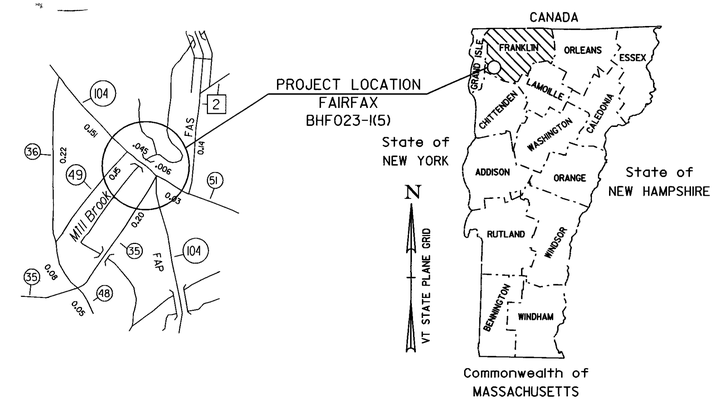
STATE OF VERMONT
AGENCY OF TRANSPORTATION

SEE SHEET 2 FOR INDEX OF SHEETS



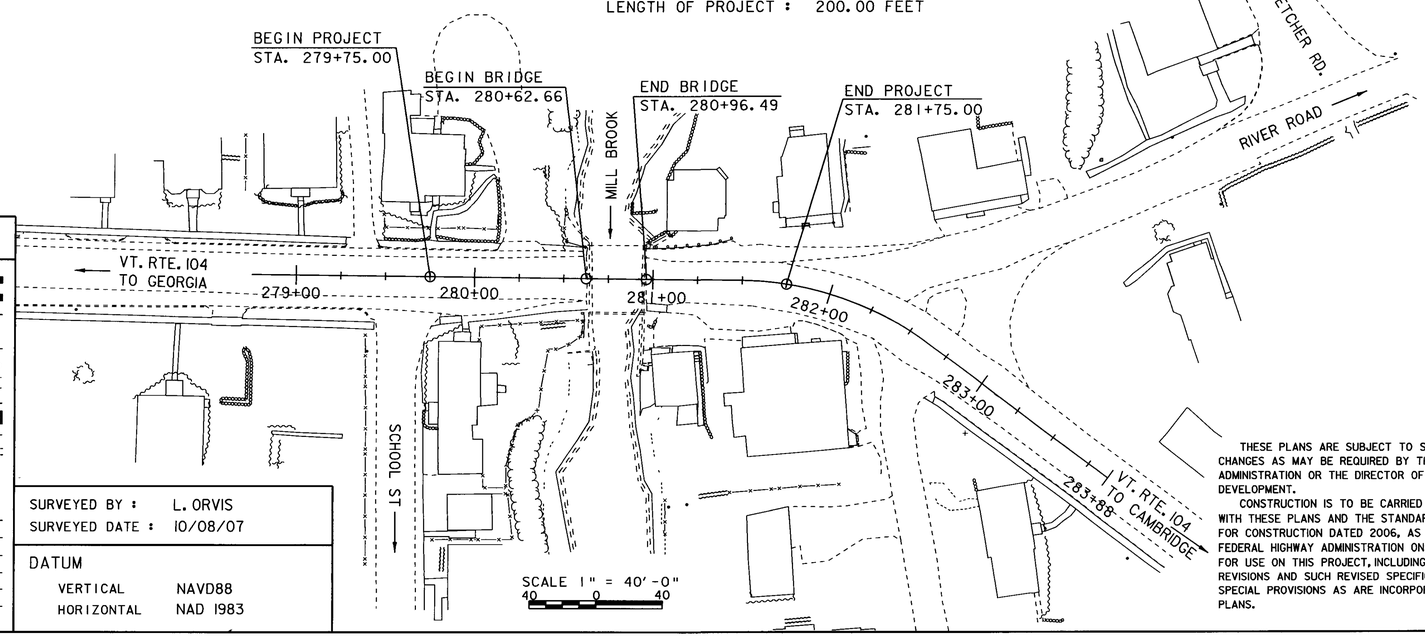
PROPOSED IMPROVEMENT

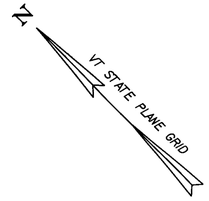
TOWN OF FAIRFAX
COUNTY OF FRANKLIN
VT. RTE. 104
MINOR ARTERIAL
BRIDGE NO. 10

PROJECT LOCATION : BEGINNING ON VT. 104 APPROXIMATELY 0.80 MILES NORTHWESTERLY OF THE INTERSECTION OF VT 104 AND VT 128 AND EXTENDING SOUTH EASTERLY 0.038 MILES.

PROJECT DESCRIPTION : THE REHABILITATION OF EXISTING BRIDGE #10 OVER THE MILL BROOK TO INCLUDE THE SUPERSTRUCTURE ALONG WITH RELATED SUBSTRUCTURE REPAIR AND APPROACH ROADWAY WORK.

LENGTH OF STRUCTURE : 33.83 FEET
LENGTH OF ROADWAY : 166.17 FEET
LENGTH OF PROJECT : 200.00 FEET





CONVENTIONAL SYMBOLS

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

SURVEYED BY : L. ORVIS
SURVEYED DATE : 10/08/07

DATUM
VERTICAL NAVD88
HORIZONTAL NAD 1983

RECORD PLANS

CONTRACTOR	BLOW & COTE INC – MORRISVILLE, VT
RESIDENT ENGINEER	GREG WILCOX
CONSTRUCTION BEGAN	OCTOBER 5, 2009
CONSTRUCTION COMPLETE	SEPTEMBER 10, 2010
RECORD PLANS BY	GREG WILCOX & M BIRCHARD

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

BY Greg Wilcox RESIDENT ENGINEER

DATE 3/3/2011

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

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

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Joan V. Bush DATE 7-13-09

PROJECT MANAGER : C. CARLSON

PROJECT NAME : FAIRFAX
PROJECT NUMBER : BHF 023-1(5)

SHEET 1 OF 61 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 09.02.00

LRFD

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TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	8300	930	57	4.3	880
2033	11500	1300	57	6.3	1800

20 year ESAL for flexible pavement from 2013 to 2033 : 7665000

40 year ESAL for flexible pavement from 2013 to 2053 : 20813000

Design Speed : 35 mph

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: July 2008

DRAINAGE AREA : 21.6 sq. mi.
CHARACTER OF TERRAIN : Hilly, mixture of forest and meadows, small urban areas
STREAM CHARACTERISTICS : Sinuous, semi-alluvial, low relief valley
NATURE OF STREAMBED : Ledge, cobbles, boulders, gravel

PEAK FLOW DATA

Q 2.33 =	650 cfs	Q 50 =	2100 cfs
Q 10 =	1300 cfs	Q 100 =	2450 cfs
Q 25 =	1700 cfs	Q 500 =	3400 cfs

DATE OF FLOOD OF RECORD 1927
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 14.1 fps
ICE CONDITIONS : Moderate
DEBRIS: Light to moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 3%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Concrete T-Beam w/CIP Concrete Deck
YEAR BUILT: 1932
CLEAR SPAN(NORMAL TO STREAM): 30'
VERTICAL CLEARANCE ABOVE STREAMBED: 14' +/-
WATERWAY OF FULL OPENING: 400 sq. ft.
DISPOSITION OF STRUCTURE: Rehabilitate
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	359.2'	VELOCITY =	10.3 fps
Q10 =	361.7'	"	14.2 fps
Q25 =	362.9'	"	15.0 fps
Q50 =	364.0'	"	15.8 fps
Q100 =	364.8'	"	16.3 fps

LONG TERM STREAMBED CHANGES: None

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 371.0'
DISCHARGE OVER ROAD @Q100: N/A

UPSTREAM STRUCTURE

TOWN: Fairfax — DISTANCE: 1350'
HIGHWAY# : TH 24 — STRUCTURE #: BR 23
CLEAR SPAN: 20' — CLEAR HEIGHT: 12'
YEAR BUILT: 1978 — FULL WATERWAY:
STRUCTURE TYPE: Concrete Slab

DOWNSTREAM STRUCTURE

TOWN: Fairfax — DISTANCE: 1050'
HIGHWAY# : TH 35 — STRUCTURE #: BR 25
CLEAR SPAN: 42' — CLEAR HEIGHT: 11'
YEAR BUILT: 1865, Reconstructed in 1990 — FULL WATERWAY:
STRUCTURE TYPE: Town Lattice Covered Bridge

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.05	1.82					
POSTING							
OPERATING	2.96	2.84	3.23	3.26	4.57	5.3	
COMMENTS:	0						

PROPOSED STRUCTURE

STRUCTURE TYPE: Concrete Prestressed Voided Slab

CLEAR SPAN(NORMAL TO STREAM): 30'
VERTICAL CLEARANCE ABOVE STREAMBED: 14' +/-
WATERWAY OF FULL OPENING: 400 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	359.2'	VELOCITY=	10.3 fps
Q10 =	361.7'	"	14.2 fps
Q25 =	362.9'	"	15.0 fps
Q50 =	364.0'	"	15.8 fps
Q100 =	364.8'	"	16.3 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: N/A
RELIEF ELEVATION: 371.0'
DISCHARGE OVER ROAD @Q100: N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 369.8'
VERTICAL CLEARANCE: @ Q50 = 5.8'

SCOUR: Abutments founded on ledge
REQUIRED CHANNEL PROTECTION: N/A

PERMIT INFORMATION

AVERAGE DAILY FLOW:	45 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	20 cfs	1.0'
ORDINARY HIGH WATER:	280 cfs	3.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. TRAFFIC WILL BE DETOURED.

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	0.0 INCH
3. DESIGN SPAN	L:	31.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	6.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	5.0 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	3.5 KSI
11. CONCRETE, CLASS C	f'_c:	---
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	---
14. SOIL UNIT WEIGHT	γ:	---
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	---
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	---
20. PILE YIELD STRENGTH ASTM A572	f_y:	---
21. PILE SIZE		---
22. EST. PILE LENGTH	L_p:	
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}	---
26. MINIMUM GROUND SNOW LOAD	p_g	---
27. SEISMIC DATA PGA ---	S_s	---
	S_1	---

PROJECT NAME: **FAIRFAX**
PROJECT NUMBER: **BHF 023-1(5)**

FILE NAME: **86e064pi_v3.xls** — PLOT DATE: 7/21/2009
PROJECT LEADER: **C. CARLSON** — DRAWN BY: **C. MOONEY**
DESIGNED BY: **C. CARLSON** — CHECKED BY: **C. CARLSON**
PRELIMINARY INFORMATION SHEET — SHEET 2 OF 61

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2006 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2006 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THEIR LATEST REVISIONS.

2. DURING THIS PROJECT, THE CONTRACTOR WILL BE ALLOWED TO CLOSE THE BRIDGE TO THROUGH TRAFFIC FOR FOUR (4) WEEKS ONLY. TRAFFIC WILL BE DETOURED AS DETAILED ON TRAFFIC DETOUR SHEETS 15-24.

   SEE SPECIAL PROVISIONS FOR INCENTIVE/DISINCENTIVE PAY ITEM IN EFFECT DURING THIS CLOSURE PERIOD.

3. **EXISTING DIMENSIONS:** THESE PLANS WERE PREPARED BASED ON INFORMATION OBTAINED FROM REFERENCE PLAN SHEETS. DIMENSIONS AND ANGLES OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN WORKING DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER. NO EXTRA PAYMENT WILL BE MADE FOR OBTAINING THE NECESSARY MEASUREMENTS.

4. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

5. THE PIPE THAT IS LOCATED AT STA. 241+42.25 LT TO STA. 280+96.5 MAY BE IN CONFLICT WITH THE NEW RETAINING WALL THAT IS BEING BUILT BETWEEN THESE SAME STATIONS. THE CONTRACTOR SHALL USE EXTREME CARE WHILE EXCAVATING FOR THE NEW WALL. IF THERE IS A CONFLICT THE RESIDENT ENGINEER SHALL CONTACT THE STRUCTURES PROJECT MANAGER AND A NEW PIPE RELOCATION WILL BE DESIGNED AND CONSTRUCTED. ANY ADDITIONAL COST INCURRED WILL BE PAID FOR AS ITEM 204.30, "TRENCH EXCAVATION" AND THE RESPECTIVE PIPE ITEM.

EARTHWORK AND RELATED ITEMS

6. A. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE: CONCRETE DECK, SIDEWALKS, T-BEAMS, AND BRIDGE RAILING REMOVED TO BRIDGE SEAT ELEVATIONS

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

7. THE CONTRACTOR MAY SUBSTITUTE SUBBASE MATERIAL FOR THE SAND BORROW SHOWN ON THE PLANS. THE SUBBASE MATERIAL SHALL BE THE TYPE SPECIFIED IN THE CONTRACT AND SHALL BE PLACED TO MEET THE SUBBASE SPECIFICATIONS. IF SUBBASE IS PLACED IN LIEU OF SAND BORROW, A GEOTEXTILE MEETING THE REQUIREMENTS OF ITEM 649.11 "GEOTEXTILE FOR ROAD BED SEPARATOR" SHALL BE PLACED BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING THE GEOTEXTILE SHALL BE INCIDENTAL TO ITEM 203.31 "SAND BORROW".

CONCRETE

8. SIDEWALK CONCRETE ON THE BRIDGE SHALL BE HIGH PERFORMANCE CLASS, A LOW CEMENT CONCRETE AND SHALL BE PAID FOR UNDER ITEM 900.608, SPECIAL PROVISION "HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT."

9. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH.

10. WATER REPELLENT, SILANE (ITEM 514.10) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE PRESTRESS UNITS BETWEEN DRIP NOTCHES. SEE SUPPLEMENTAL SPECIFICATION 514.

11. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

12. ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL." CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04.

13. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.

TRAFFIC CONTROL

14. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAINING ALL ON AND OFF PROJECT DETOUR SIGNS. SEE TRAFFIC CONTROL SHEETS: 15-24. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, "TRAFFIC CONTROL."

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

16. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. IF THE CONTRACTOR MUST RESTRICT ACCESS, THEY MUST NOTIFY THE PROPERTY OWNERS AND THE TOWN IN ADVANCE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."

17. TWO PORTABLE CHANGEABLE MESSAGE SIGNS ARE INCLUDED IN THE CONTRACT AND ARE TO BE LOCATED AND DISPLAY MESSAGES AS DIRECTED BY THE ENGINEER.

16. PRIOR TO AND AFTER THE MAXIMUM FOUR (4) WEEK BRIDGE CLOSURE, THE CONTRACTOR MUST MAINTAIN TWO WAY TRAFFIC WHEN THE CONTRACTOR IS NOT WORKING. DURING THE CONTRACTOR'S WORKING HOURS, THEY MAY REDUCE TRAFFIC TO ONE-LANE WITH THE USE OF FLAGGERS, DRUMS, BARRICADES, CONCRETE BARRIER AND/OR OTHER TRAFFIC CONTROL DEVICES. THIS WORK WILL BE PAID FOR UNDER THE "TRAFFIC CONTROL" ITEM EXCEPT THAT FLAGGERS HOURS WILL BE PAID FOR AS ITEM 630.15, "FLAGGERS".

PRESTRESSED CONCRETE

17. ITEM 510.22 "PRESTRESSED CONCRETE VOIDED SLABS" PRESTRESSED PRECAST MEMBERS SHALL:
   A. CONFORM TO SECTION 510 "PRESTRESSED CONCRETE."
   B. BE 4 FOOT WIDE VOIDED SLABS (DEPTH VARIES).
   C. USE CONCRETE WITH f'c = 6000 PSI AND fc = 4000 PSI.
   D. BE DESIGNED FOR AN AASHTO HL 93 LIVE LOAD.
   E. CONTAIN CONTINUOUS VOIDS EXCEPT AS SHOWN IN THE PLAN DETAIL.
   F. HAVE VOID DRAINS AT THE ENDS OF EACH VOID. THE VOID DRAINS SHALL BE ¾" DIAMETER, NON-FERROUS, AND CLEANED AFTER ERECTION.
   G. CONTAIN PRESTRESSING STRANDS WHICH ARE 0.6 IN. DIAMETER, 270 KSI, LOW-RELAXATION STRANDS PULLED TO 75% OF THEIR YIELD.
   H. HAVE THE ENDS OF THE STRANDS RECESSED AND GROUTED ACCORDING TO STANDARD PRACTICE.
   I. INCLUDE COLD POURED JOINT FILLER, AND TRANSVERSE TENDONS.
   J. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ¾" X ¾" UNLESS OTHERWISE NOTED.

18. THE FABRICATOR MAY, WITH THE APPROVAL OF THE STRUCTURES ENGINEER, ALTER THE DESIGN AS DETAILED TO MEET THE PLANT'S PRESTRESSING OPERATION AND MATERIAL REQUIREMENTS. AN ALTERNATE STRAND CONFIGURATION MAY BE SUBMITTED FOR APPROVAL, PROVIDED THE DESIGN IS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT, AND THAT THE DESIGN MEETS ALL OF THE APPLICABLE DESIGN CRITERIA, LOADINGS AND CODES.

19. THE CONTRACTOR SHALL NOTIFY THE VTRANS MATERIALS & RESEARCH STRUCTURAL CONCRETE ENGINEER TWO WEEKS BEFORE THE PRESTRESS FABRICATOR CONSTRUCTS THE UNITS.

20. ITEM 510.22 "PRESTRESSED CONCRETE VOIDED SLABS" TRANSVERSE TENDONS:
   A. THE ½" DIAMETER TRANSVERSE TENDONS SHALL BE POLYSTRAND OR EQUIVALENT.
   B. COVER TENDONS WITH A SEAMLESS POLYPROPYLENE SHEATH WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND TENDON.
   C. THE ¾" TENDON PLATES SHALL CONFORM TO AASHTO M270M/M270 GR50.
   D. GALVANIZE PLATES AND CHUCKS AFTER FABRICATION ACCORDING TO AASHTO M232M/M232.
   E. INSTALL TRANSVERSE TENDONS BEFORE PLACING MORTAR AND CASTING THE CONCRETE SIDEWALK.

21. ITEM 510.24 "GROUTING SHEAR KEYS": FILL THE JOINTS BETWEEN THE VOIDED SLABS WITH MORTAR, TYPE IV, AS DESCRIBED IN SUBSECTION 510.13.

22.

SERVICE LOADS	18"	18"-19"	19"-20"	20"-21"	21"
MEMBER MOMENT	84 k-ft.	88 k-ft.	94 k-ft.	101 k-ft.	95 k-ft.
SUPERIMPOSED DEAD LOAD MOMENT	28 k-ft.	28 k-ft.	28 k-ft.	28 k-ft.	28 k-ft.
LIVE LOAD & IMPACT MOMENT	193 k-ft.	193 k-ft.	192 k-ft.	191 k-ft.	196 k-ft.
DEAD LOAD REACTION	14 kips	14 kips	15 kips	16 kips	15 kips
LIVE LOAD REACTION	0 kips	14 kips	14 kips	14 kips	14 kips
TOTAL REACTION	14 kips	28 kips	29 kips	30 kips	29 kips
FINAL CAMBER	7/16 in.	7/16 in.	7/16 in.	7/16 in.	7/16 in.

23. CONSTRUCTION SEQUENCE FOR PRESTRESSED VOIDED SLABS

1. LAY OUT WORKING LINES:
   A. LAY OUT WORKING LINES FOR THE ENTIRE BRIDGE WIDTH ON THE BEAM SEAT.
   B. MEASURE ALL WORKING LINES FROM A COMMON WORKING POINT.
   C. BASE THE WORKING LINES ON THE NOMINAL BEAM WIDTHS.

2. VERIFY BEAM SEAT ELEVATIONS:
   A. MEASURE ELEVATIONS AT BEAM SEATS.
   B. IF SEATS ARE HIGH, GRIND TO CORRECT ELEVATIONS.
   C. IF SEATS ARE LOW, SHIM TO CORRECT ELEVATIONS.
   D. INSTALL BEARINGS.

3. ERECT BEAMS:
   A. PLACE BEAMS TO FIT WITHIN THE WORKING LINES.
   B. AS WORK PROGRESSES, INSTALL HARDWOOD WEDGES BETWEEN ADJACENT BEAMS TO MAINTAIN PROPER JOINT OPENING (A MINIMUM OF ONE WEDGE AT EACH TRANSVERSE TENDON).
   C. DRILL ANCHOR BOLT HOLES.
   D. PLACE ANCHOR BOLTS.
   E. GROUT ANCHOR BOLTS IN ABUTMENT.

4. INSTALL BACKER ROD:
   PLACE FILLER BELOW THE KEYWAY BOTTOM, AS SHOWN ON THE PLANS.

5. INSTALL TRANSVERSE TENDONS:
   A. FEED TENDONS THROUGH DUCTS.
   B. VERIFY THAT HARDWOOD WEDGES ARE IN PLACE AS REQUIRED TO PREVENT SLIPPAGE OF BEAMS.
   C. POST-TENSION TENDONS USING A CALIBRATED JACK TO APPROXIMATELY 3.0 KIPS TO REMOVE SAG IN THE TENDON AND TO SEAT THE CHUCK.

6. GROUT SHEAR KEYS:
   A. CLEAN JOINTS WITH AN OIL FREE AIR-BLAST IMMEDIATELY BEFORE GROUT PLACEMENT. VERIFY THAT THE BACKER ROD IS STILL IN PLACE.
   B. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR ADDITIONAL JOINT PREPARATION AND GROUT PLACEMENT.
   C. CAREFULLY ROD JOINTS TO ELIMINATE ANY POSSIBILITY OF VOIDS.

7. POST-TENSION TRANSVERSE TENDONS:
   A. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1.5 KSI, BASED ON THE MANUFACTURER'S RECOMMENDATIONS, PRIOR TO STRESSING.
   B. PROVIDE APPROPRIATE CUBE MOLDS AS DESCRIBED IN AASHTO T106M/T106 FOR 3 SETS OF 3 DAY CUBES, 3 SETS OF 28 DAY CUBES AND AT A MINIMUM OF 3 MORE CUBES TO TEST FOR THE 1.4 KSI MINIMUM COMPRESSIVE STRENGTH.

MISCELLANEOUS

24. THE CONTRACTOR SHALL REMOVE THE CHAIN LINK FENCE ON WINGWALL 3. THE CONTRACTOR SHALL INSTALL A NEW CHAIN LINK FENCE AT A LOCATION TO BE DETERMINED BY THE RESIDENT ENGINEER BETWEEN EXISTING WINGWALL 3 AND THE NEW RETAINING WALL. THIS WORK WILL BE PAID FOR UNDER ITEM 620.12, "CHAIN LINK FENCE, 6 FEET". THE CHAIN LINK FENCE SHALL BE BLACK VINYL COATED.

25. THE EXISTING FENCE LOCATED BETWEEN APPROXIMATELY STATIONS 280+25 RT AND 280+63 RT SHALL BE REMOVED AND STOCKPILED. WHEN WORK IS COMPLETED IN THE VICINITY OF THE FENCE, THE CONTRACTOR SHALL REINSTALL THE FENCE IN A LOCATION DETERMINED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PAID FOR UNDER ITEM 620.50, "REMOVING AND RESETTING FENCE."

26. THE EXISTING SIGNS, POSTS, CHAIN LINK FENCING, GUARD RAIL AND "CONCRETE BLOCKS AT WINGWALL 4" SHALL REMAIN THE PROPERTY OF DISTRICT 8. THE AFOREMENTIONED ITEMS SHALL BE STOCKPILED FOR THE DISTRICT 8 FORCES TO REMOVE. PLEASE CONTACT THE DISTRICT 8 GENERAL FOREMAN AT (802) 524-5926 TO MAKE ARRANGEMENTS FOR THE REMOVAL OF THE ITEMS.

27. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.02 GAL/SY OR AS DIRECTED BY THE ENGINEER ON ALL EXISTING PAVEMENT SURFACES, ON COLD PLANED SURFACES AND BETWEEN ALL COURSES OF PAVEMENT.

28. ALL WORK TO PLACE THE CONCRETE IN THE FRONT OF THE ABUTMENTS IN THE DRY SHALL BE INCIDENTAL TO THE ITEM 501.34, "HIGH PERFORMANCE CONCRETE, and CLASS B". (THE CONCRETE SHALL NOT BE DEPOSITED DIRECTLY INTO THE WATER.)

GENERAL NOTES

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-I(5)

FILE NAME: s86e064gen.dgn — PLOT DATE: 27-JUL-2009
PROJECT LEADER: C. CARLSON — DRAWN BY: C. CARLSON
DESIGNED BY: C. CARLSON — CHECKED BY: D. PETERSON
GENERAL NOTES — SHEET 3 OF 61

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	BRIDGE	FULL E&C	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1				1	1	LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
1290				1290	1376.4	CY	COMMON EXCAVATION	203.15	
220				220	0	CY	SAND BORROW	203.31	
80	10			90	73.6	CY	TRENCH EXCAVATION OF EARTH	204.20	
10				10	6.81	CY	TRENCH EXCAVATION OF ROCK	204.21	
1				1	35.2	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
		50		50		CY	STRUCTURE EXCAVATION	204.25	
30		50		80	58.5	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
22.4		36.1 CY							
500				500	825.2	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
770				770	1005.9	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
2				2	11.8	CWT	EMULSIFIED ASPHALT	404.65	
1				1	+3461	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
8		29		37	46.61	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
3.73		42.88							
690		2210		2900	2880	LB	REINFORCING STEEL	507.15	
398		1982							
		132		132	226	LF	DRILLING AND GROUTING DOWELS	507.16	
		226							
		1050		1050	1890	LB	EPOXY COATED REINFORCING STEEL	507.17	
		68		68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (18" x 48")	510.22	
		68		68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (18"-19" x 48")	510.22	
		68		68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (19"-20" x 48")	510.22	
		68		68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (20"-21" x 48")	510.22	
		34		34	33.83	LF	PRESTRESSED CONCRETE VOIDED SLABS (21" x 48")	510.22	
		271		271	270.60	LF	GROUTING SHEAR KEYS	510.24	
		6		6	5	GAL	WATER REPELLENT, SILANE	514.10	
		36		36	25.5	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
		100		100	95.9	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
		100		100	145.7	SY	REMOVAL OF BRIDGE PAVEMENT	529.10	
		1		1	1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	
		13		13	10.31	CY	REMOVAL OF CONCRETE OR MASONRY	529.25	
		36		36	36	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11	
							BEGIN OPTION AA		
154				154		LF	18" CAAP .075 (2-2/3 X 1/2)	601.0216	
154				154		LF	18" PCCSP .079 (2-2/3 X 1/2)	601.0416	
154				154	178.0	LF	18" CPEP(SL)	601.2615	
							END OPTION AA		
3				3	5	EACH	CAST IRON GRATE WITH FRAME, TYPE D	604.47	
	10			10	0	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	
	10			10	0	CY	STONE FILL, TYPE I	613.10	
300				300	356.8	LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
1				1	1	EACH	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12	
160				160	164.8	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
900	CY	ITEM 203.15 COMMON EXCAVATION (0.7*1290 CY)
24	CY	ITEM 204.20 TRENCH EXCAVATION OF EARTH (0.3*80 CY)
15	CY	ITEM 204.25 STRUCTURE EXCAVATION (0.3*50 CY CM)

939	CY	TOTAL FILL AVAILABLE
0	CY	TOTAL FILL REQUIRED
939	**CY**	**WASTE**
		TEMPORARY EROSION CONTROL ITEMS
		(INCLUDED UNDER EROSION CONTROL)
10	CY	ITEM 204.20 TRENCH EXCAVATION OF EARTH
10	HR	ITEM 608.25 ALL PURPOSE EXCAVATOR, TYPE I
10	CY	ITEM 613.10 STONE FILL, TYPE I
50	SY	ITEM 649.51 GEOTEXTILE FOR SILT FENCE
10	LB	ITEM 651.17 SEED, WINTER RYE
1	TON	ITEM 651.25 HAY MULCH
50	SY	ITEM 653.20 TEMPORARY EROSION MATTING
10	CY	ITEM 653.35 VEHICLE TRACKING PAD
6	EA	ITEM 653.40 INLET PROTECTION DEVICE, TYPE I
370	LF	ITEM 653.55 PROJECT DEMARCATION FENCE

N.A.B.I. = NOT A BID ITEM

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(15)

FILE NAME: s86e064_qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
QUANTITY SHEET #1

PLOT DATE: 07/29/2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. MOONEY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL E&C	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						18				18	16	SF	DETECTABLE WARNING SURFACE	618.30				
						10				10	0	LF	CHAIN-LINK FENCE, 6 FEET	620.12				
						45				45	0	LF	REMOVING AND RESETTING FENCE	620.50				
						25				25	48	LF	REMOVAL OF EXISTING FENCE	620.55				
						64				64	65	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						100				100	1059	HR	FLAGGERS	630.15				
									1	1	1	LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1	1	LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
									1	1	1	LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
						1				1	1	LS	MOBILIZATION/DEMOBILIZATION	635.11				
						1				1	1	LS	TRAFFIC CONTROL	641.10				
						2				2	3	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
						750				750	910	LF	4 INCH WHITE LINE	646.20				
						550				550	760	LF	4 INCH YELLOW LINE	646.21				
						30				30	30	LF	CROSSWALK MARKING	646.31				
							50			50	7.3	SY	GEOTEXTILE FOR SILT FENCE	649.51				
							10			10	8.6	LB	SEED	651.15				
							10			10	0	LB	SEED, WINTER RYE	651.17				
							20			20	14.2	LB	FERTILIZER	651.18				N.A.B.I. = NOT A BID ITEM
							1			1	0.06	TON	AGRICULTURAL LIMESTONE	651.20				
							1			1	0.11	TON	HAYMULCH	651.25				
							20			20	19.2	CY	TOPSOIL	651.35				
							50			50	26.7	SY	TEMPORARY EROSION MATTING	653.20				
							10			10	0	CY	VEHICLE TRACKING PAD	653.35				
							6			6	0	EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
							370			370	0	LF	PROJECT DEMARCATION FENCE	653.55				
						6				6	6	SF	TRAFFIC SIGNS, TYPE A	675.20				
						20				20	0	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
						1				1	1	EACH	REMOVING SIGNS	675.50				
						1				1	880	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
								12		12	17.74	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608				
						57				57	56.26	LF	SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)	900.640				
								116		116	116.76	LF	SPECIAL PROVISION (BRIDGE RAILING, ANODIZED ALUMINUM/PEDESTRIAN)	900.640				
						1				1	50000	LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (N.A.B.I)	900.650				
						1				1	-9238	LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
						1				1	-2538	LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
						60				60	134	SY	SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675				
						550		16		566	593.13	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(15)

FILE NAME: s86e064_qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
QUANTITY SHEET #2

PLOT DATE: 07/29/2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. MOONEY
SHEET 5 OF 61

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES

RETAINING WALL	DECK	ABUTMENT NO. 1	ABUTMENT NO. 2	BRIDGE TOTAL	TOTALS	UNIT	DESCRIPTIONS ITEMS	ITEM NUMBER
40		5	5	50	50	CY	STRUCTURE EXCAVATION	204.25
40		5	5	50	36.1	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
15		7	7	29	42.88	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
1590		355	265	2210	1982	LB	REINFORCING STEEL	507.15
		72	60	132	226	LF	DRILLING AND GROUTING DOWELS	507.16
	1050			1050	1890	LB	EPOXY COATED REINFORCING STEEL	507.17
	68			68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (18" x 48")	510.22
	68			68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (18"-19" x 48")	510.22
	68			68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (19"-20" x 48")	510.22
	68			68	67.67	LF	PRESTRESSED CONCRETE VOIDED SLABS (20"-21" x 48")	510.22
	34			34	33.83	LF	PRESTRESSED CONCRETE VOIDED SLABS (21" x 48")	510.22
	271			271	270.60	LF	GROUTING SHEAR KEYS	510.24
2	4			6	5	GAL	WATER REPELLENT, SILANE	514.10
	36			36	25.5	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10
	100			100	95.9	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20
	100			100	145.7	SY	REMOVAL OF BRIDGE PAVEMENT	529.10
	1			1	1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20
		5	8	13	10.31	CY	REMOVAL OF CONCRETE OR MASONRY	529.25
		18	18	36	36	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11
	12			12	17.74	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608
	116			116	116.76	LF	SPECIAL PROVISION (BRIDGE RAILING, ANODIZED ALUMINUM/PEDESTRIAN)	900.640
	16			16	15.98	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(15)

FILE NAME: s86e064_qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
BRIDGE QUANTITY SHEET #1

PLOT DATE: 07/20/2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. MOONEY
SHEET 6 OF 61

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CATCH BASINS INSTALLED
AS PRECAST DROP INLETS
CAMP PRECAST

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		~~PIPE ARCH~~			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	PCCDI	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS			DRAINAGE KEY	REMARKS
			NO. DEG.	INLET	OUTLET	IN	OUT	SPAN IN	RISE IN	L FT	D IN	L FT	PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP SL	PCCSP PI TH	NO. DEG	EA	EA		DEPTH DI FT	CONC CLASS B CY	REINF STEEL LBS	DI GRATE TYPE	CHAN ELEV EA	CRM CY	EARTH CY	ROCK CY	CY	CY	CY	CY	CY	SY	CY	TYPE	LT EA	RT EA			
280+48.58		RT																				4.08 ~~4.75~~	0.714 ~~2.5~~	252 ~~225~~	D			2.027 ~~10~~					1.52 ~~9~~								5	NEW 4' x 4' RCDI
280+48.58	280+48.58	RT/LT	X	RCDI	RCDI						18	25.29 ~~22~~	X	X			X											2.99 ~~4~~													5	NEW 18" OPTION PIPE
280+48.58		LT																				5.08 ~~5.75~~	0.899 ~~2.9~~	244 ~~280~~	D			2.37 ~~8~~	1.59				1.78 ~~6~~								6	NEW 4' x 4' RCDI
280+48.8	280+58.97	LT	X	RCDI					18"	23.78	18	39.97 ~~18~~	X	X			X											19.22 ~~4~~													6	NEW 18" OPTION PIPE - OUTLEY INTO MILL BROOK
281+41.92 00.70		LT																				3.75 ~~4.5~~	0.652 ~~2.3~~	208 ~~200~~	D			0.79 ~~7~~ 3.65	1.94				5								7	NEW 4' x 4' RCDI
281+~~41.92~~	281+42.25	LT	X	RCDI	RCDI				18"	50.5	18	~~4~~	X	X			X											~~4~~ 7					15.82								7	NEW 18" OPTION PIPE
281+42.5		LT																																						7	TIE INTO EXISTING DRAINAGE DI
279+36	280+48.58	RT	X	RCDI	RCDI				18"		18	112.76 ~~110~~	X	X			X								D			32.70 ~~24~~	1.83												2	NEW 18" OPTION PIPE (TIE INTO EXISTING DI AT 279+80)
279+36	280+48	RT																										2.78 1.33													1	REMOVE EXISTING PIPE (REMOVE UNDER COMMON EXCAVATION)
280+48.58		RT																										~~7~~	2												4	REMOVE EXISTING DRAINAGE STRUCTURE
280+48	280+66	RT																										3	1.45												4	REMOVE EXISTING PIPE
280+44		LT																										0.65	2												3	REMOVE EXISTING DRAINAGE STRUCTURE (REMOVE UNDER COMMON EXCAVATION)
280+44	280+58	LT																																							3	REMOVE EXISTING PIPE (REMOVE UNDER COMMON EXCAVATION)
281+53.74	281+41.92	LT							18"	11.75															D			6.07					3.26							8	
				SUB-TOTALS					86.03	178.02 ~~154~~														7.7	685	~~3~~ EA			73.58 ~~80~~ CY	6.81 ~~10~~ CY				22.4 ~~20~~								
				ROUNDING						0														.3	5				5	6				0								
				TOTALS					86.03	~~154~~ FT 178														8CY	690 LBS	~~3~~ EA 5			~~80~~ CY 73.6	~~10~~ CY 6.81				~~20~~ 22.4 CY								

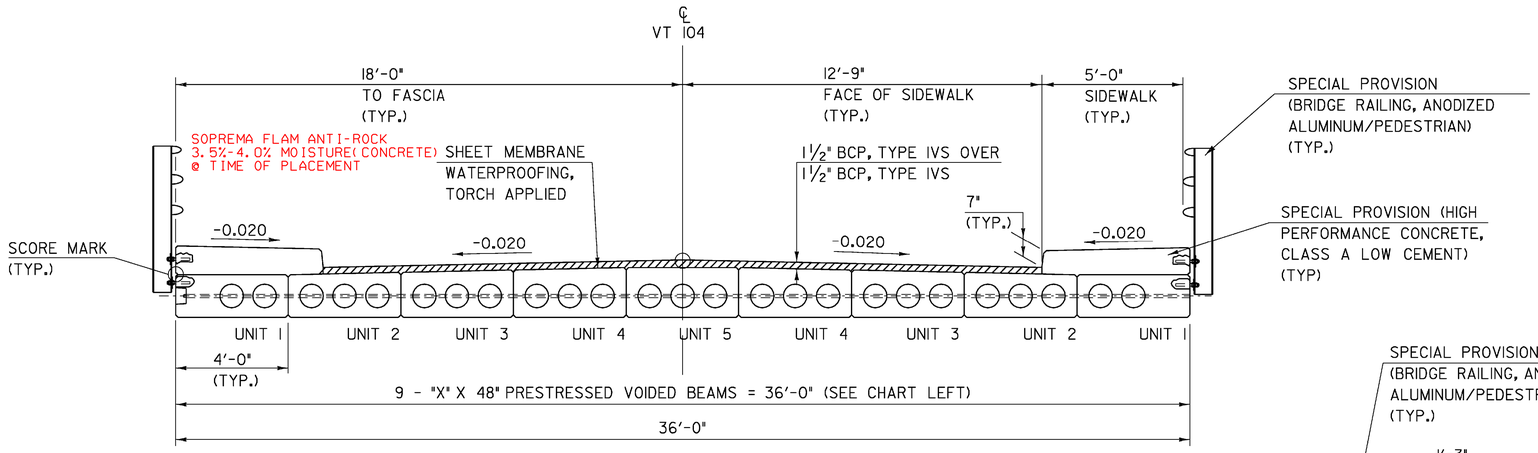
PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-1(5)
FILE NAME:	s86e064dds.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	C. CARLSON
DRAINAGE DETAIL SHEET	
PLOT DATE:	7/13/2009
DRAWN BY:	C. MOONEY
CHECKED BY:	C. CARLSON
SHEET 7 OF 61	

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						REMARKS	SIGN DETAIL	
											NO. OF	FLANGED CHANNEL			SQUARE STEEL (in)					TUBULAR ALUMINUM Ø (IN)			TUBULAR STEEL Ø (IN)					W-SHAPE STEEL								DETAIL ON SHEET NUMBER	STANDARD SHEET NUMBER
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	POST	(LB / FT)			1.75	2.00	2.50	ANCHOR	SLEEVE	3.00	4.00	4.0 MOD	FOUNDATION	3.00	3.50	4.00	5.00	FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED			
															(LB / FT)					(LB / FT)				(LB / FT)											
												1.12	2.00	3.00	1.88	2.42	3.35			1.30	1.70	1.70		7.60	9.00	10.80	14.60	24"	30"						
OPTION ITEMS																																				
280+52.5 LT.	← FAIRFAX SCHOOLS	1	72.0	12.0	6.0						~~2.0~~					~~X~~																	D1_1AL		E-123

VOIDED SLAB NO.	QUANTITY	("X") DEPTH
UNIT 1	2	18"
UNIT 2	2	18"-19"
UNIT 3	2	19"-20"
UNIT 4	2	20"-21"
UNIT 5	1	21"

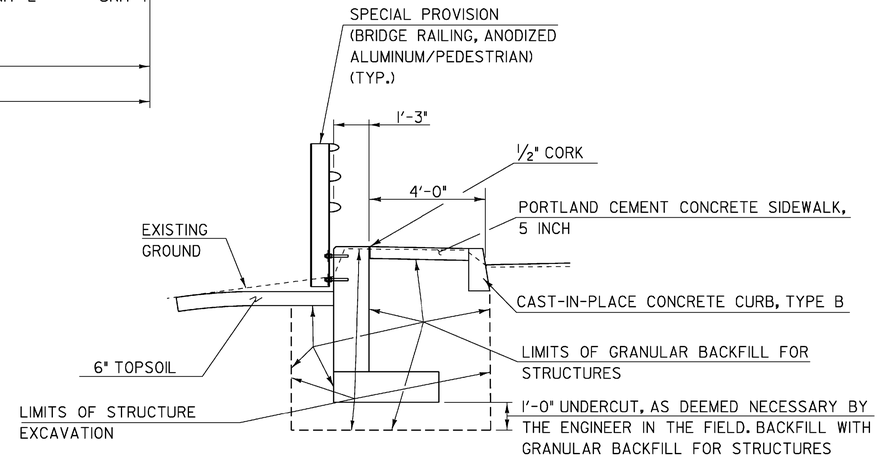


BRIDGE TYPICAL

SCALE 3/8" = 1'-0"

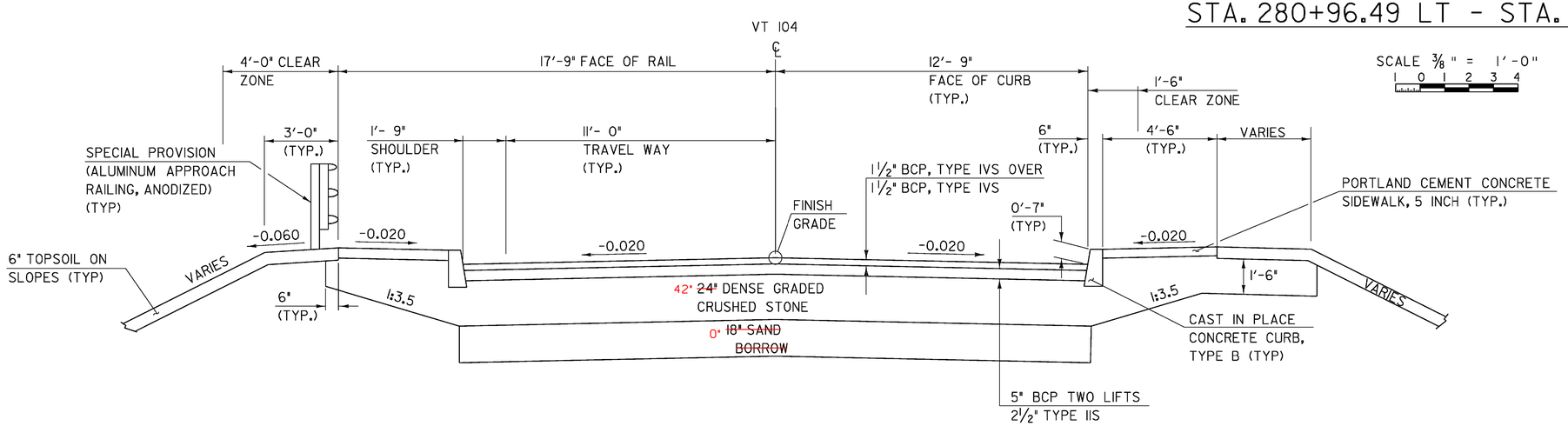
*BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER PAY ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

MATERIAL ITEM	TOLERANCE
PAVEMENT	+-1/4" TOTAL THICKNESS
BASE COURSE	+-1/2"
SUBBASE	+- 1"
SAND BORROW	+- 1"



WALL TYPICAL

STA. 280+96.49 LT - STA. 281+31.5 LT



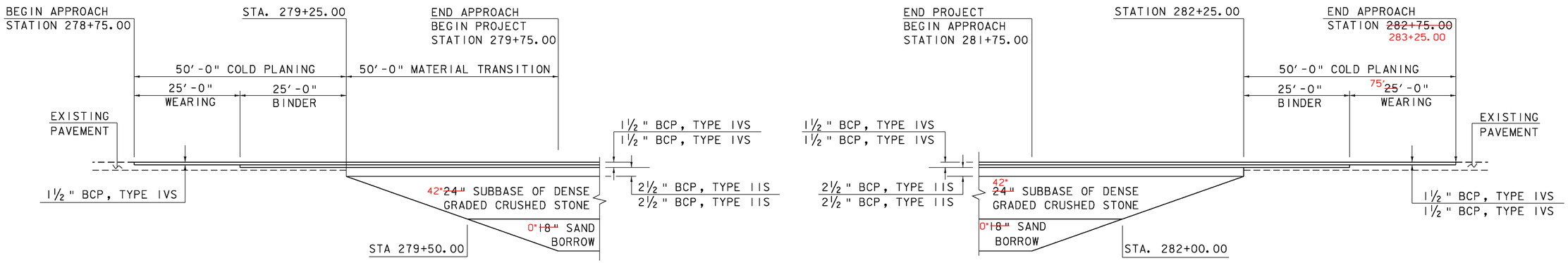
W/ GUARDRAIL

W/OUT GUARDRAIL

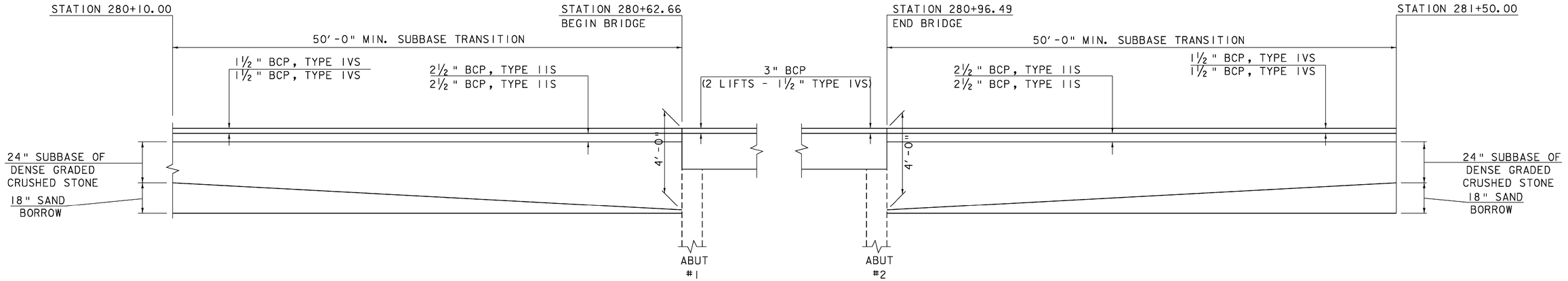
ROADWAY TYPICAL

SCALE 3/8" = 1'-0"

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-1(5)
FILE NAME: 86e064/str/se064typ.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: STR3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
TYPICAL SHEET	SHEET 9 OF 61



MAINLINE SUBBASE DETAIL
N. T. S.



BEGIN BRIDGE APPROACH DETAIL
N. T. S.

END BRIDGE APPROACH DETAIL
N. T. S.

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

MATERIAL TRANSITION DIAGRAMS

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(15)

FILE NAME: 86e064/str/se064mtd.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064mtd.i

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 10 OF 61

GPS CONTROL POINTS

HVCTRL #1

HILLCREST

NORTH = 793859.291
EAST = 1508107.459
ELEV. = 540.627

To reach from the intersection of VT route 104A (Highbridge Road) and VT Route 104 (Main St) go southeast along route 104 for 1.0 mi to the intersection of Huntville Road left. Turn left and go northeast along Huntville for 0.5 mi to the intersection of Huntville Road left and Boissonalt Road right. Turn left and go northeast along Huntville Road for 265' to the site of the mark on the right. It is about 65.6' northwest of the intersection of Ferguson Road. The mark is set in the top of a massive rock outcrop. It is 19' east of and about 1.6' higher than the centerline of Huntville Road, 60.4' north of the centerline of Ferguson Road, 53.5' west of an 18" butternut, 114.5' north of pole #602/11 with transformer and meter, and 101.4' northeast of the southeast corner of the Hillcrest Foods Inc. building.

HVCTRL #2

HILLCREST AZ MK

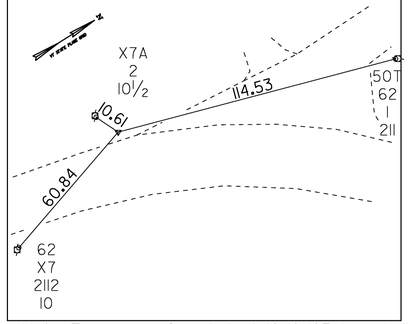
NORTH = 792293.557
EAST = 1508349.102
ELEV. = 480.372

To reach from the intersection of VT route 104A (Highbridge Road) and VT Route 104 (Main St) go southeast along route 104 for 1.0 mi to the intersection of Huntville Road left. Turn left and go northeast along Huntville for 0.5 mi to the intersection of Huntville Road left and Boissonalt Road right. Turn right and go south along Boissonalt Road for 0.3 mi to the site of the mark on the right. The mark is set 2" below ground surface in the top of a Feno-style monument. It is 19' west of and about .7' lower than the centerline of Boissonalt Road, 87.6' northwest of pole #9, 205.7' south of a guy pole, 222' southwest of pole #602/7, 178.8' southwest of the centerline of the gravel drive leading to house #87, and .7' north of a fiberglass witness post.

TRAVERSE TIES

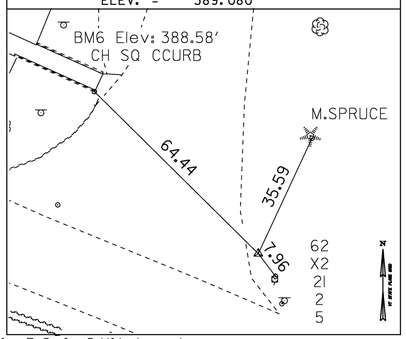
HVCTRL #5

NORTH = 790243.335
EAST = 1508361.7440
ELEV. = 401.71



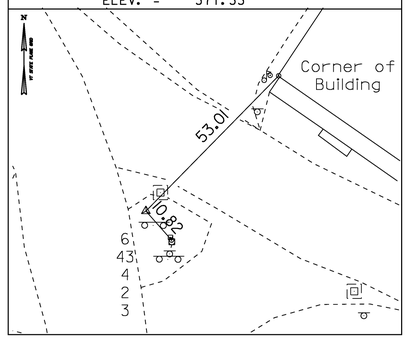
HVCTRL #6

NORTH = 789545.565
EAST = 1508328.394
ELEV. = 389.080



HVCTRL #7

NORTH = 789615.161
EAST = 1508052.031
ELEV. = 371.33



HVCTRL

NORTH =
EAST =
ELEV. =

HVCTRL

NORTH =
EAST =
ELEV. =

* Main Traverse Completed 10/8/07 by L.Orvis P.C. & G.Hitchcock

ALIGNMENT TIES

P.O.T. - 278+75

NORTH = 789897.92
EAST = 1507794.58
ELEV. = 380.73

PI - 282+07.86 BK = PI -282+04.03 AH

NORTH = 789653.82
EAST = 1508019.58
ELEV. = 370.66

PC - 281+49.56

NORTH = 789701.36
EAST = 1507986.28
ELEV. = 371.22

PT - 282+62.32

NORTH = 789601.95
EAST = 1508035.49
ELEV. = 370.22

P.O.T. - 283+88.00

NORTH = 789477.62
EAST = 1508053.83
ELEV. = 367.42

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83

ADJUSTMENT Compass

PROJECT NAME: Fairfax

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064\survey\x86e064t1.dgn PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON DRAWN BY: R. Bullock
DESIGNED BY: CHECKED BY: C. CARLSON
TIE SHEET SHEET 11 OF 61

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

STA. 279+27.6 LT. - 280+62.7 LT.
STA 279+33.5 RT. - 279+43.5 RT.
STA. 279+74.7 RT. - 280+62.7 RT.
STA. 280+96.5 LT. - 281+49.8 LT.
STA. 280+96.5 RT. - 281+29.5 RT.

SPECIAL PROVISION (BRIDGE RAILING ANODIZED ALUMINUM/PEDESTRIAN)

STA. 280+62.7 LT. - 281+31.2 LT.
STA. 280+62.7 RT. - 280+96.3 RT.

SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)

STA. 280+41.7 LT. - 280+62.7 LT.
STA. 280+42.1 RT. - 280+62.7 RT.
STA. 281+31.2 LT. - 281+42.0 LT.

REMOVAL AND DISPOSAL OF GUARDRAIL

STA. 280+61.5 RT. - 280+61.8 RT.
STA. 280+95.9 LT. - 281+44.4 LT.

CAST-IN-PLACE CONCRETE CURB, TYPE B

STA. 279+44.4 LT. - 280+16.8 LT.
STA. 280+32.8 LT. - 280+62.7 LT.
STA. 279+74.7 RT. - 280+62.7 RT.
STA. 280+96.5 LT. - 281+49.8 LT.
STA. 280+96.5 RT. - 281+29.5 RT.
STA. 280+96.5 RT. - 281+29.5 RT.
(CURB FOR ISLAND)

RELOCATE MAILBOX, MULTIPLE SUPPORT

STA. 280+38.7 LT.

CONSTRUCT RETAINING WALL

STA. 280+96.5 LT. - 281+31.5 LT.

CONSTRUCT DRIVE

STA. 279+37.7 LT. (11' WIDE)
STA. 280+24.8 LT. (16' WIDE)
STA. 281+39.5 RT. (20' WIDE)
STA. 281+61.0 LT. (20' WIDE)

DETECTABLE WARNING SURFACE (YELLOW)

STA. 279+41 RT.
STA. 279+~~82~~ 75 RT.

DRAINAGE

SEE DRAINAGE LAYOUT SHEET

REMOVING AND RESETING FENCE

~~STA. 280+25.0 - STA. 280+63 RT~~

REMOVAL OF EXISTING FENCE

STA. 280+97 RT (15±)
STA. 281+00 LT - STA. 281+10 LT (±)

COLD PLANING, BITUMINOUS PAVEMENT

STA. 278+75.00 - 279+25.00
STA. 282+25.00 - 282+75.00

CHAIN LINK FENCE, ~~6FT~~ 4 FT

STA. 281+00 FT - STA. 281+10 LT

END BRIDGE
STA. 280+96.49
F.G. = 371.55

BEGIN BRIDGE
STA. 280+62.66
F.G. = 372.13

END APPROACH
BEGIN PROJECT
STA. 279+75.00

END PROJECT
BEGIN APPROACH
STA. 281+75.00

BEGIN APPROACH
STA. 278+75.00

℄ STA. 280+66.00 =
CHAN. STA. 501+00.00
Δ = 90° LT.

APPROXIMATE LOCATION OF TEMPORARY AERIAL UTILITY RELOCATION DONE BY OTHERS.

PC STA. 282+07.86 BK=
PT STA. 282+04.03 AH

PC 281+49.56
PT 282+62.32

NEW CURB
NEWLY PAVED DRIVE

EXISTING POWER, TELEPHONE AND CATV SERVICE LINES TO BE RELOCATED TEMPORARILY BY OTHERS.

EXISTING THREE PHASE POWER OWNED BY CVPS, TELEPHONE LINES OWNED BY TELEPHONE OPERATING COMPANY OF VERMONT, LLC (FAIRPOINT), AND CATV OWNED BY COMCAST TO REMAIN IN PLACE.

EXISTING 4" STEEL CONDUITS ALONG WITH BRACKETS ATTACHED TO THE BRIDGE SHALL BE REMOVED AND CONDUITS CAPPED. THIS WORK WILL BE COMPLETED BY TELEPHONE OPERATING COMPANY OF VERMONT LLC, (FAIRPOINT).

EXISTING BRIDGE DATA

1932 CONCRETE T-BEAM W/ CIP CONCRETE DECK. OLD LAID UP STONE ABUTMENTS FOUNDED ON LEDGE.

CURVE DATA

Δ = 35°53'42"
D = 31°49'52"
R = 180.00'
T = 58.30'
L = 112.77'
E = 9.21'

VT STATE PLANE GRID

VT ROUTE 104 TO GEORGIA

VT ROUTE 104 TO WESTFORD, VT.

TH 51

SCHOOL STREET

SPRING STREET

EXISTING RIGHT-OF-WAY

0 20 40
SCALE IN FEET

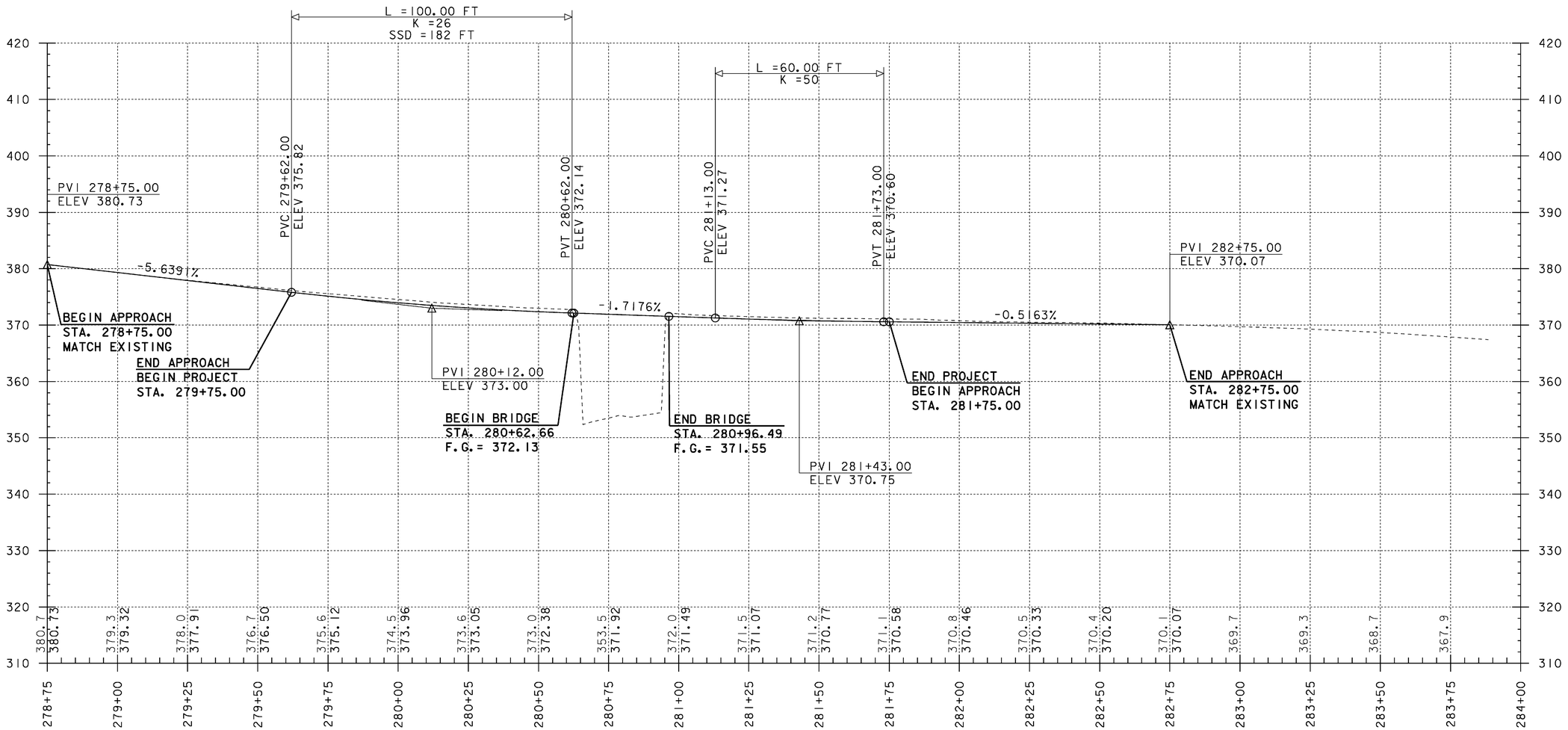
LAYOUT SHEET

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(5)

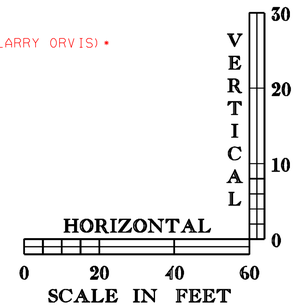
FILE NAME: 86e064/str/se064bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064101.1

PLOT DATE: 17-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 12 OF 61

VT104



FINAL ELEVATIONS OBTAINED WITH 3D SURVEY (LARRY ORVIS)
ON FILE ON VTRANS SERVER



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

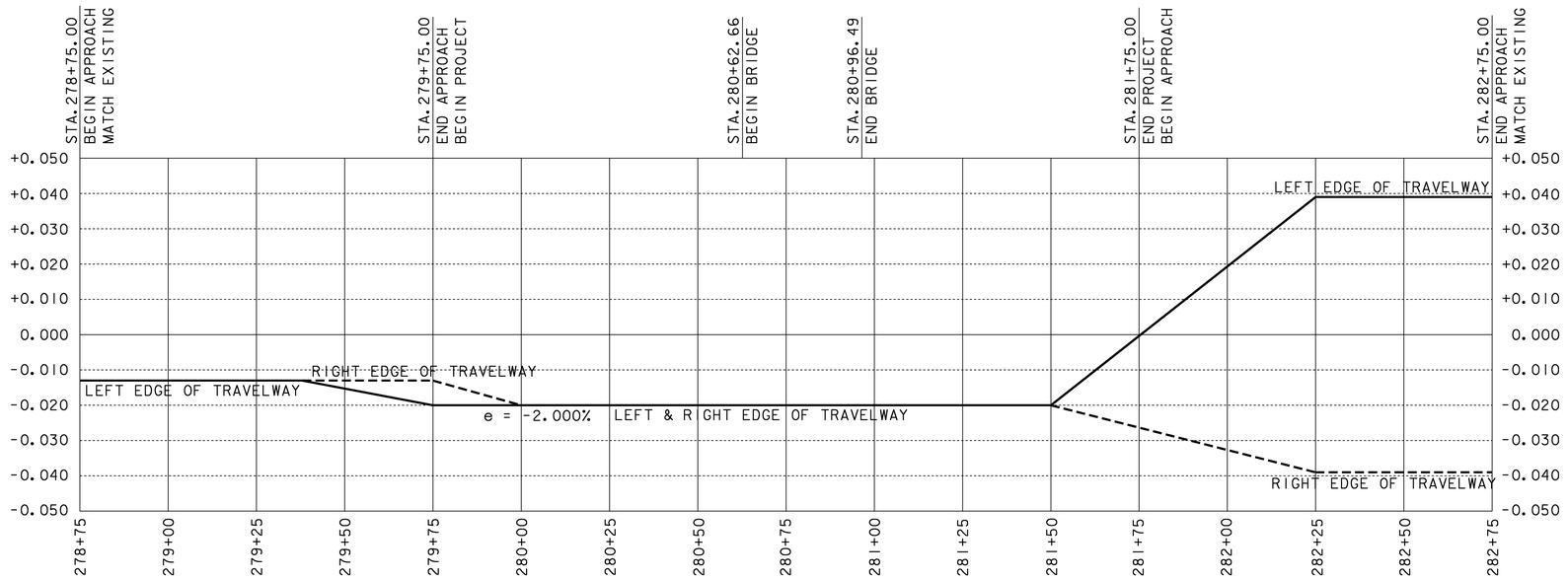
PROFILE SHEET

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: /86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064prl.i

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 13 OF 61



BANKING DIAGRAM

1"=20'-0" HORIZONTALLY
1" = .025 VERTICALLY

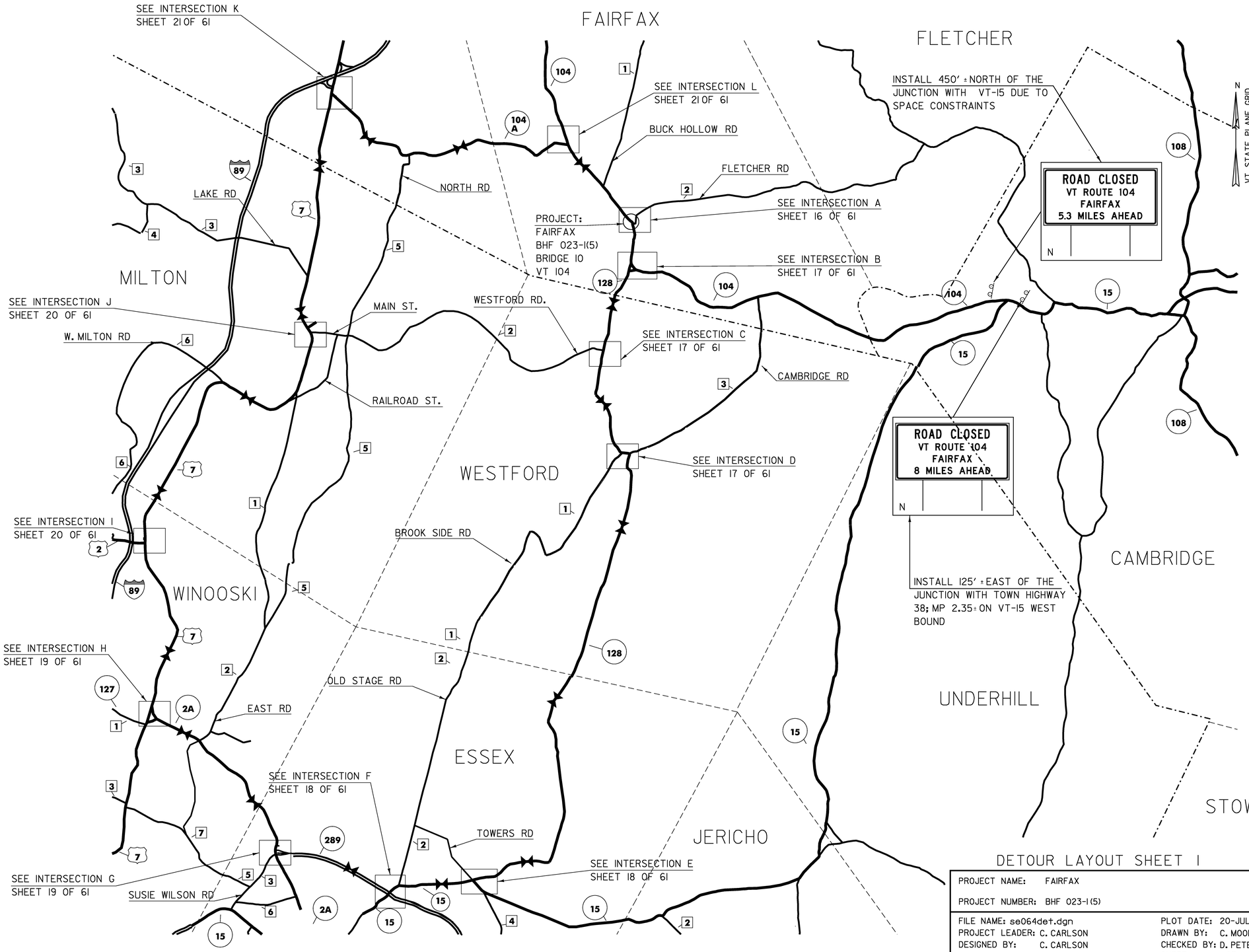
BANKING DIAGRAM

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

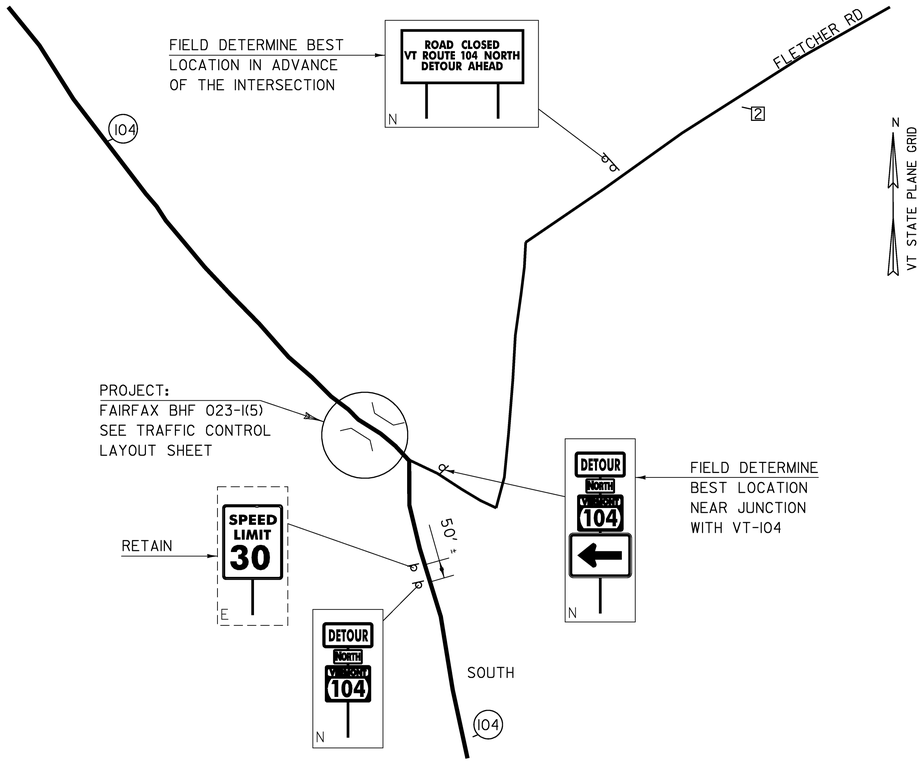
FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064bnk.i

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 14 OF 61



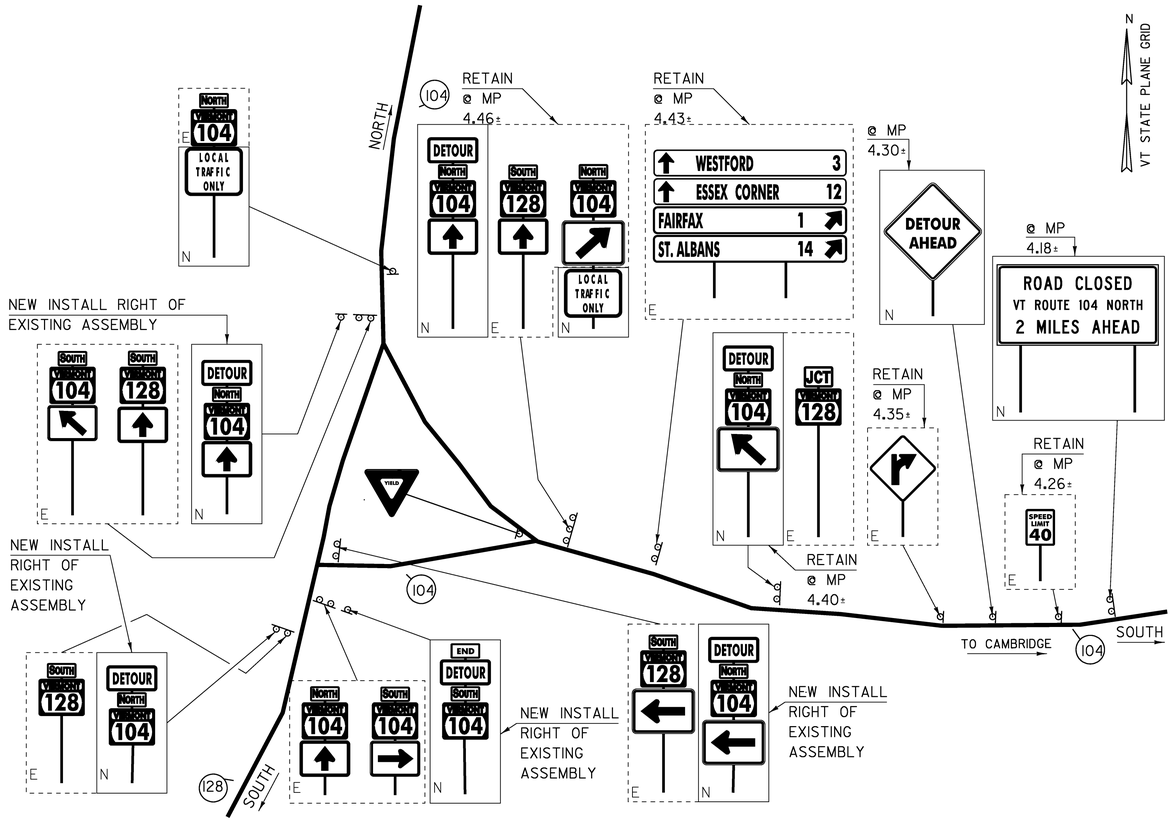
DETOUR LAYOUT SHEET 1

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 20-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 15 OF 61



DETOUR INTERSECTION A

VERMONT 104 AND FAIRFAX TH 2 (FLETCHER RD)
(NOT TO SCALE)

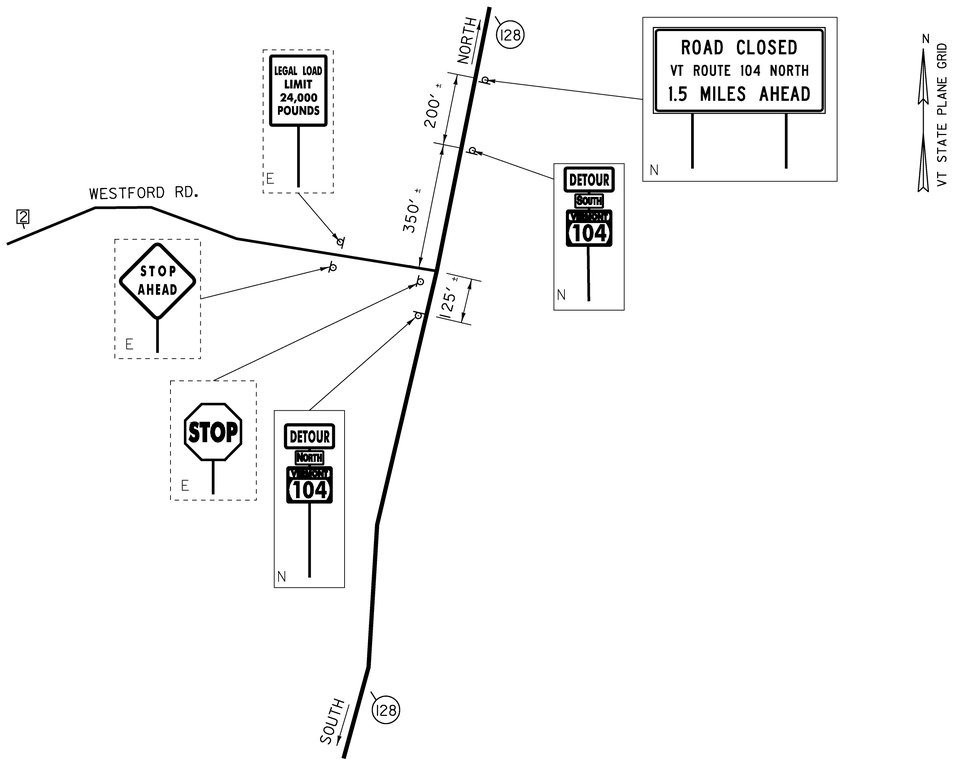


DETOUR INTERSECTION B

VERMONT 128 AND VERMONT 104
(NOT TO SCALE)

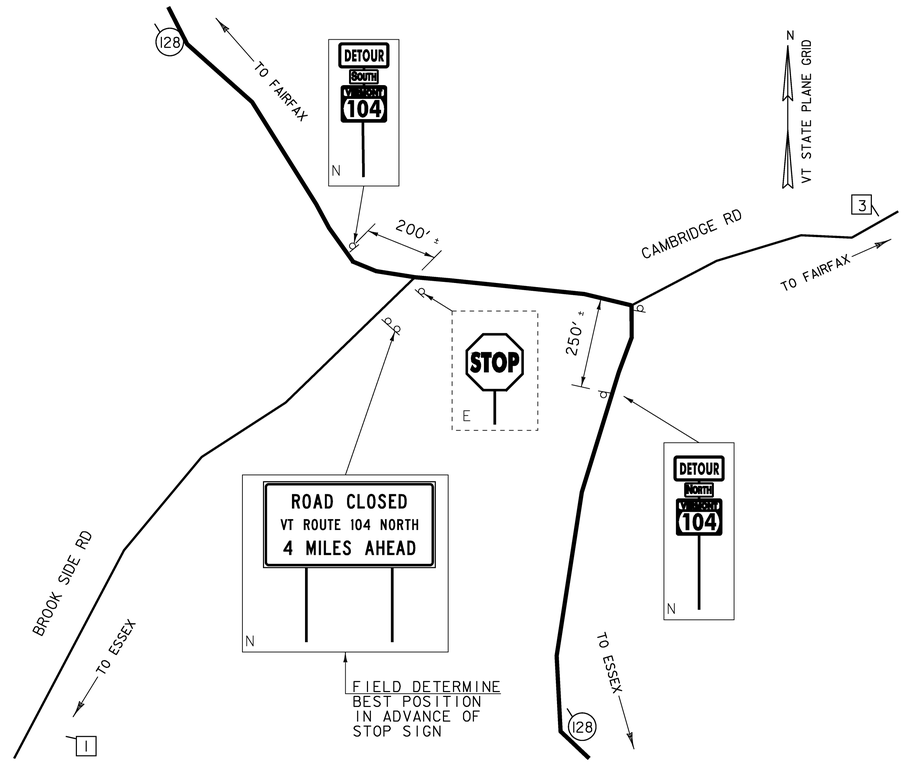
DETOUR LAYOUT SHEET 2

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 16 OF 61



DETOUR INTERSECTION C

VERMONT 128 AND WESTFORD TH 2 (WESTFORD RD.)
(NOT TO SCALE)

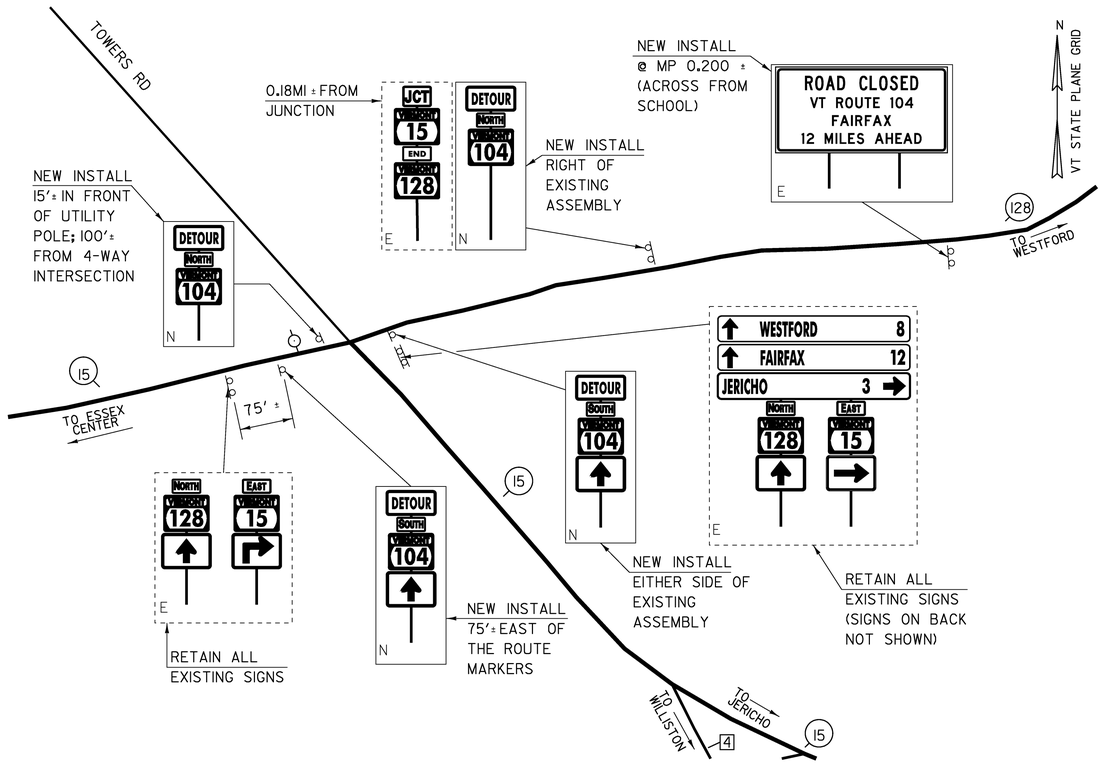


DETOUR INTERSECTION D

VERMONT 128 AND WESTFORD TH 3 (CAMBRIDGE RD.)
(NOT TO SCALE)

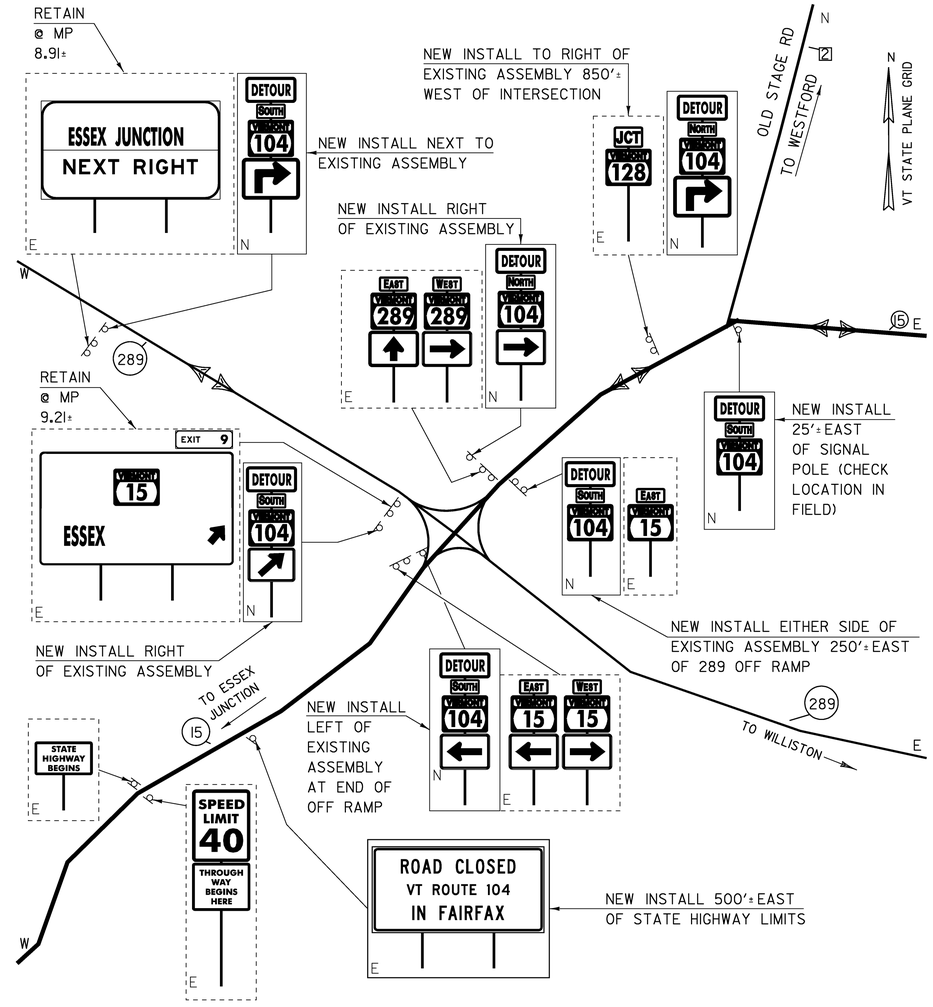
DETOUR LAYOUT SHEET 3

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 17 OF 61



DETOUR INTERSECTION E

VERMONT 15 AND VERMONT 128 AND ESSEX TH (RIVERS RD.)
(NOT TO SCALE)

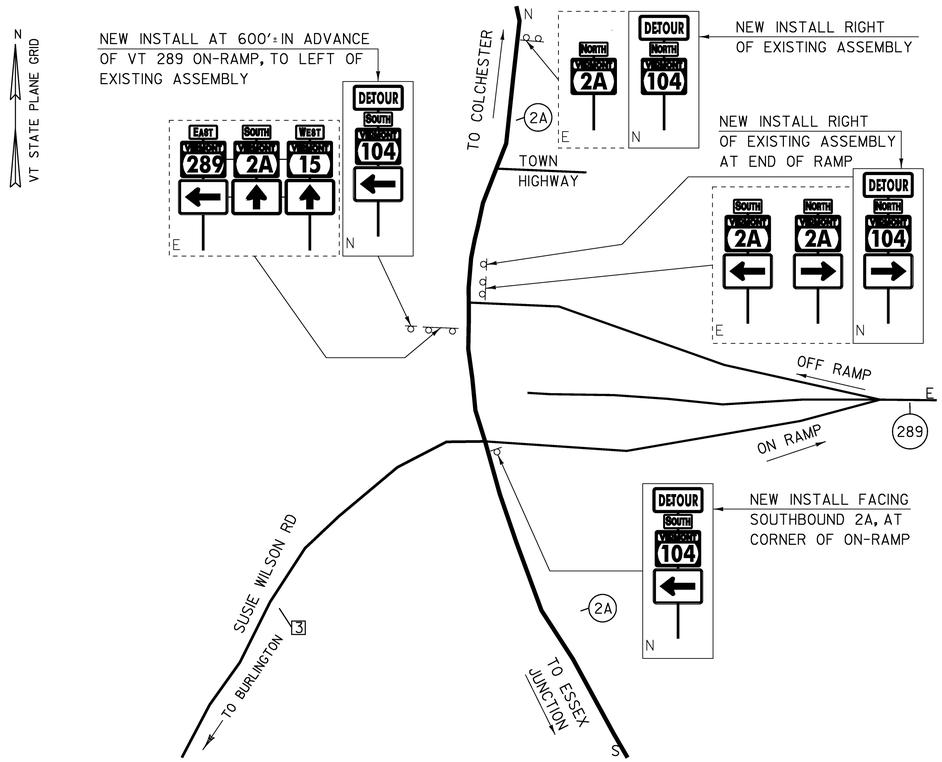


DETOUR INTERSECTION F

VERMONT 15 AND ESSEX TH 2 (OLD STAGE RD.)
AND
VERMONT 15 AND VERMONT 289
(NOT TO SCALE)

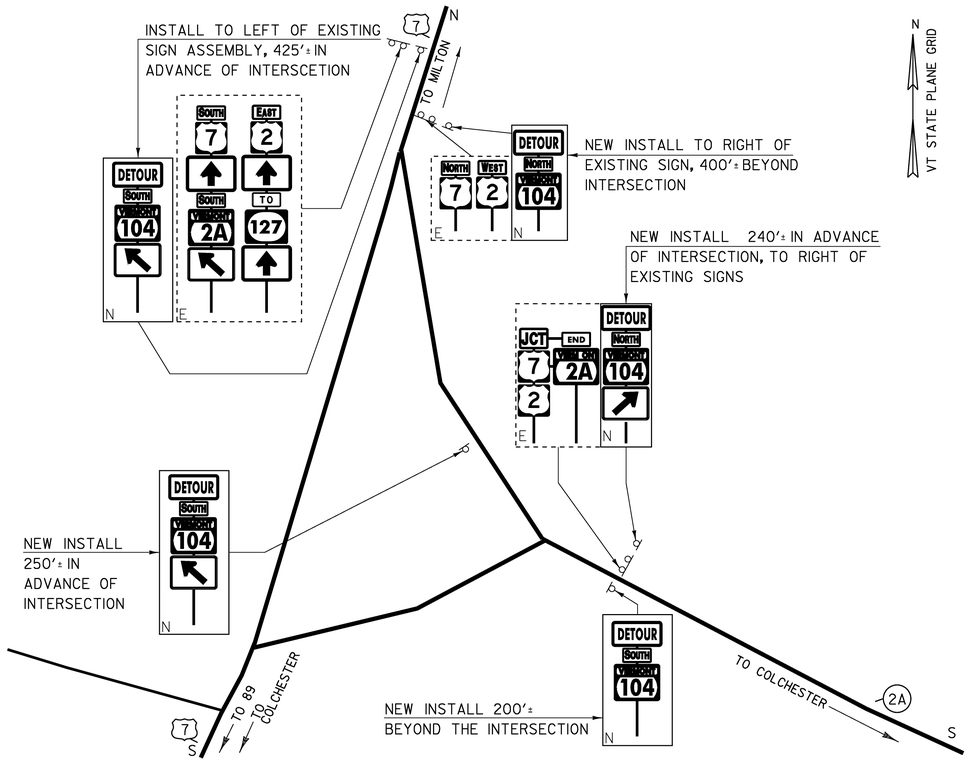
DETOUR LAYOUT SHEET 4

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-I(5)	
FILE NAME: se064det.dgn	PLOT DATE: I3-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET I8 OF 6I



DETOUR INTERSECTION G

VERMONT 2A AND VERMONT 289
(NOT TO SCALE)

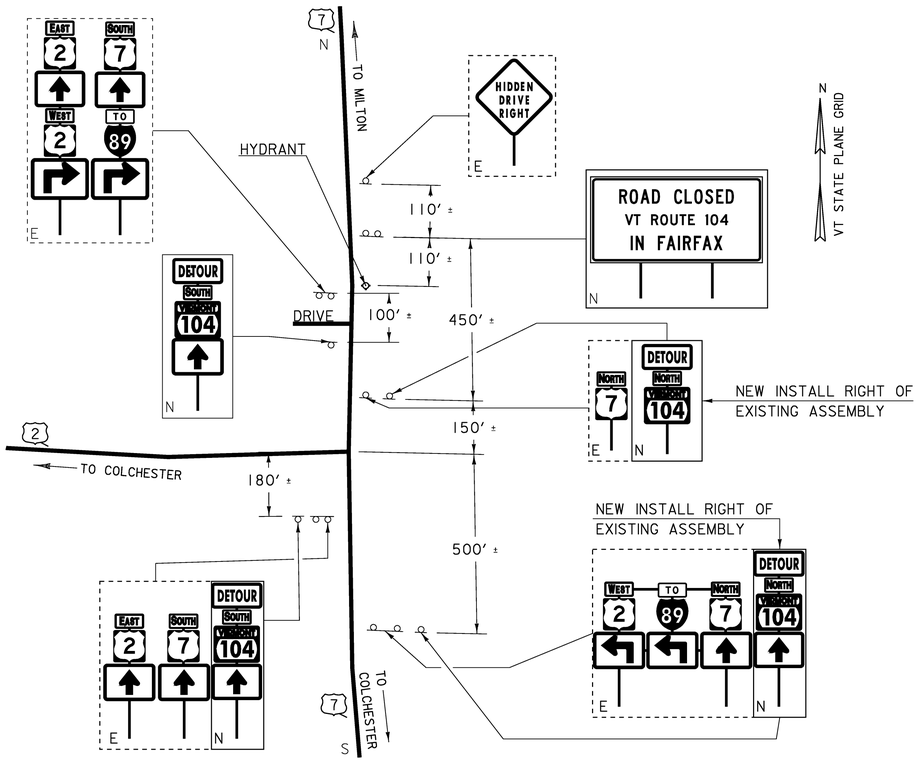


DETOUR INTERSECTION H

US 7 AND VERMONT 2A
(NOT TO SCALE)

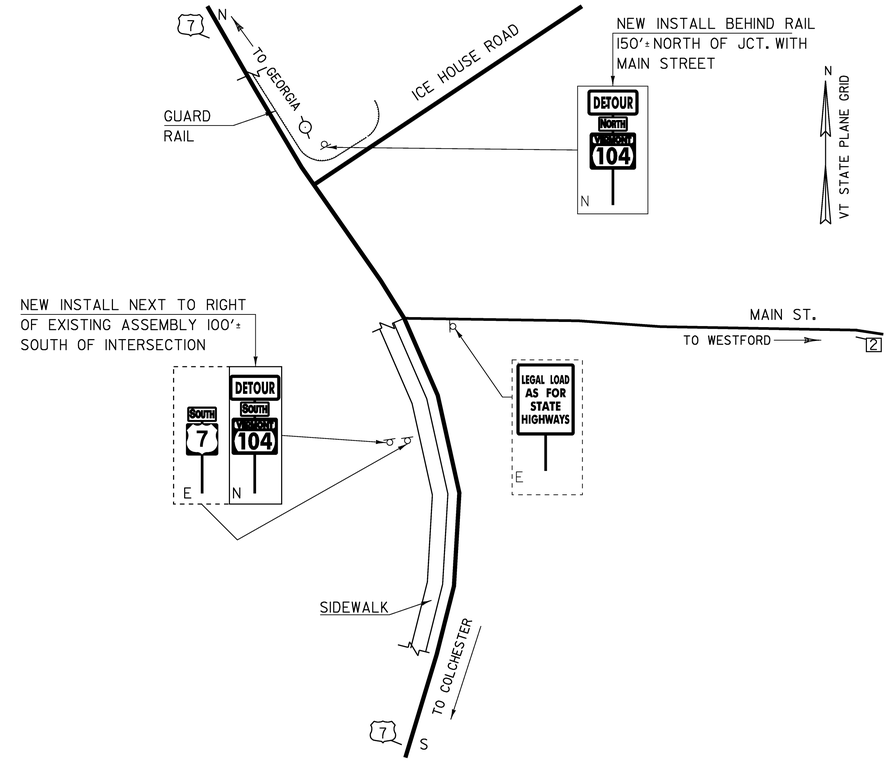
DETOUR LAYOUT SHEET 5

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 19 OF 61



DETOUR INTERSECTION I

US 7 AND US 2
(NOT TO SCALE)

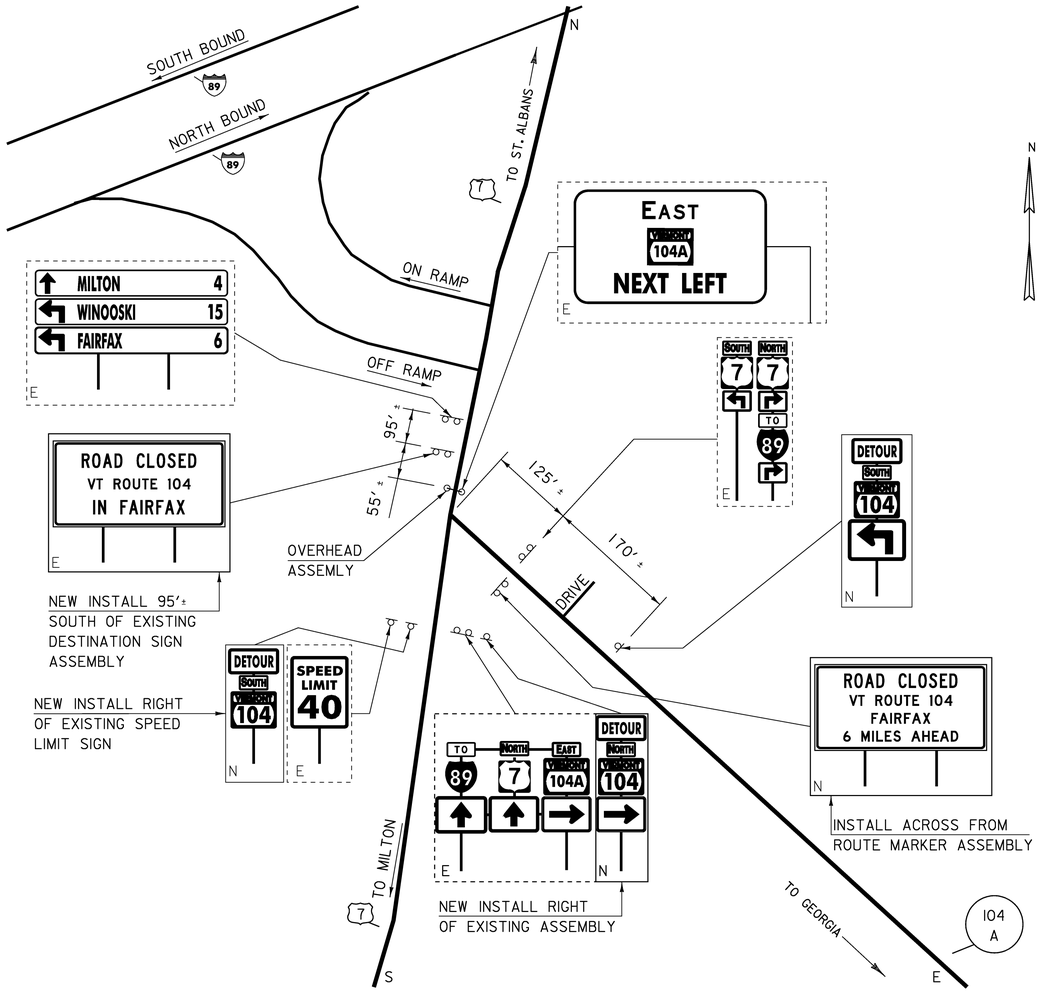


DETOUR INTERSECTION J

US 7 AND MILTON TH 2
(NOT TO SCALE)

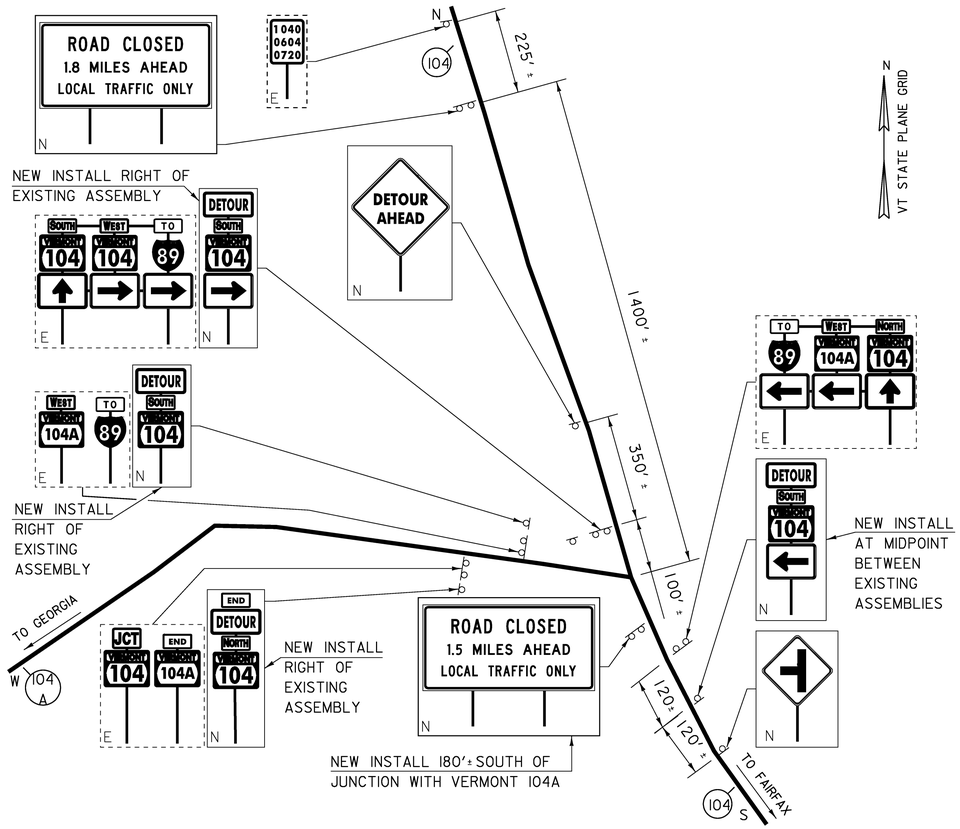
DETOUR LAYOUT SHEET 6

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 20 OF 61



DETOUR INTERSECTION K

US 7 AND VERMONT 104A
(NOT TO SCALE)



DETOUR INTERSECTION L

VERMONT 104/128 AND VERMONT 104A
(NOT TO SCALE)

DETOUR LAYOUT SHEET 7

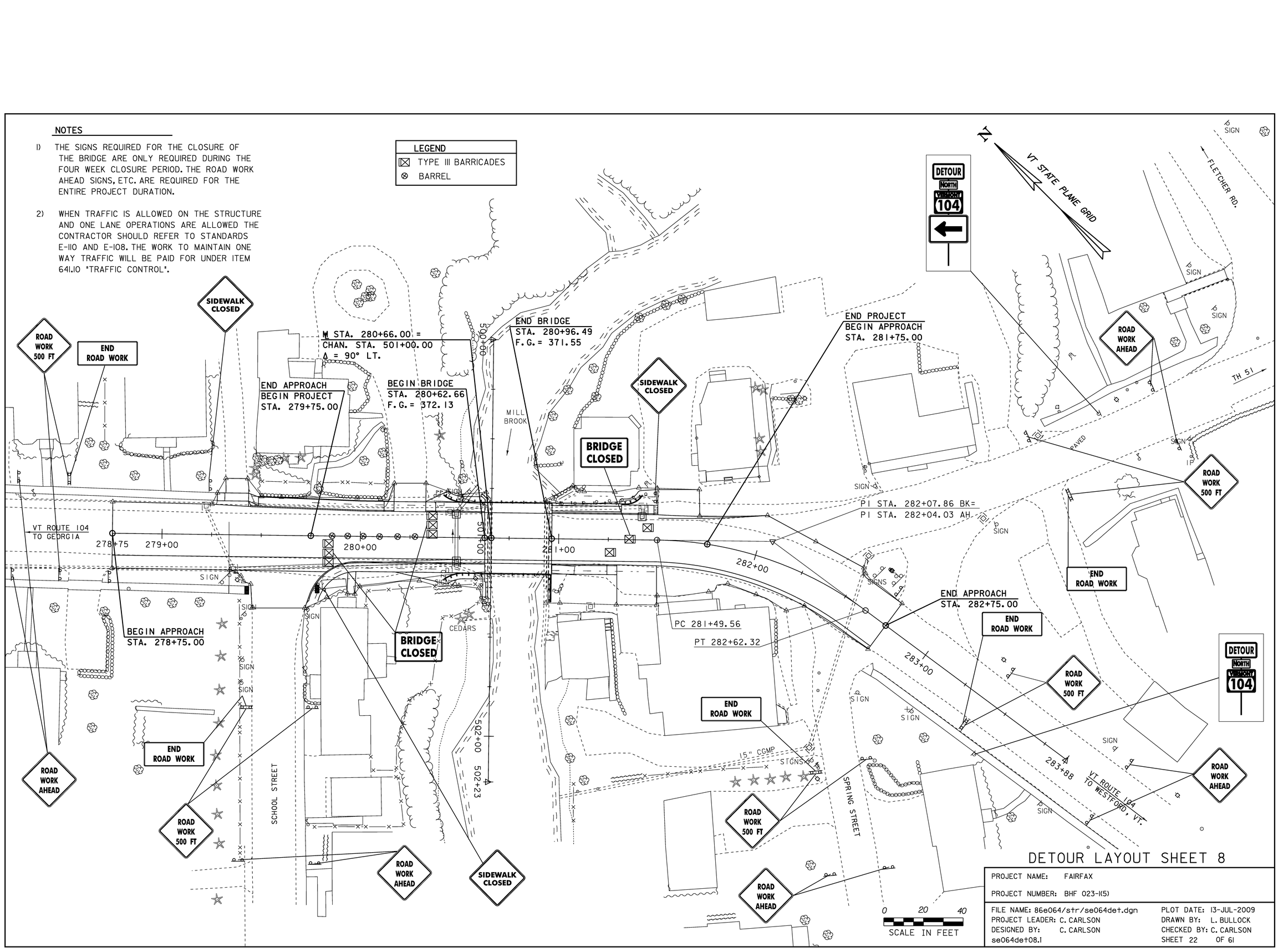
PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: se064det.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: D. PETERSON
	SHEET 21 OF 61

NOTES

1) THE SIGNS REQUIRED FOR THE CLOSURE OF THE BRIDGE ARE ONLY REQUIRED DURING THE FOUR WEEK CLOSURE PERIOD. THE ROAD WORK AHEAD SIGNS, ETC. ARE REQUIRED FOR THE ENTIRE PROJECT DURATION.

2) WHEN TRAFFIC IS ALLOWED ON THE STRUCTURE AND ONE LANE OPERATIONS ARE ALLOWED THE CONTRACTOR SHOULD REFER TO STANDARDS E-110 AND E-108. THE WORK TO MAINTAIN ONE WAY TRAFFIC WILL BE PAID FOR UNDER ITEM 641.10 "TRAFFIC CONTROL".

LEGEND
- TYPE III BARRICADES
- BARREL



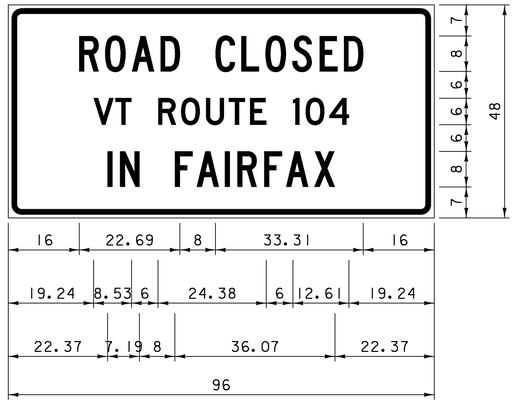
DETOUR LAYOUT SHEET 8

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-I(5)
FILE NAME:	86e064/str/se064det.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	C. CARLSON
se064det08.i	
PLOT DATE:	13-JUL-2009
DRAWN BY:	L. BULLOCK
CHECKED BY:	C. CARLSON
SHEET	22 OF 61

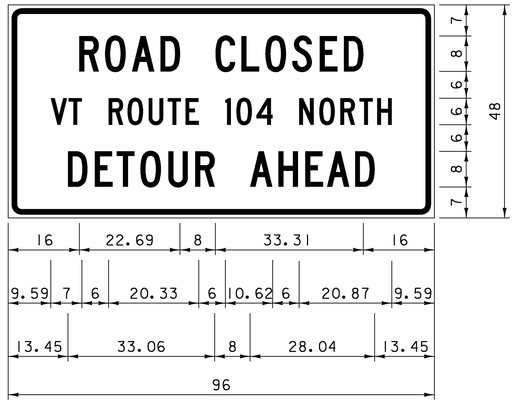
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DETOUR SIGN SUMMARY SHEET 1

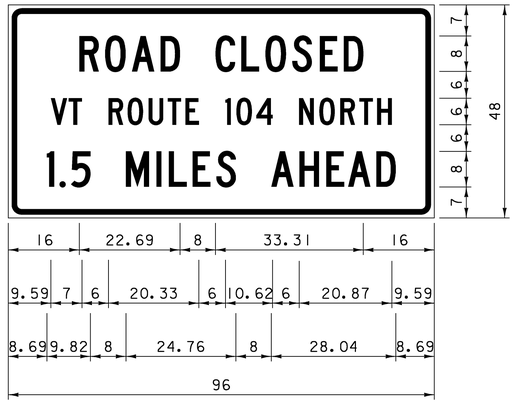
QUANTITY OF SIGNS	SIGN LEGEND	SIGN DIMENSIONS WIDTH (mm)	SIGN DIMENSIONS HEIGHT (mm)
2	DETOUR AHEAD W20-2	48	48
46	DETOUR M4-8	24	12
2	END M4-6	24	12
23	NORTH M3-1	24	12
23	SOUTH M3-3	24	12
46	VERMONT 104 M1-5	30	24
1	M5-1L	21	15
2	M5-1R	21	15
8	M6-3	21	15
10	M6-1	21	15
3	M6-2L	21	15
2		21	15
1	BRIDGE CLOSED AHEAD VT-104 VD 701	6	8
3	ROAD CLOSED VT ROUTE 104 IN FAIRFAX	96	48
1	ROAD CLOSED VT ROUTE 104 NORTH 4 MILES AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 NORTH DETOUR AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 NORTH 2 MILES AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 NORTH 1.5 MILES AHEAD	96	48
1	ROAD CLOSED 1.5 MILES AHEAD LOCAL TRAFFIC ONLY	96	48



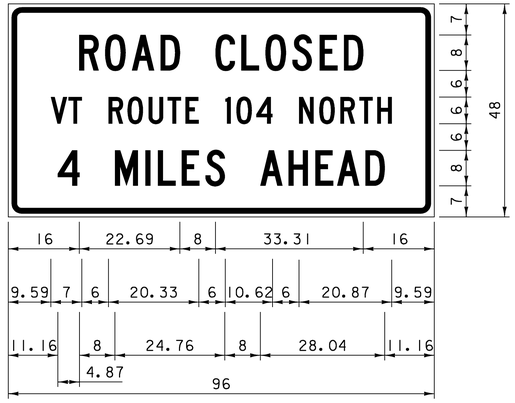
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "VT ROUTE 1047" D; "IN FAIRFAX"C;



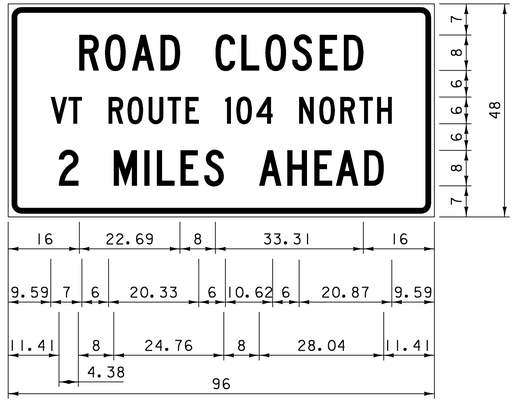
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "VT ROUTE 104 NORTH" C; "DETOUR AHEAD"C;



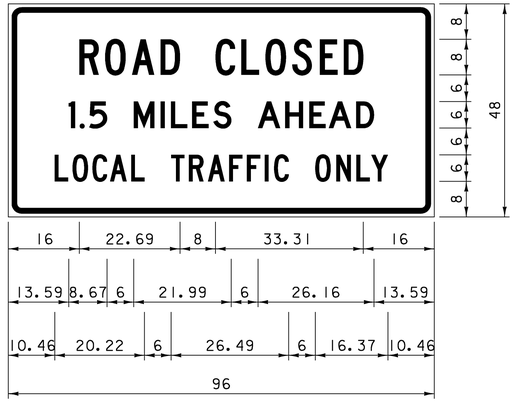
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "VT ROUTE 104 NORTH" D; "1.5 MILES AHEAD"C;



3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "VT ROUTE 104 NORTH" D; "4 MILES AHEAD"C;



3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "VT ROUTE 104 NORTH" D; "2 MILES AHEAD"C;



3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "1.5 MILES AHEAD" D; "LOCAL TRAFFIC ONLY"C;

NOTES:

THE SIGNS SHOWN ON THIS SHEET AND SHEET 24 ARE THE SIGNS NECESSARY TO SIGN THE DETOUR ROUTES. THE ROAD WORK AHEAD, END ROAD WORK, SIDEWALK CLOSED, AND BRIDGE CLOSED, ETC SIGNS ARE NOT INCLUDED IN THE SIGN SUMMARY BUT ARE REQUIRED.

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

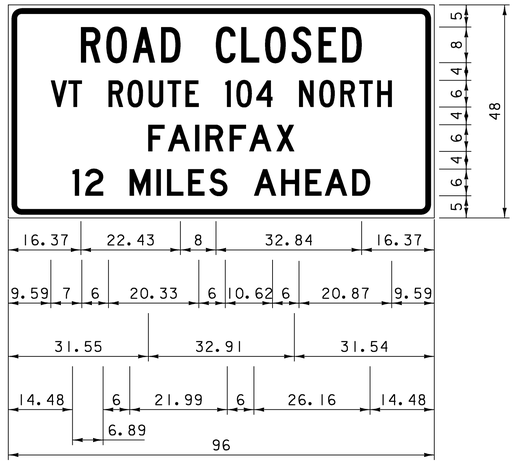
FILE NAME: 86e064\str\s86e064tss.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
DETOUR SIGN SUMMARY SHEET 1

PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 23 OF 61

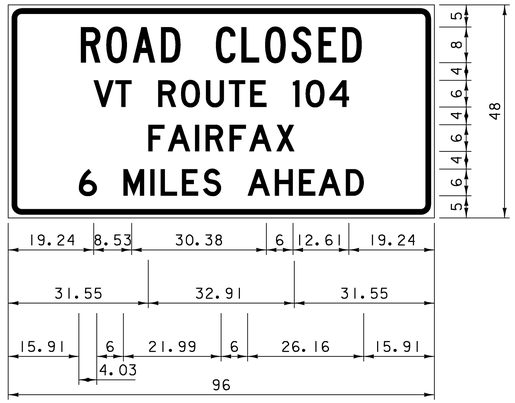
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DETOUR SIGN SUMMARY SHEET 2

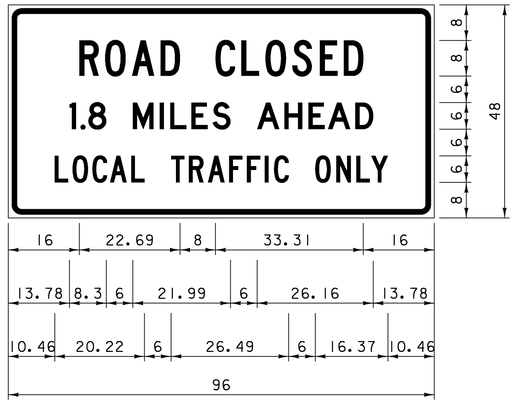
QUANTITY OF SIGNS	SIGN LEGEND	SIGN DIMENSIONS WIDTH (mm)	SIGN DIMENSIONS HEIGHT (mm)
1	ROAD CLOSED VT ROUTE 104 FAIRFAX 12 MILES AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 NORTH FAIRFAX 8 MILES AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 FAIRFAX 6 MILES AHEAD	96	48
1	ROAD CLOSED VT ROUTE 104 FAIRFAX 5.3 MILES AHEAD	96	48
1	ROAD CLOSED 1.8 MILES AHEAD LOCAL TRAFFIC ONLY	96	48
1	LOCAL TRAFFIC ONLY	24	24



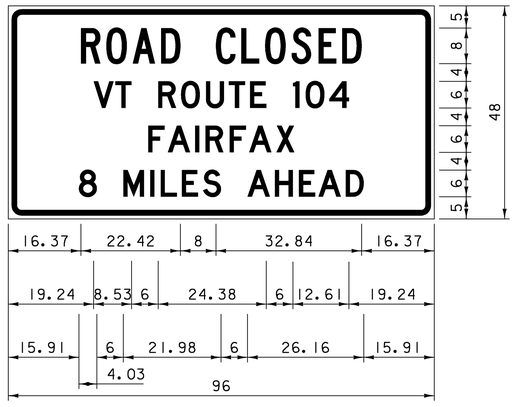
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C; "VT ROUTE 104 NORTH FAIRFAX" D; "12 MILES AHEAD" D;



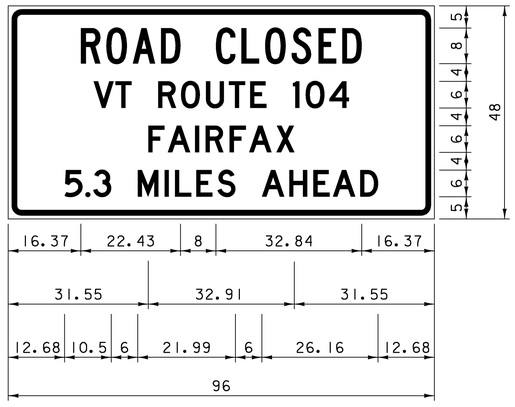
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C; "VT ROUTE 104" C; "8 MILES AHEAD"D;



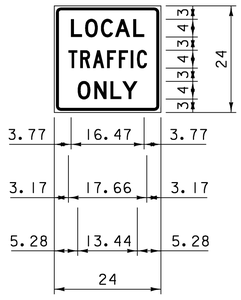
3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C 107% SPACING; "1.8 MILES AHEAD" D; "LOCAL TRAFFIC ONLY" C;



3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C; "VT ROUTE 104" D; "FAIRFAX" D; "8 MILES AHEAD"D;



3.00" RADIUS, 1.25" BORDER, 0.75" INDENT, BLACK ON WHITE; "ROAD CLOSED" C; "VT ROUTE 104" D; "FAIRFAX"C; "5.3 MILES AHEAD" D;



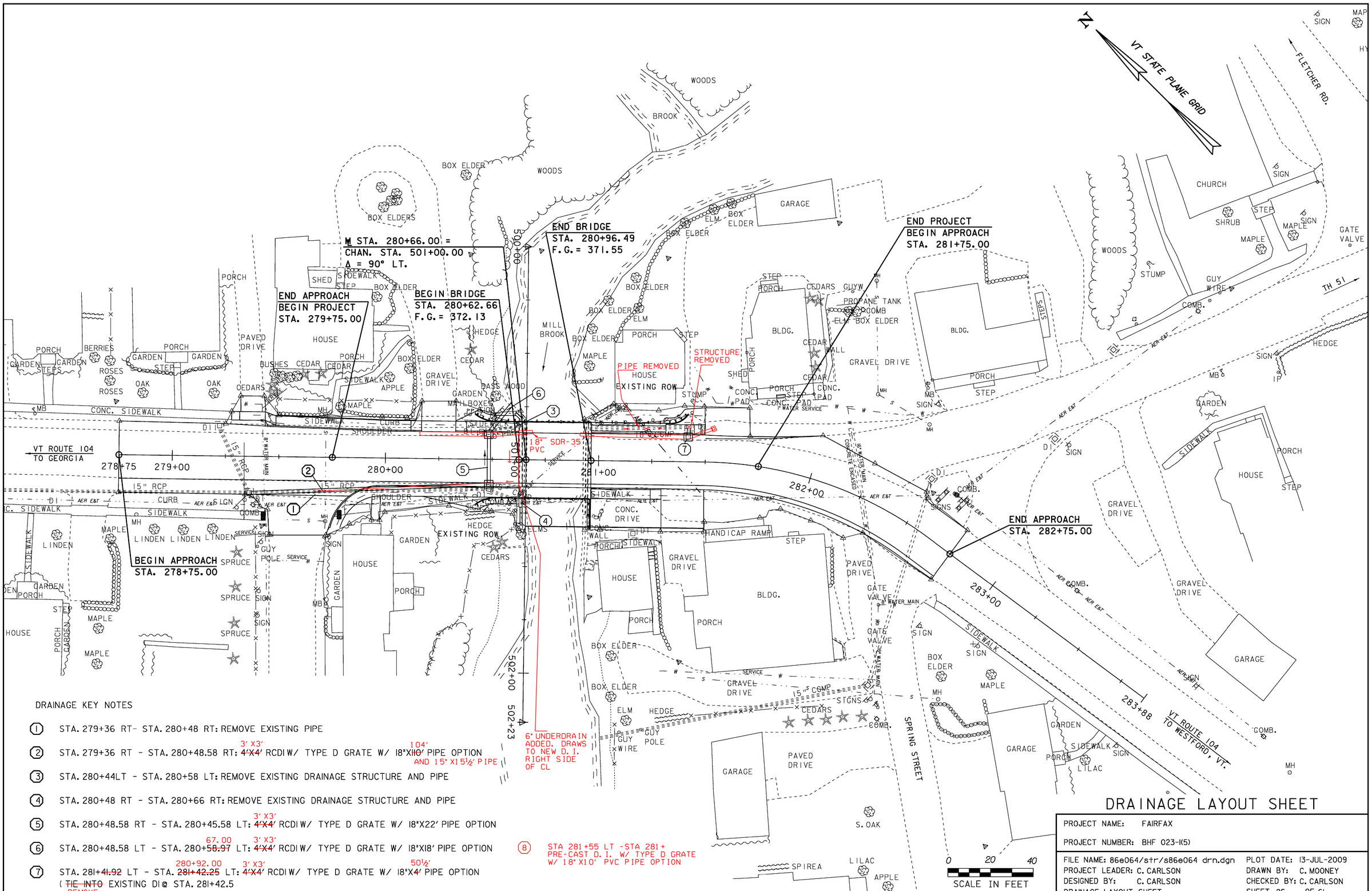
1.50" RADIUS, 0.63" BORDER, 0.38" INDENT, BLACK ON WHITE; "LOCAL" D ; "TRAFFIC" C; "ONLY" D;

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064\str\s86e064tss.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
DETOUR SIGN SUMMARY SHEET 2

PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 24 OF 61



DRAINAGE KEY NOTES

(1) STA. 279+36 RT- STA. 280+48 RT: REMOVE EXISTING PIPE

(2) STA. 279+36 RT - STA. 280+48.58 RT: ~~4'X4'~~ 3'X3' RCDI W/ TYPE D GRATE W/ 18"X~~110'~~ 104' PIPE OPTION AND 15"X15½' PIPE

(3) STA. 280+44LT - STA. 280+58 LT: REMOVE EXISTING DRAINAGE STRUCTURE AND PIPE

(4) STA. 280+48 RT - STA. 280+66 RT: REMOVE EXISTING DRAINAGE STRUCTURE AND PIPE

(5) STA. 280+48.58 RT - STA. 280+45.58 LT: ~~4'X4'~~ 3'X3' RCDI W/ TYPE D GRATE W/ 18"X22' PIPE OPTION

(6) STA. 280+48.58 LT - STA. 280+~~58.97~~ 67.00 LT: ~~4'X4'~~ 3'X3' RCDI W/ TYPE D GRATE W/ 18"X18' PIPE OPTION

(7) STA. 281+~~41.92~~ 280+92.00 LT - STA. ~~281+42.25~~ 281+50½' LT: ~~4'X4'~~ 3'X3' RCDI W/ TYPE D GRATE W/ 18"X~~4'~~ PIPE OPTION
(~~TIE INTO~~ REMOVE EXISTING DI @ STA. 281+42.5

(8) STA 281+55 LT -STA 281+ PRE-CAST D.I. W/ TYPE D GRATE W/ 18"X10' PVC PIPE OPTION

DRAINAGE LAYOUT SHEET

0 20 40
SCALE IN FEET

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: 86e064/str/s86e064 drn.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
DRAINAGE LAYOUT SHEET	SHEET 25 OF 61

REMOVE SIGNS
STA. 280+52.63 LT

N

VT STATE PLANE GRID

280+52.63 LT.
REMOVE

FAIRFAX SCHOOLS

END APPROACH
BEGIN PROJECT
STA. 279+75.00

BEGIN BRIDGE
STA. 280+62.66
F.G. = 372.13

END BRIDGE
STA. 280+96.49
F.G. = 371.55

END PROJECT
BEGIN APPROACH
STA. 281+75.00

282+56.58 LT.
RETAIN

282+64.47 LT.
RETAIN

STOP

FLETCHER RD.

SIGN

GATE VALVE

GUY WIRE

COMB.

TH 51

GUYW

MILL BROOK

EXISTING ROW

282+36.60 LT.
RETAIN

PI STA. 282+07.86 BK=
PI STA. 282+04.03 AH

282+65.93 LT.
RETAIN

VT ROUTE 104
TO GEORGIA

278+75 279+00 280+00 281+00 282+00

CONC. WALL
PORCH

PC 281+49.56

PT 282+62.32

BEGIN APPROACH
STA. 278+75.00

SIGNS

GUY POLE

CEDARS

END APPROACH
STA. 282+75.00

283+00

283+88

VT ROUTE 104
TO WESTFORD, VT.

279+73.92 RT.
RETAIN

279+42.18 RT.
RETAIN

SPEED LIMIT 30

SCHOOL STREET

15" CCMP

279+32.25 RT.
RETAIN

BINGHAMVILLE 5
FLETCHER 6
CAMBRIDGE 8
FAIRFAX SCHOOLS

282+83.70 RT.
RETAIN

LEGAL LOAD LIMIT 24,000 POUNDS

283+11.35 RT.
RETAIN

SPRING STREET

0 20 40
SCALE IN FEET

EXISTING SIGN LAYOUT SHEET

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064trf.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064exl.l

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 26 OF 61

4" WHITE LINE
STA. 278+75.0 LT. - 281+50.0 LT.
STA. 281+50.0 LT - 282+00.0 LT. (570' R.)
STA. 278+75.0 RT. - 279+22.7 RT.
STA. 279+22.7 RT. - 279+45.8 RT. (25' R.)
STA. 279+72.4 RT. - 279+98.2 RT. (25' R.)
STA. 279+98.2 RT. - 282+28.4 RT.
STA. 282+28.4 RT. - 282+48.5 RT. (35' R.)
STA. 282+41.7 LT - 282+45.7 LT. (5' R.)
STA. 282+48.5 LT. - 282+~~75.0~~ 3+25.0 LT.

CROSSWALK MARKING
STA. 279+40.0 RT. - 279+75.0 LT.

TRAFFIC SIGNS, TYPE A
STA. 280+52.63 LT

N

VT STATE PLANE GRID

280+52.5 RT.
REPLACE
FAIRFAX SCHOOLS
DIAL

END APPROACH
BEGIN PROJECT
STA. 279+75.00

BEGIN BRIDGE
STA. 280+62.66
F.G.= 372.13

END BRIDGE
STA. 280+96.49
F.G.= 371.55

MILL BROOK

EXISTING ROW

END PROJECT
BEGIN APPROACH
STA. 281+75.00

282+56.58 LT.
RETAIN

282+64.47 LT.
RETAIN
STOP

282+36.60 LT.
RETAIN
STOP

24" STOP BAR
ADDED (14 LF)

PI STA. 282+07.86 BK=
PI STA. 282+04.03 AH

282+65.93 LT.
RETAIN

FLETCHER RD.

TH 51

GUY WIRE
COMB.
GUY
COMB
SIGN
GATE VALVE
IP

VT ROUTE 104
TO GEORGIA

278+75
279+00
280+00
281+00
282+00
283+00
283+88

BEGIN APPROACH
STA. 278+75.00

24" STOP BAR
ADDED (14 LF)

CONC. WALL
PORCH
CEDARS

PC 281+49.56
PT 282+62.32

279+73.92 RT.
RETAIN
STOP

279+42.18 RT.
RETAIN
SPEED LIMIT 30

SCHOOL STREET

279+32.25 RT.
RETAIN
BINGHAMVILLE 5
FLETCHER 6
CAMBRIDGE 8
FAIRFAX SCHOOLS

15" COMP
SIGNS
GUY POLE
GUY WIRE

282+83.70 RT.
RETAIN
STOP
LEGAL LOAD LIMIT 24,000 POUNDS

283+11.35 RT.
RETAIN
SPEED LIMIT 30

SPRING STREET

4" YELLOW LINE
STA. 278+75.0 ℄ - 279+40.0 ℄ (DOUBLE)
STA. 279+80.0 ℄ - 281+90.0 ℄ (DOUBLE)

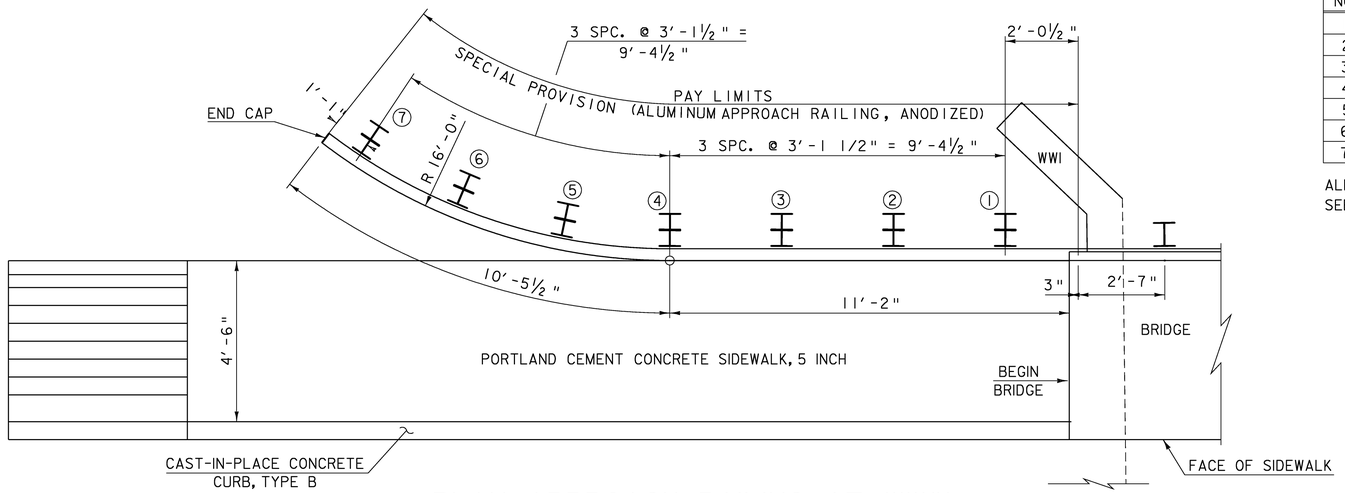
0 20 40
SCALE IN FEET

NEW SIGNS & PAVEMENT MARKING SHEET

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(5)

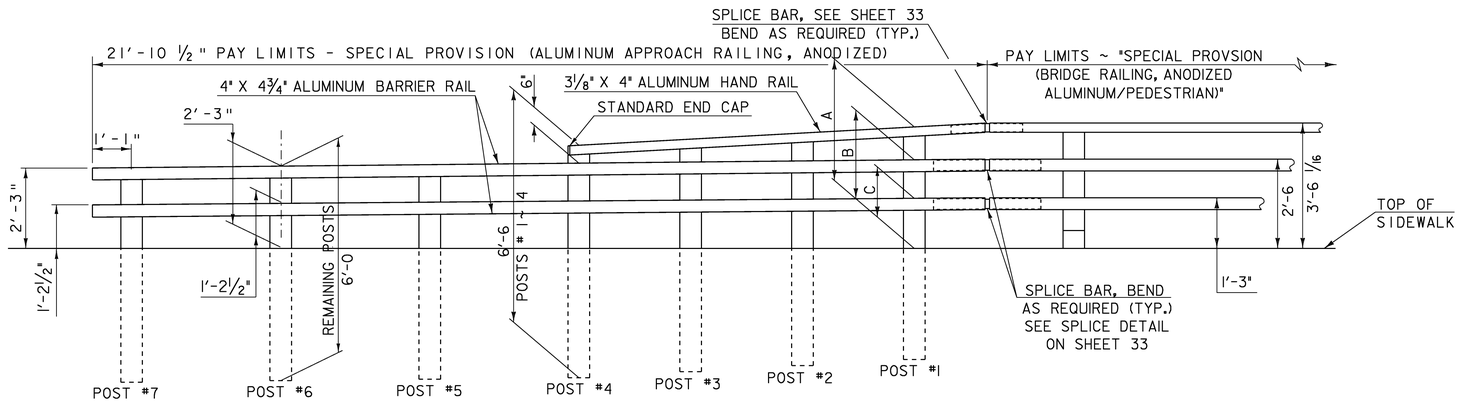
FILE NAME: 86e064/str/se064trf.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064nsl.1

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 27 OF 61



PLAN APPROACH RAILING AT WW#1

SCALE 1/2" = 1'-0



ELEVATION APPROACH RAILING AT WW #1

SCALE 1/2" = 1'-0

ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A SIDEWALK CONDITION

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

ALL REMAINING POSTS TO HAVE THE SAME DIMENSIONS AS POST NO. 7
SEE SHEET 36 FOR OFFSET BLOCK INFORMATION.

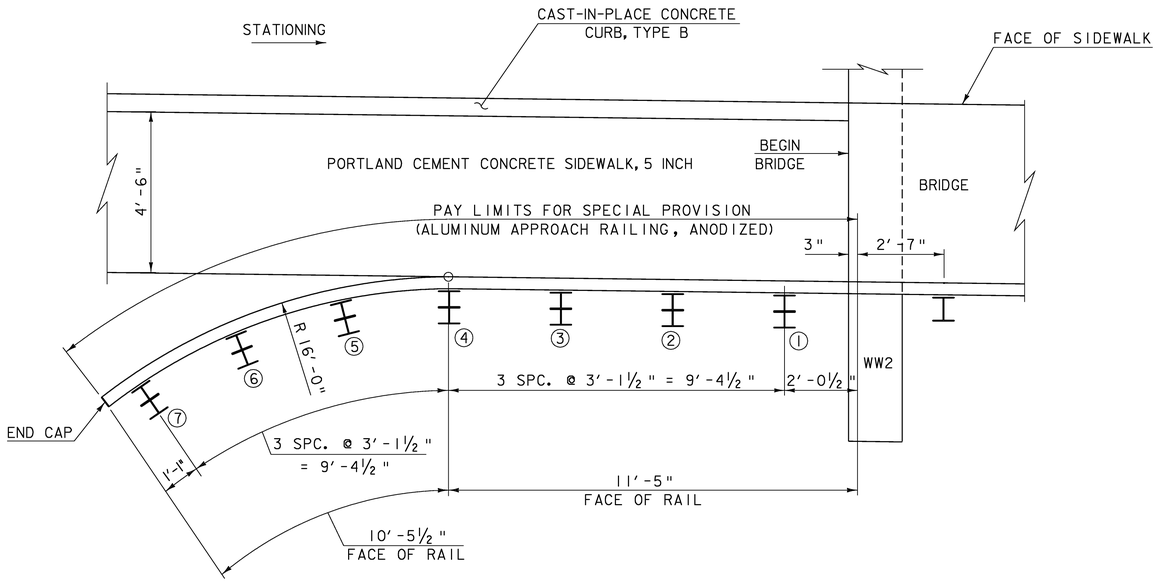
ALUMINUM RAILING DETAILS (SHEET 1)

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: /86e064/str/se064rail.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064rail1	SHEET 28 OF 61

ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A SIDEWALK CONDITION

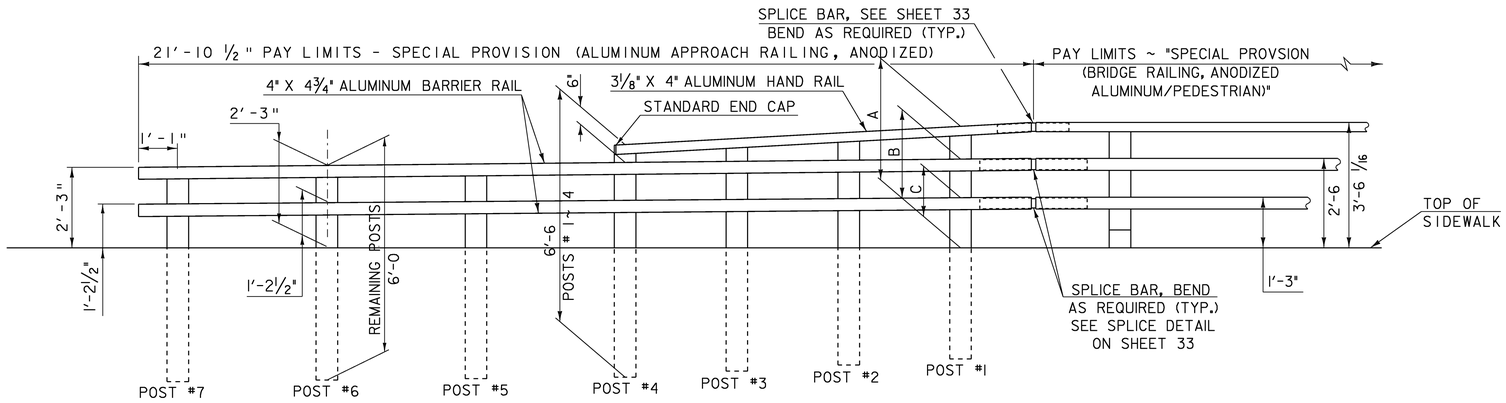
POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	3-4 1/2	2-5 1/2	1-4 9/16	0-11 7/16	1-0 15/16	2-4 15/16	
2	3-2 1/16	2-4 3/4	1-3 15/16	0-9 3/4	1-0 7/8	2-3 3/16	
3	3-0 11/16	2-4	1-3 5/16	0-8 1/8	1-0 13/16	2-1 1/2	
4	2-9 1/4	2-3 1/4	1-2 11/16	0-6 7/16	1-0 3/4	1-11 3/4	
5		2-3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

ALL REMAINING POSTS TO HAVE THE SAME DIMENSIONS AS POST NO. 7
SEE SHEET 36 FOR OFFSET BLOCK INFORMATION.



PLAN APPROACH RAILING AT WW #2

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



ELEVATION APPROACH RAILING AT WW #2

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

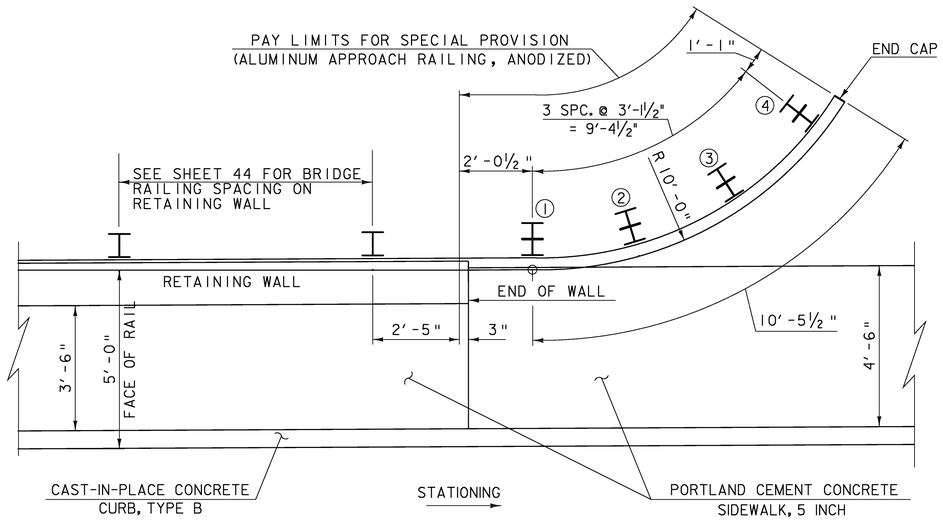
ALUMINUM RAILING DETAILS (SHEET 2)

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

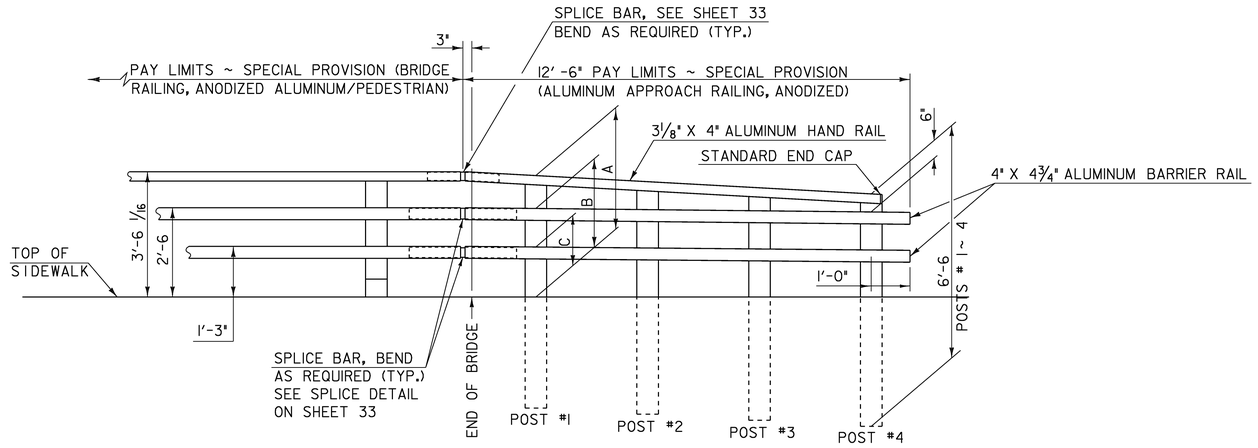
FILE NAME: /86e064/str/se064rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064rail2.1

PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 29 OF 61



PLAN APPROACH RAILING AT RETAINING WALL

SCALE ½" = 1'-0
1 0 1 2



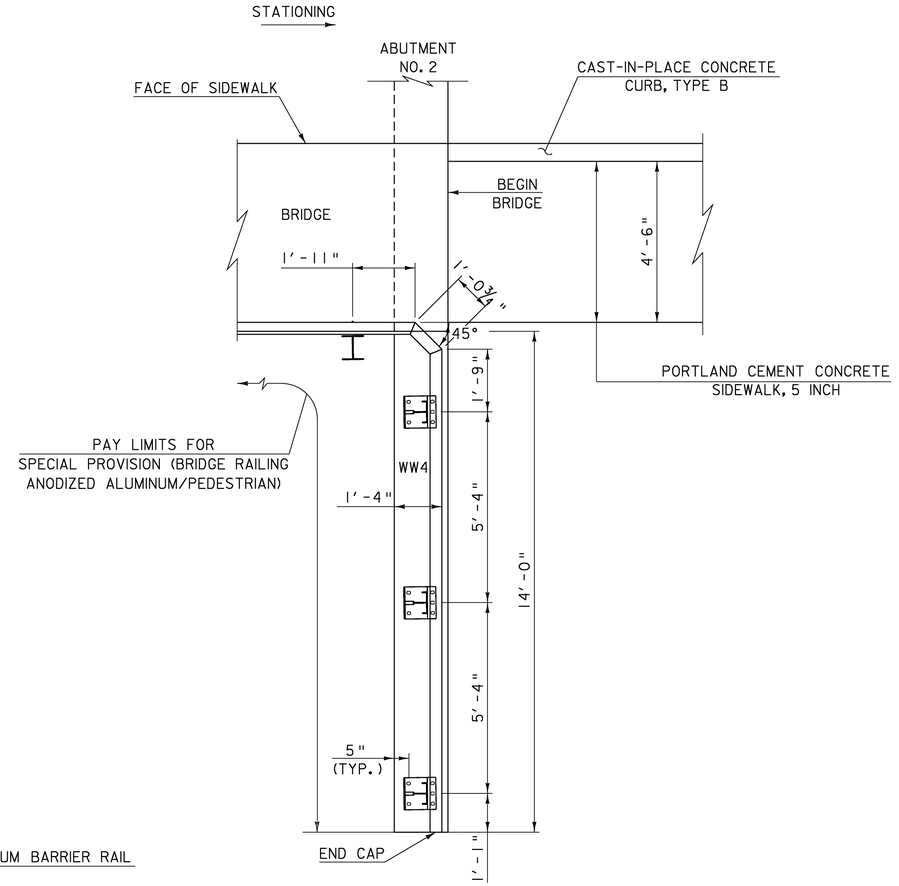
ELEVATION APPROACH RAILING AT WW #3

SCALE ½" = 1'-0
1 0 1 2

ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A SIDEWALK CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS		
	A	B	C	D	E	F
1	3-4½	2-5½	1-4⅜	0-11⅞	1-0⅝	2-4⅞
2	3-2 1/16	2-4¾	1-3⅝	0-9¾	1-0¾	2-3⅛
3	2-11⅛	2-4	1-3⅝	0-8⅛	1-0⅛	2-1½
4	2-9¼	2-3¼	1-2⅛	0-6⅞	1-0⅝	1-11⅜

SEE SHEET 36 FOR OFFSET BLOCK INFORMATION.



PLAN BRIDGE RAILING AT WW #4

SCALE ½" = 1'-0
1 0 1 2

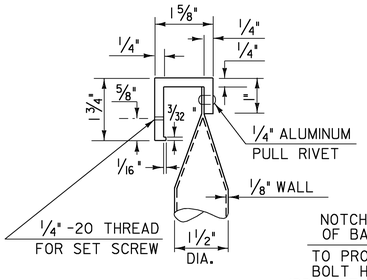
ALUMINUM RAILING DETAILS (SHEET 3)

PROJECT NAME: FAIRFAX

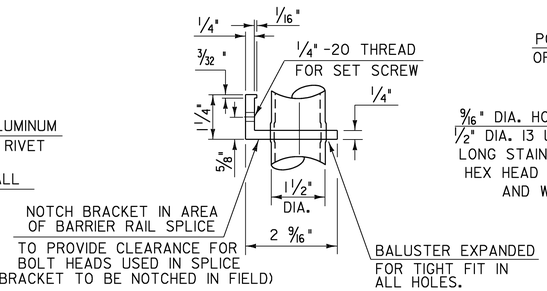
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: /86e064/str/se064rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064rail3.1

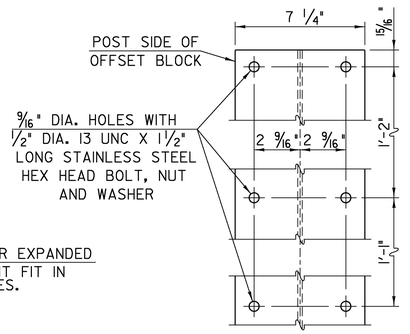
PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 30 OF 61



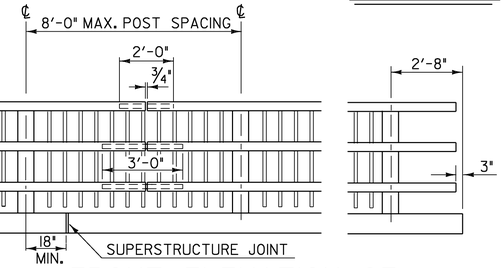
DETAIL A



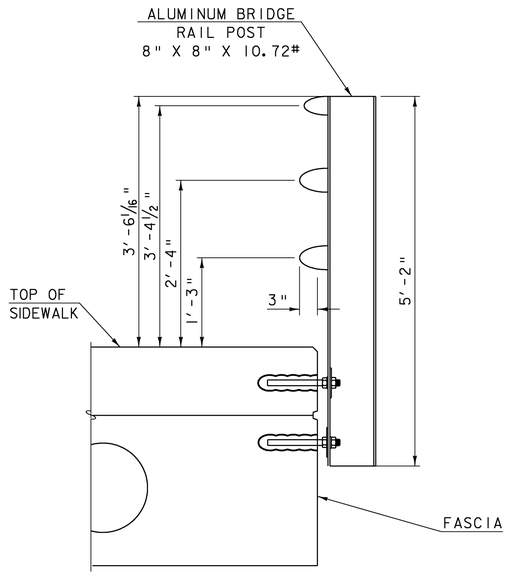
DETAIL B



OFFSET BLOCK CONNECTION

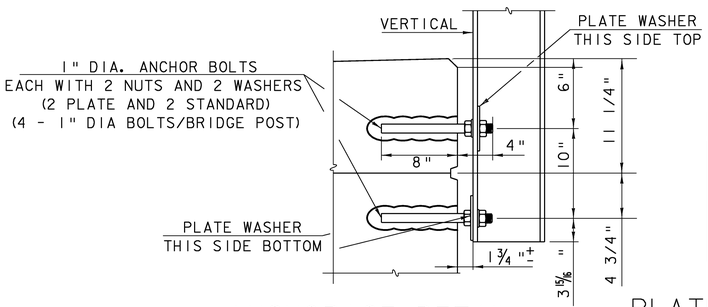


FRONT ELEVATION OF THREE RAIL WITH SPINDLES



RAIL POST DETAILS ON SUPERSTRUCTURE

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



ANCHORAGE DETAIL

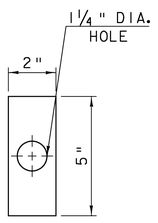
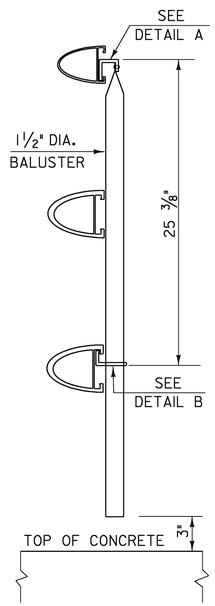
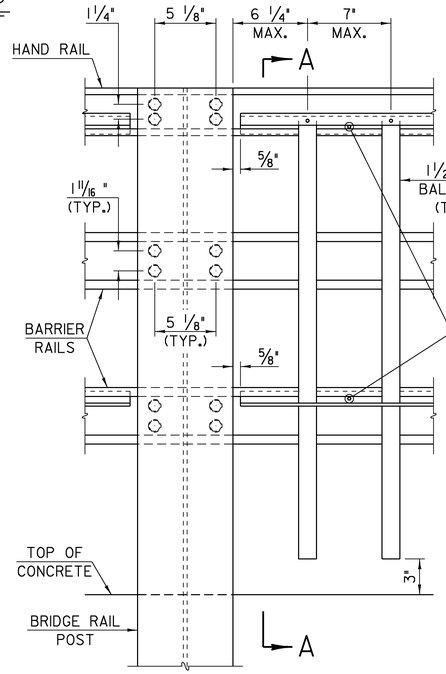


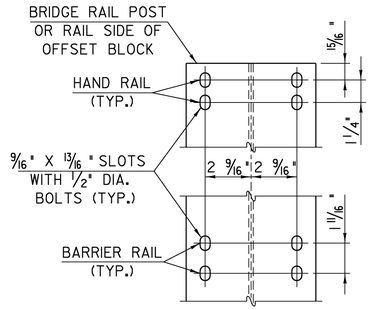
PLATE WASHER DETAIL



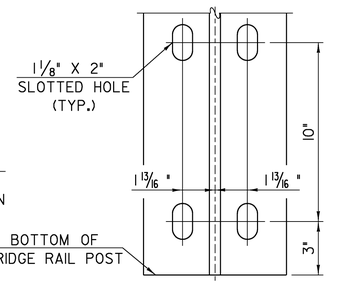
SECTION AA



OUTSIDE ELEVATION OF THREE RAIL POST & SPINDLES



RAIL CONNECTION

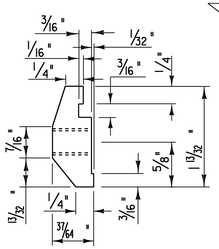


POST ANCHORAGE BOLT HOLE DETAILS

DETAILS OF SPINDLES FOR ALUMINUM RAILING

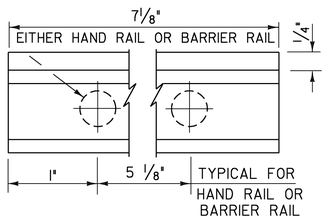
ALUMINUM RAILING DETAILS (SHEET 4)

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: /86e064/str/se064rail.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: str3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064rail4.1	SHEET 31 OF 61

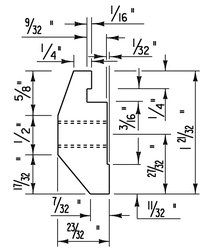


POST CONNECTION
HAND RAIL SECTION

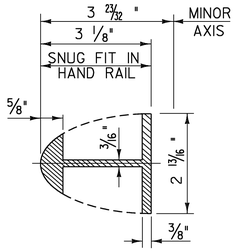
(2) 1/2" - 13 UNC THREADED HOLES FOR (2) 1/2" - 13 UNC X 1" STAINLESS STEEL HEX HEAD BOLTS WITH 1 1/16" O. D. X 17/32" I. D. X 3/32" THICK ALUMINUM WASHERS.



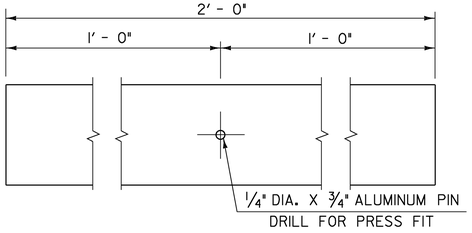
POST CONNECTION
ELEVATION



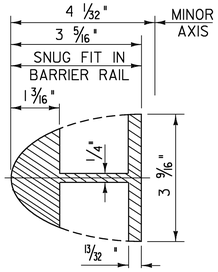
POST CONNECTION
BARRIER RAIL SECTION



HAND RAIL
SPLICE SECTION

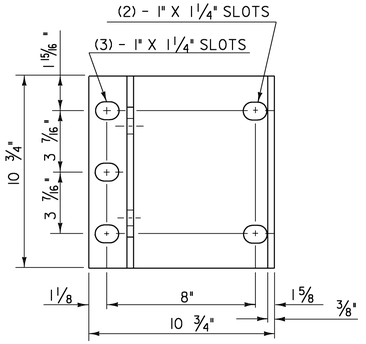


ELEVATION OF
HAND RAIL SPLICE BAR



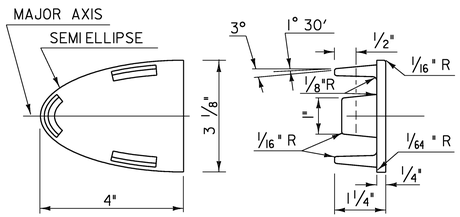
BARRIER RAIL
SPLICE SECTION

(SEE THIS SHEET FOR ELEVATION OF BARRIER RAIL SPLICE BAR)

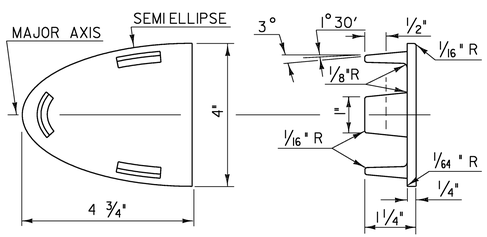


POST BASE
PLAN

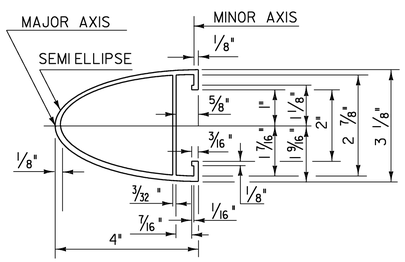
(WINGWALL 4 ONLY)



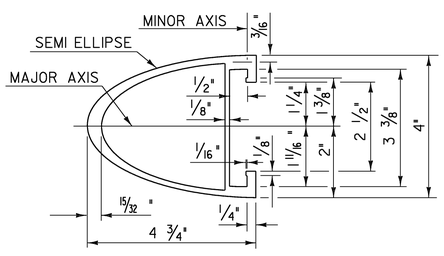
HAND RAIL END CAP



BARRIER RAIL END CAP



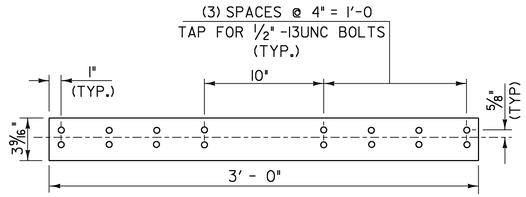
HAND RAIL SECTION



BARRIER RAIL SECTION

(SEE SHEET 33 FOR ELEVATION OF BARRIER RAIL)

(3) SPACES @ 4" = 1'-0
TAP FOR 1/2" -13UNC BOLTS (TYP.)



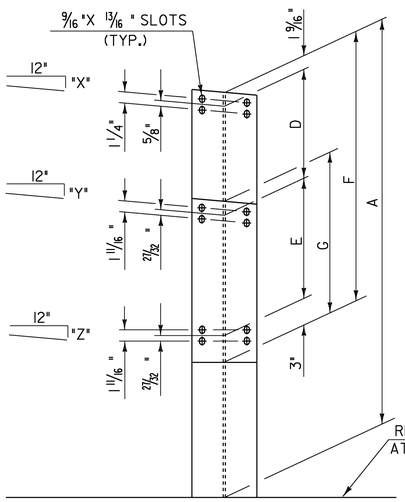
ELEVATION OF STD. BARRIER RAIL SPLICE BAR
(FROM BACK)

NOTES

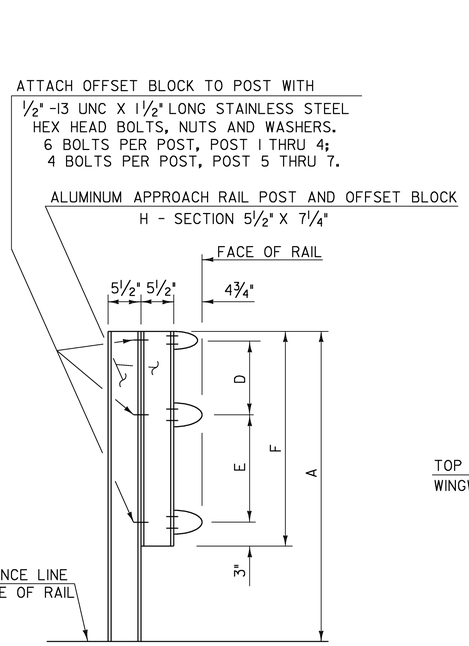
1. ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO SUBSECTION 714.07.
2. ALUMINUM SPLICE BARS, CONNECTION BARS, RAILS AND BALLUSTER FRAMES SHALL CONFORM TO ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS Fy = 35,000 psi. RAIL POSTS SHALL CONFORM TO ASTM B 308/ B 308M.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B221 ALLOY 6061-T4 OR 6063-T4.
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
5. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS AND SET SCREWS SHALL CONFORM TO SUBSECTION 732.02 (b).
6. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10.
7. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
8. WHENEVER FEASIBLE, BARRIER RAIL AND HAND RAIL SECTIONS SHALL BE FULL LENGTH SECTIONS (40'±) AND WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
9. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
10. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
11. ALUMINUM PLATE WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.
12. THE RAILING SYSTEM AND ASSOCIATED HARDWARE SHALL BE ANODIZED TO A BLACK SATIN FINISH EXCEPT AS NOTED, SEE SPECIAL PROVISIONS.

ALUMINUM RAILING DETAILS (SHEET 5)

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: /86e064/str/se064ral1.dgn	PLOT DATE: 17-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: str3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064ral15.1	SHEET 32 OF 61

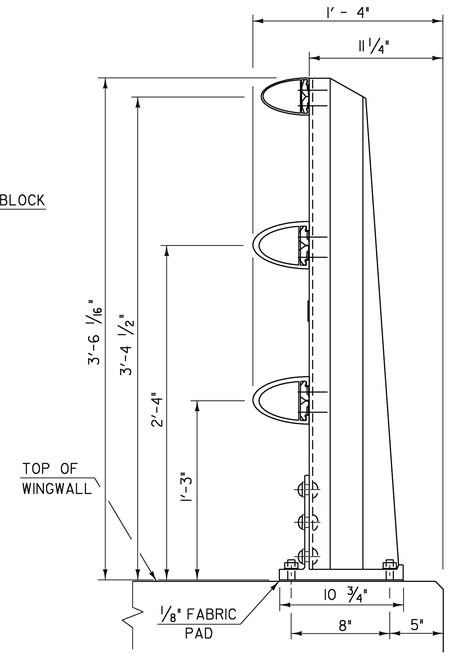


FRONT ELEVATION

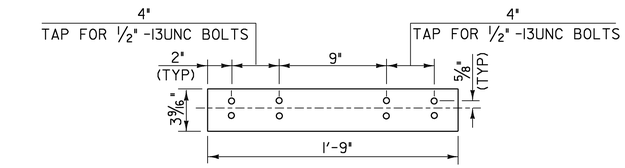


SIDE ELEVATION

APPROACH RAIL DETAILS

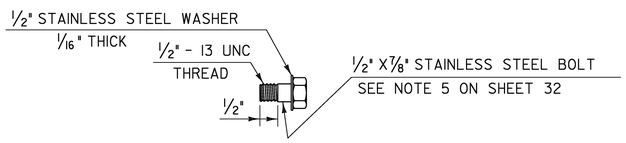


SIDE ELEVATION OF THREE RAIL
TO BE USED ON WINGWALL NO. 4

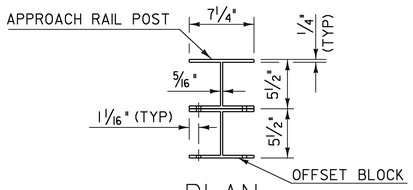


ELEVATION OF BARRIER RAIL SPLICE BAR
TO BE USED AT TRANSITION BETWEEN
APPROACH RAIL & GUARD RAIL (FROM BACK)

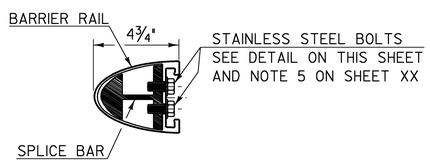
	WW1	WW2	RETAINING WALL
"X"	11/16"	11/16"	3/4"
"Y"	1/8"	1/8"	1/4"
"Z"	1/8"	1/8"	3/16"



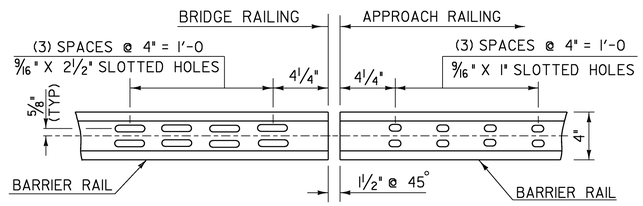
STAINLESS STEEL BOLT DETAILS



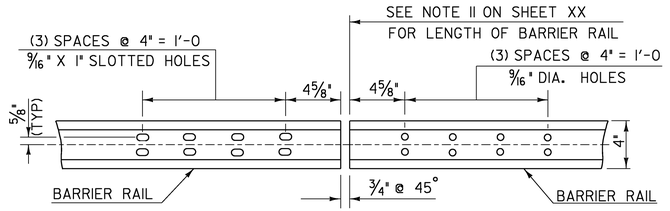
PLAN



TYPICAL SECTION THROUGH
BARRIER RAIL SPLICE



ELEVATION OF BARRIER RAIL (FROM BACK)



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

APPROACH RAILING NOTES

1. ALL APPROACH RAILING POSTS SHALL BE EXTRUDED ALUMINUM.
2. ANY STRUCTURAL STEEL SHALL BE GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
5. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.
6. THE APPROACH RAILING SYSTEM AND RELATED HARDWARE SHALL BE ANODIZED TO A BLACK SATIN FINISH. (SEE SPECIAL PROVISIONS.)

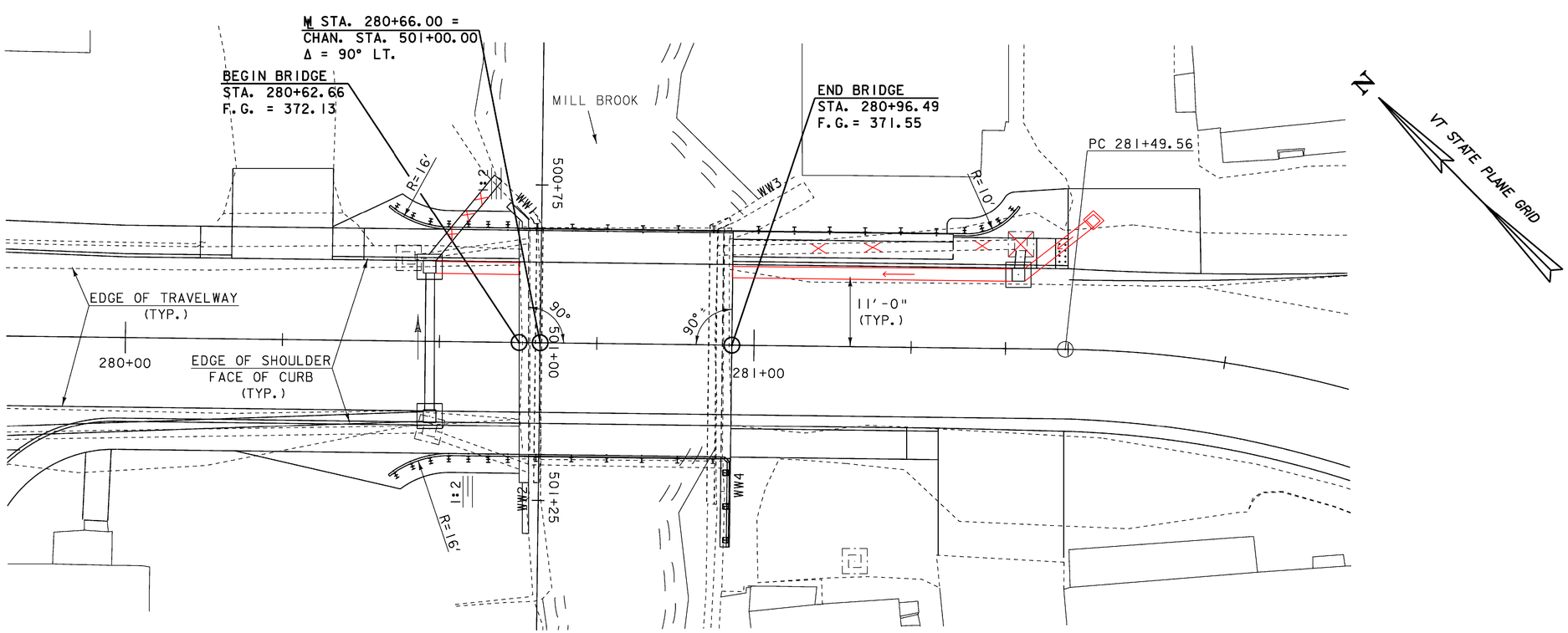
ALUMINUM RAILING DETAILS (SHEET 6)

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

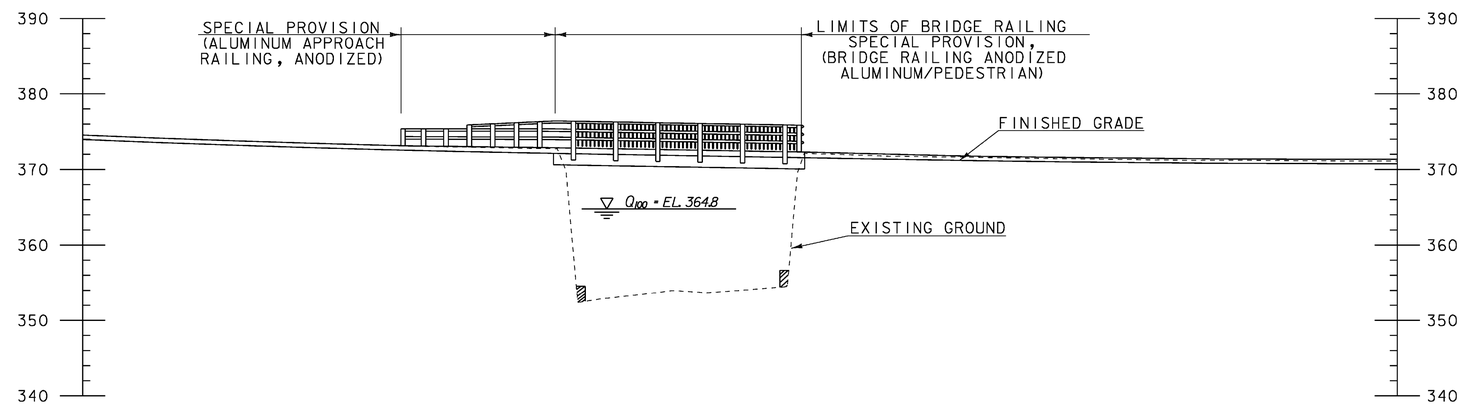
FILE NAME: /86e064/str/se064rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064rail6.1

PLOT DATE: 13-JUL-2009
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 33 OF 61



PLAN

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



ELEVATION

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

PLAN AND ELEVATION

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064pe.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064pe.1

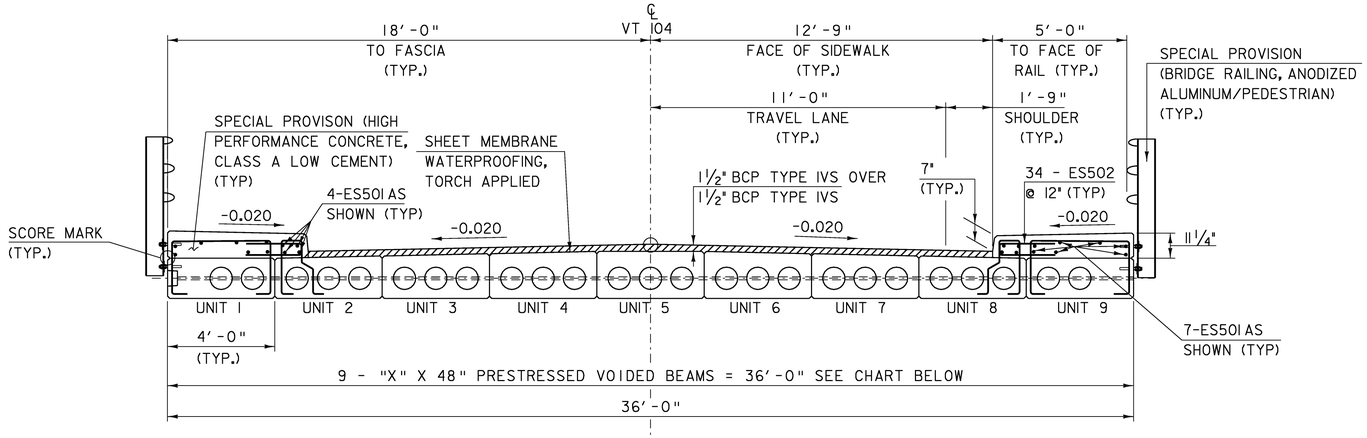
PLOT DATE: 20-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 34 OF 61

SIDEWALK NOTES:

1. THE SIDEWALKS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAILING POST. CONCRETE SIDEWALKS MAY BE PLACED IN ONE CONTINUOUS OPERATION, IF APPROVED BY THE STRUCTURES ENGINEER.

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

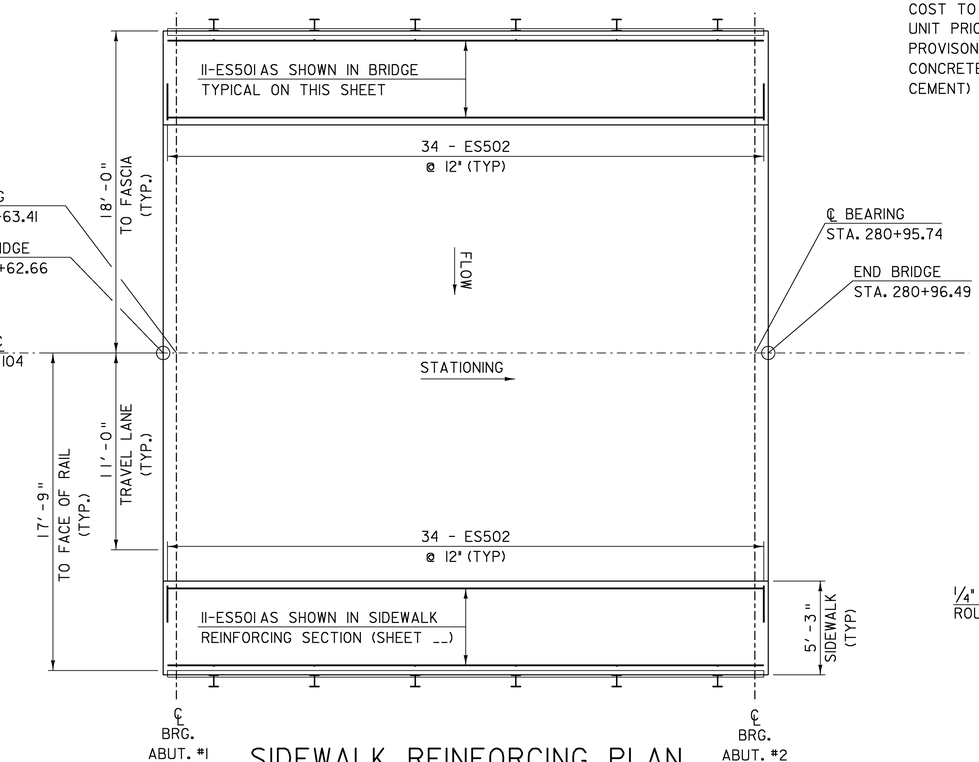
3. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH SIDEWALK CONSTRUCTION JOINTS.



NOTE: 3" (MIN.) CLEAR COVER FOR REINFORCING STEEL IN SIDEWALKS

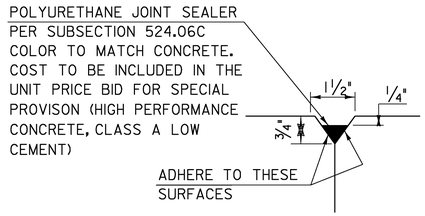
BRIDGE TYPICAL

SCALE 3/8" = 1'-0"



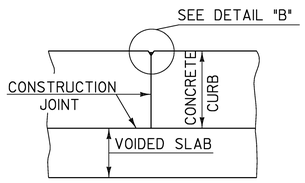
SIDEWALK REINFORCING PLAN

SCALE 1/4" = 1'-0"



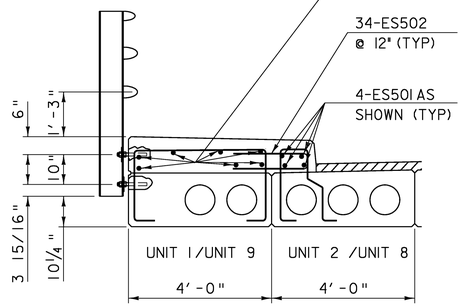
DETAIL "B"

NTS



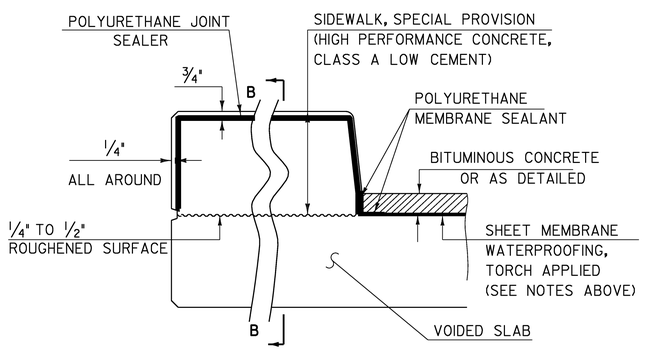
SECTION B - B

NTS



SIDEWALK REINFORCING DETAIL

SCALE 1/2" = 1'-0"



TYPICAL SECTION THROUGH CONCRETE SIDEWALK CONSTRUCTION JOINT

NTS

VOIDED SLAB NO.	QUANTITY	("X") DEPTH
UNIT 1	2	18"
UNIT 2	2	18"-19"
UNIT 3	2	19"-20"
UNIT 4	2	20"-21"
UNIT 5	1	21"

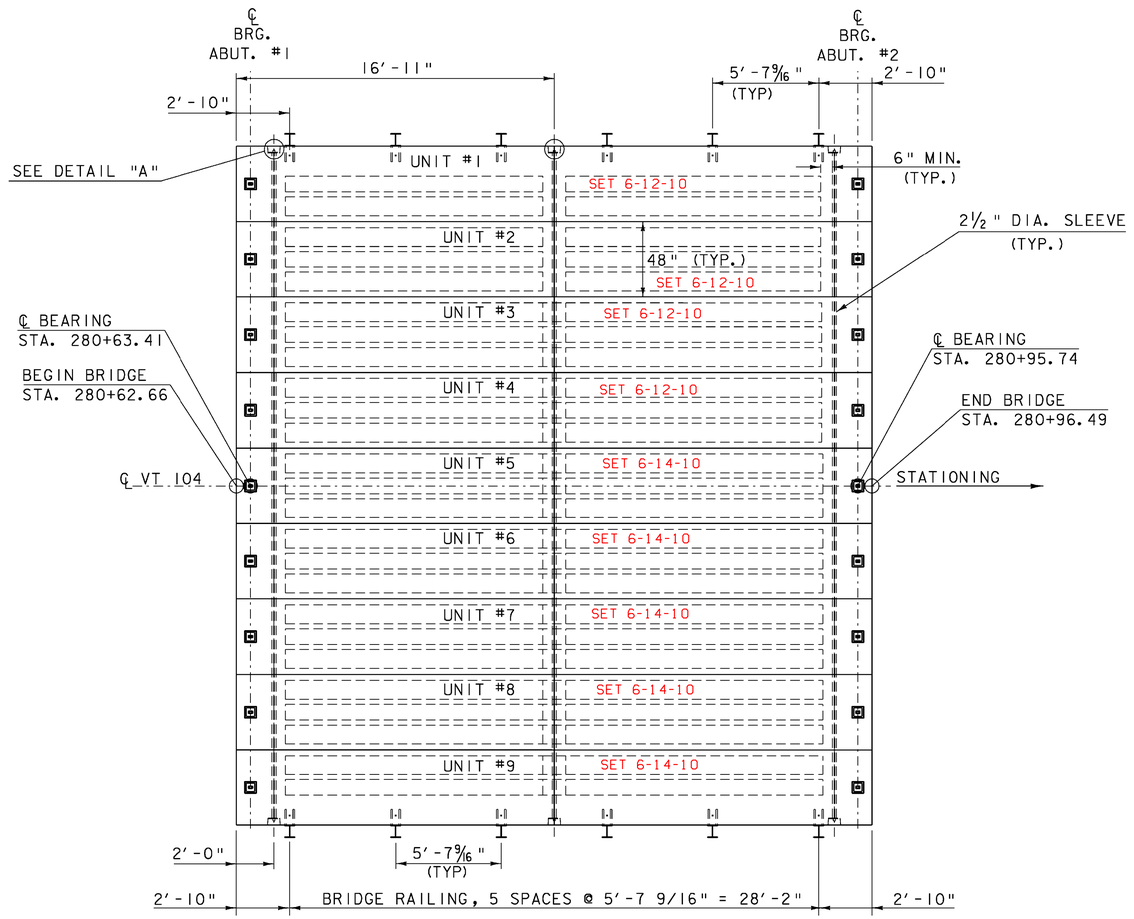
BRIDGE TYPICAL & SIDEWALK REINFORCING

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

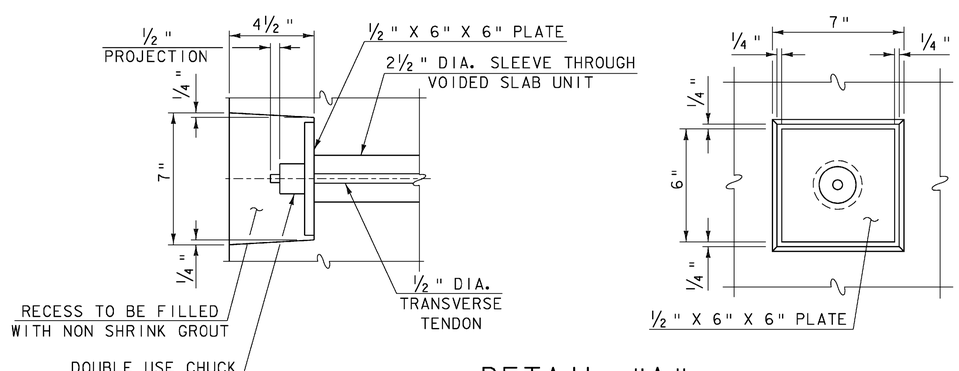
FILE NAME: 86e064\str\se064sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON

PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 35 OF 61



PLAN PRESTRESSED VOIDED SLAB UNITS

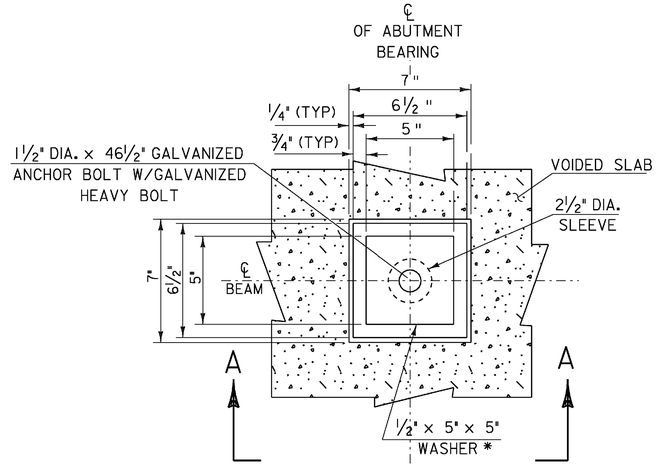
NTS



DETAIL "A"

SCALE ¼" = 1'-0

1 0 2 4 6

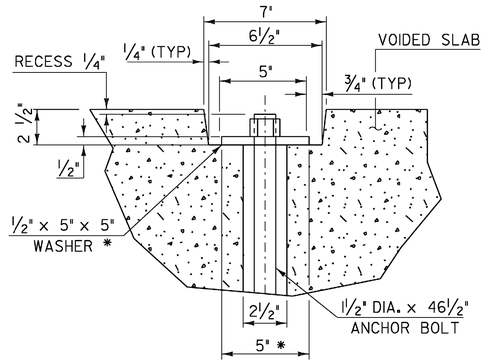


END BRIDGE ANCHOR BOLT DETAIL

NTS

NOTE:
SEE VAOT SPECIFICATION 714.08 FOR ANCHOR BOLTS & NUTS

* ½" x 5" x 5" WASHER WITH 1½" DIA. HOLE (GALVANIZED)



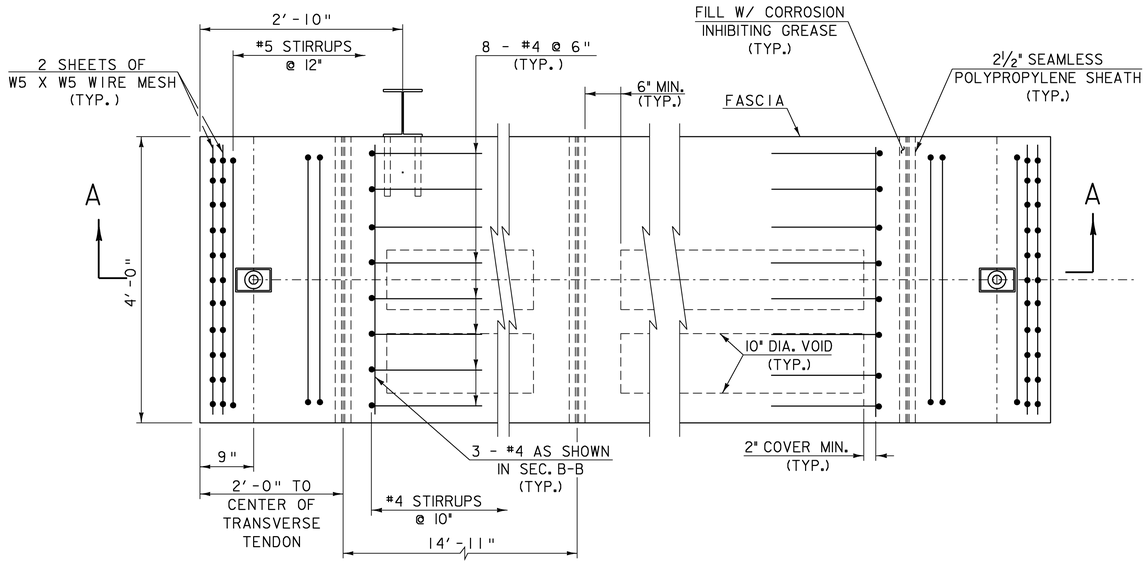
SECTION A-A

NOTES

1. TRANSVERSE TENDONS SHALL BE COVERED BY SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND TENDON) FOR THE LENGTH OF TENDON, EXCEPT AT ANCHORAGE LOCATIONS. TENDONS SHALL BE TENSIONED TO 30 KIPS.
2. THE ½" PLATE SHALL CONFORM TO AASHTO M 270M/ M 270 GRADE 50. THE PLATE AND CHUCK SHALL BE GALVANIZED ACCORDING TO AASHTO M111M/ M111.

VOIDED SLAB LAYOUT & DETAILS

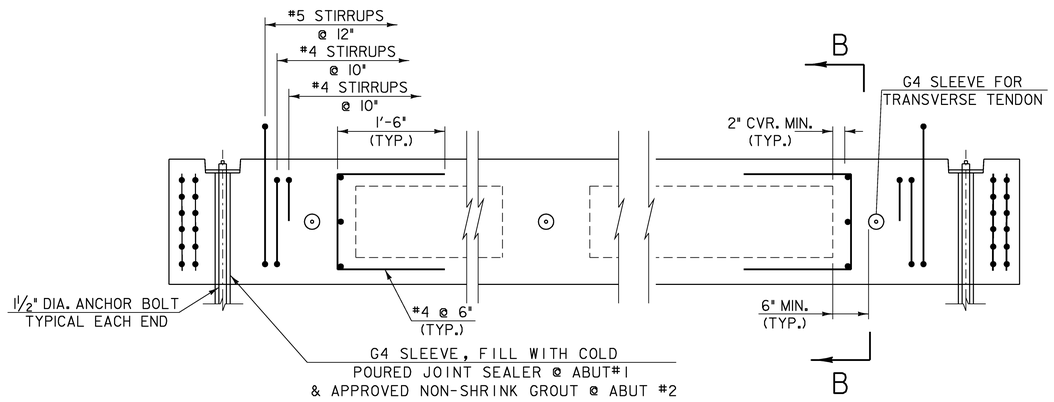
PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: 86e064\str\se064sup.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: str3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064dd.1	SHEET 36 OF 61



PLAN OF END BLOCK DETAIL (UNIT 1)

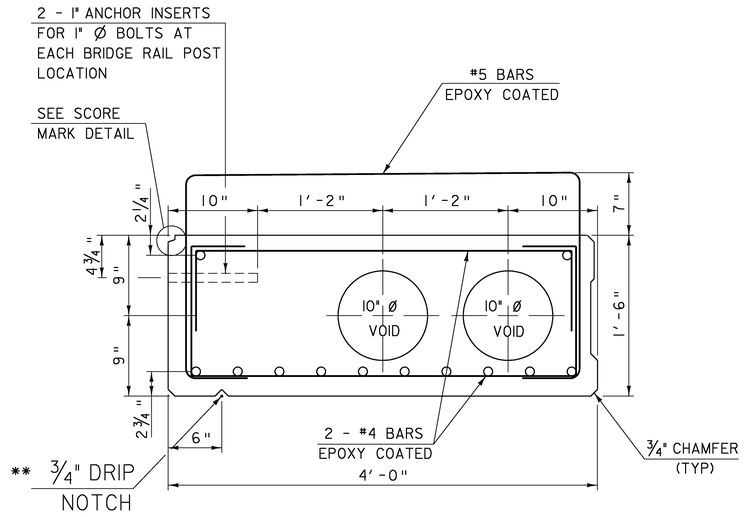
NOTE: UNIT 9 IS MIRROR IMAGE TO UNIT 1.

SCALE 1" = 1'-0



VOIDED SLAB SECTION A-A

SCALE 1" = 1'-0



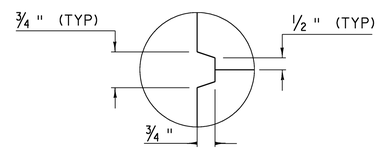
18" X 48" VOIDED SLAB UNITS 1 AND 9

SCALE 1½" = 1'-0

** = STOP DRIP NOTCH 5'-0" FROM ENDS OF UNIT AND OUTLET AT 45° TO FASCIA.

ROW #	# STRANDS
1 @ 2¾"	10
2 @ 15¾"	2

NOTES:
1. UNIT 9 IS MIRROR IMAGE TO UNIT 1. SEE SHEET 39 FOR SHEAR KEY DETAIL
2. ROUGHEN SURFACE ¼" TO ½" UNDER SIDEWALK



SCORE MARK DETAIL

NOT TO SCALE

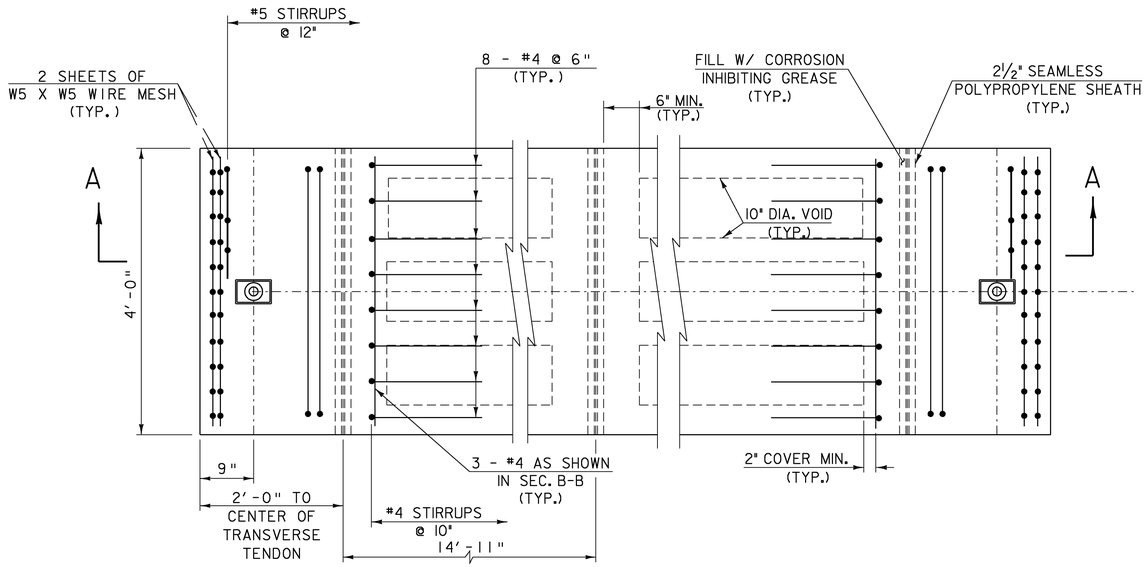
VOIDED SLAB UNITS 1 & 9

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064\str\se064sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ssd1.1

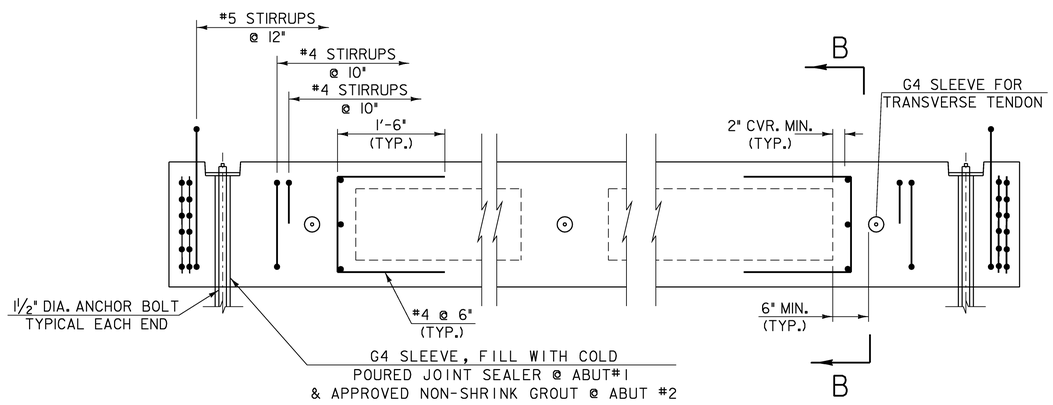
PLOT DATE: 13-JUL-2009
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 37 OF 61



PLAN OF END BLOCK DETAIL
UNITS 2 and 8

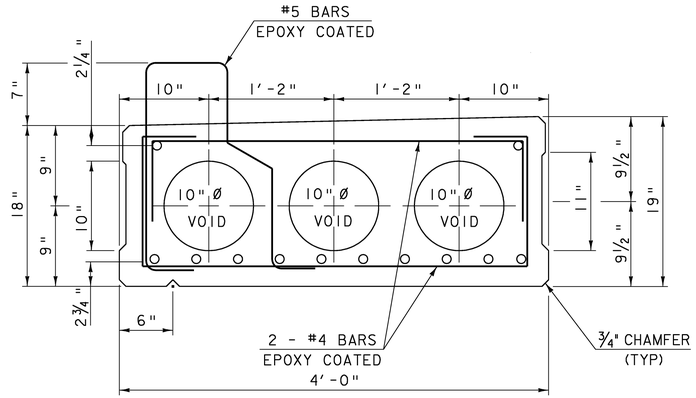
NOTE: UNIT 8 IS MIRROR IMAGE TO UNIT 2.

SCALE 1" = 1'-0



VOIDED SLAB SECTION A-A

SCALE 1" = 1'-0



18" X 48" VOIDED SLAB
UNITS 2 and 8

SCALE 1½" = 1'-0

ROW #	# STRANDS
1 @ 2¾"	10
2 @ 15¾"	2

NOTES:
1. UNIT 8 IS MIRROR IMAGE TO UNIT 2. SEE SHEET 39 FOR SHEAR KEY DETAIL
2. ROUGHEN SURFACE ¼" TO ½" FOR 12" UNDER SIDEWALK.

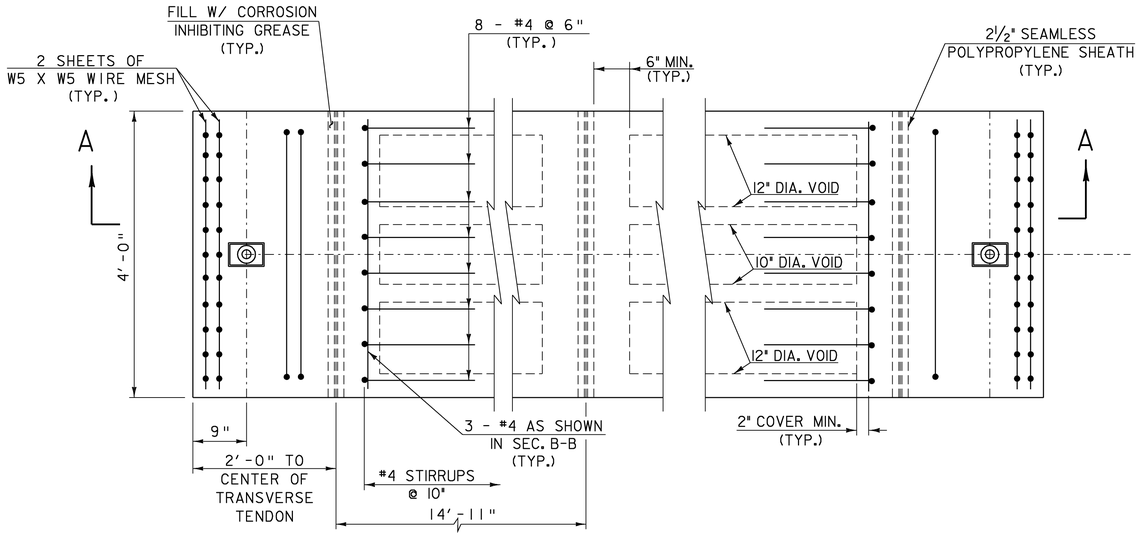
VOIDED SLAB UNITS 2 & 8

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

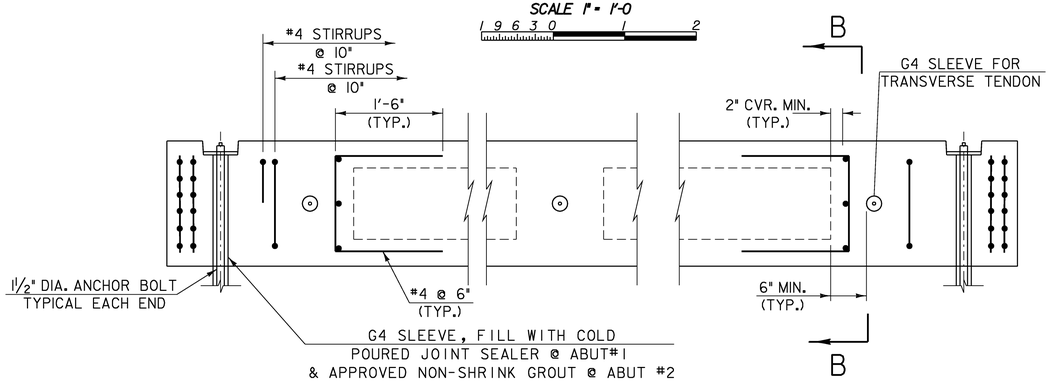
FILE NAME: 86e064\str\se064sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ssdl.i

PLOT DATE: 13-JUL-2009
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 38 OF 61



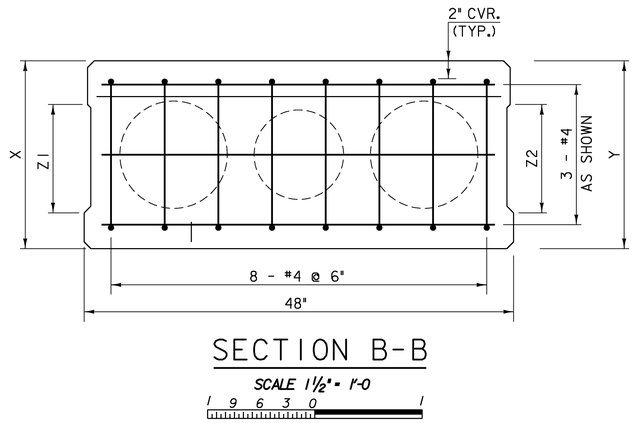
PLAN OF END BLOCK DETAIL (UNITS 3-7)

SCALE 1" = 1'-0



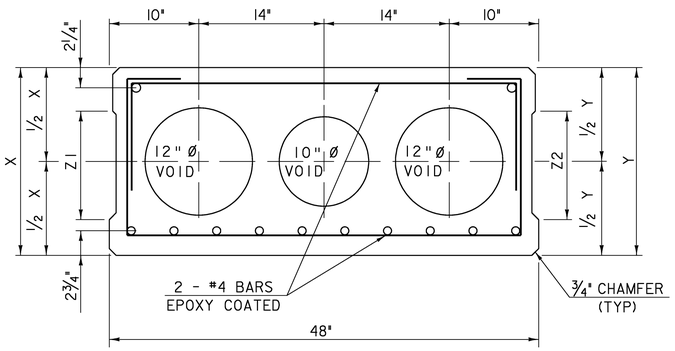
VOIDED SLAB SECTION A-A

SCALE 1" = 1'-0



SECTION B-B

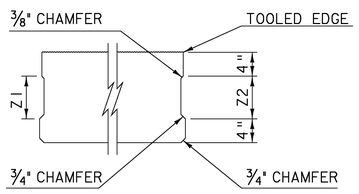
SCALE 1½" = 1'-0



VARIED DEPTH X 48" VOIDED SLAB

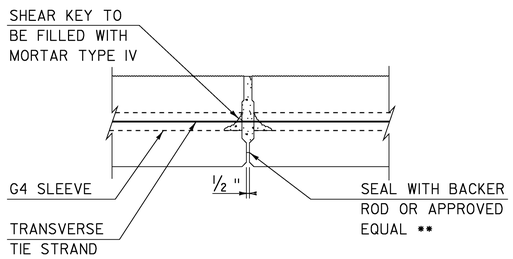
SCALE 1½" = 1'-0

VOIDED SLAB NO.	QUANTITY	(X") DEPTH	(Y") DEPTH	(Z1") DEPTH	(Z2") DEPTH	# STRANDS BOTTOM @ 2¾"	# STRANDS TOP
UNIT 3 & 7	2	19"	20"	11"	12"	10	2 @ 16¾"
UNIT 4 & 6	2	20"	21"	12"	13"	10	2 @ 17¾"
UNIT 5	1	21"	21"	13"	13"	10	2 @ 18¾"



SHEAR KEY DETAIL FOR VOIDED SLAB

SCALE 1" = 1'-0"



SHEAR KEY SECTION FOR VOIDED SLAB

SCALE 1" = 1'-0"

**NOTE:
INSTALL BACKER ROD AFTER UNITS HAVE BEEN PLACED

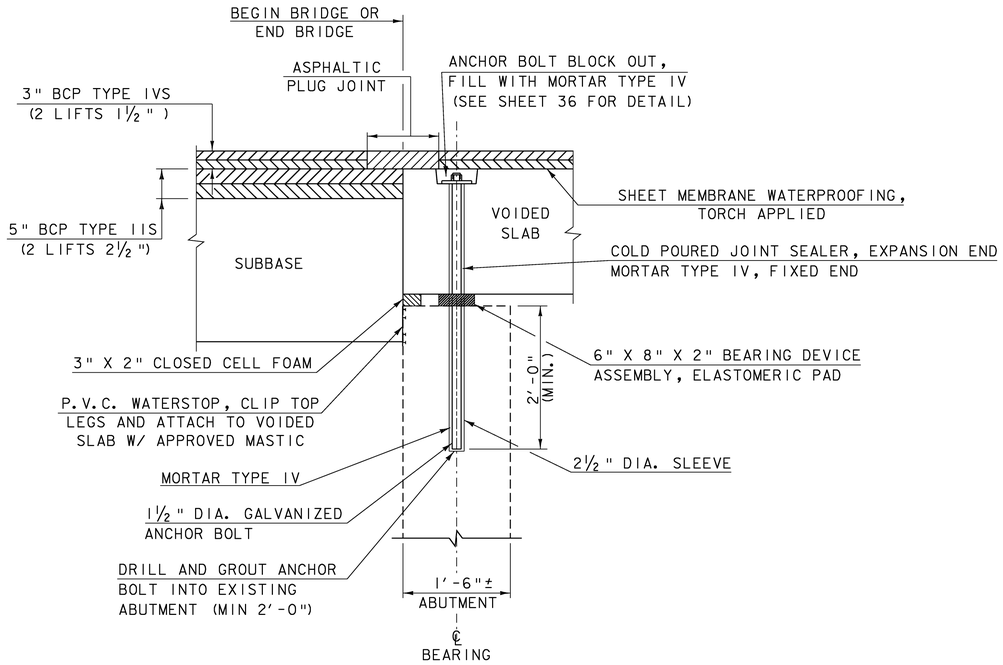
VOIDED SLAB UNITS 3 - 7

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

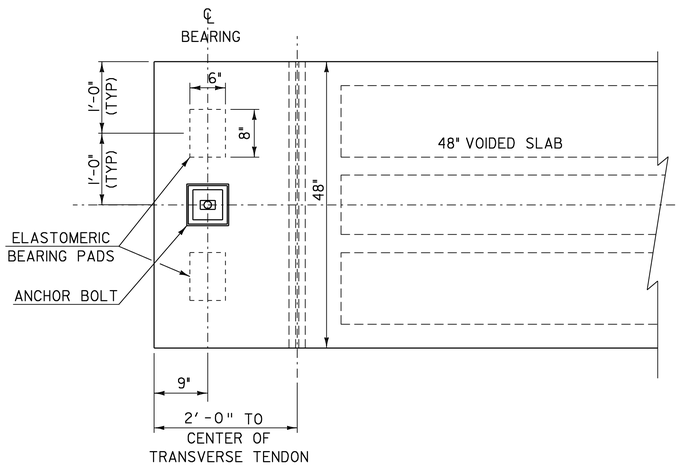
FILE NAME: 86e064\str\se064sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ssd2.1

PLOT DATE: 13-JUL-2009
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 39 OF 61



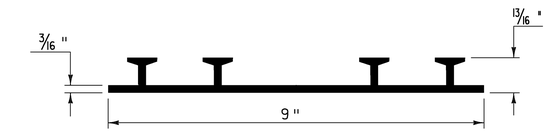
BRIDGE END DETAIL @ ABUTMENTS (NORMAL TO ℄ BEARING)

SCALE 1"= 1'-0



BEARING PAD PLACEMENT DETAIL (TYPICAL EACH END)

SCALE 1"= 1'-0



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

NTS

INCLUDE THE COSTS FOR P.V.C. WATERSTOP IN THE UNIT PRICE BID FOR CONCRETE, HIGH PERFORMANCE CLASS B. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

NOTES

1. ITEM 531.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD" IS THE PAY ITEM FOR THE BEARINGS.

2. ALTERNATE CONFIGURATIONS FOR ELASTOMERIC BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE BEARING SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE LOADS AND CRITERIA SHOWN ON THIS SHEET AND MAINTAIN THE ANCHORAGE SYSTEM SHOWN. THE BEARINGS SHALL BE DESIGNED ACCORDING TO AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS" 2006 EDITION AND ITS LATEST REVISIONS.

3. THE BEARING SHAPE FACTOR SHALL BE BETWEEN 5.0 AND 12.0.

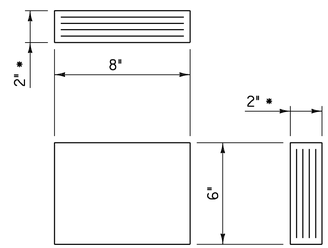
4. ALL REINFORCMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL GRADE 60. NO FABRIC REINFORCEMENT WILL BE PERMITTED.

5. ELASTOMERIC BEARINGS REINFORCED WITH STEEL SHALL HAVE A ⅛" EDGE SEAL OF ELASTOMERIC INTEGRAL WITH THE BEARING OVER ALL PLATES.

6. DESIGN CRITERIA:
   - A. TEMPERATURE RANGE: 80 F
   - B. 60 DUROMETER ELASTOMERIC
   - C. MAXIMUM BEARING STRESS: 1000 psi
   - D. DESIGN ROTATION: 0.016 rad
   - E. REACTION/BEAM:

	48"
RDL:	35 kips
RLL+I:	33 kips

7. COMPRESSIBLE SEALER. THE FABRICATOR SHALL SUPPLY A SELF ADHESIVE COMPRESSIBLE SEALER BETWEEN THE BOTTOM OF THE UNITS AND THE BRIDGE SEAT. THIS COMPRESSIBLE SEALER SHALL SURROUND THE 2 ½" DIA SLEEVE IN THE UNIT. THE PURPOSE OF THE SEALER IS TO FACILITATE PLACEMENT OF THE "MORTAR OR JOINT SEALER" AROUND THE ANCHOR BOLTS, PAYMENT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 535.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD"

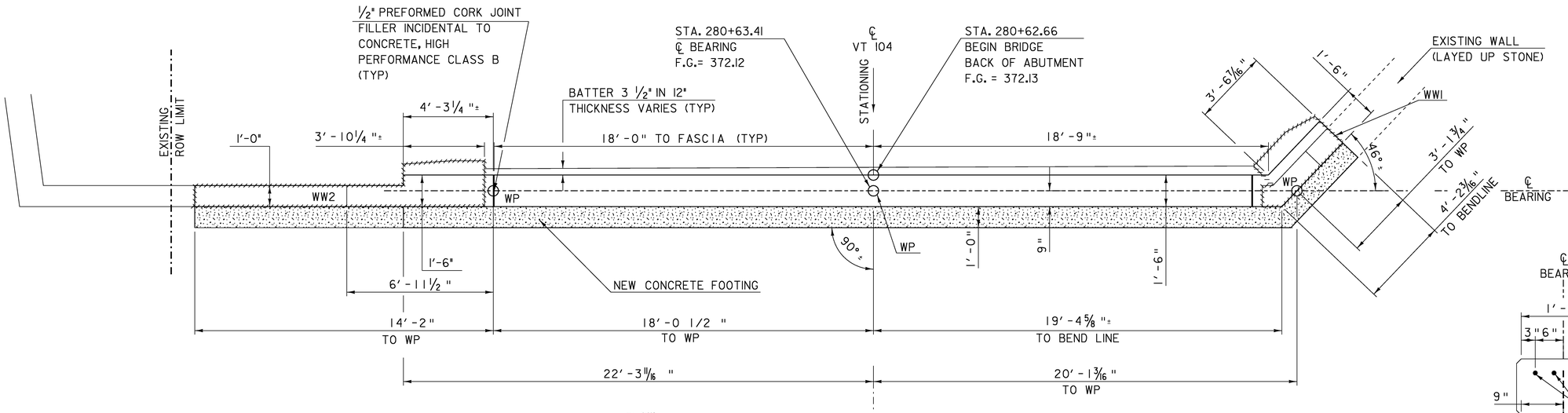


ELASTOMERIC BEARING DETAIL

* 3 -⅜" LAYERS OF ELASTOMERIC ALTERNATING WITH 4 - 14 GAGE STEEL REINFORCING PLATES

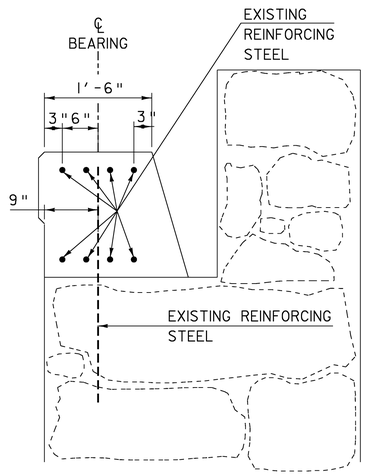
BRIDGE END AND BEARING DETAILS

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: 86e064\str\se064sup.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: str3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064beb.i	SHEET 40 OF 61



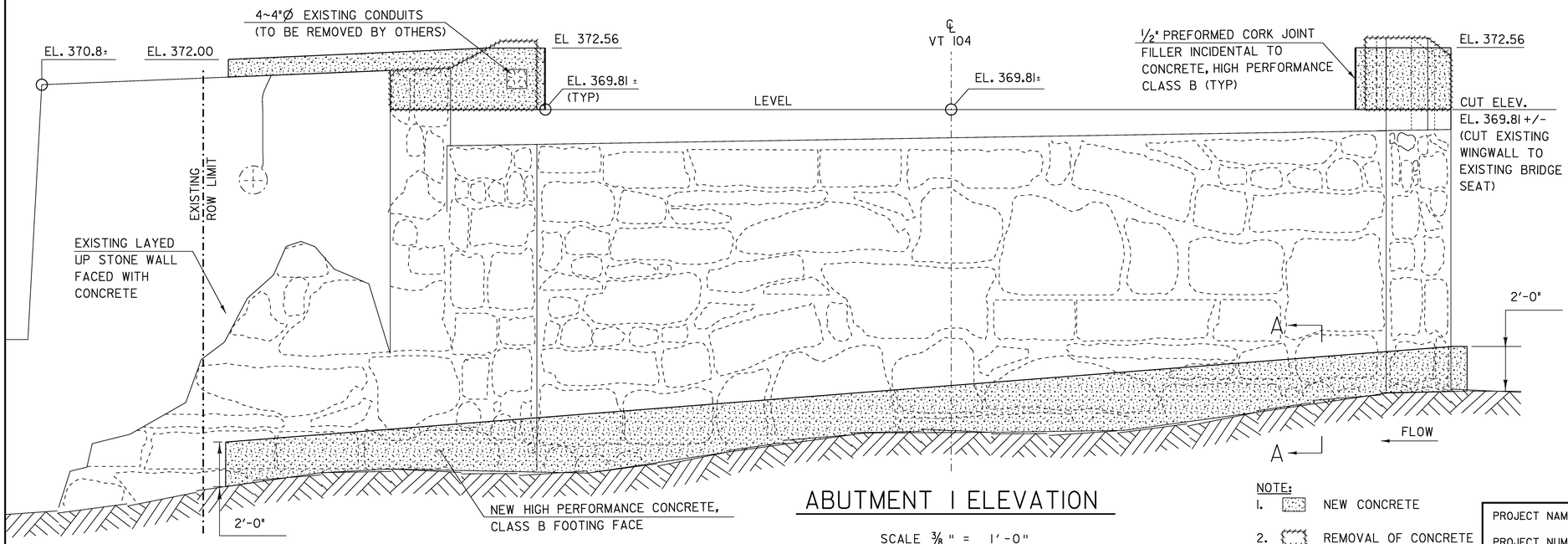
ABUTMENT 1 PLAN

SCALE ⅜" = 1'-0"



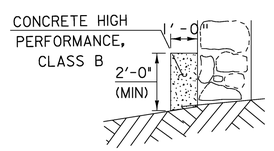
EXISTING ABUTMENT 1 TYPICAL

SCALE 1" = 1'-0"



ABUTMENT 1 ELEVATION

SCALE ⅜" = 1'-0"



SECTION A-A

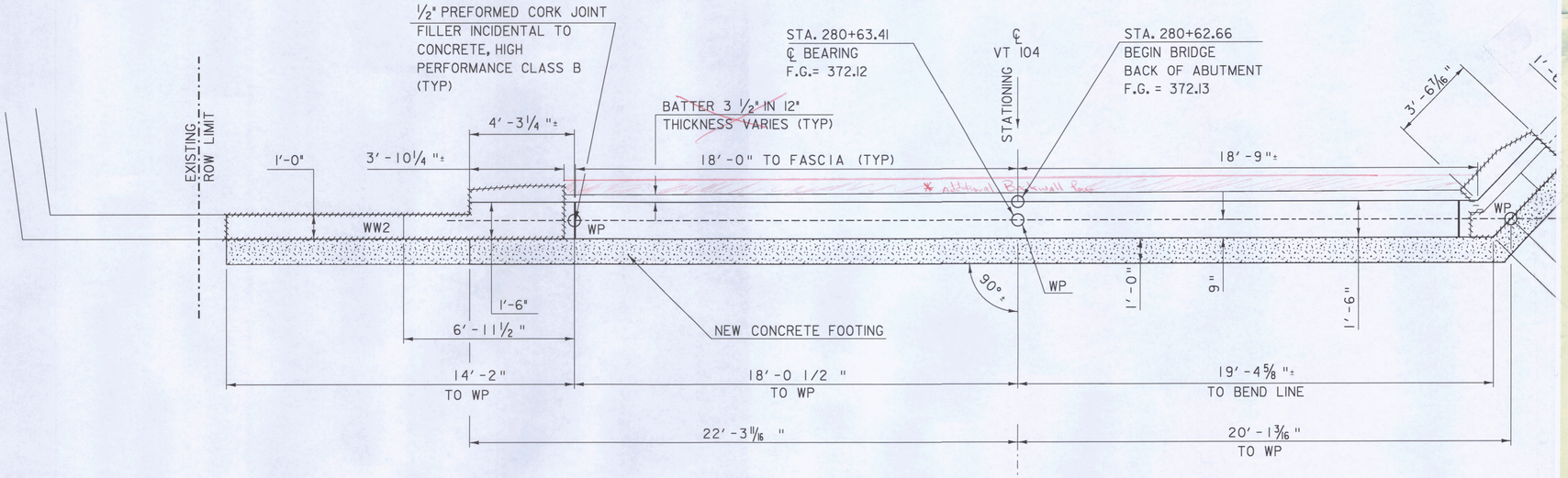
SCALE ⅜" = 1'-0"

NOTE:

1. NEW CONCRETE
2. REMOVAL OF CONCRETE OR MASONRY
3. SEE SHEET 43 FOR WINGWALL DETAILS

ABUTMENT 1 DETAILS

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-1(5)
FILE NAME: s86e064sub.dgn	PLOT DATE: 20-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
	SHEET 41 OF 61



ABUTMENT 1 PLAN

SCALE ⅜" = 1'-0"

0 1 2 3 4

* Additional Rockwall Pour Dimensions typical Abutment #1 & #2

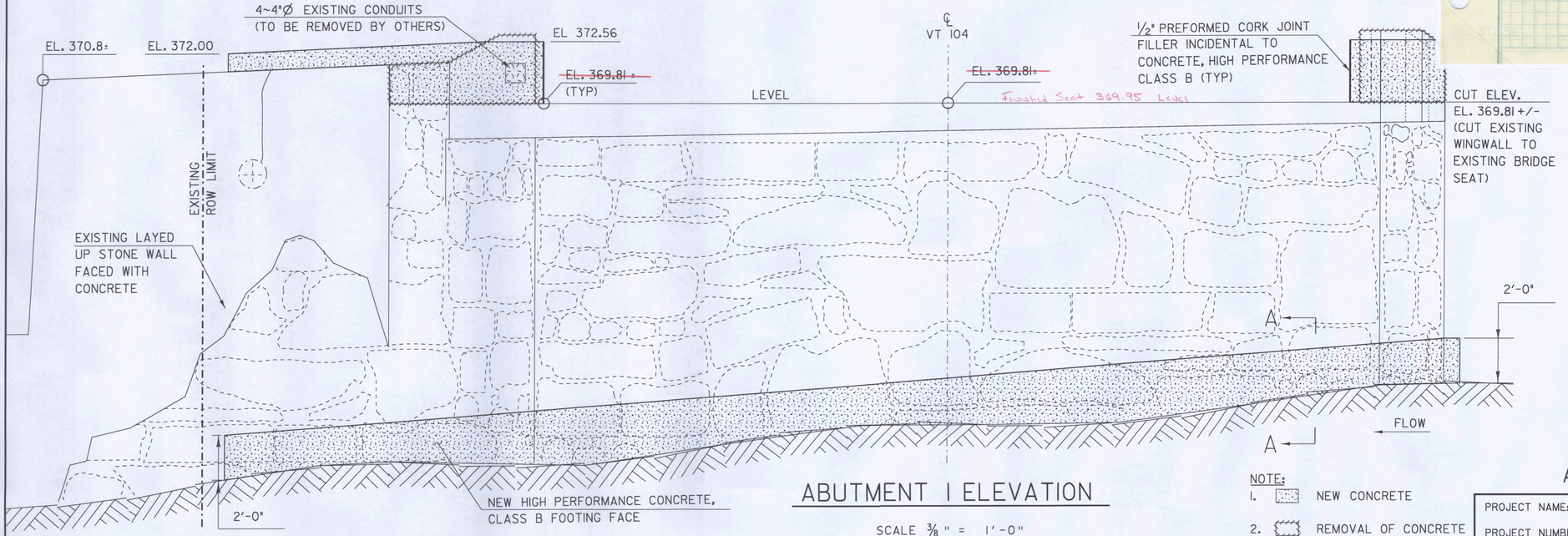
#900.605 Class A Low Cement

1.2' deep 1.5' deep @1 1.2' deep

36.5'

2'

Plan View



ABUTMENT 1 ELEVATION

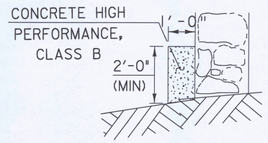
SCALE ⅜" = 1'-0"

0 1 2 3 4

EXISTING ABUTMENT 1 TYPICAL

SCALE 1" = 1'-0"

9 6 3 0 2



SECTION A-A

SCALE ⅜" = 1'-0"

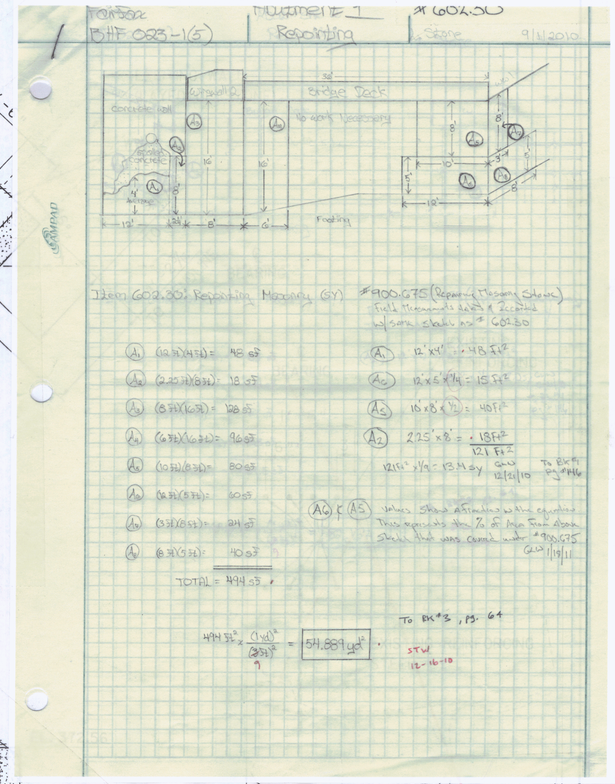
0 1 2 3 4

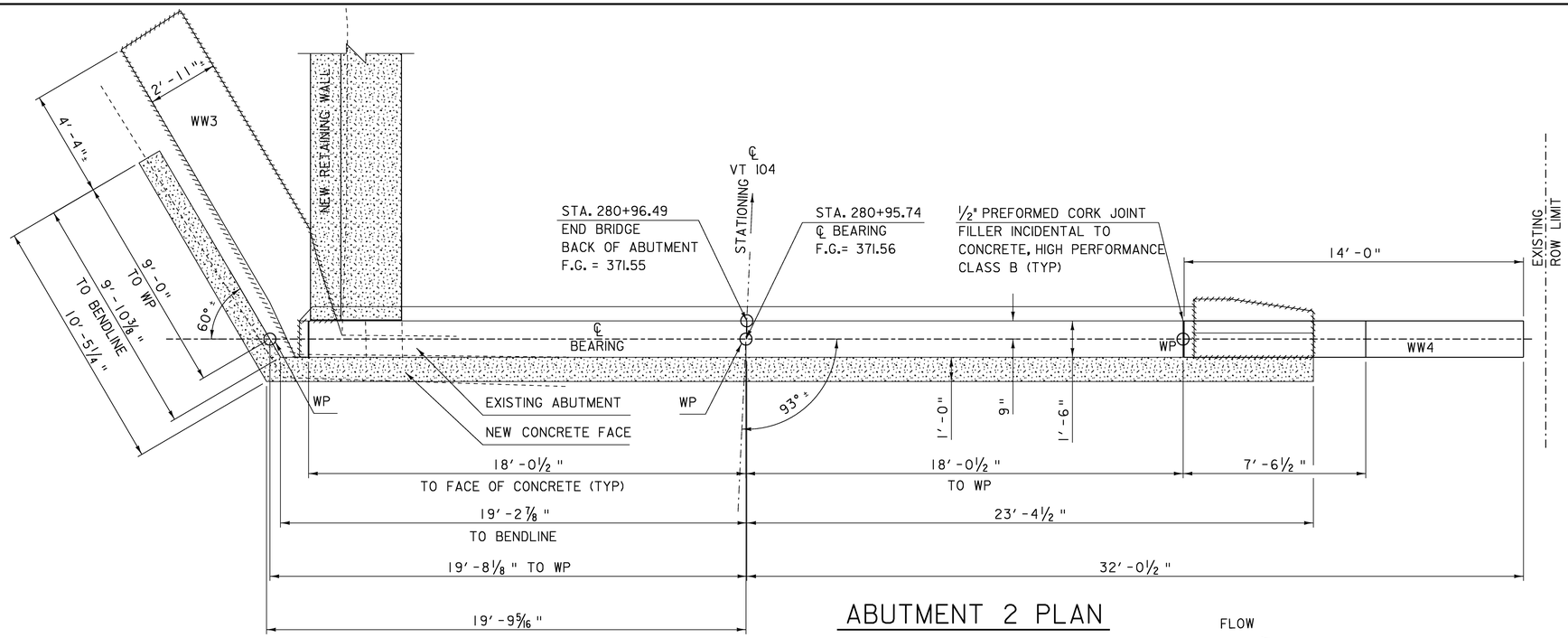
NOTE:

1. NEW CONCRETE
2. REMOVAL OF CONCRETE OR MASONRY
3. SEE SHEET 43 FOR WINGWALL DETAILS

ABUTMENT 1 DETAILS

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: s86e064sub.dgn	PLOT DATE: 20-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
	SHEET 41 OF 61



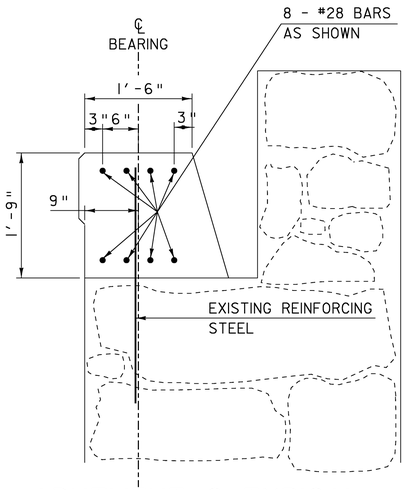


ABUTMENT 2 PLAN

SCALE 3/8" = 1'-0"

0 1 2 3 4

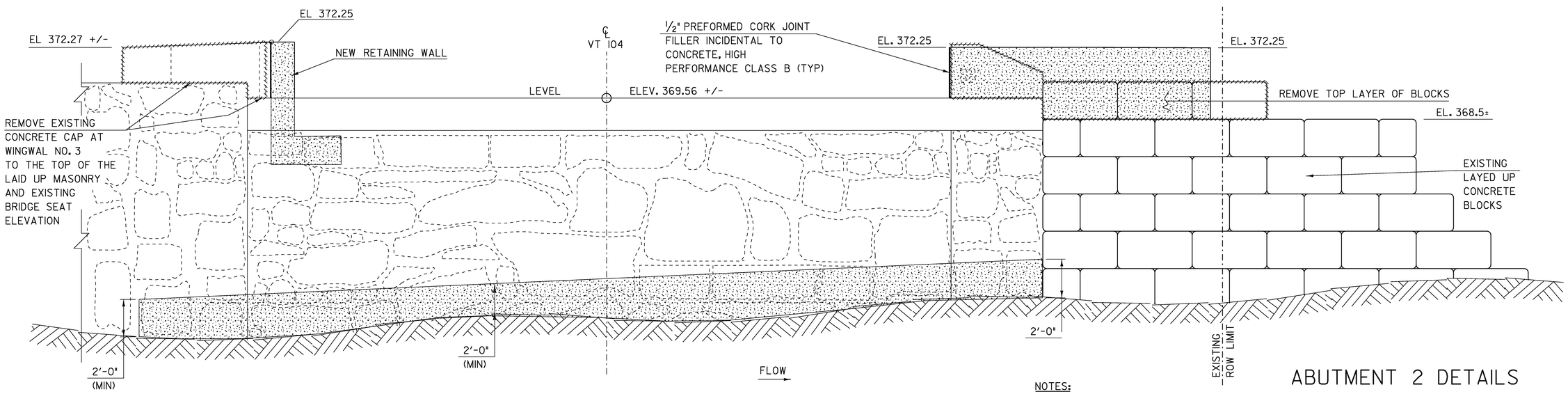
FLOW →



ABUTMENT 2 TYPICAL

SCALE 1" = 1'-0"

1 9 6 3 0 2



ABUTMENT 2 ELEVATION

SCALE 3/8" = 1'-0"

0 1 2 3 4

ABUTMENT 2 DETAILS

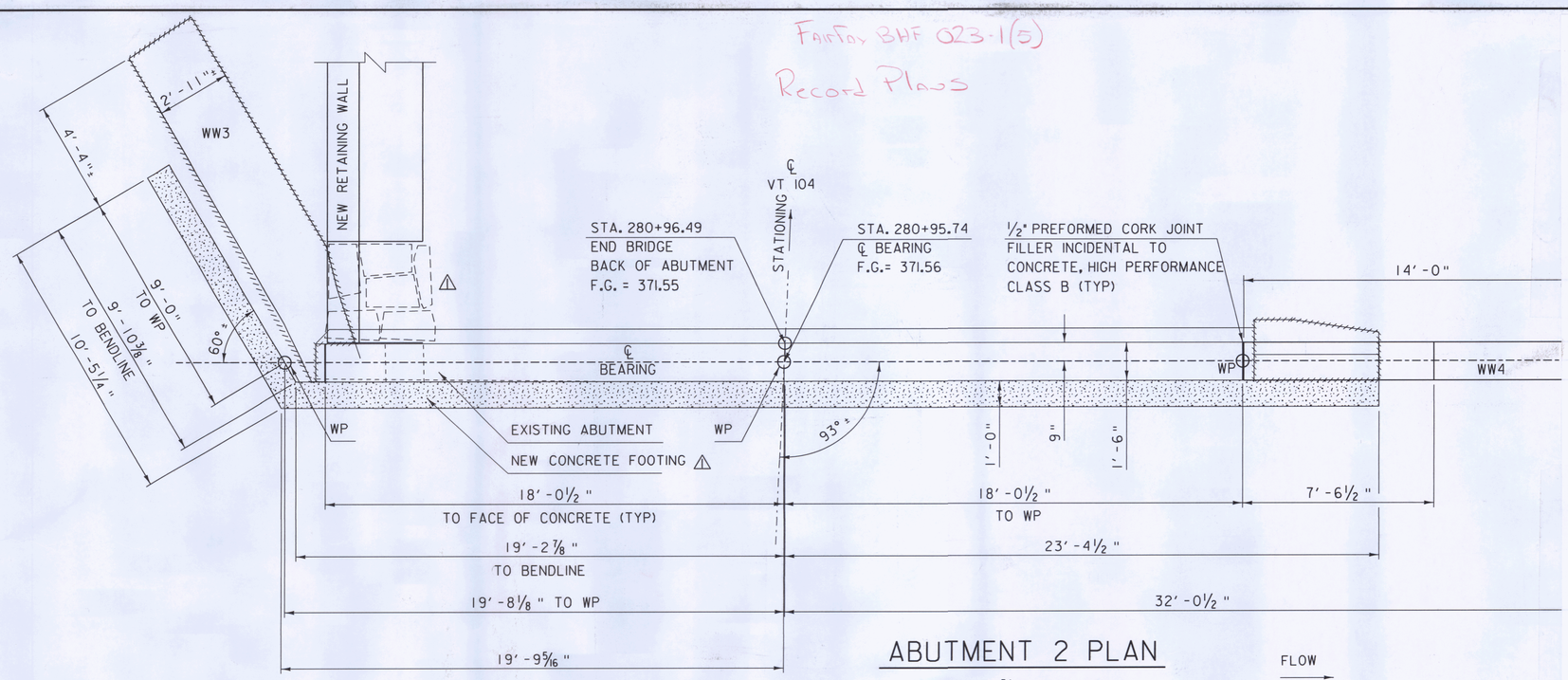
NOTES:

1. NEW CONCRETE
2. REMOVAL OF CONCRETE OR MASONRY
3. SEE SHEET 43 FOR WINGWALL DETAILS

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-I(5)
FILE NAME: s86e064sub.dgn	PLOT DATE: 20-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
	SHEET 42 OF 61

FAIRFAX BHF 023-1(5)

Record Plans



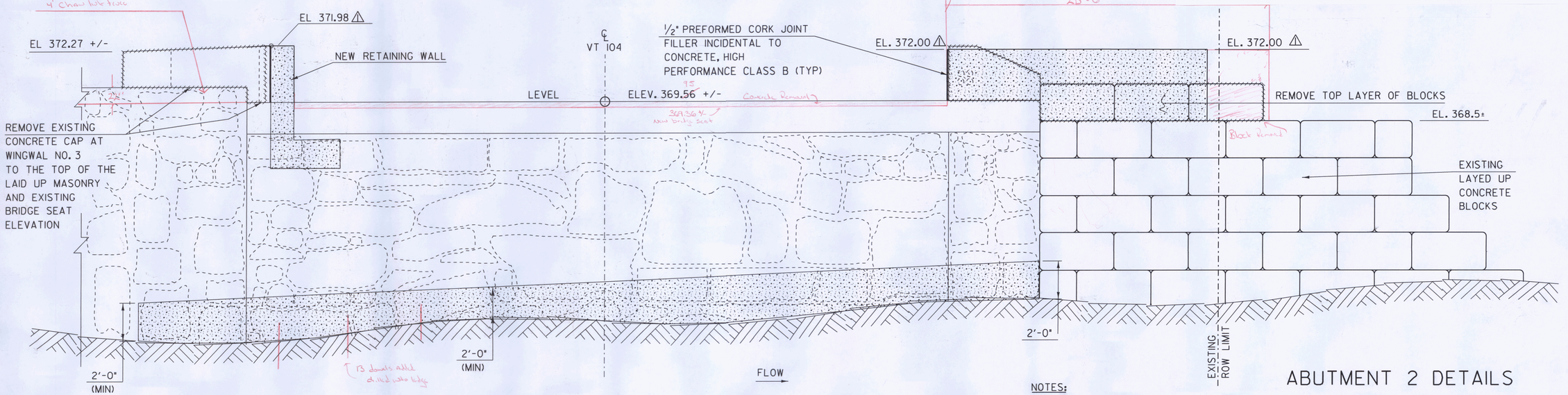
ABUTMENT 2 PLAN

SCALE ⅜" = 1'-0"

0 1 2 3 4

FLOW

Additional Masonry Removal. HRC-B cap poured back as a keyed pad & back for 4' Chain link Fence



ABUTMENT 2 ELEVATION

SCALE ⅜" = 1'-0"

0 1 2 3 4

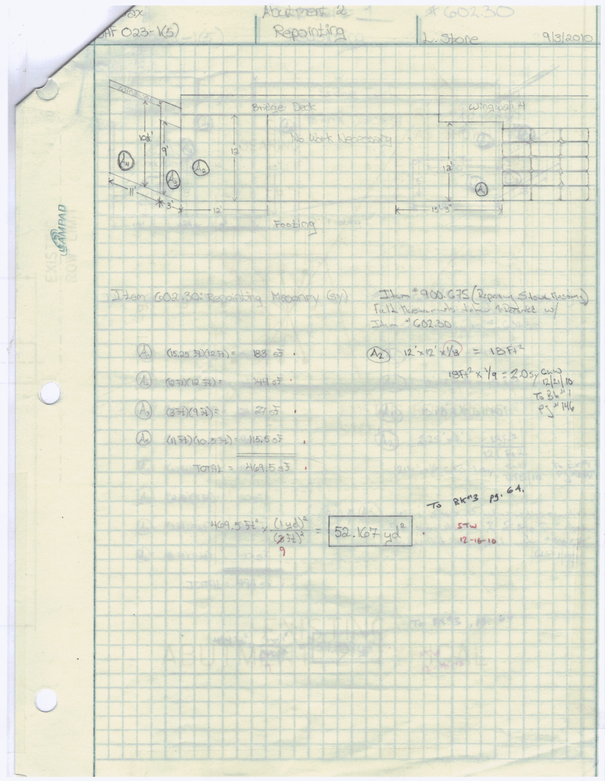
ABUTMENT 2 DETAILS

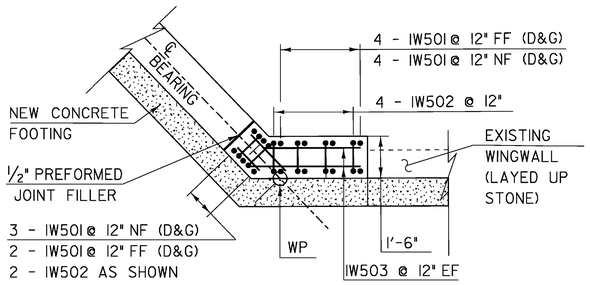
REVISION NUMBER	DESCRIPTION	DATE
⚠	CHANGE DUE TO FIELD CONDITIONS	10/30/09

NOTES:

1. NEW CONCRETE
2. REMOVAL OF CONCRETE OR MASONRY
3. SEE SHEET 43 FOR WINGWALL DETAILS

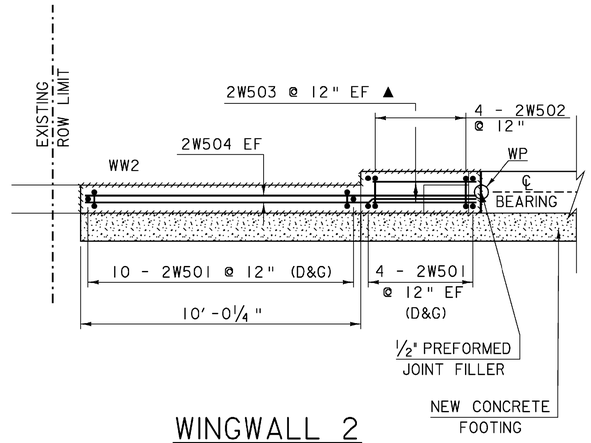
PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-1(5)
FILE NAME: s86e064sub.dgn	PLOT DATE: 05-NOV-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
	SHEET 42 OF 61





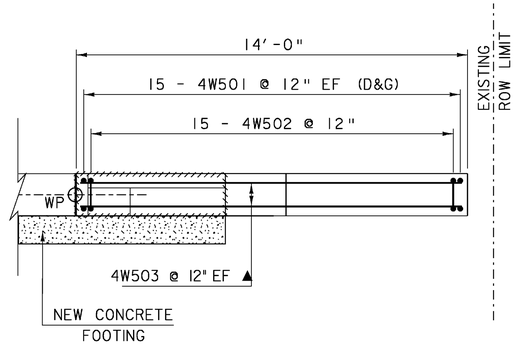
WINGWALL 1 REINFORCING PLAN

SCALE ⅜" = 1'-0"



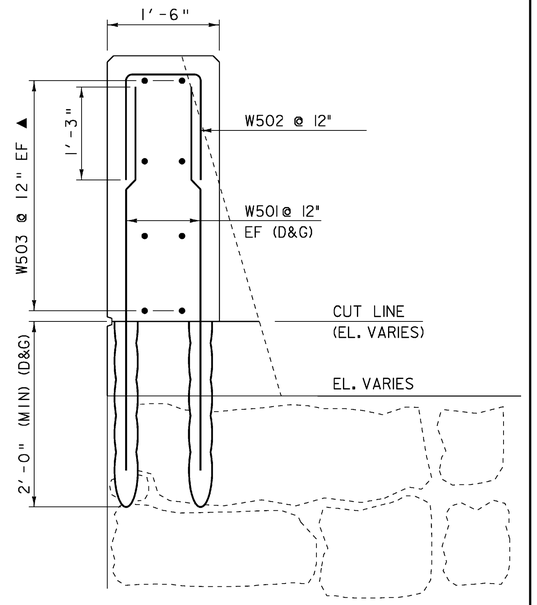
WINGWALL 2 REINFORCING PLAN

SCALE ⅜" = 1'-0"



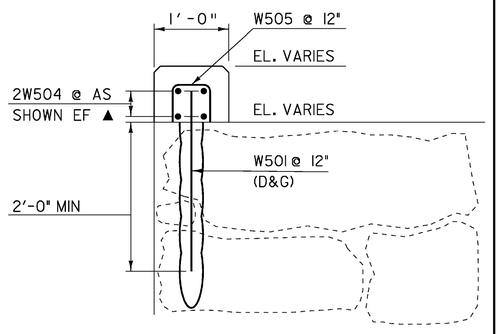
WINGWALL 4 REINFORCING PLAN

SCALE ⅜" = 1'-0"



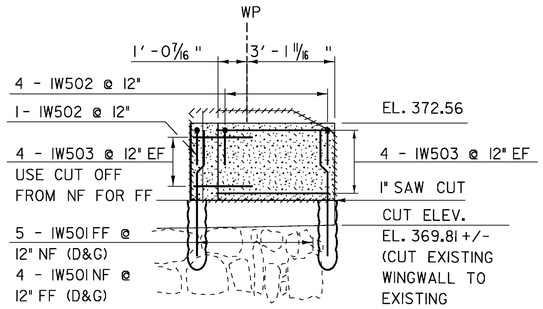
WINGWALLS 1, 2 & 4 TYPICAL

SCALE 1" = 1'-0"



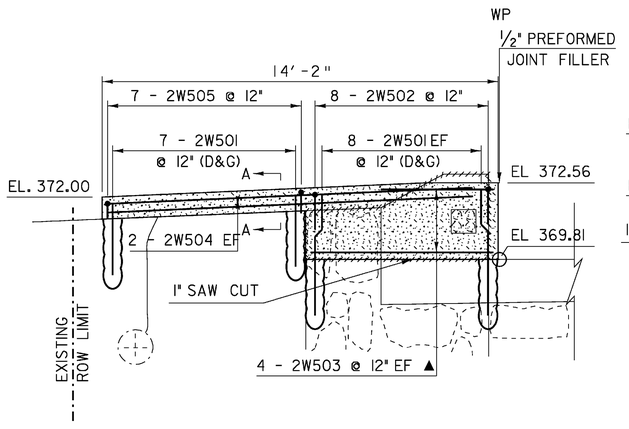
WINGWALLS 2 SECTION A-A

SCALE 1" = 1'-0"



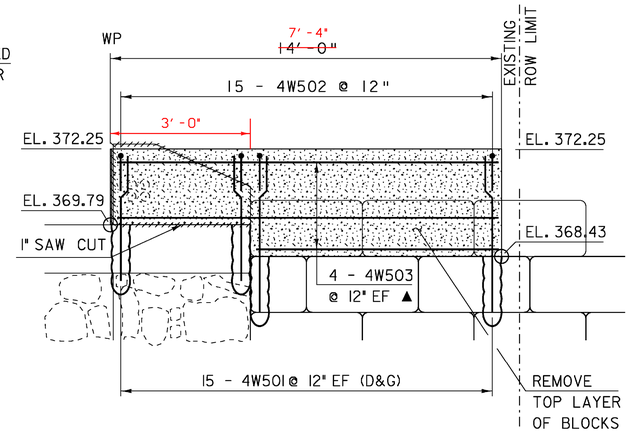
WINGWALL 1 REINFORCING DETAIL

SCALE ⅜" = 1'-0"



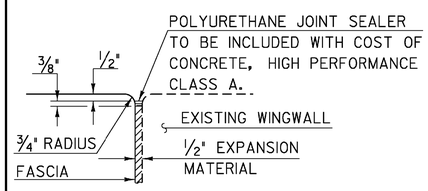
WINGWALL 2 REINFORCING DETAIL

SCALE ⅜" = 1'-0"

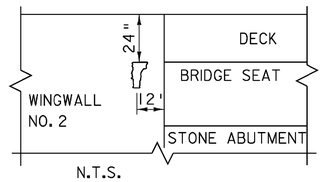


WINGWALL 4 REINFORCING DETAIL

SCALE ⅜" = 1'-0"



JOINT BETWEEN FASCIA AND WINGWALL



N.T.S.

LOCATE BRIDGE PLAQUE VIEW "A - A"

NOTE:

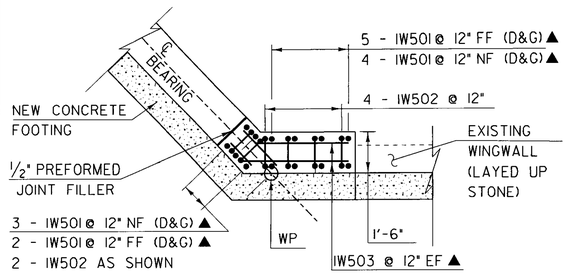
THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER. THIS WORK IS INCIDENTAL TO THE ITEM "CONCRETE, HIGH PERFORMANCE CLASS B".

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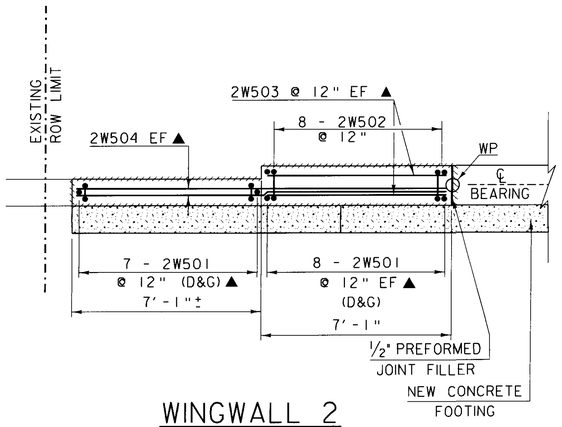
WINGWALL DETAILS

PROJECT NAME:	FAIRFAX
PROJECT NUMBER:	BHF 023-1(5)
FILE NAME: s86e064sub.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
	SHEET 43 OF 61



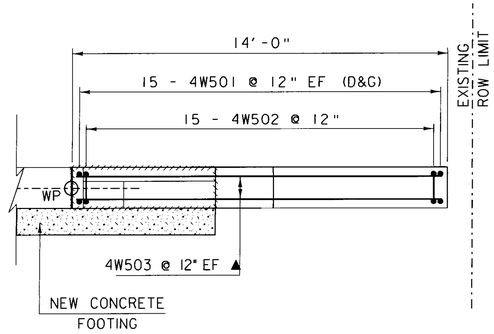
WINGWALL 1 REINFORCING PLAN

SCALE 3/8" = 1'-0"



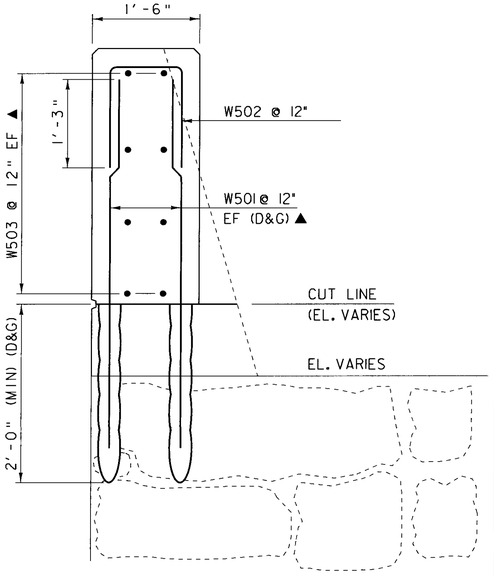
WINGWALL 2 REINFORCING PLAN

SCALE 3/8" = 1'-0"



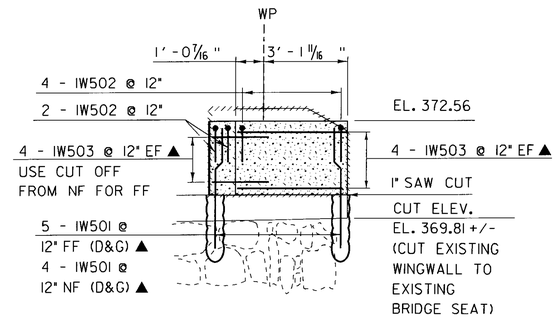
WINGWALL 4 REINFORCING PLAN

SCALE 3/8" = 1'-0"



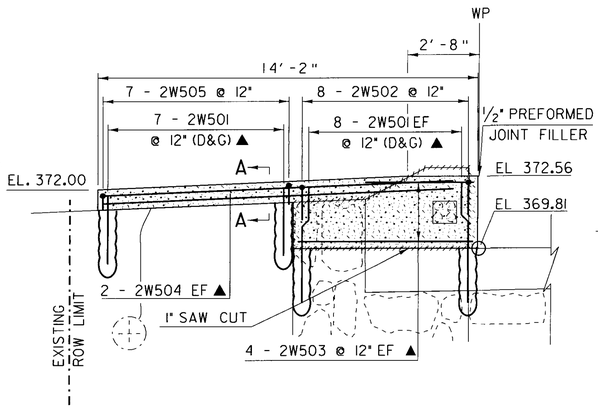
WINGWALLS 1, 2 & 4 TYPICAL

SCALE 1" = 1'-0"



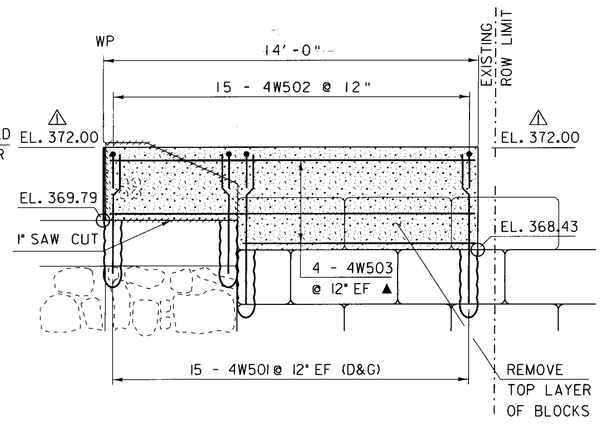
WINGWALL 1 REINFORCING DETAIL

SCALE 3/8" = 1'-0"



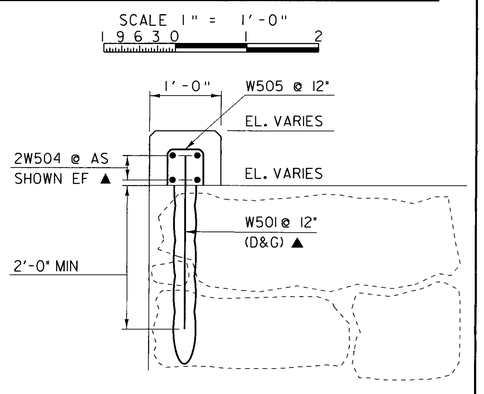
WINGWALL 2 REINFORCING DETAIL

SCALE 3/8" = 1'-0"



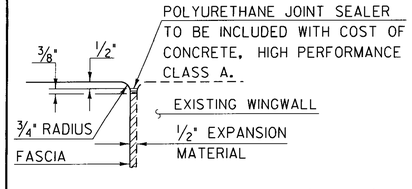
WINGWALL 4 REINFORCING DETAIL

SCALE 3/8" = 1'-0"

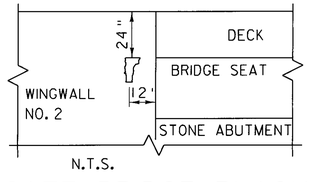


WINGWALLS 2 SECTION A-A

SCALE 1" = 1'-0"



JOINT BETWEEN FASCIA AND WINGWALL



N.T.S.

LOCATE BRIDGE PLAQUE VIEW "A - A"

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REVISION NUMBER	DESCRIPTION	DATE
⚠	CHANGE DUE TO FIELD CONDITIONS	10/30/09

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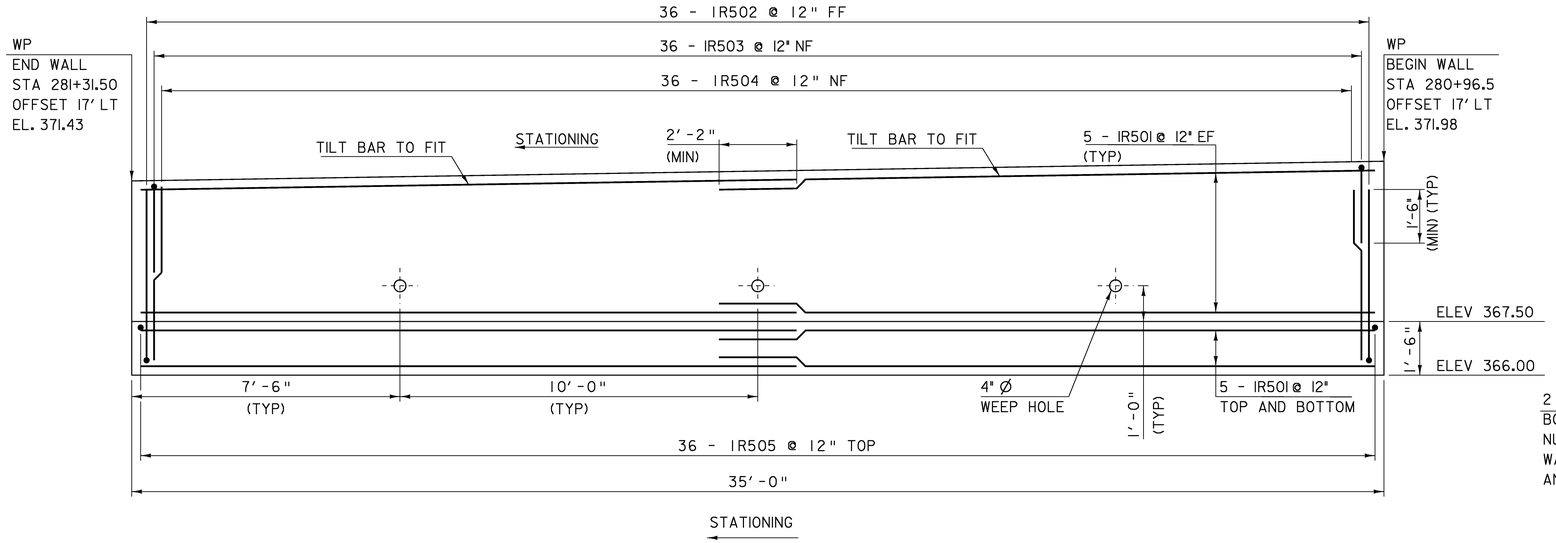
WINGWALL DETAILS

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: s86e064sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON

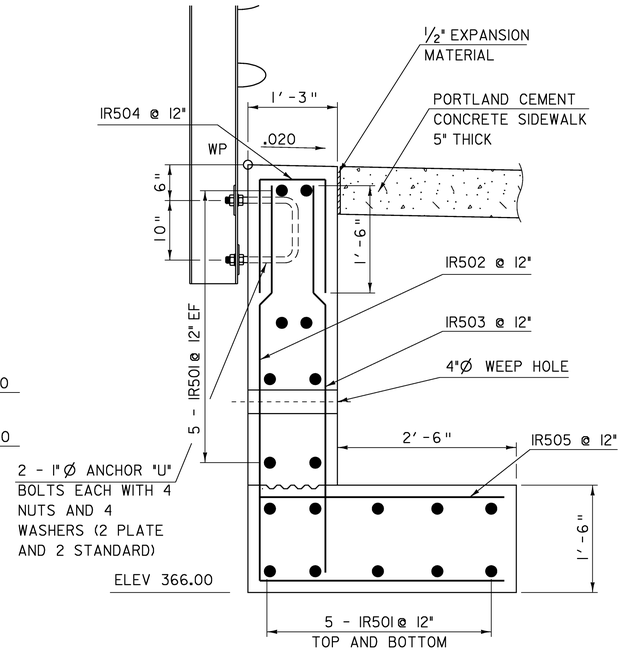
PLOT DATE: 05-NOV-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 43 OF 61



RETAINING WALL ELEVATION

SCALE ½" = 1'-0"

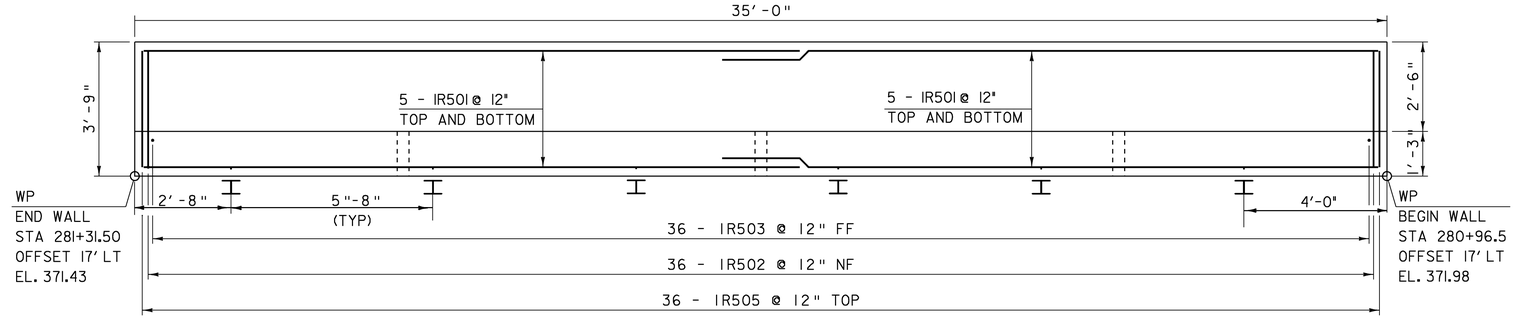
0 1 2



RETAINING WALL TYPICAL

SCALE 1" = 1'-0"

0 1 2 3 6 9

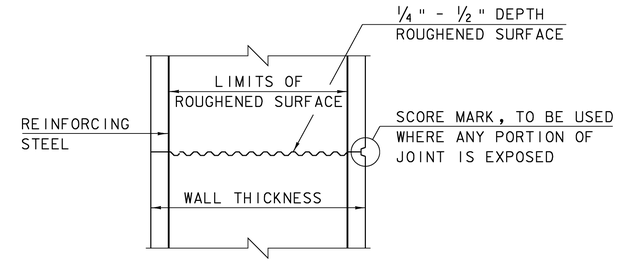


RETAINING WALL FOOTING PLAN

SCALE ½" = 1'-0"

0 1 2

STATIONING



TYPICAL HORIZONTAL CONSTRUCTION JOINT

(NOT TO SCALE)

1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.

2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

NOTE:

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3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
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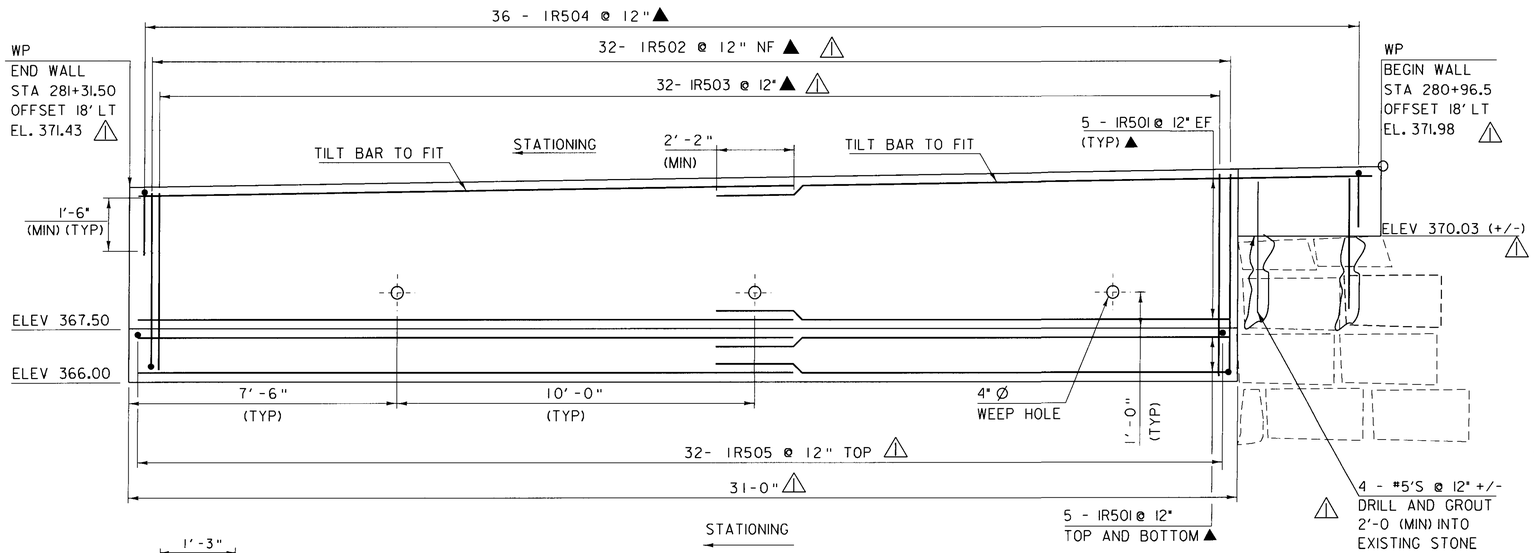
RETAINING WALL DETAILS

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

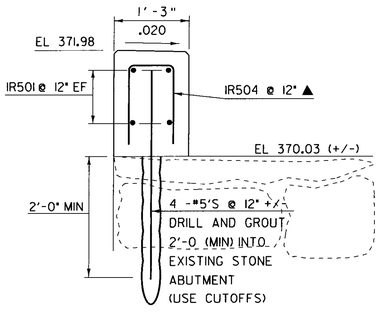
FILE NAME: s86e064sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON

PLOT DATE: 13-JUL-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 44 OF 61

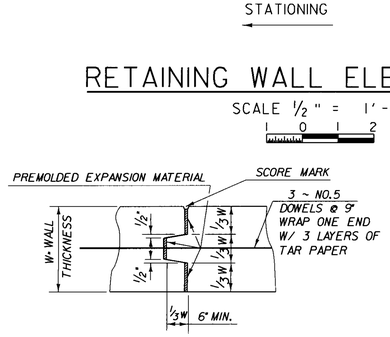


RETAINING WALL ELEVATION

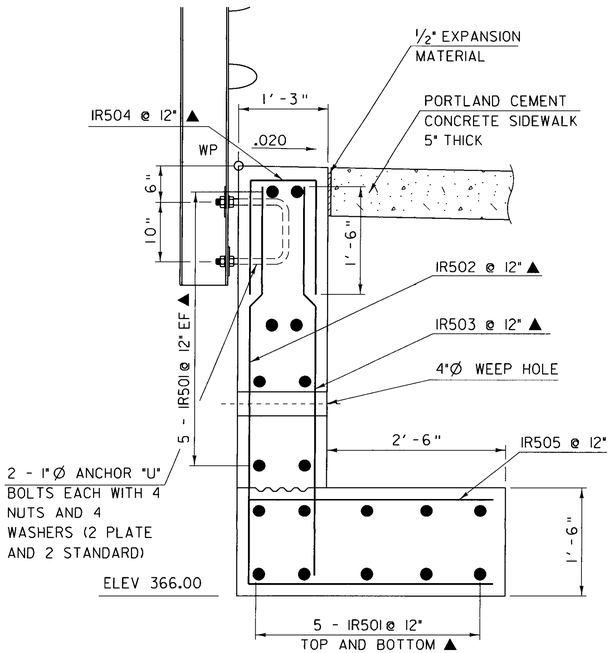
SCALE 1/2" = 1'-0"



RETAINING WALL SECTION A-A

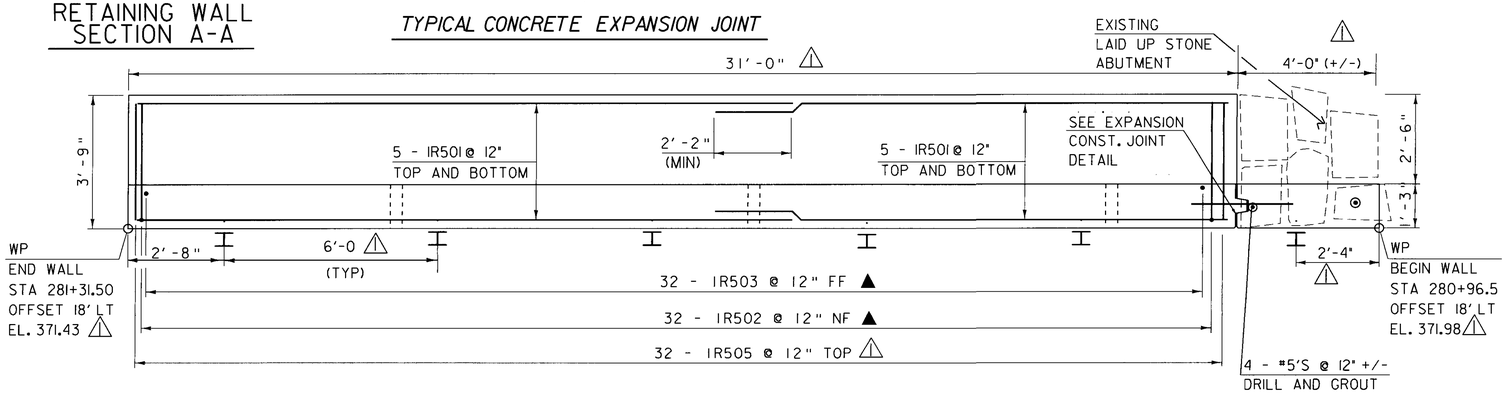


TYPICAL CONCRETE EXPANSION JOINT



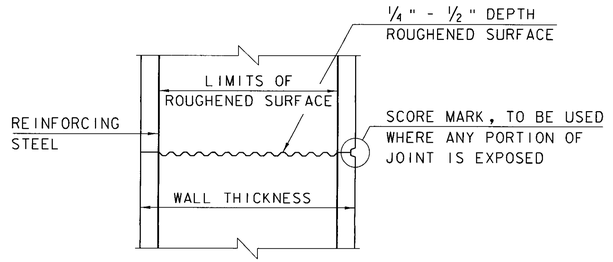
RETAINING WALL TYPICAL

SCALE 1" = 1'-0"



RETAINING WALL FOOTING PLAN

SCALE 1/2" = 1'-0"



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REVISION NUMBER	DESCRIPTION	DATE
⚠1	CHANGE DUE TO FIELD CONDITIONS	10/30/09

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NOTE

RETAINING WALL DETAILS

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: s86e064sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
PLOT DATE: 05-NOV-2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 44 OF 61

STATE OF VERMONT
AGENCY OF TRANSPORTATION

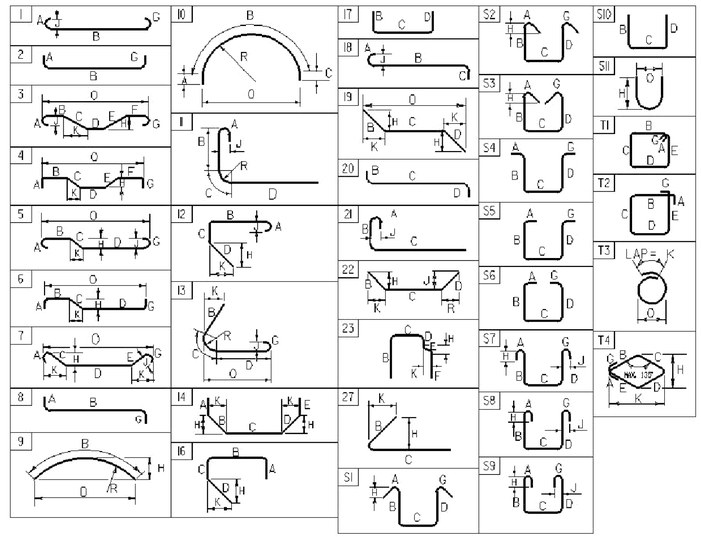
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK- SIDEWALK																
✳	23	5	33'- 4"	ES501	STR	33'- 4"											
	68	5	3'- 5"	ES502	S10		1'- 6"	0'- 5"	1'- 6"								
ABUTMENT 1																	
	WINGWALL NO. 1																
✳ ▲	14	5	5'- 0"	1W501	STR	5'- 0"											
⧺ ▲	13	5	4'- 0"	1W503	STR	4'- 0"											
	5	5	3'- 6"	1W502	S10		1'- 3"	1'- 0"	1'- 3"								
	WINGWALL NO. 2																
⧺ ▲	24	5	5'- 0"	2W501	STR	5'- 0"											
▲	6	5	4'- 0"	2W503	STR	4'- 0"											
✳	5	5	6'- 4"	2W504	STR	6'- 4"											
	4	5	3'- 6"	2W502	S10		1'- 3"	1'- 0"	1'- 3"								
	7	5	1'- 6"	2W505	S10		0'- 6"	0'- 6"	0'- 6"								
ABUTMENT 2																	
	WINGWALL NO. 4.																
⧺ ▲	31	5	5'- 0"	4W501	STR	5'- 0"											
⧺ ▲	16	5	4'- 0"	4W503	STR	4'- 0"											
	10	5	3'- 6"	4W502	S10		1'- 3"	1'- 0"	1'- 3"								
	RETAINING WALL																
✳	41	5	18'- 4"	1R501	STR	18'- 4"											
	36	5	4'- 11"	1R503	STR	4'- 11"											
	36	5	3'- 3"	1R505	STR	3'- 3"											
	36	5	4'- 11"	1R502	17		2'- 1"	0'- 9"	2'- 1"								
	36	5	8'- 2"	1R504	17		4'- 11"	3'- 3"									

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

~ 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 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

PROJECT NAME: FAIRFAX
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: s86e064rss.dgn
PROJECT MANAGER: C. CARLSON
DESIGNED BY: C. CARLSON
REINFORCING STEEL SCHEDULE

PLOT DATE: 7/10/2009
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 45 OF 61

STATE OF VERMONT
AGENCY OF TRANSPORTATION

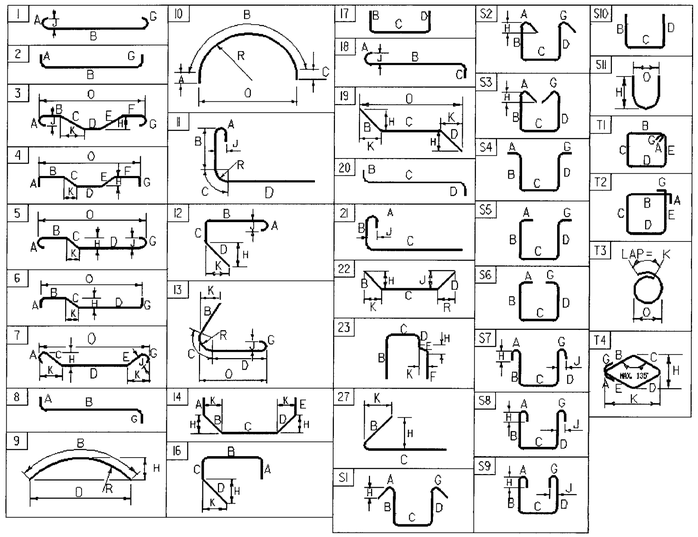
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	ABUTMENT 1																
	WINGWALL NO. 1																
✳ ▲	15	5	4'- 6"	1W501	STR	4'- 6"											
✳ ▲	13	5	3'- 11"	1W503	STR	3'- 11"											
	6	5	3'- 6"	1W502	S10		1'- 3"	1'- 0"	1'- 3"								
	WINGWALL NO. 2																
✳ ▲	24	5	4'- 6"	2W501	STR	4'- 6"											
▲	8	5	6'- 7"	2W503	STR	6'- 7"											
✳ ▲	5	5	13'- 8"	2W504	STR	13'- 8"											
	8	5	3'- 6"	2W502	S10		1'- 3"	1'- 0"	1'- 3"								
	7	5	1'- 6"	2W505	S10		0'- 6"	0'- 6"	0'- 6"								
	ABUTMENT 2																
	WINGWALL NO. 4.																
✳ ▲	31	5	5'- 4"	4W501	STR	5'- 4"											
✳ ▲	9	5	13'- 6"	4W503	STR	13'- 6"											
	15	5	3'- 6"	4W502	S10		1'- 3"	1'- 0"	1'- 3"								
	RETAINING WALL																
✳ ▲	41	5	18'- 4"	1R501	STR	18'- 4"											
▲	32	5	4'- 11"	1R503	STR	4'- 11"											
	32	5	3'- 3"	1R505	STR	3'- 3"											
▲	36	5	4'- 11"	1R504	17		2'- 1"	0'- 9"	2'- 1"								
▲	36	5	8'- 2"	1R502	17		4'- 11"	3'- 3"									

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

~ 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

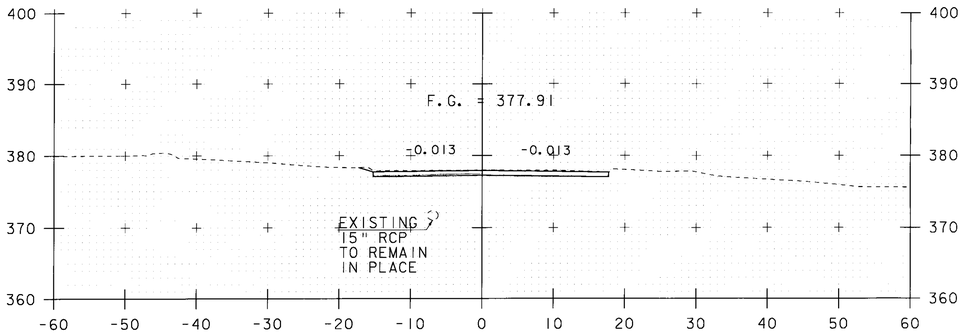
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES^2	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	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

REVISION NUMBER	DESCRIPTION	DATE
⚠	CHANGES DUE TO FIELD CONDITIONS	10/30/09

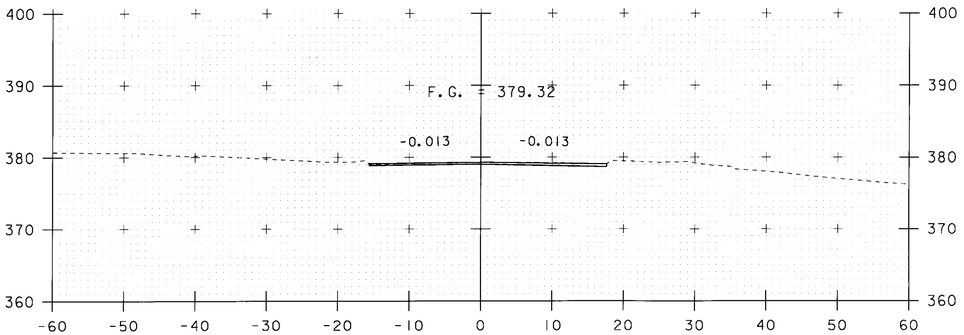
PROJECT NAME: **FAIRFAX**
PROJECT NUMBER: **BHF 023-1(5)**

FILE NAME: **s86e064rss.dgn**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **C. CARLSON**
REINFORCING STEEL SCHEDULE

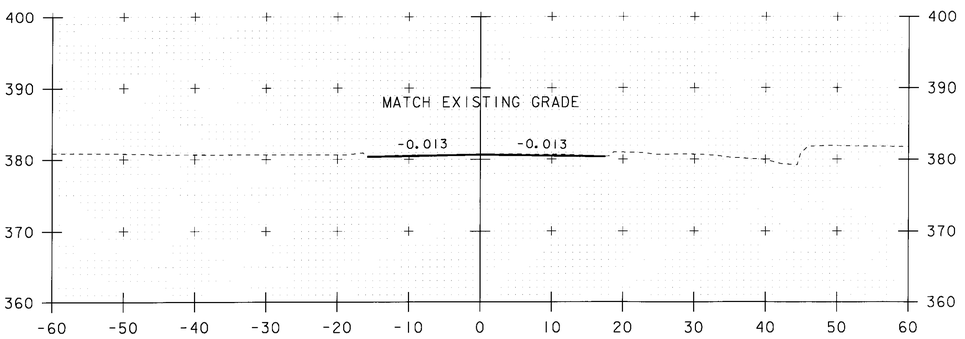
PLOT DATE: **11/4/2009**
DRAWN BY: **C. MOONEY**
CHECKED BY: **C. CARLSON**
SHEET **45** OF **61**



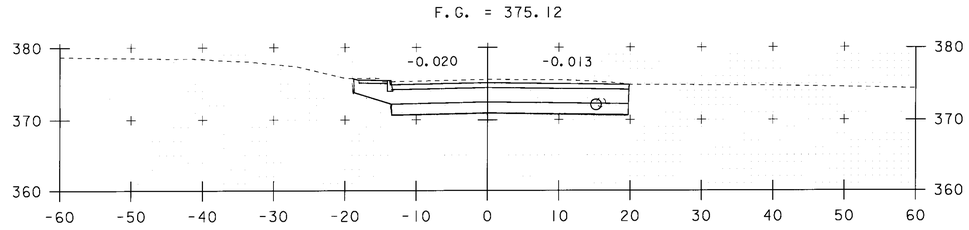
279+25



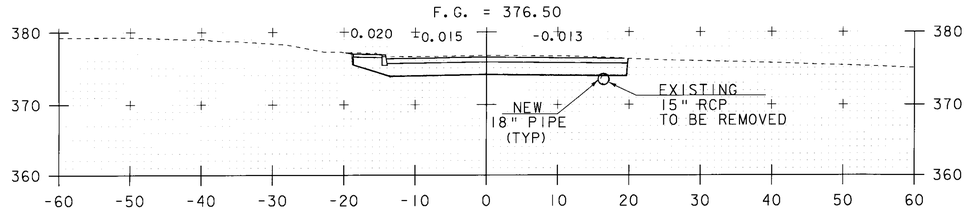
279+00



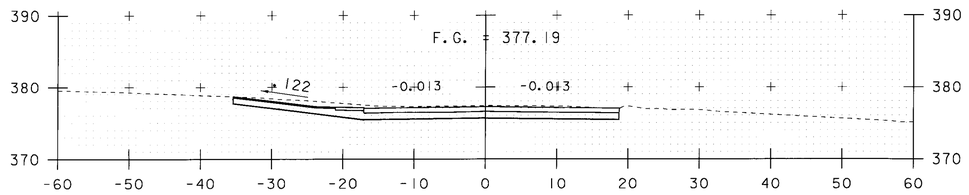
278+75
BEGIN APPROACH



279+75
END APPROACH
BEGIN PROJECT

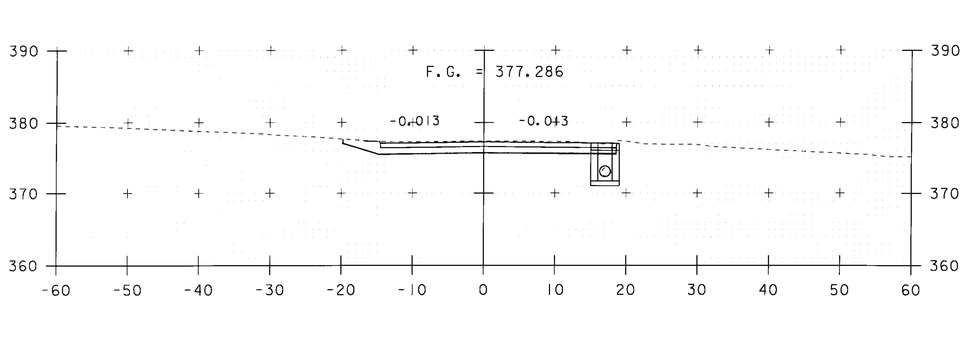


279+50



STA. 279+37.7 LT.
CONSTRUCT DRIVE

279+38



279+36

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

STA. 278+75 TO STA. 279+75

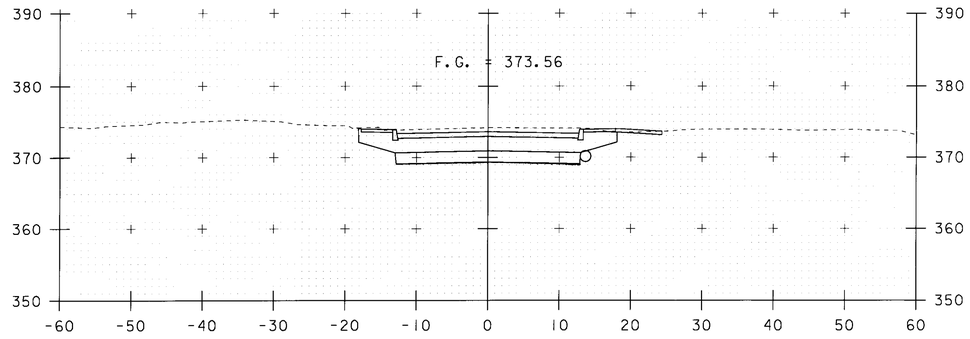
VT 104 SECTIONS - SHEET 1

PROJECT NAME: FAIRFAX

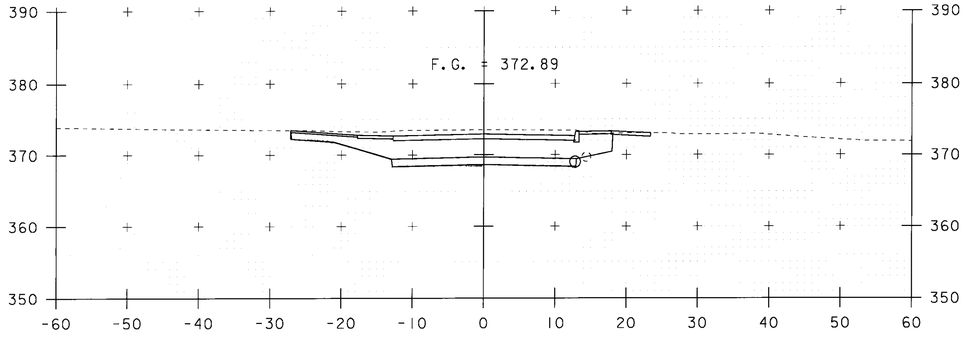
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064xsl.1

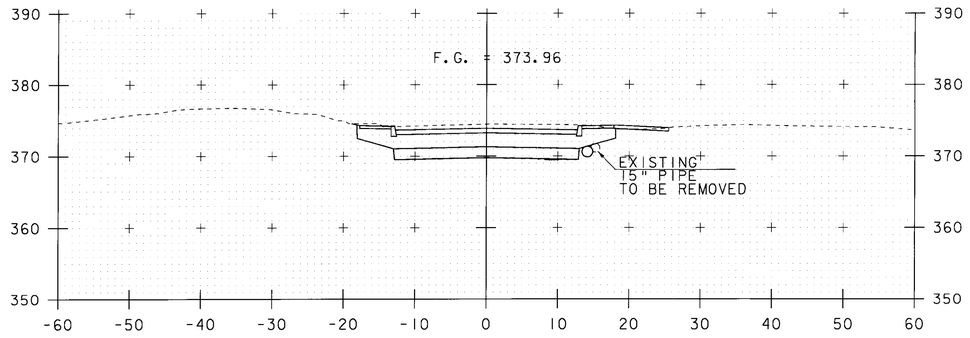
PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 46 OF 61



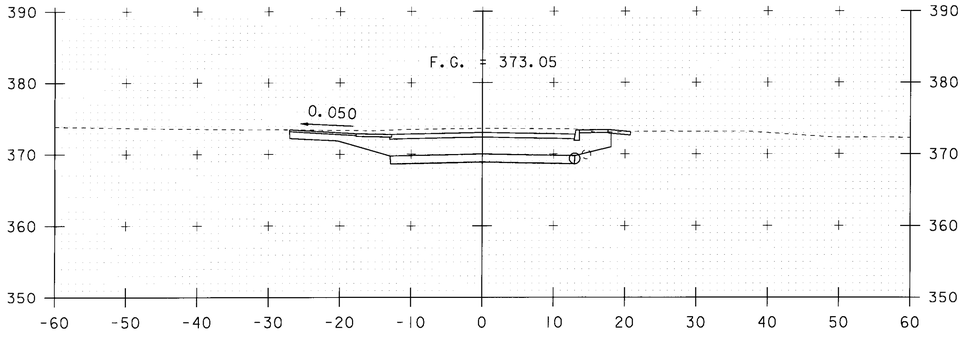
280+10



280+30

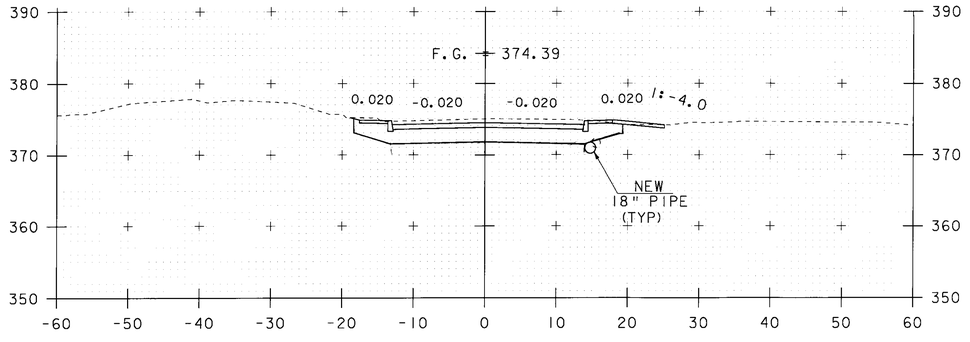


280+00

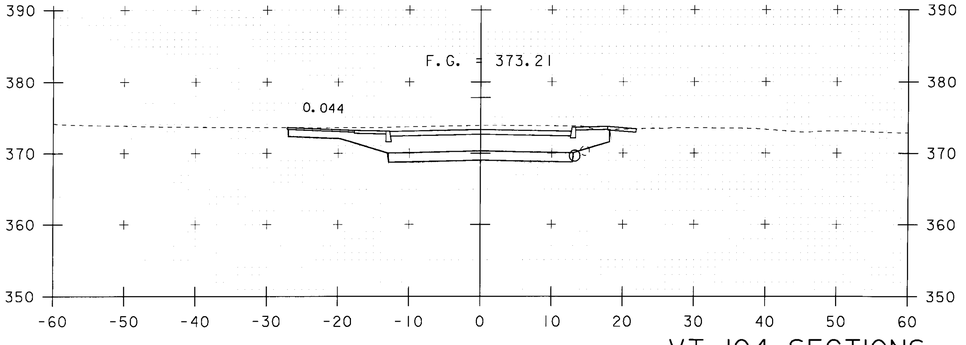


STA. 280+24.8 LT.
CONSTRUCT DRIVE

280+25



279+90



280+20

10 0 10

SCALE: 1" = 10'-0"

STA. 279+90 TO STA. 280+30

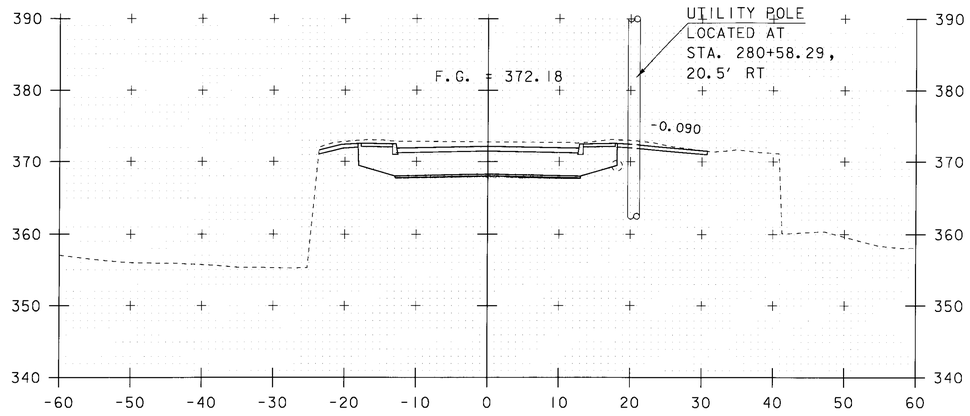
VT 104 SECTIONS - SHEET 2

PROJECT NAME: FAIRFAX

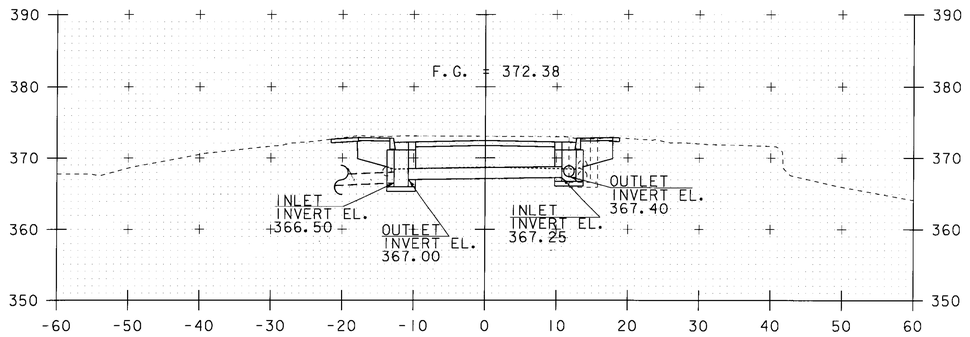
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064xs2.1

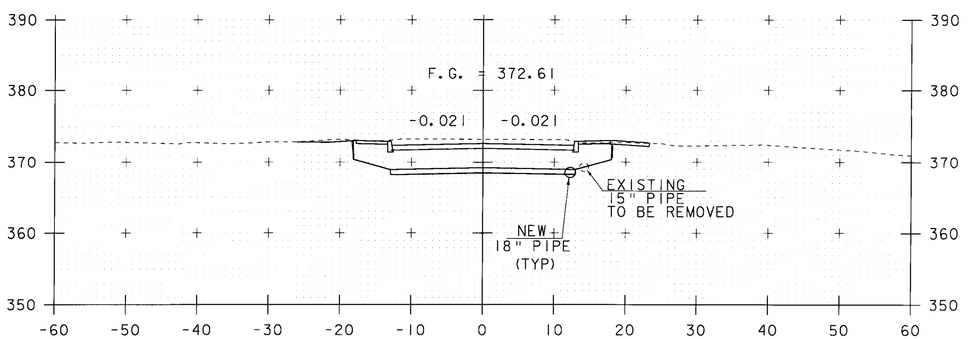
PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 47 OF 61



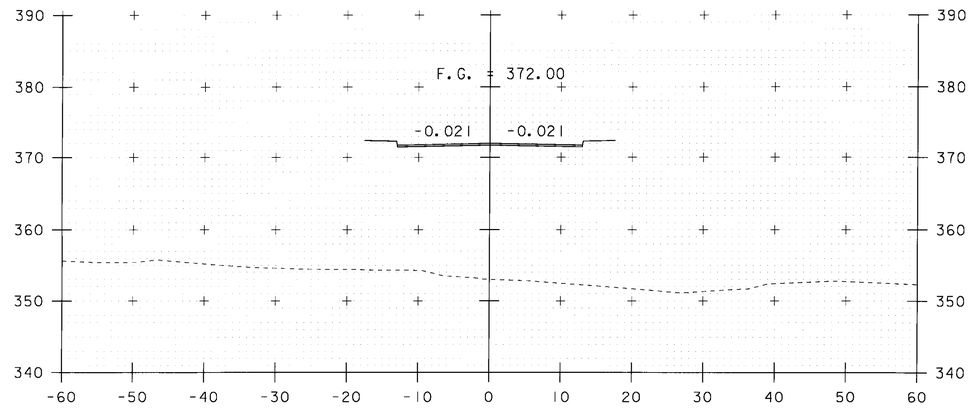
280+60



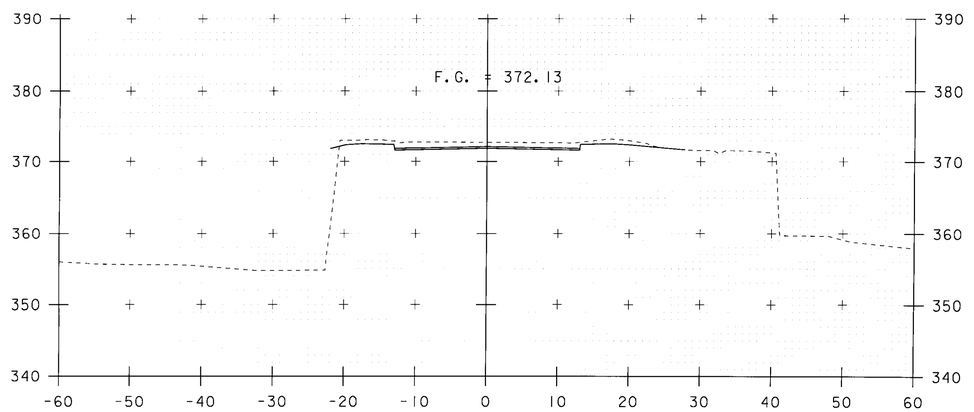
280+50



280+40



280+70



280+62.66
BEGIN BRIDGE

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

STA. 280+40 TO STA. 280+70

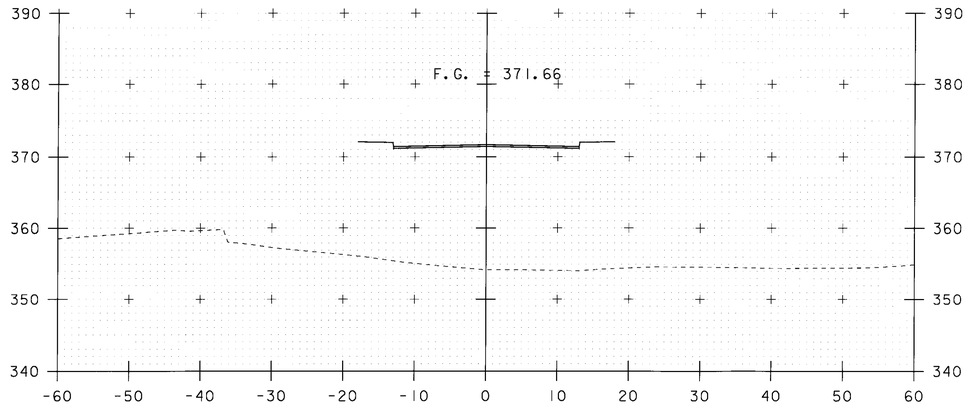
VT 104 SECTIONS - SHEET 3

PROJECT NAME: FAIRFAX

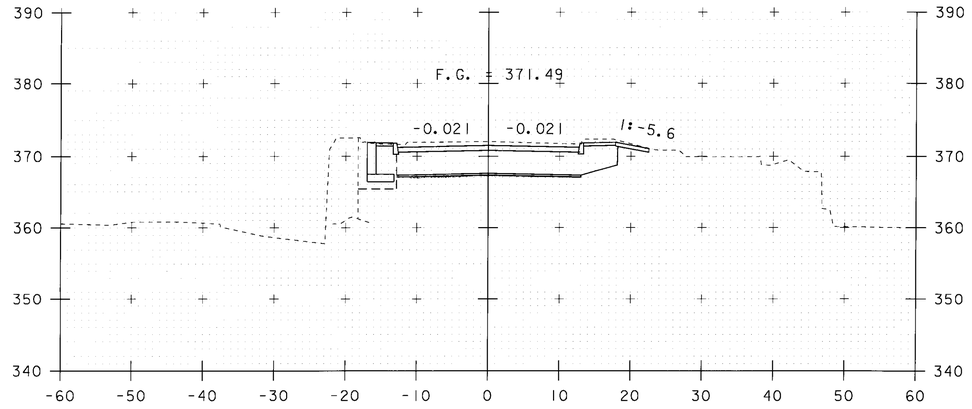
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064xs3.1

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 48 OF 61

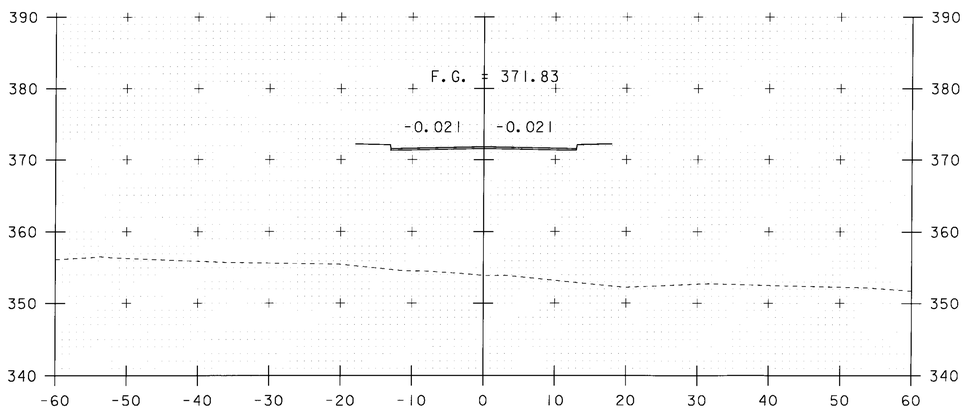


280+90

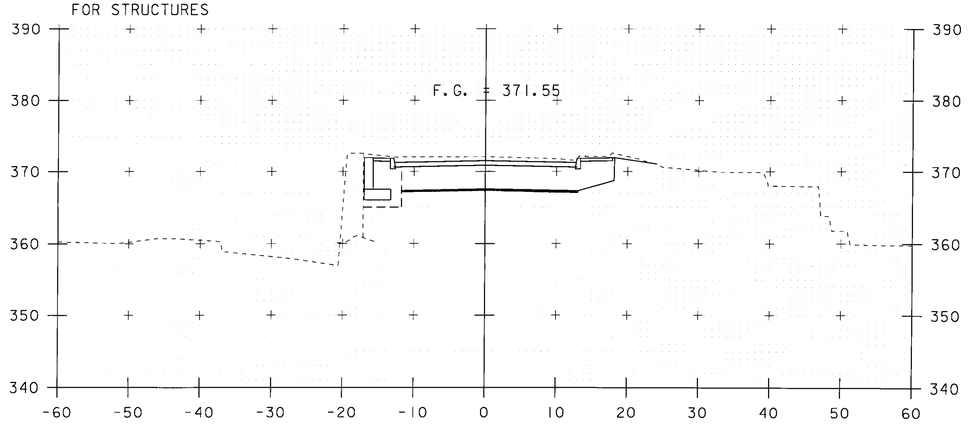


STA. 280+96.5 LT.
BEGIN RETAINING WALL
BEGIN STRUCTURE EXCAVATION
AND GRANULAR BACKFILL
FOR STRUCTURES

281+00



280+80



280+96.49
END BRIDGE

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

STA. 280+80 TO STA. 281+00

VT 104 SECTIONS - SHEET 4

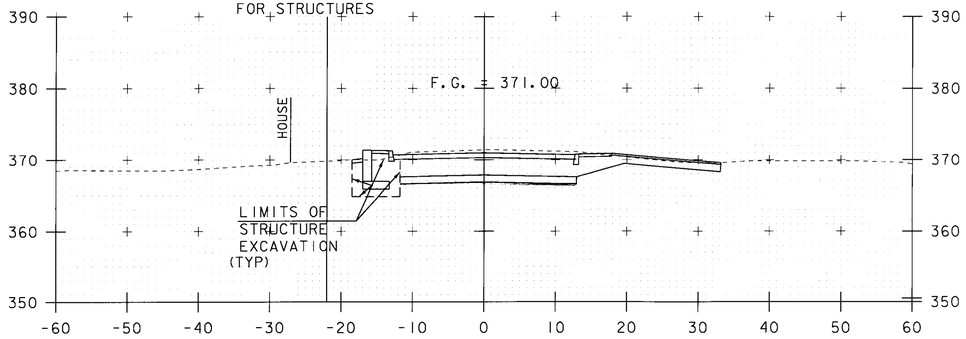
PROJECT NAME: FAIRFAX

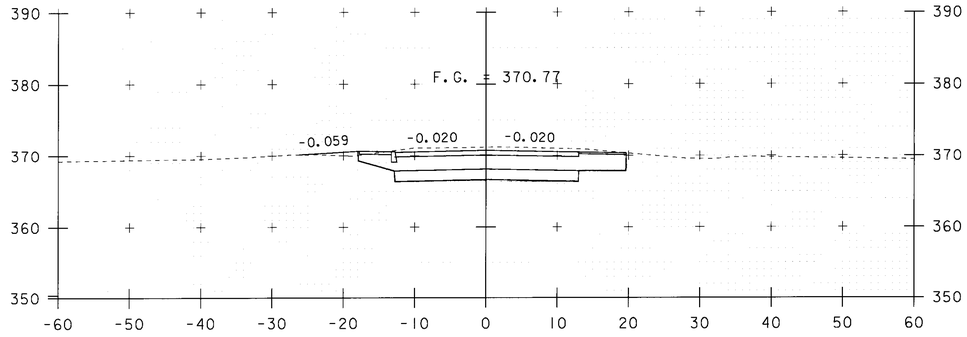
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064xs4.1

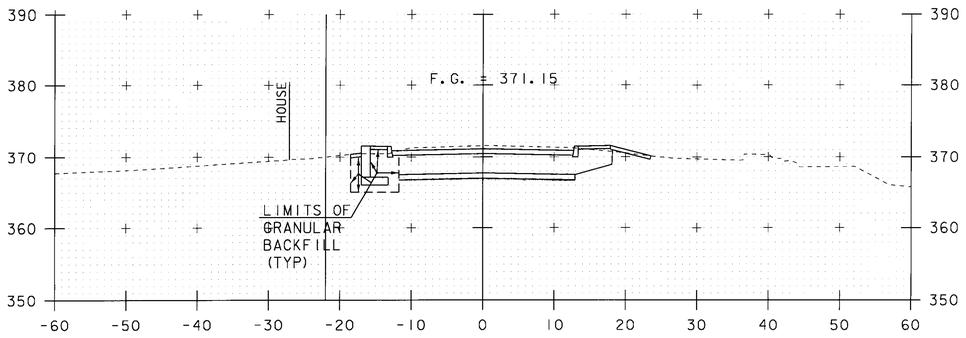
PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 49 OF 61

STA 280 + 31.5 LT
END RETAINING WALL
END STRUCTURE EXCAVATION
AND GRANULAR BACKFILL
FOR STRUCTURES

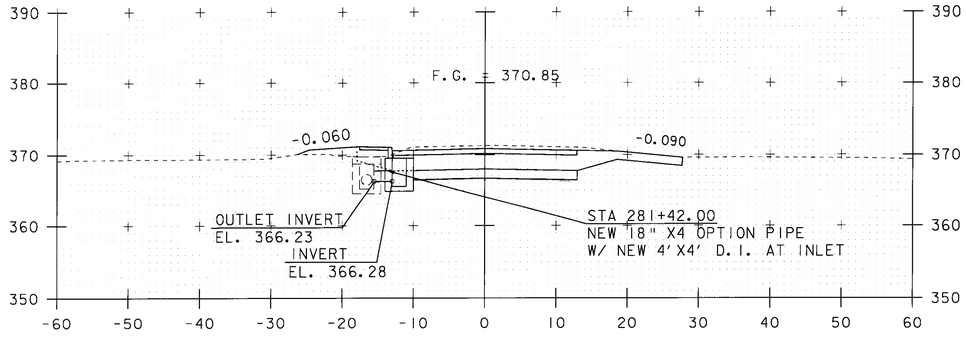




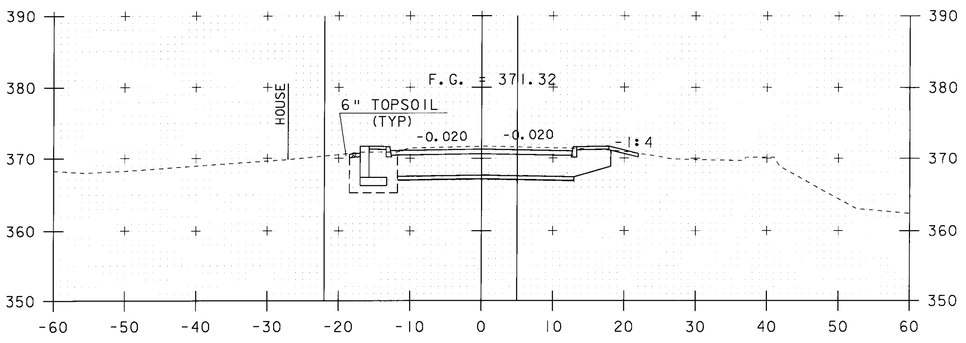
281+30



281+50

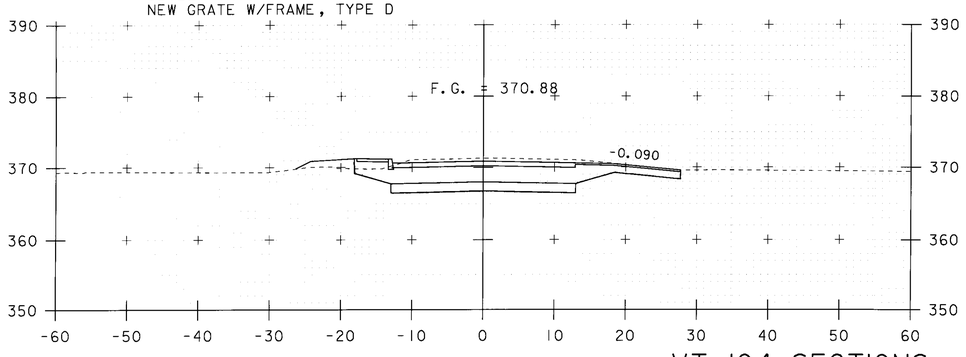


281+20



STAT 281+42.00
NEW 18" X 4'-0 OPTION PIPE
W/ NEW 4'X4' DI AT INLET
OUTLET INTO EXISTING DI W/
NEW GRATE W/FRAME, TYPE D

281+42



281+10

STA. 281+39.5 RT.
CONSTRUCT DRIVE

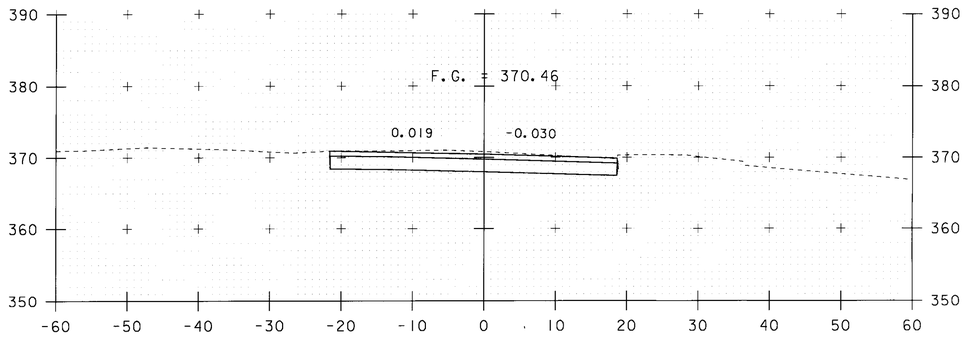
281+40

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

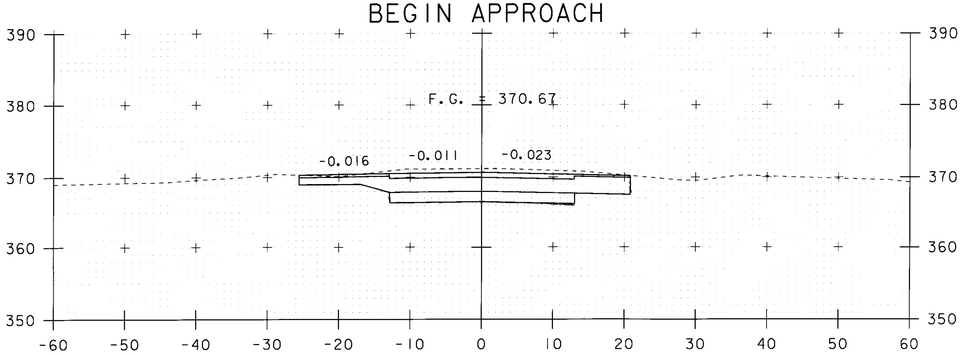
STA. 281+10 TO STA. 281+50

VT 104 SECTIONS - SHEET 5

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: 86e064/str/se064xs2.dgn	PLOT DATE: 13-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: L. BULLOCK
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064xs5.1	SHEET 50 OF 61

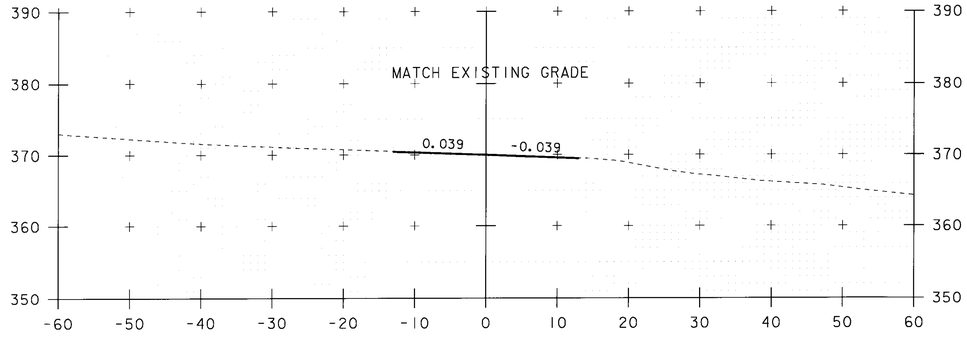


281+75
END PROJECT
BEGIN APPROACH

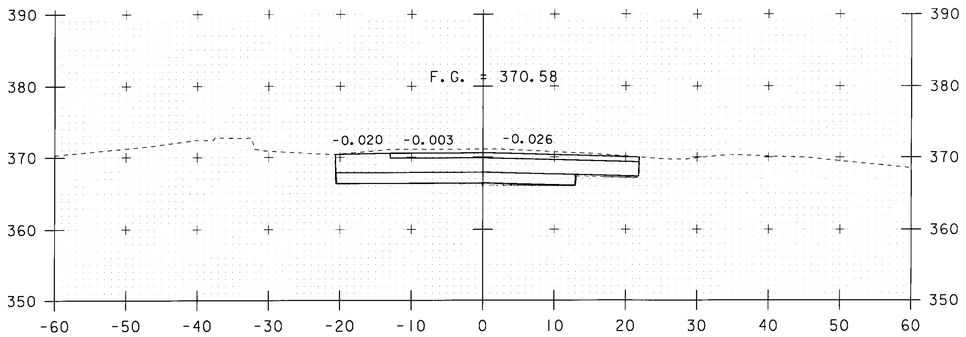


STA. 281+61.0 LT.
CONSTRUCT DRIVE

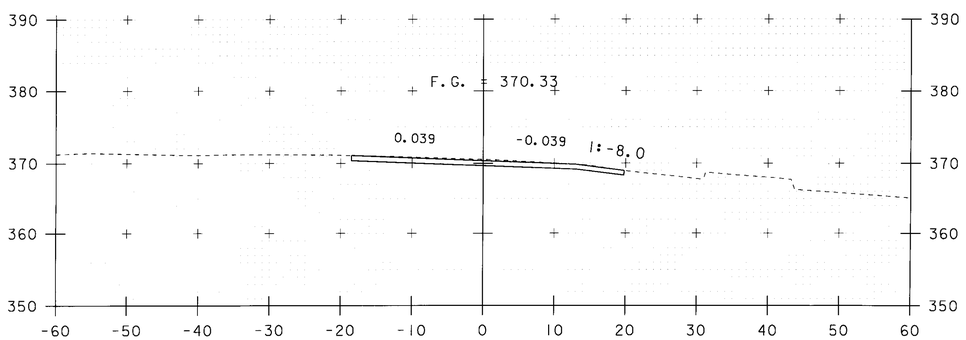
281+61



282+00

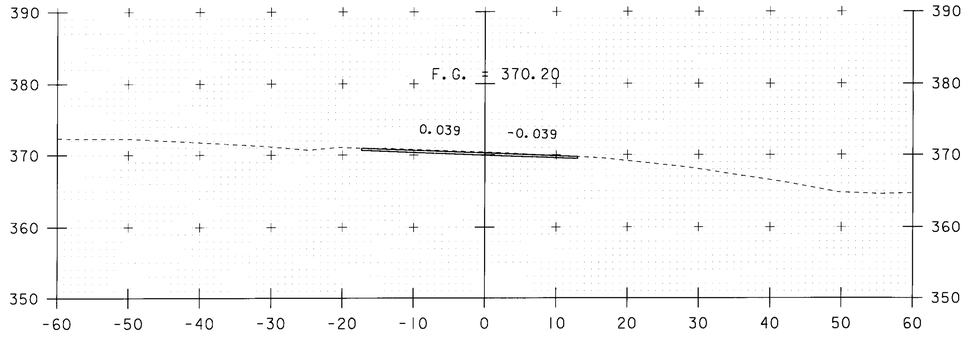


282+50



282+25

282+75
END APPROACH



SCALE: 1" = 10'-0"

STA. 281+61 TO STA. 282+75

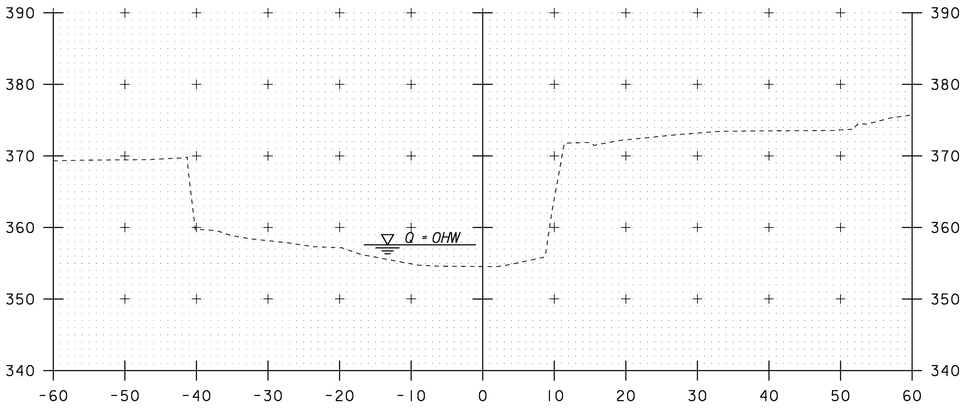
VT 104 SECTIONS - SHEET 6

PROJECT NAME: FAIRFAX

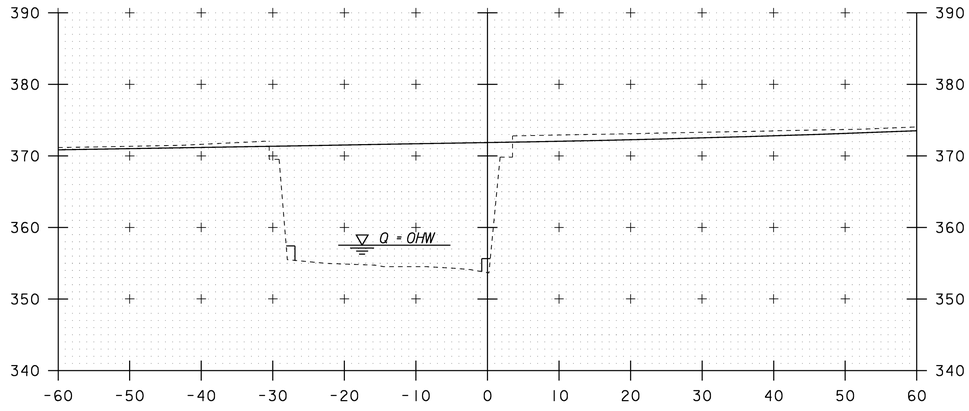
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064xs6.1

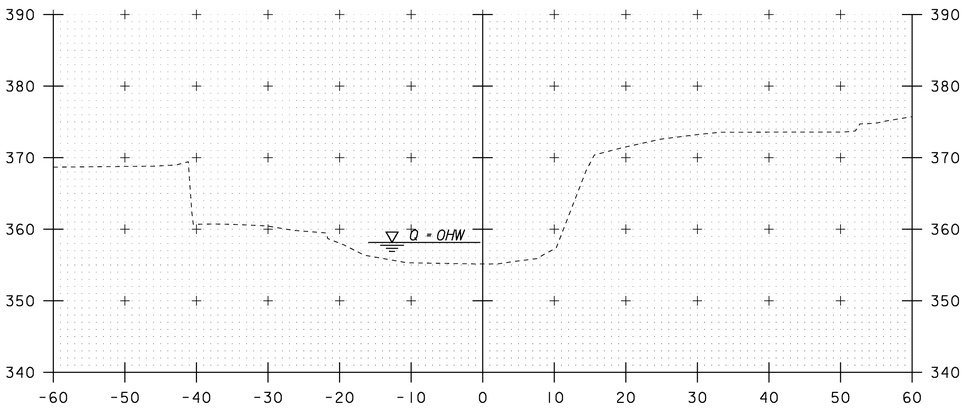
PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 51 OF 61



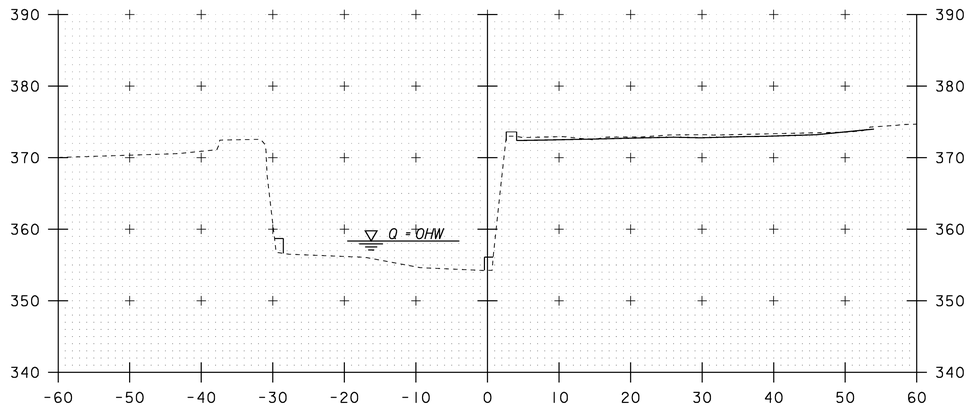
500+70



500+90



500+60



500+80

CHANNEL SECTIONS - SHEET 1

STA. 500+60 TO STA. 500+90

10 0 10

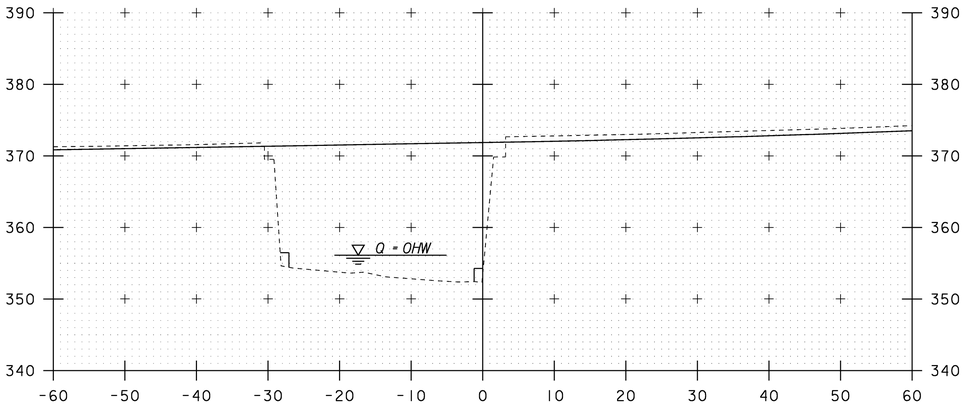
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PROJECT NAME: FAIRFAX

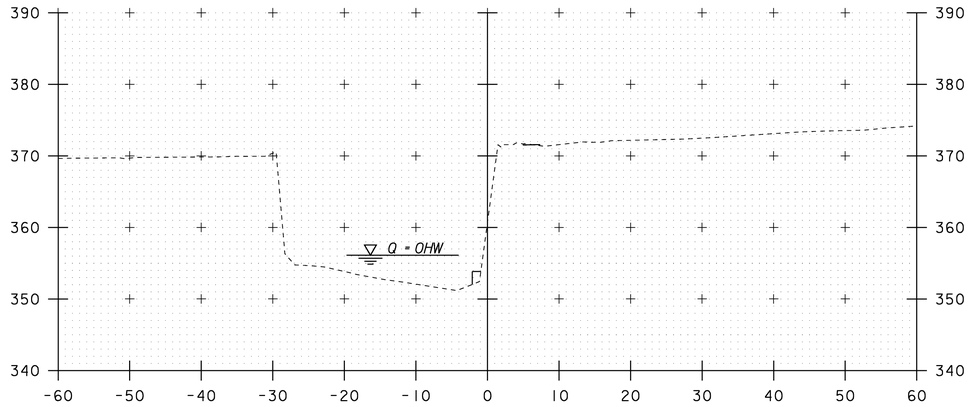
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ch1.1

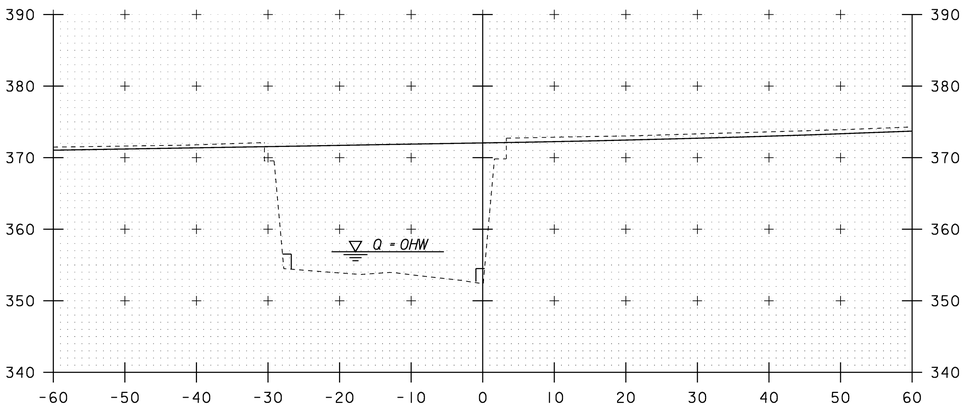
PLOT DATE: 17-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 52 OF 61



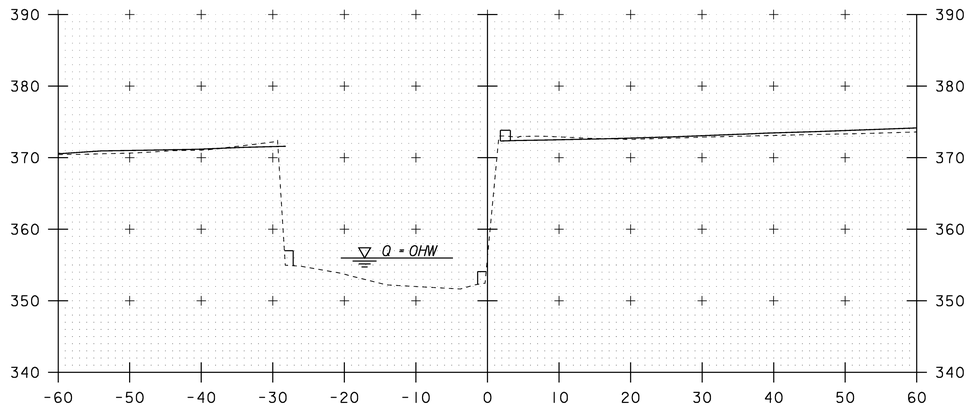
501+10



501+30



501+00



501+20

CHANNEL SECTIONS - SHEET 2

STA. 501+00 TO STA. 501+30

10 0 10

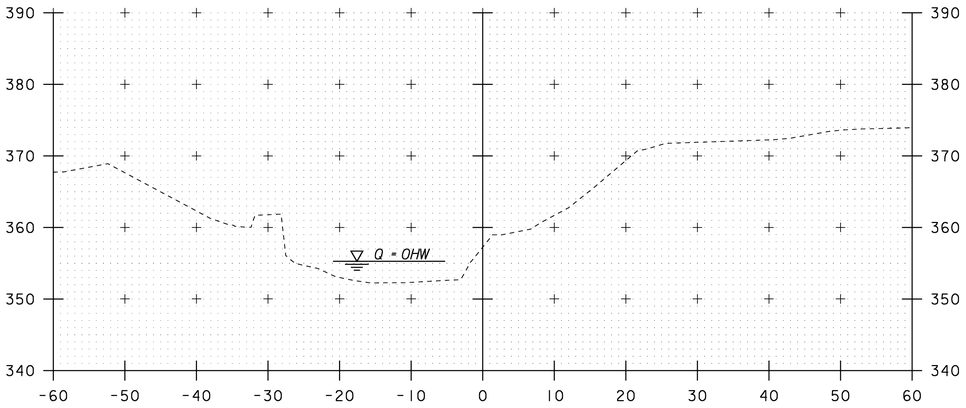
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PROJECT NAME: FAIRFAX

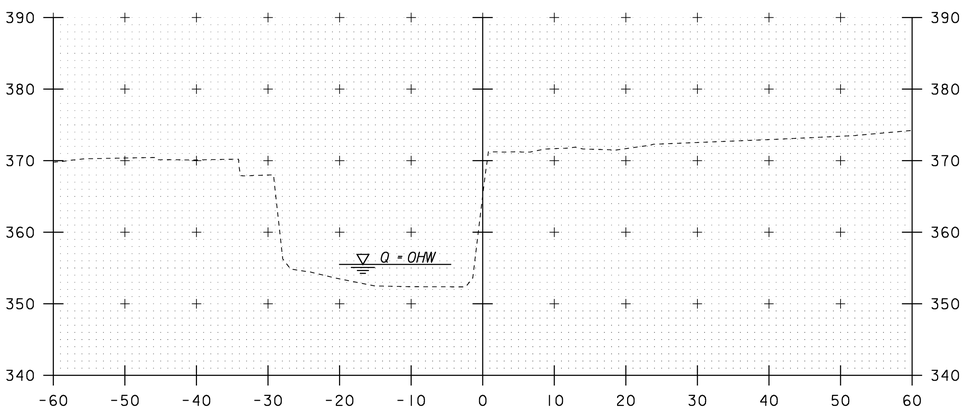
PROJECT NUMBER: BHF 023-1(5)

FILE NAME: 86e064/str/se064xs2.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ch2.1

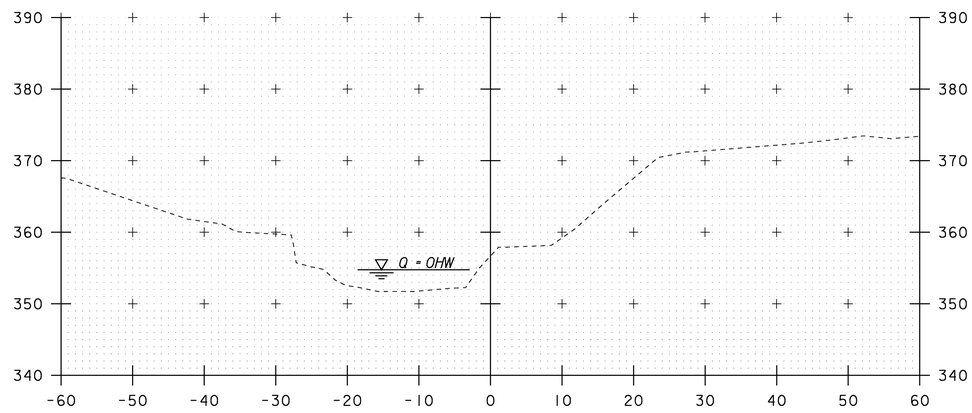
PLOT DATE: 17-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 53 OF 61



501+50



501+40



501+60

CHANNEL SECTIONS - SHEET 3

STA. 501+40 TO STA. 501+60

10 0 10

SCALE: 1" = 10'-0"

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-1(5)	
FILE NAME: 86e064/str/se064xs2.dgn	PLOT DATE: 17-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: L. BULLOCK
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
se064ch3.1	SHEET 54 OF 61

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF THE EXISTING CONCRETE T-BEAMS, DECK, RAILING, AND ASSOCIATED APPROACH WORK FOR BRIDGE 10 LOCATED IN THE VILLAGE OF FAIRFAX. AN ADJACENT RETAINING WALL LOCATED AT STATION 280+96.5LT TO 281+31.5LT WILL BE CONSTRUCTED. DRAINAGE WORK, AS DESCRIBED IN SECTION 1.2.2 BELOW, WILL BE COMPLETED. EXISTING SIDEWALK WITHIN THE PROJECT AREA WILL BE REPLACED. NO CHANNEL WORK WILL BE COMPLETED AS PART OF THIS PROJECT. ALL WORK WILL BE COMPLETED WITHIN THE RIGHT OF WAY.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.41 ACRES EXCLUDING ANY WASTE, BORROW, OR STAGING AREA TO BE IDENTIFIED BY THE CONTRACTOR.

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

1.2 SITE INVENTORY

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

THE PROJECT IS LOCATED IN THE VILLAGE OF FAIRFAX IN AN AREA OF DENSE RESIDENTIAL AND COMMERCIAL DEVELOPMENT. THE PROJECT WILL INVOLVE MINIMAL DISTURBANCE TO VEGETATION AND PERVIOUS SURFACES IN THE PROJECT AREA. THE PROJECT INCLUDES THE AREA OF THE EXISTING BRIDGE, ADJACENT SIDEWALKS AND APPROACH ROADWAY. DRAINAGE FROM THE ROADWAY AND BRIDGE SURFACE IS COLLECTED BY DROP INLETS ON THE EAST AND WEST SIDE OF THE BRIDGE, AND DISCHARGES INTO THE MILL BROOK.

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

THE MILL BROOK RUNS THROUGH THE PROJECT SITE. THE BROOK IS SINUOUS, SEMI-ALLUVIAL, IN A LOW RELIEF VALLEY AND A STREAMBED CONSISTING OF LEDGE, COBBLES, BOULDERS, AND GRAVEL.

THERE ARE THREE (3) EXISTING DROP INLETS ON SITE DRAINING FROM BOTH SIDES OF THE BRIDGE TO THE MILL BROOK. THESE DROP INLETS WILL BE RECONFIGURED AS SHOWN ON THE PROJECT PLANS.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE PROJECT IS LOCATED IN A DENSE RESIDENTIAL AND COMMERCIAL AREA IN THE VILLAGE OF FAIRFAX. THE BRIDGE CARRIES VT 104 OVER THE MILL BROOK. TOPOGRAPHY OF THE AREA SLOPED GENTLY FROM THE EAST AND WEST TOWARDS THE BROOK, WHICH FLOWS TO THE SOUTH. THE WESTERN APPROACH TO THE PROJECT IS PRIMARILY RESIDENTIAL WITH SIDEWALKS, DRIVES, LAWNS AND VEGETATED AREAS. THE AREA TO THE EAST OF THE BRIDGE HAS NUMEROUS DRIVES AND PARKING LOTS. A WOODED BUFFER EXISTS ON THE SLOPES OF THE EAST AND WEST SIDES OF THE MILL BROOK.

1.2.4 VEGETATION

VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED, AS WORK WILL NOT BE COMPLETED MUCH BEYOND CURRENTLY DISTURBED AREAS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

SOIL DATA FROM THE U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF FRANKLIN, VERMONT. SOILS ON THE PROJECT SITE ARE BELGRADE SILT LOAM, 8 TO 15 PERCENT SLOPES, K FACTOR = 0.49; ELDRIDGE LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES, K FACTOR = 0.24.

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

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, SEE EPSC LAYOUT SHEET 56
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: MILL BROOK
WETLANDS: NO

1.3 RISK EVALUATION

RISK DETERMINATION
THIS PROJECT HAS BEEN DETERMINED TO BE NON-JURISDICTIONAL, AS THE AREA OF DISTURBANCE IS LESS THAN 1 ACRE. THE FOLLOWING REQUIREMENTS SHALL BE MET:

1. IMPLEMENT THE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) FIELD GUIDE.
2. ALL AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE AND STABILIZED THEREAFTER ON A DAILY BASIS. THE FOLLOWING EXCEPTIONS APPLY:
   A. STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA WITHIN 24 HOURS AND NO PRECIPITATION IS FORECASTED FOR THE NEXT 24 HOURS.
   B. STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION WITH A DEPTH OF 2 FEET OR GREATER.

RISK RE-EVALUATION
SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULTING IN A POTENTIAL CHANGE IN THE RISK, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH THE DEC VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

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

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. 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.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE REMOVED FROM THE UPHILL SIDE OF SILT FENCE PRIOR TO REACHING 50% OF THE HEIGHT OF THE SILT FENCE. SEDIMENT SHALL BE DISPOSED AT AN APPPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

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

1.4.1 MARK SITE BOUNDARIES
PROJECT DEMARCATION FENCING, DENOTED –PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA
EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT OR AS DIRECTED BY THE RESIDENT ENGINEER. LIMIT DISTURBANCE TO EXISTING VEGETATION, SHRUBS AND TREES WHEREVER POSSIBLE.

1.4.3 INSTALL SILT FENCE
SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UPSLOPE WORK AS DIRECTED BY THE RESIDENT ENGINEER.

1.4.4 DIVERT UPLAND RUNOFF
CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED AROUND THE PROJECT SITE USING UPSLOPE DIVERSION BERMS, DIVERSION CHANNELS AND TEMPORARY OR PERMANENT CULVERTS WHERE PRACTICAL.

1.4.5 CONSTRUCT INLET PROTECTION DEVICES
SEE ATTACHED PLANS. INLET PROTECTION DEVICES SHALL BE CONSTRUCTED AROUND DRAINAGE INLETS UNTIL THE AREA DRAINING TO THAT INLET HAS BEEN STABILIZED.

1.4.6 CONSTRUCT PERMANENT CONTROLS
SEED AND MULCH – UTILIZE URBAN SEEDING FORMULA
DRAINAGE INLETS AND PIPING – SEE ATTACHED PLANS.

1.4.7 STABILIZE EXPOSED SOILS
TEMPORARY MULCHING WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1V:3H. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.8 WINTER STABILIZATION
THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR REVIEW A WINTER EPSC PLAN IF SOILS ARE NOT TO BE STABILIZED PRIOR TO OCTOBER 15TH AND BEFORE APRIL 15TH.

1.4.9 STABILIZE SOIL AT FINAL GRADE
SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1V:3H. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE. UTILIZE URBAN SEEDING FORMULA.

1.4.10 INSPECT YOUR SITE
INSPECT SITE TO ENSURE PROPER FUNCTION OF EPSC MEASURES.

ADDITIONAL NOTES

A TEMPORARY EROSION CONTROL PLAN MUST BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.

THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SUBSECTION 105.23 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

PROJECT NAME: FAIRFAX	
PROJECT NUMBER: BHF 023-I(5)	
FILE NAME: s86e064ern.dgn	PLOT DATE: 20-JUL-2009
PROJECT LEADER: C. CARLSON	DRAWN BY: W. LAMMER
DESIGNED BY: W. LAMMER	CHECKED BY: C. CARLSON
	SHEET 55 OF 61

LEGEND

PDF —— PROJECT DEMARCATION FENCE

FILTER FABRIC INLET PROTECTION DEVICE

—OHW—· ORDINARY HIGH WATER

- - - - - - 50' RIPARIAN BUFFER

– – – – NRCS SOIL BOUNDARY

N

VT STATE PLANE GRID

MITCHELL, JOHN & SUSAN

KOCH, ANNETTE

MITCHELL, JOHN & SUSAN

TROLAND, SEAN T.

FOOTHILLS BAKERY, INC.

L W PROPERTIES LLC

GATES, RONALD

ROWELL, WILLARD

OBARSKI, TIMOTHY

I-P-W TRUST DAVID ASHLEY HALL

VERMONT FOOD VENTURES

HISTORIC DIST

END APPROACH STA. 279+75.00

BEGIN BRIDGE STA. 280+02.66 F.C. = 372.13

END BRIDGE STA. 280+16.49 F.C. = 371.55

BEGIN APPROACH STA. 278+75.00

BEGIN APPROACH STA. 281+72.00

END APPROACH STA. 282+75.00

EXISTING ROW

RIPARIAN BUFFER

NON-HISTORIC STRUCTURE

CONC. DRIVE

GRAVEL DRIVE

PAVED DRIVE

SIDEWALK

CURB

SHOULDER

DI

MH

CMP

15" RCP

18" RCP

OHW

PDF

P L

BeC

EdB

0 20 40

SCALE IN FEET

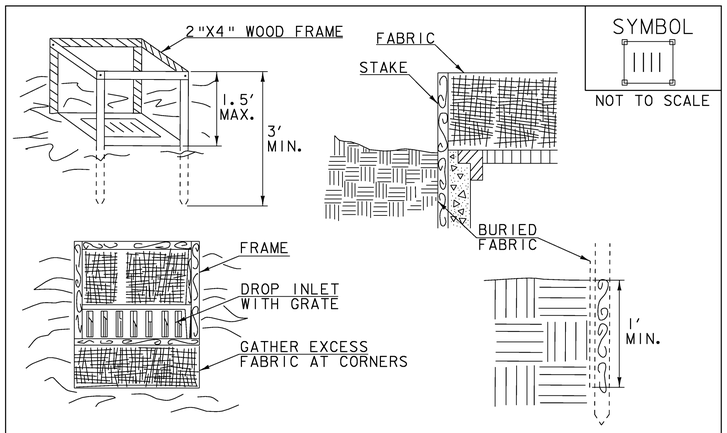
EPSC LAYOUT SHEET

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-I(5)

FILE NAME: 86e064/str/se064ecbdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ecl.1

PLOT DATE: 17-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 56 OF 61



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

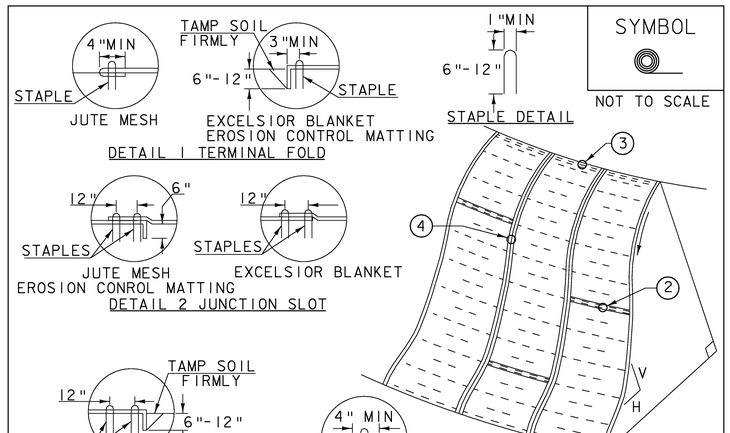
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

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

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

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

SEEDING FORMULA
URBAN AREAS

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

GENERAL NOTES

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

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.

EPSC DETAIL SHEET 1

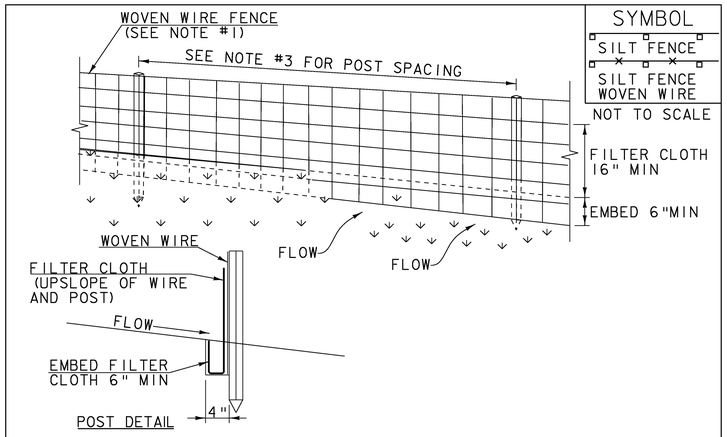
NTS

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: /86e064/str/se064ecdet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ecdl.i

PLOT DATE: 17-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 57 OF 61



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

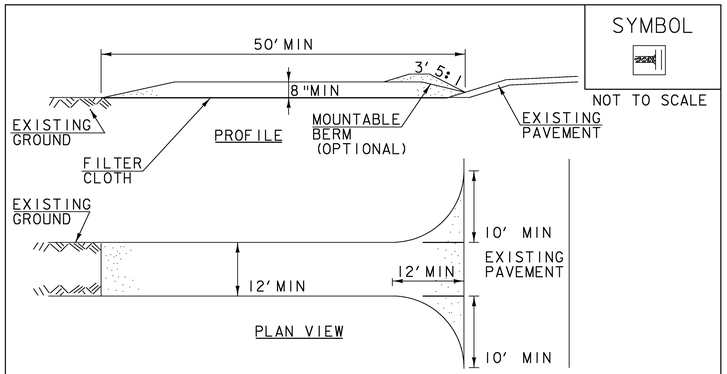
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

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

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



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

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

STABILIZED CONSTRUCTION ENTRANCE

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

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

EPSC DETAIL SHEET 2

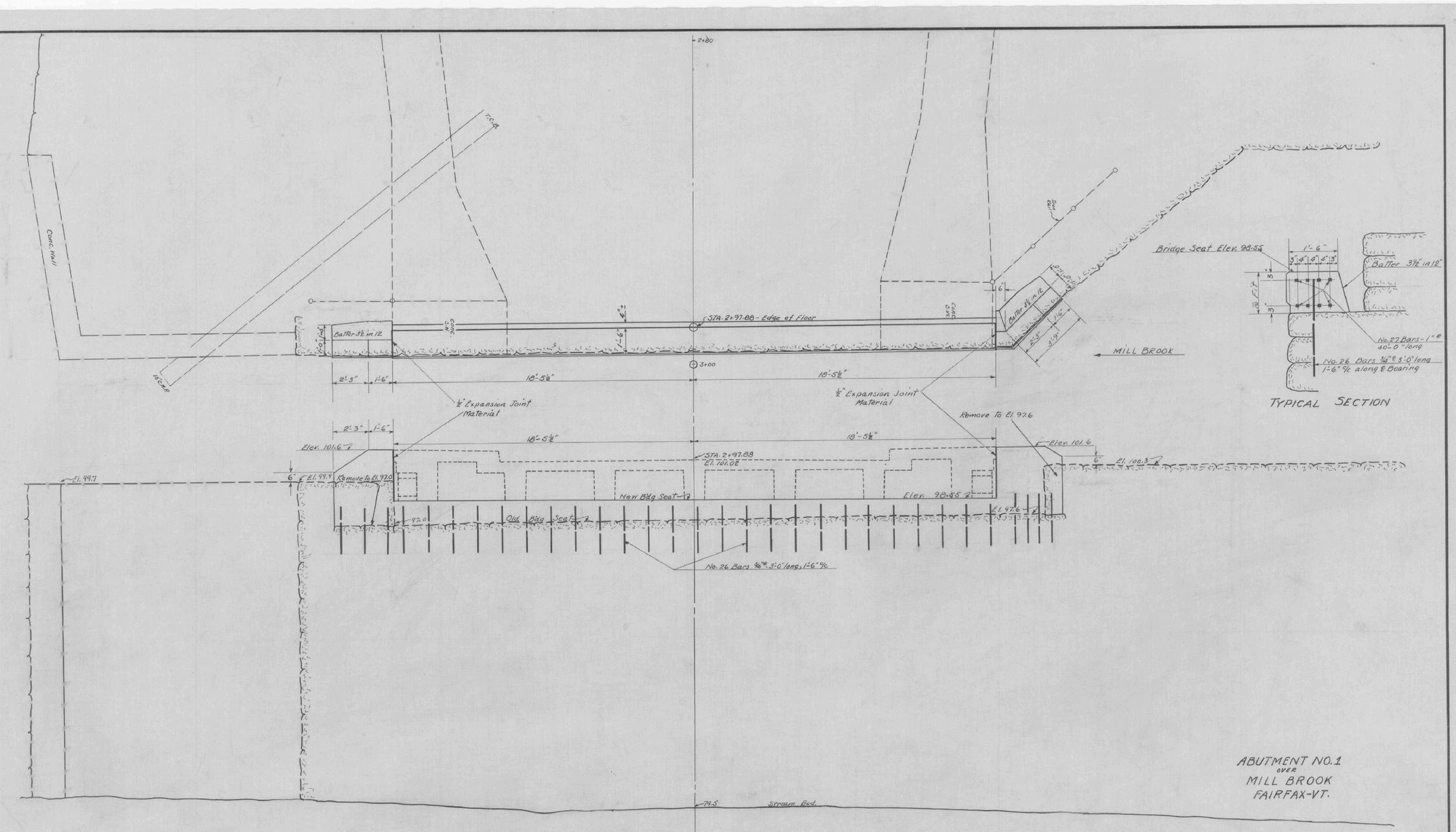
NTS

PROJECT NAME: FAIRFAX

PROJECT NUMBER: BHF 023-1(5)

FILE NAME: /86e064/str/se064ecdet.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
se064ecd2.1

PLOT DATE: 13-JUL-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 58 OF 61



FAIRFAX
BHF 023-1(5)
REFERENCE SHEET 1 OF 3
SHEET 59 OF 61

ESTIMATED QUANTITIES

Concrete Class "B"	6	Cu. Yds.
Reinforcing Steel	1255	Lbs.
Structure Excav.	10	Cu. Yds.
Repointing Masonry	25	Sq. Yds.

Surveyed by
Designed by
Drawn by
Traced by
Checked by mwD.
Series No. Filed
Sheet 3 of 10 Sheets

House

Stone Wall

Angle of Wings to fit Top of Present Wings.

Batter 3/8 in 12

5'-9"

6'-9"

3'-0"

Elev. 101.1

No 26 Bars 3/4" ø 3'-0" long

6"

STA. 3+31.50 End of Floor

STA. 3+30

Batter 3½ in 12

2"

Wall broken from Abut.

½" Expansion Joint Material

½" Expansion Joint Material

MILL BROOK

18'-5½"

18'-5½"

1'-6"

3'-3"

Elev. 100.46

Elev. 101.1

Remove To El. 96.3

Elev. 99.7

El. 99.2

New Bdg Seat

Elev. 98.03

Present Bdg Seat

El. 96.3

El. 99.0

El. 99.9

El. 96.9

1'-6"

No. 11 Bars 2 per beam as shown on Superstructure Detail

No. 26 Bars 3/4" ø - 3'-0" long Spaced evenly between No. 11 Bars as shown

Bg. Seat Elev. 98.03

1'-6"

3" 4" 4" 3"

Batter 3½" in 12"

No. 28 Bars - 1" ø 40'-0" long

1'-9"±

9"

3"

Old Bridge Seat

No. 26 Bars ¾" ø 3'-0" long Dowels

Face Old Abut.

TYPICAL SECTION

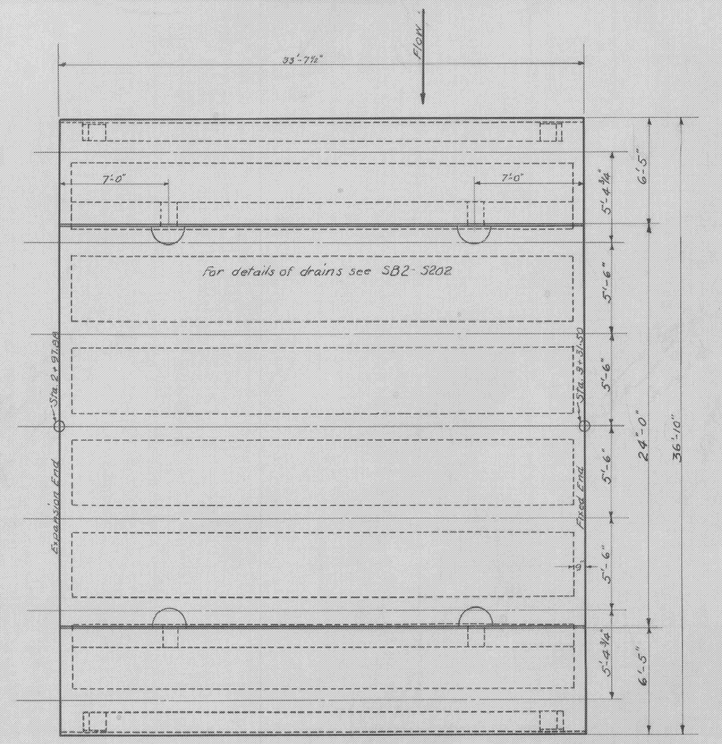
ABUTMENT NO. 2
OVER
MILL BROOK
FAIRFAX - VT.

FAIRFAX
BHF 023-1(5)
REFERENCE SHEET 2 OF 3
SHEET 60 OF 61

ESTIMATED QUANTITIES

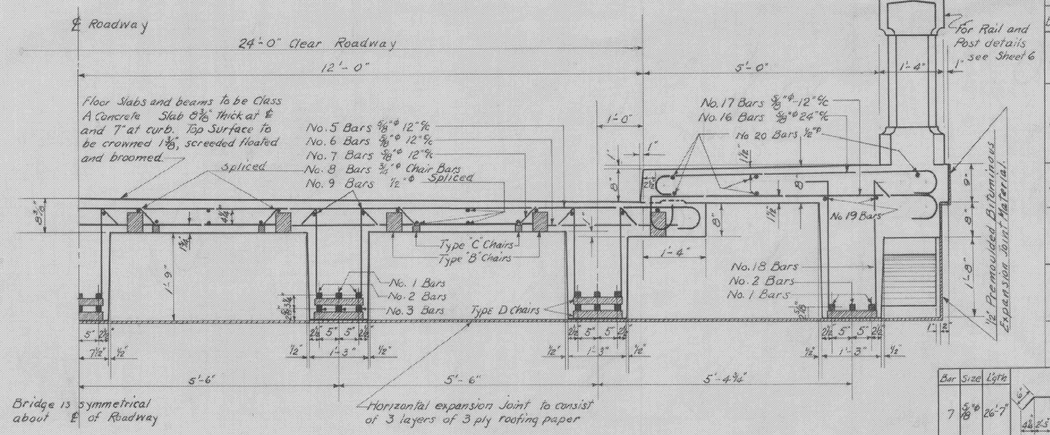
Concrete Class "B"	7	Cu. Yds.
Reinforcing Steel	1210	Lbs.
Structure Excav.	15	Cu. Yds.
Repainting Masonry	25	Sq. Yds.

Surveyed by
Designed by
Drawn by
Traced by
Checked by MWD.
Series No. Filed
Sheet 4 of 10 Sheets

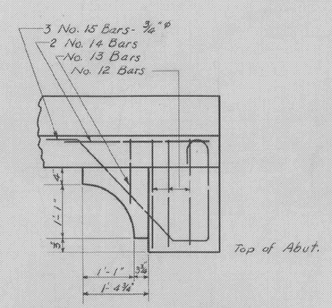


PLAN
Scale 1/16"=1'-0"

If necessary Superstructure to be skewed as directed by the Engineer to fit present Abutments.



HALF SECTION THROUGH ROADWAY
Scale ¾"=1'-0"



BRACKET DETAIL
Scale ¾"=1'-0"

Note:
The correctness of this steel schedule is not guaranteed and no claim will be allowed on account of any inaccuracy therein.
All steel to be deformed bars. Reinforcing steel shall conform to the Standard Specifications for New Billet Steel Concrete Reinforcing Bars, Intermediate or Structural Grade, of the American Society for Testing Materials, Serial Designation A 14-15.
All bar detail dimensions refer to ℄ of steel.
All work and materials shall conform to the Standard Road and Bridge Specifications of the Vermont State Highway Department 1930.
For Typical details see sheet SB2. Use details S202, S204.

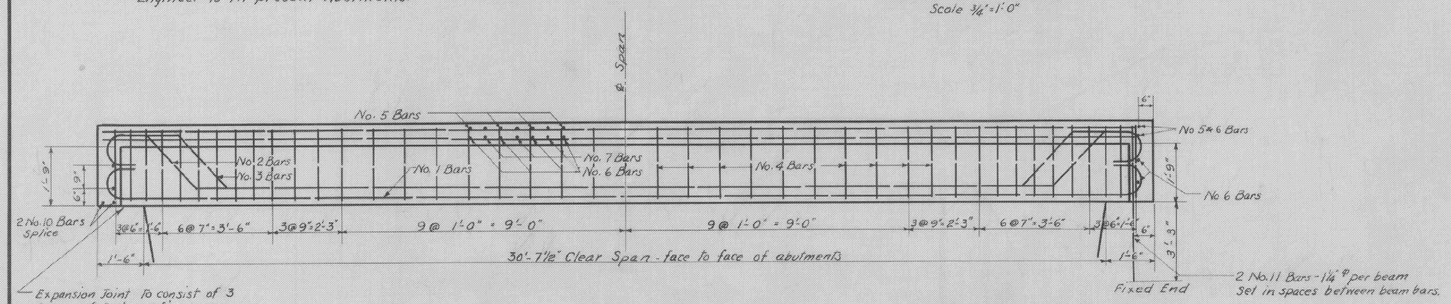
STEE SCHEDULE

Bar	Size	Lgth	Detail
1	1¼"ϕ	35'-6"	5"R, 5", 5", 32'-0"
2	1¼"ϕ	36'-9"	5", 5"R, 9", 1'-7", 27'-4", 1'-7", 9", 32'-0"
3	1⅛"ϕ	36'-9"	1'-9", 1'-7", 25'-4", 1'-7", 1'-9", 32'-0"
4	½"ϕ	6'-3"	5", 11¾", 2'-1"
5	⅝"ϕ	28'-0"	2½"R, 3", 26'-0", 3"
6	⅝"ϕ	26'-6"	3"R, 24'-6", 1'-0"
7	⅝"ϕ	26'-7"	16", 24", 25'-1½"

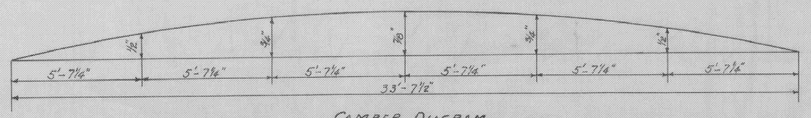
Bar	Size	Lgth
8	⅜"ϕ	17'-6"
9	½"ϕ	17'-6"
10	⅜"ϕ	20'-0" (Splice)
11	¼"ϕ	5'-3"
14	⅜"ϕ	2'-6"

Bar	Size	Lgth	A	B	
12	⅜"ϕ	5'-6"	1'-0"	2'-0"	5½", A, B
13	⅜"ϕ	4'-0"	1'-0"	1'-3"	

Bar	Size	Lgth	
15	¼"ϕ	6'-9"	9", 2½"R, 1'-9", 2'-6", 45°, 9"
16	⅝"ϕ	7'-6"	2½"R, 3", 5'-9", 3"
17	⅝"ϕ	8'-0"	5'-9", 6", 2½"R, 3", 2½"R, 3"
18	½"ϕ	7'-0"	6", 2'-7", 11", 6"
19	¾"ϕ	33'-0"	33'-0"
20	½"ϕ	33'-0"	33'-0"



ELEVATION OF BEAM
Scale ½"=1'-0"



CAMBER DIAGRAM
Slab, curb and rail shall be cambered as shown.

SUPERSTRUCTURE DETAILS
FAIRFAX BRIDGE over MILL BROOK
FAIRFAX-VT.
PROJECT-136-L

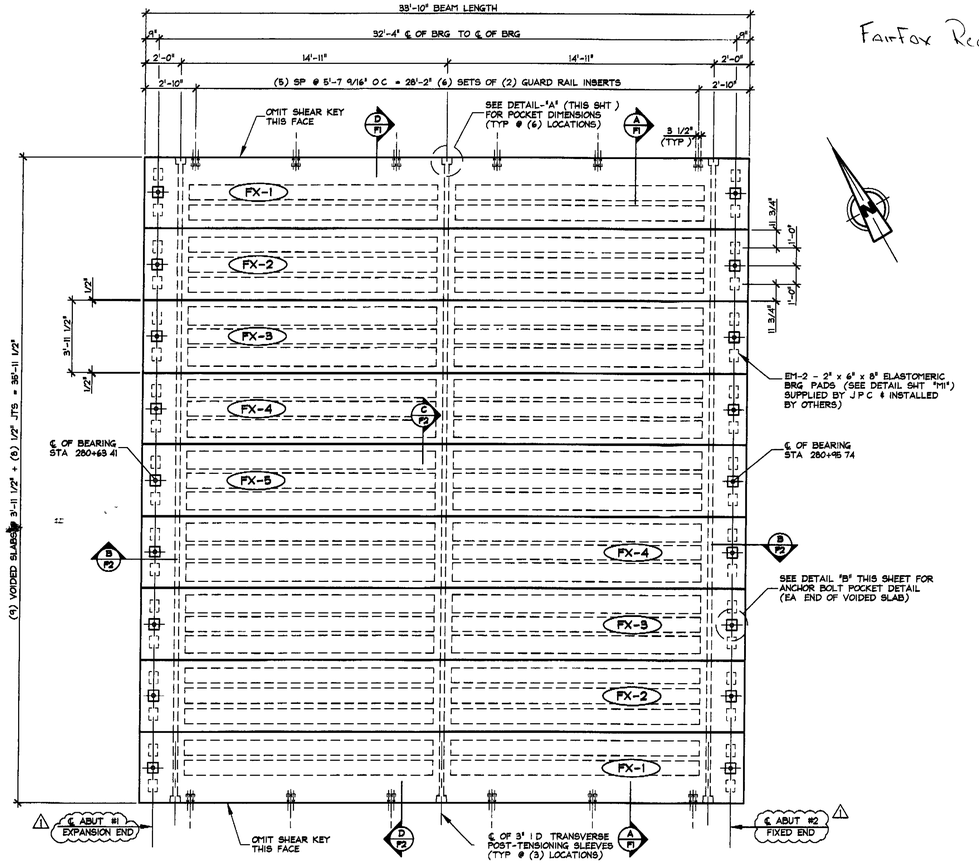
FAIRFAX
BHF 023-1(5)
REFERENCE SHEET 3 OF 3
SHEET 61 OF 61

ESTIMATED QUANTITIES

Concrete Class A	59 Cu.Yds.
Reinf. Steel	14,300 lbs

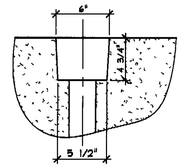
Surveyed by
Designed by E.F.T.
Drawn by E.F.T.
Traced by O.W.R.
Checked by M.L.D.B.
Series Proj. No. 136L Filed
Sheet 5 of 10 Sheets

FairFax Record Plan

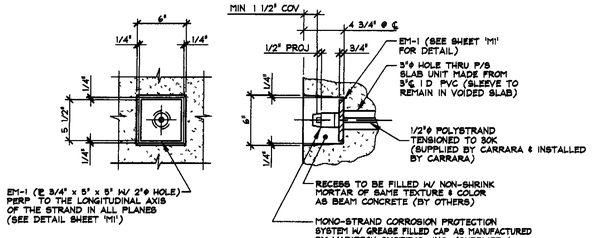


1 / F1 PRESTRESSED VOIDED SLAB LAYOUT
1/4" = 1'-0"

DESIGN LIVE LOAD: HL-93



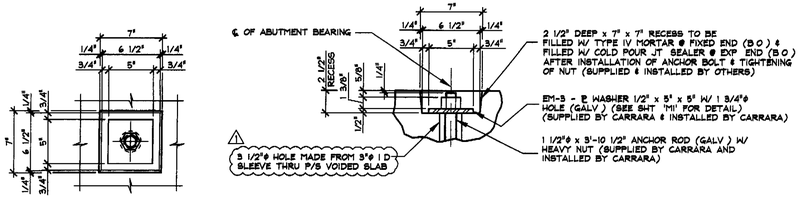
PLAN OF POCKET



FASCIA ELEVATION

SECTION AT CENTERLINE

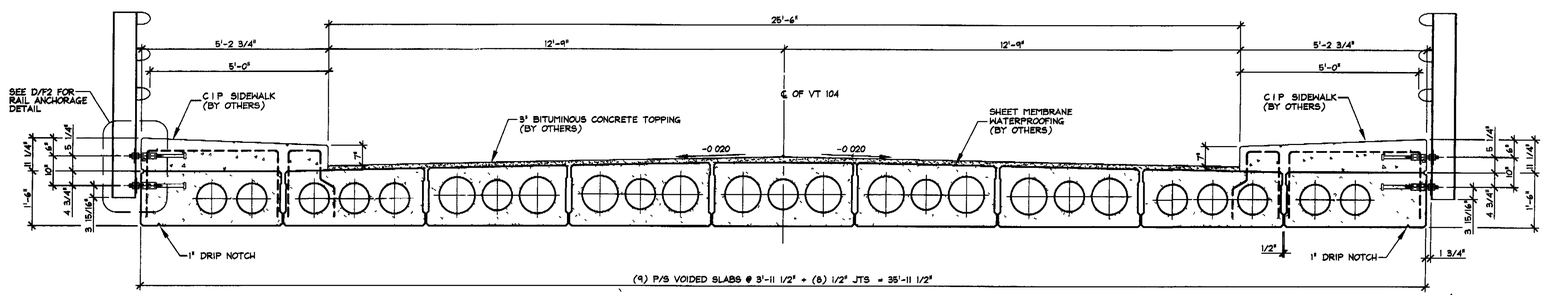
DETAIL - "A"
1 1/2" = 1'-0"



PLAN @ VOIDED SLAB ℄

SECTION @ VOIDED SLAB ℄

DETAIL - "B"
1 1/2" = 1'-0"



A / F1 TRANSVERSE SECTION
1/2" = 1'-0"

GENERAL NOTES

1 MIN CONCRETE STRENGTH AT 28 DAYS SHALL BE 6,000 PSI

2 MIN CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 4,000 PSI

3 REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL BE EPOXY COATED

4 PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0 60"ø x 270 KSI 7-WIRE LOW RELAXATION STRANDS

5 PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44 0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE TENSTION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET)

6 ENDS OF PRESTRESSING STRANDS SHALL BE CUT, RECESSED & GROUTED FLUSH WITH END OF BOX BEAMS

7 EXPOSED CORNERS SHALL BE CHAMFERED 3/4" AS NOTED

8 THE TOP OF BEAMS SHALL RECEIVE A FLOAT FINISH UNLESS NOTED OTHERWISE

9 SHEAR KEY SURFACES SHALL BE BLASTED CLEAN WITH OIL FREE AIR

10 BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60" BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J P CARRARA & SONS, INC

11 MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC P510 02 AND P510 05 RESPECTIVELY
DESIGN MIX J P C BRIDGE MIX 430

12 QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS J P CARRARA & SONS, INC IS A PCI CERTIFIED PLANT

13 THE VOIDS MUST BE VENTED DURING CURING PERIOD

14 CURING METHOD AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF POLY AND A LAYER OF HOMOSOTE (OR BLUE BOARD) WILL BE PLACED OVER THE BEAM THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°F THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED, (NATURAL CURE WITH NO EXTERNAL HEAT APPLIED) EACH CHART SHALL BE MARKED

15 TRANSVERSE POST-TENSTIONING SEQUENCE:
- A ONCE VOIDED SLABS ARE ERECTED, POST-TENSION TENDONS TO APPROXIMATELY 5,000 LBS
- B GROUT SHEAR KEYS
- C ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI, POST TENSION TENDONS TO 30,000 LBS

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE 0 60"ø x 270 KSI
AREA 0 217 IN^2
TENSION: 44,000 LB EACH STRANDS
GRIP-TO-GRIP 192'-9 3/4" = 192 813'
Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS, VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE

$$\Delta = \frac{PL}{AE} = \frac{(44{,}000 - 3{,}000) \times 192.813 \times 12}{0.217 \times 28{,}600{,}000} = 15.29"$$

THEREFORE: (TOLERANCES ± 5%)
- △ UPPER LIMIT = 1 05 x 15 29" = 16 05" = 16 1/16"
- △ LOWER LIMIT = 0 95 x 15 29" = 14 53" = 14 1/2"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:

$$\Delta P = \frac{0.5 \times 41{,}000}{15.29} = 1{,}341 \text{ LBS}$$

TOTAL TENSIONING FORCE = 44,000 + 1,341 = 45,341 LBS

STRAND TENSIONING PROCEDURE:

1 PULL EACH STRAND INITIALLY TO 3,000# LBS AND MARK STRAND

2 THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,341# LBS AND MEASURE ELONGATION AFTER SEATING IT MUST BE BETWEEN 14 1/2" & 16 1/16"

NOTE FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED

1 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T D

APPROVAL STAMP:

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CK BY WDL MAD GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
3464 OSE STR., MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

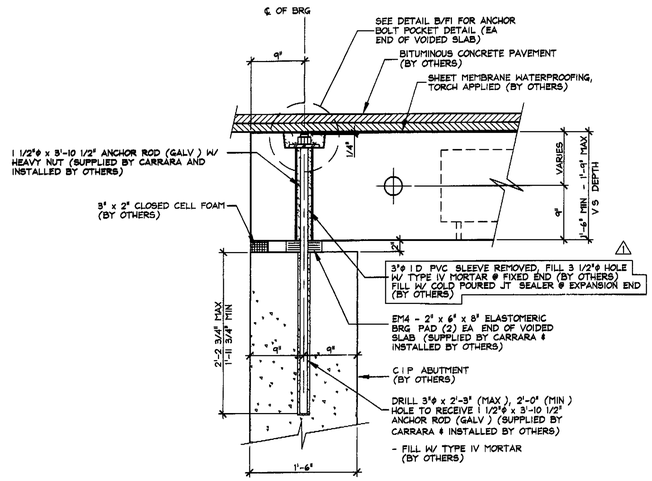
BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

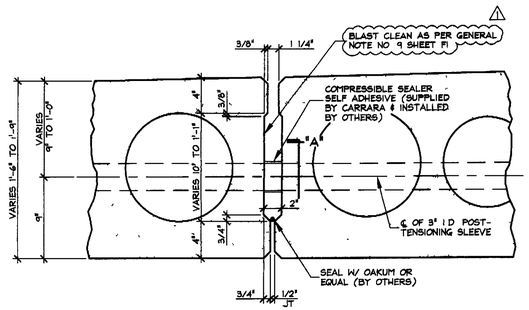
TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.: 10 PROJECT NO.: BHF 023-1(5)

SUPERSTRUCTURE PLAN & DETAILS

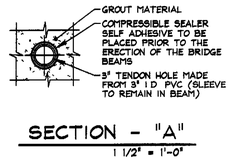
DATE: NOV 12, 2009
SCALE NOTED
CHKD: DFTM. T D
JOB NO 23304-09
DWG NO F1



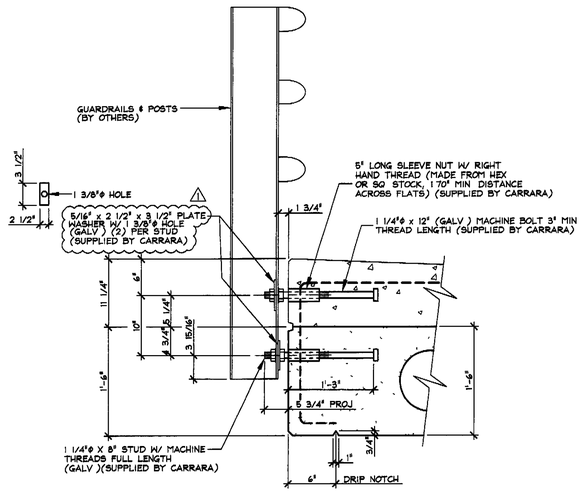
B / F2 BEARING SECTION
1" = 1'-0"



C / F2 SHEAR KEY SECTION @ P.T. SLEEVE
1 1/2" = 1'-0"



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



D / F2 GUARDRAIL ANCHORAGE DETAIL
1" = 1'-0"

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T.D.

APPROVAL STAMP.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CK'RY WDL IN BY GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 CASE STR. MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

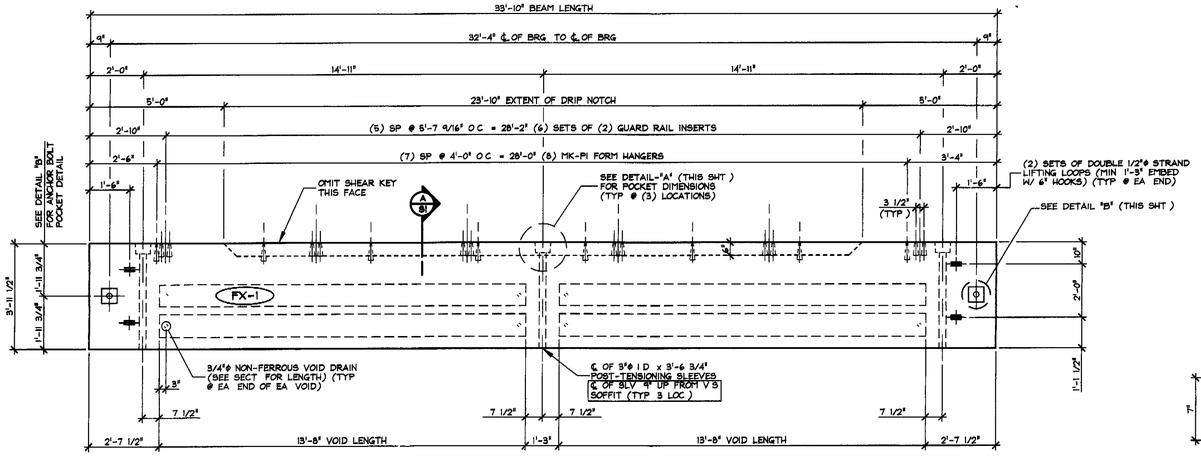
BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

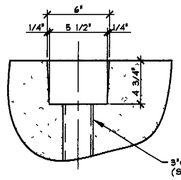
TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO. 10 PROJECT NO.: BHF 023-1(5)

SUPERSTRUCTURE SECTIONS & DETAILS

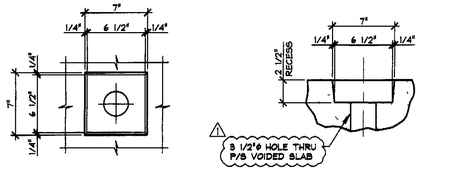
DATE: NOV 12, 2009
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CHKD DFTM: T.D.
JOB NO: 23304-09
DWG NO F2



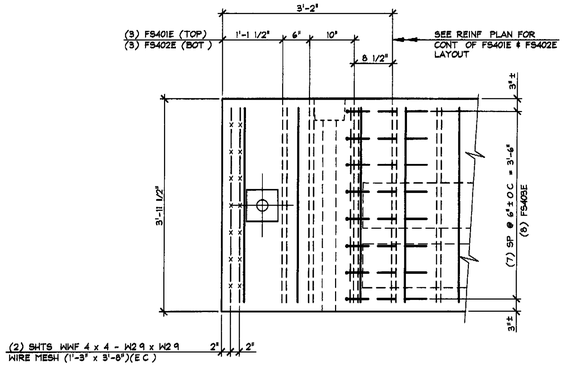
1 / S1 DIMENSIONAL PLAN VIEW IN FORM
3/8" = 1'-0"



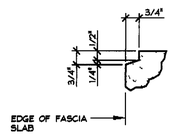
DETAIL - "A"
1 1/2" = 1'-0"



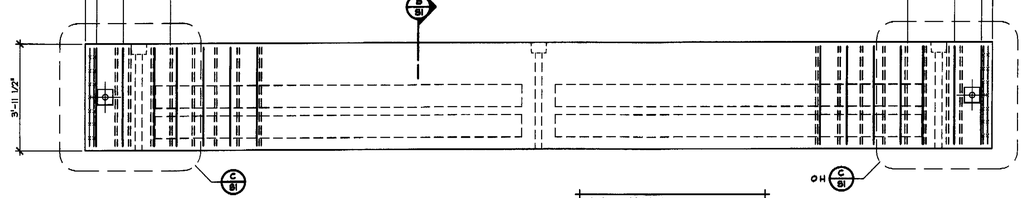
DETAIL - "B"
1 1/2" = 1'-0"



C / S1 END BLOCK REINFORCING DETAIL
3/4" = 1'-0"

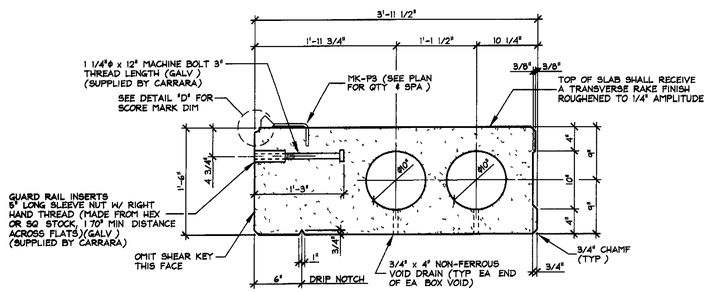


D / S1 SCORE MARK DETAIL
3" = 1'-0"

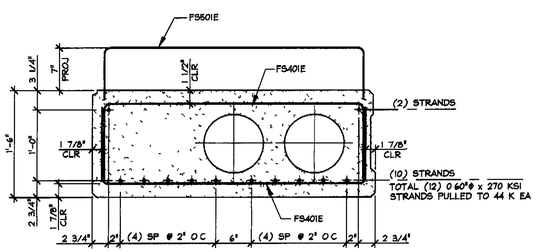


2 / S1 REINFORCING PLAN VIEW IN FORM
3/8" = 1'-0"

SHOP NOTE:
ADJUST REINFORCING SPACING AS REQUIRED TO CLEAR P/T SLEEVES, INSERTS, ETC



A / S1 DIMENSIONAL SECTION
1" = 1'-0"



B / S1 REINFORCING SECTION
1" = 1'-0"

① ② ③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE
NTS

MARK	FX-1	QTY	2	WT	12.78 T	VOL	6.31 cy

MATERIAL LIST / VOIDED SLAB

ITEM	MARK	DESCRIPTION	QTY
1	FS401E	#4 BENT BAR (EPOXY COATED)	80
2	FS403E	#4 BENT BAR (EPOXY COATED)	16
3			
4			
5	FS501E	#5 BENT BAR (EPOXY COATED)	34
6		#4 x 3'-8" (EPOXY COATED)	16
7			
8		1 1/4"ϕ x 5" SLEEVE NUT W/ RIGHT HAND THRD (GALV.)	12
9		1 1/4"ϕ X 12" MACHINE BOLT 3" THRD (GALV.)	12
10			
11			
12			
13		WIRE MESH WWF-4 x 4 - W2.9 x W2.9 (1'-3" x 3'-8") (EPOXY COATED)	4
14	MK-P1	DAYTON C-24 TYPE 4-APR PRESS-STEEL PRECAST HALF HANGER (GALV.)	8
15		10"ϕ x 13'-8 VOID	4
16		3/4"ϕ x 4" NON-FERROUS VOID DRAINS	8
17		DOUBLE 1/2"ϕ STRANDS LIFTING LOOPS	4
18			

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T.D

APPROVAL STAMP:

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CK'D BY WDL DR'N BY GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

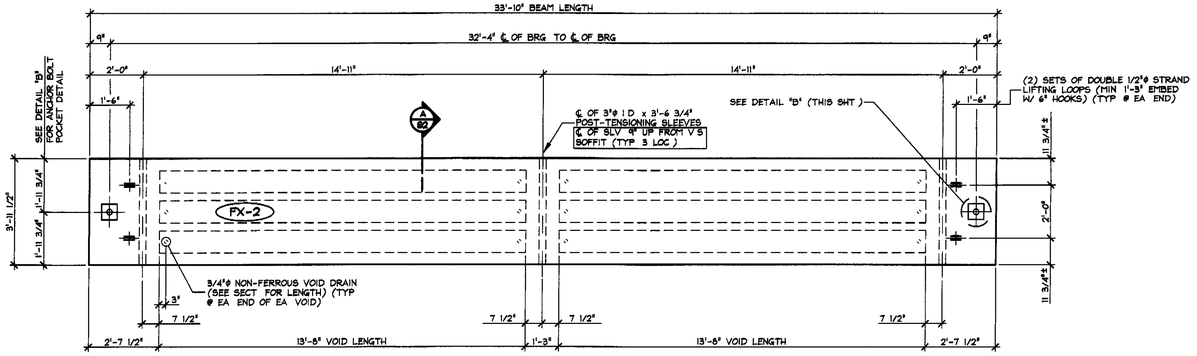
BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

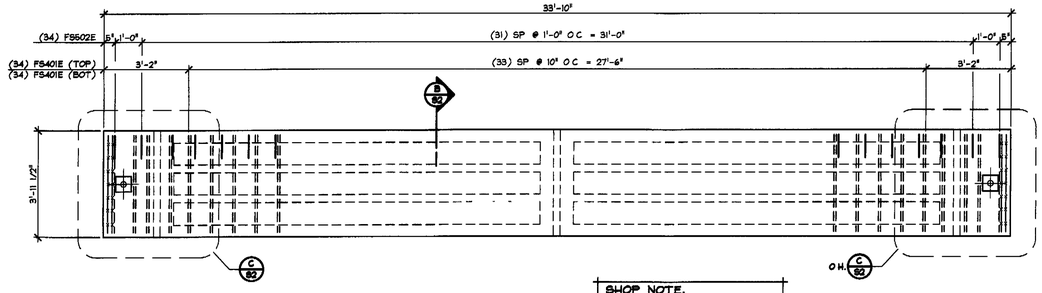
TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.: 10 PROJECT NO.: BHF 023-1(5)

P/S VOIDED SLAB DETAILS

DATE: NOV 12, 2009
SCALE: NOTED
CHK'D: DFTM: T.D
JOB NO. 23304-09
DWG NO S1

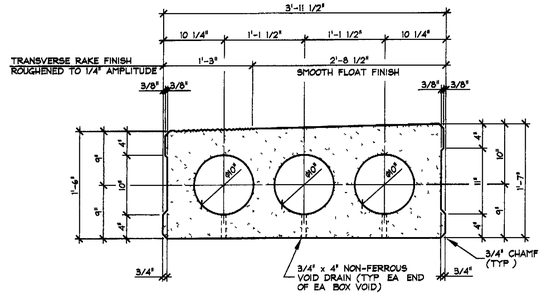


1/S2 DIMENSIONAL PLAN VIEW IN FORM
3/8" = 1'-0"

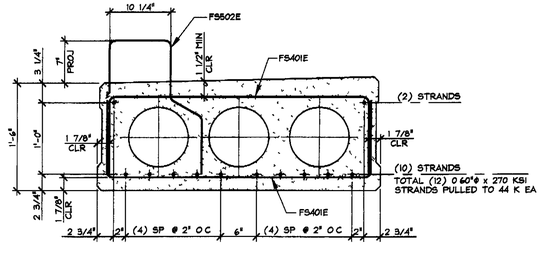


2/S2 REINFORCING PLAN VIEW IN FORM
3/8" = 1'-0"

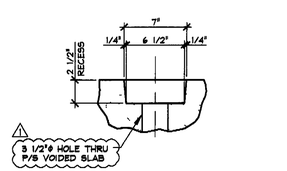
SHOP NOTE.
ADJUST REINFORCING SPACING AS REQUIRED TO CLEAR P T SLEEVES, INSERTS, ETC



A/S2 DIMENSIONAL SECTION
1" = 1'-0"

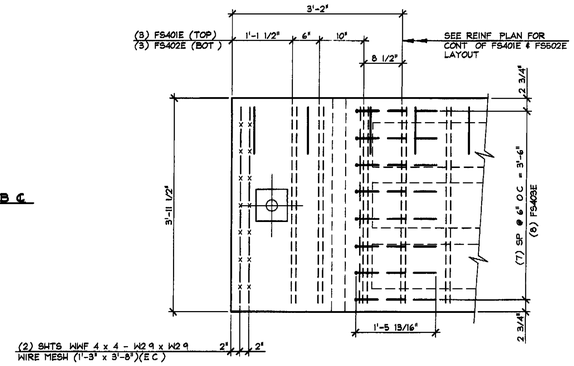


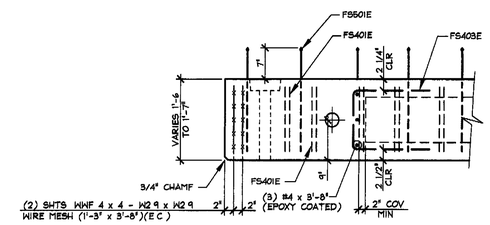
B/S2 REINFORCING SECTION
1" = 1'-0"



PLAN @ VOIDED SLAB ℄ SECTION @ VOIDED SLAB ℄

DETAIL - "B"
1 1/2" = 1'-0"





C/S2 END BLOCK REINFORCING DETAIL
3/4" = 1'-0"

MARK FX-2	QTY. 2	WT 11.71 T	VOL 5.78 cy

MATERIAL LIST / VOIDED SLAB

ITEM	MARK	DESCRIPTION	QTY
1	FS401E	#4 BENT BAR (EPOXY COATED)	80
2	FS403E	#4 BENT BAR (EPOXY COATED)	16
3			
4			
5	FS502E	#5 BENT BAR (EPOXY COATED)	34
6		#4 x 3'-8" (EPOXY COATED)	6
7			
8			
9			
10			
11			
12			
13		WIRE MESH WWF-4 x 4 - W2.9 x W2.9 (1'-9" x 3'-8") (EPOXY COATED)	4
14			
15		10"ϕ x 13'-8 VOID	6
16		3/4"ϕ x 4" NON-FERROUS VOID DRAINS	12
17		DOUBLE 1/2"ϕ STRANDS LIFTING LOOPS	4
18			

① ②

③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE
NTS

⚠1 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T D

APPROVAL STAMP.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CHKD WDL ENGR GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2444 CASE STR MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

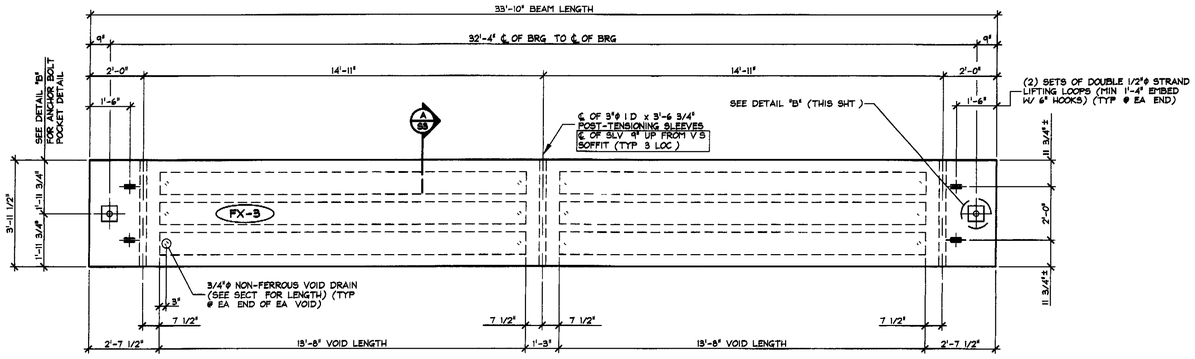
DATE: NOV 12, 2009
SCALE: NOTED
CHKD: DFTM: T D

TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.. 10 PROJECT NO.: BHF 023-1(5)

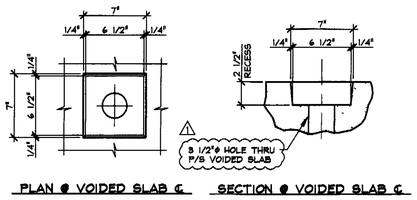
JOB NO. 23304-09

P/S VOIDED SLAB DETAILS

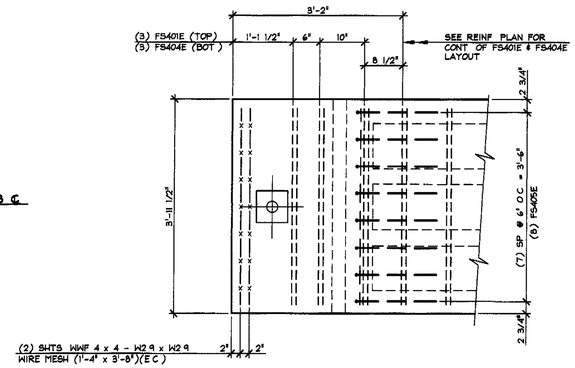
DWG NO S2

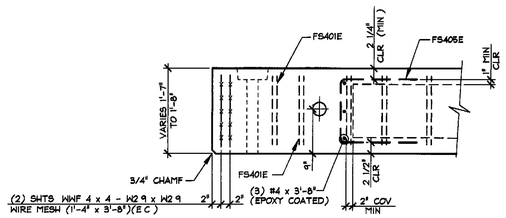


1 / S3 DIMENSIONAL PLAN VIEW IN FORM
3/8" = 1'-0"

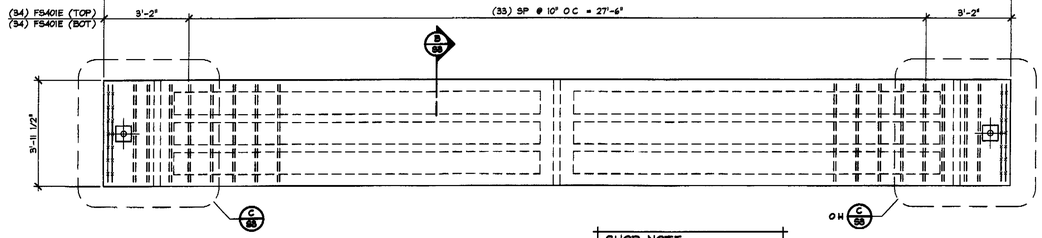


DETAIL - "B"
1 1/2" = 1'-0"



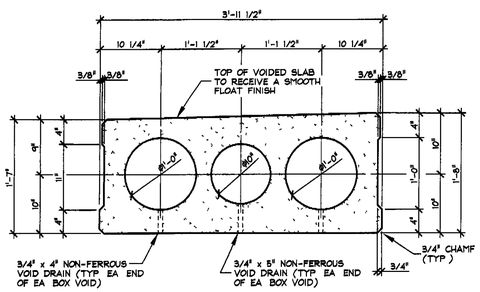


C / S3 END BLOCK REINFORCING DETAIL
3/4" = 1'-0"

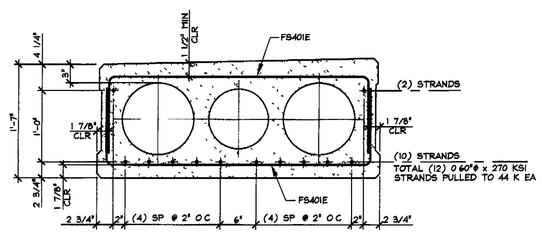


2 / S3 REINFORCING PLAN VIEW IN FORM
3/8" = 1'-0"

SHOP NOTE:
ADJUST REINFORCING SPACING AS REQUIRED TO CLEAR P/T SLEEVES, INSERTS, ETC



A / S3 DIMENSIONAL SECTION
1" = 1'-0"



B / S3 REINFORCING SECTION
1" = 1'-0"

① ② ③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE
NTS

MARK FX-3	QTY 2	WT 11.99 T	VOL 5.92 cy

MATERIAL LIST / VOIDED SLAB

ITEM	MARK	DESCRIPTION	QTY
1	FS401E	#4 BENT BAR (EPOXY COATED)	80
2			
3	FS405E	#4 BENT BAR (EPOXY COATED)	16
4		#4 x 3'-8" (EPOXY COATED)	6
5			
6			
7			
8			
9			
10			
11			
12			
13		WIRE MESH WWF-4 x 4 -W2.9 x W2.9 (1'-4" x 3'-8") (EPOXY COATED)	4
14			
15		12"ϕ x 13'-8 VOID	4
16		10"ϕ x 13'-8 VOID	2
17		3/4"ϕ x 4" NON-FERROUS VOID DRAINS	8
18		3/4"ϕ x 5" NON-FERROUS VOID DRAINS	4
19		DOUBLE 1/2"ϕ STRANDS LIFTING LOOPS	4

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T.D.

APPROVAL STAMP

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CK'D BY WDL CK'D BY GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

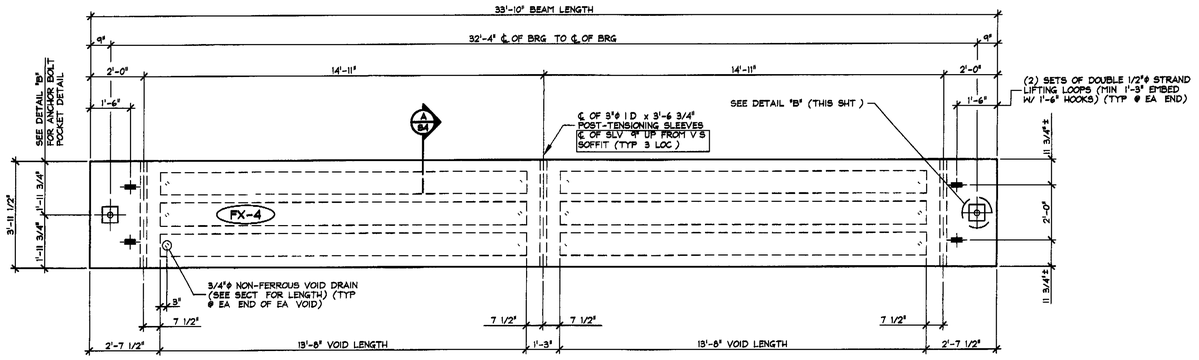
BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.: 10 PROJECT NO.: BHF 023-1(5)

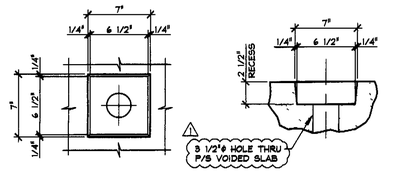
P/S VOIDED SLAB DETAILS

DATE: NOV 12, 2009
SCALE. NOTED
CHK'D: DFTM: T.D.
JOB NO: 23304-09
DWG. NO. S3



1 / S4 DIMENSIONAL PLAN VIEW IN FORM

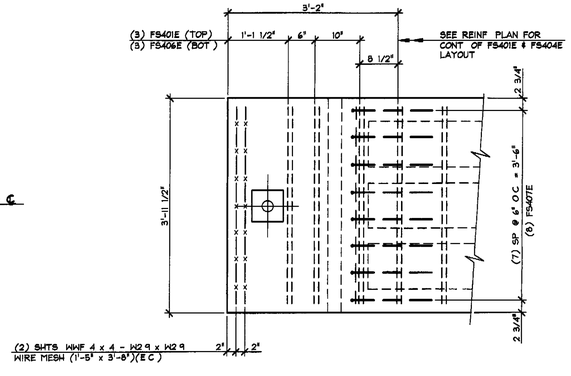
3/8" = 1'-0"

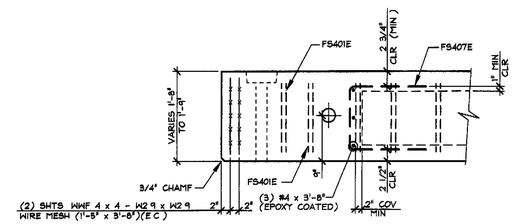


PLAN @ VOIDED SLAB ℄ SECTION @ VOIDED SLAB ℄

DETAIL - "B"

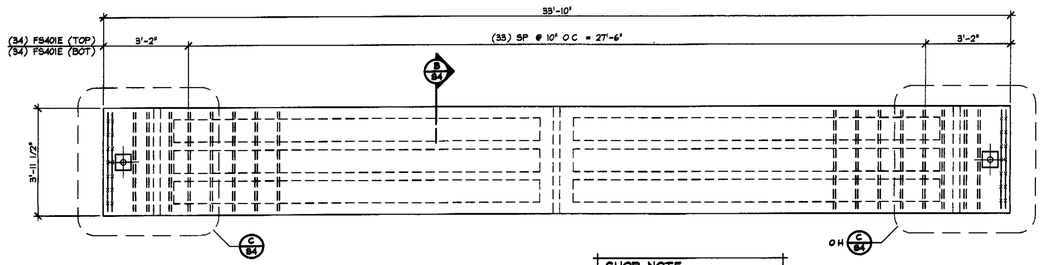
1 1/2" = 1'-0"





C / S4 END BLOCK REINFORCING DETAIL

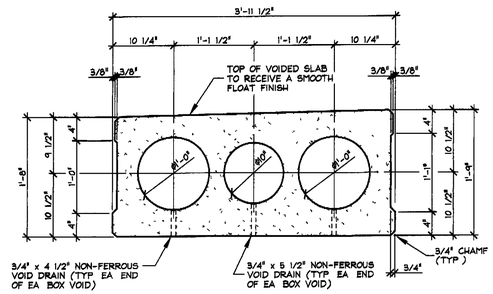
3/4" = 1'-0"



2 / S4 REINFORCING PLAN VIEW IN FORM

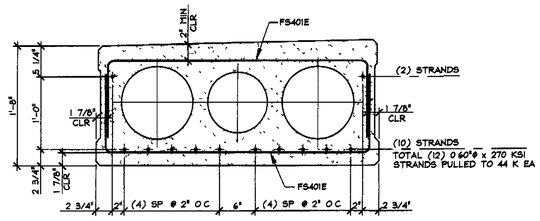
3/8" = 1'-0"

SHOP NOTE.
ADJUST REINFORCING SPACING AS REQUIRED TO CLEAR P T SLEEVES, INSERTS, ETC



A / S4 DIMENSIONAL SECTION

1" = 1'-0"



B / S4 REINFORCING SECTION

1" = 1'-0"

① ②

③ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE

NTS

MARK	FX-4	QTY	2	WT	12.82 T	VOL	6.33 cy

MATERIAL LIST / VOIDED SLAB

ITEM	MARK	DESCRIPTION	QTY
1	FS401E	#4 BENT BAR (EPOXY COATED)	80
2	FS407E	#4 BENT BAR (EPOXY COATED)	16
3			
4		#4 x 3'-8" (EPOXY COATED)	6
5			
6			
7			
8			
9			
10			
11			
12			
13		WIRE MESH WWF-4 x 4 - W2.9 x W2.9 (1'-5" x 3'-8") (EPOXY COATED)	4
14			
15		12"ϕ x 13'-8 VOID	4
16		10"ϕ x 13'-8 VOID	2
17		3/4"ϕ x 4 1/2" NON-FERROUS VOID DRAINS	8
18		3/4"ϕ x 5 1/2" NON-FERROUS VOID DRAINS	4
19		DOUBLE 1/2"ϕ STRANDS LIFTING LOOPS	4

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T.D

APPROVAL STAMP:

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CK.BY WDL DR.BY GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 CASE STR., MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

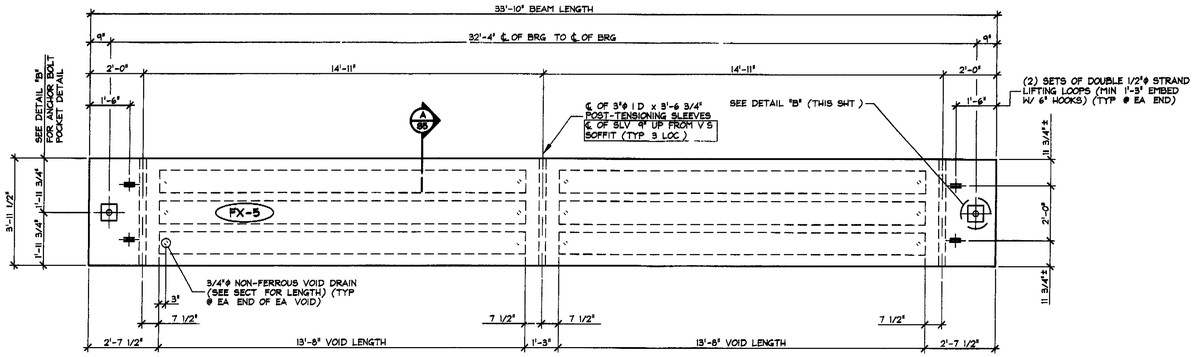
DATE: NOV 12, 2009
SCALE NOTED

TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.: 10 PROJECT NO.: BHF 023-1(5)

CHKD. DFTM. T.D
JOB NO: 23304-09

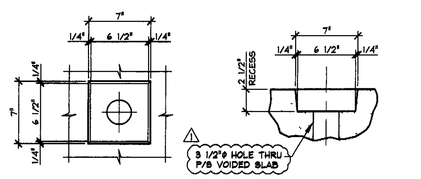
P/S VOIDED SLAB DETAILS

DWG. NO S4



1 / S5 DIMENSIONAL PLAN VIEW IN FORM

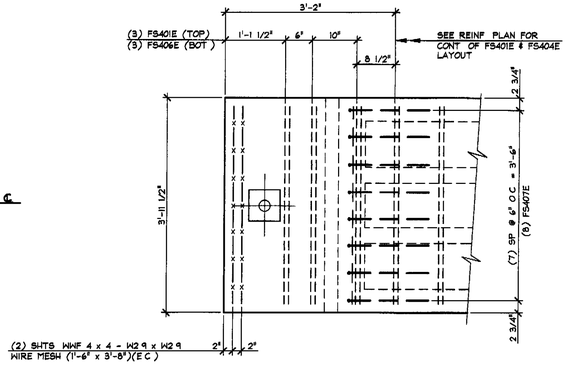
3/8" = 1'-0"

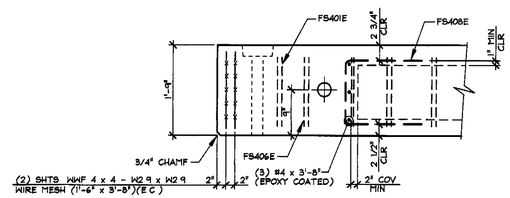


PLAN @ VOIDED SLAB ℄ SECTION @ VOIDED SLAB ℄

DETAIL - "B"

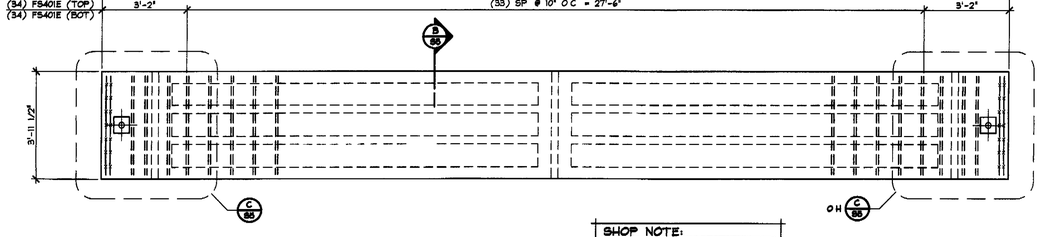
1 1/2" = 1'-0"





C / S5 END BLOCK REINFORCING DETAIL

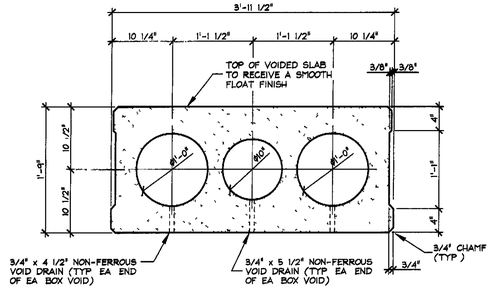
3/4" = 1'-0"



2 / S5 REINFORCING PLAN VIEW IN FORM

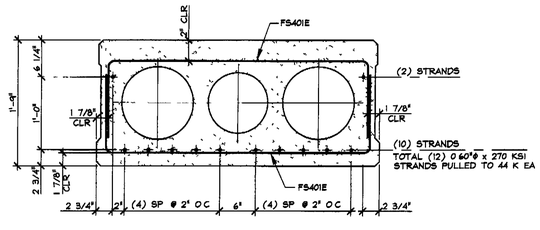
3/8" = 1'-0"

SHOP NOTE:
ADJUST REINFORCING SPACING AS REQUIRED TO CLEAR P/T SLEEVES, INSERTS, ETC



A / S5 DIMENSIONAL SECTION

1" = 1'-0"



B / S5 REINFORCING SECTION

1" = 1'-0"

① ②

⑬ ⑤ ⑦ ⑨ ⑪ ⑫ ⑩ ⑧ ⑥ ④

DETENSIONING SCHEDULE

NTS

MARK FX-5	QTY 1	WT 13.23 T	VOL 6.53 cy

MATERIAL LIST / VOIDED SLAB

ITEM	MARK	DESCRIPTION	QTY
1	FS401E	#4 BENT BAR (EPOXY COATED)	80
2	FS408E	#4 BENT BAR (EPOXY COATED)	16
3		#4 x 3'-8" (EPOXY COATED)	6
4			
5			
6			
7			
8			
9			
10			
11			
12			
13		WIRE MESH WWF-4 x 4 - W2.9 x W2.9 (1'-6" x 3'-8") (EPOXY COATED)	4
14			
15		12"ϕ x 13'-8 VOID	4
16		10"ϕ x 13'-8 VOID	2
17		3/4"ϕ x 4 1/2" NON-FERROUS VOID DRAINS	8
18		3/4"ϕ x 5 1/2" NON-FERROUS VOID DRAINS	4
19		DOUBLE 1/2"ϕ STRANDS LIFTING LOOPS	4

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T.D.

APPROVAL STAMP:

STATE OF VERMONT
AGENCY OF TRANSPORTATION
REVIEWED 01/27/2010
CK'D BY WDL CK'D GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR. MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

DATE. NOV 12, 2009
SCALE. NOTED

TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO.. 10 PROJECT NO BHF 023-1(5)

CHKD. DFTM T.D.
JOB NO. 23304-09

P/S VOIDED SLAB DETAILS

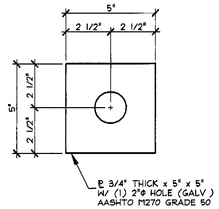
DWG NO S5

BENT BARS, TIES, & STIRRUPS

ITEM	MARK	QTY	SIZE	LENGTH	TYPE	A	B	C	D	E	F/R	G	H	J	K	O	GRADE	REMARKS
1	FS401E	720	#4	5'-10 3/4"	S10		1'-2 1/2"	3'-7 3/4"	1'-2 1/2"								60	EPOXY COATED
2	FS403E	64	#4	3'-11 1/4"	S10		1'-6"	1'-1 1/4"	1'-6"								60	EPOXY COATED
3	FS405E	32	#4	4'-0 1/4"	S10		1'-6"	1'-2 1/4"	1'-6"								60	EPOXY COATED
4	FS407E	32	#4	4'-0 1/2"	S10		1'-6"	1'-2 1/2"	1'-6"								60	EPOXY COATED
5	FS408E	16	#4	4'-1 1/2"	S10		1'-6"	1'-3 1/2"	1'-6"								60	EPOXY COATED
6																		
7																		
8					⚠													
9	FS501E	64	#5	7'-3 1/2"	S10		1'-11"	3'-7 3/4"	1'-11"								60	EPOXY COATED
10	FS502E	64	#5	4'-8 1/4"	T15		1'-11"	10 1/4"	9 3/4"	6"	10 1/4"		3"		5"		60	EPOXY COATED
11																		
12																		
13																		
14		54	#4	3'-8"	STR												60	EPOXY COATED
15																		
16																		
17																		
18																		
19																		
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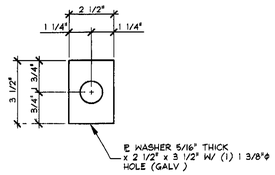
MISCELLANEOUS MATERIALS

ITEM	MARK	QTY	DESCRIPTION	REMARKS
1	EM-1	6	℄ 3/4" x 5" x 5" W/ (1) 2"ϕ HOLE (GALV)	FOR ERECTION, SEE DETAIL THIS SHEET
2	EM-3	18	℄ 1/2" x 5" x 5" W/ (1) 1 3/4"ϕ HOLE (GALV)	FOR ERECTION, SEE DETAIL THIS SHEET
3		18	1 1/2"ϕ x 3'-10 1/2" ANCHOR BOLT (GALV) W/ HEAVY NUT (GALV)	FOR ERECTION, SEE DETAIL THIS SHEET
4		6	SINGLE USE STRESSING CHUCK	FOR ERECTION
5		3	1/2"ϕ x 38'-9" POLYSTRAND	FOR ERECTION
6	EM-2	36	2" THICK x 6" x 8" ELASTOMERIC BRG PAD (60D)	FOR ERECTION, SEE DETAIL THIS SHEET
7		48	℄ 5/16" x 2 1/2" x 3 1/2" W/ (1) 1 3/8"ϕ HOLE (GALV)	FOR ERECTION, SEE DETAIL THIS SHEET
8		48	1 1/4"ϕ x 12" MACHINE BOLT W/ 3" THRD (GALV)	24 FOR C I P SIDEWALK
9		48	1 1/4"ϕ X 5" SLEEVE NUT W/ RIGHT HAND THRD (GALV)	24 FOR C I P SIDEWALK
10		16	DAYTON C-24 TYPE 4-APR PRESS STEEL P/C HALF HANGER (GALV)	
11				
12		56	3/4"ϕ x 4" NON-FERROUS VD DRAINS	
13		8	3/4"ϕ x 5" NON-FERROUS VD DRAINS	
14		24	3/4"ϕ x 4 1/2" NON-FERROUS VD DRAINS	
15		12	3/4"ϕ x 5 1/2" NON-FERROUS VD DRAINS	
16				
17		16	WIRE MESH WWF-W4 x W4 -W2 9 x W2 9 (1'-3" x 3'-8") (E C)	
18		8	WIRE MESH WWF-W4 x W4 -W2 9 x W2 9 (1'-4" x 3'-8") (E C)	
19		8	WIRE MESH WWF-W4 x W4 -W2 9 x W2 9 (1'-5" x 3'-8") (E C)	
20		4	WIRE MESH WWF-W4 x W4 -W2 9 x W2 9 (1'-6" x 3'-8") (E C)	
21				
22				
23				
24		36	DOUBLE 1/2"ϕ STRAND LIFTING LOOPS	
25				
26				
27				
28				
29				
30				



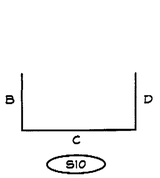
EM - 1

3" = 1'-0"

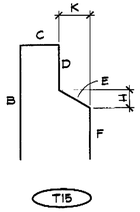


℄ WASHER

3" = 1'-0"



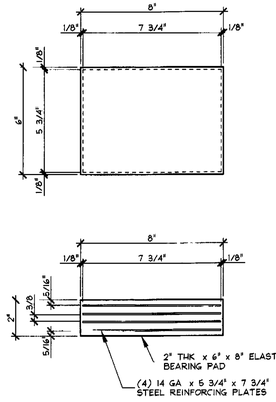
S10



T15

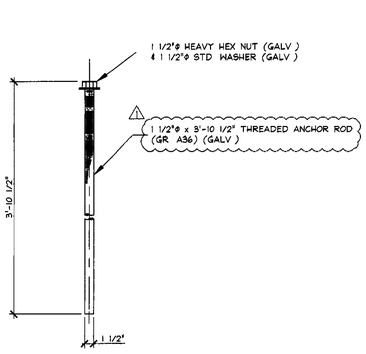
EM - 3

3" = 1'-0"



EM-2 - BEARING PAD DETAIL

3" = 1'-0"



ANCHOR BOLT DETAIL

1" = 1'-0"

⚠ 1-18-10 REVISED AS PER ENGINEER COMMENTS 12/29/2009 T D

APPROVAL STAMP

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RECEIVED 01/27/2010
CKBY WDL DKD GS
ACTION APPROVED
BY CWC DATE 01/27/2010

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR MIDDLEBURY, VERMONT 05753 Phone (802)388-6361 Fax (802)388-9010

BLOW & COTE, INC.
CONTRACTOR
MORRISVILLE, VERMONT

STATE OF VERMONT A.O.T.
COUNTY OF FRANKLIN

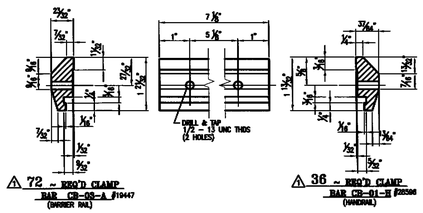
DATE NOV 12, 2009
SCALE NOTED

TOWN OF FAIRFAX
VERMONT ROUTE 104
BRIDGE NO 10 PROJECT NO BHF 023-1(5)

CHKD DFTM T D
JOB NO 23304-09

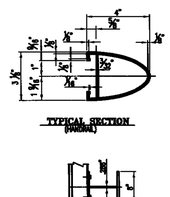
MATERIALS LIST

DWG NO M1



⚠ 72 ~ REQ'D CLAMP BAR CB-03-A #19447 (INNER RAIL)

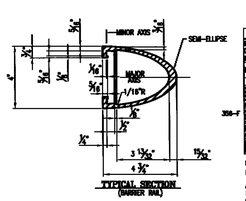
⚠ 36 ~ REQ'D CLAMP BAR CB-01-H #20588 (HANDRAIL)



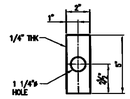
TYPICAL SECTION (HANDRAIL)



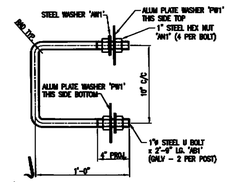
PLAN VIEW



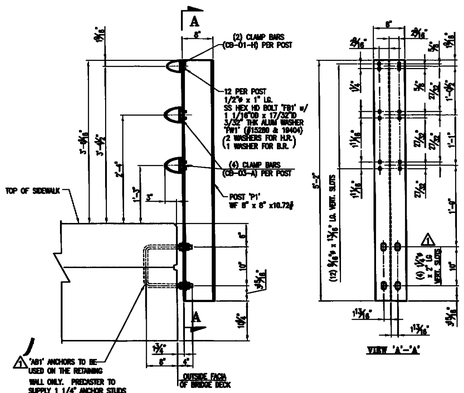
TYPICAL SECTION (INNER RAIL)



⚠ 48 ~ REQ'D ALUM. PLATE WASHER "PW1"



⚠ 12 ~ REQ'D ANCHOR BOLTS AB1



⚠ 18 ~ REQ'D FABRICATED RAIL POSTS P1 (SPECIAL) (SIDEWALK)

VIEW 'A'-'A'

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND ITS LATEST REVISIONS.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAIL POST, SPLICE, CLAMP BAR, RAIL & BRIDGE RAILS	B221	6061-T6 OR 6351-T5	MIN. YIELD STRENGTH Fy = 35,000 psi.
BALUSTERS	B221	6061 OR 6063	T4 ~ USED FOR SUPERIOR EXPANDING QUALITIES
SET SCREWS FOR BALUSTERS	F593	TYPE 303	
STAINLESS STEEL BOLTS	A193	GRADE B8	
ANCHOR U-BOLTS	A449		GALV. A153
STEEL NUT, BOLTS	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
RAIL FITTINGS	B209	X034-T6	AL6XN
ALUMINUM WASHERS	B209	6061-T6	304-F
SET SCREWS	B26		
ELECTRODES FOR WELDING		AWS A5.10 ER5356	

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE. RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE.

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES. ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED. GRIND ALL CUT EDGES SMOOTH.

ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221

IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS: THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP. THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT

ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2

ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK COLD SEAL PROCESS FINISH, FED. STD. COLOR No. 37038. THE ANODIZING COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mills AND A MIN. WEIGHT OF 30 mg/sq in
- ALL WELDS ARE CONT. HORIZONTAL SEAM, BE FIELD PAINTED BLACK. TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

Structures Copy

RESUBMIT ____ APPROVED ____
BY ____ DATE 2/2/10

NO.	DESCRIPTION	BY	DATE
⚠	ADDED SHEET NO 8 TO THE SET OF DRAWINGS DUE TO PREVIOUSLY OMITTED SHEET OF ANCHORS	CAB	2/2/10

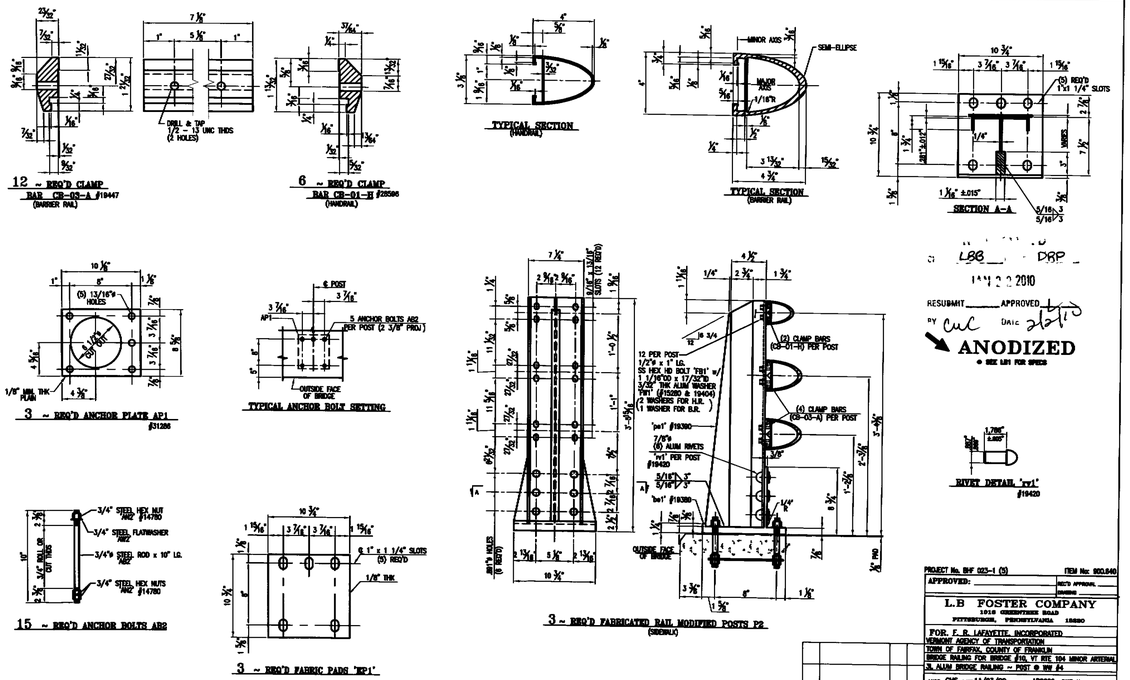
PROJECT No. BRF 023-(0) FED No. BRO.040

APPROVED ____ DATE APPROVAL ____
REVISED ____

L.B. FOSTER COMPANY
1016 GREENSTREET ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
OVER ALUM BRIDGE BOARD ~ GENERAL NOTES & TYP. DETAILS

DRWG. CAB DATE 11/03/09 JOB No. ARCHIVED CONT No.
CHECK. DAF DATE 12/21/09 DRAWING LB1 BRF No. ONE



L88 DRP

12 2 2010

RESUBMIT APPROVED

BY cmc DATE 2/2/10

ANODIZED

* SEE LIST FOR SPECS

REV	DESCRIPTION	BY	DATE

PROJECT No. BHF 023-1 (5) ITEM No. 900.840

APPROVED: _____ DIST'S APPROVAL _____ DATE _____

L.B FOSTER COMPANY
1818 OREGONTOWN ROAD
PITTSBURGH, PENNSYLVANIA 15220

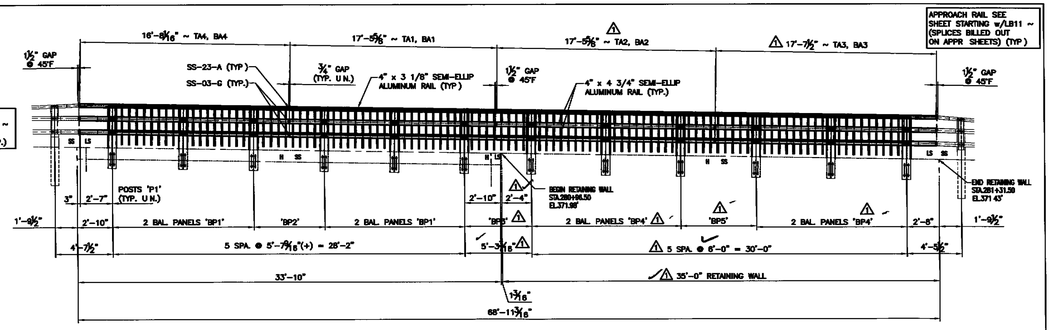
FOR F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3 ALUM BRIDGE RAILING ~ POST @ INV #4

MDE CMS DATE 11/03/09 JOB No. ARD002 CUST No.
CHECK Dd DATE 12/24/09 DRAWING LB2 BHF No.

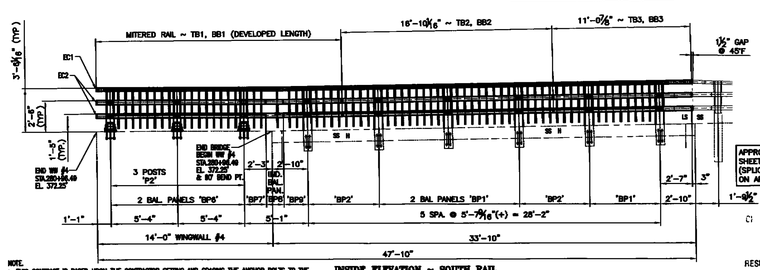
H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

APPROACH RAIL SEE SHEET STARTING w/LB11 ~ (SPLICES BILLED OUT ON APPR SHEETS) (TYP.)

APPROACH RAIL SEE SHEET STARTING w/LB9 ~ (SPLICES BILLED OUT ON APPR. SHEETS) (TYP.)

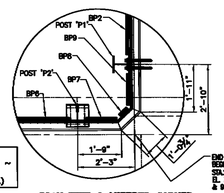


INSIDE ELEVATION ~ NORTH RAIL



INSIDE ELEVATION ~ SOUTH RAIL

APPROACH RAIL SEE SHEET STARTING w/LB10 ~ (SPLICES BILLED OUT ON APPR. SHEETS) (TYP.)



PLAN VIEW @ MITERED CORNER WINGWALL #4

NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB1 & LB2.
- LENGTH OF RAILING ON THIS SHEET IS 116.76 LF PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG BF OF PANNEL
- SPLICE GAP AT SLEEVE = 3/4" TYP.
- RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS
- FOR BALUSTER DETAILS SEE DRAWING LB5~LB7

ANODIZED
(SEE LB1 FOR NOTES)

C1 LBB DRP
14 2 2 2010
RESUBMIT APPROVED
BY Date
FOR RAILING KEY PLAN SEE DWG LB4

REV	DESCRIPTION	BY	DATE
1	REVISED POST SPACING & NOT WALL LENGTH BY COMMENTS ~ RES'S 1/21/10	CMS	01 21 10

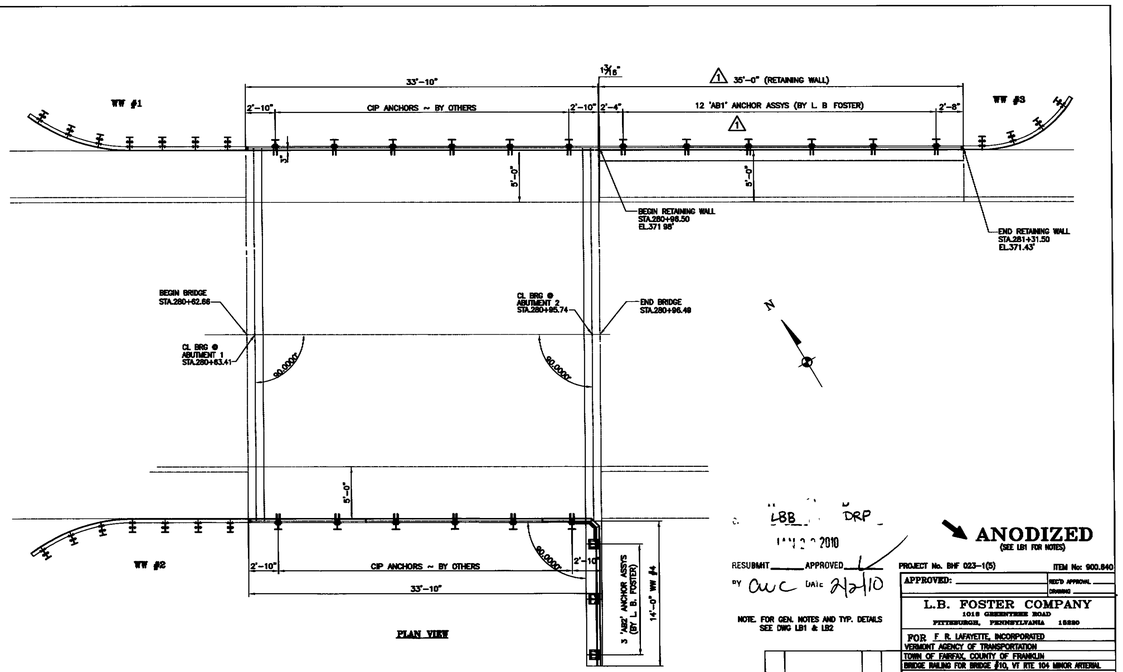
ITEM No: 900.640
PROJECT No. BHF 023-1(6)

APPROVED: _____ MDOT APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE FOA, VT RTE 104 MINOR ARTERIAL
3L ALUM. BRIDGE RAILING ~ ELEVATION & SIDEWALK SIDE

MADE CMS DATE 11/07/08 JOB No. AR0600 CUST No.
CHECK DM DATE 12/21/09 DRAWING LB3 SHT No. ONE



LBB DRP

12/2 2010

RESUBMIT ____ APPROVED ____

BY CWC DATE 2/2/10

NOTE FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB1 & LB2

ANODIZED
(SEE LB1 FOR NOTES)

PROJECT No. BHF 023-1(5) ITEM No. 900.840

APPROVED: _____ RES'D APPROVAL _____

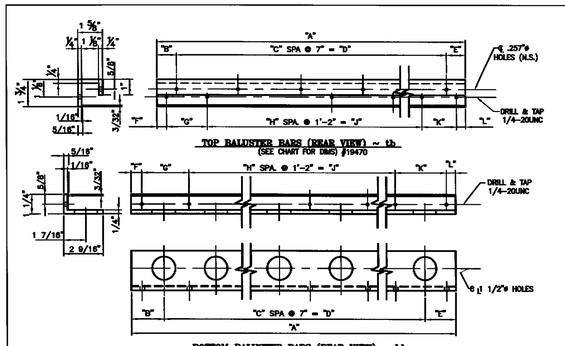
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

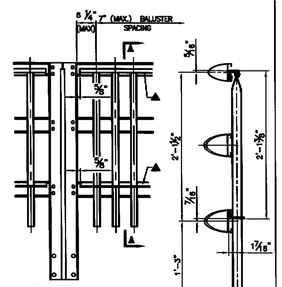
FOR F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
36 ALUM. BRIDGE RAILING ~ KEY PLAN

REV	DESCRIPTION	BY	DATE
1	REVISED POST SPACING & RET. WALL LENGTH BY OWNER/CSR - RECD 1/21/10	CMS	01/25/10

DRAWN CMS DATE 11/07/09 JOB No. AR0600 CUST No.
CHECK DJL DATE 12/21/09 DRAWING LB4 SHT No. ONE



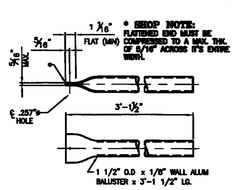
⚠ 7 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP1'
⚠ 4 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP4'
2 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP6'



TYPICAL ELEVATION
▲ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" ~ SS1* (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

SECTION A-A

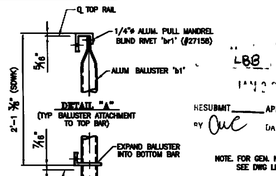
MARK	QTY	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	PANEL ASSY
tb1 / bb1	7	4'-10 3/8"	4 11/16"	7	4'-1"	4 11/16"	2"	1'-1 3/16"	2	2'-4"	1'-1 3/16"	2"	BP1
⚠ tb4 / bb4	4	5'-2 3/4"	3 3/8"	8	4'-8"	3 3/8"	1"	5 7/8"	3	3'-6"	1'-0 7/8"	1"	BP4
tb6 / bb6	2	4'-7 1/2"	3 1/4"	7	4'-1"	3 1/4"	1"	1'-0 3/4"	2	2'-4"	1'-0 3/4"	1"	BP6



* SHOP NOTE: FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

1 1/2" O.D x 1/8" WALL ALUM BALUSTER x 3'-1 1/2" Lg.

⚠ 108 ~ REQ'D BALUSTERS 'b1'
#19451



DETAIL "A" (TYP BALUSTER ATTACHMENT TO TOP BAR)

DETAIL "B" (TYP BALUSTER ATTACHMENT TO BOTTOM BAR)

L88 DRP

12/3 2910

RESUBMIT ____ APPROVED AS NOTED
BY Que DATE 2/3/10

NOTE. FOR GEN. NOTES AND TYP DETAILS SEE DWG LB1

ANODIZED
(SEE LB1 FOR NOTES)

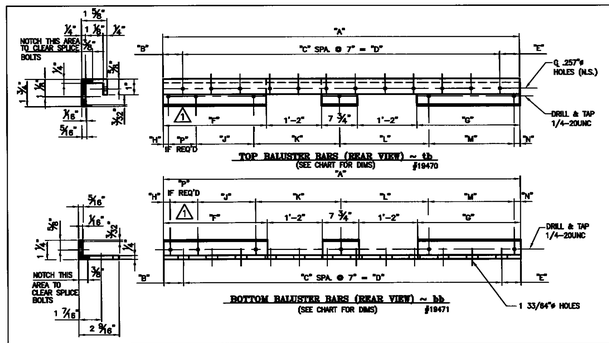
REV	DESCRIPTION	BY	DATE
⚠ 1	REVISED POST SPACING & RET. WALL LENGTH; BY/ CMS COMMENTS - RES 1/21/10	CMS	01 25 10

PROJECT No. BHF 023-1(5) ITEM No: 900.640
APPROVED _____ RES'D APPROVAL _____
APPROVED _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

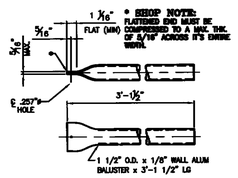
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

DRAWN CMS DATE 11/09/09 JOB No. ARD0500 CUST No. _____
CHECK JM DATE 12/21/09 DRAWING LB5 SHT No. ONE



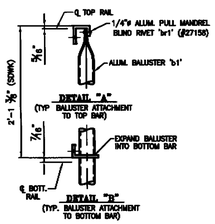
MARK	QTY	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"P" IF REQ'D	PANEL ASSY
tb2 / bb2	3	4'-10 3/8"	4 11/16"	7	4'-1"	4 11/16"	11 1/2"	11 1/8"	2"	6 3/16"	1'-7 13/16"	1'-10 3/16"	6 3/16"	2"	–	BP2
tb3 / bb3	1	4'-5 15/16"	4 2 7/16"		4'-1"	2 1/2"	11 1/8"	7 1/16"	3/4"	5 3/16"	1'-8 13/16"	1'-9"	5 7/16"	3/4"	6"	BP3
tb5 / bb5	1	5'-2 3/4"	3 3/8"	8	4'-8"	3 3/8"	1'-4 3/8"	10 5/8"	1"	1'-0 7/8"	1'-10"	1'-8"	5 7/8"	1"	–	BP5

2 REQ'D. ~ BALUSTER PANEL ASSEMBLY "BP2"
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY "BP3"
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY "BP5"



* SHOP NOTE: FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

41 ~ REQ'D BALUSTERS "b1"
#19481



LBB DRP
12/22/2010
RESUBMIT ____ APPROVED AS NOTED
BY Cwl DATE 2/2/10

ANODIZED
(SEE LB1 FOR NOTES)

NOTE: FOR GEN NOTES AND TYP DETAILS SEE DWG LB1

PROJECT No. BNF 023-(5) FEDN No. 000B(B40)

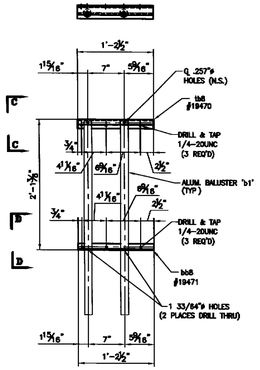
APPROVED: ____ RECTO APPROVAL ____ DRAWING ____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

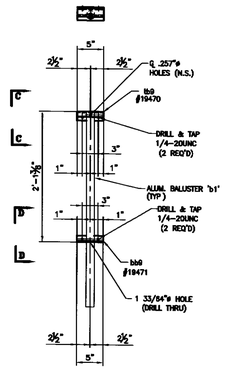
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

MADE CMS DATE 11/07/09 JOB No. AR0800 CUST No.
CHECK DJ DATE 12/21/09 DRAWING LB6 REV No. ONE

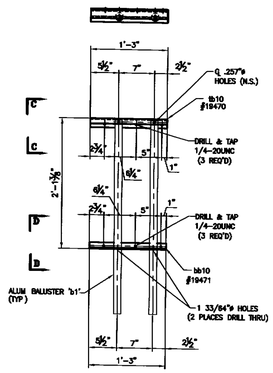
REV	DESCRIPTION	BY	DATE
1	REVISED POST SPACING & RET WALL LENGTH BY CONTRACTOR ~ REV 1/21/10	CMS	01 22 10



BALUSTER PANEL ~ BP7 ~ ONE REQ'D.
(REAR ELEVATION VIEW)

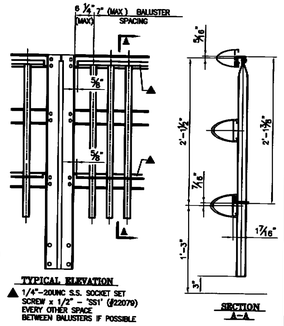


BALUSTER PANEL ~ BP8 ~ ONE REQ'D.
(REAR ELEVATION VIEW)

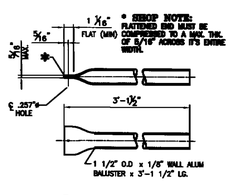


BALUSTER PANEL ~ BP9 ~ ONE REQ'D.
(REAR ELEVATION VIEW)

ANODIZED
(SEE LB1 FOR NOTES)



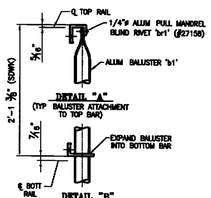
TYPICAL ELEVATION
▲ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" - "SS1" (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

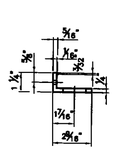


1 1/2" O.D x 1/8" WALL ALUM BALUSTER x 3'-1 1/2" LG.

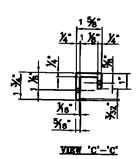
5 ~ REQ'D BALUSTERS 'b1'
#19451

*** SHOP NOTE:**
FLATTENED END MUST BE CONFORMED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.





VIEW 'D'-'D'



VIEW 'C'-'C'

L88 DRP
2010
RESUBMIT APPROVED
BY CWC DATE 12/21/09
NOTE: FOR GEN. NOTES AND TYP DETAILS SEE DWG LB1

PROJECT No. BRF 023-(5) ITEM No: 900,640

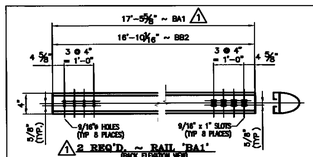
APPROVED: _____ MGT'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
36. ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

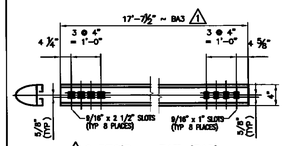
MADE CMS DATE 11/07/09 JOB No. AR0800 DIST No.
CHECK DJ DATE 12/21/09 DRAWING LB7 REF No.

REV	DESCRIPTION	BY	DATE

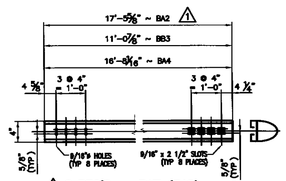


⚠ 2 REQ'D. ~ RAIL 'BA1'
(BACK ELEVATION VIEW)

2 REQ'D. ~ RAIL 'BB2'
(BACK ELEVATION VIEW)



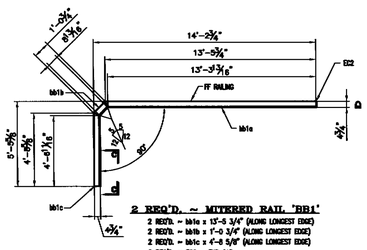
⚠ 2 REQ'D. ~ RAIL 'BA3'
(BACK ELEVATION VIEW)



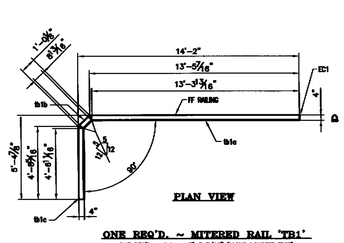
⚠ 2 REQ'D. ~ RAIL 'BA2'
(BACK ELEVATION VIEW)

2 REQ'D. ~ RAIL 'BA4'
(BACK ELEVATION VIEW)

2 REQ'D. ~ RAIL 'BB3'
(BACK ELEVATION VIEW)

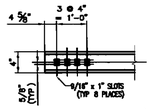


2 REQ'D. ~ MITERED RAIL 'BB1'
2 REQ'D. ~ tb1a x 13'-5 3/4" (ALONG LONGEST EDGE)
2 REQ'D. ~ tb1b x 1'-0 3/4" (ALONG LONGEST EDGE)
2 REQ'D. ~ tb1c x 4'-8 5/8" (ALONG LONGEST EDGE)
2 REQ'D. ~ EC2 ~ END CAP

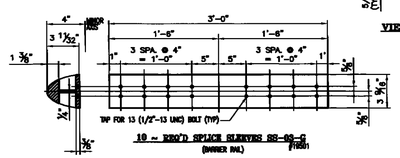


PLAN VIEW

ONE REQ'D. ~ MITERED RAIL 'TB1'
ONE REQ'D. ~ tb1a x 13'-5 7/16" (ALONG LONGEST EDGE)
ONE REQ'D. ~ tb1b x 1'-0 1/8" (ALONG LONGEST EDGE)
ONE REQ'D. ~ tb1c x 4'-8 5/16" (ALONG LONGEST EDGE)
ONE REQ'D ~ EC1 ~ END CAP



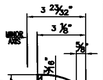
VIEW 'C' - 'C'

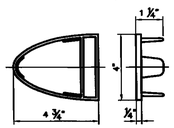


10 ~ REQ'D SPLICE SLEEVES SS-63-S
(INNER RAIL) #19351



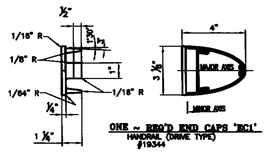
5 ~ REQ'D SPLICE SLEEVES SS-23-A
(NEAR ELEVATION)(UNIDIRNL) #20284





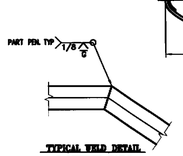
2 ~ REQ'D. ALUM
END CAPS EC2
#19345

ANODIZED
(SEE NOTES ON LIST)



SPLICE BOLT DETAILS

ONE ~ REQ'D END CAPS 'EC1'
HANDRAIL (CURVE TYPE)
#19344



TYPICAL WELD DETAIL
@ MITERED RAILS

REV	DESCRIPTION	BY	DATE
1	REVISED POST SPACING & RET. WALL LENGTH) BY CMS CORRECTED ~ RETD 1/21/09	CMS	01/22/09 01/23/09

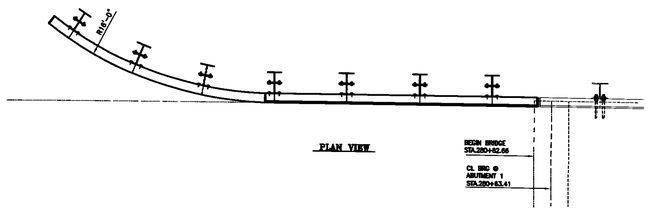
ITEM No: BDL040
PROJECT No. BHF 023-(3)

APPROVED _____ RECT'D APPROVAL _____
DRAWING _____

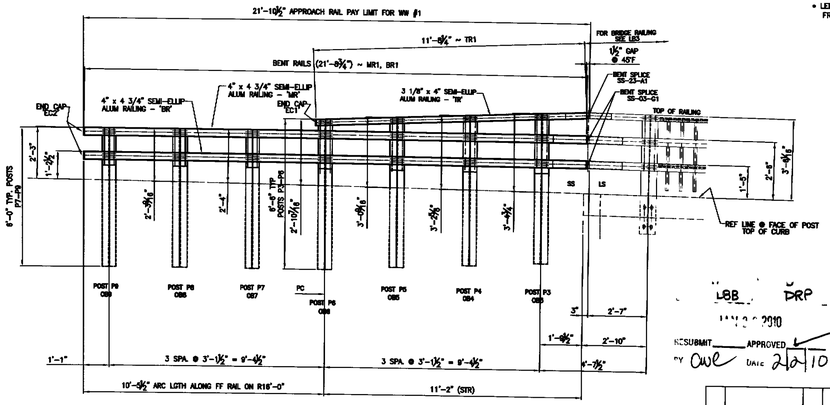
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. N. LAFRATTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3-LINE ALUM. BRIDGE RAIL ~ MISC. RAIL DETAILS

DRWG. CMS DATE 11/06/08 JOB No. AR0800 CUST No. _____
CHECK Dd DATE 12/21/08 DRAWING LBB REF No. ONE



NOTE.
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 21.875 LF PAY LENGTH.
- LENGTHS SHOWN THUS ( ) ARE ACTUAL LENGTHS ALONG FRT FACE OF RAILING



INSIDE ELEVATION OF WW #1 APPROACH RAIL

ANODIZED
(SEE LB1 FOR NOTES)

L88 DRP

RESUBMIT ____ APPROVED

BY owl DATE 2/2/10

REV	DESCRIPTION	BY	DATE

PROJECT No BHF 023-1(5) ITEM No: 900 840

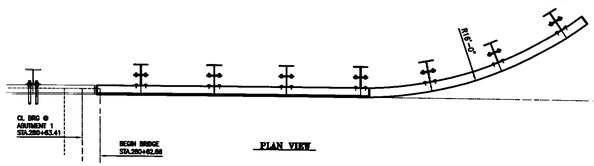
APPROVED: ____ REG'D APPROVAL ____

DRAWING ____

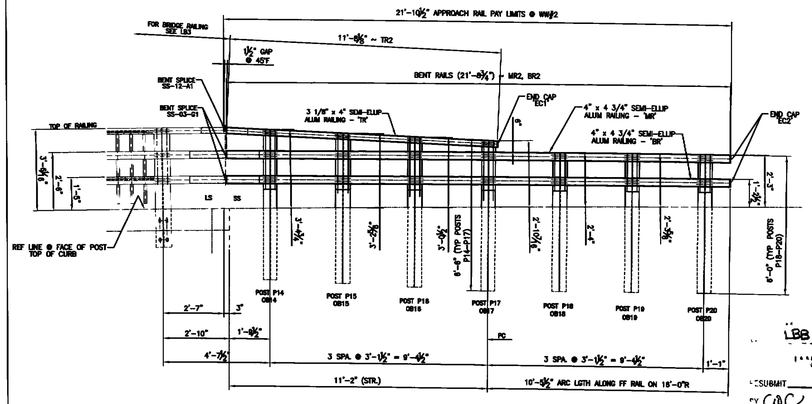
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR F.B. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3L ALUMINUM APPROACH RAIL ELEVATIONS @ WW #1

MADE CMS DATE 11/06/08 JOB No. AR0600 CUST No.
CHECK DJ DATE 12/24/08 DRAWING LB9 REF No.



PLAN VIEW



INSIDE ELEVATION OF WW #2 APPROACH RAIL

NOTE.
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 21.875 LF PAY LENGTH.
- LENGTHS SHOWN THUS ( ) ARE ACTUAL LENGTHS ALONG FRT FACE OF RAILING

ANODIZED
(SEE LB1 FOR NOTES)

LBB DRP

RESUBMIT APPROVED
BY CdC DATE 2/2/10

REV	DESCRIPTION	BY	DATE

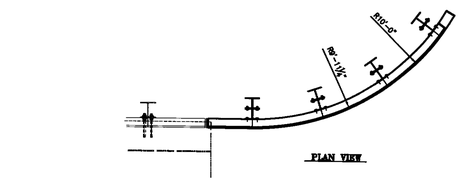
PROJECT No. BHF 023-1(5) ITEM No: 900.640

APPROVED REC'D APPROVAL
DRAWING

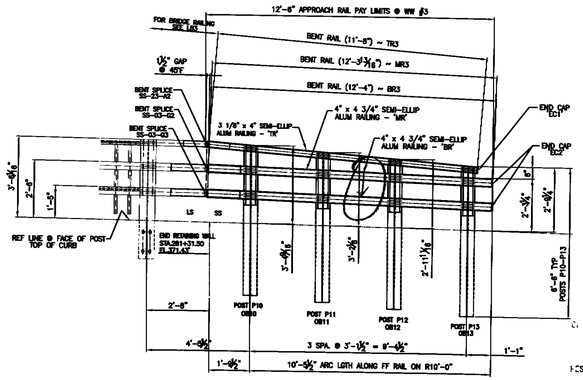
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR E. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
SL ALUMINUM APPROACH RAIL ELEVATIONS @ WW #2

MADE CMS DATE 11/06/09 JOB No. ARO600 CUST No.
CHECK DJ DATE 12/24/09 DRAWING LB10 SEF No.



PLAN VIEW



INSIDE ELEVATION OF WW #3 APPROACH RAIL

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 12.5 LF PAY LENGTH
- LENGTHS SHOWN THUS ( ) ARE ACTUAL LENGTHS ALONG FRT FACE OF RAILING

ANODIZED
(SEE LB1 FOR NOTES)

LBB DRP
2010
RESUBMIT APPROVED AS NOTED
BY AWR DATE 2/2/10

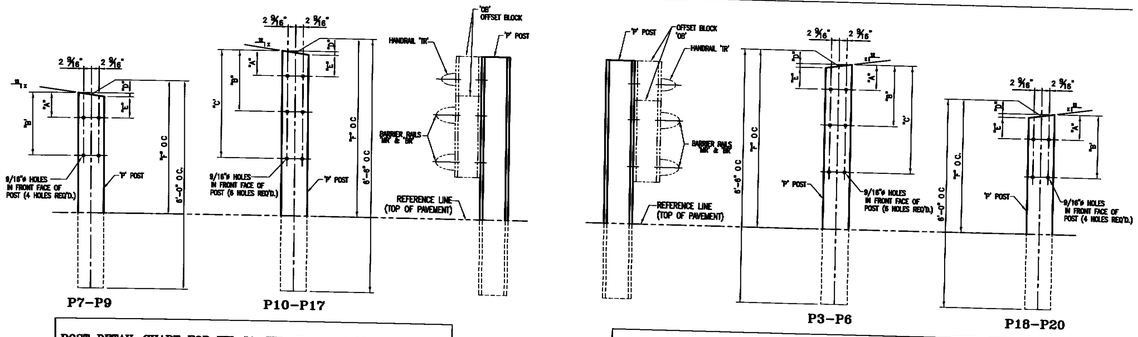
REV	DESCRIPTION	BY	DATE

PROJECT No. BNF 023-1(5) ITEM No: 900.640
APPROVED REG'D APPROVAL
DRAWING

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: E. B. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
SL ALUMINUM APPROACH RAIL ELEVATIONS @ WW #3

MADE CMS DATE 11/08/09 JOB No. AR0800 CUST No.
CHECK DJL DATE 12/24/09 DRAWING LB11 DEP No.

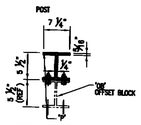


POST DETAIL CHART FOR WW #1, WW #2 & WW #3 APPROACHES

POST No.	QTY	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	REV X
P10	1	1 7/8"	1'-1 5/16"	2'-2 1/4"	9/16"	1 1/4"	3'-4 9/16"	1
P11	1	1 7/8"	11 5/8"	2'-0 7/16"	9/16"	1 1/4"	3'-2 1/8"	1
P12	1	1 7/8"	10"	1'-10 11/16"	9/16"	1 1/4"	2'-11 11/16"	1
P13	1	1 7/8"	8 5/16"	1'-8 7/8"	9/16"	1 1/4"	2'-9 1/4"	1
P14	1	1 11/16"	1'-1 1/8"	2'-2 1/8"	5/16"	1 7/16"	3'-4 3/4"	1/2
P15	1	1 11/16"	11 1/2"	2'-0 3/8"	5/16"	1 7/16"	3'-2 5/8"	1/2
P16	1	1 11/16"	9 13/16"	1'-10 5/8"	5/16"	1 7/16"	3'-0 1/2"	1/2
P17	1	1 11/16"	8 1/8"	1'-8 7/8"	5/16"	1 7/16"	2'-10 7/16"	1/2
P7	1	2"	1'-2 11/16"		0	2"	2'-4"	SQ
P8	1	2"	1'-2 5/8"		0	2"	2'-3 9/16"	SQ
P9	1	2"	1'-2 9/16"		0	2"	2'-3"	SQ

POST DETAIL CHART FOR WW #1 & WW #2 APPROACHES

POST No.	QTY	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	REV X
P3	1	1 11/16"	1'-1 1/8"	2'-2 1/8"	5/16"	1 7/16"	3'-4 3/4"	1/2
P4	1	1 11/16"	11 1/2"	2'-0 3/8"	5/16"	1 7/16"	3'-2 5/8"	1/2
P5	1	1 11/16"	9 13/16"	1'-10 5/8"	5/16"	1 7/16"	3'-0 9/16"	1/2
P6	1	1 11/16"	8 1/8"	1'-8 7/8"	5/16"	1 7/16"	2'-10 7/16"	1/2
P18	1	2"	1'-2 11/16"		0	2"	2'-4"	SQ
P19	1	2"	1'-2 5/8"		0	2"	2'-3 9/16"	SQ
P20	1	2"	1'-2 9/16"		0	2"	2'-3"	SQ



TYP. SECT. POST & OFFSET BLOCK

ANODIZED
(SEE NOTES ON LEFT)

NOTE:
FOR POST TOPS THAT HAVE MITERS LESS THAN OR EQUAL TO 1/8" – THE POSTS WILL BE TREATED SQUARE.

NOTE:
2 CLAMPING BARS CB–01–H (#28598) PER POSTS P2–P4, P12
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P2–P8 w/ 1/2"–13 UNC S.S. BOLT x 1" LG. "FB1", 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER "FW1" (#15280 & # 19404) (15 PER POST)

NOTE:
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P12–P15 w/ 1/2"–13 UNC S.S. BOLT x 1" LG. "FB1", 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER "FW1" (#15280 & # 19404) (8 PER POST)

REV	DESCRIPTION	BY	DATE

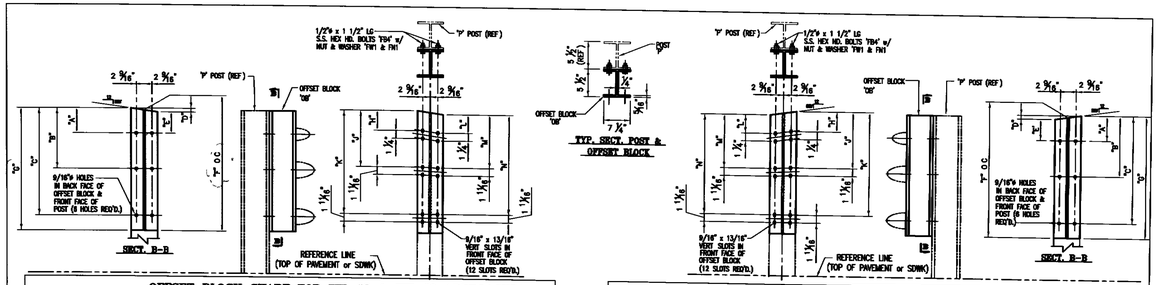
LB8 DRP
RESUBMIT APPROVED
Due 12/7/10

PROJECT No. BHF 025-1(5) ITEM No: 900.840
APPROVED
REG'S APPROVAL
DRAWING

L.B. FOSTER COMPANY
1816 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
SL ALUMINUM APPROACH RAIL POST DETAILS

MADE CMS. DATE 11/06/09. JOB No. AB0500 CUST. No.
CHECK DP DATE 12/28/09. DRAWING LB12 REF. No.



OFFSET BLOCK CHART FOR WW #2 & WW #3 APPROACHES POSTS P10 – P17

POST No	OFFSET BLOCK	QTY	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	G	REV X
P10	OB10	1	1 7/8"	1'-1 5/16"	2'-2 1/4"	9/16"	1 1/4"	2'-7"	2'-7 5/16"	1
P11	OB11	1	1 7/8"	11 5/8"	2'-0 7/16"	9/16"	1 1/4"	2'-5 1/4"	2'-5 9/16"	1
P12	OB12	1	1 7/8"	10"	1'-10 11/16"	9/16"	1 1/4"	2'-3 1/2"	2'-3 3/4"	1
P13	OB13	1	1 7/8"	8 5/16"	1'-8 7/8"	9/16"	1 1/4"	2'-1 11/16"	2'-2"	1
P14	OB14	1	1 11/16"	1'-1 1/8"	2'-2 1/8"	5/16"	1 7/16"	2'-7"	2'-7 1/8"	1/2
P15	OB15	1	1 11/16"	11 1/2"	2'-0 3/8"	5/16"	1 7/16"	2'-5 1/4"	2'-5 3/8"	1/2
P16	OB16	1	1 11/16"	9 13/16"	1'-10 5/8"	5/16"	1 7/16"	2'-3 1/2"	2'-3 5/8"	1/2
P17	OB17	1	1 11/16"	8 1/8"	1'-8 7/8"	5/16"	1 7/16"	2'-1 3/4"	2'-1 15/16"	1/2

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P10	OB10	1"	1'-0 3/8"	2'-1 5/16"	7/8"	1'-0"	2'-0 15/16"
P11	OB11	1"	10 11/16"	1'-11 1/2"	7/8"	10 5/16"	1'-11 1/8"
P12	OB12	1"	9 1/16"	1'-9 3/4"	7/8"	8 5/8"	1'-9 5/16"
P13	OB13	1"	7 3/8"	1'-7 15/16"	7/8"	6 15/16"	1'-7 1/2"
P14	OB14	1"	1'-0 5/16"	2'-1 5/16"	7/8"	1'-0"	2'-0 15/16"
P15	OB15	1"	10 5/8"	1'-11 9/16"	7/8"	10 5/16"	1'-11 3/16"
P16	OB16	1"	9"	1'-9 13/16"	7/8"	8 11/16"	1'-9 1/2"
P17	OB17	1"	7 5/16"	1'-8 1/16"	7/8"	7"	1'-7 3/4"

ANODIZED
(SEE NOTES ON LB1)

*NOTE:
FOR POST TOPS THAT HAVE MITERS LESS THAN OR EQUAL TO 1/8" – THE POSTS WILL BE TREATED SQUARE.

NOTE:
2 CLAMPING BARS CB-01-H (#28986) PER POSTS P2 – P5, P12
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P2 – P8 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. "FB1", 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER "FW1" (#15280 & #19404) (16 PER POST)

NOTE:
4 CLAMPING BARS CB-03-A (#19447) PER POST P12 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. "FB1", 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER "FW1" (#15280 & #19404) (8 PER POST)

OFFSET BLOCK CHART FOR WW #1 APPROACH POSTS P3 – P6

POST No	OFFSET BLOCK	QTY	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	G	REV X
P3	OB3	1	1 11/16"	1'-1 1/8"	2'-2 1/8"	5/16"	1 7/16"	2'-7"	2'-7 1/8"	1/2
P4	OB4	1	1 11/16"	11 1/2"	2'-0 3/8"	5/16"	1 7/16"	2'-5 1/4"	2'-5 3/8"	1/2
P5	OB5	1	1 11/16"	9 13/16"	1'-10 5/8"	5/16"	1 7/16"	2'-3 1/2"	2'-3 5/8"	1/2
P6	OB6	1	1 11/16"	8 1/8"	1'-8 7/8"	5/16"	1 7/16"	2'-1 3/4"	2'-1 15/16"	1/2

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No	OFFSET BLOCK	H	J	K	L	M	N
P3	OB3	1"	1'-0 5/16"	2'-1 5/16"	7/8"	1'-0"	2'-0 15/16"
P4	OB4	1"	10 11/16"	1'-11 9/16"	7/8"	10 5/16"	1'-11 1/4"
P5	OB5	1"	9"	1'-9 13/16"	7/8"	8 11/16"	1'-9 1/2"
P6	OB6	1"	7 5/16"	1'-8 1/16"	7/8"	7"	1'-7 3/4"

LBB DRP
10/20/2010
RESUBMIT ____ APPROVED
BY Dal DATE 2/2/10

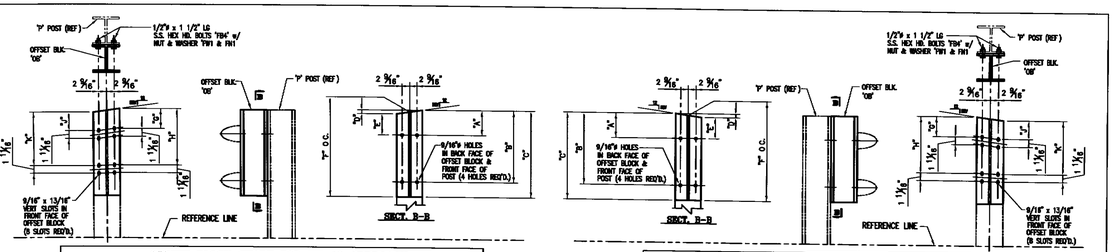
REV	DESCRIPTION	BY	DATE

PROJECT No BHF 023-K(5) ITEM No 900.640
APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F R LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
OFFSET BOX DETAILS

MADE CMS DATE 11/08/09 JOB No AR0800 CUST No
CHECK DC DATE 12/28/09 DRAWING LB13 REV No



OFFSET BLOCK CHART FOR WW #2 APPROACH
POSTS P18 – P20

POST No.	OFFSET BLOCK	QTY	OFFSET BLOCK ~ POST MTG DIMENSIONS A	B	C	D	E	F (O.C.)	REV X
P18	OB18	1	2"	1'-2 11/16"	1'-7 11/16"	0	2"	1'-7 5/8"	SQ
P19	OB19	1	2"	1'-2 5/8"	1'-7 5/8"	0	2"	1'-7 5/8"	SQ
P20	OB20	1	2"	1'-2 9/16"	1'-7 9/16"	0	2"	1'-7 9/16"	SQ

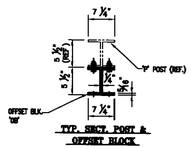
POST No.	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS G	H	J	K
P18	OB18	1 3/16"	1'-1 7/8"	1 1/8"	1'-1 7/8"
P19	OB19	1 3/16"	1'-1 13/16"	1 1/8"	1'-1 13/16"
P20	OB20	1 3/16"	1'-1 11/16"	1 1/8"	1'-1 11/16"

***NOTE:**
FOR POST TOPS THAT HAVE MITERS LESS THAN OR EQUAL TO 1/8" – THE POSTS WILL BE TREATED SQUARE.

OFFSET BLOCK CHART FOR WW #1 APPROACH
POSTS P7 – P9

POST No.	OFFSET BLOCK	QTY	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	REV X
P7	OB7	1	2"	1'-2 11/16"	1'-7 11/16"	0	2"	1'-7 5/8"	SQ
P8	OB8	1	2"	1'-2 5/8"	1'-7 5/8"	0	2"	1'-7 5/8"	SQ
P9	OB9	1	2"	1'-2 9/16"	1'-7 9/16"	0	2"	1'-7 9/16"	SQ

POST No.	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG DIMENSIONS G	H	J	K
P7	OB7	1 3/16"	1'-1 13/16"	1 1/8"	1'-1 13/16"
P8	OB8	1 3/16"	1'-1 3/4"	1 1/8"	1'-1 3/4"
P9	OB9	1 3/16"	1'-1 11/16"	1 1/8"	1'-1 11/16"



TYP. SECT. POST & OFFSET BLOCK

NOTE:
4 CLAMPING BARS CB-03-A (P1947) PER POSTS P6 – P8, P13 – P15 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. "FB1", 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER "FW1" (#152260 & #19404) (8 PER POST)

ANODIZED
(SEE NOTES ON LBS)

L88 DRP
2010
RESUBMIT ____ APPROVED ✓
BY Ael DATE 2/9/10

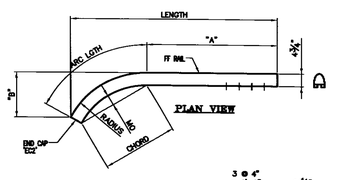
REV	DESCRIPTION	BY	DATE

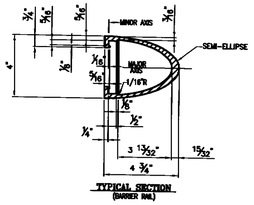
PROJECT No BHF 023-1(5) ITEM No 900 640
APPROVED: ____ REC'D APPROVAL ____ DRAWING ____

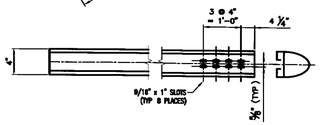
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
OFFSET BLOCK DETAILS

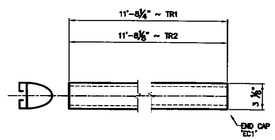
MADE CMS DATE 11/06/09 JOB No. AR0800 CUST No.
CHECK Dd DATE 12/28/09 DRAWING LB14 REV No.





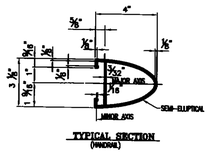


BENT TOP RAILS										MATL FOR BENDING
MK.	QTY	OAL (ALONG FF RAIL)	LENGTH	ARC LGTH	"A"	"B"	MO	CHORD	RADIUS	
MR1	1	21'-6 3/4"	21'-0 1/16"	10'-5 1/4"	11'-3 1/2"	3'-3 7/16"	9 7/8"	10'-0"	16'-0"	+2'-6"
BR1	1	21'-6 3/4"	21'-0 1/16"	10'-5 1/4"	11'-3 1/2"	3'-3 7/16"	9 7/8"	10'-0"	16'-0"	+2'-6"
MR3	1	12'-3 13/16"	10'-6 1/2"	10'-4 13/16"	1'-11"	4'-11 1/4"	1'-3 1/4"	9'-8 1/2"	10'-0"	+2'-6"
BR3	1	12'-4"	10'-6 9/16"	10'-5"	1'-11"	4'-11 7/16"	1'-3 1/4"	9'-8 11/16"	10'-0"	+2'-6"
MR2	1	21'-6 3/4"	21'-0 1/16"	10'-5 1/4"	11'-3 1/2"	3'-3 7/16"	9 7/8"	10'-0"	16'-0"	+2'-6"
BR2	1	21'-6 3/4"	21'-0 1/16"	10'-5 1/4"	11'-3 1/2"	3'-3 7/16"	9 7/8"	10'-0"	16'-0"	+2'-6"

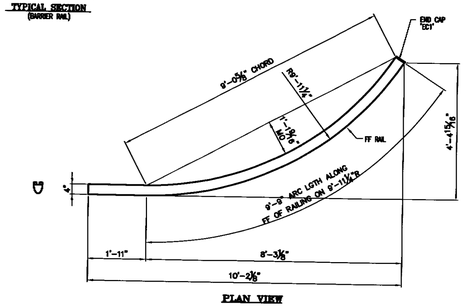


ONE REQ'D – HANDRAIL 'TR1'
(FRONT ELEVATION VIEW)

ONE REQ'D – HANDRAIL 'TR2'
(FRONT ELEVATION VIEW)



TYPICAL SECTION
(HANDRAIL)



PLAN VIEW

ONE REQ'D – HANDRAIL 'TR3'

11'-6" LGTH ALONG FF RAIL (+2'-6" FOR SHOP BENDING = 14'-2")

ANODIZED
(SEE NOTES ON LB1)

SUBMIT ____ APPROVED
BY ____ DATE 2/27/10

REV	DESCRIPTION	BY	DATE

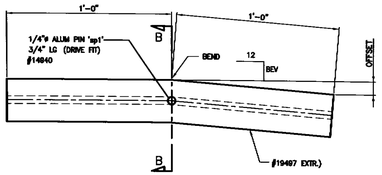
PROJECT No. BNF 023-(0) ITEM No. 900.640

APPROVED. DIST'S APPROVAL

L.B. FOSTER COMPANY
1510 GRIFFITH ROAD
PITTSBURGH, PENNSYLVANIA 15880

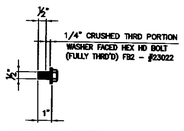
FOR: F. R. LAFAYETTE, INCORPORATED
VENDING AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
3. ALUMINUM APPROACH RAIL — RAIL DETAILS

MDE CMS DATE 11/28/09 JOB No. AR0800 CONT. No.
CHECK_Ed DATE 12/28/09 DRAWING LB15 REV No.

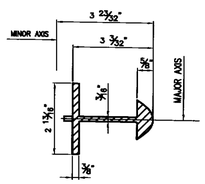


REAR ELEVATION VIEW

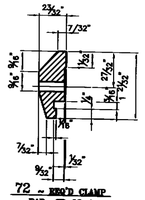
HANDRAIL SPLICES			
MK.	QTY.	OFFSET	BEV
SS-23-A1	2	11/16"	11/16
SS-23-A2	1	3/4"	3/4



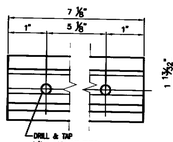
SPLICE BOLT DETAILS

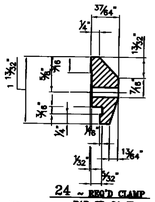


SECTION B-B

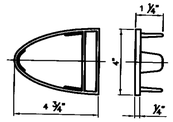


72 ~ REQ'D CLAMP
BAR CB-03-A
(BARRIER RAIL ~ 4 PER POST)
(#19447)

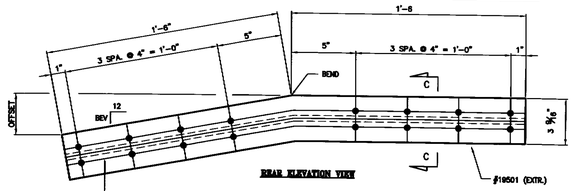




24 ~ REQ'D CLAMP
BAR CB-01-M
(HANDRAIL ~ 2 PER POST)
(#28586)



6 ~ REQ'D. ALUM
END CAPS EC2
#19345



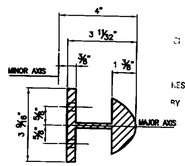
REAR ELEVATION VIEW

DRILL AND TAP FOR
1/2"-13UNC BOLT (18 REQ'D)
"FS2"

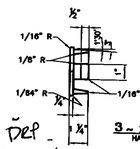
BARRIER RAIL SPLICES			
MK.	QTY.	OFFSET	BEV
SS-03-G1	4	3/16"	1/8
SS-03-G2	1	3/8"	1/4
SS-03-G3	1	5/16"	3/16

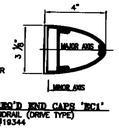


TYPICAL WELD DETAIL ⚠1
● MITERED SPLICES (OPTIONAL IF REQ'D.)



SECTION C-C





3 ~ REQ'D END CAPS "EC1"
HANDRAIL (DRIVE TYPE)
#18344

LBB DEP
2010
RESUBMIT APPROVED
BY DATE 2/5/10

ANODIZED
(SEE NOTES ON LB1)

REV	DESCRIPTION	BY	DATE
⚠1	REVISED NOTATION FOR TYP. MITER WELD	CMS	01/25/10

PROJECT No. BHF 023-4(3) ITEM No. 000.040
APPROVED _____ DATE APPROVED _____
COMMENTS _____

L.B. FOSTER COMPANY
1016 GREENWOOD ROAD
PITTSBURGH, PENNSYLVANIA 15220
FOR: F. R. LAFAYETTE, INCORPORATED
MUNICIPAL AGENCY OF TRANSPORTATION
TOWN OF FAIRFAX, COUNTY OF FRANKLIN
BRIDGE RAILING FOR BRIDGE #10, VT RTE 104 MINOR ARTERIAL
SS ALUMINUM APPROACH RAIL ~ MISC DETAILS

DRAWN CMS DATE 11/09/09 JOB No. 090900 DWG. No.
CHECK DM DATE 12/28/09 Drawing# 21540MT SHT No. ONE