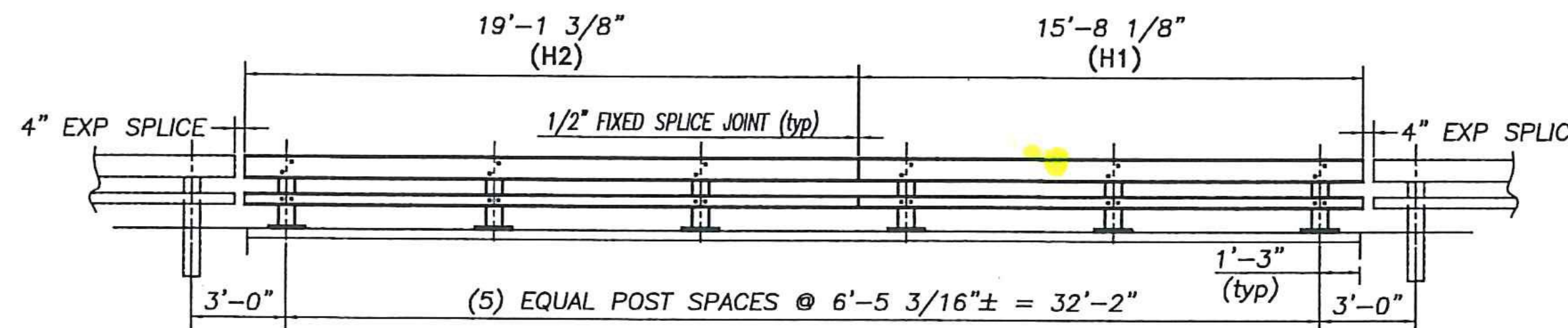


WEST RAILING ELEVATION
BRIDGE 96
LOOKING AT FACE OF RAILING
FACING WEST FROM CENTERLINE OF ROADWAY



EAST RAILING ELEVATION
BRIDGE 96
LOOKING AT FACE OF RAILING
FACING EAST FROM CENTERLINE OF ROADWAY

BILL OF MATERIAL
APPROACH RAILING

Qty	mk	Description	Spec.
4	01	WB25 APPROACH POST- #1 x 8'-0\" OAL (GALV)	A709 gr 50
4	02	WB25 APPROACH POST- #2 x 8'-0\" OAL (GALV)	A709 gr 50
4	03	WB25 APPROACH POST- #3 x 8'-0\" OAL (GALV)	A709 gr 50
4	04	WB25 APPROACH POST- #4 x 8'-0\" OAL (GALV)	A709 gr 50
4		UPPER RAIL APPROACH TUBE HSS 8 x 4 x 5/16 x 9'-4.000\" w/ 3,500 SLOTS FOR 4\" EXP GAP (GALV)	A500 gr B
4		LOWER RAIL APPROACH TUBE HSS 4 x 4 x 5/16 x 9'-4.000\" w/ 3,500 SLOTS FOR 4\" EXP GAP (GALV)	A500 gr B
4		CONNECTION PLATE PL 0.375\" x 20.000\" x 27.000\" (GALV)	A709 gr 36
2		DEFLECTOR PLATE (RIGHT) PL 0.375\" x 4.000\" x 13.375\" (GALV)	A709 gr 36
2		DEFLECTOR PLATE (LEFT) PL 0.375\" x 4.000\" x 13.375\" (GALV)	A709 gr 36
4		END CAP FOR 8x4 TUBE 0.187\" THICK PLATE 8.000\" x 4.000\" w/ WELDED TABS (GALV)	A709 gr 36
4		END CAP FOR 4x4 TUBE 0.187\" THICK PLATE 4.000\" x 4.000\" w/ WELDED TABS (GALV)	A709 gr 36
4		(ANGLED) SPLICE TUBE (EXPANSION) FOR 8x4 UPPER RAIL HSS 7 x 3 x 3/8 x 1'-11.750\" OAL (GALV)	A500 gr B
4		SPLICE TUBE (EXPANSION) FOR 4x4 LOWER RAIL HSS 3 x 3 x 5/16 x 1'-11.750\" OAL (GALV)	A500 gr B
32		WOOD POST (WP1) 6 x 8 x 7'-0\"	TIMBER
32		WOOD BLOCKOUT (WB1) 6 x 8 x 1'-0\"	TIMBER
4		WOOD POST (WP2) 6 x 8 x 7'-0\"	TIMBER
4		WOOD BLOCKOUT (WB2) 6 x 8 x 1'-0\"	TIMBER
4		WOOD POST (WP3) 6 x 8 x 7'-0\"	TIMBER
4		WOOD BLOCKOUT (WB3) 6 x 8 x 1'-2\"	TIMBER
4		THREE FLAT LIP BRIDGE SHOE (MODIFIED) 10 GA. GALV	as to M180 B2
4		THREE TRANSITION PANEL 6'-3\" / 3'-1 1/2\" 10 GA. GALV.	as to M180 B2
8		THREE PANEL 12'-0\" / 1'-0 3/4\" 12 GA. GALV.	as to M180 A2
2	NE	THREE PANEL 12'-0\" / 1'-0 3/4\" 12 GA. GALV. (CURVED FOR 16 FT RADIUS)	as to M180 A2
92		ROUND HEAD POST BOLT slot or wrench head - no shoulder 3/4\" DIA x 6\" LG. (GLV) w/ LOCK NUT & FLAT WASHER	A449
4		ROUND HEAD POST BOLT slot or wrench head - no shoulder 3/4\" DIA x 2\" LG. (GLV) w/ HEX NUT	A449
8		ROUND HEAD POST BOLT - oval shoulder 5/8\" DIA x 1'-8\" LG. (GALV) w/ DBL RECESS NUT, FLAT WASHER	A307
88		ROUND HEAD POST BOLT - oval shoulder 5/8\" DIA x 1'-8\" LG. (GALV) w/ DBL RECESS NUT, FLAT WASHER	A307
32		HEX HEAD BOLT 5/8\" x 1-3/4\" (GALV) w/ FLAT WASHER	A325
128		PANEL SPLICE BOLT 5/8\" x 1-1/4\" (GALV) w/ DOUBLE RECESSED NUT	A307
78		RECTANGULAR PLATE WASHER 0.187\" x 1.750\" x 3.000\" (GALV)	A709 gr 36
32		SPACER PIPE - GALVANIZED 3/4\" SCH. 40 x 1/2\" LONG (GLV)	A53 gr B

BILL OF MATERIAL
EAST AND WEST SIDE BRIDGE RAIL COMBINED

Qty	mk	Description	Spec.
12		BRIDGE RAILING POST W6 x 25 x 2'-2.375\" OAH WITH 1 x 10 x 14 BASE PLATE (GLV)	A709 gr 50
2		SPLICE TUBE (FOR 8x4 RAIL) HSS 7 x 3 x 3/8 x 1'-8.000\" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	A500 gr B
2		SPLICE TUBE (FOR 4x4 RAIL) HSS 3 x 3 x 5/16 x 1'-8.000\" OAL w/ TAPPED HOLES & 2 WELDED NUTS (GLV)	A500 gr B
2	H1	UPPER RAIL TUBE 8 x 4 x 5/16 x 15'-8.125\" OAL 1 END EXP SLOTS / 1 END SPLICE HOLES	A500 gr B
2	H2	UPPER RAIL TUBE 8 x 4 x 5/16 x 19'-1.375\" OAL 1 END EXP SLOTS / 1 END SPLICE HOLES	A500 gr B
2	H1	LOWER RAIL TUBE 4 x 4 x 1/4 x 15'-8.125\" OAL 1 END EXP SLOTS / 1 END SPLICE HOLES	A500 gr B
2	H2	LOWER RAIL TUBE 4 x 4 x 1/4 x 19'-1.375\" OAL 1 END EXP SLOTS / 1 END SPLICE HOLES	A500 gr B
12		ANCHOR SPACER PLATE PL 0.375\" x 13.000\" x 9.375	A709 gr 36
48		ANCHOR STUD DBL END PART THREAD - 1\" DIA x 12.000\" w/ 2.250\" THD EACH END (GLV)	A449
96		HEAVY HEX NUT 1\" (GLV)	A563 DH
48		ROUND WASHER (SAE) - 1\" DIA SMALL (GLV)	F436
48		JAM NUT 1\" (GALV)	A563 DH
48		ROUND HEAD POST BOLT slot or wrench head - no shoulder 3/4\" DIA x 6\" LG. FULL BODY (GLV)	A449 / A325
48		LOCK NUT 3/4\" (GLV)	A563 DH
48		ROUND WASHER (SAE) 3/4\" (GLV)	F436
16		HEX HEAD BOLT 5/8\" DIA x 1.75\" LG. (GLV)	A325
16		ROUND WASHER (SAE) 5/8\" (GLV)	F436
12		BEARING PAD 0.125\" THICK x 10.000\" x 14.000\" (NEOPRENE 80 duro +1-10)	as to M251

SHOP DRAWING REVIEW

- REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.
- REJECTED REVISE AND RESUBMIT FURNISH AS CORRECTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.



Vanasse Hangen Brustlin, Inc.
7056 US Route 7
North Ferrisburgh, VT 05473
802.425.7788

HUBBARDTON ER STP 0161 (26)
Job Number: ER STP 0161 (26)
Reviewed By: S. FARNSWORTHY
Date: 9-18-2012

No.	Remarks	Date
0	Initial submittal	9/11/12
REVISIONS		

BRIDGE RAILING, GALVANIZED
2 RAIL BOX BEAM

GUARDRAIL APPROACH
SECTION, GALVANIZED
2 RAIL BOX BEAM

ER STP 0161 (26) BRIDGE #96
ITEM 525.33 BRIDGE RAIL GALVANIZED 2 RAIL BOX BEAM = 70.4 LF
ITEM 621.72 GUARDRAIL APPROACH SECTION 2 RAIL BOX BEAM = 4 UNITS

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.33 NETC 2 RAIL BRIDGE RAILING (S-360A)
ITEM 621.72 NETC 2 RAIL APPROACH RAILING (S-360B)

HUBBARDTON, VERMONT BRIDGE 96 & 98
ER STP 0161 (26) & ER STP 0161 (27)

CERTIFIED FABRICATOR

HSC JOB NO. 1896
SHEET NO. 1 of 5

GENERAL CONTRACTOR: LAFAYETTE
DATE: 09-10-12 SCALE: NONE SIZE: D