



ERECTOR FRAMING PLAN
(SHIPMENT 1)

NOTES:
 NO CREDIT WILL BE ALLOWED FOR WORK PERFORMED BY OTHERS IN REPLACING OR CORRECTING MATERIALS OR WORKMANSHIP COVERED BY THIS DRAWING UNLESS EXPRESSLY AUTHORIZED BY HIGH STEEL STRUCTURES, INC.
 ALL FIELD CONNECTIONS IN UNPAINTED AREAS TO BE MADE WITH 7/8" HIGH STRENGTH (A325, TYPE 3) BOLTS.
 ALL FIELD CONNECTIONS IN PAINTED AREAS TO BE MADE WITH 7/8" HIGH STRENGTH (A325, TYPE 1) BOLTS, MECH. GALV. ASTM B-695 CLASS 50.
 ALL DIMENSIONS ARE GIVEN HORIZONTALLY (U.N.I.).
 DIMENSIONS GIVEN THUS: (36 290) ARE THE SHIPPING LENGTHS OUT TO OUT OF FASCIA GIRDERS.
 HIGH STEEL STRUCTURES, INC. DOES NOT SUPPLY SHEAR STUDS, EXPANSION DAM MATERIAL, SCUPPERS OR ANY OTHER BRIDGE DRAINAGE MATERIAL.
 WT SUPPORTS AT DRAINAGE, ROD HANGERS OR HARDWARE AT UTILITIES AND BEARING ASSEMBLIES INCLUDING PADS AND ANCHOR BOLTS.
 FOR SHEAR STUD LAYOUTS, SEE DRAWINGS E9, E10 & E11.
 SEE DRAWINGS SA1, SA2 & SA3 FOR FIELD SPLICE PLATE MARKS AND LOCATIONS.
 WORK THIS DRAWING WITH DRAWINGS E2 THRU E11.
 NOTICE: WEIGHTS OF MEMBERS LISTED ON THESE DRAWINGS ARE ESTIMATED WEIGHTS AND ACTUAL WEIGHTS WILL VARY. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY ERECTION PROCEDURES, SHIPPING PROCEDURES, ETC. DEVELOPED USING ESTIMATED WEIGHTS AS SHOWN.
 ERECTOR NOTE: ELEVATIONS, CAMBER CHECKS AND HORIZONTAL ALIGNMENT OF FIELD SPLICES MUST BE COMPLETED PRIOR TO FINAL BOLTING. HIGH STEEL STRUCTURES IS TO BE NOTIFIED AND CONSULTED, PRIOR TO FINAL BOLTING, IF SPLICE LOCATIONS ARE NOT WITHIN ACCEPTABLE TOLERANCE. BOTH VERTICAL & HORIZONTAL CORRECTION OF ANY UNACCEPTABLE SPLICES AFTER FINAL BOLTING WILL BE AT NO COST TO HIGH STEEL STRUCTURES.
 NOTICE TO ERECTOR & CONTRACTOR: THIS STRUCTURAL STEEL IS BEING DELIVERED WITH THE FINAL FINISH COAT APPLIED. YOUR SPECIAL ATTENTION REQUIRES EXTREME CARE AND APPROPRIATE EQUIPMENT FOR HANDLING DURING ERECTION AND SUBSEQUENT FIELD OPERATIONS. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY TOUCH-UP REQUIRED DUE TO YOUR FAILURE TO PROPERLY PROTECT FINISH PAINT.
 FOR PIERS 3 & 4, ANCHOR BOLTS MUST BE SET BEFORE CROSSFRAMES AT BEARINGS ARE ERECTED.
 ALL FIELD BOLTS THRU BOTTOM FLANGE ARE TO HAVE HEADS UP.
 ALL FIELD BOLTS THRU WEB OF FASCIA GIRDERS ARE TO HAVE HEADS ON OUTSIDE OF WEB.
 THE SHIPPING MARKS SHOWN CONSIST OF THE PREFIX INDICATING THE SHEET NUMBER UPON WHICH THE PIECE IS DETAILED ALONG WITH THE SHIPPING PIECE MARK.
 ALL ELEVATIONS AND STATIONS ARE GIVEN IN METERS.

FIELD BOLT SUMMARY
 (4% ADDITIONAL BOLTS ADDED + 3 EA. FOR TESTING)
 ASTM A325 TYPE 3 BOLTS WITH HVY. HEX HEAD AND
 ASTM A563 GRADE DH3 HVY. HEX NUT

SHIP. 1	SHIP. 2	SHIP. 3	
336	336	336	1008 - 7/8" HIGH STRENGTH BOLTS x 0'-4 1/2"
602	602	602	1806 - 7/8" HIGH STRENGTH BOLTS x 0'-4 1/4"
1068	1334	1334	3736 - 7/8" HIGH STRENGTH BOLTS x 0'-3 3/4"
677	789	789	2255 - 7/8" HIGH STRENGTH BOLTS x 0'-3 1/2"
2449	2799	2799	8047 - 7/8" HIGH STRENGTH BOLTS x 0'-3"
2100	2399	2299	6798 - 7/8" HIGH STRENGTH BOLTS x 0'-2 1/2"
199	228	223	650 - 7/8" HIGH STRENGTH BOLTS x 0'-2 1/4"
7431	8487	8382	24 300 - ROUND, FLAT F436 WEATHERING WASHERS FOR 7/8" H. S. BOLTS

ASTM A325 TYPE 1 BOLTS WITH HVY. HEX HEAD AND
 ASTM A563 GRADE DH HVY. HEX NUTS, GALV. B695, CLASS 50

SHIP. 1	SHIP. 2	SHIP. 3	
53	53	53	159 - 7/8" HIGH STRENGTH BOLTS x 0'-2 3/4"
53	53	153	259 - 7/8" HIGH STRENGTH BOLTS x 0'-2 1/2"
13	13	17	43 - 7/8" HIGH STRENGTH BOLTS x 0'-2 1/4"
119	119	223	461 - ROUND, FLAT F436 WASH. FOR 7/8" H. S. BOLTS, GALV. B695, CLASS 50

ERECTOR NOTE: ALL BOLTS MUST BE LOCATED IN ACCORDANCE WITH THIS LIST OF FIELD CONNECTIONS. HIGH STEEL STRUCTURES WILL NOT BE RESPONSIBLE FOR FURNISHING ADDITIONAL BOLTS OR FOR ANY OTHER RELATED COSTS OR DAMAGES RESULTING FROM IMPROPER LOCATION OF BOLTS.

LIST OF FIELD CONNECTIONS

LINE	NO. REQ'D SHIP. 1	NO. REQ'D SHIP. 2	NO. REQ'D SHIP. 3	ACTUAL NO. REQ'D	BOLT DIAM.	BOLT LENGTH	BOLTS /CONN.	* OF CONNS.	GRIP	THICKNESS OF PCS. CONNECTED	PIECES CONNECTED AND REMARKS
1	2352	2688	2688	7728	3/8"	3	84	92	40	12 16 12	WEB FIELD SPLICE
2	256	256	256	768	7/8"	4 1/4"	32	24	70	14 40 16	TOP FLG. SPLICE - FS1, FS7, FS8, FS15, FS16 & FS23
3	160	160	160	480	7/8"	4 1/4"	40	12	70	14 40 16	TOP FLG. SPLICE - FS2, FS9 & FS17
4	512	640	640	1792	7/8"	3 3/4"	32	56	62	14 32 16	TOP FLG. SPLICE - FS3, 4, 5&6; FS10, 11, 12, 13&14; FS18, FS19, 20, 21&22
5	320	320	320	960	7/8"	4 1/2"	40	24	78	18 40 20	BOTT. FLG. SPLICE - FS1, FS7, FS8, FS15, FS16 & FS23
6	160	160	160	480	7/8"	4 1/4"	40	12	70	14 40 16	BOTT. FLG. SPLICE - FS2, FS9 & FS17
7	512	640	640	1792	7/8"	3 3/4"	32	56	62	14 32 16	BOTT. FLG. SPLICE - FS3, 4, 5&6; FS10, 11, 12, 13&14; FS18, FS19, 20, 21&22
8	648	756	756	2160	7/8"	3 1/2"	18	120	54	16 38	INTERMED. PIER CROSSFRAMES TO STIFF.
9	2016	2304	2208	6528	7/8"	2 1/2"	8	816	26	14 12	INTERMED. CROSSFRAMES TO CONN. PLATE
10	140	160	156	456	7/8"	2 1/4"	2	228	23.6	9.6 14	UTIL. SUPPORT D2 TO PART. DEPTH STIFF.
11	48	56	56	160	7/8"	2 1/4"	2	80	21.6	9.6 12	UTIL. SUPPORT D2 TO FULL DEPTH STIFF.
12											
13											
14	48	48	48	144	7/8"	2 1/2"	4	36	31.4	9.4 22	END CROSSFRAME W TO STIFF. - ABUTS. 1&2, PIERS 7&15
15	48	48	48	144	7/8"	2 3/4"	4	36	36	14 22	END FRAME GUSSET E TO STIFF. - ABUTS. 1&2, PIERS 7&15
16	8	8	8	24	7/8"	2 1/4"	2	12	21.6	9.6 12	UTIL. SUPPORT D1 TO FULL DEPTH STIFF.
17	--	--	4	4	7/8"	2 1/4"	2	23.6	9.6 14	9.6 14	UTIL. SUPPORT D1 TO PART. DEPTH STIFF.
18	--	--	96	96	7/8"	2 1/2"	8	12	26	14 12	INTERMED. CROSSFRAMES TO CONN. PLATE
19											

TYPE 3 (UNPAINTED AREA)

(RCT) INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

TYPE 1 - GALV. (PAINTED AREA)

SHIPMENT 1 WEIGHT: 2718.00 kg
 SHIPMENT 2 WEIGHT: 3098.16 kg
 SHIPMENT 3 WEIGHT: 3097.80 kg
 TOTAL WEIGHT OF FIELD BOLTS: 8913.96 kg
 (FIELD BOLT WEIGHT IS EXCLUDING GRIP)

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR COMPLIANCE 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 CONTRACT DOCUMENTS 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 CORRECTING 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.

Vanessa Hangan Grustin, Inc.
 Engineers, Planners, and Scientists
 Six Bedford Farms, Rte. 10
 Bedford, NH 03110-0030

Job Number: 50911
 Reviewed By: JJA
 Date: 11/10/11

INCREASE LENGTHS TO SATISFY REQUIREMENTS FOR LENGTH & MEAN TEMPERATURE OF 45°F. (WEIGHT CHANGED)

NO. REVISION BY DATE

DP 9/20/04

HIGH STEEL STRUCTURES, INC.
 1770 Hempstead Road
 Lancaster, PA 17605-0008
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 A Division of High Industries, Inc.

ERECTOR FRAMING PLAN
 VT 78 OVER MISSISQUOI BAY, BRIDGE NO. 2
 VT 78 STA. 10+970.425 TO STA. 12+059.775
 TOWNS OF ALBURG AND SWANTON
 COUNTIES OF GRAND ISLE AND FRANKLIN
 STATE OF VERMONT, AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. BR-036-1(1)

CONTRACTOR CIAMBRO CORPORATION

IN CHARGE: GLIDDEN (IH) MADE BY: JSA CHK'D: DAP DATE: 8-24-04

CONTRACT NUMBER: VT-04057-1,2&3 DRAWING NUMBER: E1 OF E11