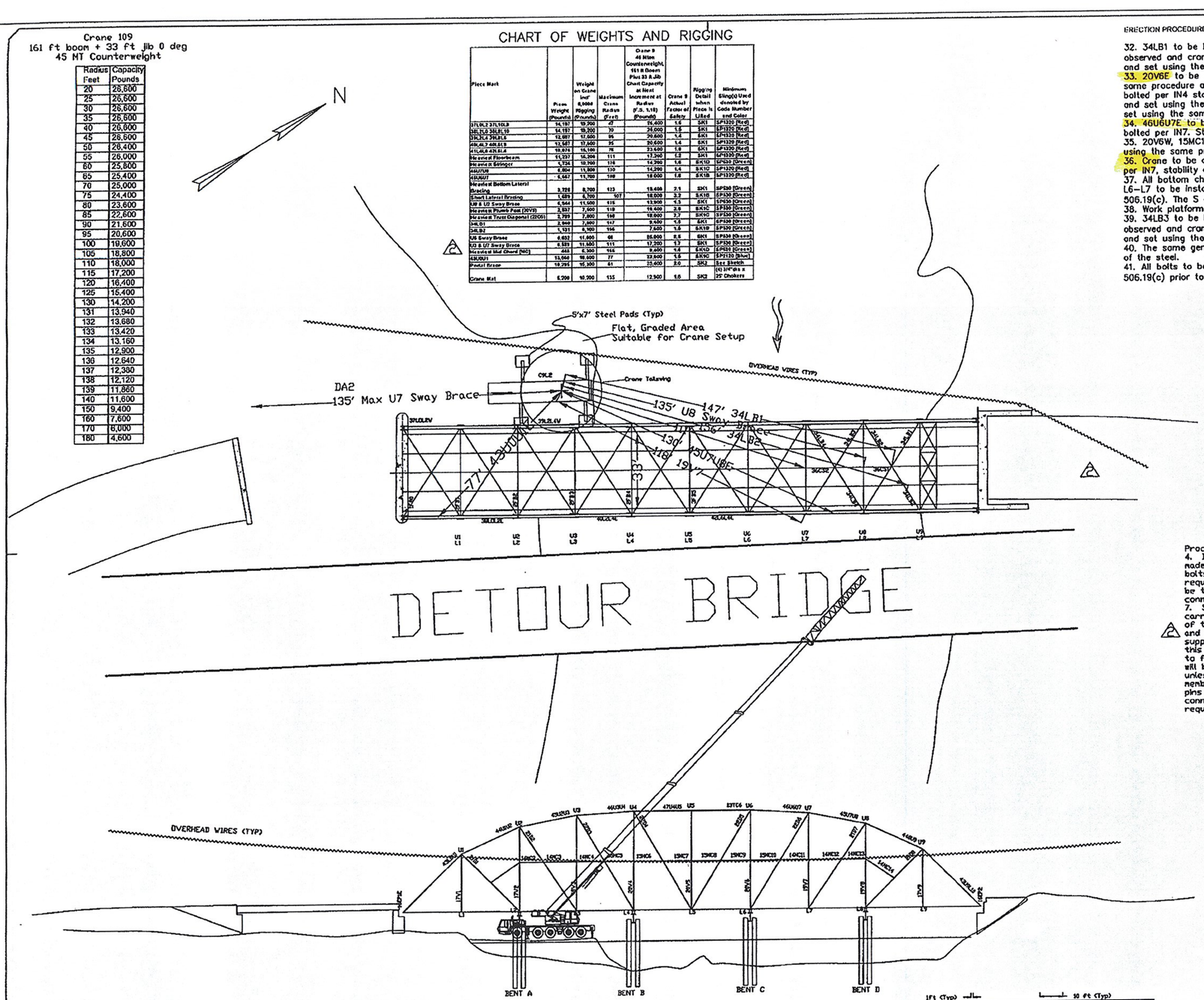
Crane 109
161 ft boom + 33 ft jib 0 deg
45 MT Counterweight

Radius Feet	Capacity Pounds
20	28,600
25	26,600
30	26,600
35	26,600
40	26,600
45	26,600
50	26,400
55	26,000
60	25,800
65	25,400
70	25,000
75	24,400
80	23,600
85	22,600
90	21,600
95	20,600
100	19,600
105	18,800
110	18,000
115	17,200
120	16,400
125	15,400
130	14,200
131	13,940
132	13,680
133	13,420
134	13,160
135	12,900
136	12,640
137	12,380
138	12,120
139	11,860
140	11,600
150	9,400
160	7,600
170	6,000
180	4,600

CHART OF WEIGHTS AND RIGGING

Piece Mark	Piece Weight (Pounds)	Weight on Crane incl Rigging (Pounds)	Maximum Crane Radius (Feet)	Crane B 40 Kton Counterweight, 155 ft Boom Plus 33 ft Jib Chart Capacity at Next Increment at Radius (P.S. 1/8) (Pounds)	Crane B Actual Factor of Safety	Rigging Detail when Piece is Lifted	Minimum Sling(s) Used denoted by Code Number and Color
37L0L2 37L1L0LB	14,197	19,200	47	25,600	1.6	SK1	SP1320 (Red)
36L1L2 36L0L1B	14,197	19,200	70	24,000	1.5	SK1	SP1320 (Red)
39L3L4 39L0L5	12,987	17,500	95	20,600	1.4	SK1	SP1320 (Red)
40L4L5 40L0L5	12,587	17,000	95	20,600	1.4	SK1	SP1320 (Red)
41L4L6 41L0L6	10,076	14,100	78	23,600	1.8	SK1	SP1320 (Red)
Headrest Floorbeam	11,257	16,208	111	17,200	1.2	SK1	SP1320 (Red)
Headrest Stringer	1,756	10,700	118	14,200	1.6	SK1D	SP530 (Green)
46U7U8	6,804	11,800	130	14,200	1.4	SK1D	SP1320 (Red)
45U6U7	6,667	11,700	118	18,000	1.8	SK1B	SP1320 (Red)
Headrest Bottom Lateral Bracing	3,728	8,700	122	13,600	2.1	SK1	SP330 (Green)
Short Lateral Bracing	1,689	8,700	107	18,000	3.2	SK1B	SP530 (Green)
U8 & U9 Sway Brace	6,566	11,600	115	13,900	1.3	SK1	SP830 (Green)
Headrest Plumb Post (20V9)	3,837	7,600	118	19,400	2.9	SK1C	SP330 (Green)
Headrest Truss Outpost (22G6)	3,789	7,800	150	18,000	2.7	SK1C	SP330 (Green)
34LB1	2,940	7,000	147	9,400	1.5	SK1	SP530 (Green)
34LB2	1,131	5,900	156	7,600	1.5	SK1B	SP530 (Green)
U8 Sway Brace	6,652	11,800	88	25,000	2.5	SK1	SP836 (Green)
U3 & U7 Sway Brace	6,589	11,600	111	17,200	1.7	SK1	SP536 (Green)
Headrest Mid Chord (16C)	443	2,300	155	9,600	1.4	SK1C	SP830 (Green)
45U5U7	13,066	18,600	77	23,800	1.5	SK1C	SP1130 (Blue)
Portal Brace	19,295	25,300	61	25,600	2.0	SK2	See Sketch
Crane Mat	8,200	10,200	135	12,900	1.6	SK2	(6) 3/4"dia x 25' Chokers



Bents shown for location only. The design by others may vary

Scale

ERECTION PROCEDURE

32. 34LB1 to be lifted from DA2 and set in place and bolted per IN4, stability observed and crane disconnected. Two (2) 34LB2 and one (1) 36CS1 to be lifted and set using the same procedure as that used to set 34LB1.
33. 20V6E to be delivered to DA2, set in place and bolted per IN7 using the same procedure as that used to set 19V7. 15MC10E to be delivered and set and bolted per IN4 stability observed and crane disconnected. 22D5E to be delivered and set using the same procedure as that used to set 22D6E. 15MC9E to be set using the same procedure as that used to set 15MC10E.
34. 46U6U7E to be delivered to DA2, crane connected, beam to be set and bolted per IN7. Stability to be observed and crane disconnected.
35. 20V6W, 15MC10W, 22D5W, 15MC9W and 46U6U7W to be delivered and set using the same procedure as that used to set the east members.
36. Crane to be connected to sway brace for U7 and brace to be set and bolted per IN7, stability observed and crane disconnected.
37. All bottom chord, lateral bracing and stringer F end bolts in bays L7–L8 and L6–L7 to be installed and tensioned to specification requirements section 506.19(c). The S end of the stringers are to be fully bolted snug tight.
38. Work platform to be installed in those bays.
39. 34LB3 to be lifted from DA2 and set in place and bolted per IN4, stability observed and crane disconnected. Two (2) 34LB4 and one (1) 36CS2 to be lifted and set using the same procedure as that used to set 34LB1.
40. The same general sequence and procedure to be used to erect the remainder of the steel.
41. All bolts to be installed and tensioned to specification requirements section 506.19(c) prior to the removal of temporary supports per section 506.19(b).

STATE OF VERMONT
ERIC T. CALDERWOOD
NO. 9744
Structural
LICENSED
PROFESSIONAL ENGINEER
2/12

INFORMATION (Referred to as IN# in Procedure)

4. Between pieces erected, each connection will be made with a minimum of two approved high strength bolts at each connection unless a greater number is required for alignment and stability. The bolts shall be tightened until there is no gap between the connected parts (snug tight).
7. Splices and all field connections of main stress carrying members shall be made with a minimum of 25% of the holes filled with approved high strength bolts and full size erection pins before the external support systems are released. At least one-half of this percentage shall be bolts tightened snug tight to facilitate adding members to the connection. Bolts will be installed uniformly throughout the connection unless they will interfere with connecting future members to that location and except that erection pins shall be used at the extreme corner of all main connections. Before tensioning bolts to specification requirements, all bolts are to be snug tight.

	Sym.	Date	Drawn / Checked
X	3	X	K / X
X	2	X	K / X
As noted	1	6/1/2012	WCS / TS
As Noted	0	6/4/2012	WCS / X

ERECTOR:
BURT CRANE & RIGGING
5 Veterans Memorial Dr.
Green Island, N.Y. 12183
(518) 271-6856 800-262-2878
FAX (518) 271-6838
EMAIL: INFO@BURTCRANE.COM
HTTP://WWW.BURTCRANE.COM
Beginnings in 1899

CONTRACTOR: BECK & BELLUCCI, INCORPORATED

CONTRACT #/LOCATION:
BRF 022-1 (14); WINDSOR COUNTY
VT ROUTE 107 OVER WHITE RIVER

SCALE: Per Scale Bar | BCR #: B108526
DATE: 3/02/2012 | FABRICATORS #: 498

TITLE OF DRAWING:
STRUCTURAL STEEL ERECTION PLAN
Bridge 15

DRAWN BY: WCS
CHECKED BY: TS
DRAWING NO. E4

JOB PHONE: X
JOB FAX: X
ERC PHONE: X
FAB PHONE: X