



**CFI BUILDING
SYSTEMS BUILDINGS INC.
SYSTEMS CONTRACTORS INC.**

**PROJECTED RIGGING FOR ALL STEEL PLACEMENT
ACTIVITIES
(IN TONS)**

TYPE OF RIGGING TO BE USED	QUANTITY	RATINGS		
		S/L (Straight Line)	CHOKER	BASKET
4 LEG BRIDLE 1-1/2"X30' W/ FACTORY APPLIED HOOKS AND SAFETY LATCHES	2	72	N/A	N/A
3/8" X 10' STEEL CHOKERS	6	1.4	1.1	2.9
5/8" X 12' STEEL CHOKERS	6	3.9	2.9	7.8
3/4" X 14' STEEL CHOKERS	10	5.6	4.2	11
1/2" X 10' STEEL CHOKERS	2	2.5	1.9	5
3-5 TON BEAM CLAMPS (SUPER CLAMP)	2	3-5	N/A	N/A
2" X 20' NYLON STRAPS	2	3.2	2.5	6.4
2" X 12' NYLON STRAPS	2	3.2	2.5	6.4
4.5 TON CROSBY SHACKLES	4	4.5	4.5	4.5
8.5 TON CROSBY SHACKLE	8	8.5	8.5	8.5
1-1/8" X 27' STEEL CHOKERS	4	12	9	24
1-1/8" X 12' STEEL CHOKERS	12	12	9	24

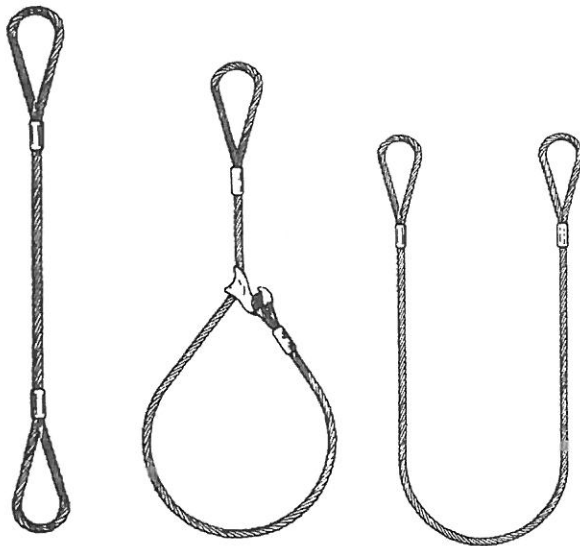
ALL RIGGING WILL BE INSPECTED BY THE COMPETENT PERSON PRIOR TO EACH USE PER A.I.S.C. STANDARDS

ALL RIGGING WILL BE TAGGED TO INCLUDE DIAMETER AND RATINGS.

ANY RIGGING FOUND TO BE DAMAGED WILL BE REMOVED FROM SERVICE IMMEDIATELY BY CUTTING THE RIGGING IN HALF AND DISPOSING OF.

ALL DICREPANCIES AND DAMAGE WILL BE DOCUMENTED IN THE ERECTION PLAN AND DAILY REPORTS.

Below shows from left to right: Straight Pull, Choker, Basket



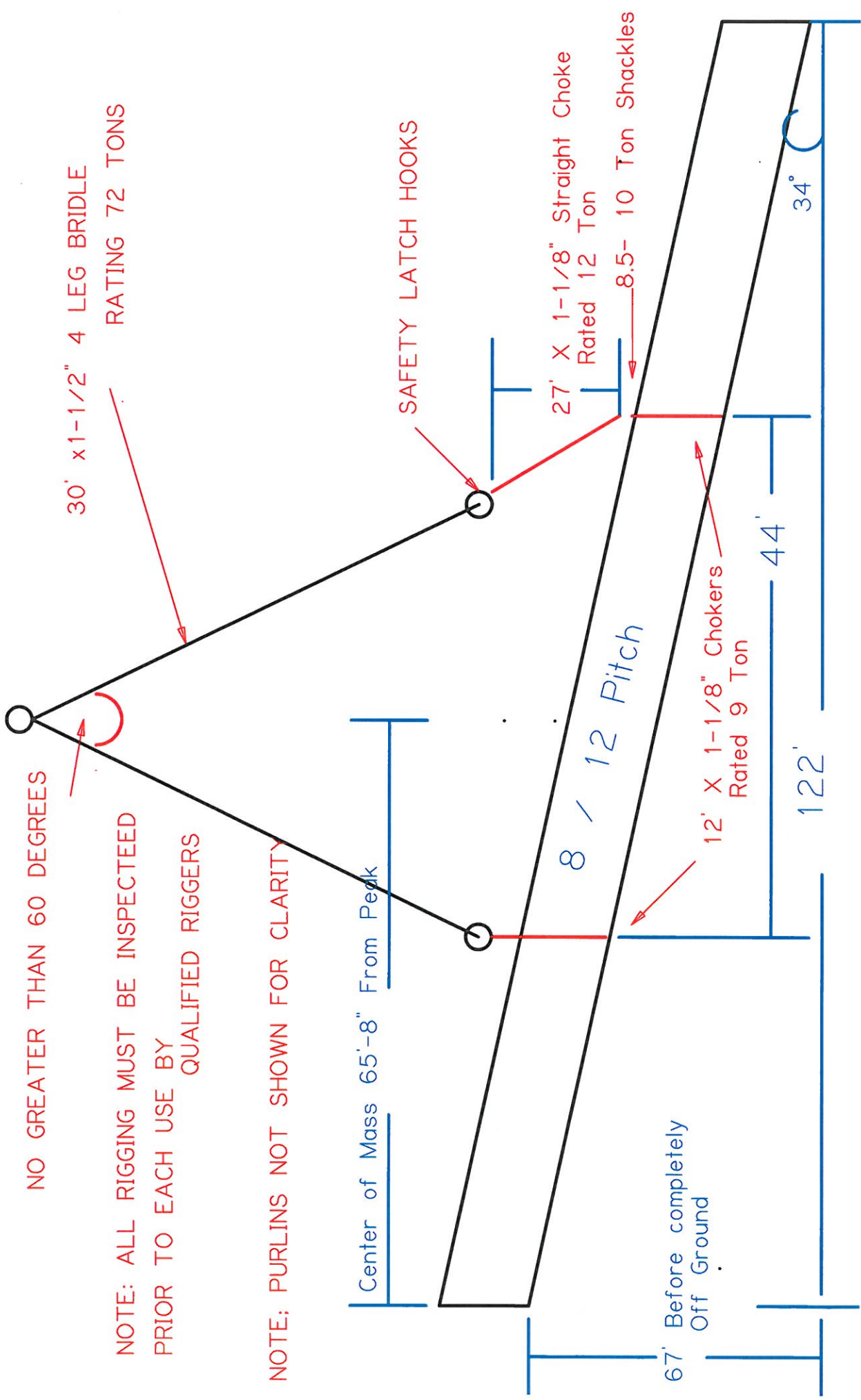
Part #	Weight	Line 2-3 North side		Line 2-3 South Side		Line 9-2 North Side		Line 9-2 South Side		Line 4-5 North Side		Line 7-8 South Side	
		Quantity	Total Weight	Quantity	Total Weight	Quantity	Total Weight	Quantity	Total Weight	Quantity	Total Weight	Quantity	Total Weight
e-10	167.7	1	167.7	1	167.7					1	167.7	1	167.7
e-9	167.63					1	167.63	1	167.63		0		0
p-15	106.58										0		0
p-17	98.13										0	28	2747.64
p-18	116.44										0	2	232.88
p-20	129.3										0		0
p-51	126.76										0		0
p-52	116.71										0	4	466.84
p-12	115.03	27	3105.81		0		0		0	29	3335.87		0
p-13	136.5	3	409.5	18	2457		0		0		0		0
p-66	119						0		0		0		0
p-67	119						0		0		0		0
p-68	135.75		0	1	135.75		0		0		0		0
p-11	136.54		0	1	136.54		0		0		0		0
p-48	180.72	4	722.88	3	542.16		0		0		0		0
p-14	151.57	1	151.57	1	151.57		0		0		0		0
p-19	91.02	1	91.02	1	91.02		0		0		0		0
p-4	102.31					27	2762.37		0		0		0
p-45	160.74					4	642.96		0		0		0
p-40	102.95					1	102.95		0		0		0
p-37	121.41					3	364.23		0		0		0
p-9	139.12		0	8	1112.96		0		0		0		0
p-61	67.71					4	270.84		3	203.13			0
p-28	108.01										0	1	108.01
p-29	119.94	1	119.94		0		0		0	4	479.76		0
p-5	134.82						0	20	2696.4		0		0
p-7	135.95			1	135.95		0		0		0		0
p-10	154.53		0	5	772.65		0		0		0		0
p-46	160.74						0	3	482.22		0		0
p-47	184.33		0	1	184.33		0		0		0		0
p-21	108.01		0	1	108.01		0		0		0		0
p-6	135.75		0	1	135.75		0		0		0		0
pc-22	7.78	8	62.24	8	62.24		0		0	8	62.24		0
br-4	86.57	2	173.14	2	173.14		0		0		0	2	173.14
br-3	93.37	2	186.74	2	186.74		0		0		0	2	186.74
br-8	28.43	4	113.72	4	113.72		0		0		0	4	113.72
br-6	34	2	68	2	68		0		0		0	2	68
br-9	27.57	2	55.14	2	55.14		0		0		0	2	55.14
rfr-10	4930.21	1	4930.21		0		0		0		0		0
rfr-16	4529.98	1	4529.98		0		0		0		0		0
rfr-11	4095.42	1	4095.42		0		0		0		0		0
rfr-17	3579.03	1	3579.03		0		0		0		0		0
rfr-12	3605.71	1	3605.71		0		0		0		0		0
rfr-18	3360.67	1	3360.67		0		0		0		0		0
rfr-13	4020.3		0	1	4020.3		0		0		0		0
rfr-19	3496.77		0	1	3496.77		0		0		0		0
rfr-14	4493.2		0	1	4493.2		0		0		0		0
rfr-20	3704.79		0	1	3704.79		0		0		0		0
rfr-15	5067.07		0	1	5067.07		0		0		0		0
rfr-23	3287.83		0				0		0	2	6575.66		0
rfr-24	2776.1		0				0		0	2	5552.2		0
rfr-26, 29	4547.68		0				0		0	2	9095.36	2	9095.36
rfr-27	2776.1		0				0		0		0		0
rfr-33, 34, 35	2776.1		0				0		0		0	2	5552.2
rfr-30	3287.83		0				0		0		0	2	6575.66
rfr-21	4679.47		0	1	4679.47		0		0		0		0
fb130e	24.94	1	24.94		0		0		0		0		0
fb136e	20.72						0		0	1	20.72	2	41.44
fb135h	6.75						0		0	2	13.5	4	27
fb134h	6.73									2	13.46	4	26.92
fb131h	9.14									2	18.28	4	36.56
fb128e	20.82		0		0		0		0		0		0
fb129e	8.78		0	1	8.78		0		0		0		0
fb127h	9.28	1	9.28	1	9.28		0		0		0		0
fb125h	9.63	1		1	9.63		0		0		0		0
fb124h	9.87	1	9.87	1	9.87		0		0	2	19.26	4	38.52
fb122h	7.32	4	29.28	4	29.28		0		0	2	19.74	4	39.48
fb120h	8.95	2	17.9		0		0		0		0		0
fb123e	20.87	2	41.74		0		0		0		0		0
fb132e	20.77		0	4	83.08		0		0		0		0
fb121h	8.93		0	2	17.86		0		0		0		0
fb119h	9.65		0	2	19.3		0		0		0		0
fb118h	9.68	2	19.36		0		0		0		0		0
fb116h	10.04	6	60.24	6	60.24		0		0	4	40.16	8	80.32
fb117h	10.02	4	40.08	2	20.04		0		0		0		0
fb114e	28.42	4	113.68	2	56.84		0		0		0		0
fb115e	28.47	2	56.94	6	170.82		0		0	4	113.88	8	227.76
Total Weights			29951.73		32746.99		4310.98		3549.38		25527.79		26061.03

(Line 2 cotains both east and west side flange braces
Line 3 contains only west side flange braces)

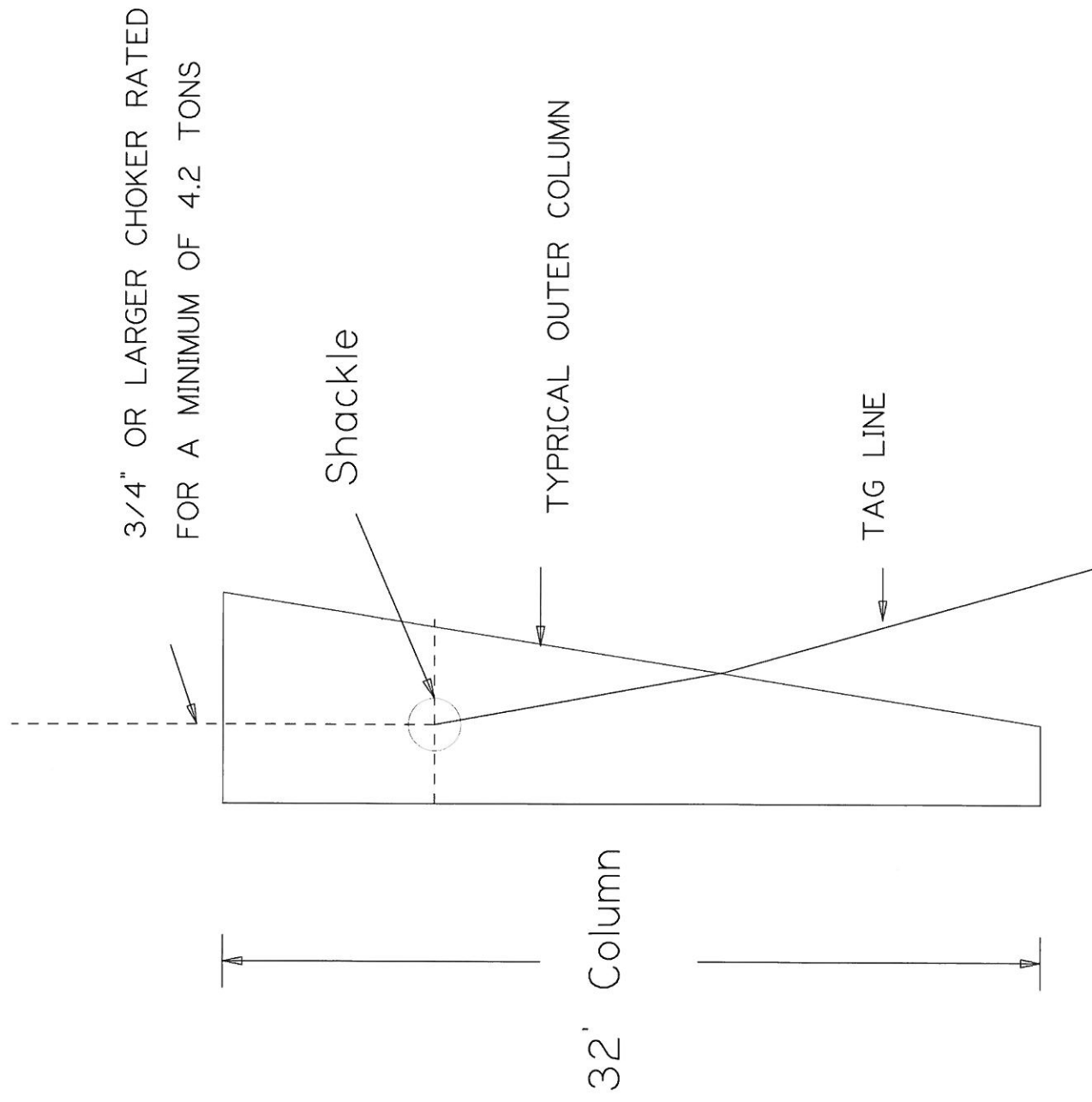
Module Weights

ROOF MODULE RIGGING CONFIGURATION

SIDE VIEW



TYPICAL COLUMN RIGGING





Max Allowable Wind Force Calculations

2% of capacity at radius = Maximum Allowable Wind Force

Assuming Grove Crane: RT9150E, 35' radius @ 150.9' Boom = 45,000 lbs.

2% = 900 lbs.

$900 = 0.004 * A * V^2$ IF $A = 584.25$ Sq. Ft. (Surface Area of Rafter)

$$V^2 = 900 / [0.004 * (584.25)] = 385.109 \quad \sqrt{385.109} = 19.6242 \text{ mph} = V$$

Typical Pressure Equation is $p = .00256 V^2$

Using that; $V^2 = \frac{900}{.00256(584.25)} = 601.733 \quad \sqrt{601.733} = 24.5 \text{ MPH Max. Wind Speed}$

= Men on rafter with tag line connected to each side of the roof rod

 = Man lift that will be carrying roof rod to desired location

