

MILLER CONSTRUCTION, INC.

P.O. BOX 86 ASCUTNEY BLVD WINDSOR, VERMONT 05089-0086
 TELEPHONE (802) 674-5525 / FAX (802) 674-5245

TRANSMITTAL

TO: Rob Young, PE Project Manager Vermont Agency of Transportation	DATE	PROJECT NO.
	4/21/2016	Woodstock BRF 0151 (21)

XX WE ENCLOSE THE FOLLOWING: _____ UNDER SEPARATE COVER WE ARE SENDING THE FOLLOWING

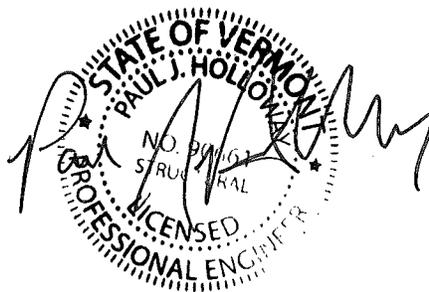
COPIES	NUMBER	DESCRIPTION	CODE
1		Precast Erection Plan - Rev 0	H

- CODE:
- | | |
|---|----------------------------|
| A FOR INITIAL APPROVAL | H FOR APPROVAL |
| B FOR FINAL APPROVAL | I AS REQUESTED OR REQUIRED |
| C APPROVED AS NOTED-RESUBMISSION REQUIRED | J FOR USE IN ERECTION |
| D APPROVED AS NOTED-RESUBMISSION NOT REQUIRED | K LETTER FOLLOWS |
| E DISAPPROVED-RESUBMIT | L FOR FIELD CHECK |
| F QUOTATION REQUESTED | M FOR YOUR USE |
| G APPROVED | |

BY: Paul A. Young

ERECTION PLAN
Precast Substructure & Superstructure
for
State of Vermont Project: Woodstock BRF 0151 (21)

Town of: Woodstock, Vermont
County of: Windsor



4/20/16

Prepared By:

Miller Construction, Inc.
P.O. Box 86
Windsor, VT 05089
Tel. (802) 674-5525
Fax. (802) 674-5245

April 20, 2016

***ERECTION PLAN
FOR
State of Vermont Project: Woodstock BRF 0151 (21)***

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Erection Plan
Woodstock BRF 0151 (21)

General Project Description and Timetable

The Woodstock BRF 0151 (21) Project involves the removal of Bridge 24 and its abutments. Bridge 24 will be replaced with a precast 3 sided frame spanning 45.27 feet with a 45 degree skew over Kedron Brook, on new piles along the same alignment. Bridge 24 is located in the Town of Woodstock, on VT Route 106, approximately at the intersections of VT Route 106, Bryant Road and Kendall Road.

The new structure comprises of a precast concrete footing and pedestal wall substructure and a precast concrete Rigid Frame superstructure.

Erection of all precast units is anticipated to occur in Late May 2016.

Abstract

Substructure

Miller Construction, Inc. shall install the precast substructure picked from points as shown on Concrete Systems, Inc. approved shop drawings. Substructure shall be installed from each respective end of the bridge. The crane used shall be a Link-Belt ATC-3210.

Superstructure

Miller Construction, Inc. shall install the precast superstructure picked from points as shown on Concrete Systems, Inc. approved shop drawings. Superstructure shall be installed from the Southern end of the bridge. The crane used shall be a Link-Belt ATC-3210.

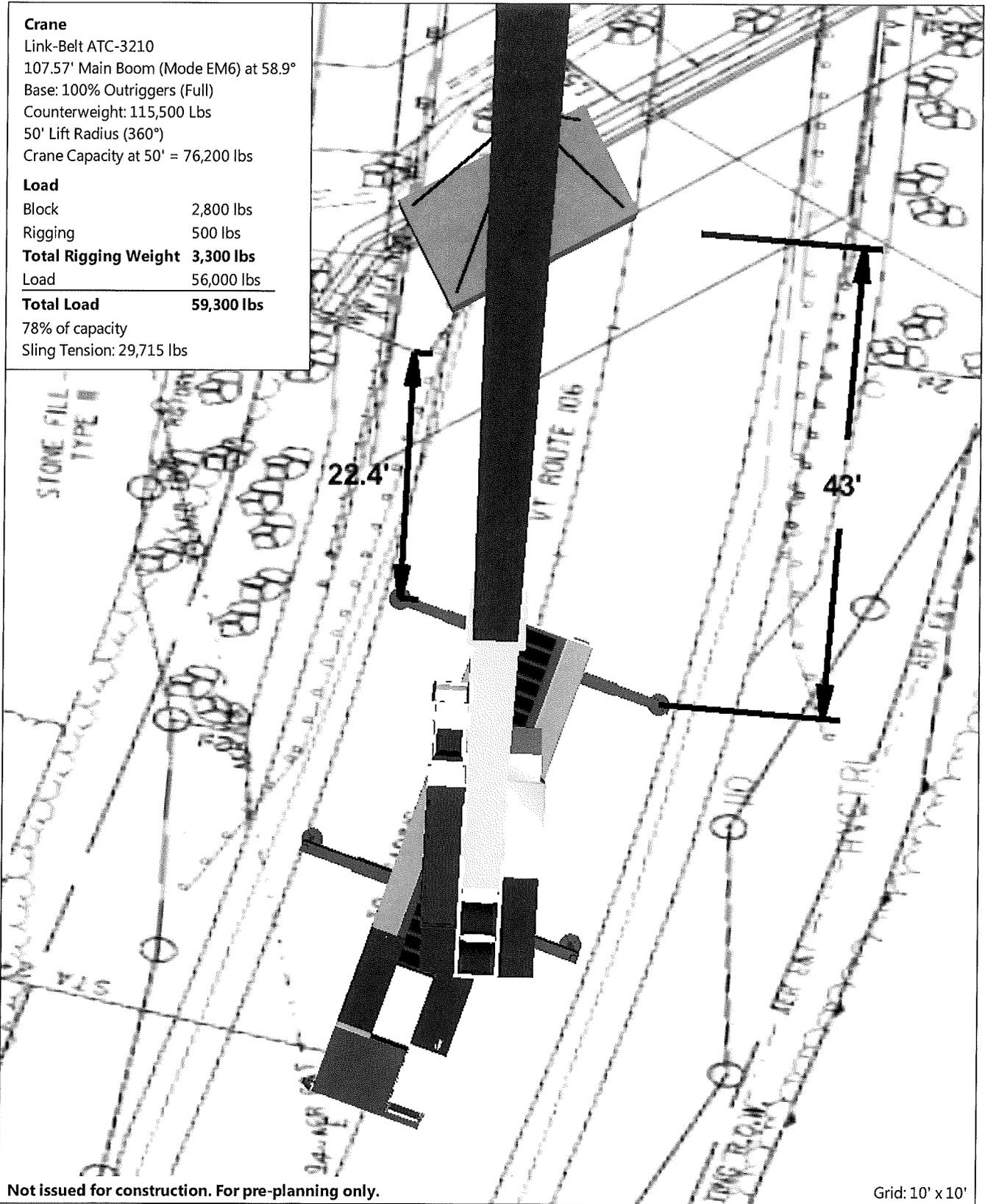
Rigging

Rigging used shall include the following:

- 2 Inch Master Links
- 2 Inch, 35 Ton Shackles
- 1-3/4 Inch, 25 Ton Shackles
- 1-1/2 Inch, 30 Foot Slings
- Lifting Devices as shown on Concrete Systems, Inc. approved shop drawings

Ground Pressures

Maximum Ground Pressures due to outriggers are shown in Attachment 8. However, outrigger distance from the back of the pedestal walls shall be maintained at a minimum 1:1 so not to add any load to the pedestal wall. 4 foot by 8 foot by 12 inch crane mats shall be under outriggers.



Not issued for construction. For pre-planning only.

Grid: 10' x 10'

4'x8'x12" crane mats under outriggers

Title	Lift Plan
Project	woodstock footings
Customer	vtrans
Description	erection footings north side
Drawn By	jeremy tetreatult

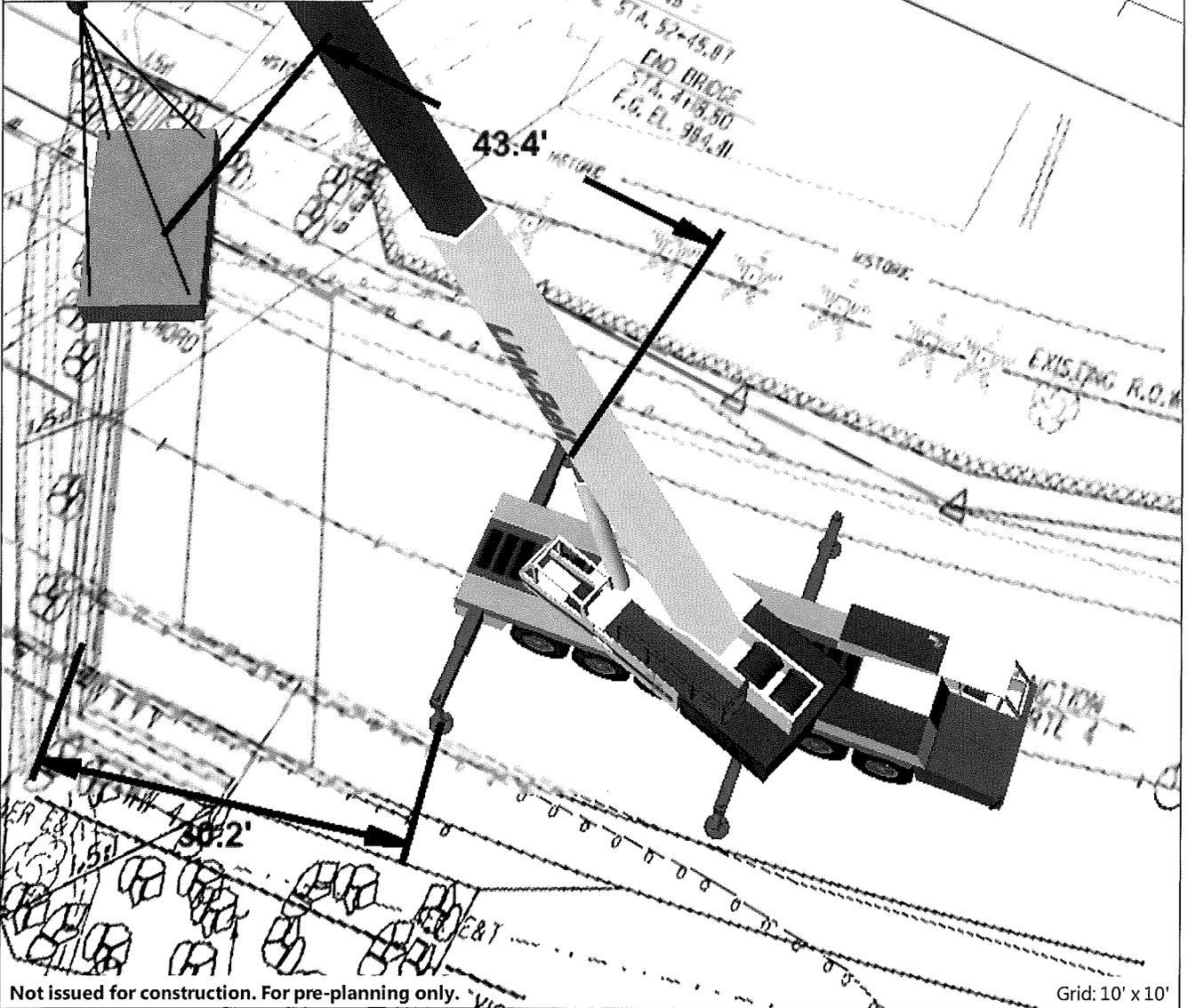
04/20/2016

Crane
 Link-Belt ATC-3210
 107.57' Main Boom (Mode EM6) at 54.3°
 Base: 100% Outriggers (Full)
 Counterweight: 115,500 Lbs
 57' Lift Radius (360°)
 Crane Capacity at 57' = 60,700 lbs

Load

Block	2,800 lbs
Rigging	500 lbs
Total Rigging Weight	3,300 lbs
Load	56,000 lbs
Total Load	59,300 lbs

98% of capacity
 Sling Tension: 29,715 lbs



Not issued for construction. For pre-planning only.

Grid: 10' x 10'

4'x8'x12" crane mats under outriggers

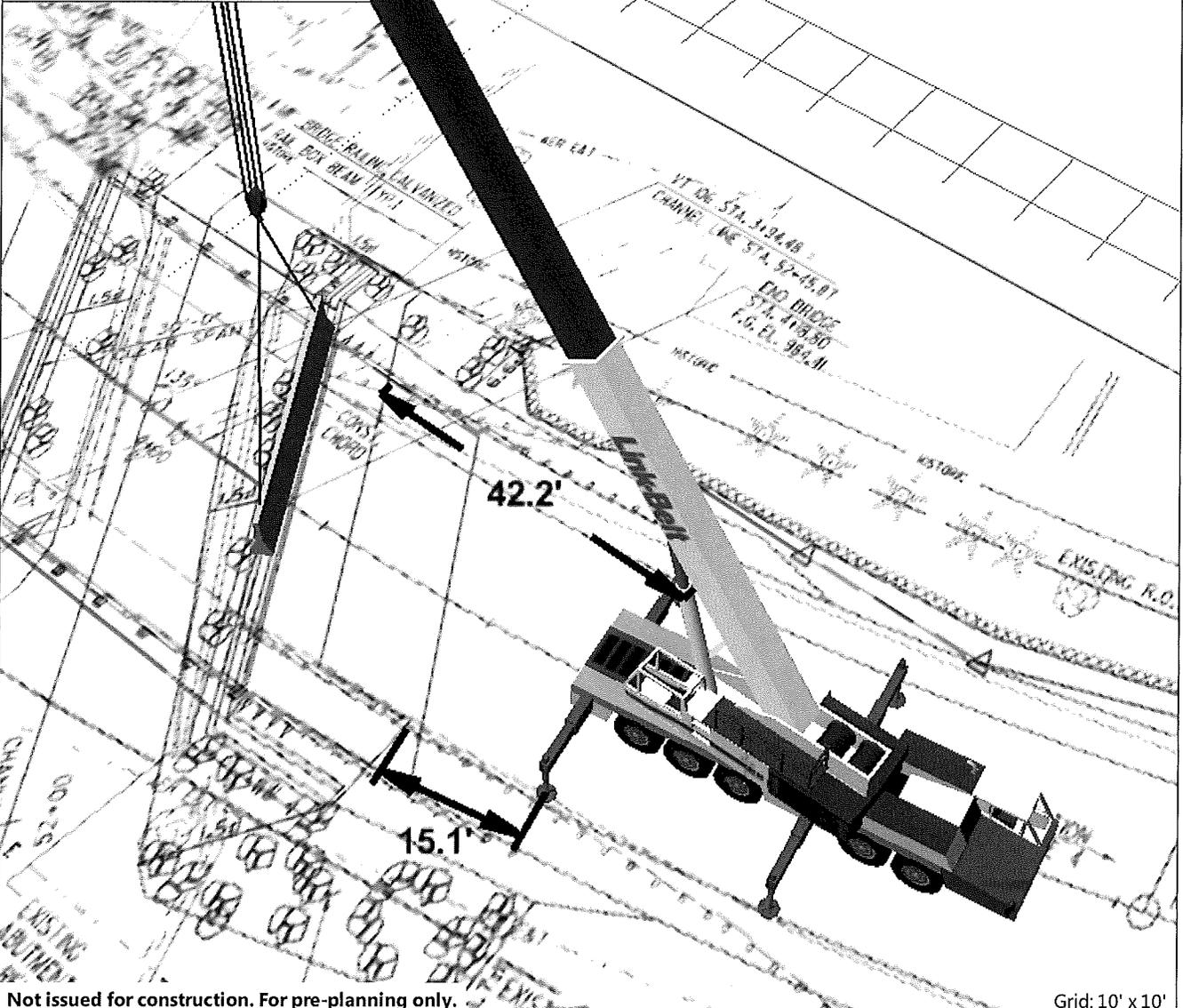
Title	Lift Plan
Project	woodstock footings
Customer	vtrans
Description	erection footings south side
Drawn By	jeremy tetreault
	04/20/2016

Crane
 Link-Belt ATC-3210
 107.57' Main Boom (Mode EM6) at 55.7°
 Base: 100% Outriggers (Full)
 Counterweight: 115,500 Lbs
 55' Lift Radius (360°)
 Crane Capacity at 55' = 67,800 lbs

Load

Block	2,800 lbs
Rigging	250 lbs
Total Rigging Weight	3,050 lbs
Load	56,000 lbs
Total Load	59,050 lbs

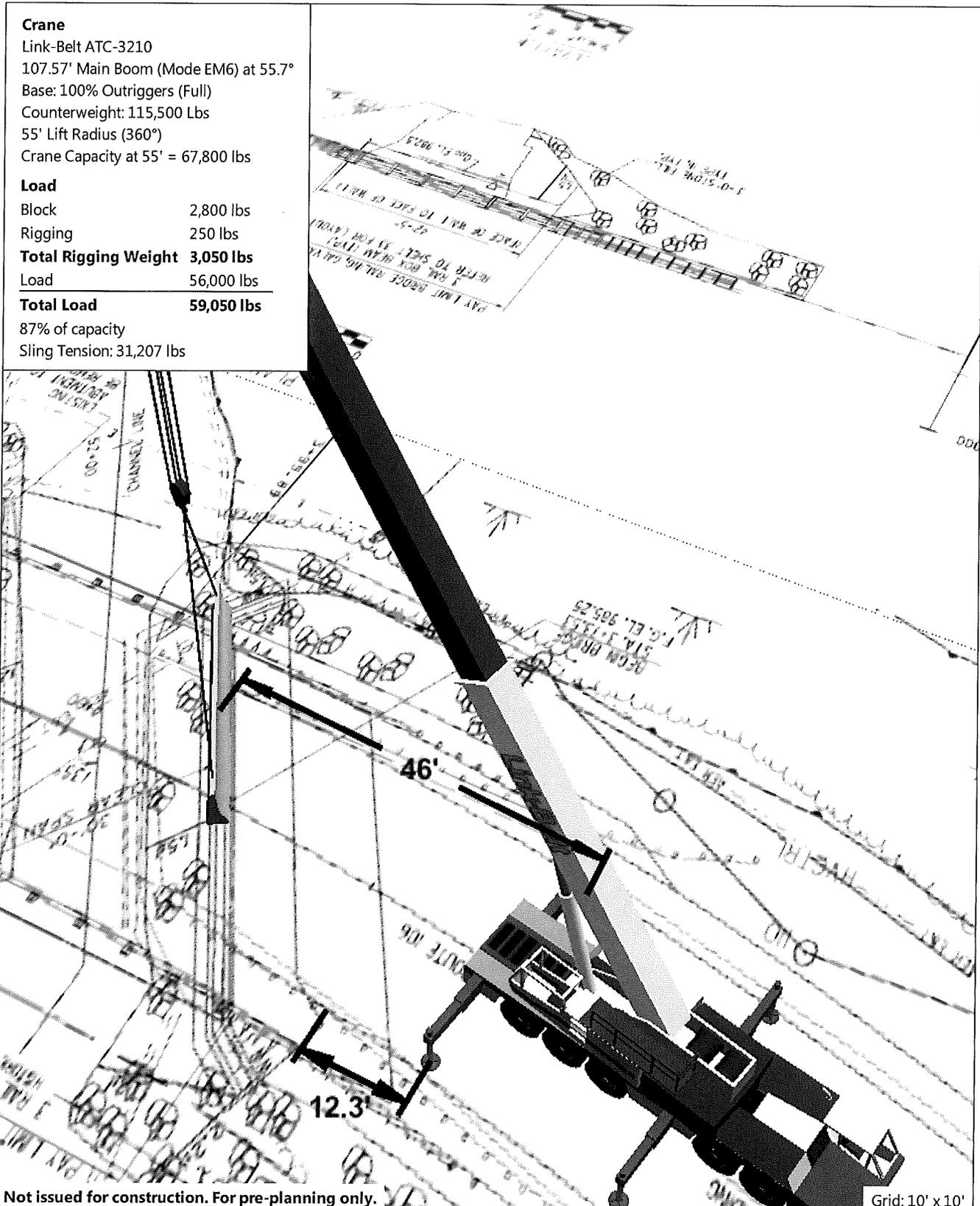
87% of capacity
 Sling Tension: 31,207 lbs



Not issued for construction. For pre-planning only.

Grid: 10' x 10'

Title	Lift Plan
Project	woodstock stem walls
Customer	
Description	erection plan north side
Drawn By	jeremy tetreault
	04/20/2016



Crane
 Link-Belt ATC-3210
 107.57' Main Boom (Mode EM6) at 55.7°
 Base: 100% Outriggers (Full)
 Counterweight: 115,500 Lbs
 55' Lift Radius (360°)
 Crane Capacity at 55' = 67,800 lbs

Load

Block	2,800 lbs
Rigging	250 lbs
Total Rigging Weight	3,050 lbs
Load	56,000 lbs
Total Load	59,050 lbs

87% of capacity
 Sling Tension: 31,207 lbs

Not issued for construction. For pre-planning only.

Grid: 10' x 10'

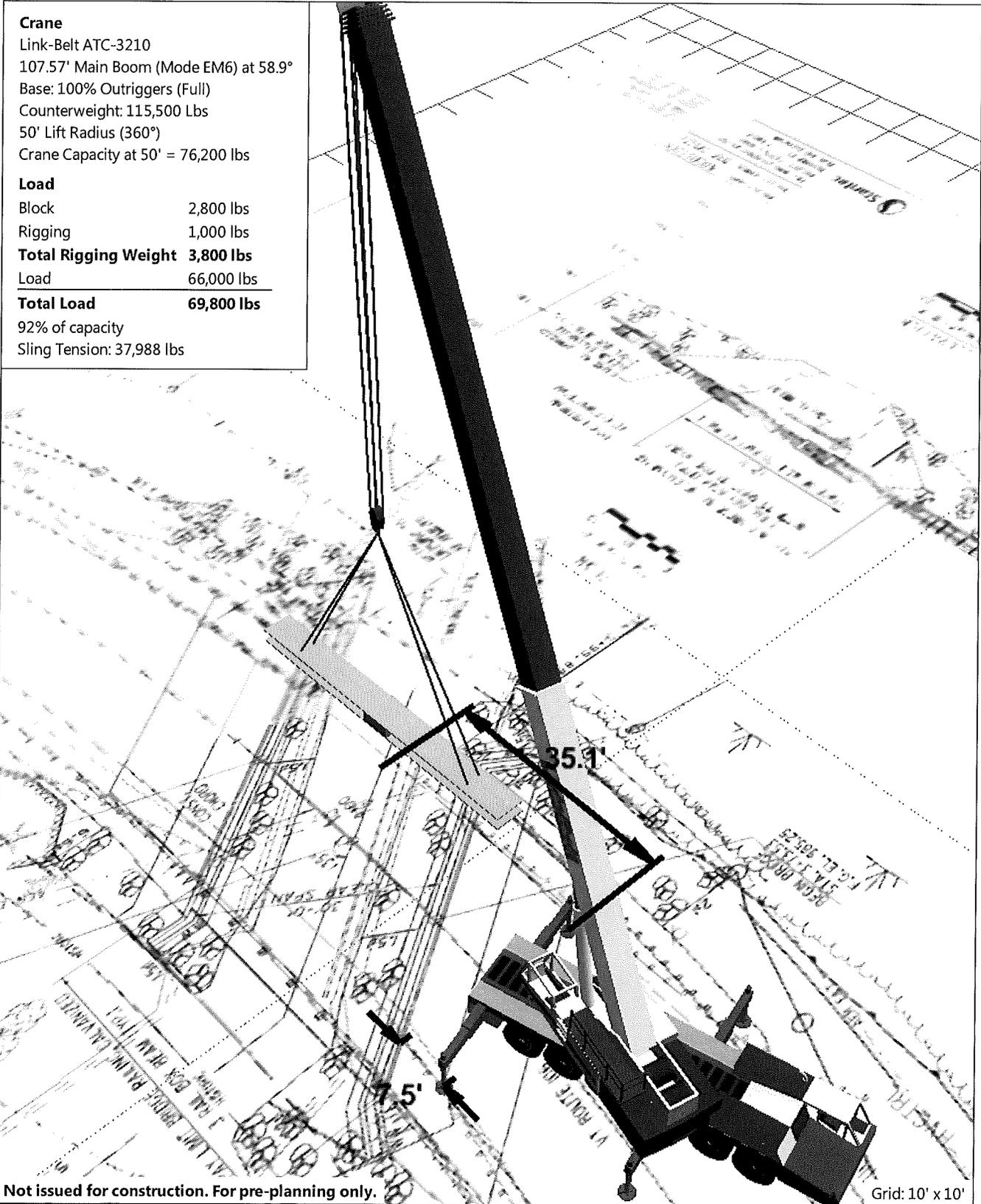
Title	Lift Plan
Project	woodstock stem walls
Customer	
Description	erection plan south side
Drawn By	jeremy tetreault
	04/20/2016

Crane
 Link-Belt ATC-3210
 107.57' Main Boom (Mode EM6) at 58.9°
 Base: 100% Outriggers (Full)
 Counterweight: 115,500 Lbs
 50' Lift Radius (360°)
 Crane Capacity at 50' = 76,200 lbs

Load

Block	2,800 lbs
Rigging	1,000 lbs
Total Rigging Weight	3,800 lbs
Load	66,000 lbs
Total Load	69,800 lbs

92% of capacity
 Sling Tension: 37,988 lbs



Not issued for construction. For pre-planning only.

Grid: 10' x 10'

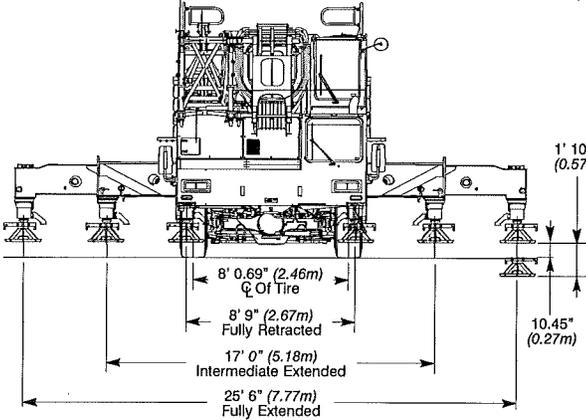
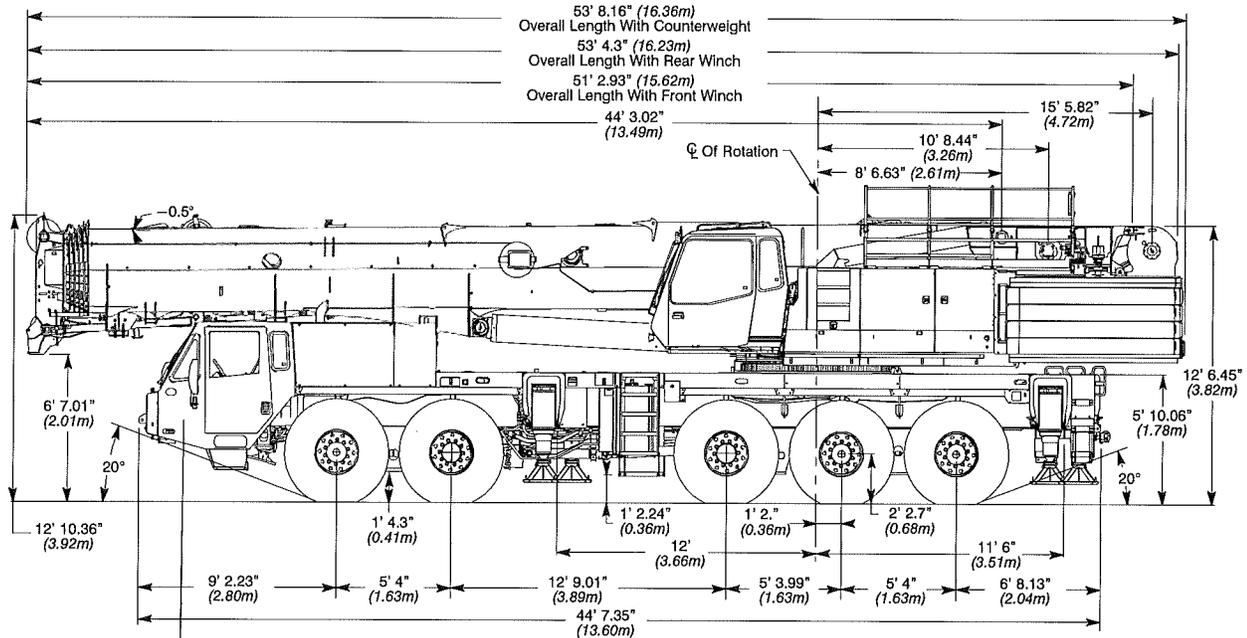
4'x8'x12" crane pads under outriggers

Title	Lift Plan
Project	woodstock rigid frame
Customer	vtrans
Description	erection plan rigid frame south side
Drawn By	jeremy tetreault
	04/20/2016

RIGID BRIDGE, WINGWALL & GUARDRAIL CURB PIECE SCHEDULE (MX-FA5000SC30)					
MARK	QTY	LENGTH	YDS	WEIGHT	
C1	1	4.29'	16.36	33.13	TONS
C2	6	4.29'	10.88	22.02	TONS
C3	1	4.29'	17.63	35.71	TONS
WW1	1	8.00'	2.41	5.78	TONS
WW2	1	8.00'	2.32	5.59	TONS
WW3	1	5.00'	1.29	3.51	TONS
WW4	1	16.50'	4.68	12.18	TONS

FOOTING AND PEDESTAL PIECE SCHEDULE (MX-FA5000SC30)					
MARK	QTY	LENGTH	YDS	WEIGHT	
F1	1	7.99'	5.52	11.18	TONS
F2	1	13.50'	9.90	20.05	TONS
F3	1	16.00'	11.68	23.66	TONS
F4	1	17.03'	11.20	22.69	TONS
F5	1	9.81'	6.84	13.84	TONS
F6	1	16.00'	11.68	23.66	TONS
F7	1	18.50'	13.46	27.27	TONS
F8	1	18.11'	12.59	25.49	TONS
P1	1	23.98'	10.53	21.31	TONS
P2	2	30.44'	13.35	27.04	TONS
P3	1	11.46'	5.01	10.15	TONS
P4	1	21.32'	9.36	18.95	TONS
P5	1	19.96'	8.75	17.72	TONS

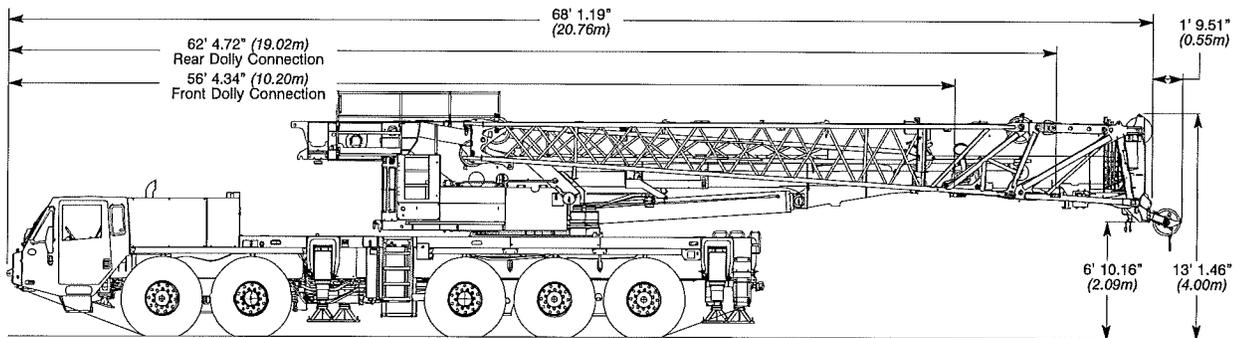
General Dimensions



Turning Radius	20.5R25		16.00R25	
	English	Metric	English	Metric
Wall to wall over carrier	42' 0"	12.8m	41' 6"	12.6m
Wall to wall over boom	42' 6"	12.9m	42' 2"	12.8m
Wall to wall over boom attachment	44' 11"	13.7m	44' 6"	13.5m
Curb to curb	37' 1"	11.3m	36' 3"	11.04m
Centerline of tire	36' 2"	11.0m	35' 6"	10.8m

Tail Swing	English	Metric
With auxiliary winch	16' 11"	5.1m
Without auxiliary winch	14' 8"	4.7m
With Counterweight	17' 1"	5.21m

Overall Width	English	Metric
With 14,000 lb (6.3t) counterweight	9' 10"	3.0m
With 36,000–115,000 lb (16.3t–52.4t) counterweight	10' 3"	3.1m



Not To Scale

115,500 lb Counterweight - Fully Extended Outriggers - 360° Rotation (All Capacities Are Listed In Pounds)												
Radius (ft)	Boom Length (ft)											Radius (ft)
	44.3	58.9-59.8	73.5-75.9	88.6-92.4	103.7-107.5	119.3-124.1	134.9-136.8	151.9-153.3	167-168.9	183.6-185.5	200.1	
8	420,000 **											8
10	300,000	297,300	262,200	212,200								10
12	268,200	269,500	256,800	212,200								12
15	233,200	235,200	232,200	205,500	128,900							15
20	189,400	192,100	191,000	184,600	172,300	129,700	91,400					20
25	157,800	160,900	160,000	158,700	153,000	120,900	91,400	73,000	41,200			25
30	133,000	137,200	136,300	135,000	136,500	118,300	85,500	73,000	55,000	41,300		30
35	111,300	115,700	117,000	116,700	115,300	107,800	79,100	73,000	55,000	41,300	33,000	35
40		99,400	100,700	100,500	99,200	98,900	73,500	69,700	55,000	41,300	33,000	40
45		87,400	87,800	87,700	86,500	88,000	68,600	63,800	55,000	41,300	33,000	45
50		76,100	77,500	77,400	77,400	77,900	64,100	58,600	53,500	41,300	33,000	50
55			70,700	70,800	70,800	69,400	60,400	54,100	50,500	41,300	33,000	55
60			63,700	64,200	63,800	62,400	57,000	50,100	47,600	40,200	33,000	60
65			55,900	58,200	57,700	56,300	54,000	46,500	44,300	37,800	33,000	65
70				53,000	52,500	51,300	51,300	43,300	41,400	35,600	33,000	70
75				48,500	48,000	46,800	48,100	40,500	38,700	33,700	32,600	75
80				42,200	44,100	42,900	44,100	37,900	36,400	31,900	30,800	80
85					40,100	40,900	40,100	35,600	34,200	30,200	29,100	85
90					36,600	38,000	36,600	33,400	32,200	28,600	27,600	90
95					33,600	34,900	33,700	31,700	30,300	27,200	26,200	95
100						32,300	31,000	30,400	28,600	25,800	25,000	100
105						29,900	28,500	29,100	27,100	24,400	23,800	105
110						25,000	26,400	27,100	25,600	23,000	22,400	110
115						20,600	24,400	25,100	24,100	21,600	21,400	115
120							23,300	23,300	22,300	20,400	20,400	120
125							21,000	21,700	20,700	19,400	19,600	125
130								20,200	19,200	18,300	18,700	130
135								18,800	17,800	17,100	17,700	135
140								17,600	16,700	15,900	16,700	140
145									15,500	15,000	15,600	145
150									14,500	14,400	14,500	150
155									13,500	13,800	13,500	155
160									10,200	13,200	12,500	160
165										12,500	11,700	165
170										11,700	10,800	170
175										9,300	10,100	175
180											9,400	180
185											8,700	185

Note: Capacities depict multiple boom modes.
 ** Over rear intermediate outriggers, additional equipment required.

This information is not for crane operation. Operator must refer to the in-cab information for crane operation. Rated lifting capacities shown on fully extended outriggers do not exceed 85% of the tipping loads.

Link-Belt Constructon Equipment Co., Lexington, Kentucky - ATC-3210 (S3) Unit: English
 Model ATC-3210 (S3) Telescopic Boom with 115,500# CTWT

EM6 Boom on Fully Ext. O/R

69800 lb load @ **50** ft radius

107.6 ft boom + **0 FT** fly, w / **2 DEG** fly offset

59.2° boom angle

Main pontoon: 385 in²; Bumper pontoon: 201 in²

320,395 lb gross vehicle weight (GVW)

Date: **4/21/2016** - v1.0

Rear O/R Max Load: 200,000 lb; Front O/R Max Load: 175,000 lb; Bumper O/R Max Load: 68,000 lb;

Slew Angle For Highest O/R Reaction

Click & Drag the Boom or Input Slew Angle

O/R Reaction Over 360° (Based on Input & Crane Config)

Right Front	Right Rear	Left Rear	Left Front	Front Bumper
136,483 lb	150,186 lb	150,186 lb	136,483 lb	45,868 lb

CAUTION: DO NOT USE FOR CAPACITIES!

User to consult the crane rating manual or capacity plate supplied with the machine for input values and allowable crane configurations used in these ground bearing reaction calculations. Do not exceed allowable lifting capacities for configured machine setup.

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Master Link

Hanes
SUPPLY, INC.
YOUR SLING AND RIGGING SPECIALIST

MASTER LINK

- Alloy Steel - Quenched and Tempered.
- Individually proof tested at 2 times Working Load Limit with certification.
- Proof test certification shipped with each link.
- Sizes from 1/2" to 2" are drop forged.

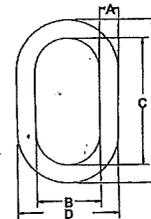
QUIC-CHECK™

Qr



A-342

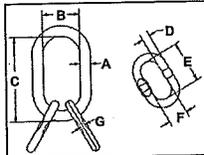
SIZE (IN)	A-342 STOCK NO. S.C.	WLL*† (LBS)	WT. EACH (LBS)	DIMENSIONS (IN)					DEFOR- MATION INDICATOR
				A	B	C	D	E	
1/2	1014262	7000	.82	.50	2.50	5.00	3.50	6.00	3.00
5/8	1014280	9000	1.52	.63	3.00	6.00	4.25	7.25	3.50
3/4	1014306	12300	2.07	.75	2.75	5.50	4.25	7.00	3.50
1	1014324	24360	4.85	1.00	3.50	7.00	5.50	9.00	4.50
1-1/4	1014342	36000	9.57	1.25	4.38	8.75	6.88	11.25	5.50
1-1/2	1014360	54300	16.22	1.50	5.25	10.50	8.25	13.50	6.50
1-3/4	1014388	84900	25.22	1.75	6.00	12.00	9.50	15.50	7.50
2	1014404	102600	37.04	2.00	7.00	14.00	11.00	18.00	9.00
2-1/4††	1014422	143100	54.10	2.25	8.00	16.00	12.50	20.50	-
2-1/2††	1014468	147300	67.75	2.50	8.00	16.00	13.00	21.00	-
2-3/4††	1014440	216900	87.70	2.75	9.50	16.00	15.00	21.50	-
3††	1014486	228000	115.00	3.00	9.00	18.00	15.00	24.00	-
3-1/4††	1014501	262200	145.00	3.25	10.00	20.00	16.50	26.50	-
3-1/2††	1014529	279000	200.00	3.50	12.00	24.00	19.00	31.00	-
3-3/4††	1015051	336000	198.00	3.75	10.00	20.00	17.50	27.50	-
4††	1015060	373000	228.00	4.00	10.00	20.00	18.00	28.00	-
4-1/4††	1015067	354000	302.00	4.25	12.00	24.00	20.50	32.50	-
4-1/2††	1015079	360000	345.00	4.50	14.00	28.00	23.00	37.00	-
4-3/4††	1015088	389000	436.00	4.75	14.00	28.00	23.50	37.50	-
5††	1015094	395000	516.00	5.00	15.00	30.00	25.00	40.00	-



*Minimum Ultimate Load is 5 times Working Load Limit.
†Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120°. For use with chain slings.
††Welded Master Link.

MASTER LINK ASSEMBLY

- Alloy Steel - Quenched and Tempered.
- Individually proof tested at 2 times Working Load Limit with certification.
- Proof test certification shipped with each link.



A-345

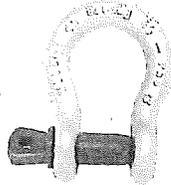
SIZE (IN)	A-345 STOCK NO. S.C.	WLL*† (LBS)	WT. EACH (LBS)	DIMENSIONS (IN)						DEFOR- MATION INDICATOR
				A	B	C	D	E	F	
3/4	1014734	10500	2.60	.75	2.75	5.50	.66	3.55	1.57	3.50
1	1014752	24360	6.10	1.00	3.50	7.00	.69	3.94	2.36	4.50
1-1/4	1014770	36000	13.20	1.25	4.38	8.75	.88	3.94	2.36	5.50
1-1/2	1014798	54300	24.20	1.50	5.25	10.50	1.15	5.91	2.76	6.50
1-3/4	1014814	84900	35.60	1.75	6.00	12.00	1.25	6.30	3.54	7.50
2	1014832	102600	67.30	2.00	7.00	14.00	1.50	7.09	3.94	9.00

*Working Load Limit with coupling links at 60° included angle.
†Ultimate Load is 4 times Working Load Limit.

HEADQUARTERS: 55 James E. Casey Drive • Buffalo, NY 14206 PHONE: 716.826.2636 FAX: 716.826.4412 www.hanessupply.com

Forged Shackles

SCREW PIN

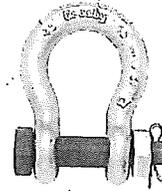


G-209 S-209

Screw pin anchor shackles meet the requirements of Federal Specification RR-C-271D Type IVA, Grade A, Class 2.

- Working load limit permanently shown on every shackle.
- Forged - Quenched and Tempered, with alloy pins.
- Capacities 1/3 through 55 tons.
- Look for the red pin...the mark of genuine Crosby quality.
- Shackles can be furnished proof tested with certificates to designated standards such as ABS, DNV, Lloyds, or other certification available when requested at the time of order.
- Hot dip galvanized or self-colored.
- Fatigue rated.

ROUND PIN



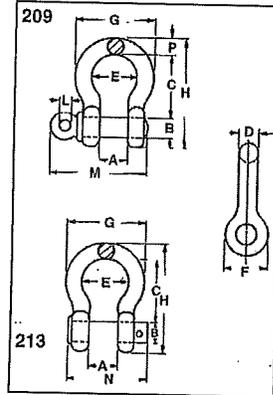
G-213 S-213

Round pin anchor shackles meet the requirements of Federal Specification RR-C-271D Type IVA, Grade A, Class 1.

Load Rated



NOM. SIZE (IN.)	WORKING LOAD LIMIT* (TONS)	STOCK NO.				WEIGHT EACH (LBS)	
		G-209 GALV.	S-209 S.C.	G-213 GALV.	S-213 S.C.	G-209 S-209	G-213 S-213
3/16	1/3	1018357	-	-	-	.06	-
1/4	1/2	1018375	1018384	1018017	1018026	.10	.13
5/16	3/4	1018393	1018400	1018035	1018044	.19	.18
3/8	1	1018419	1018428	1018053	1018062	.31	.29
7/16	1-1/2	1018437	1018446	1018071	1018080	.38	.38
1/2	2	1018455	1018464	1018099	1018108	.72	.71
5/8	3-1/4	1018473	1018482	1018115	1018124	1.37	1.60
3/4	4-3/4	1018491	1018507	1018133	1018142	2.35	2.32
7/8	6-1/2	1018516	1018525	1018151	1018160	3.62	3.49
1	8-1/2	1018534	1018543	1018179	1018188	5.03	5.00
1-1/8	9-1/2	1018552	1018561	1018197	1018204	7.41	6.97
1-1/4	12	1018570	1018589	1018213	1018222	9.50	9.75
1-3/8	13-1/2	1018598	1018605	1018231	1018240	13.53	13.25
1-1/2	17	1018814	1018623	1018259	1018268	17.20	17.25
1-3/4	25	1018632	1018641	1018277	1018286	27.75	29.46
2	35	1018650	1018669	1018295	1018302	45.00	45.75
2-1/2	55	1018678	1018687	-	-	85.75	-



NOM. SIZE	WORKING LOAD LIMIT*	DIMENSIONS (IN)													TOLERANCE	
		A	B	C	D	E	F	G	H	L	M	N	P	C	A	
3/16	1/3	.38	.25	.88	.19	.60	.56	.88	1.47	.16	1.12	-	.19	.06	.06	
1/4	1/2	.47	.31	1.13	.25	.78	.61	1.28	1.84	.19	1.38	1.34	.25	.06	.08	
5/16	3/4	.53	.38	1.22	.31	.84	.75	1.47	2.09	.22	1.66	1.59	.31	.06	.08	
3/8	1	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.03	1.88	.38	.13	.06	
7/16	1-1/2	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	.31	2.38	2.13	.44	.13	.06	
1/2	2	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	2.35	.50	.13	.06	
5/8	3-1/4	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	2.91	.69	.13	.06	
3/4	4-3/4	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	3.44	.81	.25	.06	
7/8	6-1/2	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	.50	4.50	3.81	.97	.25	.06	
1	8-1/2	1.69	1.13	3.75	1.00	2.69	2.38	4.69	6.56	.56	5.07	4.53	1.06	.25	.06	
1-1/8	9-1/2	1.81	1.25	4.25	1.16	2.91	2.69	5.16	7.47	.63	5.59	5.13	1.25	.25	.06	
1-1/4	12	2.03	1.38	4.69	1.29	3.25	3.00	5.75	8.25	.69	6.16	5.50	1.38	.25	.06	
1-3/8	13-1/2	2.25	1.60	5.25	1.42	3.63	3.31	6.38	9.16	.75	6.84	6.13	1.50	.25	.13	
1-1/2	17	2.38	1.63	5.75	1.54	3.88	3.63	6.88	10.00	.81	7.35	6.50	1.62	.25	.13	
1-3/4	25	2.88	2.00	7.00	1.84	5.00	4.19	8.66	12.34	1.00	9.08	7.75	2.25	.25	.13	
2	35	3.25	2.25	7.75	2.08	5.75	4.71	9.97	13.68	1.22	10.34	8.75	2.40	.25	.13	
2-1/2	55	4.13	2.75	10.50	2.71	7.25	5.69	12.67	17.84	1.38	13.00	-	3.13	.25	.13	

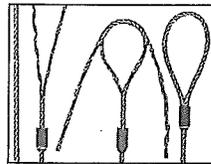
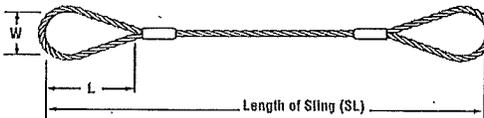
*NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit.
†Furnished in screw pin only.

Mechanical Splice Flemish Eye Slings

Hanes
SUPPLY, INC.
YOUR SLING AND RIGGING SPECIALIST

NO. 105B

Eyes are formed using the flemish eye splice. Ends are secured by pressing a metal sleeve over the ends of the strands of the splice. Pull is directly along the centerline of rope & eye. Gives most efficient use of rope capacity & is economical.



Flemish Eye Splice

In the standard flemish eye mechanical splice, rope is separated into two parts - 3 adjacent strands, and 3 adjacent strands and core. These two parts are then re-laid back in opposite directions to form an eye, and ends are secured with a pressed metal sleeve.



Swaging Provides

Positive Grip

This cutaway of a metal sleeve swaged onto a splice shows how metal "flows" into valleys between strands to positively prevent ends from unlaying when sling is used within its rated capacity.

DIAM OF ROPE (IN)	MIN LENGTH (SL) OF SLING (FT-IN)	LOOP DIMENSIONS		RATED CAPACITIES IN TONS (2000 LBS) 6 X 19 AND 6 X 37 EIPS ROPE - IWRC				
		W (IN)	L (IN)	SINGLE LEG VERTICAL	CHOKER HITCH	BASKET HITCH		
						60°	45°	30°
1/4	1 - 6	2	4	0.65	0.48	1.1	.91	.65
5/16	1 - 9	2-1/2	5	1.0	0.74	1.7	1.4	1.0
3/8	2	3	6	1.4	1.1	2.5	2.0	1.4
7/16	2 - 3	3-1/2	7	1.9	1.4	3.4	2.7	1.9
1/2	2 - 6	4	8	2.5	1.9	4.4	3.6	2.5
9/16	2 - 9	4-1/2	9	3.2	2.4	5.5	4.5	3.2
5/8	3	5	10	3.9	2.9	6.8	5.5	3.9
3/4	3 - 6	6	12	5.6	4.1	9.7	7.9	5.6
7/8	4	7	14	7.6	5.6	13	11	7.6
1	4 - 6	8	16	9.8	7.2	17	14	9.8
1-1/8	5	9	18	12	9.1	21	17	12
1-1/4	5 - 6	10	20	15	11	26	21	15
1-3/8	6	11	22	18	13	31	25	18
1-1/2	7	12	24	21	16	37	30	21
1-3/4	8	14	28	28	21	49	40	28
2	9	16	32	37	28	63	52	37
2-1/4	10	18	36	44	35	77	63	44
2-1/2	11	20	40	54	42	94	77	54
2-3/4	12	22	44	65	51	113	92	65
3	13	24	48	77	60	133	108	77
3-1/2	16 - 6	32	64	102	79	176	144	102
3-3/4	18	36	72	115	90	199	163	115
4	20	40	80	130	101	225	184	130
4-1/2	24	50	100	160	124	277	226	160

*Rated capacities of basket hitches are based on a minimum diameter of curvature at the point of load contact of 40 times the rope diameter for slings 1/4" thru 1" diameter and 25 times the rope diameter for slings 1-1/4" diameter and larger.

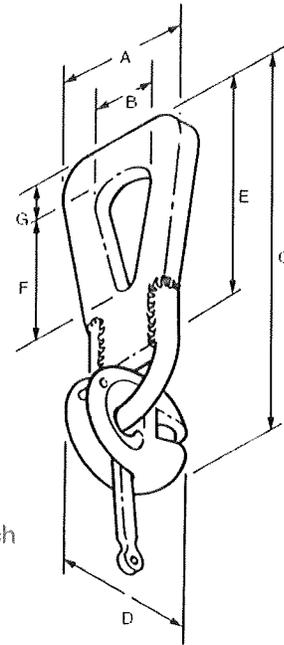
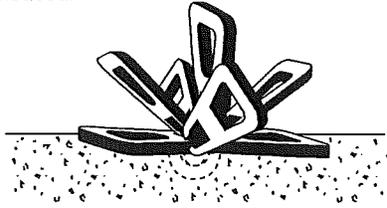
WARNING Follow OSHA, ASME B30.9 & Manufacturer's Guidelines. Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Do not exceed rated capacity. Protect sling from being cut by load edges, corners, protrusions & abrasive surfaces. Avoid environments stated on Warning Tag. DEATH or INJURY can occur from improper use or maintenance.

HEADQUARTERS: 55 James E. Casey Drive • Buffalo, NY 14206 PHONE: 716.826.2636 FAX: 716.826.4412 www.hanessupp

P-91-S Fleet-Lift Ring Clutch

The P-91-S Fleet-Lift Ring Clutch consists of a clutch body, a curved bolt and a high strength bail. Installation and release is safe and simple. After the clutch is inserted over the anchor head and into the recess, the curved bolt is rotated into the closed position.

Rotation of the standard bail is a full 360°. Once engaged and supporting four hundred pounds of load, the ring clutch cannot be released.



P-91-S
Fleet-Lift
Ring Clutch

To Order:

Specify: (1) quantity, (2) name, (3) product code, (3) system size.

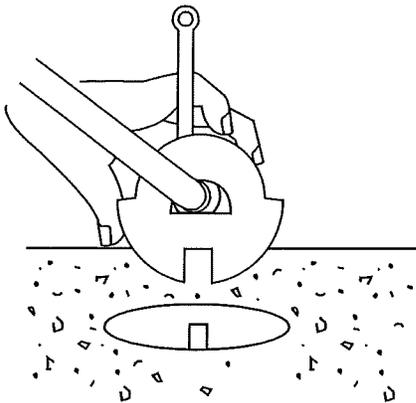
Example:

9, P-91-S Fleet-Lift Ring Clutches, FL002S, 4/6-ton units.

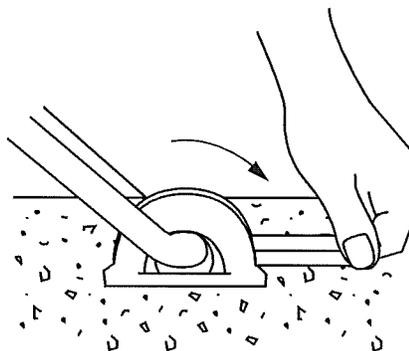
P-91-S Fleet-Lift Ring Clutch Selection Chart

Safe Working Load (Tons)	Load Range (Tons)	Product Code	A	B	C	D	E	F	G
3	2-3	FL001S	3-3/4"	2-3/8"	10-1/2"	3"	7"	3"	1"
6	4-6	FL002S	4-3/4"	2-5/8"	12-1/2"	4"	8-1/4"	3-1/2"	1-1/2"
10	8-10	FL003S	5-7/8"	3"	17-3/4"	5-7/8"	11"	4-1/2"	2-1/8"

Installation of P-91-S Ring Clutch

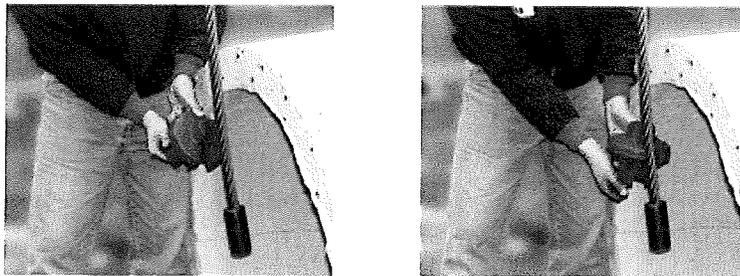
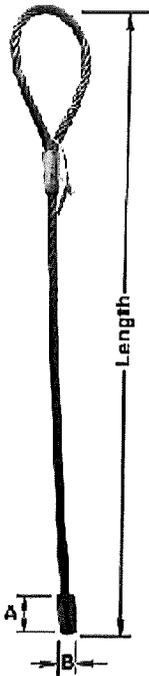


The P-91-S Ring Clutch is located directly over the head of a Fleet-Lift Anchor.

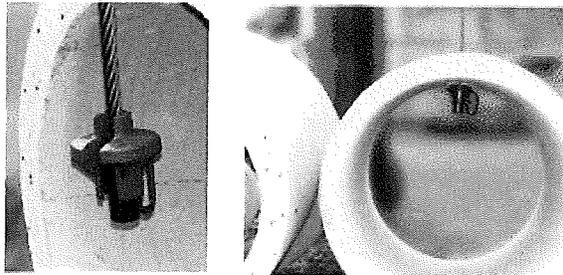


The ring clutch is pushed down onto the anchor head and the curved bolt is rotated through the engagement hole of the anchor and locked into position. The process of engaging anchor and ring clutch is completed in seconds.

OPERATION



Drop pipe carrier lifting sling through hole in pipe. Align and insert "Tea Cup" pipe carrier into lifting sling.



Once set, you are ready to lift the pipe.

Model LS Specifications

Model numbers shown in green are part of our INSTOCK program.

Model Number	Use With Model	Rated Capacity (tons)	Sling Dia. (in.)	Standard Length (ft.)	A (in.)	B (in.)	Weight (lbs.)
LS-3/4	PC-3/4	4.9	3/4	5	3.25	1.55	9
LS-7/8	PC-3/4	6.6	7/8	5	3.86	1.80	14
LS-1	PC-1	8.5	1	5	4.36	2.05	19
LS-1 1/8	PC-1	10	1-1/8	5	4.81	2.30	26
LS-1 1/4	PC-1	13	1-1/4	5	5.42	2.56	33
LS-1 1/2	PC-1 1/2	18	1-1/2	5	6.52	3.00	52

NOTE: INSTOCK on standard 5' length only.