Date: **August 02, 2023**

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Site Number:	5000175325
	Site Name:	BERLIN KENSINGTON CT
Crown Castle Designation:	**BU Number:**	826217
	Site Name:	Newington_1
	JDE Job Number:	751341
	Work Order Number:	2246495
	Order Number:	654632 Rev. 0
Engineering Firm Designation:	**Crown Castle Project Number:**	2246495
Site Data:	**240 Kensington Road, Berlin, Hartford County, CT** **Latitude *41° 37' 34.3"*, Longitude *-72° 46' 32.33"*** **191.667 Foot - Monopole Tower**	

Crown Castle is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 91.1%**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Blake Jacobsen, EIT

Respectfully submitted by:

Digitally signed by Maham Barimani
Date: 2023.08.03 14:17:37 -04'00'

STATE OF CONNECTICUT
MAHAM BARIMANI
30501
LICENSED
PROFESSIONAL ENGINEER

Maham Barimani, P.E.
Senior Project Engineer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 191.667 ft Monopole tower designed by PIROD MANUFACTURES INC. The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
160.0	160.0	1	andrew	HBXX-6517DS-A2M w/ Mount Pipe	13	1-5/8
		2	andrew	LNX-6514DS-A1M w/ Mount Pipe		
		6	commscope	NNHH-65B-R4 w/ Mount Pipe		
		1	kaelus	BSF0020F3V1		
		1	raycap	RVZDC-6627-PF-48		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
		1	tower mounts	Platform Mount [LP 303-1_KCKR-HR-1]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
192.0	196.0	1	kathrein	OGB4-900D	1	7/8
	192.0	1	tower mounts	Side Arm Mount [SO 701-1]		
191.0	196.0	1	andrew	DB589-A	1	5/16
	191.0	1	tower mounts	Side Arm Mount [SO 701-1]		
	190.0	1	motorola	WB2623 w/ Mount Pipe		
184.0	184.0	3	ericsson	AIR -32 B2A/B66AA w/ Mount Pipe	3	1-5/8
		3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	ericsson	RADIO 4415 B25_TMO		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		1	tower mounts	Platform Mount [LP 405-1_HR-1]		
168.0	171.0	3	fujitsu	TA08025-B604	1	1-3/4
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-21 w/ Mount Pipe		
		1	raycap	RDIDC-9181-PF-48		
	168.0	1	tower mounts	Sabre_C10801018-32788		
158.0	158.0	1	decibel	DB205-A	2	7/8
		1	sinclair	SRL-224NM-4		
		2	tower mounts	Side Arm Mount [SO 702-1]		
151.0	151.0	1	tower mounts	Platform Mount [LP 402-1_KCKR]	12 3 4 2	1-1/4 3/8 13/16 7/8
	150.0	3	ericsson	AIR 6449 N77		
	149.0	3	cci antennas	DMP65R-BU8D w/ Mount Pipe		
		3	cci antennas	TPA65R-BU8D w/ Mount Pipe		
		3	ericsson	RRUS 32 B30		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14_CCIV2		
		3	ericsson	RRUS 8843 B2/B66A_CCIV2		
		1	raycap	DC6-48-60-18-8F		
		1	raycap	DC9-48-60-24-8C-EV		
	148.0	3	ericsson	AIR 6419 B77G		
150.0	150.0	1	tower mounts	Side Arm Mount [SO 102-1]	-	-
	149.0	1	raycap	DC6-48-60-18-8F		
132.0	132.0	1	sinclair	SRL-235-2	1	7/8
		1	tower mounts	Side Arm Mount [SO 104-3]		
		1	tower mounts	Side Arm Mount [SO 702-1]		
124.0	124.0	1	decibel	PCS 1900 TMA RX	-	-
		1	tower mounts	Side Arm Mount [SO 104-3]		
90.0	99.0	1	decibel	DB205-A	1 2 1	7/8 1/2 5/16
	90.0	1	andrew	KP2F-34		
		1	mti wireless edge	MT-485002		
		1	tower mounts	Side Arm Mount [SO 702-3]		
70.0	70.0	1	sinclair	SRL-235-2	2	7/8
		1	tower mounts	Side Arm Mount [SO 102-3]		
		1	tower mounts	Side Arm Mount [SO 701-1]		
33.0	33.0	1	decibel	DB909XVTE-M	2	1/2
		1	tower mounts	Side Arm Mount [SO 102-3]		
		1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	3438510	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	3463552	CCISITES
4-TOWER MANUFACTURER DRAWINGS	3438498	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3678661	CCISITES
4-POST-MODIFICATION INSPECTION	5493013	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	5753424	CCISITES
4-POST-MODIFICATION INSPECTION	5947973	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	4003976	CCISITES

3.1) Analysis Method

tnxTower (version 8.1.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

1) Tower and structures were maintained in accordance with the TIA-222 Standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Crown Castle should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
191.67 - 186.67	Pole	TP18x18x0.375	Pole	1.0%	Pass
186.67 - 181.57	Pole	TP24x24x0.375	Pole	3.0%	Pass
181.57 - 176.57	Pole	TP24x24x0.375	Pole	6.5%	Pass
176.57 - 171.57	Pole	TP24x24x0.375	Pole	10.3%	Pass
171.57 - 166.57	Pole	TP24x24x0.375	Pole	15.8%	Pass
166.57 - 161.57	Pole	TP24x24x0.375	Pole	21.9%	Pass
161.57 - 156.57	Pole	TP24x24x0.375	Pole	31.0%	Pass
156.57 - 151.57	Pole	TP24x24x0.375	Pole	40.9%	Pass

151.57 - 146.57	Pole	TP24x24x0.375	Pole	54.6%	Pass
146.57 - 141.57	Pole	TP24x24x0.375	Pole	69.8%	Pass
141.57 - 141.42	Pole	TP24x24x0.375	Pole	70.2%	Pass
141.42 - 136.42	Pole	TP36x36x0.375	Pole	40.5%	Pass
136.42 - 131.42	Pole	TP36x36x0.375	Pole	48.1%	Pass
131.42 - 126.42	Pole	TP36x36x0.375	Pole	55.8%	Pass
126.42 - 121.42	Pole	TP36x36x0.375	Pole	63.7%	Pass
121.42 - 121.17	Pole	TP36x36x0.375	Pole	64.1%	Pass
121.17 - 116.17	Pole	TP42x42x0.375	Pole	54.1%	Pass
116.17 - 111.17	Pole	TP42x42x0.375	Pole	60.2%	Pass
111.17 - 110.04	Pole	TP42x42x0.375	Pole	61.6%	Pass
110.04 - 109.79	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	48.0%	Pass
109.79 - 105.08	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	52.7%	Pass
105.08 - 104.83	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	48.0%	Pass
104.83 - 100.92	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	51.7%	Pass
100.92 - 100.67	Pole	TP48x48x0.375	Pole	57.4%	Pass
100.67 - 95.83	Pole	TP48x48x0.375	Pole	62.5%	Pass
95.83 - 95.58	Pole + Reinf.	TP48x48x0.475	Pole	49.8%	Pass
95.58 - 90.58	Pole + Reinf.	TP48x48x0.475	Pole	54.1%	Pass
90.58 - 89.92	Pole + Reinf.	TP48x48x0.475	Pole	54.6%	Pass
89.92 - 89.67	Pole + Reinf.	TP48x48x0.575	Pole	45.5%	Pass
89.67 - 84.67	Pole + Reinf.	TP48x48x0.575	Pole	49.2%	Pass
84.67 - 80.83	Pole + Reinf.	TP48x48x0.575	Pole	52.2%	Pass
80.83 - 80.33	Pole + Reinf.	TP54x54x0.55	Pole	43.8%	Pass
80.33 - 80.08	Pole + Reinf.	TP54x54x0.4875	Pole	49.5%	Pass
80.08 - 75.08	Pole + Reinf.	TP54x54x0.4875	Pole	53.2%	Pass
75.08 - 70.08	Pole + Reinf.	TP54x54x0.4875	Pole	57.0%	Pass
70.08 - 69.5	Pole + Reinf.	TP54x54x0.4875	Pole	57.4%	Pass
69.5 - 69.25	Pole + Reinf.	TP54x54x0.5875	Pole	47.6%	Pass
69.25 - 64.25	Pole + Reinf.	TP54x54x0.5875	Pole	51.1%	Pass
64.25 - 60.58	Pole + Reinf.	TP54x54x0.5875	Pole	53.7%	Pass
60.58 - 60.33	Pole + Reinf.	TP60x60x0.5125	Pole	50.4%	Pass
60.33 - 55.33	Pole + Reinf.	TP60x60x0.5125	Pole	53.7%	Pass
55.33 - 52.17	Pole + Reinf.	TP60x60x0.5125	Pole	55.9%	Pass
52.17 - 51.92	Pole + Reinf.	TP60x60x0.625	Pole	46.8%	Pass
51.92 - 46.92	Pole + Reinf.	TP60x60x0.625	Pole	49.6%	Pass
46.92 - 41.92	Pole + Reinf.	TP60x60x0.625	Pole	52.6%	Pass

41.92 - 40.23	Pole + Reinf.	TP60x60x0.6	Pole	54.1%	Pass
40.23 - 39.98	Pole + Reinf.	TP60x60x0.6	Pole	54.2%	Pass
39.98 - 34.98	Pole + Reinf.	TP60x60x0.6	Pole	57.3%	Pass
34.98 - 29.98	Pole + Reinf.	TP60x60x0.6	Pole	60.4%	Pass
29.98 - 28	Pole + Reinf.	TP60x60x0.6	Pole	61.7%	Pass
28 - 27.75	Pole + Reinf.	TP60x60x0.725	Pole	51.9%	Pass
27.75 - 22.75	Pole + Reinf.	TP60x60x0.725	Pole	54.6%	Pass
22.75 - 20.08	Pole + Reinf.	TP60x60x0.725	Pole	56.1%	Pass
20.08 - 19.83	Pole	TP60x60x0.625	Pole	62.6%	Pass
19.83 - 17	Pole	TP60x60x0.625	Pole	64.4%	Pass
17 - 16.75	Pole + Reinf.	TP60x60x0.725	Pole	55.8%	Pass
16.75 - 11.65	Pole + Reinf.	TP60x60x0.75	Pole	57.2%	Pass
11.65 - 11.42	Pole + Reinf.	TP60x60x0.75	Pole	57.3%	Pass
11.42 - 9.4	Pole + Reinf.	TP60x60x0.75	Pole	58.4%	Pass
9.4 - 9.15	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	58.1%	Pass
9.15 - 4.83	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	60.4%	Pass
4.83 - 4.58	Pole + Reinf.	TP60x60x0.75	Pole	61.8%	Pass
4.58 - 0	Pole + Reinf.	TP60x60x0.75	Pole	64.3%	Pass
				Summary	
			Pole	70.2%	Pass
			Reinforcement	62.6%	Pass
			Overall	70.2%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	41.0	Pass
1	Base Plate	0	69.9	Pass
1	Base Foundation (Structure)	0	84.2	Pass
1	Base Foundation (Soil Interaction)	0	80.6	Pass
1	Flange Connection	181.58	3.5	Pass
1	Flange Connection	141.42	45.3	Pass
1	Flange Connection	121.2	91.1	Pass
1	Flange Connection	100.9	77.9	Pass
1	Flange Connection	80.83	73.6	Pass
1	Flange Connection	60.58	46.5	Pass
1	Flange Connection	40.33	64.8	Pass
1	Flange Connection	20.08	77.4	Pass

Structure Rating (max from all components) =	91.1%

Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.

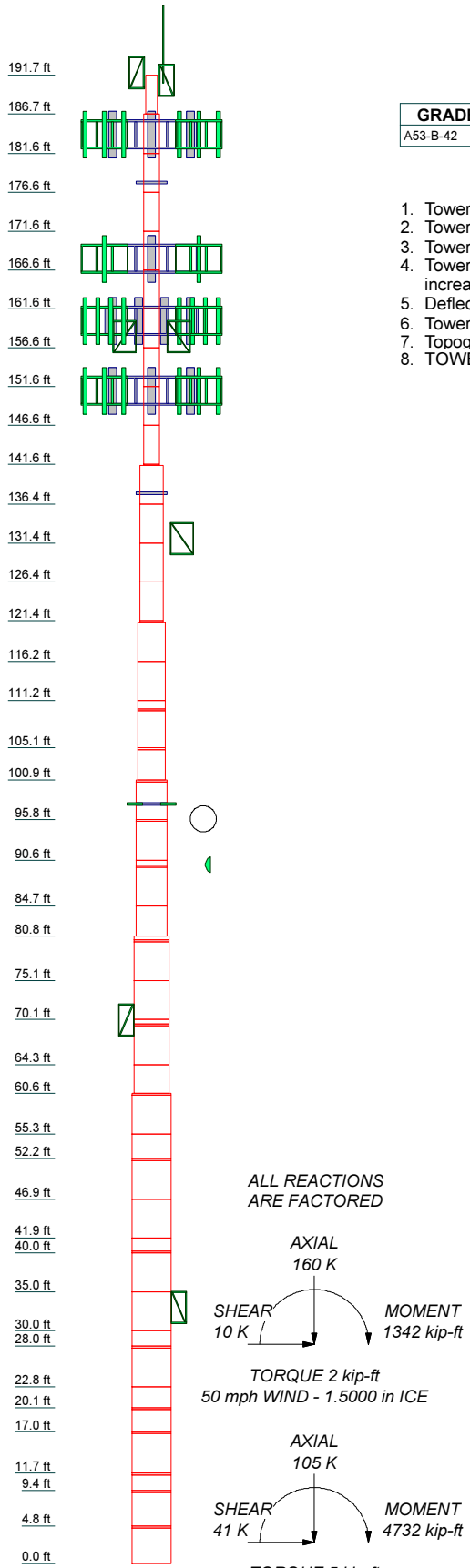
4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	Size	Length (ft)	Grade	Weight (K)
1	P36.0x0.375	5.00	A53-B-42	0.4
2	P35.0x0.375	5.10		0.5
3	P34.0x0.375	5.00		0.5
4	P33.0x0.375	5.00		0.5
5	P32.0x0.375	5.00		0.5
6	P31.0x0.375	5.00		0.5
7	P30.0x0.375	5.00		0.5
8	P29.0x0.375	5.00		0.5
9	P28.0x0.375	5.00		0.5
10	P27.0x0.375	5.00		0.5
11	P26.0x0.375	5.00		0.7
12	P25.0x0.375	5.00		0.7
13	P24.0x0.375	5.00		0.7
14	P23.0x0.375	5.00		0.7
15	P22.0x0.375	5.00		0.8
16	P21.0x0.375	5.00		0.8
17	P20.0x0.375	5.00		0.8
18	P19.0x0.375	5.00		1.0
20	P18.0x0.375	5.00		1.0
21	P17.0x0.375	5.00		1.1
22	P16.0x0.375	5.00		1.1
23	P15.0x0.375	5.00		1.2
24	P14.0x0.375	5.00		1.2
25	P13.0x0.375	5.00		1.4
26	P12.0x0.375	5.00		1.4
27	P11.0x0.375	5.00		1.4
28	P10.0x0.375	5.00		1.4
30	P9.0x0.375	5.00		1.4
31	P8.0x0.375	5.00		1.4
32	P7.0x0.375	5.00		1.4
34	P6.0x0.375	5.00		1.4
35	P5.0x0.375	5.00		1.4
36	P4.0x0.375	5.00		1.7
38	P3.0x0.375	5.00		1.7
39	P2.0x0.375	5.00		1.7
40	P1.0x0.375	5.00		1.7
41	P0.0x0.375	5.00		1.6
42	P0.0x0.375	5.00		1.6
43	P0.0x0.375	5.00		1.6
44	P0.0x0.375	5.00		2.0
45	P0.0x0.375	5.00		2.0
46	P0.0x0.375	5.00		2.0
47	P0.0x0.375	5.00		1.9
48	P0.0x0.375	5.00		1.9
49	P0.0x0.375	5.00		1.9
50	P0.0x0.375	5.00		1.8
52	P0.0x0.375	5.00		2.3
53	P0.0x0.375	5.00		2.3
54	P0.0x0.375	5.00		2.3
55	P0.0x0.375	5.00		2.3
56	P0.0x0.375	5.00		2.3
57	P0.0x0.375	5.00		2.5
58	P0.0x0.375	5.00		2.5
59	P0.0x0.375	5.00		2.5
60	P0.0x0.375	5.00		2.5
61	P0.0x0.375	5.00		2.5
62	P0.0x0.375	5.00		2.5
63	P0.0x0.375	4.58		2.3



ALL REACTIONS ARE FACTORED

AXIAL 160 K

SHEAR 10 K *MOMENT 1342 kip-ft*

TORQUE 2 kip-ft
50 mph WIND - 1.5000 in ICE

AXIAL 105 K

SHEAR 41 K *MOMENT 4732 kip-ft*

TORQUE 5 kip-ft
REACTIONS - 118 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 70.2%

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Pathway to Possible
Phone: (724) 416-2000
FAX: (724) 416-2000

Job: **BU 826217**			
Project:			
Client: Crown Castle	Drawn by: JJacobsen		App'd:
Code: TIA-222-H	Date: 08/02/23		Scale: NTS
Path: C:\Users\jjacobsen\SAPI Work Area\826217\WO 2246495 - SA\Prod\826217_Reinforced.er			Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower is located in Hartford County, Connecticut.
- Tower base elevation above sea level: 133.00 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- TOWER RATING: 70.2%.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Forces in Supporting Bracing Members
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Pole Section Geometry

Section	*Elevation*	*Section Length*	*Pole Size*	*Pole Grade*	*Socket Length*
	ft	*ft*			*ft*
L1	191.67-186.67	5.00	P18x0.375	A53-B-42	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L2	186.67-181.57	5.10	P24x0.375	A53-B-42 (42 ksi)	
L3	181.57-176.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L4	176.57-171.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L5	171.57-166.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L6	166.57-161.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L7	161.57-156.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L8	156.57-151.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L9	151.57-146.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L10	146.57-141.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L11	141.57-141.42	0.15	P24x0.375	A53-B-42 (42 ksi)	
L12	141.42-136.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L13	136.42-131.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L14	131.42-126.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L15	126.42-121.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L16	121.42-121.17	0.25	P36x0.375	A53-B-42 (42 ksi)	
L17	121.17-116.17	5.00	P42x0.375	A53-B-42 (42 ksi)	
L18	116.17-111.17	5.00	P42x0.375	A53-B-42 (42 ksi)	
L19	111.17-110.04	1.13	P42x0.375	A53-B-42 (42 ksi)	
L20	110.04-109.79	0.25	P42x0.4875	A53-B-42 (42 ksi)	
L21	109.79-105.08	4.71	P42x0.4875	A53-B-42 (42 ksi)	
L22	105.08-104.83	0.25	P42x0.5625	A53-B-42 (42 ksi)	
L23	104.83-100.92	3.92	P42x0.5625	A53-B-42 (42 ksi)	
L24	100.92-100.67	0.25	P48x0.375	A53-B-42 (42 ksi)	
L25	100.67-95.83	4.83	P48x0.375	A53-B-42 (42 ksi)	
L26	95.83-95.58	0.25	P48x0.475	A53-B-42 (42 ksi)	
L27	95.58-90.58	5.00	P48x0.475	A53-B-42 (42 ksi)	
L28	90.58-89.92	0.67	P48x0.475	A53-B-42 (42 ksi)	
L29	89.92-89.67	0.25	P48x0.575	A53-B-42 (42 ksi)	
L30	89.67-84.67	5.00	P48x0.575	A53-B-42 (42 ksi)	
L31	84.67-80.83	3.83	P48x0.575	A53-B-42 (42 ksi)	
L32	80.83-80.33	0.50	P54x0.55	A53-B-42 (42 ksi)	
L33	80.33-80.08	0.25	P54x0.4875	A53-B-42 (42 ksi)	
L34	80.08-75.08	5.00	P54x0.4875	A53-B-42 (42 ksi)	
L35	75.08-70.08	5.00	P54x0.4875	A53-B-42 (42 ksi)	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L36	70.08-69.50	0.58	P54x0.4875	A53-B-42 (42 ksi)	
L37	69.50-69.25	0.25	P54x0.5875	A53-B-42 (42 ksi)	
L38	69.25-64.25	5.00	P54x0.5875	A53-B-42 (42 ksi)	
L39	64.25-60.58	3.67	P54x0.5875	A53-B-42 (42 ksi)	
L40	60.58-60.33	0.25	P60x0.5125	A53-B-42 (42 ksi)	
L41	60.33-55.33	5.00	P60x0.5125	A53-B-42 (42 ksi)	
L42	55.33-52.17	3.17	P60x0.5125	A53-B-42 (42 ksi)	
L43	52.17-51.92	0.25	P60x0.625	A53-B-42 (42 ksi)	
L44	51.92-46.92	5.00	P60x0.625	A53-B-42 (42 ksi)	
L45	46.92-41.92	5.00	P60x0.625	A53-B-42 (42 ksi)	
L46	41.92-40.23	1.68	P60x0.6	A53-B-42 (42 ksi)	
L47	40.23-39.98	0.25	P60x0.6	A53-B-42 (42 ksi)	
L48	39.98-34.98	5.00	P60x0.6	A53-B-42 (42 ksi)	
L49	34.98-29.98	5.00	P60x0.6	A53-B-42 (42 ksi)	
L50	29.98-28.00	1.98	P60x0.6	A53-B-42 (42 ksi)	
L51	28.00-27.75	0.25	P60x0.725	A53-B-42 (42 ksi)	
L52	27.75-22.75	5.00	P60x0.725	A53-B-42 (42 ksi)	
L53	22.75-20.08	2.67	P60x0.725	A53-B-42 (42 ksi)	
L54	20.08-19.83	0.25	P60x0.625	A53-B-42 (42 ksi)	
L55	19.83-17.00	2.83	P60x0.625	A53-B-42 (42 ksi)	
L56	17.00-16.75	0.25	P60x0.725	A53-B-42 (42 ksi)	
L57	16.75-11.65	5.10	P60x0.75	A53-B-42 (42 ksi)	
L58	11.65-11.42	0.23	P60x0.75	A53-B-42 (42 ksi)	
L59	11.42-9.40	2.02	P60x0.75	A53-B-42 (42 ksi)	
L60	9.40-9.15	0.25	P60x0.8	A53-B-42 (42 ksi)	
L61	9.15-4.83	4.31	P60x0.8	A53-B-42 (42 ksi)	
L62	4.83-4.58	0.25	P60x0.75	A53-B-42 (42 ksi)	
L63	4.58-0.00	4.58	P60x0.75	A53-B-42 (42 ksi)	

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 191.67-186.67				1	1	1			
L2 186.67-181.57				1	1	1			
L3 181.57-				1	1	1			

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
176.57									
L4 176.57-171.57				1	1	1			
L5 171.57-166.57				1	1	1			
L6 166.57-161.57				1	1	1			
L7 161.57-156.57				1	1	1			
L8 156.57-151.57				1	1	1			
L9 151.57-146.57				1	1	1			
L10 146.57-141.57				1	1	1			
L11 141.57-141.42				1	1	1			
L12 141.42-136.42				1	1	1			
L13 136.42-131.42				1	1	1			
L14 131.42-126.42				1	1	1			
L15 126.42-121.42				1	1	1			
L16 121.42-121.17				1	1	1			
L17 121.17-116.17				1	1	1			
L18 116.17-111.17				1	1	1			
L19 111.17-110.04				1	1	1			
L20 110.04-109.79				1	1	0.983655			
L21 109.79-105.08				1	1	0.983655			
L22 105.08-104.83				1	1	0.976951			
L23 104.83-100.92				1	1	0.976951			
L24 100.92-100.67				1	1	1			
L25 100.67-95.83				1	1	1			
L26 95.83-95.58				1	1	0.981492			
L27 95.58-90.58				1	1	0.981492			
L28 90.58-89.92				1	1	0.981492			
L29 89.92-89.67				1	1	0.97009			
L30 89.67-84.67				1	1	0.97009			
L31 84.67-80.83				1	1	0.97009			
L32 80.83-80.33				1	1	0.976401			
L33 80.33-80.08				1	1	0.990478			
L34 80.08-75.08				1	1	0.990478			
L35 75.08-70.08				1	1	0.990478			
L36 70.08-69.50				1	1	0.990478			

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L37 69.50-69.25				1	1	1.00601			
L38 69.25-64.25				1	1	1.00601			
L39 64.25-60.58				1	1	1.00601			
L40 60.58-60.33				1	1	0.987891			
L41 60.33-55.33				1	1	0.987891			
L42 55.33-52.17				1	1	0.987891			
L43 52.17-51.92				1	1	1.01747			
L44 51.92-46.92				1	1	1.01747			
L45 46.92-41.92				1	1	1.01747			
L46 41.92-40.23				1	1	0.995499			
L47 40.23-39.98				1	1	0.995499			
L48 39.98-34.98				1	1	0.995499			
L49 34.98-29.98				1	1	0.995499			
L50 29.98-28.00				1	1	0.995499			
L51 28.00-27.75				1	1	1.00337			
L52 27.75-22.75				1	1	1.00337			
L53 22.75-20.08				1	1	1.00337			
L54 20.08-19.83				1	1	1			
L55 19.83-17.00				1	1	1			
L56 17.00-16.75				1	1	1.04129			
L57 16.75-11.65				1	1	1.02849			
L58 11.65-11.42				1	1	1.02849			
L59 11.42-9.40				1	1	1.02849			
L60 9.40-9.15				1	1	1.00535			
L61 9.15-4.83				1	1	1.00535			
L62 4.83-4.58				1	1	1.04998			
L63 4.58-0.00				1	1	1.04998			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
****										
CU12PSM6P4XXX(1-3/4)	B	No	Surface Ar (CaAa)	168.00 - 0.00	1	1	-0.300 -0.300	1.7500		2.72
****										
AL7-50(1-5/8)	B	No	Surface Ar (CaAa)	160.00 - 4.00	13	11	-0.350 -0.100	1.9600		0.52

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
****										
***										
****										
Safety Line 3/8	C	No	Surface Ar (CaAa)	191.67 - 4.00	1	1	0.000 0.010	0.3750		0.22
****										
* Reinforcement Plates*										
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	10.88 - 0.00	1	1	0.400 0.450	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate	B	No	Surface Af (CaAa)	10.88 - 0.00	1	1	-0.250 -0.200	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate	C	No	Surface Af (CaAa)	13.17 - 3.17	1	1	0.250 0.300	4.0000	9.5000	0.00
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.450 -0.400	6.5000	15.5000	0.00
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.450 -0.400	6.5000	15.5000	0.00
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.400 -0.350	6.5000	15.5000	0.00
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.450 -0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.350 -0.300	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.450 -0.400	6.0000	14.0000	0.00
*										
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate	B	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate	C	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
*										
1" x 2" Plate	A	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.450 -0.400	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.350 -0.300	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	50.42 - 40.58	1	1	0.200 0.250	1.0000	6.0000	6.81
1" x 2" Plate	C	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.350 -0.300	1.0000	6.0000	6.81
*										
1" x 2" Plate	A	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.350 -0.300	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.450 -0.400	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	66.17 - 61.08	1	1	0.300 0.350	1.0000	6.0000	6.81
1" x 2" Plate	C	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.450 -0.400	1.0000	6.0000	6.81
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.300 0.350	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.400 0.450	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.450 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af	19.00 -	1	1	-0.500	6.0000	14.0000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)	0.00			-0.450			
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.150 -0.100	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.450 -0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	30.00 - 17.00	1	1	0.350 0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.500 -0.450	6.0000	14.0000	0.00
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.250 0.300	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.100 0.150	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	50.17 - 37.17	1	1	-0.400 -0.350	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.450 0.500	6.0000	14.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	71.00 - 61.00	1	1	-0.250 -0.200	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	71.00 - 61.00	1	1	-0.450 -0.400	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	71.00 - 61.00	1	1	0.400 0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	71.00 - 61.00	1	1	0.350 0.400	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
*										
* BS*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.400 0.450	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.450 0.500	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.350 0.400	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	47.83 - 32.83	1	1	0.400 0.450	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 -0.350	6.5000	15.5000	27.65

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 -0.350	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 0.350	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	60.08 - 55.25	1	1	0.200 0.250	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	60.08 - 55.25	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	60.08 - 55.25	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.500 -0.450	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.200 0.250	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.500 -0.450	8.5000	19.5000	36.16
CCI 8.5" x 4.25" Plate	A	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.200 0.250	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	A	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.400 -0.350	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	B	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.150 0.200	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	B	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.350 -0.300	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	C	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.100 0.150	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate *	C	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.500 -0.450	8.5000	25.5000	122.94
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.200 0.250	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.500 -0.450	8.5000	19.5000	36.16
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.150 0.200	6.5000	15.5000	27.65

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.150 0.200	6.5000	15.5000	27.65
CCI 6.5" x 4.25" Plate	A	No	Surface Af (CaAa)	85.83 - 80.50	1	1	0.050 0.100	6.5000	21.5000	94.01
CCI 6.5" x 4.25" Plate	B	No	Surface Af (CaAa)	85.83 - 80.50	1	1	0.000 0.050	6.5000	21.5000	94.01
CCI 6.5" x 4.25" Plate *	C	No	Surface Af (CaAa)	85.83 - 80.50	1	1	0.150 0.200	6.5000	21.5000	94.01
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.150 0.200	6.5000	15.5000	27.65
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 4" Plate	A	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.150 -0.100	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate	B	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate *	C	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.200 -0.150	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.200 -0.150	4.5000	11.0000	15.34
CCI 4.5" x 4" Plate	A	No	Surface Af (CaAa)	124.42 - 121.67	1	1	-0.150 -0.100	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate	B	No	Surface Af (CaAa)	124.42 - 121.67	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate	C	No	Surface Af	124.42 -	1	1	-0.200	4.5000	17.0000	61.26

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)	121.67			-0.150			
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.200 -0.150	4.5000	11.0000	15.34
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	61.46 - 58.00	1	1	-0.250 -0.200	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	61.46 - 58.00	1	1	-0.450 -0.400	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	61.46 - 58.00	1	1	0.400 0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	61.46 - 58.00	1	1	0.350 0.400	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	62.96 - 61.55	1	1	-0.250 -0.200	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	62.96 - 61.55	1	1	-0.450 -0.400	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	62.96 - 61.55	1	1	0.400 0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	62.96 - 61.55	1	1	0.350 0.400	4.5000	15.0000	45.94
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
****										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF5-50A(7/8)	B	No	No	Inside Pole	191.67 - 5.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
							2" Ice	0.00	0.33
***									
ATCB-B01-001(5/16)	B	No	No	Inside Pole	191.00 - 5.00	1	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
							1" Ice	0.00	0.07
							2" Ice	0.00	0.07
****									
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Inside Pole	184.00 - 5.00	1	No Ice	0.00	2.50
							1/2" Ice	0.00	2.50
							1" Ice	0.00	2.50
							2" Ice	0.00	2.50
HCS 6X12 4AWG(1-5/8)	C	No	No	Inside Pole	184.00 - 5.00	2	No Ice	0.00	2.40
							1/2" Ice	0.00	2.40
							1" Ice	0.00	2.40
							2" Ice	0.00	2.40
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	158.00 - 4.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
LDF6-50A(1-1/4)	C	No	No	Inside Pole	151.00 - 4.00	6	No Ice	0.00	0.60
							1/2" Ice	0.00	0.60
							1" Ice	0.00	0.60
							2" Ice	0.00	0.60
****									
LDF6-50A(1-1/4)	B	No	No	Inside Pole	151.00 - 4.00	6	No Ice	0.00	0.60
							1/2" Ice	0.00	0.60
							1" Ice	0.00	0.60
							2" Ice	0.00	0.60
FB-L98B-002-XXX(3/8)	B	No	No	Inside Pole	151.00 - 4.00	2	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
**									
PWRT-606-S(7/8)	B	No	No	Inside Pole	151.00 - 4.00	2	No Ice	0.00	0.89
							1/2" Ice	0.00	0.89
							1" Ice	0.00	0.89
							2" Ice	0.00	0.89
PWRT-608-S(13/16)	B	No	No	Inside Pole	151.00 - 4.00	4	No Ice	0.00	0.62
							1/2" Ice	0.00	0.62
							1" Ice	0.00	0.62
							2" Ice	0.00	0.62
FB-L98B-235-XXX(3/8)	B	No	No	Inside Pole	151.00 - 4.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	132.00 - 4.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
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ATCB-B01-001(5/16)	B	No	No	Inside Pole	90.00 - 4.00	1	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
							1" Ice	0.00	0.07
							2" Ice	0.00	0.07
LDF4-50A(1/2)	B	No	No	Inside Pole	90.00 - 4.00	2	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
LDF5-50A(7/8)	B	No	No	Inside Pole	90.00 - 4.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF5-50A(7/8)	B	No	No	Inside Pole	70.00 - 4.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
LDF4-50A(1/2)	B	No	No	Inside Pole	33.00 - 4.00	2	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
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Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	191.67-186.67	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.188	0.000	0.00
L2	186.67-181.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.191	0.000	0.02
L3	181.57-176.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.188	0.000	0.04
L4	176.57-171.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.188	0.000	0.04
L5	171.57-166.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.251	0.000	0.01
		C	0.000	0.000	0.188	0.000	0.04
L6	166.57-161.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.875	0.000	0.02
		C	0.000	0.000	0.188	0.000	0.04
L7	161.57-156.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	8.277	0.000	0.04
		C	0.000	0.000	0.188	0.000	0.04
L8	156.57-151.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.05
		C	0.000	0.000	0.188	0.000	0.04
L9	151.57-146.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.09
		C	0.000	0.000	0.188	0.000	0.05
L10	146.57-141.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.09
		C	0.000	0.000	0.188	0.000	0.06
L11	141.57-141.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.350	0.000	0.00
		C	0.000	0.000	0.006	0.000	0.00
L12	141.42-136.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.09
		C	0.000	0.000	0.188	0.000	0.06
L13	136.42-131.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.09
		C	0.000	0.000	0.188	0.000	0.06
L14	131.42-126.42	A	0.000	0.000	0.395	0.000	0.01
		B	0.000	0.000	12.050	0.000	0.11
		C	0.000	0.000	0.583	0.000	0.07
L15	126.42-121.42	A	0.000	0.000	2.541	0.000	0.20
		B	0.000	0.000	14.196	0.000	0.30

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	2.729	0.000	0.26
L16	121.42-121.17	A	0.000	0.000	0.113	0.000	0.00
		B	0.000	0.000	0.696	0.000	0.01
		C	0.000	0.000	0.122	0.000	0.01
L17	121.17-116.17	A	0.000	0.000	1.675	0.000	0.05
		B	0.000	0.000	13.330	0.000	0.14
		C	0.000	0.000	1.863	0.000	0.11
L18	116.17-111.17	A	0.000	0.000	0.844	0.000	0.00
		B	0.000	0.000	11.655	0.000	0.09
		C	0.000	0.000	0.188	0.000	0.06
L19	111.17-110.04	A	0.000	0.000	2.531	0.000	0.00
		B	0.000	0.000	2.622	0.000	0.02
		C	0.000	0.000	0.042	0.000	0.01
L20	110.04-109.79	A	0.000	0.000	0.563	0.000	0.00
		B	0.000	0.000	0.583	0.000	0.00
		C	0.000	0.000	0.009	0.000	0.00
L21	109.79-105.08	A	0.000	0.000	12.523	0.000	0.03
		B	0.000	0.000	12.904	0.000	0.12
		C	0.000	0.000	2.104	0.000	0.08
L22	105.08-104.83	A	0.000	0.000	0.832	0.000	0.00
		B	0.000	0.000	0.853	0.000	0.01
		C	0.000	0.000	0.279	0.000	0.01
L23	104.83-100.92	A	0.000	0.000	12.345	0.000	0.28
		B	0.000	0.000	14.068	0.000	0.35
		C	0.000	0.000	5.087	0.000	0.32
L24	100.92-100.67	A	0.000	0.000	0.250	0.000	0.01
		B	0.000	0.000	0.833	0.000	0.01
		C	0.000	0.000	0.259	0.000	0.01
L25	100.67-95.83	A	0.000	0.000	3.761	0.000	0.08
		B	0.000	0.000	15.029	0.000	0.17
		C	0.000	0.000	3.943	0.000	0.13
L26	95.83-95.58	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	0.770	0.000	0.00
		C	0.000	0.000	0.197	0.000	0.00
L27	95.58-90.58	A	0.000	0.000	4.375	0.000	0.00
		B	0.000	0.000	16.031	0.000	0.09
		C	0.000	0.000	4.563	0.000	0.06
L28	90.58-89.92	A	0.000	0.000	0.999	0.000	0.00
		B	0.000	0.000	2.551	0.000	0.01
		C	0.000	0.000	1.024	0.000	0.01
L29	89.92-89.67	A	0.000	0.000	0.438	0.000	0.00
		B	0.000	0.000	1.021	0.000	0.01
		C	0.000	0.000	0.447	0.000	0.01
L30	89.67-84.67	A	0.000	0.000	11.325	0.000	0.22
		B	0.000	0.000	22.980	0.000	0.31
		C	0.000	0.000	11.512	0.000	0.27
L31	84.67-80.83	A	0.000	0.000	9.104	0.000	0.44
		B	0.000	0.000	18.041	0.000	0.52
		C	0.000	0.000	9.248	0.000	0.49
L32	80.83-80.33	A	0.000	0.000	0.642	0.000	0.04
		B	0.000	0.000	1.808	0.000	0.05
		C	0.000	0.000	0.661	0.000	0.05
L33	80.33-80.08	A	0.000	0.000	0.410	0.000	0.01
		B	0.000	0.000	0.993	0.000	0.02
		C	0.000	0.000	0.419	0.000	0.01
L34	80.08-75.08	A	0.000	0.000	8.671	0.000	0.13
		B	0.000	0.000	20.326	0.000	0.22
		C	0.000	0.000	8.858	0.000	0.18
L35	75.08-70.08	A	0.000	0.000	12.297	0.000	0.24
		B	0.000	0.000	24.640	0.000	0.34
		C	0.000	0.000	12.484	0.000	0.30
L36	70.08-69.50	A	0.000	0.000	2.176	0.000	0.04
		B	0.000	0.000	3.972	0.000	0.05
		C	0.000	0.000	2.198	0.000	0.05
L37	69.50-69.25	A	0.000	0.000	0.933	0.000	0.02
		B	0.000	0.000	1.703	0.000	0.02
		C	0.000	0.000	0.942	0.000	0.02
L38	69.25-64.25	A	0.000	0.000	19.430	0.000	1.10
		B	0.000	0.000	35.155	0.000	1.21

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	19.618	0.000	1.15
L39	64.25-60.58	A	0.000	0.000	14.648	0.000	0.91
		B	0.000	0.000	27.292	0.000	1.09
		C	0.000	0.000	14.786	0.000	0.96
L40	60.58-60.33	A	0.000	0.000	0.563	0.000	0.02
		B	0.000	0.000	1.283	0.000	0.03
		C	0.000	0.000	0.572	0.000	0.02
L41	60.33-55.33	A	0.000	0.000	16.020	0.000	0.40
		B	0.000	0.000	28.959	0.000	0.53
		C	0.000	0.000	16.208	0.000	0.45
L42	55.33-52.17	A	0.000	0.000	3.593	0.000	0.01
		B	0.000	0.000	10.973	0.000	0.07
		C	0.000	0.000	3.712	0.000	0.04
L43	52.17-51.92	A	0.000	0.000	0.271	0.000	0.00
		B	0.000	0.000	0.854	0.000	0.01
		C	0.000	0.000	0.280	0.000	0.00
L44	51.92-46.92	A	0.000	0.000	11.228	0.000	0.07
		B	0.000	0.000	23.467	0.000	0.20
		C	0.000	0.000	14.666	0.000	0.13
L45	46.92-41.92	A	0.000	0.000	22.083	0.000	0.31
		B	0.000	0.000	34.572	0.000	0.45
		C	0.000	0.000	27.271	0.000	0.37
L46	41.92-40.23	A	0.000	0.000	6.729	0.000	0.10
		B	0.000	0.000	10.877	0.000	0.15
		C	0.000	0.000	8.476	0.000	0.12
L47	40.23-39.98	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.374	0.000	0.02
		C	0.000	0.000	1.051	0.000	0.02
L48	39.98-34.98	A	0.000	0.000	18.416	0.000	0.28
		B	0.000	0.000	30.071	0.000	0.38
		C	0.000	0.000	21.420	0.000	0.33
L49	34.98-29.98	A	0.000	0.000	9.682	0.000	0.12
		B	0.000	0.000	21.337	0.000	0.22
		C	0.000	0.000	9.886	0.000	0.17
L50	29.98-28.00	A	0.000	0.000	3.966	0.000	0.00
		B	0.000	0.000	8.588	0.000	0.04
		C	0.000	0.000	6.023	0.000	0.02
L51	28.00-27.75	A	0.000	0.000	0.500	0.000	0.00
		B	0.000	0.000	1.083	0.000	0.01
		C	0.000	0.000	0.759	0.000	0.00
L52	27.75-22.75	A	0.000	0.000	20.292	0.000	0.26
		B	0.000	0.000	31.947	0.000	0.37
		C	0.000	0.000	25.479	0.000	0.32
L53	22.75-20.08	A	0.000	0.000	10.445	0.000	0.15
		B	0.000	0.000	16.662	0.000	0.20
		C	0.000	0.000	13.213	0.000	0.18
L54	20.08-19.83	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.374	0.000	0.02
		C	0.000	0.000	1.051	0.000	0.02
L55	19.83-17.00	A	0.000	0.000	10.971	0.000	0.16
		B	0.000	0.000	17.575	0.000	0.21
		C	0.000	0.000	15.910	0.000	0.19
L56	17.00-16.75	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.374	0.000	0.02
		C	0.000	0.000	1.051	0.000	0.02
L57	16.75-11.65	A	0.000	0.000	13.940	0.000	0.23
		B	0.000	0.000	25.828	0.000	0.33
		C	0.000	0.000	20.243	0.000	0.28
L58	11.65-11.42	A	0.000	0.000	0.233	0.000	0.00
		B	0.000	0.000	0.776	0.000	0.00
		C	0.000	0.000	0.630	0.000	0.00
L59	11.42-9.40	A	0.000	0.000	3.007	0.000	0.00
		B	0.000	0.000	7.718	0.000	0.04
		C	0.000	0.000	5.465	0.000	0.02
L60	9.40-9.15	A	0.000	0.000	0.417	0.000	0.00
		B	0.000	0.000	0.999	0.000	0.01
		C	0.000	0.000	0.676	0.000	0.00
L61	9.15-4.83	A	0.000	0.000	7.188	0.000	0.00
		B	0.000	0.000	17.242	0.000	0.09

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	11.663	0.000	0.05
L62	4.83-4.58	A	0.000	0.000	0.417	0.000	0.00
		B	0.000	0.000	0.999	0.000	0.01
		C	0.000	0.000	0.676	0.000	0.00
L63	4.58-0.00	A	0.000	0.000	7.638	0.000	0.00
		B	0.000	0.000	9.697	0.000	0.02
		C	0.000	0.000	10.132	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	191.67-186.67	A	1.518	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	1.706	0.000	0.02
L2	186.67-181.57	A	1.514	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	1.736	0.000	0.04
L3	181.57-176.57	A	1.510	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	1.697	0.000	0.05
L4	176.57-171.57	A	1.506	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	1.693	0.000	0.05
L5	171.57-166.57	A	1.501	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.681	0.000	0.01
		C		0.000	0.000	1.689	0.000	0.05
L6	166.57-161.57	A	1.497	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	2.372	0.000	0.05
		C		0.000	0.000	1.684	0.000	0.05
L7	161.57-156.57	A	1.492	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	12.900	0.000	0.19
		C		0.000	0.000	1.680	0.000	0.05
L8	156.57-151.57	A	1.487	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	17.697	0.000	0.25
		C		0.000	0.000	1.675	0.000	0.05
L9	151.57-146.57	A	1.483	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	17.686	0.000	0.29
		C		0.000	0.000	1.670	0.000	0.07
L10	146.57-141.57	A	1.477	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	17.674	0.000	0.29
		C		0.000	0.000	1.665	0.000	0.07
L11	141.57-141.42	A	1.475	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.530	0.000	0.01
		C		0.000	0.000	0.050	0.000	0.00
L12	141.42-136.42	A	1.472	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	17.662	0.000	0.29
		C		0.000	0.000	1.660	0.000	0.07
L13	136.42-131.42	A	1.467	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	17.650	0.000	0.29
		C		0.000	0.000	1.654	0.000	0.07
L14	131.42-126.42	A	1.461	0.000	0.000	0.510	0.000	0.02
		B		0.000	0.000	18.147	0.000	0.31
		C		0.000	0.000	2.159	0.000	0.09
L15	126.42-121.42	A	1.455	0.000	0.000	3.327	0.000	0.26
		B		0.000	0.000	20.952	0.000	0.55
		C		0.000	0.000	4.970	0.000	0.33
L16	121.42-121.17	A	1.452	0.000	0.000	0.155	0.000	0.01
		B		0.000	0.000	1.036	0.000	0.02
		C		0.000	0.000	0.237	0.000	0.01
L17	121.17-116.17	A	1.449	0.000	0.000	2.176	0.000	0.08
		B		0.000	0.000	19.786	0.000	0.37
		C		0.000	0.000	3.812	0.000	0.15
L18	116.17-111.17	A	1.443	0.000	0.000	1.028	0.000	0.01
		B		0.000	0.000	17.596	0.000	0.29

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	1.630	0.000	0.07
L19	111.17-110.04	A	1.439	0.000	0.000	3.081	0.000	0.03
		B		0.000	0.000	3.957	0.000	0.07
		C		0.000	0.000	0.366	0.000	0.02
L20	110.04-109.79	A	1.438	0.000	0.000	0.685	0.000	0.01
		B		0.000	0.000	0.879	0.000	0.01
		C		0.000	0.000	0.081	0.000	0.00
L21	109.79-105.08	A	1.435	0.000	0.000	15.362	0.000	0.19
		B		0.000	0.000	19.025	0.000	0.34
		C		0.000	0.000	3.998	0.000	0.13
L22	105.08-104.83	A	1.431	0.000	0.000	1.030	0.000	0.02
		B		0.000	0.000	1.224	0.000	0.02
		C		0.000	0.000	0.427	0.000	0.01
L23	104.83-100.92	A	1.429	0.000	0.000	15.424	0.000	0.47
		B		0.000	0.000	20.177	0.000	0.60
		C		0.000	0.000	7.686	0.000	0.43
L24	100.92-100.67	A	1.426	0.000	0.000	0.329	0.000	0.01
		B		0.000	0.000	1.207	0.000	0.03
		C		0.000	0.000	0.410	0.000	0.02
L25	100.67-95.83	A	1.422	0.000	0.000	4.946	0.000	0.14
		B		0.000	0.000	21.913	0.000	0.41
		C		0.000	0.000	6.502	0.000	0.20
L26	95.83-95.58	A	1.418	0.000	0.000	0.258	0.000	0.00
		B		0.000	0.000	1.135	0.000	0.02
		C		0.000	0.000	0.339	0.000	0.01
L27	95.58-90.58	A	1.414	0.000	0.000	5.924	0.000	0.05
		B		0.000	0.000	23.456	0.000	0.34
		C		0.000	0.000	7.525	0.000	0.12
L28	90.58-89.92	A	1.410	0.000	0.000	1.293	0.000	0.01
		B		0.000	0.000	3.627	0.000	0.05
		C		0.000	0.000	1.506	0.000	0.02
L29	89.92-89.67	A	1.409	0.000	0.000	0.561	0.000	0.01
		B		0.000	0.000	1.437	0.000	0.02
		C		0.000	0.000	0.641	0.000	0.01
L30	89.67-84.67	A	1.405	0.000	0.000	14.273	0.000	0.37
		B		0.000	0.000	31.784	0.000	0.65
		C		0.000	0.000	15.866	0.000	0.44
L31	84.67-80.83	A	1.398	0.000	0.000	11.514	0.000	0.58
		B		0.000	0.000	24.929	0.000	0.80
		C		0.000	0.000	12.730	0.000	0.64
L32	80.83-80.33	A	1.394	0.000	0.000	0.796	0.000	0.05
		B		0.000	0.000	2.545	0.000	0.08
		C		0.000	0.000	0.955	0.000	0.06
L33	80.33-80.08	A	1.393	0.000	0.000	0.507	0.000	0.02
		B		0.000	0.000	1.382	0.000	0.03
		C		0.000	0.000	0.586	0.000	0.02
L34	80.08-75.08	A	1.389	0.000	0.000	10.839	0.000	0.23
		B		0.000	0.000	28.314	0.000	0.52
		C		0.000	0.000	12.415	0.000	0.30
L35	75.08-70.08	A	1.380	0.000	0.000	14.775	0.000	0.39
		B		0.000	0.000	33.061	0.000	0.68
		C		0.000	0.000	16.342	0.000	0.46
L36	70.08-69.50	A	1.374	0.000	0.000	2.594	0.000	0.07
		B		0.000	0.000	5.156	0.000	0.11
		C		0.000	0.000	2.776	0.000	0.08
L37	69.50-69.25	A	1.373	0.000	0.000	1.112	0.000	0.03
		B		0.000	0.000	2.211	0.000	0.05
		C		0.000	0.000	1.190	0.000	0.03
L38	69.25-64.25	A	1.368	0.000	0.000	23.445	0.000	1.36
		B		0.000	0.000	46.077	0.000	1.72
		C		0.000	0.000	25.001	0.000	1.43
L39	64.25-60.58	A	1.359	0.000	0.000	18.035	0.000	1.13
		B		0.000	0.000	36.324	0.000	1.51
		C		0.000	0.000	19.169	0.000	1.18
L40	60.58-60.33	A	1.355	0.000	0.000	0.678	0.000	0.03
		B		0.000	0.000	1.722	0.000	0.05
		C		0.000	0.000	0.755	0.000	0.03
L41	60.33-55.33	A	1.349	0.000	0.000	19.007	0.000	0.60
		B		0.000	0.000	38.015	0.000	0.94

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	20.543	0.000	0.67
L42	55.33-52.17	A	1.339	0.000	0.000	4.463	0.000	0.04
		B		0.000	0.000	15.456	0.000	0.22
		C		0.000	0.000	5.429	0.000	0.09
L43	52.17-51.92	A	1.334	0.000	0.000	0.337	0.000	0.00
		B		0.000	0.000	1.205	0.000	0.02
		C		0.000	0.000	0.414	0.000	0.01
L44	51.92-46.92	A	1.328	0.000	0.000	14.294	0.000	0.20
		B		0.000	0.000	33.138	0.000	0.52
		C		0.000	0.000	19.546	0.000	0.30
L45	46.92-41.92	A	1.313	0.000	0.000	27.227	0.000	0.54
		B		0.000	0.000	46.674	0.000	0.89
		C		0.000	0.000	34.471	0.000	0.66
L46	41.92-40.23	A	1.303	0.000	0.000	8.203	0.000	0.17
		B		0.000	0.000	14.593	0.000	0.28
		C		0.000	0.000	10.638	0.000	0.21
L47	40.23-39.98	A	1.300	0.000	0.000	0.917	0.000	0.02
		B		0.000	0.000	1.780	0.000	0.04
		C		0.000	0.000	1.278	0.000	0.03
L48	39.98-34.98	A	1.291	0.000	0.000	21.816	0.000	0.45
		B		0.000	0.000	39.071	0.000	0.73
		C		0.000	0.000	26.523	0.000	0.55
L49	34.98-29.98	A	1.273	0.000	0.000	11.705	0.000	0.21
		B		0.000	0.000	28.920	0.000	0.48
		C		0.000	0.000	13.185	0.000	0.28
L50	29.98-28.00	A	1.259	0.000	0.000	4.749	0.000	0.04
		B		0.000	0.000	11.563	0.000	0.14
		C		0.000	0.000	7.589	0.000	0.08
L51	28.00-27.75	A	1.254	0.000	0.000	0.598	0.000	0.00
		B		0.000	0.000	1.457	0.000	0.02
		C		0.000	0.000	0.956	0.000	0.01
L52	27.75-22.75	A	1.241	0.000	0.000	23.807	0.000	0.45
		B		0.000	0.000	40.950	0.000	0.72
		C		0.000	0.000	30.943	0.000	0.56
L53	22.75-20.08	A	1.221	0.000	0.000	12.175	0.000	0.24
		B		0.000	0.000	21.294	0.000	0.38
		C		0.000	0.000	15.964	0.000	0.30
L54	20.08-19.83	A	1.212	0.000	0.000	0.907	0.000	0.02
		B		0.000	0.000	1.761	0.000	0.03
		C		0.000	0.000	1.262	0.000	0.03
L55	19.83-17.00	A	1.203	0.000	0.000	12.754	0.000	0.25
		B		0.000	0.000	22.418	0.000	0.40
		C		0.000	0.000	19.245	0.000	0.33
L56	17.00-16.75	A	1.192	0.000	0.000	0.931	0.000	0.02
		B		0.000	0.000	1.783	0.000	0.03
		C		0.000	0.000	1.310	0.000	0.03
L57	16.75-11.65	A	1.172	0.000	0.000	16.424	0.000	0.34
		B		0.000	0.000	33.751	0.000	0.61
		C		0.000	0.000	25.377	0.000	0.46
L58	11.65-11.42	A	1.148	0.000	0.000	0.286	0.000	0.00
		B		0.000	0.000	1.076	0.000	0.01
		C		0.000	0.000	0.830	0.000	0.01
L59	11.42-9.40	A	1.136	0.000	0.000	3.755	0.000	0.03
		B		0.000	0.000	10.588	0.000	0.13
		C		0.000	0.000	7.180	0.000	0.07
L60	9.40-9.15	A	1.123	0.000	0.000	0.521	0.000	0.00
		B		0.000	0.000	1.365	0.000	0.02
		C		0.000	0.000	0.886	0.000	0.01
L61	9.15-4.83	A	1.092	0.000	0.000	8.952	0.000	0.06
		B		0.000	0.000	23.449	0.000	0.27
		C		0.000	0.000	15.190	0.000	0.15
L62	4.83-4.58	A	1.049	0.000	0.000	0.516	0.000	0.00
		B		0.000	0.000	1.351	0.000	0.02
		C		0.000	0.000	0.873	0.000	0.01
L63	4.58-0.00	A	0.976	0.000	0.000	9.355	0.000	0.05
		B		0.000	0.000	12.766	0.000	0.10
		C		0.000	0.000	12.250	0.000	0.07

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	191.67-186.67	-0.0038	0.3675	-0.0134	1.2820
L2	186.67-181.57	-0.0039	0.3693	-0.0143	1.3629
L3	181.57-176.57	-0.0039	0.3693	-0.0142	1.3603
L4	176.57-171.57	-0.0039	0.3693	-0.0142	1.3576
L5	171.57-166.57	0.2003	-0.1032	0.2111	0.7920
L6	166.57-161.57	0.6454	-1.1337	0.6954	-0.4199
L7	161.57-156.57	4.2058	-6.5447	3.0557	-4.3283
L8	156.57-151.57	4.8491	-7.5223	3.5819	-5.2000
L9	151.57-146.57	4.8491	-7.5223	3.5826	-5.2020
L10	146.57-141.57	4.8491	-7.5223	3.5833	-5.2040
L11	141.57-141.42	4.8491	-7.5223	3.5837	-5.2051
L12	141.42-136.42	5.9432	-9.2184	4.4003	-6.3705
L13	136.42-131.42	5.9432	-9.2184	4.4007	-6.3724
L14	131.42-126.42	5.7337	-8.7072	4.3182	-6.1396
L15	126.42-121.42	4.9133	-6.6722	3.9572	-5.0908
L16	121.42-121.17	4.9885	-6.8888	3.9740	-5.1662
L17	121.17-116.17	5.6472	-8.0194	4.4297	-5.9310
L18	116.17-111.17	5.4528	-8.9225	4.1922	-6.3131
L19	111.17-110.04	-2.1531	-0.9402	-0.8624	-1.2884
L20	110.04-109.79	-2.1531	-0.9402	-0.8624	-1.2886
L21	109.79-105.08	-1.8476	-0.6695	-0.7809	-1.0394
L22	105.08-104.83	-1.2217	-0.3322	-0.6677	-0.7594
L23	104.83-100.92	-0.6457	-0.8109	-0.1431	-1.1861
L24	100.92-100.67	3.1186	-4.6932	3.4880	-4.8973
L25	100.67-95.83	4.4965	-6.8414	3.7580	-5.3419
L26	95.83-95.58	4.5942	-7.1255	3.7798	-5.4743
L27	95.58-90.58	4.3610	-6.7638	3.6482	-5.2846
L28	90.58-89.92	2.7545	-4.2721	3.0990	-4.4899
L29	89.92-89.67	2.3505	-4.1604	2.7104	-4.3773
L30	89.67-84.67	1.6691	-3.9749	2.0419	-4.1871
L31	84.67-80.83	1.5893	-3.8670	1.9494	-4.0750
L32	80.83-80.33	2.2763	-5.3747	2.7904	-5.7190
L33	80.33-80.08	2.3816	-4.9395	2.8761	-5.2654
L34	80.08-75.08	3.1396	-4.7498	3.5999	-5.0597
L35	75.08-70.08	3.3386	-4.0087	3.7254	-4.3490
L36	70.08-69.50	0.9826	-2.7659	1.3272	-3.0694
L37	69.50-69.25	0.9826	-2.7659	1.3272	-3.0694
L38	69.25-64.25	1.0687	-2.6653	1.4276	-2.9111
L39	64.25-60.58	0.3501	-2.3365	0.6813	-2.4993
L40	60.58-60.33	1.2287	-3.9035	1.5853	-4.2780
L41	60.33-55.33	2.1666	-3.3770	2.4851	-3.7251
L42	55.33-52.17	4.3083	-6.2820	3.7534	-5.1413
L43	52.17-51.92	4.3211	-6.3560	3.7552	-5.1781
L44	51.92-46.92	3.9561	-4.9794	4.4982	-4.9534
L45	46.92-41.92	3.8646	-4.7125	4.3110	-4.6201
L46	41.92-40.23	4.0909	-5.1602	4.5250	-5.1311
L47	40.23-39.98	4.5200	-6.3216	4.8637	-6.6388
L48	39.98-34.98	3.6415	-5.1590	3.9527	-5.4396
L49	34.98-29.98	3.3413	-5.0333	3.7913	-5.4283
L50	29.98-28.00	-0.5460	-6.3115	0.1350	-6.5997
L51	28.00-27.75	-0.5460	-6.3115	0.1346	-6.6007
L52	27.75-22.75	-0.5133	-3.9179	-0.0304	-4.2330
L53	22.75-20.08	-0.5312	-3.9738	-0.0393	-4.3061
L54	20.08-19.83	-0.5980	-4.4739	-0.0450	-4.8661
L55	19.83-17.00	0.3243	-4.3415	0.8338	-4.6822
L56	17.00-16.75	3.2699	-3.3694	3.7066	-3.8105
L57	16.75-11.65	3.1817	-3.5343	3.6124	-3.9732
L58	11.65-11.42	3.5065	-5.0163	3.9478	-5.4271
L59	11.42-9.40	4.1509	-6.9791	4.5864	-7.4442
L60	9.40-9.15	4.3653	-7.6321	4.7975	-8.1144
L61	9.15-4.83	4.3653	-7.6321	4.7957	-8.1206
L62	4.83-4.58	4.3653	-7.6321	4.7931	-8.1290
L63	4.58-0.00	3.6979	-5.7099	4.1356	-6.5483

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	46	Safety Line 3/8	186.67 - 191.67	1.0000	1.0000
L2	46	Safety Line 3/8	181.57 - 186.67	1.0000	1.0000
L3	46	Safety Line 3/8	176.57 - 181.57	1.0000	1.0000
L4	46	Safety Line 3/8	171.57 - 176.57	1.0000	1.0000
L5	8	CU12PSM6P4XXX(1-3/4)	166.57 - 168.00	1.0000	1.0000
L5	46	Safety Line 3/8	166.57 - 171.57	1.0000	1.0000
L6	8	CU12PSM6P4XXX(1-3/4)	161.57 - 166.57	1.0000	1.0000
L6	46	Safety Line 3/8	161.57 - 166.57	1.0000	1.0000
L7	8	CU12PSM6P4XXX(1-3/4)	156.57 - 161.57	1.0000	1.0000
L7	10	AL7-50(1-5/8)	156.57 - 160.00	1.0000	1.0000
L7	46	Safety Line 3/8	156.57 - 161.57	1.0000	1.0000
L8	8	CU12PSM6P4XXX(1-3/4)	151.57 - 156.57	1.0000	1.0000
L8	10	AL7-50(1-5/8)	151.57 - 156.57	1.0000	1.0000
L8	46	Safety Line 3/8	151.57 - 156.57	1.0000	1.0000
L9	8	CU12PSM6P4XXX(1-3/4)	146.57 - 151.57	1.0000	1.0000
L9	10	AL7-50(1-5/8)	146.57 - 151.57	1.0000	1.0000
L9	46	Safety Line 3/8	146.57 - 151.57	1.0000	1.0000
L10	8	CU12PSM6P4XXX(1-3/4)	141.57 - 146.57	1.0000	1.0000
L10	10	AL7-50(1-5/8)	141.57 - 146.57	1.0000	1.0000
L10	46	Safety Line 3/8	141.57 - 146.57	1.0000	1.0000
L11	8	CU12PSM6P4XXX(1-3/4)	141.42 - 141.57	1.0000	1.0000
L11	10	AL7-50(1-5/8)	141.42 - 141.57	1.0000	1.0000
L11	46	Safety Line 3/8	141.42 - 141.57	1.0000	1.0000
L12	8	CU12PSM6P4XXX(1-3/4)	136.42 - 141.42	1.0000	1.0000
L12	10	AL7-50(1-5/8)	136.42 - 141.42	1.0000	1.0000
L12	46	Safety Line 3/8	136.42 - 141.42	1.0000	1.0000
L13	8	CU12PSM6P4XXX(1-3/4)	131.42 - 136.42	1.0000	1.0000
L13	10	AL7-50(1-5/8)	131.42 - 136.42	1.0000	1.0000
L13	46	Safety Line 3/8	131.42 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	8	CU12PSM6P4XXX(1-3/4)	136.42 126.42 - 131.42	1.0000	1.0000
L14	10	AL7-50(1-5/8)	126.42 - 131.42	1.0000	1.0000
L14	46	Safety Line 3/8	126.42 - 131.42	1.0000	1.0000
L14	199	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L14	200	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L14	201	CCI 4.5" x 1" Plate	126.42 - 127.17	1.0000	1.0000
L15	8	CU12PSM6P4XXX(1-3/4)	121.42 - 126.42	1.0000	1.0000
L15	10	AL7-50(1-5/8)	121.42 - 126.42	1.0000	1.0000
L15	46	Safety Line 3/8	121.42 - 126.42	1.0000	1.0000
L15	191	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	192	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	193	CCI 4.5" x 1" Plate	121.42 - 121.67	1.0000	1.0000
L15	195	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	196	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	197	CCI 4.5" x 4" Plate	121.67 - 124.42	1.0000	1.0000
L15	199	CCI 4.5" x 1" Plate	124.42 - 126.42	1.0000	1.0000
L15	200	CCI 4.5" x 1" Plate	124.42 - 126.42	1.0000	1.0000
L15	201	CCI 4.5" x 1" Plate	124.42 - 126.42	1.0000	1.0000
L16	8	CU12PSM6P4XXX(1-3/4)	121.17 - 121.42	1.0000	1.0000
L16	10	AL7-50(1-5/8)	121.17 - 121.42	1.0000	1.0000
L16	46	Safety Line 3/8	121.17 - 121.42	1.0000	1.0000
L16	191	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L16	192	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L16	193	CCI 4.5" x 1" Plate	121.17 - 121.42	1.0000	1.0000
L17	8	CU12PSM6P4XXX(1-3/4)	116.17 - 121.17	1.0000	1.0000
L17	10	AL7-50(1-5/8)	116.17 - 121.17	1.0000	1.0000
L17	46	Safety Line 3/8	116.17 - 121.17	1.0000	1.0000
L17	187	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	188	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	189	CCI 4.5" x 1" Plate	117.92 - 120.67	1.0000	1.0000
L17	191	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L17	192	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L17	193	CCI 4.5" x 1" Plate	120.67 - 121.17	1.0000	1.0000
L18	8	CU12PSM6P4XXX(1-3/4)	111.17 - 116.17	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L18	10	AL7-50(1-5/8)	111.17 - 116.17	1.0000	1.0000
L18	46	Safety Line 3/8	111.17 - 116.17	1.0000	1.0000
L18	104	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L18	105	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L18	106	CCI 4.5" x 1" Plate	111.17 - 111.54	1.0000	1.0000
L19	8	CU12PSM6P4XXX(1-3/4)	110.04 - 111.17	1.0000	1.0000
L19	10	AL7-50(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	46	Safety Line 3/8	110.04 - 111.17	1.0000	1.0000
L19	104	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L19	105	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L19	106	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L20	8	CU12PSM6P4XXX(1-3/4)	109.79 - 110.04	1.0000	1.0000
L20	10	AL7-50(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	46	Safety Line 3/8	109.79 - 110.04	1.0000	1.0000
L20	104	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L20	105	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L20	106	CCI 4.5" x 1" Plate	109.79 - 110.04	1.0000	1.0000
L21	8	CU12PSM6P4XXX(1-3/4)	105.08 - 109.79	1.0000	1.0000
L21	10	AL7-50(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	46	Safety Line 3/8	105.08 - 109.79	1.0000	1.0000
L21	66	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	67	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	68	CCI 4" x 0.75" Plate	105.08 - 106.58	1.0000	1.0000
L21	104	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	105	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	106	CCI 4.5" x 1" Plate	105.08 - 109.79	1.0000	1.0000
L21	183	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L21	184	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L21	185	CCI 4.5" x 1" Plate	105.08 - 107.17	1.0000	1.0000
L22	8	CU12PSM6P4XXX(1-3/4)	104.83 - 105.08	1.0000	1.0000
L22	10	AL7-50(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	46	Safety Line 3/8	104.83 - 105.08	1.0000	1.0000
L22	66	CCI 4" x 0.75" Plate	104.83 - 105.08	1.0000	1.0000
L22	67	CCI 4" x 0.75" Plate	104.83 - 105.08	1.0000	1.0000
L22	68	CCI 4" x 0.75" Plate	104.83 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L22	104	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L22	105	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L22	106	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L22	183	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L22	184	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L22	185	CCI 4.5" x 1" Plate	105.08 104.83 -	1.0000	1.0000
L23	8	CU12PSM6P4XXX(1-3/4)	105.08 100.92 -	1.0000	1.0000
L23	10	AL7-50(1-5/8)	104.83 100.92 -	1.0000	1.0000
L23	46	Safety Line 3/8	104.83 100.92 -	1.0000	1.0000
L23	66	CCI 4" x 0.75" Plate	104.83 101.58 -	1.0000	1.0000
L23	67	CCI 4" x 0.75" Plate	104.83 101.58 -	1.0000	1.0000
L23	68	CCI 4" x 0.75" Plate	104.83 101.58 -	1.0000	1.0000
L23	104	CCI 4.5" x 1" Plate	104.83 101.54 -	1.0000	1.0000
L23	105	CCI 4.5" x 1" Plate	104.83 101.54 -	1.0000	1.0000
L23	106	CCI 4.5" x 1" Plate	104.83 101.54 -	1.0000	1.0000
L23	175	CCI 4.5" x 1" Plate	104.83 100.92 -	1.0000	1.0000
L23	176	CCI 4.5" x 1" Plate	101.42 100.92 -	1.0000	1.0000
L23	177	CCI 4.5" x 1" Plate	101.42 100.92 -	1.0000	1.0000
L23	179	CCI 4.5" x 4" Plate	101.42 101.42 -	1.0000	1.0000
L23	180	CCI 4.5" x 4" Plate	104.42 101.42 -	1.0000	1.0000
L23	181	CCI 4.5" x 4" Plate	104.42 101.42 -	1.0000	1.0000
L23	183	CCI 4.5" x 1" Plate	104.42 104.42 -	1.0000	1.0000
L23	184	CCI 4.5" x 1" Plate	104.83 104.42 -	1.0000	1.0000
L23	185	CCI 4.5" x 1" Plate	104.83 104.42 -	1.0000	1.0000
L23	221	CCI 4.5" x 1" Plate	104.83 100.92 -	1.0000	1.0000
L23	222	CCI 4.5" x 1" Plate	101.79 100.92 -	1.0000	1.0000
L23	223	CCI 4.5" x 1" Plate	101.79 100.92 -	1.0000	1.0000
L23	225	CCI 4.5" x 3" Plate	101.79 101.79 -	1.0000	1.0000
L23	226	CCI 4.5" x 3" Plate	103.29 101.79 -	1.0000	1.0000
L23	227	CCI 4.5" x 3" Plate	103.29 101.79 -	1.0000	1.0000
L24	8	CU12PSM6P4XXX(1-3/4)	103.29 100.67 -	1.0000	1.0000
L24	10	AL7-50(1-5/8)	100.92 100.67 -	1.0000	1.0000
L24	46	Safety Line 3/8	100.92 100.67 -	1.0000	1.0000
L24	175	CCI 4.5" x 1" Plate	100.92 100.67 -	1.0000	1.0000
			100.92		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	176	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	177	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	221	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	222	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L24	223	CCI 4.5" x 1" Plate	100.67 - 100.92	1.0000	1.0000
L25	8	CU12PSM6P4XXX(1-3/4)	95.83 - 100.67	1.0000	1.0000
L25	10	AL7-50(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	46	Safety Line 3/8	95.83 - 100.67	1.0000	1.0000
L25	100	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	101	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	102	CCI 4.5" x 1" Plate	95.83 - 97.33	1.0000	1.0000
L25	171	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	172	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	173	CCI 4.5" x 1" Plate	97.92 - 100.42	1.0000	1.0000
L25	175	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	176	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	177	CCI 4.5" x 1" Plate	100.42 - 100.67	1.0000	1.0000
L25	221	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L25	222	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L25	223	CCI 4.5" x 1" Plate	98.42 - 100.67	1.0000	1.0000
L26	8	CU12PSM6P4XXX(1-3/4)	95.58 - 95.83	1.0000	1.0000
L26	10	AL7-50(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	46	Safety Line 3/8	95.58 - 95.83	1.0000	1.0000
L26	100	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L26	101	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L26	102	CCI 4.5" x 1" Plate	95.58 - 95.83	1.0000	1.0000
L27	8	CU12PSM6P4XXX(1-3/4)	90.58 - 95.58	1.0000	1.0000
L27	10	AL7-50(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	46	Safety Line 3/8	90.58 - 95.58	1.0000	1.0000
L27	100	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	101	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	102	CCI 4.5" x 1" Plate	90.58 - 95.58	1.0000	1.0000
L27	108	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	109	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	110	CCI 4.5" x 1" Plate	90.58 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			91.42		
L28	8	CU12PSM6P4XXX(1-3/4)	89.92 - 90.58	1.0000	1.0000
L28	10	AL7-50(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	46	Safety Line 3/8	89.92 - 90.58	1.0000	1.0000
L28	100	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	101	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	102	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	108	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	109	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L28	110	CCI 4.5" x 1" Plate	89.92 - 90.58	1.0000	1.0000
L29	8	CU12PSM6P4XXX(1-3/4)	89.67 - 89.92	1.0000	1.0000
L29	10	AL7-50(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	46	Safety Line 3/8	89.67 - 89.92	1.0000	1.0000
L29	100	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	101	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	102	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	108	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	109	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	110	CCI 4.5" x 1" Plate	89.67 - 89.92	1.0000	1.0000
L29	167	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L29	168	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L29	169	CCI 6.5" x 1.25" Plate	89.67 - 89.75	1.0000	1.0000
L30	8	CU12PSM6P4XXX(1-3/4)	84.67 - 89.67	1.0000	1.0000
L30	10	AL7-50(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	46	Safety Line 3/8	84.67 - 89.67	1.0000	1.0000
L30	100	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	101	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	102	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	108	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	109	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	110	CCI 4.5" x 1" Plate	84.67 - 89.67	1.0000	1.0000
L30	163	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	164	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	165	CCI 6.5" x 4.25" Plate	84.67 - 85.83	1.0000	1.0000
L30	167	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L30	168	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000
L30	169	CCI 6.5" x 1.25" Plate	85.83 - 89.67	1.0000	1.0000
L31	8	CU12PSM6P4XXX(1-3/4)	80.83 - 84.67	1.0000	1.0000
L31	10	AL7-50(1-5/8)	80.83 - 84.67	1.0000	1.0000
L31	46	Safety Line 3/8	80.83 - 84.67	1.0000	1.0000
L31	100	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	101	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	102	CCI 4.5" x 1" Plate	81.33 - 84.67	1.0000	1.0000
L31	108	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	109	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	110	CCI 4.5" x 1" Plate	81.42 - 84.67	1.0000	1.0000
L31	163	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	164	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	165	CCI 6.5" x 4.25" Plate	80.83 - 84.67	1.0000	1.0000
L31	213	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	214	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	215	CCI 4.5" x 1" Plate	80.83 - 81.71	1.0000	1.0000
L31	217	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L31	218	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L31	219	CCI 4.5" x 3" Plate	81.71 - 83.20	1.0000	1.0000
L32	8	CU12PSM6P4XXX(1-3/4)	80.33 - 80.83	1.0000	1.0000
L32	10	AL7-50(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	46	Safety Line 3/8	80.33 - 80.83	1.0000	1.0000
L32	159	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	160	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	161	CCI 6.5" x 1.25" Plate	80.33 - 80.50	1.0000	1.0000
L32	163	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	164	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	165	CCI 6.5" x 4.25" Plate	80.50 - 80.83	1.0000	1.0000
L32	213	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000
L32	214	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000
L32	215	CCI 4.5" x 1" Plate	80.33 - 80.83	1.0000	1.0000
L33	8	CU12PSM6P4XXX(1-3/4)	80.08 - 80.33	1.0000	1.0000
L33	10	AL7-50(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	46	Safety Line 3/8	80.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L33	62	CCI 6" x 1" Plate	80.33 80.08 - 80.17	1.0000	1.0000
L33	63	CCI 6" x 1" Plate	80.08 - 80.17	1.0000	1.0000
L33	64	CCI 6" x 1" Plate	80.08 - 80.17	1.0000	1.0000
L33	155	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	156	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	157	CCI 6.5" x 1.25" Plate	80.08 - 80.33	1.0000	1.0000
L33	213	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L33	214	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L33	215	CCI 4.5" x 1" Plate	80.08 - 80.33	1.0000	1.0000
L34	8	CU12PSM6P4XXX(1-3/4)	75.08 - 80.08	1.0000	1.0000
L34	10	AL7-50(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	46	Safety Line 3/8	75.08 - 80.08	1.0000	1.0000
L34	62	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	63	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	64	CCI 6" x 1" Plate	75.08 - 80.08	1.0000	1.0000
L34	155	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	156	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	157	CCI 6.5" x 1.25" Plate	76.50 - 80.08	1.0000	1.0000
L34	213	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L34	214	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L34	215	CCI 4.5" x 1" Plate	78.33 - 80.08	1.0000	1.0000
L35	8	CU12PSM6P4XXX(1-3/4)	70.08 - 75.08	1.0000	1.0000
L35	10	AL7-50(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	46	Safety Line 3/8	70.08 - 75.08	1.0000	1.0000
L35	62	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	63	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	64	CCI 6" x 1" Plate	70.08 - 75.08	1.0000	1.0000
L35	95	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	96	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	97	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	98	CCI 4.5" x 1" Plate	70.08 - 71.00	1.0000	1.0000
L35	148	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	149	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	150	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L35	151	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	152	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L35	153	CCI 8.5" x 1.25" Plate	70.08 - 73.42	1.0000	1.0000
L36	8	CU12PSM6P4XXX(1-3/4)	69.50 - 70.08	1.0000	1.0000
L36	10	AL7-50(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	46	Safety Line 3/8	69.50 - 70.08	1.0000	1.0000
L36	62	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	63	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	64	CCI 6" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	95	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	96	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	97	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	98	CCI 4.5" x 1" Plate	69.50 - 70.08	1.0000	1.0000
L36	148	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	149	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	150	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	151	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	152	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L36	153	CCI 8.5" x 1.25" Plate	69.50 - 70.08	1.0000	1.0000
L37	8	CU12PSM6P4XXX(1-3/4)	69.25 - 69.50	1.0000	1.0000
L37	10	AL7-50(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	46	Safety Line 3/8	69.25 - 69.50	1.0000	1.0000
L37	62	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	63	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	64	CCI 6" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	95	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	96	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	97	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	98	CCI 4.5" x 1" Plate	69.25 - 69.50	1.0000	1.0000
L37	148	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	149	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	150	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	151	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	152	CCI 8.5" x 1.25" Plate	69.25 - 69.50	1.0000	1.0000
L37	153	CCI 8.5" x 1.25" Plate	69.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L38	8	CU12PSM6P4XXX(1-3/4)	69.50 64.25 - 69.25	1.0000	1.0000
L38	10	AL7-50(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	46	Safety Line 3/8	64.25 - 69.25	1.0000	1.0000
L38	62	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	63	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	64	CCI 6" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	75	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	76	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	77	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	78	1" x 2" Plate	64.25 - 66.17	1.0000	1.0000
L38	95	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	96	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	97	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	98	CCI 4.5" x 1" Plate	64.25 - 69.25	1.0000	1.0000
L38	141	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	142	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	143	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	144	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	145	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	146	CCI 8.5" x 4.25" Plate	64.25 - 68.42	1.0000	1.0000
L38	148	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	149	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	150	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	151	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	152	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L38	153	CCI 8.5" x 1.25" Plate	68.42 - 69.25	1.0000	1.0000
L39	8	CU12PSM6P4XXX(1-3/4)	60.58 - 64.25	1.0000	1.0000
L39	10	AL7-50(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	46	Safety Line 3/8	60.58 - 64.25	1.0000	1.0000
L39	62	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	63	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	64	CCI 6" x 1" Plate	61.17 - 64.25	1.0000	1.0000
L39	75	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	76	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L39	77	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	78	1" x 2" Plate	61.08 - 64.25	1.0000	1.0000
L39	95	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	96	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	97	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	98	CCI 4.5" x 1" Plate	61.00 - 64.25	1.0000	1.0000
L39	134	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	135	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	136	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	137	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	138	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	139	CCI 8.5" x 1.25" Plate	60.58 - 61.08	1.0000	1.0000
L39	141	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	142	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	143	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	144	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	145	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	146	CCI 8.5" x 4.25" Plate	61.08 - 64.25	1.0000	1.0000
L39	203	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	204	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	205	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	206	CCI 4.5" x 1" Plate	60.58 - 61.46	1.0000	1.0000
L39	208	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	209	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	210	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L39	211	CCI 4.5" x 3" Plate	61.55 - 62.96	1.0000	1.0000
L40	8	CU12PSM6P4XXX(1-3/4)	60.33 - 60.58	1.0000	1.0000
L40	10	AL7-50(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	46	Safety Line 3/8	60.33 - 60.58	1.0000	1.0000
L40	134	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	135	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	136	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	137	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	138	CCI 8.5" x 1.25" Plate	60.33 - 60.58	1.0000	1.0000
L40	139	CCI 8.5" x 1.25" Plate	60.33 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L40	203	CCI 4.5" x 1" Plate	60.58 60.33 - 60.58	1.0000	1.0000
L40	204	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	205	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L40	206	CCI 4.5" x 1" Plate	60.33 - 60.58	1.0000	1.0000
L41	8	CU12PSM6P4XXX(1-3/4)	55.33 - 60.33	1.0000	1.0000
L41	10	AL7-50(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	46	Safety Line 3/8	55.33 - 60.33	1.0000	1.0000
L41	58	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	59	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	60	CCI 6.5" x 1.25" Plate	55.33 - 59.92	1.0000	1.0000
L41	127	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	128	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	129	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	130	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	131	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	132	CCI 8.5" x 1.25" Plate	55.33 - 60.08	1.0000	1.0000
L41	134	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	135	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	136	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	137	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	138	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	139	CCI 8.5" x 1.25" Plate	60.08 - 60.33	1.0000	1.0000
L41	203	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	204	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	205	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L41	206	CCI 4.5" x 1" Plate	58.00 - 60.33	1.0000	1.0000
L42	8	CU12PSM6P4XXX(1-3/4)	52.17 - 55.33	1.0000	1.0000
L42	10	AL7-50(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	46	Safety Line 3/8	52.17 - 55.33	1.0000	1.0000
L42	58	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	59	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	60	CCI 6.5" x 1.25" Plate	52.17 - 55.33	1.0000	1.0000
L42	127	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	128	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L42	129	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	130	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	131	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L42	132	CCI 8.5" x 1.25" Plate	55.25 - 55.33	1.0000	1.0000
L43	8	CU12PSM6P4XXX(1-3/4)	51.92 - 52.17	1.0000	1.0000
L43	10	AL7-50(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	46	Safety Line 3/8	51.92 - 52.17	1.0000	1.0000
L43	58	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L43	59	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L43	60	CCI 6.5" x 1.25" Plate	51.92 - 52.17	1.0000	1.0000
L44	8	CU12PSM6P4XXX(1-3/4)	46.92 - 51.92	1.0000	1.0000
L44	10	AL7-50(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	46	Safety Line 3/8	46.92 - 51.92	1.0000	1.0000
L44	58	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	59	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	60	CCI 6.5" x 1.25" Plate	46.92 - 51.92	1.0000	1.0000
L44	70	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	71	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	72	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	73	1" x 2" Plate	46.92 - 50.42	1.0000	1.0000
L44	90	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	91	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	92	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	93	CCI 6" x 1" Plate	46.92 - 50.17	1.0000	1.0000
L44	120	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	121	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	122	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	123	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	124	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L44	125	CCI 6.5" x 1.25" Plate	46.92 - 47.83	1.0000	1.0000
L45	8	CU12PSM6P4XXX(1-3/4)	41.92 - 46.92	1.0000	1.0000
L45	10	AL7-50(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	46	Safety Line 3/8	41.92 - 46.92	1.0000	1.0000
L45	58	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	59	CCI 6.5" x 1.25" Plate	41.92 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L45	60	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	70	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	71	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	72	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	73	1" x 2" Plate	41.92 - 46.92	1.0000	1.0000
L45	90	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	91	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	92	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	93	CCI 6" x 1" Plate	41.92 - 46.92	1.0000	1.0000
L45	120	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	121	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	122	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	123	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	124	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L45	125	CCI 6.5" x 1.25" Plate	41.92 - 46.92	1.0000	1.0000
L46	8	CU12PSM6P4XXX(1-3/4)	40.23 - 41.92	1.0000	1.0000
L46	10	AL7-50(1-5/8)	40.23 - 41.92	1.0000	1.0000
L46	46	Safety Line 3/8	40.23 - 41.92	1.0000	1.0000
L46	58	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	59	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	60	CCI 6.5" x 1.25" Plate	40.83 - 41.92	1.0000	1.0000
L46	70	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	71	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	72	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	73	1" x 2" Plate	40.58 - 41.92	1.0000	1.0000
L46	90	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	91	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	92	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	93	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	120	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	121	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	122	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	123	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	124	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L46	125	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L47	8	CU12PSM6P4XXX(1-3/4)	39.98 - 40.23	1.0000	1.0000
L47	10	AL7-50(1-5/8)	39.98 - 40.23	1.0000	1.0000
L47	46	Safety Line 3/8	39.98 - 40.23	1.0000	1.0000
L47	90	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	91	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	92	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	93	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	120	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	121	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	122	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	123	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	124	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	125	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L48	8	CU12PSM6P4XXX(1-3/4)	34.98 - 39.98	1.0000	1.0000
L48	10	AL7-50(1-5/8)	34.98 - 39.98	1.0000	1.0000
L48	46	Safety Line 3/8	34.98 - 39.98	1.0000	1.0000
L48	54	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	55	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	56	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	90	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	91	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	92	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	93	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	120	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	121	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	122	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	123	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	124	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	125	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L49	8	CU12PSM6P4XXX(1-3/4)	29.98 - 34.98	1.0000	1.0000
L49	10	AL7-50(1-5/8)	29.98 - 34.98	1.0000	1.0000
L49	46	Safety Line 3/8	29.98 - 34.98	1.0000	1.0000
L49	54	CCI 6" x 1" Plate	29.98 - 34.98	1.0000	1.0000
L49	55	CCI 6" x 1" Plate	29.98 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L49	56	CCI 6" x 1" Plate	29.98 - 34.98	1.0000	1.0000
L49	85	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	86	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	87	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	88	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	120	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	121	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	122	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	123	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	124	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	125	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L50	8	CU12PSM6P4XXX(1-3/4)	28.00 - 29.98	1.0000	1.0000
L50	10	AL7-50(1-5/8)	28.00 - 29.98	1.0000	1.0000
L50	46	Safety Line 3/8	28.00 - 29.98	1.0000	1.0000
L50	54	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	55	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	56	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	85	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	86	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	87	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	88	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L51	8	CU12PSM6P4XXX(1-3/4)	27.75 - 28.00	1.0000	1.0000
L51	10	AL7-50(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	46	Safety Line 3/8	27.75 - 28.00	1.0000	1.0000
L51	54	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	55	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	56	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	85	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	86	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	87	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L51	88	CCI 6" x 1" Plate	27.75 - 28.00	1.0000	1.0000
L52	8	CU12PSM6P4XXX(1-3/4)	22.75 - 27.75	1.0000	1.0000
L52	10	AL7-50(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	46	Safety Line 3/8	22.75 - 27.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L52	54	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	55	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	56	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	85	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	86	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	87	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	88	CCI 6" x 1" Plate	22.75 - 27.75	1.0000	1.0000
L52	113	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	114	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	115	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	116	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	117	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L52	118	CCI 6.5" x 1.25" Plate	22.75 - 27.50	1.0000	1.0000
L53	8	CU12PSM6P4XXX(1-3/4)	20.08 - 22.75	1.0000	1.0000
L53	10	AL7-50(1-5/8)	20.08 - 22.75	1.0000	1.0000
L53	46	Safety Line 3/8	20.08 - 22.75	1.0000	1.0000
L53	54	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	55	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	56	CCI 6" x 1" Plate	20.75 - 22.75	1.0000	1.0000
L53	85	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	86	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	87	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	88	CCI 6" x 1" Plate	20.08 - 22.75	1.0000	1.0000
L53	113	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	114	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	115	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	116	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	117	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L53	118	CCI 6.5" x 1.25" Plate	20.08 - 22.75	1.0000	1.0000
L54	8	CU12PSM6P4XXX(1-3/4)	19.83 - 20.08	1.0000	1.0000
L54	10	AL7-50(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	46	Safety Line 3/8	19.83 - 20.08	1.0000	1.0000
L54	85	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	86	CCI 6" x 1" Plate	19.83 - 20.08	1.0000	1.0000
L54	87	CCI 6" x 1" Plate	19.83 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L54	88	CCI 6" x 1" Plate	20.08 19.83 -	1.0000	1.0000
L54	113	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L54	114	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L54	115	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L54	116	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L54	117	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L54	118	CCI 6.5" x 1.25" Plate	20.08 19.83 -	1.0000	1.0000
L55	8	CU12PSM6P4XXX(1-3/4)	20.08 17.00 -	1.0000	1.0000
L55	10	AL7-50(1-5/8)	19.83 17.00 -	1.0000	1.0000
L55	46	Safety Line 3/8	19.83 17.00 -	1.0000	1.0000
L55	80	CCI 6" x 1" Plate	19.83 17.00 -	1.0000	1.0000
L55	81	CCI 6" x 1" Plate	19.00 17.00 -	1.0000	1.0000
L55	82	CCI 6" x 1" Plate	19.00 17.00 -	1.0000	1.0000
L55	83	CCI 6" x 1" Plate	19.00 17.00 -	1.0000	1.0000
L55	85	CCI 6" x 1" Plate	19.00 17.00 -	1.0000	1.0000
L55	86	CCI 6" x 1" Plate	19.83 17.00 -	1.0000	1.0000
L55	87	CCI 6" x 1" Plate	19.83 17.00 -	1.0000	1.0000
L55	88	CCI 6" x 1" Plate	19.83 17.00 -	1.0000	1.0000
L55	113	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L55	114	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L55	115	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L55	116	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L55	117	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L55	118	CCI 6.5" x 1.25" Plate	19.83 17.00 -	1.0000	1.0000
L56	8	CU12PSM6P4XXX(1-3/4)	19.83 16.75 -	1.0000	1.0000
L56	10	AL7-50(1-5/8)	17.00 16.75 -	1.0000	1.0000
L56	46	Safety Line 3/8	17.00 16.75 -	1.0000	1.0000
L56	80	CCI 6" x 1" Plate	17.00 16.75 -	1.0000	1.0000
L56	81	CCI 6" x 1" Plate	17.00 16.75 -	1.0000	1.0000
L56	82	CCI 6" x 1" Plate	17.00 16.75 -	1.0000	1.0000
L56	83	CCI 6" x 1" Plate	17.00 16.75 -	1.0000	1.0000
L56	113	CCI 6.5" x 1.25" Plate	17.00 16.75 -	1.0000	1.0000
L56	114	CCI 6.5" x 1.25" Plate	17.00 16.75 -	1.0000	1.0000
L56	115	CCI 6.5" x 1.25" Plate	17.00 16.75 -	1.0000	1.0000
			17.00		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L56	116	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	117	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L56	118	CCI 6.5" x 1.25" Plate	16.75 - 17.00	1.0000	1.0000
L57	8	CU12PSM6P4XXX(1-3/4)	11.65 - 16.75	1.0000	1.0000
L57	10	AL7-50(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	46	Safety Line 3/8	11.65 - 16.75	1.0000	1.0000
L57	52	CCI 4" x 0.75" Plate	11.65 - 13.17	1.0000	1.0000
L57	80	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	81	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	82	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	83	CCI 6" x 1" Plate	11.65 - 16.75	1.0000	1.0000
L57	113	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	114	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	115	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	116	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	117	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L57	118	CCI 6.5" x 1.25" Plate	12.67 - 16.75	1.0000	1.0000
L58	8	CU12PSM6P4XXX(1-3/4)	11.42 - 11.65	1.0000	1.0000
L58	10	AL7-50(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	46	Safety Line 3/8	11.42 - 11.65	1.0000	1.0000
L58	52	CCI 4" x 0.75" Plate	11.42 - 11.65	1.0000	1.0000
L58	80	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	81	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	82	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L58	83	CCI 6" x 1" Plate	11.42 - 11.65	1.0000	1.0000
L59	8	CU12PSM6P4XXX(1-3/4)	9.40 - 11.42	1.0000	1.0000
L59	10	AL7-50(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	46	Safety Line 3/8	9.40 - 11.42	1.0000	1.0000
L59	50	CCI 4" x 0.75" Plate	9.40 - 10.88	1.0000	1.0000
L59	51	CCI 4" x 0.75" Plate	9.40 - 10.88	1.0000	1.0000
L59	52	CCI 4" x 0.75" Plate	9.40 - 11.42	1.0000	1.0000
L59	80	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	81	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	82	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L59	83	CCI 6" x 1" Plate	9.40 - 11.42	1.0000	1.0000
L60	8	CU12PSM6P4XXX(1-3/4)	9.15 - 9.40	1.0000	1.0000
L60	10	AL7-50(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	46	Safety Line 3/8	9.15 - 9.40	1.0000	1.0000
L60	50	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	51	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	52	CCI 4" x 0.75" Plate	9.15 - 9.40	1.0000	1.0000
L60	80	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	81	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L60	82	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L60	83	CCI 6" x 1" Plate	9.15 - 9.40	1.0000	1.0000
L61	8	CU12PSM6P4XXX(1-3/4)	4.83 - 9.15	1.0000	1.0000
L61	10	AL7-50(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	46	Safety Line 3/8	4.83 - 9.15	1.0000	1.0000
L61	50	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	51	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	52	CCI 4" x 0.75" Plate	4.83 - 9.15	1.0000	1.0000
L61	80	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	81	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	82	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L61	83	CCI 6" x 1" Plate	4.83 - 9.15	1.0000	1.0000
L62	8	CU12PSM6P4XXX(1-3/4)	4.58 - 4.83	1.0000	1.0000
L62	10	AL7-50(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	46	Safety Line 3/8	4.58 - 4.83	1.0000	1.0000
L62	50	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	51	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	52	CCI 4" x 0.75" Plate	4.58 - 4.83	1.0000	1.0000
L62	80	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	81	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	82	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L62	83	CCI 6" x 1" Plate	4.58 - 4.83	1.0000	1.0000
L63	8	CU12PSM6P4XXX(1-3/4)	0.00 - 4.58	1.0000	1.0000
L63	10	AL7-50(1-5/8)	4.00 - 4.58	1.0000	1.0000
L63	46	Safety Line 3/8	4.00 - 4.58	1.0000	1.0000
L63	50	CCI 4" x 0.75" Plate	0.00 - 4.58	1.0000	1.0000
L63	51	CCI 4" x 0.75" Plate	0.00 - 4.58	1.0000	1.0000
L63	52	CCI 4" x 0.75" Plate	3.17 - 4.58	1.0000	1.0000
L63	80	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	81	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	82	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000
L63	83	CCI 6" x 1" Plate	0.00 - 4.58	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L14	199	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L14	200	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L14	201	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L15	191	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	192	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	193	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	195	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	196	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	197	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	199	CCI 4.5" x 1" Plate	124.42 - 126.42	Auto	1.0000
L15	200	CCI 4.5" x 1" Plate	124.42 - 126.42	Auto	1.0000
L15	201	CCI 4.5" x 1" Plate	124.42 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L16	191	CCI 4.5" x 1" Plate	126.42 121.17 - 121.42	Auto	1.0000
L16	192	CCI 4.5" x 1" Plate	121.17 - 121.42	Auto	1.0000
L16	193	CCI 4.5" x 1" Plate	121.17 - 121.42	Auto	1.0000
L17	187	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	188	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	189	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	191	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L17	192	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L17	193	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L18	104	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L18	105	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L18	106	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L19	104	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L19	105	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L19	106	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L20	104	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L20	105	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L20	106	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L21	66	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	67	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	68	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	104	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	105	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	106	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	183	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L21	184	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L21	185	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L22	66	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	67	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	68	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	104	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	105	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	106	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	183	CCI 4.5" x 1" Plate	104.83 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L22	184	CCI 4.5" x 1" Plate	105.08 104.83 -	Auto	1.0000
L22	185	CCI 4.5" x 1" Plate	105.08 104.83 -	Auto	1.0000
L23	66	CCI 4" x 0.75" Plate	105.08 101.58 -	Auto	1.0000
L23	67	CCI 4" x 0.75" Plate	104.83 101.58 -	Auto	1.0000
L23	68	CCI 4" x 0.75" Plate	104.83 101.58 -	Auto	1.0000
L23	104	CCI 4.5" x 1" Plate	104.83 101.54 -	Auto	1.0000
L23	105	CCI 4.5" x 1" Plate	104.83 101.54 -	Auto	1.0000
L23	106	CCI 4.5" x 1" Plate	104.83 101.54 -	Auto	1.0000
L23	175	CCI 4.5" x 1" Plate	104.83 100.92 -	Auto	1.0000
L23	176	CCI 4.5" x 1" Plate	101.42 100.92 -	Auto	1.0000
L23	177	CCI 4.5" x 1" Plate	101.42 100.92 -	Auto	1.0000
L23	179	CCI 4.5" x 4" Plate	101.42 101.42 -	Auto	1.0000
L23	180	CCI 4.5" x 4" Plate	104.42 101.42 -	Auto	1.0000
L23	181	CCI 4.5" x 4" Plate	104.42 101.42 -	Auto	1.0000
L23	183	CCI 4.5" x 1" Plate	104.42 104.42 -	Auto	1.0000
L23	184	CCI 4.5" x 1" Plate	104.83 104.42 -	Auto	1.0000
L23	185	CCI 4.5" x 1" Plate	104.83 104.42 -	Auto	1.0000
L23	221	CCI 4.5" x 1" Plate	104.83 100.92 -	Auto	1.0000
L23	222	CCI 4.5" x 1" Plate	101.79 100.92 -	Auto	1.0000
L23	223	CCI 4.5" x 1" Plate	101.79 100.92 -	Auto	1.0000
L23	225	CCI 4.5" x 3" Plate	101.79 101.79 -	Auto	1.0000
L23	226	CCI 4.5" x 3" Plate	103.29 101.79 -	Auto	1.0000
L23	227	CCI 4.5" x 3" Plate	103.29 101.79 -	Auto	1.0000
L24	175	CCI 4.5" x 1" Plate	103.29 100.67 -	Auto	1.0000
L24	176	CCI 4.5" x 1" Plate	100.92 100.67 -	Auto	1.0000
L24	177	CCI 4.5" x 1" Plate	100.92 100.67 -	Auto	1.0000
L24	221	CCI 4.5" x 1" Plate	100.92 100.67 -	Auto	1.0000
L24	222	CCI 4.5" x 1" Plate	100.92 100.67 -	Auto	1.0000
L24	223	CCI 4.5" x 1" Plate	100.92 100.67 -	Auto	1.0000
L25	100	CCI 4.5" x 1" Plate	100.92 95.83 -	Auto	1.0000
L25	101	CCI 4.5" x 1" Plate	97.33 95.83 -	Auto	1.0000
L25	102	CCI 4.5" x 1" Plate	97.33 95.83 -	Auto	1.0000
L25	171	CCI 4.5" x 1" Plate	97.33 97.92 -	Auto	1.0000
L25	172	CCI 4.5" x 1" Plate	100.42 97.92 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L25	173	CCI 4.5" x 1" Plate	100.42 - 97.92	Auto	1.0000
L25	175	CCI 4.5" x 1" Plate	100.42 - 100.42	Auto	1.0000
L25	176	CCI 4.5" x 1" Plate	100.42 - 100.67	Auto	1.0000
L25	177	CCI 4.5" x 1" Plate	100.42 - 100.67	Auto	1.0000
L25	221	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L25	222	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L25	223	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L26	100	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L26	101	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L26	102	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L27	100	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	101	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	102	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	108	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L27	109	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L27	110	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L28	100	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	101	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	102	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	108	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	109	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	110	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L29	100	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	101	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	102	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	108	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	109	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	110	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	167	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000
L29	168	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000
L29	169	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000
L30	100	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	101	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	102	CCI 4.5" x 1" Plate	84.67 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L30	108	CCI 4.5" x 1" Plate	89.67 - 84.67	Auto	1.0000
L30	109	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	110	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	163	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	164	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	165	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	167	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L30	168	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L30	169	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L31	100	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	101	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	102	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	108	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	109	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	110	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	163	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	164	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	165	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	213	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	214	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	215	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	217	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L31	218	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L31	219	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L32	159	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	160	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	161	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	163	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	164	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	165	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	213	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L32	214	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L32	215	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L33	62	CCI 6" x 1" Plate	80.08 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L33	63	CCI 6" x 1" Plate	80.17 80.08 -	Auto	1.0000
L33	64	CCI 6" x 1" Plate	80.17 80.08 -	Auto	1.0000
L33	155	CCI 6.5" x 1.25" Plate	80.17 80.08 -	Auto	1.0000
L33	156	CCI 6.5" x 1.25" Plate	80.33 80.08 -	Auto	1.0000
L33	157	CCI 6.5" x 1.25" Plate	80.33 80.08 -	Auto	1.0000
L33	213	CCI 4.5" x 1" Plate	80.33 80.08 -	Auto	1.0000
L33	214	CCI 4.5" x 1" Plate	80.33 80.08 -	Auto	1.0000
L33	215	CCI 4.5" x 1" Plate	80.33 80.08 -	Auto	1.0000
L34	62	CCI 6" x 1" Plate	80.33 75.08 -	Auto	1.0000
L34	63	CCI 6" x 1" Plate	80.08 75.08 -	Auto	1.0000
L34	64	CCI 6" x 1" Plate	80.08 75.08 -	Auto	1.0000
L34	155	CCI 6.5" x 1.25" Plate	80.08 76.50 -	Auto	1.0000
L34	156	CCI 6.5" x 1.25" Plate	80.08 76.50 -	Auto	1.0000
L34	157	CCI 6.5" x 1.25" Plate	80.08 76.50 -	Auto	1.0000
L34	213	CCI 4.5" x 1" Plate	80.08 78.33 -	Auto	1.0000
L34	214	CCI 4.5" x 1" Plate	80.08 78.33 -	Auto	1.0000
L34	215	CCI 4.5" x 1" Plate	80.08 78.33 -	Auto	1.0000
L35	62	CCI 6" x 1" Plate	80.08 70.08 -	Auto	1.0000
L35	63	CCI 6" x 1" Plate	75.08 70.08 -	Auto	1.0000
L35	64	CCI 6" x 1" Plate	75.08 70.08 -	Auto	1.0000
L35	95	CCI 4.5" x 1" Plate	75.08 70.08 -	Auto	1.0000
L35	96	CCI 4.5" x 1" Plate	71.00 70.08 -	Auto	1.0000
L35	97	CCI 4.5" x 1" Plate	71.00 70.08 -	Auto	1.0000
L35	98	CCI 4.5" x 1" Plate	71.00 70.08 -	Auto	1.0000
L35	148	CCI 8.5" x 1.25" Plate	71.00 70.08 -	Auto	1.0000
L35	149	CCI 8.5" x 1.25" Plate	73.42 70.08 -	Auto	1.0000
L35	150	CCI 8.5" x 1.25" Plate	73.42 70.08 -	Auto	1.0000
L35	151	CCI 8.5" x 1.25" Plate	73.42 70.08 -	Auto	1.0000
L35	152	CCI 8.5" x 1.25" Plate	73.42 70.08 -	Auto	1.0000
L35	153	CCI 8.5" x 1.25" Plate	73.42 70.08 -	Auto	1.0000
L36	62	CCI 6" x 1" Plate	73.42 69.50 -	Auto	1.0000
L36	63	CCI 6" x 1" Plate	70.08 69.50 -	Auto	1.0000
L36	64	CCI 6" x 1" Plate	70.08 69.50 -	Auto	1.0000
L36	95	CCI 4.5" x 1" Plate	70.08 69.50 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L36	96	CCI 4.5" x 1" Plate	70.08 69.50 -	Auto	1.0000
L36	97	CCI 4.5" x 1" Plate	70.08 69.50 -	Auto	1.0000
L36	98	CCI 4.5" x 1" Plate	70.08 69.50 -	Auto	1.0000
L36	148	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L36	149	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L36	150	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L36	151	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L36	152	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L36	153	CCI 8.5" x 1.25" Plate	70.08 69.50 -	Auto	1.0000
L37	62	CCI 6" x 1" Plate	70.08 69.25 -	Auto	1.0000
L37	63	CCI 6" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	64	CCI 6" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	95	CCI 4.5" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	96	CCI 4.5" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	97	CCI 4.5" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	98	CCI 4.5" x 1" Plate	69.50 69.25 -	Auto	1.0000
L37	148	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L37	149	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L37	150	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L37	151	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L37	152	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L37	153	CCI 8.5" x 1.25" Plate	69.50 69.25 -	Auto	1.0000
L38	62	CCI 6" x 1" Plate	69.50 64.25 -	Auto	1.0000
L38	63	CCI 6" x 1" Plate	69.25 64.25 -	Auto	1.0000
L38	64	CCI 6" x 1" Plate	69.25 64.25 -	Auto	1.0000
L38	75	1" x 2" Plate	69.25 64.25 -	Auto	1.0000
L38	76	1" x 2" Plate	66.17 64.25 -	Auto	1.0000
L38	77	1" x 2" Plate	66.17 64.25 -	Auto	1.0000
L38	78	1" x 2" Plate	66.17 64.25 -	Auto	1.0000
L38	95	CCI 4.5" x 1" Plate	66.17 64.25 -	Auto	1.0000
L38	96	CCI 4.5" x 1" Plate	69.25 64.25 -	Auto	1.0000
L38	97	CCI 4.5" x 1" Plate	69.25 64.25 -	Auto	1.0000
L38	98	CCI 4.5" x 1" Plate	69.25 64.25 -	Auto	1.0000
L38	141	CCI 8.5" x 4.25" Plate	69.25 64.25 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L38	142	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	143	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	144	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	145	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	146	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	148	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	149	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	150	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	151	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	152	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	153	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L39	62	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	63	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	64	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	75	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	76	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	77	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	78	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	95	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	96	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	97	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	98	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	134	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	135	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	136	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	137	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	138	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	139	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	141	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	142	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	143	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	144	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	145	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	146	CCI 8.5" x 4.25" Plate	61.08 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L39	203	CCI 4.5" x 1" Plate	64.25 - 60.58	Auto	1.0000
L39	204	CCI 4.5" x 1" Plate	61.46 - 60.58	Auto	1.0000
L39	205	CCI 4.5" x 1" Plate	61.46 - 60.58	Auto	1.0000
L39	206	CCI 4.5" x 1" Plate	61.46 - 60.58	Auto	1.0000
L39	208	CCI 4.5" x 3" Plate	61.46 - 61.55	Auto	1.0000
L39	209	CCI 4.5" x 3" Plate	62.96 - 61.55	Auto	1.0000
L39	210	CCI 4.5" x 3" Plate	62.96 - 61.55	Auto	1.0000
L39	211	CCI 4.5" x 3" Plate	62.96 - 61.55	Auto	1.0000
L40	134	CCI 8.5" x 1.25" Plate	62.96 - 60.33	Auto	1.0000
L40	135	CCI 8.5" x 1.25" Plate	60.58 - 60.33	Auto	1.0000
L40	136	CCI 8.5" x 1.25" Plate	60.58 - 60.33	Auto	1.0000
L40	137	CCI 8.5" x 1.25" Plate	60.58 - 60.33	Auto	1.0000
L40	138	CCI 8.5" x 1.25" Plate	60.58 - 60.33	Auto	1.0000
L40	139	CCI 8.5" x 1.25" Plate	60.58 - 60.33	Auto	1.0000
L40	203	CCI 4.5" x 1" Plate	60.58 - 60.33	Auto	1.0000
L40	204	CCI 4.5" x 1" Plate	60.58 - 60.33	Auto	1.0000
L40	205	CCI 4.5" x 1" Plate	60.58 - 60.33	Auto	1.0000
L40	206	CCI 4.5" x 1" Plate	60.58 - 60.33	Auto	1.0000
L41	58	CCI 6.5" x 1.25" Plate	59.92 - 55.33	Auto	1.0000
L41	59	CCI 6.5" x 1.25" Plate	59.92 - 55.33	Auto	1.0000
L41	60	CCI 6.5" x 1.25" Plate	59.92 - 55.33	Auto	1.0000
L41	127	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	128	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	129	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	130	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	131	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	132	CCI 8.5" x 1.25" Plate	60.08 - 55.33	Auto	1.0000
L41	134	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	135	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	136	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	137	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	138	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	139	CCI 8.5" x 1.25" Plate	60.33 - 60.08	Auto	1.0000
L41	203	CCI 4.5" x 1" Plate	60.33 - 58.00	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L41	204	CCI 4.5" x 1" Plate	60.33 58.00 - 60.33	Auto	1.0000
L41	205	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L41	206	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L42	58	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	59	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	60	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	127	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	128	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	129	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	130	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	131	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	132	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L43	58	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000
L43	59	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000
L43	60	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000
L44	58	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	59	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	60	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	70	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	71	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	72	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	73	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	90	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	91	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	92	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	93	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	120	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	121	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	122	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	123	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	124	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	125	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L45	58	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	59	CCI 6.5" x 1.25" Plate	41.92 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L45	60	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	70	1" x 2" Plate	46.92 41.92 -	Auto	1.0000
L45	71	1" x 2" Plate	46.92 41.92 -	Auto	1.0000
L45	72	1" x 2" Plate	46.92 41.92 -	Auto	1.0000
L45	73	1" x 2" Plate	46.92 41.92 -	Auto	1.0000
L45	90	CCI 6" x 1" Plate	46.92 41.92 -	Auto	1.0000
L45	91	CCI 6" x 1" Plate	46.92 41.92 -	Auto	1.0000
L45	92	CCI 6" x 1" Plate	46.92 41.92 -	Auto	1.0000
L45	93	CCI 6" x 1" Plate	46.92 41.92 -	Auto	1.0000
L45	120	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	121	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	122	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	123	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	124	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L45	125	CCI 6.5" x 1.25" Plate	46.92 41.92 -	Auto	1.0000
L46	58	CCI 6.5" x 1.25" Plate	46.92 40.83 -	Auto	1.0000
L46	59	CCI 6.5" x 1.25" Plate	41.92 40.83 -	Auto	1.0000
L46	60	CCI 6.5" x 1.25" Plate	41.92 40.83 -	Auto	1.0000
L46	70	1" x 2" Plate	41.92 40.58 -	Auto	1.0000
L46	71	1" x 2" Plate	41.92 40.58 -	Auto	1.0000
L46	72	1" x 2" Plate	41.92 40.58 -	Auto	1.0000
L46	73	1" x 2" Plate	41.92 40.58 -	Auto	1.0000
L46	90	CCI 6" x 1" Plate	41.92 40.23 -	Auto	1.0000
L46	91	CCI 6" x 1" Plate	41.92 40.23 -	Auto	1.0000
L46	92	CCI 6" x 1" Plate	41.92 40.23 -	Auto	1.0000
L46	93	CCI 6" x 1" Plate	41.92 40.23 -	Auto	1.0000
L46	120	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L46	121	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L46	122	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L46	123	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L46	124	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L46	125	CCI 6.5" x 1.25" Plate	41.92 40.23 -	Auto	1.0000
L47	90	CCI 6" x 1" Plate	41.92 39.98 -	Auto	1.0000
L47	91	CCI 6" x 1" Plate	40.23 39.98 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L47	92	CCI 6" x 1" Plate	40.23 39.98 - 40.23	Auto	1.0000
L47	93	CCI 6" x 1" Plate	39.98 - 40.23	Auto	1.0000
L47	120	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	121	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	122	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	123	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	124	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	125	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L48	54	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000
L48	55	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000
L48	56	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000
L48	90	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	91	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	92	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	93	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	120	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	121	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	122	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	123	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	124	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	125	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L49	54	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	55	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	56	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	85	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	86	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	87	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	88	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	120	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	121	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	122	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	123	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	124	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	125	CCI 6.5" x 1.25" Plate	32.83 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L50	54	CCI 6" x 1" Plate	34.98 28.00 - 29.98	Auto	1.0000
L50	55	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	56	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	85	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	86	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	87	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	88	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L51	54	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	55	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	56	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	85	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	86	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	87	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	88	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L52	54	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	55	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	56	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	85	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	86	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	87	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	88	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	113	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	114	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	115	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	116	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	117	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	118	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L53	54	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	55	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	56	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	85	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	86	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	87	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	88	CCI 6" x 1" Plate	20.08 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L53	113	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L53	114	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L53	115	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L53	116	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L53	117	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L53	118	CCI 6.5" x 1.25" Plate	22.75 - 20.08	Auto	1.0000
L54	85	CCI 6" x 1" Plate	20.08 - 19.83	Auto	1.0000
L54	86	CCI 6" x 1" Plate	20.08 - 19.83	Auto	1.0000
L54	87	CCI 6" x 1" Plate	20.08 - 19.83	Auto	1.0000
L54	88	CCI 6" x 1" Plate	20.08 - 19.83	Auto	1.0000
L54	113	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L54	114	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L54	115	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L54	116	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L54	117	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L54	118	CCI 6.5" x 1.25" Plate	20.08 - 19.83	Auto	1.0000
L55	80	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	81	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	82	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	83	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	85	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	86	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	87	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	88	CCI 6" x 1" Plate	19.83 - 19.00	Auto	1.0000
L55	113	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L55	114	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L55	115	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L55	116	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L55	117	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L55	118	CCI 6.5" x 1.25" Plate	19.83 - 19.00	Auto	1.0000
L56	80	CCI 6" x 1" Plate	19.00 - 17.00	Auto	1.0000
L56	81	CCI 6" x 1" Plate	19.00 - 17.00	Auto	1.0000
L56	82	CCI 6" x 1" Plate	19.00 - 17.00	Auto	1.0000
L56	83	CCI 6" x 1" Plate	19.00 -	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L56	113	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	114	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	115	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	116	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	117	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	118	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L57	52	CCI 4" x 0.75" Plate	11.65 - 13.17	Auto	1.0000
L57	80	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	81	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	82	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	83	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	113	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	114	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	115	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	116	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	117	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	118	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L58	52	CCI 4" x 0.75" Plate	11.42 - 11.65	Auto	1.0000
L58	80	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	81	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	82	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	83	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L59	50	CCI 4" x 0.75" Plate	9.40 - 10.88	Auto	1.0000
L59	51	CCI 4" x 0.75" Plate	9.40 - 10.88	Auto	1.0000
L59	52	CCI 4" x 0.75" Plate	9.40 - 11.42	Auto	1.0000
L59	80	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	81	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	82	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	83	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L60	50	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000
L60	51	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000
L60	52	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000
L60	80	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	81	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	82	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	83	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L61	50	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	51	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	52	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	80	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	81	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	82	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	83	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L62	50	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000
L62	51	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L62	52	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000
L62	80	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	81	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	82	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	83	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L63	50	CCI 4" x 0.75" Plate	0.00 - 4.58	Auto	1.0000
L63	51	CCI 4" x 0.75" Plate	0.00 - 4.58	Auto	1.0000
L63	52	CCI 4" x 0.75" Plate	3.17 - 4.58	Auto	1.0000
L63	80	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	81	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	82	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	83	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
Lightning Rod 5/8" x 4' on 4' Pole	B	From Leg	1.00 0.00 4.00	0.0000	191.67
*					
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	178.00
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	138.00
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	98.00
4' ICE SHIELDS	B	From Leg	0.50 0.00 0.00	0.0000	98.00
4' ICE SHIELDS	C	From Leg	0.50 0.00 0.00	0.0000	98.00
******					
OGB4-900D	C	From Leg	3.00 0.00 4.00	0.0000	192.00
Side Arm Mount [SO 701-1]	C	From Leg	1.50 0.00 0.00	0.0000	192.00
***					
DB589-A	B	From Leg	3.00 0.00 5.00	0.0000	191.00
WB2623 w/ Mount Pipe	B	From Leg	3.00 0.00 -1.00	0.0000	191.00
Side Arm Mount [SO 701-1]	B	From Leg	1.50 0.00 0.00	0.0000	191.00
***					
AIR -32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.00 0.00	0.0000	184.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
AIR -32 B2A/B66AA w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	184.00
AIR -32 B2A/B66AA w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	184.00
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	0.00 4.00 0.00	0.0000	184.00
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	184.00
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	184.00
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	0.00 4.00 0.00	0.0000	184.00
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	184.00
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4415 B25_TMO	A	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4415 B25_TMO	B	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4415 B25_TMO	C	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	0.00 4.00 0.00	0.0000	184.00
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	0.00 4.00 0.00	0.0000	184.00
Platform Mount [LP 405-1_HR-1]	C	None	0.00	0.0000	184.00
******					
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.00 0.00	0.0000	168.00
MX08FRO665-21 w/ Mount Pipe	B	From Leg	3.00 4.00 0.00	0.0000	168.00
MX08FRO665-21 w/ Mount Pipe	C	From Leg	3.00 4.00 0.00	0.0000	168.00
TA08025-B604	A	From Leg	3.00 4.00 0.00	0.0000	168.00
TA08025-B604	B	From Leg	3.00 4.00 0.00	0.0000	168.00
TA08025-B604	C	From Leg	3.00 4.00 0.00	0.0000	168.00
TA08025-B605	A	From Leg	3.00 4.00 0.00	0.0000	168.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
TA08025-B605	B	From Leg	3.00 4.00 0.00	0.0000	168.00
TA08025-B605	C	From Leg	3.00 4.00 0.00	0.0000	168.00
RDIDC-9181-PF-48	A	From Leg	3.00 4.00 0.00	0.0000	168.00
(2) 8' x 2" Mount Pipe	A	From Leg	3.00 4.00 0.00	0.0000	168.00
(2) 8' x 2" Mount Pipe	B	From Leg	3.00 4.00 0.00	0.0000	168.00
(2) 8' x 2" Mount Pipe	C	From Leg	3.00 4.00 0.00	0.0000	168.00
Sabre_C10801018-32788	C	None	3.00	0.0000	168.00
*** BSF0020F3V1	B	From Leg	4.00 0.00	0.0000	160.00
HBXX-6517DS-A2M w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	160.00
LNX-6514DS-A1M w/ Mount Pipe	A	From Leg	0.00 4.00 0.00	0.0000	160.00
LNX-6514DS-A1M w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	160.00
(2) NNHH-65B-R4 w/ Mount Pipe	A	From Leg	0.00 4.00 0.00	0.0000	160.00
(2) NNHH-65B-R4 w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	160.00
(2) NNHH-65B-R4 w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	160.00
MT6407-77A w/ Mount Pipe	A	From Leg	0.00 4.00 0.00	0.0000	160.00
MT6407-77A w/ Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	160.00
MT6407-77A w/ Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	160.00
RVZDC-6627-PF-48	B	From Leg	0.00 4.00 0.00	0.0000	160.00
RFV01U-D1A	A	From Leg	0.00 4.00 0.00	0.0000	160.00
RFV01U-D1A	B	From Leg	0.00 4.00 0.00	0.0000	160.00
RFV01U-D1A	C	From Leg	0.00 4.00 0.00	0.0000	160.00
RFV01U-D2A	A	From Leg	0.00 4.00 0.00	0.0000	160.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft
RFV01U-D2A	B	From Leg	0.00 4.00 0.00	0.0000	160.00
RFV01U-D2A	C	From Leg	0.00 4.00 0.00	0.0000	160.00
Platform Mount [LP 303-1_KCKR-HR-1]	C	None	0.00	0.0000	160.00
*******					
SRL-224NM-4	B	From Leg	6.00 0.00	0.0000	158.00
DB205-A	C	From Leg	0.00 6.00 0.00	0.0000	158.00
Side Arm Mount [SO 702-1]	B	From Leg	0.00 3.00 0.00	0.0000	158.00
Side Arm Mount [SO 702-1]	C	From Leg	0.00 3.00 0.00	0.0000	158.00
4' x 2" Pipe Mount	B	From Leg	0.00 6.00 0.00	0.0000	158.00
4' x 2" Pipe Mount	C	From Leg	0.00 6.00 0.00	0.0000	158.00
***			0.00		
RRUS 32 B30	A	From Leg	4.00 0.00	0.0000	151.00
RRUS 32 B30	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 32 B30	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
DC6-48-60-18-8F	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
Platform Mount [LP 402-1_KCKR]	C	None	-2.00	0.0000	151.00
***					
DMP65R-BU8D w/ Mount Pipe	A	From Leg	4.00 0.00	0.0000	151.00
DMP65R-BU8D w/ Mount Pipe	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
DMP65R-BU8D w/ Mount Pipe	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
TPA65R-BU8D w/ Mount Pipe	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
TPA65R-BU8D w/ Mount Pipe	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
TPA65R-BU8D w/ Mount Pipe	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
AIR 6449 N77	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
AIR 6449 N77	B	From Leg	-1.00 4.00 0.00	0.0000	151.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
AIR 6449 N77	C	From Leg	-1.00 4.00 0.00	0.0000	151.00
AIR 6419 B77G	A	From Leg	-1.00 4.00 0.00	0.0000	151.00
AIR 6419 B77G	B	From Leg	-3.00 4.00 0.00	0.0000	151.00
AIR 6419 B77G	C	From Leg	-3.00 4.00 0.00	0.0000	151.00
RRUS 8843 B2/B66A_CCIV2	A	From Leg	-3.00 4.00 0.00	0.0000	151.00
RRUS 8843 B2/B66A_CCIV2	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 8843 B2/B66A_CCIV2	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4449 B5/B12	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4449 B5/B12	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4449 B5/B12	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4478 B14_CCIV2	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4478 B14_CCIV2	B	From Leg	-2.00 4.00 0.00	0.0000	151.00
RRUS 4478 B14_CCIV2	C	From Leg	-2.00 4.00 0.00	0.0000	151.00
DC9-48-60-24-8C-EV	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
8' x 2" Mount Pipe	A	From Leg	-2.00 4.00 0.00	0.0000	151.00
8' x 2" Mount Pipe	B	From Leg	0.00 4.00 0.00	0.0000	151.00
8' x 2" Mount Pipe	C	From Leg	0.00 4.00 0.00	0.0000	151.00
***			0.00		
DC6-48-60-18-8F	B	From Leg	2.00 0.00	0.0000	150.00
Side Arm Mount [SO 102-1]	B	From Leg	-1.00 1.00 0.00	0.0000	150.00
***			0.00		
SRL-235-2	B	From Leg	6.00 0.00	0.0000	132.00
Side Arm Mount [SO 702-1]	B	From Leg	0.00 3.00 0.00	0.0000	132.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft
			0.00		
Side Arm Mount [SO 104-3]	C	None		0.0000	132.00
4' x 2" Pipe Mount	B	From Leg	6.00	0.0000	132.00
			0.00		
			0.00		
***					
PCS 1900 TMA RX	A	From Leg	2.00	0.0000	124.00
			0.00		
			0.00		
Side Arm Mount [SO 104-3]	A	None		0.0000	124.00
2' x 2" Pipe Mount	A	From Leg	2.00	0.0000	124.00
			0.00		
			0.00		
***					
***					
***					
****					
DB205-A	C	From Leg	6.00	0.0000	90.00
			0.00		
			9.00		
MT-485002	C	From Leg	6.00	0.0000	90.00
			0.00		
			0.00		
Side Arm Mount [SO 702-3]	C	None		0.0000	90.00
5' x 2" Pipe Mount	C	From Leg	6.00	0.0000	90.00
			0.00		
			0.00		
***					
SRL-235-2	C	From Leg	3.00	0.0000	70.00
			0.00		
			0.00		
Side Arm Mount [SO 701-1]	C	From Leg	1.50	0.0000	70.00
			0.00		
			0.00		
Side Arm Mount [SO 102-3]	C	None		0.0000	70.00
6' x 2" Mount Pipe	C	From Leg	3.00	0.0000	70.00
			0.00		
			0.00		
***					
DB909XVTE-M	B	From Leg	3.00	0.0000	33.00
			0.00		
			0.00		
Side Arm Mount [SO 701-1]	B	From Leg	1.50	0.0000	33.00
			0.00		
			0.00		
Side Arm Mount [SO 102-3]	B	None		0.0000	33.00
6' x 2" Mount Pipe	B	From Leg	3.00	0.0000	33.00
			0.00		
			0.00		
****					

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft
*								

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft
KP2F-34	B	Grid	From Leg	6.00 0.00 0.00	5.0000		90.00	2.00

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	191.667 - 186.667	Pole	Max Tension	36	0.00	-0.00	0.00
			Max. Compression	26	-1.27	-0.76	-0.88
			Max. Mx	8	-0.67	-3.39	-0.38
			Max. My	14	-0.67	-0.25	-3.62
			Max. Vy	8	0.60	-3.39	-0.38
			Max. Vx	14	0.61	-0.25	-3.62
			Max. Torque	6			-0.72
L2	186.667 - 181.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-11.96	-0.77	-0.90
			Max. Mx	8	-5.76	-15.67	-0.49
			Max. My	14	-5.76	-0.35	-15.97
			Max. Vy	8	4.37	-15.67	-0.49
			Max. Vx	14	4.39	-0.35	-15.97
			Max. Torque	6			-0.72
L3	181.567 - 176.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13.08	-0.80	-0.54
			Max. Mx	8	-6.40	-38.29	-0.54
			Max. My	14	-6.39	-0.46	-38.65
			Max. Vy	8	4.68	-38.29	-0.54
			Max. Vx	14	4.73	-0.46	-38.65
			Max. Torque	6			-0.72
L4	176.567 - 171.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13.95	-0.83	-0.57
			Max. Mx	8	-7.00	-62.39	-0.65
			Max. My	14	-6.99	-0.57	-63.02
			Max. Vy	8	4.96	-62.39	-0.65
			Max. Vx	14	5.01	-0.57	-63.02
			Max. Torque	6			-0.70
L5	171.567 - 166.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-20.38	-0.88	-0.15
			Max. Mx	8	-10.39	-95.46	-0.66
			Max. My	14	-10.38	-0.68	-96.35
			Max. Vy	8	7.81	-95.46	-0.66
			Max. Vx	14	7.89	-0.68	-96.35
			Max. Torque	6			-0.70
L6	166.567 - 161.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.30	-0.97	-0.15
			Max. Mx	8	-11.01	-135.17	-0.76
			Max. My	14	-11.01	-0.81	-136.43
			Max. Vy	8	8.07	-135.17	-0.76
			Max. Vx	14	8.15	-0.81	-136.43
			Max. Torque	5			-0.58
L7	161.567 - 156.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.33	-1.95	-1.97
			Max. Mx	8	-15.76	-189.93	-1.68
			Max. My	14	-15.75	-1.17	-192.10
			Max. Vy	8	12.44	-189.93	-1.68
			Max. Vx	14	12.51	-1.17	-192.10
			Max. Torque	7			-1.92
L8	156.567 - 151.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.46	-2.27	-1.85
			Max. Mx	8	-16.45	-252.82	-1.82
			Max. My	14	-16.45	-1.40	-255.18
			Max. Vy	8	12.69	-252.82	-1.82
			Max. Vx	14	12.74	-1.40	-255.18
			Max. Torque	7			-1.92
L9	151.567 - 146.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.36	-2.57	-1.61
			Max. Mx	8	-22.52	-334.76	-1.91
			Max. My	14	-22.52	-1.64	-337.19

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	18.59	-334.76	-1.91
			Max. Vx	14	18.62	-1.64	-337.19
			Max. Torque	7			-1.95
L10	146.567 - 141.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.56	-2.91	-1.49
			Max. Mx	8	-23.34	-428.15	-2.06
			Max. My	14	-23.34	-1.87	-430.62
			Max. Vy	8	18.76	-428.15	-2.06
			Max. Vx	14	18.78	-1.87	-430.62
			Max. Torque	7			-1.95
L11	141.567 - 141.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.59	-2.92	-1.49
			Max. Mx	8	-23.38	-430.96	-2.06
			Max. My	14	-23.37	-1.88	-433.43
			Max. Vy	8	18.76	-430.96	-2.06
			Max. Vx	14	18.78	-1.88	-433.43
			Max. Torque	7			-1.95
L12	141.417 - 136.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.43	-3.36	-0.81
			Max. Mx	8	-24.46	-525.74	-2.12
			Max. My	14	-24.46	-2.14	-528.15
			Max. Vy	8	19.13	-525.74	-2.12
			Max. Vx	14	19.18	-2.14	-528.15
			Max. Torque	7			-1.95
L13	136.417 - 131.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.15	-6.40	-2.13
			Max. Mx	8	-26.01	-623.54	-2.75
			Max. My	14	-26.00	-3.27	-625.69
			Max. Vy	8	19.92	-623.54	-2.75
			Max. Vx	14	19.98	-3.27	-625.69
			Max. Torque	5			-4.03
L14	131.417 - 126.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-54.80	-6.84	-1.95
			Max. Mx	8	-27.12	-723.97	-2.80
			Max. My	14	-27.12	-3.46	-726.34
			Max. Vy	8	20.24	-723.97	-2.80
			Max. Vx	14	20.30	-3.46	-726.34
			Max. Torque	5			-4.03
L15	126.417 - 121.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58.04	-7.34	-1.61
			Max. Mx	8	-29.30	-826.48	-2.77
			Max. My	14	-29.28	-3.69	-829.72
			Max. Vy	20	-21.04	823.11	0.59
			Max. Vx	14	21.11	-3.69	-829.72
			Max. Torque	5			-4.03
L16	121.417 - 121.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58.14	-7.37	-1.61
			Max. Mx	8	-29.37	-831.67	-2.78
			Max. My	14	-29.36	-3.70	-835.00
			Max. Vy	20	-21.05	828.37	0.60
			Max. Vx	14	21.12	-3.70	-835.00
			Max. Torque	5			-4.00
L17	121.167 - 116.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.19	-7.87	-1.41
			Max. Mx	8	-30.76	-936.37	-2.83
			Max. My	14	-30.74	-3.91	-941.47
			Max. Vy	20	-21.42	934.41	0.71
			Max. Vx	14	21.50	-3.91	-941.47
			Max. Torque	5			-4.00
L18	116.167 - 111.167	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-61.97	-8.33	-1.20
			Max. Mx	8	-31.97	-1042.86	-2.87
			Max. My	14	-31.96	-4.10	-1049.74
			Max. Vy	20	-21.78	1042.29	0.84
			Max. Vx	14	21.85	-4.10	-1049.74
			Max. Torque	5			-4.00
L19	111.167 - 110.042	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62.40	-8.37	-1.16
			Max. Mx	8	-32.25	-1067.12	-2.88
			Max. My	14	-32.23	-4.14	-1074.34
			Max. Vy	20	-21.85	1066.80	0.87
			Max. Vx	14	21.92	-4.14	-1074.34
			Max. Torque	5			-4.00
L20	110.042 - 109.792	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62.51	-8.38	-1.15
			Max. Mx	8	-32.32	-1072.53	-2.88
			Max. My	14	-32.31	-4.15	-1079.82
			Max. Vy	20	-21.87	1072.26	0.88
			Max. Vx	14	21.94	-4.15	-1079.82
			Max. Torque	5			-4.00
L21	109.792 - 105.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64.78	-8.54	-0.97
			Max. Mx	8	-33.82	-1176.36	-2.92
			Max. My	14	-33.83	-4.33	-1183.86
			Max. Vy	8	22.41	-1176.36	-2.92
			Max. Vx	14	22.28	-4.33	-1183.86
			Max. Torque	5			-4.00
L22	105.083 - 104.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64.93	-8.55	-0.97
			Max. Mx	8	-33.92	-1181.96	-2.93
			Max. My	14	-33.93	-4.34	-1189.43
			Max. Vy	8	22.44	-1181.96	-2.93
			Max. Vx	14	22.31	-4.34	-1189.43
			Max. Torque	5			-4.00
L23	104.833 - 100.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-68.06	-8.70	-0.85
			Max. Mx	8	-36.22	-1271.20	-2.99
			Max. My	14	-36.23	-4.46	-1278.04
			Max. Vy	8	23.12	-1271.20	-2.99
			Max. Vx	14	22.95	-4.46	-1278.04
			Max. Torque	5			-4.00
L24	100.917 - 100.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-68.20	-8.73	-0.84
			Max. Mx	8	-36.32	-1276.99	-3.00
			Max. My	14	-36.33	-4.47	-1283.78
			Max. Vy	8	23.16	-1276.99	-3.00
			Max. Vx	14	22.99	-4.47	-1283.78
			Max. Torque	5			-4.00
L25	100.667 - 95.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71.28	-9.22	-0.63
			Max. Mx	8	-38.01	-1390.13	-3.04
			Max. My	14	-38.02	-4.66	-1395.97
			Max. Vy	8	23.64	-1390.13	-3.04
			Max. Vx	14	23.47	-4.66	-1395.97
			Max. Torque	5			-4.00
L26	95.833 - 95.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71.40	-9.25	-0.62
			Max. Mx	8	-38.10	-1396.04	-3.04
			Max. My	14	-38.11	-4.67	-1401.83
			Max. Vy	8	23.65	-1396.04	-3.04
			Max. Vx	14	23.48	-4.67	-1401.83

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	5			-4.00
L27	95.583 - 90.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.79	-9.77	-0.38
			Max. Mx	8	-39.73	-1515.35	-3.07
			Max. My	14	-39.73	-4.87	-1520.14
			Max. Vy	8	24.04	-1515.35	-3.07
			Max. Vx	14	23.87	-4.87	-1520.14
			Max. Torque	5			-4.00
L28	90.583 - 89.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-74.63	-9.09	-1.24
			Max. Mx	8	-40.12	-1531.32	-3.38
			Max. My	14	-40.12	-4.44	-1536.77
			Max. Vy	8	24.34	-1531.32	-3.38
			Max. Vx	14	24.20	-4.44	-1536.77
			Max. Torque	7			-4.19
L29	89.917 - 89.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-74.78	-9.12	-1.23
			Max. Mx	8	-40.22	-1537.41	-3.38
			Max. My	14	-40.23	-4.45	-1542.82
			Max. Vy	8	24.38	-1537.41	-3.38
			Max. Vx	14	24.24	-4.45	-1542.82
			Max. Torque	7			-4.19
L30	89.667 - 84.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-78.51	-9.47	-0.94
			Max. Mx	8	-42.89	-1661.43	-3.33
			Max. My	14	-42.90	-4.48	-1666.08
			Max. Vy	8	25.24	-1661.43	-3.33
			Max. Vx	14	25.11	-4.48	-1666.08
			Max. Torque	7			-4.19
L31	84.667 - 80.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.44	-9.62	-0.67
			Max. Mx	8	-45.95	-1759.36	-3.24
			Max. My	14	-45.95	-4.40	-1763.54
			Max. Vy	8	25.93	-1759.36	-3.24
			Max. Vx	14	25.80	-4.40	-1763.54
			Max. Torque	7			-4.19
L32	80.833 - 80.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.91	-9.64	-0.64
			Max. Mx	8	-46.31	-1772.34	-3.23
			Max. My	14	-46.31	-4.39	-1776.44
			Max. Vy	8	26.02	-1772.34	-3.23
			Max. Vx	14	25.89	-4.39	-1776.44
			Max. Torque	7			-4.19
L33	80.333 - 80.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.09	-9.67	-0.62
			Max. Mx	8	-46.44	-1778.85	-3.23
			Max. My	14	-46.45	-4.39	-1782.92
			Max. Vy	8	26.07	-1778.85	-3.23
			Max. Vx	14	25.94	-4.39	-1782.92
			Max. Torque	7			-4.19
L34	80.083 - 75.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86.38	-10.15	-0.35
			Max. Mx	8	-48.75	-1911.38	-3.19
			Max. My	14	-48.76	-4.51	-1914.68
			Max. Vy	8	26.94	-1911.38	-3.19
			Max. Vx	14	26.81	-4.51	-1914.68
			Max. Torque	7			-4.19
L35	75.083 - 70.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-90.21	-10.88	-0.11
			Max. Mx	8	-51.49	-2048.48	-3.18

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	14	-51.49	-4.82	-2050.83
			Max. Vy	8	27.82	-2048.48	-3.18
			Max. Vx	14	27.69	-4.82	-2050.83
			Max. Torque	7			-4.19
L36	70.083 - 69.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-91.36	-9.08	-1.17
			Max. Mx	8	-52.14	-2064.17	-3.62
			Max. My	14	-52.14	-4.10	-2067.67
			Max. Vy	8	28.34	-2064.17	-3.62
			Max. Vx	14	28.23	-4.10	-2067.67
			Max. Torque	7			-4.19
L37	69.5 - 69.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-91.60	-9.13	-1.16
			Max. Mx	8	-52.32	-2071.27	-3.63
			Max. My	14	-52.32	-4.12	-2074.73
			Max. Vy	8	28.39	-2071.27	-3.63
			Max. Vx	14	28.27	-4.12	-2074.73
			Max. Torque	7			-4.19
L38	69.25 - 64.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-99.29	-10.37	-0.91
			Max. Mx	8	-58.52	-2216.46	-3.66
			Max. My	14	-58.52	-4.99	-2218.51
			Max. Vy	8	29.40	-2216.46	-3.66
			Max. Vx	14	29.28	-4.99	-2218.51
			Max. Torque	7			-4.19
L39	64.25 - 60.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-105.53	-11.34	-0.68
			Max. Mx	8	-63.57	-2326.48	-3.65
			Max. My	14	-63.57	-5.66	-2327.43
			Max. Vy	8	30.31	-2326.48	-3.65
			Max. Vx	14	30.19	-5.66	-2327.43
			Max. Torque	7			-4.19
L40	60.583 - 60.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-105.78	-11.38	-0.66
			Max. Mx	8	-63.77	-2334.08	-3.65
			Max. My	14	-63.77	-5.69	-2334.98
			Max. Vy	8	30.35	-2334.08	-3.65
			Max. Vx	14	30.23	-5.69	-2334.98
			Max. Torque	7			-4.19
L41	60.333 - 55.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-110.69	-12.19	-0.36
			Max. Mx	8	-67.38	-2488.47	-3.67
			Max. My	14	-67.38	-6.14	-2488.38
			Max. Vy	8	31.29	-2488.47	-3.67
			Max. Vx	14	31.17	-6.14	-2488.38
			Max. Torque	7			-4.19
L42	55.333 - 52.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-112.60	-12.53	-0.19
			Max. Mx	8	-68.77	-2587.95	-3.69
			Max. My	14	-68.77	-6.30	-2587.38
			Max. Vy	8	31.52	-2587.95	-3.69
			Max. Vx	14	31.41	-6.30	-2587.38
			Max. Torque	7			-4.19
L43	52.167 - 51.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-112.78	-12.56	-0.17
			Max. Mx	8	-68.91	-2595.84	-3.69
			Max. My	14	-68.91	-6.31	-2595.23
			Max. Vy	8	31.54	-2595.84	-3.69
			Max. Vx	14	31.43	-6.31	-2595.23
			Max. Torque	7			-4.19
L44	51.917 - 46.917	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-116.80	-13.22	0.15
			Max. Mx	8	-71.84	-2755.77	-3.64
			Max. My	14	-71.84	-6.63	-2754.26
			Max. Vy	8	32.37	-2755.77	-3.64
			Max. Vx	14	32.26	-6.63	-2754.26
			Max. Torque	7			-4.19
L45	46.917 - 41.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-122.03	-13.92	0.94
			Max. Mx	8	-75.64	-2919.96	-3.20
			Max. My	14	-75.64	-6.96	-2917.24
			Max. Vy	8	33.24	-2919.96	-3.20
			Max. Vx	14	33.16	-6.96	-2917.24
			Max. Torque	7			-4.19
L46	41.917 - 40.233	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-123.70	-14.14	1.20
			Max. Mx	8	-76.85	-2976.20	-3.06
			Max. My	14	-76.86	-7.06	-2973.12
			Max. Vy	8	33.52	-2976.20	-3.06
			Max. Vx	14	33.45	-7.06	-2973.12
			Max. Torque	7			-4.19
L47	40.233 - 39.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-123.93	-14.17	1.24
			Max. Mx	8	-77.04	-2984.59	-3.04
			Max. My	14	-77.04	-7.07	-2981.46
			Max. Vy	8	33.55	-2984.59	-3.04
			Max. Vx	14	33.48	-7.07	-2981.46
			Max. Torque	7			-4.19
L48	39.983 - 34.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-128.61	-14.69	2.07
			Max. Mx	8	-80.53	-3154.33	-2.60
			Max. My	14	-80.54	-7.30	-3150.24
			Max. Vy	8	34.32	-3154.33	-2.60
			Max. Vx	14	34.27	-7.30	-3150.24
			Max. Torque	7			-4.19
L49	34.983 - 29.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-132.88	-16.35	1.94
			Max. Mx	8	-83.69	-3328.77	-2.68
			Max. My	14	-83.69	-8.00	-3323.84
			Max. Vy	8	35.19	-3328.77	-2.68
			Max. Vx	14	35.15	-8.00	-3323.84
			Max. Torque	7			-4.75
L50	29.983 - 28	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-134.24	-16.54	2.02
			Max. Mx	8	-84.68	-3398.83	-2.67
			Max. My	14	-84.68	-8.08	-3393.73
			Max. Vy	8	35.46	-3398.83	-2.67
			Max. Vx	14	35.41	-8.08	-3393.73
			Max. Torque	7			-4.75
L51	28 - 27.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-134.44	-16.57	2.03
			Max. Mx	8	-84.84	-3407.70	-2.67
			Max. My	14	-84.84	-8.09	-3402.57
			Max. Vy	8	35.47	-3407.70	-2.67
			Max. Vx	14	35.42	-8.09	-3402.57
			Max. Torque	7			-4.75
L52	27.75 - 22.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-139.58	-17.12	2.19
			Max. Mx	8	-88.79	-3587.02	-2.68
			Max. My	14	-88.79	-8.34	-3581.39
			Max. Vy	8	36.20	-3587.02	-2.68
			Max. Vx	14	36.14	-8.34	-3581.39
			Max. Torque	7			-4.75
L53	22.75 -	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
	20.083						
			Max. Compression	26	-142.32	-17.41	2.28
			Max. Mx	8	-90.92	-3684.13	-2.69
			Max. My	14	-90.92	-8.48	-3678.22
			Max. Vy	8	36.58	-3684.13	-2.69
			Max. Vx	14	36.51	-8.48	-3678.22
			Max. Torque	7			-4.75
L54	20.083 - 19.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-142.56	-17.44	2.29
			Max. Mx	8	-91.11	-3693.28	-2.69
			Max. My	14	-91.11	-8.49	-3687.34
			Max. Vy	8	36.60	-3693.28	-2.69
			Max. Vx	14	36.53	-8.49	-3687.34
			Max. Torque	7			-4.75
L55	19.833 - 17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-145.26	-17.78	2.33
			Max. Mx	8	-93.15	-3797.60	-2.70
			Max. My	14	-93.15	-8.64	-3791.33
			Max. Vy	8	37.00	-3797.60	-2.70
			Max. Vx	14	36.92	-8.64	-3791.33
			Max. Torque	7			-4.75
L56	17 - 16.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-145.51	-17.82	2.33
			Max. Mx	8	-93.37	-3806.86	-2.70
			Max. My	14	-93.37	-8.65	-3800.56
			Max. Vy	8	37.01	-3806.86	-2.70
			Max. Vx	14	36.94	-8.65	-3800.56
			Max. Torque	7			-4.75
L57	16.75 - 11.65	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-150.53	-18.45	2.40
			Max. Mx	8	-97.41	-3997.44	-2.71
			Max. My	14	-97.41	-8.90	-3990.50
			Max. Vy	8	37.68	-3997.44	-2.71
			Max. Vx	14	37.59	-8.90	-3990.50
			Max. Torque	7			-4.75
L58	11.65 - 11.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-150.72	-18.48	2.40
			Max. Mx	8	-97.57	-4006.23	-2.71
			Max. My	14	-97.57	-8.91	-3999.25
			Max. Vy	8	37.68	-4006.23	-2.71
			Max. Vx	14	37.59	-8.91	-3999.25
			Max. Torque	7			-4.75
L59	11.417 - 9.396	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-152.31	-18.69	2.47
			Max. Mx	8	-98.85	-4082.65	-2.70
			Max. My	14	-98.85	-8.99	-4075.27
			Max. Vy	8	37.93	-4082.65	-2.70
			Max. Vx	14	37.69	-8.99	-4075.27
			Max. Torque	7			-4.75
L60	9.396 - 9.146	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-152.52	-18.72	2.48
			Max. Mx	8	-99.02	-4092.14	-2.70
			Max. My	14	-99.02	-9.00	-4084.68
			Max. Vy	8	37.94	-4092.14	-2.70
			Max. Vx	14	37.71	-9.00	-4084.68
			Max. Torque	7			-4.75
L61	9.146 - 4.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-156.01	-19.16	2.66
			Max. Mx	8	-101.86	-4256.99	-2.68
			Max. My	14	-101.86	-9.16	-4248.34
			Max. Vy	8	38.47	-4256.99	-2.68
			Max. Vx	14	38.23	-9.16	-4248.34
			Max. Torque	7			-4.75

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L62	4.833 - 4.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-156.20	-19.19	2.68
			Max. Mx	8	-102.03	-4266.61	-2.68
			Max. My	14	-102.03	-9.17	-4257.89
			Max. Vy	8	38.48	-4266.61	-2.68
			Max. Vx	14	38.25	-9.17	-4257.89
			Max. Torque	7			-4.75
L63	4.583 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-159.52	-19.36	2.75
			Max. Mx	8	-104.85	-4443.41	-2.70
			Max. My	14	-104.85	-9.27	-4434.32
			Max. Vy	20	-38.99	4425.81	3.97
			Max. Vx	14	38.78	-9.27	-4434.32
			Max. Torque	7			-4.75

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	159.52	-0.00	-0.00
	Max. H_x	20	104.86	38.97	0.01
	Max. H_z	2	104.86	0.01	38.66
	Max. M_x	2	4395.14	0.01	38.66
	Max. M_z	8	4443.41	-38.65	-0.01
	Max. Torsion	19	4.75	33.27	-19.26
	Min. Vert	17	78.65	19.08	-33.17
	Min. H_x	8	104.86	-38.65	-0.01
	Min. H_z	14	104.86	-0.01	-38.76
	Min. M_x	14	-4434.32	-0.01	-38.76
	Min. M_z	20	-4425.81	38.97	0.01
	Min. Torsion	7	-4.75	-33.14	19.18

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	87.39	0.00	0.00	-0.65	-4.51	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	104.86	-0.01	-38.66	-4395.14	-2.13	1.80
0.9 Dead+1.0 Wind 0 deg - No Ice	78.65	-0.01	-38.66	-4349.43	-0.73	1.81
1.2 Dead+1.0 Wind 30 deg - No Ice	104.86	19.15	-33.27	-3877.25	-2232.99	3.70
0.9 Dead+1.0 Wind 30 deg - No Ice	78.65	19.15	-33.27	-3836.99	-2208.54	3.71
1.2 Dead+1.0 Wind 60 deg - No Ice	104.86	33.14	-19.18	-2237.69	-3868.16	4.74
0.9 Dead+1.0 Wind 60 deg - No Ice	78.65	33.14	-19.18	-2214.39	-3826.79	4.75
1.2 Dead+1.0 Wind 90 deg - No Ice	104.86	38.65	0.01	2.70	-4443.41	4.44
0.9 Dead+1.0 Wind 90 deg - No Ice	78.65	38.65	0.01	2.82	-4396.10	4.44
1.2 Dead+1.0 Wind 120 deg - No Ice	104.86	35.72	20.69	2371.14	-4094.62	2.27
0.9 Dead+1.0 Wind 120 deg - No Ice	78.65	35.72	20.69	2346.89	-4051.10	2.27
1.2 Dead+1.0 Wind 150 deg	104.86	19.65	34.12	3901.86	-2251.55	0.54

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
0.9 Dead+1.0 Wind 150 deg - No Ice	78.65	19.65	34.12	3861.76	-2226.92	0.54
1.2 Dead+1.0 Wind 180 deg - No Ice	104.86	0.01	38.76	4434.32	-9.27	-1.80
0.9 Dead+1.0 Wind 180 deg - No Ice	78.65	0.01	38.76	4388.58	-7.75	-1.81
1.2 Dead+1.0 Wind 210 deg - No Ice	104.86	-19.08	33.17	3785.56	2168.69	-3.72
0.9 Dead+1.0 Wind 210 deg - No Ice	78.65	-19.08	33.17	3746.43	2147.60	-3.73
1.2 Dead+1.0 Wind 240 deg - No Ice	104.86	-33.27	19.26	2189.62	3775.54	-4.74
0.9 Dead+1.0 Wind 240 deg - No Ice	78.65	-33.27	19.26	2167.10	3737.82	-4.75
1.2 Dead+1.0 Wind 270 deg - No Ice	104.86	-38.97	-0.01	-3.97	4425.81	-4.46
0.9 Dead+1.0 Wind 270 deg - No Ice	78.65	-38.97	-0.01	-3.74	4381.46	-4.46
1.2 Dead+1.0 Wind 300 deg - No Ice	104.86	-35.42	-20.51	-2358.19	4058.53	-2.29
0.9 Dead+1.0 Wind 300 deg - No Ice	78.65	-35.42	-20.51	-2333.67	4018.08	-2.28
1.2 Dead+1.0 Wind 330 deg - No Ice	104.86	-19.15	-33.26	-3816.28	2189.61	-0.53
0.9 Dead+1.0 Wind 330 deg - No Ice	78.65	-19.15	-33.26	-3776.48	2168.27	-0.52
1.2 Dead+1.0 Ice+1.0 Temp	159.52	0.00	0.00	-2.75	-19.36	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	159.52	-0.03	-10.07	-1300.88	-16.74	0.61
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	159.52	4.96	-8.66	-1124.03	-661.22	1.39
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	159.52	8.61	-4.99	-649.69	-1132.99	1.80
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	159.52	10.00	-0.00	-2.49	-1308.72	1.72
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	159.52	8.93	5.19	664.00	-1165.95	0.99
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	159.52	5.02	8.74	1124.75	-666.10	0.24
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	159.52	0.00	10.04	1294.26	-20.26	-0.66
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	159.52	-4.96	8.64	1116.30	620.85	-1.39
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	159.52	-8.64	4.99	642.05	1094.33	-1.75
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	159.52	-10.02	-0.02	-5.07	1270.03	-1.61
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	159.52	-8.91	-5.18	-669.27	1125.15	-0.96
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	159.52	-5.03	-8.73	-1128.68	627.25	-0.30
Dead+Wind 0 deg - Service	87.39	-0.00	-9.42	-1064.42	-3.82	0.45
Dead+Wind 30 deg - Service	87.39	4.67	-8.11	-939.06	-543.88	0.91
Dead+Wind 60 deg - Service	87.39	8.07	-4.67	-542.15	-939.72	1.17
Dead+Wind 90 deg - Service	87.39	9.42	0.00	0.21	-1078.98	1.09
Dead+Wind 120 deg - Service	87.39	8.70	5.04	573.58	-994.58	0.55
Dead+Wind 150 deg - Service	87.39	4.79	8.31	944.13	-548.37	0.13
Dead+Wind 180 deg - Service	87.39	0.00	9.44	1073.02	-5.55	-0.45
Dead+Wind 210 deg - Service	87.39	-4.65	8.08	915.95	521.69	-0.92
Dead+Wind 240 deg - Service	87.39	-8.11	4.69	529.62	910.68	-1.17
Dead+Wind 270 deg - Service	87.39	-9.50	-0.00	-1.40	1068.11	-1.09
Dead+Wind 300 deg -	87.39	-8.63	-5.00	-571.33	979.22	-0.56

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Service Dead+Wind 330 deg - Service	87.39	-4.67	-8.10	-924.28	526.75	-0.12

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-87.39	0.00	0.00	87.39	0.00	0.000%
2	-0.01	-104.86	-38.66	0.01	104.86	38.66	0.000%
3	-0.01	-78.65	-38.66	0.01	78.65	38.66	0.000%
4	19.15	-104.86	-33.27	-19.15	104.86	33.27	0.000%
5	19.15	-78.65	-33.27	-19.15	78.65	33.27	0.000%
6	33.14	-104.86	-19.18	-33.14	104.86	19.18	0.000%
7	33.14	-78.65	-19.18	-33.14	78.65	19.18	0.000%
8	38.65	-104.86	0.01	-38.65	104.86	-0.01	0.000%
9	38.65	-78.65	0.01	-38.65	78.65	-0.01	0.000%
10	35.72	-104.86	20.69	-35.72	104.86	-20.69	0.000%
11	35.72	-78.65	20.69	-35.72	78.65	-20.69	0.000%
12	19.65	-104.86	34.12	-19.65	104.86	-34.12	0.000%
13	19.65	-78.65	34.12	-19.65	78.65	-34.12	0.000%
14	0.01	-104.86	38.76	-0.01	104.86	-38.76	0.000%
15	0.01	-78.65	38.76	-0.01	78.65	-38.76	0.000%
16	-19.08	-104.86	33.17	19.08	104.86	-33.17	0.000%
17	-19.08	-78.65	33.17	19.08	78.65	-33.17	0.000%
18	-33.27	-104.86	19.26	33.27	104.86	-19.26	0.000%
19	-33.27	-78.65	19.26	33.27	78.65	-19.26	0.000%
20	-38.97	-104.86	-0.01	38.97	104.86	0.01	0.000%
21	-38.97	-78.65	-0.01	38.97	78.65	0.01	0.000%
22	-35.42	-104.86	-20.51	35.42	104.86	20.51	0.000%
23	-35.42	-78.65	-20.51	35.42	78.65	20.51	0.000%
24	-19.15	-104.86	-33.26	19.15	104.86	33.26	0.000%
25	-19.15	-78.65	-33.26	19.15	78.65	33.26	0.000%
26	0.00	-159.52	0.00	-0.00	159.52	-0.00	0.000%
27	-0.03	-159.52	-10.07	0.03	159.52	10.07	0.000%
28	4.96	-159.52	-8.66	-4.96	159.52	8.66	0.000%
29	8.61	-159.52	-4.99	-8.61	159.52	4.99	0.000%
30	10.00	-159.52	-0.00	-10.00	159.52	0.00	0.000%
31	8.93	-159.52	5.19	-8.93	159.52	-5.19	0.000%
32	5.02	-159.52	8.74	-5.02	159.52	-8.74	0.000%
33	0.00	-159.52	10.04	-0.00	159.52	-10.04	0.000%
34	-4.96	-159.52	8.64	4.96	159.52	-8.64	0.000%
35	-8.64	-159.52	4.99	8.64	159.52	-4.99	0.000%
36	-10.02	-159.52	-0.02	10.02	159.52	0.02	0.000%
37	-8.91	-159.52	-5.18	8.91	159.52	5.18	0.000%
38	-5.03	-159.52	-8.73	5.03	159.52	8.73	0.000%
39	-0.00	-87.39	-9.42	0.00	87.39	9.42	0.000%
40	4.67	-87.39	-8.11	-4.67	87.39	8.11	0.000%
41	8.07	-87.39	-4.67	-8.07	87.39	4.67	0.000%
42	9.42	-87.39	0.00	-9.42	87.39	-0.00	0.000%
43	8.70	-87.39	5.04	-8.70	87.39	-5.04	0.000%
44	4.79	-87.39	8.31	-4.79	87.39	-8.31	0.000%
45	0.00	-87.39	9.44	-0.00	87.39	-9.44	0.000%
46	-4.65	-87.39	8.08	4.65	87.39	-8.08	0.000%
47	-8.11	-87.39	4.69	8.11	87.39	-4.69	0.000%
48	-9.50	-87.39	-0.00	9.50	87.39	0.00	0.000%
49	-8.63	-87.39	-5.00	8.63	87.39	5.00	0.000%
50	-4.67	-87.39	-8.10	4.67	87.39	8.10	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000158
2	Yes	5	0.00000001	0.00053705
3	Yes	5	0.00000001	0.00026363
4	Yes	6	0.00000001	0.00032333
5	Yes	6	0.00000001	0.00012067
6	Yes	6	0.00000001	0.00027767
7	Yes	6	0.00000001	0.00010245
8	Yes	5	0.00000001	0.00083644
9	Yes	5	0.00000001	0.00042849
10	Yes	6	0.00000001	0.00035054
11	Yes	6	0.00000001	0.00012904
12	Yes	6	0.00000001	0.00030432
13	Yes	6	0.00000001	0.00011267
14	Yes	5	0.00000001	0.00056123
15	Yes	5	0.00000001	0.00027617
16	Yes	6	0.00000001	0.00026531
17	Yes	6	0.00000001	0.00009831
18	Yes	6	0.00000001	0.00031242
19	Yes	6	0.00000001	0.00011720
20	Yes	5	0.00000001	0.00081516
21	Yes	5	0.00000001	0.00041783
22	Yes	6	0.00000001	0.00032780
23	Yes	6	0.00000001	0.00012046
24	Yes	6	0.00000001	0.00028951
25	Yes	6	0.00000001	0.00010768
26	Yes	5	0.00000001	0.00012947
27	Yes	6	0.00000001	0.00074506
28	Yes	6	0.00000001	0.00080537
29	Yes	6	0.00000001	0.00080280
30	Yes	6	0.00000001	0.00075529
31	Yes	6	0.00000001	0.00082569
32	Yes	6	0.00000001	0.00080815
33	Yes	6	0.00000001	0.00074807
34	Yes	6	0.00000001	0.00078313
35	Yes	6	0.00000001	0.00078088
36	Yes	6	0.00000001	0.00072679
37	Yes	6	0.00000001	0.00079431
38	Yes	6	0.00000001	0.00078477
39	Yes	5	0.00000001	0.00005252
40	Yes	5	0.00000001	0.00011691
41	Yes	5	0.00000001	0.00009618
42	Yes	5	0.00000001	0.00006102
43	Yes	5	0.00000001	0.00011870
44	Yes	5	0.00000001	0.00010254
45	Yes	5	0.00000001	0.00005323
46	Yes	5	0.00000001	0.00009100
47	Yes	5	0.00000001	0.00011503
48	Yes	5	0.00000001	0.00006028
49	Yes	5	0.00000001	0.00010604
50	Yes	5	0.00000001	0.00009633

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.667 - 186.667	19.842	43	0.9834	0.0051
L2	186.667 - 181.567	18.812	43	0.9822	0.0048
L3	181.567 - 176.567	17.764	43	0.9807	0.0046
L4	176.567 - 171.567	16.739	43	0.9757	0.0045
L5	171.567 - 166.567	15.722	43	0.9666	0.0043

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L6	166.567 - 161.567	14.717	43	0.9528	0.0042
L7	161.567 - 156.567	13.729	43	0.9322	0.0040
L8	156.567 - 151.567	12.767	43	0.9035	0.0038
L9	151.567 - 146.567	11.841	43	0.8636	0.0034
L10	146.567 - 141.567	10.963	43	0.8114	0.0029
L11	141.567 - 141.417	10.148	43	0.7420	0.0025
L12	141.417 - 136.417	10.124	43	0.7397	0.0025
L13	136.417 - 131.417	9.363	43	0.7142	0.0023
L14	131.417 - 126.417	8.631	43	0.6833	0.0022
L15	126.417 - 121.417	7.934	43	0.6469	0.0019
L16	121.417 - 121.167	7.278	43	0.6049	0.0017
L17	121.167 - 116.167	7.246	43	0.6026	0.0016
L18	116.167 - 111.167	6.631	43	0.5725	0.0015
L19	111.167 - 110.042	6.049	43	0.5387	0.0013
L20	110.042 - 109.792	5.923	43	0.5306	0.0013
L21	109.792 - 105.083	5.895	43	0.5292	0.0013
L22	105.083 - 104.833	5.387	43	0.5011	0.0012
L23	104.833 - 100.917	5.360	43	0.4997	0.0011
L24	100.917 - 100.667	4.960	43	0.4775	0.0011
L25	100.667 - 95.833	4.935	43	0.4760	0.0011
L26	95.833 - 95.583	4.467	43	0.4465	0.0009
L27	95.583 - 90.583	4.444	43	0.4452	0.0009
L28	90.583 - 89.917	3.991	43	0.4187	0.0009
L29	89.917 - 89.667	3.933	43	0.4150	0.0008
L30	89.667 - 84.667	3.912	43	0.4139	0.0008
L31	84.667 - 80.833	3.491	43	0.3896	0.0008
L32	80.833 - 80.333	3.186	43	0.3698	0.0007
L33	80.333 - 80.083	3.147	43	0.3678	0.0007
L34	80.083 - 75.083	3.128	43	0.3667	0.0007
L35	75.083 - 70.083	2.756	43	0.3437	0.0006
L36	70.083 - 69.5	2.409	43	0.3191	0.0006
L37	69.5 - 69.25	2.370	43	0.3161	0.0006
L38	69.25 - 64.25	2.353	43	0.3150	0.0006
L39	64.25 - 60.583	2.035	43	0.2927	0.0005
L40	60.583 - 60.333	1.817	43	0.2753	0.0005
L41	60.333 - 55.333	1.802	43	0.2743	0.0005
L42	55.333 - 52.167	1.526	43	0.2535	0.0004
L43	52.167 - 51.917	1.363	43	0.2395	0.0004
L44	51.917 - 46.917	1.350	43	0.2386	0.0004
L45	46.917 - 41.917	1.110	43	0.2195	0.0003
L46	41.917 - 40.233	0.891	43	0.1992	0.0003
L47	40.233 - 39.983	0.822	43	0.1918	0.0003
L48	39.983 - 34.983	0.812	43	0.1907	0.0003
L49	34.983 - 29.983	0.624	43	0.1679	0.0003
L50	29.983 - 28	0.461	43	0.1438	0.0002
L51	28 - 27.75	0.403	43	0.1339	0.0002
L52	27.75 - 22.75	0.396	43	0.1328	0.0002
L53	22.75 - 20.083	0.268	43	0.1112	0.0002
L54	20.083 - 19.833	0.209	43	0.0991	0.0001
L55	19.833 - 17	0.204	43	0.0978	0.0001

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L56	17 - 16.75	0.151	43	0.0826	0.0001
L57	16.75 - 11.65	0.146	43	0.0815	0.0001
L58	11.65 - 11.417	0.072	43	0.0576	0.0001
L59	11.417 - 9.396	0.069	43	0.0565	0.0001
L60	9.396 - 9.146	0.047	43	0.0467	0.0001
L61	9.146 - 4.833	0.045	43	0.0455	0.0001
L62	4.833 - 4.583	0.013	43	0.0252	0.0000
L63	4.583 - 0	0.012	43	0.0239	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
192.00	OGB4-900D	43	19.842	0.9834	0.0051	210880
191.67	Lightning Rod 5/8" x 4' on 4' Pole	43	19.842	0.9834	0.0051	210880
191.00	DB589-A	43	19.704	0.9832	0.0051	210880
184.00	AIR -32 B2A/B66AA w/ Mount Pipe	43	18.264	0.9816	0.0047	139220
178.00	4' ICE SHIELDS	43	17.032	0.9776	0.0045	49471
168.00	MX08FRO665-21 w/ Mount Pipe	43	15.003	0.9574	0.0042	18719
160.00	BSF0020F3V1	43	13.424	0.9242	0.0040	10500
158.00	SRL-224NM-4	43	13.040	0.9128	0.0039	9155
151.00	RRUS 32 B30	43	11.739	0.8584	0.0033	6075
150.00	DC6-48-60-18-8F	43	11.560	0.8488	0.0032	5739
138.00	4' ICE SHIELDS	43	9.601	0.7170	0.0023	9785
132.00	SRL-235-2	43	8.714	0.6878	0.0022	8698
124.00	PCS 1900 TMA RX	43	7.611	0.6275	0.0018	7105
98.00	4' ICE SHIELDS	43	4.673	0.4592	0.0010	9677
90.00	KP2F-34	43	3.941	0.4155	0.0008	11220
70.00	SRL-235-2	43	2.403	0.3186	0.0006	12033
33.00	DB909XVTE-M	43	0.556	0.1587	0.0002	11947

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.667 - 186.667	81.819	10	4.0568	0.0212
L2	186.667 - 181.567	77.578	10	4.0530	0.0198
L3	181.567 - 176.567	73.257	10	4.0474	0.0191
L4	176.567 - 171.567	69.034	10	4.0274	0.0184
L5	171.567 - 166.567	64.841	10	3.9901	0.0178
L6	166.567 - 161.567	60.696	10	3.9332	0.0172
L7	161.567 - 156.567	56.625	10	3.8479	0.0166
L8	156.567 - 151.567	52.659	10	3.7292	0.0156
L9	151.567 - 146.567	48.840	10	3.5650	0.0138
L10	146.567 - 141.567	45.218	10	3.3489	0.0120
L11	141.567 - 141.417	41.858	10	3.0624	0.0102
L12	141.417 -	41.762	10	3.0527	0.0102

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
	136.417				
L13	136.417 - 131.417	38.621	10	2.9471	0.0096
L14	131.417 - 126.417	35.602	10	2.8197	0.0090
L15	126.417 - 121.417	32.728	10	2.6696	0.0079
L16	121.417 - 121.167	30.023	10	2.4963	0.0068
L17	121.167 - 116.167	29.892	10	2.4870	0.0068
L18	116.167 - 111.167	27.353	10	2.3628	0.0061
L19	111.167 - 110.042	24.952	10	2.2234	0.0054
L20	110.042 - 109.792	24.432	10	2.1899	0.0053
L21	109.792 - 105.083	24.318	10	2.1840	0.0052
L22	105.083 - 104.833	22.221	10	2.0681	0.0047
L23	104.833 - 100.917	22.113	10	2.0625	0.0047
L24	100.917 - 100.667	20.459	10	1.9707	0.0043
L25	100.667 - 95.833	20.356	10	1.9647	0.0043
L26	95.833 - 95.583	18.428	10	1.8429	0.0039
L27	95.583 - 90.583	18.332	10	1.8376	0.0039
L28	90.583 - 89.917	16.465	10	1.7282	0.0035
L29	89.917 - 89.667	16.225	10	1.7130	0.0035
L30	89.667 - 84.667	16.135	10	1.7082	0.0034
L31	84.667 - 80.833	14.399	10	1.6081	0.0031
L32	80.833 - 80.333	13.140	10	1.5260	0.0029
L33	80.333 - 80.083	12.981	10	1.5179	0.0028
L34	80.083 - 75.083	12.901	10	1.5133	0.0028
L35	75.083 - 70.083	11.366	10	1.4184	0.0026
L36	70.083 - 69.5	9.934	10	1.3164	0.0023
L37	69.5 - 69.25	9.774	10	1.3041	0.0023
L38	69.25 - 64.25	9.706	10	1.2997	0.0023
L39	64.25 - 60.583	8.393	10	1.2075	0.0020
L40	60.583 - 60.333	7.493	10	1.1358	0.0019
L41	60.333 - 55.333	7.433	10	1.1317	0.0019
L42	55.333 - 52.167	6.293	10	1.0455	0.0017
L43	52.167 - 51.917	5.619	10	0.9881	0.0016
L44	51.917 - 46.917	5.567	10	0.9843	0.0016
L45	46.917 - 41.917	4.577	10	0.9054	0.0014
L46	41.917 - 40.233	3.673	10	0.8217	0.0013
L47	40.233 - 39.983	3.388	10	0.7912	0.0012
L48	39.983 - 34.983	3.347	10	0.7867	0.0012
L49	34.983 - 29.983	2.572	10	0.6925	0.0011
L50	29.983 - 28	1.899	10	0.5930	0.0009
L51	28 - 27.75	1.661	10	0.5521	0.0008
L52	27.75 - 22.75	1.632	10	0.5477	0.0008
L53	22.75 - 20.083	1.105	10	0.4583	0.0007
L54	20.083 - 19.833	0.863	10	0.4088	0.0006
L55	19.833 - 17	0.841	10	0.4033	0.0006
L56	17 - 16.75	0.621	10	0.3407	0.0005
L57	16.75 - 11.65	0.603	10	0.3359	0.0005
L58	11.65 - 11.417	0.296	10	0.2374	0.0003
L59	11.417 - 9.396	0.285	10	0.2328	0.0003
L60	9.396 - 9.146	0.195	10	0.1924	0.0003
L61	9.146 - 4.833	0.185	10	0.1876	0.0003
L62	4.833 - 4.583	0.053	10	0.1040	0.0001
L63	4.583 - 0	0.048	10	0.0987	0.0001

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
192.00	OGB4-900D	10	81.819	4.0568	0.0212	65178
191.67	Lightning Rod 5/8" x 4' on 4' Pole	10	81.819	4.0568	0.0212	65178
191.00	DB589-A	10	81.253	4.0562	0.0210	65178
184.00	AIR -32 B2A/B66AA w/ Mount Pipe	10	75.318	4.0511	0.0193	38460
178.00	4' ICE SHIELDS	10	70.242	4.0349	0.0186	12326
168.00	MX08FRO665-21 w/ Mount Pipe	10	61.878	3.9521	0.0173	4579
160.00	BSF0020F3V1	10	55.369	3.8149	0.0164	2566
158.00	SRL-224NM-4	10	53.782	3.7674	0.0160	2243
151.00	RRUS 32 B30	10	48.418	3.5433	0.0136	1484
150.00	DC6-48-60-18-8F	10	47.681	3.5035	0.0133	1401
138.00	4' ICE SHIELDS	10	39.603	2.9589	0.0097	2380
132.00	SRL-235-2	10	35.947	2.8379	0.0091	2119
124.00	PCS 1900 TMA RX	10	31.398	2.5895	0.0074	1731
98.00	4' ICE SHIELDS	10	19.277	1.8954	0.0041	2350
90.00	KP2F-34	10	16.254	1.7147	0.0035	2723
70.00	SRL-235-2	10	9.911	1.3146	0.0023	2916
33.00	DB909XVTE-M	10	2.293	0.6544	0.0010	2896

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
L1	191.667 - 186.667 (1)	P18x0.375	5.00	0.00	0.0	20.7640	-0.67	784.88	0.001
L2	186.667 - 181.567 (2)	P24x0.375	5.10	0.00	0.0	27.8325	-5.76	1052.07	0.005
L3	181.567 - 176.567 (3)	P24x0.375	5.00	0.00	0.0	27.8325	-6.39	1052.07	0.006
L4	176.567 - 171.567 (4)	P24x0.375	5.00	0.00	0.0	27.8325	-6.99	1052.07	0.007
L5	171.567 - 166.567 (5)	P24x0.375	5.00	0.00	0.0	27.8325	-10.38	1052.07	0.010
L6	166.567 - 161.567 (6)	P24x0.375	5.00	0.00	0.0	27.8325	-11.00	1052.07	0.010
L7	161.567 - 156.567 (7)	P24x0.375	5.00	0.00	0.0	27.8325	-15.75	1052.07	0.015
L8	156.567 - 151.567 (8)	P24x0.375	5.00	0.00	0.0	27.8325	-16.39	1052.07	0.016
L9	151.567 - 146.567 (9)	P24x0.375	5.00	0.00	0.0	27.8325	-22.42	1052.07	0.021
L10	146.567 - 141.567 (10)	P24x0.375	5.00	0.00	0.0	27.8325	-23.23	1052.07	0.022
L11	141.567 - 141.417 (11)	P24x0.375	0.15	0.00	0.0	27.8325	-23.26	1052.07	0.022
L12	141.417 - 136.417 (12)	P36x0.375	5.00	0.00	0.0	41.9697	-24.34	1490.10	0.016
L13	136.417 - 131.417 (13)	P36x0.375	5.00	0.00	0.0	41.9697	-25.89	1490.10	0.017
L14	131.417 - 126.417 (14)	P36x0.375	5.00	0.00	0.0	41.9697	-27.00	1490.10	0.018
L15	126.417 - 121.417 (15)	P36x0.375	5.00	0.00	0.0	41.9697	-29.19	1490.10	0.020
L16	121.417 - 121.167 (16)	P36x0.375	0.25	0.00	0.0	41.9697	-29.26	1490.10	0.020
L17	121.167 -	P42x0.375	5.00	0.00	0.0	49.038	-30.65	1668.87	0.018

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	116.167 (17)					3			
L18	116.167 - 111.167 (18)	P42x0.375	5.00	0.00	0.0	49.038 3	-31.87	1668.87	0.019
L19	111.167 - 110.042 (19)	P42x0.375	1.13	0.00	0.0	49.038 3	-32.14	1668.87	0.019
L20	110.042 - 109.792 (20)	P42x0.4875	0.25	0.00	0.0	63.577 5	-32.22	2332.13	0.014
L21	109.792 - 105.083 (21)	P42x0.4875	4.71	0.00	0.0	63.577 5	-33.72	2332.13	0.014
L22	105.083 - 104.833 (22)	P42x0.5625	0.25	0.00	0.0	73.226 1	-33.82	2767.95	0.012
L23	104.833 - 100.917 (23)	P42x0.5625	3.92	0.00	0.0	73.226 1	-36.12	2767.95	0.013
L24	100.917 - 100.667 (24)	P48x0.375	0.25	0.00	0.0	56.106 9	-36.22	1847.49	0.020
L25	100.667 - 95.833 (25)	P48x0.375	4.83	0.00	0.0	56.106 9	-37.91	1847.49	0.021
L26	95.833 - 95.583 (26)	P48x0.475	0.25	0.00	0.0	70.919 5	-38.00	2481.39	0.015
L27	95.583 - 90.583 (27)	P48x0.475	5.00	0.00	0.0	70.919 5	-39.63	2481.39	0.016
L28	90.583 - 89.917 (28)	P48x0.475	0.67	0.00	0.0	70.919 5	-40.02	2481.39	0.016
L29	89.917 - 89.667 (29)	P48x0.575	0.25	0.00	0.0	85.669 3	-40.13	3174.02	0.013
L30	89.667 - 84.667 (30)	P48x0.575	5.00	0.00	0.0	85.669 3	-42.80	3174.02	0.013
L31	84.667 - 80.833 (31)	P48x0.575	3.83	0.00	0.0	85.669 3	-45.85	3174.02	0.014
L32	80.833 - 80.333 (32)	P54x0.55	0.50	0.00	0.0	92.355 0	-46.22	3257.83	0.014
L33	80.333 - 80.083 (33)	P54x0.4875	0.25	0.00	0.0	81.955 8	-46.35	2797.17	0.017
L34	80.083 - 75.083 (34)	P54x0.4875	5.00	0.00	0.0	81.955 8	-48.67	2797.17	0.017
L35	75.083 - 70.083 (35)	P54x0.4875	5.00	0.00	0.0	81.955 8	-51.41	2797.17	0.018
L36	70.083 - 69.5 (36)	P54x0.4875	0.58	0.00	0.0	81.955 8	-52.06	2797.17	0.019
L37	69.5 - 69.25 (37)	P54x0.5875	0.25	0.00	0.0	98.582 7	-52.24	3545.23	0.015
L38	69.25 - 64.25 (38)	P54x0.5875	5.00	0.00	0.0	98.582 7	-58.43	3545.23	0.016
L39	64.25 - 60.583 (39)	P54x0.5875	3.67	0.00	0.0	98.582 7	-63.49	3545.23	0.018
L40	60.583 - 60.333 (40)	P60x0.5125	0.25	0.00	0.0	95.778 8	-63.68	3222.89	0.020
L41	60.333 - 55.333 (41)	P60x0.5125	5.00	0.00	0.0	95.778 8	-67.31	3222.89	0.021
L42	55.333 - 52.167 (42)	P60x0.5125	3.17	0.00	0.0	95.778 8	-68.70	3222.89	0.021
L43	52.167 - 51.917 (43)	P60x0.625	0.25	0.00	0.0	116.58 30	-68.83	4139.15	0.017
L44	51.917 - 46.917 (44)	P60x0.625	5.00	0.00	0.0	116.58 30	-71.77	4139.15	0.017
L45	46.917 - 41.917 (45)	P60x0.625	5.00	0.00	0.0	116.58 30	-75.57	4139.15	0.018
L46	41.917 - 40.233 (46)	P60x0.6	1.68	0.00	0.0	111.96 60	-76.79	3929.11	0.020
L47	40.233 - 39.983 (47)	P60x0.6	0.25	0.00	0.0	111.96 60	-76.98	3929.11	0.020
L48	39.983 - 34.983 (48)	P60x0.6	5.00	0.00	0.0	111.96 60	-80.48	3929.11	0.020
L49	34.983 - 29.983 (49)	P60x0.6	5.00	0.00	0.0	111.96 60	-83.64	3929.11	0.021
L50	29.983 - 28 (50)	P60x0.6	1.98	0.00	0.0	111.96 60	-84.64	3929.11	0.022
L51	28 - 27.75 (51)	P60x0.725	0.25	0.00	0.0	135.00 80	-84.80	5015.91	0.017

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L52	27.75 - 22.75 (52)	P60x0.725	5.00	0.00	0.0	135.0080	-88.75	5015.91	0.018
L53	22.75 - 20.083 (53)	P60x0.725	2.67	0.00	0.0	135.0080	-90.88	5015.91	0.018
L54	20.083 - 19.833 (54)	P60x0.625	0.25	0.00	0.0	116.5830	-91.07	4139.15	0.022
L55	19.833 - 17 (55)	P60x0.625	2.83	0.00	0.0	116.5830	-93.12	4139.15	0.022
L56	17 - 16.75 (56)	P60x0.725	0.25	0.00	0.0	135.0080	-93.34	5015.91	0.019
L57	16.75 - 11.65 (57)	P60x0.75	5.10	0.00	0.0	139.6050	-97.39	5244.23	0.019
L58	11.65 - 11.417 (58)	P60x0.75	0.23	0.00	0.0	139.6050	-97.55	5244.23	0.019
L59	11.417 - 9.396 (59)	P60x0.75	2.02	0.00	0.0	139.6050	-98.83	5244.23	0.019
L60	9.396 - 9.146 (60)	P60x0.8	0.25	0.00	0.0	148.7860	-99.00	5624.10	0.018
L61	9.146 - 4.833 (61)	P60x0.8	4.31	0.00	0.0	148.7860	-101.85	5624.10	0.018
L62	4.833 - 4.583 (62)	P60x0.75	0.25	0.00	0.0	139.6050	-102.02	5244.23	0.019
L63	4.583 - 0 (63)	P60x0.75	4.58	0.00	0.0	139.6050	-104.85	5244.23	0.020

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	191.667 - 186.667 (1)	P18x0.375	3.72	367.00	0.010	0.00	367.00	0.000
L2	186.667 - 181.567 (2)	P24x0.375	16.15	623.72	0.026	0.00	623.72	0.000
L3	181.567 - 176.567 (3)	P24x0.375	38.91	623.72	0.062	0.00	623.72	0.000
L4	176.567 - 171.567 (4)	P24x0.375	63.32	623.72	0.102	0.00	623.72	0.000
L5	171.567 - 166.567 (5)	P24x0.375	96.67	623.72	0.155	0.00	623.72	0.000
L6	166.567 - 161.567 (6)	P24x0.375	136.78	623.72	0.219	0.00	623.72	0.000
L7	161.567 - 156.567 (7)	P24x0.375	192.53	623.72	0.309	0.00	623.72	0.000
L8	156.567 - 151.567 (8)	P24x0.375	256.78	623.72	0.412	0.00	623.72	0.000
L9	151.567 - 146.567 (9)	P24x0.375	342.15	623.72	0.549	0.00	623.72	0.000
L10	146.567 - 141.567 (10)	P24x0.375	440.76	623.72	0.707	0.00	623.72	0.000
L11	141.567 - 141.417 (11)	P24x0.375	443.76	623.72	0.711	0.00	623.72	0.000
L12	141.417 - 136.417 (12)	P36x0.375	544.79	1338.81	0.407	0.00	1338.81	0.000
L13	136.417 - 131.417 (13)	P36x0.375	649.35	1338.81	0.485	0.00	1338.81	0.000
L14	131.417 - 126.417 (14)	P36x0.375	756.63	1338.81	0.565	0.00	1338.81	0.000
L15	126.417 - 121.417 (15)	P36x0.375	866.27	1338.81	0.647	0.00	1338.81	0.000
L16	121.417 - 121.167 (16)	P36x0.375	871.82	1338.81	0.651	0.00	1338.81	0.000
L17	121.167 - 116.167 (17)	P42x0.375	983.98	1796.56	0.548	0.00	1796.56	0.000
L18	116.167 -	P42x0.375	1098.11	1796.56	0.611	0.00	1796.56	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	111.167 (18)							
L19	111.167 - 110.042 (19)	P42x0.375	1124.10	1796.56	0.626	0.00	1796.56	0.000
L20	110.042 - 109.792 (20)	P42x0.4875	1129.90	2395.43	0.472	0.00	2395.43	0.000
L21	109.792 - 105.083 (21)	P42x0.4875	1240.98	2395.43	0.518	0.00	2395.43	0.000
L22	105.083 - 104.833 (22)	P42x0.5625	1246.97	2809.31	0.444	0.00	2809.31	0.000
L23	104.833 - 100.917 (23)	P42x0.5625	1342.57	2809.31	0.478	0.00	2809.31	0.000
L24	100.917 - 100.667 (24)	P48x0.375	1348.78	2321.11	0.581	0.00	2321.11	0.000
L25	100.667 - 95.833 (25)	P48x0.375	1470.17	2321.11	0.633	0.00	2321.11	0.000
L26	95.833 - 95.583 (26)	P48x0.475	1476.52	2999.96	0.492	0.00	2999.96	0.000
L27	95.583 - 90.583 (27)	P48x0.475	1604.47	2999.96	0.535	0.00	2999.96	0.000
L28	90.583 - 89.917 (28)	P48x0.475	1621.84	2999.96	0.541	0.00	2999.96	0.000
L29	89.917 - 89.667 (29)	P48x0.575	1628.38	3702.97	0.440	0.00	3702.97	0.000
L30	89.667 - 84.667 (30)	P48x0.575	1761.32	3702.97	0.476	0.00	3702.97	0.000
L31	84.667 - 80.833 (31)	P48x0.575	1866.37	3702.97	0.504	0.00	3702.97	0.000
L32	80.833 - 80.333 (32)	P54x0.55	1880.30	4408.41	0.427	0.00	4408.41	0.000
L33	80.333 - 80.083 (33)	P54x0.4875	1887.30	3864.47	0.488	0.00	3864.47	0.000
L34	80.083 - 75.083 (34)	P54x0.4875	2029.48	3864.47	0.525	0.00	3864.47	0.000
L35	75.083 - 70.083 (35)	P54x0.4875	2176.21	3864.47	0.563	0.00	3864.47	0.000
L36	70.083 - 69.5 (36)	P54x0.4875	2193.37	3864.47	0.568	0.00	3864.47	0.000
L37	69.5 - 69.25 (37)	P54x0.5875	2200.96	4739.87	0.464	0.00	4739.87	0.000
L38	69.25 - 64.25 (38)	P54x0.5875	2356.47	4739.87	0.497	0.00	4739.87	0.000
L39	64.25 - 60.583 (39)	P54x0.5875	2474.67	4739.87	0.522	0.00	4739.87	0.000
L40	60.583 - 60.333 (40)	P60x0.5125	2482.83	4992.04	0.497	0.00	4992.04	0.000
L41	60.333 - 55.333 (41)	P60x0.5125	2648.64	4992.04	0.531	0.00	4992.04	0.000
L42	55.333 - 52.167 (42)	P60x0.5125	2755.38	4992.04	0.552	0.00	4992.04	0.000
L43	52.167 - 51.917 (43)	P60x0.625	2763.84	6198.18	0.446	0.00	6198.18	0.000
L44	51.917 - 46.917 (44)	P60x0.625	2935.21	6198.18	0.474	0.00	6198.18	0.000
L45	46.917 - 41.917 (45)	P60x0.625	3110.73	6198.18	0.502	0.00	6198.18	0.000
L46	41.917 - 40.233 (46)	P60x0.6	3170.82	5926.84	0.535	0.00	5926.84	0.000
L47	40.233 - 39.983 (47)	P60x0.6	3179.78	5926.84	0.537	0.00	5926.84	0.000
L48	39.983 - 34.983 (48)	P60x0.6	3360.96	5926.84	0.567	0.00	5926.84	0.000
L49	34.983 - 29.983 (49)	P60x0.6	3547.03	5926.84	0.598	0.00	5926.84	0.000
L50	29.983 - 28 (50)	P60x0.6	3621.70	5926.84	0.611	0.00	5926.84	0.000
L51	28 - 27.75 (51)	P60x0.725	3631.15	7302.23	0.497	0.00	7302.23	0.000
L52	27.75 - 22.75 (52)	P60x0.725	3822.09	7302.23	0.523	0.00	7302.23	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L53	22.75 - 20.083 (53)	P60x0.725	3925.39	7302.23	0.538	0.00	7302.23	0.000
L54	20.083 - 19.833 (54)	P60x0.625	3935.13	6198.18	0.635	0.00	6198.18	0.000
L55	19.833 - 17 (55)	P60x0.625	4046.00	6198.18	0.653	0.00	6198.18	0.000
L56	17 - 16.75 (56)	P60x0.725	4055.83	7302.23	0.555	0.00	7302.23	0.000
L57	16.75 - 11.65 (57)	P60x0.75	4258.18	7582.87	0.562	0.00	7582.87	0.000
L58	11.65 - 11.417 (58)	P60x0.75	4267.50	7582.87	0.563	0.00	7582.87	0.000
L59	11.417 - 9.396 (59)	P60x0.75	4348.57	7582.87	0.573	0.00	7582.87	0.000
L60	9.396 - 9.146 (60)	P60x0.8	4358.63	8149.65	0.535	0.00	8149.65	0.000
L61	9.146 - 4.833 (61)	P60x0.8	4533.37	8149.65	0.556	0.00	8149.65	0.000
L62	4.833 - 4.583 (62)	P60x0.75	4543.56	7582.87	0.599	0.00	7582.87	0.000
L63	4.583 - 0 (63)	P60x0.75	4731.62	7582.87	0.624	0.00	7582.87	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	191.667 - 186.667 (1)	P18x0.375	0.63	235.46	0.003	0.12	364.87	0.000
L2	186.667 - 181.567 (2)	P24x0.375	4.40	315.62	0.014	0.12	655.57	0.000
L3	181.567 - 176.567 (3)	P24x0.375	4.74	315.62	0.015	0.13	655.57	0.000
L4	176.567 - 171.567 (4)	P24x0.375	5.02	315.62	0.016	0.13	655.57	0.000
L5	171.567 - 166.567 (5)	P24x0.375	7.89	315.62	0.025	0.23	655.57	0.000
L6	166.567 - 161.567 (6)	P24x0.375	8.16	315.62	0.026	0.23	655.57	0.000
L7	161.567 - 156.567 (7)	P24x0.375	12.53	315.62	0.040	0.17	655.57	0.000
L8	156.567 - 151.567 (8)	P24x0.375	13.20	315.62	0.042	0.98	655.57	0.001
L9	151.567 - 146.567 (9)	P24x0.375	19.46	315.62	0.062	0.82	655.57	0.001
L10	146.567 - 141.567 (10)	P24x0.375	19.99	315.62	0.063	0.67	655.57	0.001
L11	141.567 - 141.417 (11)	P24x0.375	20.00	315.62	0.063	0.64	655.57	0.001
L12	141.417 - 136.417 (12)	P36x0.375	20.43	454.19	0.045	0.60	1094.28	0.001
L13	136.417 - 131.417 (13)	P36x0.375	21.27	454.19	0.047	0.60	1094.28	0.001
L14	131.417 - 126.417 (14)	P36x0.375	21.64	454.19	0.048	0.60	1094.28	0.001
L15	126.417 - 121.417 (15)	P36x0.375	22.20	454.19	0.049	0.54	1094.28	0.000
L16	121.417 - 121.167 (16)	P36x0.375	22.22	454.19	0.049	0.54	1094.28	0.000
L17	121.167 - 116.167 (17)	P42x0.375	22.63	421.13	0.054	0.54	1185.51	0.000
L18	116.167 - 111.167 (18)	P42x0.375	23.02	421.13	0.055	0.54	1185.51	0.000
L19	111.167 - 110.042 (19)	P42x0.375	23.18	421.13	0.055	0.54	1185.51	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L20	110.042 - 109.792 (20)	P42x0.4875	23.22	720.97	0.032	0.54	2272.02	0.000
L21	109.792 - 105.083 (21)	P42x0.4875	23.95	720.97	0.033	0.54	2272.02	0.000
L22	105.083 - 104.833 (22)	P42x0.5625	23.99	830.38	0.029	0.54	3025.18	0.000
L23	104.833 - 100.917 (23)	P42x0.5625	24.82	830.38	0.030	0.54	3025.18	0.000
L24	100.917 - 100.667 (24)	P48x0.375	24.86	394.37	0.063	0.54	1270.22	0.000
L25	100.667 - 95.833 (25)	P48x0.375	25.37	394.37	0.064	0.54	1270.22	0.000
L26	95.833 - 95.583 (26)	P48x0.475	25.38	710.64	0.036	0.54	2284.06	0.000
L27	95.583 - 90.583 (27)	P48x0.475	25.79	710.64	0.036	0.54	2284.06	0.000
L28	90.583 - 89.917 (28)	P48x0.475	26.14	710.64	0.037	1.13	2284.06	0.000
L29	89.917 - 89.667 (29)	P48x0.575	26.18	971.49	0.027	1.13	3667.03	0.000
L30	89.667 - 84.667 (30)	P48x0.575	27.03	971.49	0.028	1.13	3667.03	0.000
L31	84.667 - 80.833 (31)	P48x0.575	27.88	971.49	0.029	1.07	3667.03	0.000
L32	80.833 - 80.333 (32)	P54x0.55	27.96	966.32	0.029	1.04	3493.03	0.000
L33	80.333 - 80.083 (33)	P54x0.4875	28.01	729.66	0.038	1.04	2639.00	0.000
L34	80.083 - 75.083 (34)	P54x0.4875	28.88	729.66	0.040	1.04	2639.00	0.000
L35	75.083 - 70.083 (35)	P54x0.4875	29.76	729.66	0.041	1.04	2639.00	0.000
L36	70.083 - 69.5 (36)	P54x0.4875	30.29	729.66	0.042	2.42	2639.00	0.001
L37	69.5 - 69.25 (37)	P54x0.5875	30.34	1117.93	0.027	2.42	4113.45	0.001
L38	69.25 - 64.25 (38)	P54x0.5875	31.63	1117.93	0.028	2.35	4113.45	0.001
L39	64.25 - 60.583 (39)	P54x0.5875	32.60	1117.93	0.029	2.29	4113.45	0.001
L40	60.583 - 60.333 (40)	P60x0.5125	32.64	838.76	0.039	2.27	3372.33	0.001
L41	60.333 - 55.333 (41)	P60x0.5125	33.59	838.76	0.040	2.27	3372.33	0.001
L42	55.333 - 52.167 (42)	P60x0.5125	33.83	838.76	0.040	2.27	3372.33	0.001
L43	52.167 - 51.917 (43)	P60x0.625	33.84	1308.39	0.026	2.27	5250.55	0.000
L44	51.917 - 46.917 (44)	P60x0.625	34.69	1308.39	0.027	2.27	5250.55	0.000
L45	46.917 - 41.917 (45)	P60x0.625	35.58	1308.39	0.027	2.27	5250.55	0.000
L46	41.917 - 40.233 (46)	P60x0.6	35.86	1194.07	0.030	2.27	4793.81	0.000
L47	40.233 - 39.983 (47)	P60x0.6	35.89	1194.07	0.030	2.27	4793.81	0.000
L48	39.983 - 34.983 (48)	P60x0.6	36.67	1194.07	0.031	2.27	4793.81	0.000
L49	34.983 - 29.983 (49)	P60x0.6	37.53	1194.07	0.031	2.27	4793.81	0.000
L50	29.983 - 28 (50)	P60x0.6	37.80	1194.07	0.032	2.27	4793.81	0.000
L51	28 - 27.75 (51)	P60x0.725	37.80	1530.99	0.025	2.27	7317.32	0.000
L52	27.75 - 22.75 (52)	P60x0.725	38.53	1530.99	0.025	2.27	7317.32	0.000
L53	22.75 - 20.083 (53)	P60x0.725	38.91	1530.99	0.025	2.27	7317.32	0.000
L54	20.083 -	P60x0.625	38.92	1308.39	0.030	2.27	5250.55	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	19.833 (54)							
L55	19.833 - 17 (55)	P60x0.625	39.32	1308.39	0.030	2.27	5250.55	0.000
L56	17 - 16.75 (56)	P60x0.725	39.33	1530.99	0.026	2.27	7317.32	0.000
L57	16.75 - 11.65 (57)	P60x0.75	39.99	1583.12	0.025	2.27	7957.82	0.000
L58	11.65 - 11.417 (58)	P60x0.75	39.98	1583.12	0.025	2.27	7957.82	0.000
L59	11.417 - 9.396 (59)	P60x0.75	40.23	1583.12	0.025	2.27	7957.82	0.000
L60	9.396 - 9.146 (60)	P60x0.8	40.25	1687.23	0.024	2.27	8781.67	0.000
L61	9.146 - 4.833 (61)	P60x0.8	40.77	1687.23	0.024	2.27	8781.67	0.000
L62	4.833 - 4.583 (62)	P60x0.75	40.78	1583.12	0.026	2.27	7957.82	0.000
L63	4.583 - 0 (63)	P60x0.75	41.30	1583.12	0.026	2.27	7957.82	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	191.667 - 186.667 (1)	0.001	0.010	0.000	0.003	0.000	0.011	1.050	4.8.2
L2	186.667 - 181.567 (2)	0.005	0.026	0.000	0.014	0.000	0.032	1.050	4.8.2
L3	181.567 - 176.567 (3)	0.006	0.062	0.000	0.015	0.000	0.069	1.050	4.8.2
L4	176.567 - 171.567 (4)	0.007	0.102	0.000	0.016	0.000	0.108	1.050	4.8.2
L5	171.567 - 166.567 (5)	0.010	0.155	0.000	0.025	0.000	0.165	1.050	4.8.2
L6	166.567 - 161.567 (6)	0.010	0.219	0.000	0.026	0.000	0.230	1.050	4.8.2
L7	161.567 - 156.567 (7)	0.015	0.309	0.000	0.040	0.000	0.325	1.050	4.8.2
L8	156.567 - 151.567 (8)	0.016	0.412	0.000	0.042	0.001	0.429	1.050	4.8.2
L9	151.567 - 146.567 (9)	0.021	0.549	0.000	0.062	0.001	0.574	1.050	4.8.2
L10	146.567 - 141.567 (10)	0.022	0.707	0.000	0.063	0.001	0.733	1.050	4.8.2
L11	141.567 - 141.417 (11)	0.022	0.711	0.000	0.063	0.001	0.738	1.050	4.8.2
L12	141.417 - 136.417 (12)	0.016	0.407	0.000	0.045	0.001	0.425	1.050	4.8.2
L13	136.417 - 131.417 (13)	0.017	0.485	0.000	0.047	0.001	0.505	1.050	4.8.2
L14	131.417 - 126.417 (14)	0.018	0.565	0.000	0.048	0.001	0.586	1.050	4.8.2
L15	126.417 - 121.417 (15)	0.020	0.647	0.000	0.049	0.000	0.669	1.050	4.8.2
L16	121.417 - 121.167 (16)	0.020	0.651	0.000	0.049	0.000	0.673	1.050	4.8.2
L17	121.167 - 116.167 (17)	0.018	0.548	0.000	0.054	0.000	0.569	1.050	4.8.2
L18	116.167 - 111.167 (18)	0.019	0.611	0.000	0.055	0.000	0.633	1.050	4.8.2
L19	111.167 - 110.042 (19)	0.019	0.626	0.000	0.055	0.000	0.648	1.050	4.8.2
L20	110.042 -	0.014	0.472	0.000	0.032	0.000	0.487	1.050	4.8.2

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	109.792 (20)								
L21	109.792 - 105.083 (21)	0.014	0.518	0.000	0.033	0.000	0.534	1.050	4.8.2
L22	105.083 - 104.833 (22)	0.012	0.444	0.000	0.029	0.000	0.457	1.050	4.8.2
L23	104.833 - 100.917 (23)	0.013	0.478	0.000	0.030	0.000	0.492	1.050	4.8.2
L24	100.917 - 100.667 (24)	0.020	0.581	0.000	0.063	0.000	0.605	1.050	4.8.2
L25	100.667 - 95.833 (25)	0.021	0.633	0.000	0.064	0.000	0.658	1.050	4.8.2
L26	95.833 - 95.583 (26)	0.015	0.492	0.000	0.036	0.000	0.509	1.050	4.8.2
L27	95.583 - 90.583 (27)	0.016	0.535	0.000	0.036	0.000	0.552	1.050	4.8.2
L28	90.583 - 89.917 (28)	0.016	0.541	0.000	0.037	0.000	0.558	1.050	4.8.2
L29	89.917 - 89.667 (29)	0.013	0.440	0.000	0.027	0.000	0.453	1.050	4.8.2
L30	89.667 - 84.667 (30)	0.013	0.476	0.000	0.028	0.000	0.490	1.050	4.8.2
L31	84.667 - 80.833 (31)	0.014	0.504	0.000	0.029	0.000	0.519	1.050	4.8.2
L32	80.833 - 80.333 (32)	0.014	0.427	0.000	0.029	0.000	0.442	1.050	4.8.2
L33	80.333 - 80.083 (33)	0.017	0.488	0.000	0.038	0.000	0.506	1.050	4.8.2
L34	80.083 - 75.083 (34)	0.017	0.525	0.000	0.040	0.000	0.544	1.050	4.8.2
L35	75.083 - 70.083 (35)	0.018	0.563	0.000	0.041	0.000	0.583	1.050	4.8.2
L36	70.083 - 69.5 (36)	0.019	0.568	0.000	0.042	0.001	0.588	1.050	4.8.2
L37	69.5 - 69.25 (37)	0.015	0.464	0.000	0.027	0.001	0.480	1.050	4.8.2
L38	69.25 - 64.25 (38)	0.016	0.497	0.000	0.028	0.001	0.514	1.050	4.8.2
L39	64.25 - 60.583 (39)	0.018	0.522	0.000	0.029	0.001	0.541	1.050	4.8.2
L40	60.583 - 60.333 (40)	0.020	0.497	0.000	0.039	0.001	0.519	1.050	4.8.2
L41	60.333 - 55.333 (41)	0.021	0.531	0.000	0.040	0.001	0.553	1.050	4.8.2
L42	55.333 - 52.167 (42)	0.021	0.552	0.000	0.040	0.001	0.575	1.050	4.8.2
L43	52.167 - 51.917 (43)	0.017	0.446	0.000	0.026	0.000	0.463	1.050	4.8.2
L44	51.917 - 46.917 (44)	0.017	0.474	0.000	0.027	0.000	0.492	1.050	4.8.2
L45	46.917 - 41.917 (45)	0.018	0.502	0.000	0.027	0.000	0.521	1.050	4.8.2
L46	41.917 - 40.233 (46)	0.020	0.535	0.000	0.030	0.000	0.555	1.050	4.8.2
L47	40.233 - 39.983 (47)	0.020	0.537	0.000	0.030	0.000	0.557	1.050	4.8.2
L48	39.983 - 34.983 (48)	0.020	0.567	0.000	0.031	0.000	0.589	1.050	4.8.2
L49	34.983 - 29.983 (49)	0.021	0.598	0.000	0.031	0.000	0.621	1.050	4.8.2
L50	29.983 - 28 (50)	0.022	0.611	0.000	0.032	0.000	0.634	1.050	4.8.2
L51	28 - 27.75 (51)	0.017	0.497	0.000	0.025	0.000	0.515	1.050	4.8.2
L52	27.75 - 22.75 (52)	0.018	0.523	0.000	0.025	0.000	0.542	1.050	4.8.2
L53	22.75 - 20.083 (53)	0.018	0.538	0.000	0.025	0.000	0.556	1.050	4.8.2
L54	20.083 - 19.833 (54)	0.022	0.635	0.000	0.030	0.000	0.658	1.050	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L55	19.833 - 17 (55)	0.022	0.653	0.000	0.030	0.000	0.676	1.050	4.8.2
L56	17 - 16.75 (56)	0.019	0.555	0.000	0.026	0.000	0.575	1.050	4.8.2
L57	16.75 - 11.65 (57)	0.019	0.562	0.000	0.025	0.000	0.581	1.050	4.8.2
L58	11.65 - 11.417 (58)	0.019	0.563	0.000	0.025	0.000	0.582	1.050	4.8.2
L59	11.417 - 9.396 (59)	0.019	0.573	0.000	0.025	0.000	0.593	1.050	4.8.2
L60	9.396 - 9.146 (60)	0.018	0.535	0.000	0.024	0.000	0.553	1.050	4.8.2
L61	9.146 - 4.833 (61)	0.018	0.556	0.000	0.024	0.000	0.575	1.050	4.8.2
L62	4.833 - 4.583 (62)	0.019	0.599	0.000	0.026	0.000	0.619	1.050	4.8.2
L63	4.583 - 0 (63)	0.020	0.624	0.000	0.026	0.000	0.645	1.050	4.8.2

Section Capacity Table

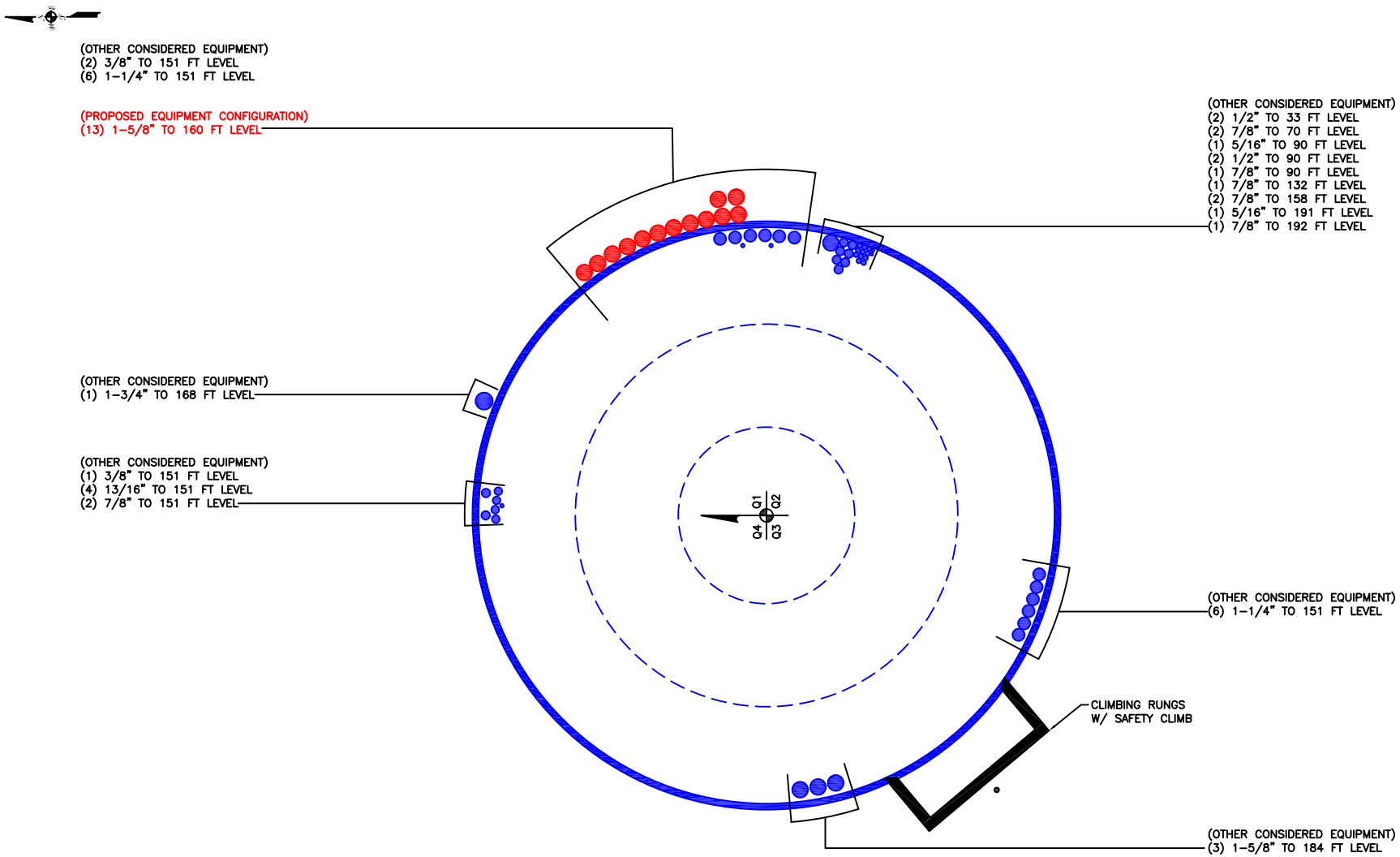
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	191.667 - 186.667	Pole	P18x0.375	1	-0.67	824.12	1.0	Pass
L2	186.667 - 181.567	Pole	P24x0.375	2	-5.76	1104.67	3.0	Pass
L3	181.567 - 176.567	Pole	P24x0.375	3	-6.39	1104.67	6.5	Pass
L4	176.567 - 171.567	Pole	P24x0.375	4	-6.99	1104.67	10.3	Pass
L5	171.567 - 166.567	Pole	P24x0.375	5	-10.38	1104.67	15.8	Pass
L6	166.567 - 161.567	Pole	P24x0.375	6	-11.00	1104.67	21.9	Pass
L7	161.567 - 156.567	Pole	P24x0.375	7	-15.75	1104.67	31.0	Pass
L8	156.567 - 151.567	Pole	P24x0.375	8	-16.39	1104.67	40.9	Pass
L9	151.567 - 146.567	Pole	P24x0.375	9	-22.42	1104.67	54.7	Pass
L10	146.567 - 141.567	Pole	P24x0.375	10	-23.23	1104.67	69.8	Pass
L11	141.567 - 141.417	Pole	P24x0.375	11	-23.26	1104.67	70.3	Pass
L12	141.417 - 136.417	Pole	P36x0.375	12	-24.34	1564.60	40.5	Pass
L13	136.417 - 131.417	Pole	P36x0.375	13	-25.89	1564.60	48.1	Pass
L14	131.417 - 126.417	Pole	P36x0.375	14	-27.00	1564.60	55.8	Pass
L15	126.417 - 121.417	Pole	P36x0.375	15	-29.19	1564.60	63.7	Pass
L16	121.417 - 121.167	Pole	P36x0.375	16	-29.26	1564.60	64.1	Pass
L17	121.167 - 116.167	Pole	P42x0.375	17	-30.65	1752.31	54.2	Pass
L18	116.167 - 111.167	Pole	P42x0.375	18	-31.87	1752.31	60.3	Pass
L19	111.167 - 110.042	Pole	P42x0.375	19	-32.14	1752.31	61.7	Pass
L20	110.042 - 109.792	Pole	P42x0.4875	20	-32.22	2448.74	46.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L21	109.792 - 105.083	Pole	P42x0.4875	21	-33.72	2448.74	50.8	Pass
L22	105.083 - 104.833	Pole	P42x0.5625	22	-33.82	2906.35	43.5	Pass
L23	104.833 - 100.917	Pole	P42x0.5625	23	-36.12	2906.35	46.8	Pass
L24	100.917 - 100.667	Pole	P48x0.375	24	-36.22	1939.86	57.6	Pass
L25	100.667 - 95.833	Pole	P48x0.375	25	-37.91	1939.86	62.7	Pass
L26	95.833 - 95.583	Pole	P48x0.475	26	-38.00	2605.46	48.5	Pass
L27	95.583 - 90.583	Pole	P48x0.475	27	-39.63	2605.46	52.6	Pass
L28	90.583 - 89.917	Pole	P48x0.475	28	-40.02	2605.46	53.2	Pass
L29	89.917 - 89.667	Pole	P48x0.575	29	-40.13	3332.72	43.2	Pass
L30	89.667 - 84.667	Pole	P48x0.575	30	-42.80	3332.72	46.7	Pass
L31	84.667 - 80.833	Pole	P48x0.575	31	-45.85	3332.72	49.5	Pass
L32	80.833 - 80.333	Pole	P54x0.55	32	-46.22	3420.72	42.1	Pass
L33	80.333 - 80.083	Pole	P54x0.4875	33	-46.35	2937.03	48.2	Pass
L34	80.083 - 75.083	Pole	P54x0.4875	34	-48.67	2937.03	51.8	Pass
L35	75.083 - 70.083	Pole	P54x0.4875	35	-51.41	2937.03	55.5	Pass
L36	70.083 - 69.5	Pole	P54x0.4875	36	-52.06	2937.03	56.0	Pass
L37	69.5 - 69.25	Pole	P54x0.5875	37	-52.24	3722.49	45.7	Pass
L38	69.25 - 64.25	Pole	P54x0.5875	38	-58.43	3722.49	49.0	Pass
L39	64.25 - 60.583	Pole	P54x0.5875	39	-63.49	3722.49	51.5	Pass
L40	60.583 - 60.333	Pole	P60x0.5125	40	-63.68	3384.03	49.4	Pass
L41	60.333 - 55.333	Pole	P60x0.5125	41	-67.31	3384.03	52.7	Pass
L42	55.333 - 52.167	Pole	P60x0.5125	42	-68.70	3384.03	54.8	Pass
L43	52.167 - 51.917	Pole	P60x0.625	43	-68.83	4346.11	44.1	Pass
L44	51.917 - 46.917	Pole	P60x0.625	44	-71.77	4346.11	46.8	Pass
L45	46.917 - 41.917	Pole	P60x0.625	45	-75.57	4346.11	49.6	Pass
L46	41.917 - 40.233	Pole	P60x0.6	46	-76.79	4125.57	52.9	Pass
L47	40.233 - 39.983	Pole	P60x0.6	47	-76.98	4125.57	53.1	Pass
L48	39.983 - 34.983	Pole	P60x0.6	48	-80.48	4125.57	56.1	Pass
L49	34.983 - 29.983	Pole	P60x0.6	49	-83.64	4125.57	59.1	Pass
L50	29.983 - 28	Pole	P60x0.6	50	-84.64	4125.57	60.3	Pass
L51	28 - 27.75	Pole	P60x0.725	51	-84.80	5266.71	49.0	Pass
L52	27.75 - 22.75	Pole	P60x0.725	52	-88.75	5266.71	51.6	Pass
L53	22.75 - 20.083	Pole	P60x0.725	53	-90.88	5266.71	53.0	Pass
L54	20.083 - 19.833	Pole	P60x0.625	54	-91.07	4346.11	62.6	Pass
L55	19.833 - 17	Pole	P60x0.625	55	-93.12	4346.11	64.4	Pass
L56	17 - 16.75	Pole	P60x0.725	56	-93.34	5266.71	54.7	Pass
L57	16.75 - 11.65	Pole	P60x0.75	57	-97.39	5506.44	55.3	Pass
L58	11.65 - 11.417	Pole	P60x0.75	58	-97.55	5506.44	55.4	Pass
L59	11.417 - 9.396	Pole	P60x0.75	59	-98.83	5506.44	56.5	Pass
L60	9.396 - 9.146	Pole	P60x0.8	60	-99.00	5905.30	52.7	Pass
L61	9.146 - 4.833	Pole	P60x0.8	61	-101.85	5905.30	54.8	Pass
L62	4.833 - 4.583	Pole	P60x0.75	62	-102.02	5506.44	59.0	Pass
L63	4.583 - 0	Pole	P60x0.75	63	-104.85	5506.44	61.4	Pass
							Summary	
						Pole (L11)	70.3	Pass
						RATING =	**70.3**	**Pass**

***NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

APPENDIX B

BASE LEVEL DRAWING


(OTHER CONSIDERED EQUIPMENT)
(2) 3/8" TO 151 FT LEVEL
(6) 1-1/4" TO 151 FT LEVEL
(PROPOSED EQUIPMENT CONFIGURATION)
(13) 1-5/8" TO 160 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(2) 1/2" TO 33 FT LEVEL
(2) 7/8" TO 70 FT LEVEL
(1) 5/16" TO 90 FT LEVEL
(2) 1/2" TO 90 FT LEVEL
(1) 7/8" TO 90 FT LEVEL
(1) 7/8" TO 132 FT LEVEL
(2) 7/8" TO 158 FT LEVEL
(1) 5/16" TO 191 FT LEVEL
(1) 7/8" TO 192 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1-3/4" TO 168 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 3/8" TO 151 FT LEVEL
(4) 13/16" TO 151 FT LEVEL
(2) 7/8" TO 151 FT LEVEL
Q1
Q2
Q3
Q4
(OTHER CONSIDERED EQUIPMENT)
(6) 1-1/4" TO 151 FT LEVEL
CLIMBING RUNGS
W/ SAFETY CLIMB
(OTHER CONSIDERED EQUIPMENT)
(3) 1-5/8" TO 184 FT LEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 826217

Work Order: 2246495

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	191.667	10.084		0	18	18	0.375		A53-B-42
2	181.583	40.166		0	24.00	24	0.375		A53-B-42
3	141.417	20.25		0	36.00	36	0.375		A53-B-42
4	121.167	20.25		0	42.00	42	0.375		A53-B-42
5	100.917	20.084		0	48.00	48	0.375		A53-B-42
6	80.833	20.25		0	54.00	54	0.375		A53-B-42
7	60.583	20.25		0	60.00	60	0.375		A53-B-42
8	40.333	20.25		0	60.00	60	0.5		A53-B-42
9	20.083	20.083		0	60.00	60	0.625		A53-B-42

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0	9.396	plate	CCI-AFP-040075	2				70												313		
2	20.083	40.33	plate	CCI-SFP-060100	3				66						189						312		
3	40.333	60.583	plate	CCI-SFP-065125	3				67.5						188						307		
4	60.583	80.333	plate	CCI-SFP-060100	3				67.5						190						307		
5	80.333	89.917	plate	CCI-SFP-045100	3				72						192						312		
6	100.917	105.083	plate	CCI-AFP-040075	3			53						178							303		
7	4.833	11.667	plate	CCI-AFP-040075	1										198								
8	0	17	plate	CCI-SFP-060100	4		36				113						223			294			
9	20.083	28	plate	CCI-SFP-060100	4			53					157					247				339	
10	40.333	52.167	plate	CCI-SFP-060100	4		36					126					234			294			
11	60.583	69.5	plate	CCI-SFP-045100	4				80				155					254					341
12	80.333	95.833	plate	CCI-SFP-045100	3					93						213						333	
13	100.917	110.042	plate	CCI-SFP-045100	3		30							150					270				
14																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
2	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
3	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
4	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
5	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
6	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
7	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
8	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
9	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
10	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
11	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
12	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
13	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	191.667 - 186.667	5	0	0	18.000	18.000	0.375	A53-B-42	1.000
2	186.667 - 181.567	5.1		0	24.000	24.000	0.375	A53-B-42	1.000
3	181.567 - 176.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
4	176.567 - 171.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
5	171.567 - 166.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
6	166.567 - 161.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
7	161.567 - 156.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
8	156.567 - 151.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
9	151.567 - 146.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
10	146.567 - 141.567	5		0	24.000	24.000	0.375	A53-B-42	1.000
11	141.567 - 141.417	0.15	0	0	24.000	24.000	0.375	A53-B-42	1.000
12	141.417 - 136.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
13	136.417 - 131.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
14	131.417 - 126.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
15	126.417 - 121.417	5		0	36.000	36.000	0.375	A53-B-42	1.000
16	121.417 - 121.167	0.25	0	0	36.000	36.000	0.375	A53-B-42	1.000
17	121.167 - 116.167	5		0	42.000	42.000	0.375	A53-B-42	1.000
18	116.167 - 111.167	5		0	42.000	42.000	0.375	A53-B-42	1.000
19	111.167 - 110.042	1.125		0	42.000	42.000	0.375	A53-B-42	1.000
20	110.042 - 109.792	0.25		0	42.000	42.000	0.4875	A53-B-42	0.984
21	109.792 - 105.083	4.709		0	42.000	42.000	0.4875	A53-B-42	0.984
22	105.083 - 104.833	0.25		0	42.000	42.000	0.5625	A53-B-42	0.977
23	104.833 - 100.917	3.916	0	0	42.000	42.000	0.5625	A53-B-42	0.977
24	100.917 - 100.667	0.25		0	48.000	48.000	0.375	A53-B-42	1.000
25	100.667 - 95.833	4.834		0	48.000	48.000	0.375	A53-B-42	1.000
26	95.833 - 95.583	0.25		0	48.000	48.000	0.475	A53-B-42	0.981
27	95.583 - 90.583	5		0	48.000	48.000	0.475	A53-B-42	0.981
28	90.583 - 89.917	0.666		0	48.000	48.000	0.475	A53-B-42	0.981
29	89.917 - 89.667	0.25		0	48.000	48.000	0.575	A53-B-42	0.970
30	89.667 - 84.667	5		0	48.000	48.000	0.575	A53-B-42	0.970
31	84.667 - 80.833	3.834	0	0	48.000	48.000	0.575	A53-B-42	0.970
32	80.833 - 80.333	0.5		0	54.000	54.000	0.55	A53-B-42	0.976
33	80.333 - 80.083	0.25		0	54.000	54.000	0.4875	A53-B-42	0.990
34	80.083 - 75.083	5		0	54.000	54.000	0.4875	A53-B-42	0.990
35	75.083 - 70.083	5		0	54.000	54.000	0.4875	A53-B-42	0.990
36	70.083 - 69.5	0.583		0	54.000	54.000	0.4875	A53-B-42	0.990
37	69.5 - 69.25	0.25		0	54.000	54.000	0.5875	A53-B-42	1.006
38	69.25 - 64.25	5		0	54.000	54.000	0.5875	A53-B-42	1.006
39	64.25 - 60.583	3.667	0	0	54.000	54.000	0.5875	A53-B-42	1.006
40	60.583 - 60.333	0.25		0	60.000	60.000	0.5125	A53-B-42	0.988
41	60.333 - 55.333	5		0	60.000	60.000	0.5125	A53-B-42	0.988
42	55.333 - 52.167	3.166		0	60.000	60.000	0.5125	A53-B-42	0.988
43	52.167 - 51.917	0.25		0	60.000	60.000	0.625	A53-B-42	1.017
44	51.917 - 46.917	5		0	60.000	60.000	0.625	A53-B-42	1.017
45	46.917 - 41.917	5	0	0	60.000	60.000	0.625	A53-B-42	1.017
46	41.917 - 40.233	1.684		0	60.000	60.000	0.6	A53-B-42	0.995
47	40.233 - 39.983	0.25		0	60.000	60.000	0.6	A53-B-42	0.995
48	39.983 - 34.983	5		0	60.000	60.000	0.6	A53-B-42	0.995
49	34.983 - 29.983	5		0	60.000	60.000	0.6	A53-B-42	0.995
50	29.983 - 28	1.983		0	60.000	60.000	0.6	A53-B-42	0.995
51	28 - 27.75	0.25		0	60.000	60.000	0.725	A53-B-42	1.003
52	27.75 - 22.75	5		0	60.000	60.000	0.725	A53-B-42	1.003
53	22.75 - 20.083	2.667	0	0	60.000	60.000	0.725	A53-B-42	1.003
54	20.083 - 19.833	0.25		0	60.000	60.000	0.625	A53-B-42	1.000
55	19.833 - 17	2.833		0	60.000	60.000	0.625	A53-B-42	1.000
56	17 - 16.75	0.25		0	60.000	60.000	0.725	A53-B-42	1.041
57	16.75 - 11.65	5.1		0	60.000	60.000	0.75	A53-B-42	1.028
58	11.65 - 11.417	0.233		0	60.000	60.000	0.75	A53-B-42	1.028
59	11.417 - 9.396	2.021		0	60.000	60.000	0.75	A53-B-42	1.028
60	9.396 - 9.146	0.25		0	60.000	60.000	0.8	A53-B-42	1.005
61	9.146 - 4.833	4.313		0	60.000	60.000	0.8	A53-B-42	1.005
62	4.833 - 4.583	0.25		0	60.000	60.000	0.75	A53-B-42	1.050
63	4.583 - 0	4.583		0	60.000	60.000	0.75	A53-B-42	1.050

TNX Section Forces

	Increment (ft): 5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	191.667 - 186.667	0.67	3.72	0.63
2	186.667 - 181.567	5.76	16.15	4.40
3	181.567 - 176.567	6.39	38.91	4.74
4	176.567 - 171.567	6.99	63.32	5.02
5	171.567 - 166.567	10.38	96.67	7.89
6	166.567 - 161.567	11.00	136.78	8.16
7	161.567 - 156.567	15.75	192.53	12.53
8	156.567 - 151.567	16.39	256.78	13.20
9	151.567 - 146.567	22.42	342.15	19.46
10	146.567 - 141.567	23.23	440.76	19.99
11	141.567 - 141.417	23.26	443.76	20.00
12	141.417 - 136.417	24.34	544.79	20.43
13	136.417 - 131.417	25.89	649.35	21.26
14	131.417 - 126.417	27.00	756.63	21.64
15	126.417 - 121.417	29.19	866.26	22.20
16	121.417 - 121.167	29.26	871.82	22.22
17	121.167 - 116.167	30.65	983.97	22.63
18	116.167 - 111.167	31.87	1098.11	23.02
19	111.167 - 110.042	32.14	1124.10	23.18
20	110.042 - 109.792	32.22	1129.90	23.22
21	109.792 - 105.083	33.72	1240.98	23.95
22	105.083 - 104.833	33.82	1246.98	23.99
23	104.833 - 100.917	36.12	1342.57	24.82
24	100.917 - 100.667	36.22	1348.78	24.86
25	100.667 - 95.833	37.91	1470.17	25.37
26	95.833 - 95.583	38.00	1476.51	25.38
27	95.583 - 90.583	39.63	1604.47	25.79
28	90.583 - 89.917	40.02	1621.84	26.14
29	89.917 - 89.667	40.13	1628.38	26.18
30	89.667 - 84.667	42.80	1761.31	27.03
31	84.667 - 80.833	45.85	1866.36	27.88
32	80.833 - 80.333	46.22	1880.30	27.96
33	80.333 - 80.083	46.35	1887.30	28.01
34	80.083 - 75.083	48.67	2029.48	28.88
35	75.083 - 70.083	51.41	2176.21	29.76
36	70.083 - 69.5	52.06	2193.37	30.29
37	69.5 - 69.25	52.24	2200.96	30.34
38	69.25 - 64.25	58.43	2356.46	31.63
39	64.25 - 60.583	63.49	2474.67	32.60
40	60.583 - 60.333	63.68	2482.83	32.64
41	60.333 - 55.333	67.31	2648.64	33.59
42	55.333 - 52.167	68.70	2755.38	33.83
43	52.167 - 51.917	68.83	2763.84	33.84
44	51.917 - 46.917	71.77	2935.21	34.69
45	46.917 - 41.917	75.57	3110.73	35.58
46	41.917 - 40.233	76.79	3170.83	35.86
47	40.233 - 39.983	76.98	3179.78	35.89
48	39.983 - 34.983	80.48	3360.96	36.67
49	34.983 - 29.983	83.64	3547.03	37.53
50	29.983 - 28	84.64	3621.70	37.80
51	28 - 27.75	84.80	3631.15	37.80
52	27.75 - 22.75	88.75	3822.09	38.53
53	22.75 - 20.083	90.88	3925.39	38.91
54	20.083 - 19.833	91.07	3935.12	38.92
55	19.833 - 17	93.12	4046.00	39.32
56	17 - 16.75	93.34	4055.83	39.33
57	16.75 - 11.65	97.39	4258.18	39.99
58	11.65 - 11.417	97.55	4267.50	39.98
59	11.417 - 9.396	98.83	4348.57	40.23
60	9.396 - 9.146	99.00	4358.63	40.25
61	9.146 - 4.833	101.85	4533.36	40.77
62	4.833 - 4.583	102.02	4543.56	40.78
63	4.583 - 0	104.85	4731.62	41.30

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
191.67 - 186.67	Pole	TP18x18x0.375	Pole	1.0%	Pass
186.67 - 181.57	Pole	TP24x24x0.375	Pole	3.0%	Pass
181.57 - 176.57	Pole	TP24x24x0.375	Pole	6.5%	Pass
176.57 - 171.57	Pole	TP24x24x0.375	Pole	10.3%	Pass
171.57 - 166.57	Pole	TP24x24x0.375	Pole	15.8%	Pass
166.57 - 161.57	Pole	TP24x24x0.375	Pole	21.9%	Pass
161.57 - 156.57	Pole	TP24x24x0.375	Pole	31.0%	Pass
156.57 - 151.57	Pole	TP24x24x0.375	Pole	40.9%	Pass
151.57 - 146.57	Pole	TP24x24x0.375	Pole	54.6%	Pass
146.57 - 141.57	Pole	TP24x24x0.375	Pole	69.8%	Pass
141.57 - 141.42	Pole	TP24x24x0.375	Pole	70.2%	Pass
141.42 - 136.42	Pole	TP36x36x0.375	Pole	40.5%	Pass
136.42 - 131.42	Pole	TP36x36x0.375	Pole	48.1%	Pass
131.42 - 126.42	Pole	TP36x36x0.375	Pole	55.8%	Pass
126.42 - 121.42	Pole	TP36x36x0.375	Pole	63.7%	Pass
121.42 - 121.17	Pole	TP36x36x0.375	Pole	64.1%	Pass
121.17 - 116.17	Pole	TP42x42x0.375	Pole	54.1%	Pass
116.17 - 111.17	Pole	TP42x42x0.375	Pole	60.2%	Pass
111.17 - 110.04	Pole	TP42x42x0.375	Pole	61.6%	Pass
110.04 - 109.79	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	48.0%	Pass
109.79 - 105.08	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	52.7%	Pass
105.08 - 104.83	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	48.0%	Pass
104.83 - 100.92	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	51.7%	Pass
100.92 - 100.67	Pole	TP48x48x0.375	Pole	57.4%	Pass
100.67 - 95.83	Pole	TP48x48x0.375	Pole	62.5%	Pass
95.83 - 95.58	Pole + Reinf.	TP48x48x0.475	Pole	49.8%	Pass
95.58 - 90.58	Pole + Reinf.	TP48x48x0.475	Pole	54.1%	Pass
90.58 - 89.92	Pole + Reinf.	TP48x48x0.475	Pole	54.6%	Pass
89.92 - 89.67	Pole + Reinf.	TP48x48x0.575	Pole	45.5%	Pass
89.67 - 84.67	Pole + Reinf.	TP48x48x0.575	Pole	49.2%	Pass
84.67 - 80.83	Pole + Reinf.	TP48x48x0.575	Pole	52.2%	Pass
80.83 - 80.33	Pole + Reinf.	TP54x54x0.55	Pole	43.8%	Pass
80.33 - 80.08	Pole + Reinf.	TP54x54x0.4875	Pole	49.5%	Pass
80.08 - 75.08	Pole + Reinf.	TP54x54x0.4875	Pole	53.2%	Pass
75.08 - 70.08	Pole + Reinf.	TP54x54x0.4875	Pole	57.0%	Pass
70.08 - 69.5	Pole + Reinf.	TP54x54x0.4875	Pole	57.4%	Pass
69.5 - 69.25	Pole + Reinf.	TP54x54x0.5875	Pole	47.6%	Pass
69.25 - 64.25	Pole + Reinf.	TP54x54x0.5875	Pole	51.1%	Pass
64.25 - 60.58	Pole + Reinf.	TP54x54x0.5875	Pole	53.7%	Pass
60.58 - 60.33	Pole + Reinf.	TP60x60x0.5125	Pole	50.4%	Pass
60.33 - 55.33	Pole + Reinf.	TP60x60x0.5125	Pole	53.7%	Pass
55.33 - 52.17	Pole + Reinf.	TP60x60x0.5125	Pole	55.9%	Pass
52.17 - 51.92	Pole + Reinf.	TP60x60x0.625	Pole	46.8%	Pass
51.92 - 46.92	Pole + Reinf.	TP60x60x0.625	Pole	49.6%	Pass
46.92 - 41.92	Pole + Reinf.	TP60x60x0.625	Pole	52.6%	Pass
41.92 - 40.23	Pole + Reinf.	TP60x60x0.6	Pole	54.1%	Pass
40.23 - 39.98	Pole + Reinf.	TP60x60x0.6	Pole	54.2%	Pass
39.98 - 34.98	Pole + Reinf.	TP60x60x0.6	Pole	57.3%	Pass
34.98 - 29.98	Pole + Reinf.	TP60x60x0.6	Pole	60.4%	Pass
29.98 - 28	Pole + Reinf.	TP60x60x0.6	Pole	61.7%	Pass
28 - 27.75	Pole + Reinf.	TP60x60x0.725	Pole	51.9%	Pass
27.75 - 22.75	Pole + Reinf.	TP60x60x0.725	Pole	54.6%	Pass
22.75 - 20.08	Pole + Reinf.	TP60x60x0.725	Pole	56.1%	Pass
20.08 - 19.83	Pole	TP60x60x0.625	Pole	62.6%	Pass
19.83 - 17	Pole	TP60x60x0.625	Pole	64.4%	Pass
17 - 16.75	Pole + Reinf.	TP60x60x0.725	Pole	55.8%	Pass
16.75 - 11.65	Pole + Reinf.	TP60x60x0.75	Pole	57.2%	Pass
11.65 - 11.42	Pole + Reinf.	TP60x60x0.75	Pole	57.3%	Pass
11.42 - 9.4	Pole + Reinf.	TP60x60x0.75	Pole	58.4%	Pass
9.4 - 9.15	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	58.1%	Pass
9.15 - 4.83	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	60.4%	Pass
4.83 - 4.58	Pole + Reinf.	TP60x60x0.75	Pole	61.8%	Pass
4.58 - 0	Pole + Reinf.	TP60x60x0.75	Pole	64.3%	Pass
				Summary	
			Pole	70.2%	Pass
			Reinforcement	62.6%	Pass
			Overall	70.2%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity* (100% Max. Allowable)												
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13
191.67 - 186.67	807	n/a	807	20.76	n/a	20.76	1.0%													
186.67 - 181.57	1942	n/a	1942	27.83	n/a	27.83	3.0%													
181.57 - 176.57	1942	n/a	1942	27.83	n/a	27.83	6.5%													
176.57 - 171.57	1942	n/a	1942	27.83	n/a	27.83	10.3%													
171.57 - 166.57	1942	n/a	1942	27.83	n/a	27.83	15.8%													
166.57 - 161.57	1942	n/a	1942	27.83	n/a	27.83	21.9%													
161.57 - 156.57	1942	n/a	1942	27.83	n/a	27.83	31.0%													
156.57 - 151.57	1942	n/a	1942	27.83	n/a	27.83	40.9%													
151.57 - 146.57	1942	n/a	1942	27.83	n/a	27.83	54.6%													
146.57 - 141.57	1942	n/a	1942	27.83	n/a	27.83	69.8%													
141.57 - 141.42	1942	n/a	1942	27.83	n/a	27.83	70.2%													
141.42 - 136.42	6659	n/a	6659	41.97	n/a	41.97	40.5%													
136.42 - 131.42	6659	n/a	6659	41.97	n/a	41.97	48.1%													
131.42 - 126.42	6659	n/a	6659	41.97	n/a	41.97	55.8%													
126.42 - 121.42	6659	n/a	6659	41.97	n/a	41.97	63.7%													
121.42 - 121.17	6659	n/a	6659	41.97	n/a	41.97	64.1%													
121.17 - 116.17	10622	n/a	10622	49.04	n/a	49.04	54.1%													
116.17 - 111.17	10622	n/a	10622	49.04	n/a	49.04	60.2%													
111.17 - 110.04	10622	n/a	10622	49.04	n/a	49.04	61.6%													
110.04 - 109.79	10622	3132	13754	49.04	13.50	62.54	47.7%													48.0%
109.79 - 105.08	10622	3132	13754	49.04	13.50	62.54	52.3%													52.7%
105.08 - 104.83	10622	5106	15728	49.04	22.50	71.54	46.1%						48.0%							46.6%
104.83 - 100.92	10622	5106	15728	49.04	22.50	71.54	49.6%						51.7%							50.1%
100.92 - 100.67	15908	n/a	15908	56.11	n/a	56.11	57.4%													
100.67 - 95.83	15908	n/a	15908	56.11	n/a	56.11	62.5%													
95.83 - 95.58	15908	4064	19972	56.11	13.50	69.61	49.8%												49.3%	
95.58 - 90.58	15908	4064	19972	56.11	13.50	69.61	54.1%												53.5%	
90.58 - 89.92	15908	4064	19972	56.11	13.50	69.61	54.6%												54.1%	
89.92 - 89.67	15908	8127	24036	56.11	27.00	83.11	45.5%					45.0%							45.0%	
89.67 - 84.67	15908	8127	24036	56.11	27.00	83.11	49.2%					48.7%							48.7%	
84.67 - 80.83	15908	8127	24036	56.11	27.00	83.11	52.2%					51.6%							51.6%	
80.83 - 80.33	22710	10233	32943	63.18	27.00	90.18	43.8%					42.8%							42.8%	
80.33 - 80.08	22710	6621	29331	63.18	18.00	81.18	49.5%				43.9%									
80.08 - 75.08	22710	6621	29331	63.18	18.00	81.18	53.2%				47.2%									
75.08 - 70.08	22710	6621	29331	63.18	18.00	81.18	57.0%				50.6%									
70.08 - 69.5	22710	6621	29331	63.18	18.00	81.18	57.4%				51.0%									
69.5 - 69.25	22710	12688	35398	63.18	36.00	99.18	47.6%				42.3%							45.7%		
69.25 - 64.25	22710	12688	35398	63.18	36.00	99.18	51.1%				45.4%							48.9%		
64.25 - 60.58	22710	12688	35398	63.18	36.00	99.18	53.7%				47.7%							51.5%		
60.58 - 60.33	31217	11364	42581	70.24	24.38	94.62	50.4%			43.8%										
60.33 - 55.33	31217	11364	42581	70.24	24.38	94.62	53.7%			46.7%										
55.33 - 52.17	31217	11364	42581	70.24	24.38	94.62	55.9%			48.6%										
52.17 - 51.92	31219	19812	51030	70.24	48.38	118.62	46.8%			40.4%							39.8%			
51.92 - 46.92	31219	19812	51030	70.24	48.38	118.62	49.6%			42.8%							42.2%			
46.92 - 41.92	31219	19812	51030	70.24	48.38	118.62	52.6%			45.4%							44.7%			
41.92 - 40.23	41363	7892	49255	93.46	18.00	111.46	54.1%		48.7%											
40.23 - 39.98	41363	7892	49255	93.46	18.00	111.46	54.2%		48.9%											
39.98 - 34.98	41363	7892	49255	93.46	18.00	111.46	57.3%		51.6%											
34.98 - 29.98	41363	7892	49255	93.46	18.00	111.46	60.4%		54.4%											
29.98 - 28	41363	7892	49255	93.46	18.00	111.46	61.7%		55.6%											
28 - 27.75	41368	17587	58955	93.46	42.00	135.46	51.9%		45.7%							45.9%				
27.75 - 22.75	41368	17587	58955	93.46	42.00	135.46	54.6%		48.1%							48.3%				
22.75 - 20.08	41368	17587	58955	93.46	42.00	135.46	56.1%		49.4%							49.6%				
20.08 - 19.83	51381	n/a	51381	116.58	n/a	116.58	62.6%													
19.83 - 17	51381	n/a	51381	116.58	n/a	116.58	64.4%													
17 - 16.75	51383	8145	59528	116.58	24.00	140.58	55.8%								49.1%					
16.75 - 11.65	51395	9920	61315	116.58	27.00	143.58	57.2%							57.0%	51.2%					
11.65 - 11.42	51395	9920	61315	116.58	27.00	143.58	57.3%							57.1%	51.3%					
11.42 - 9.4	51395	9920	61315	116.58	27.00	143.58	58.4%							58.2%	52.2%					
9.4 - 9.15	51382	13787	65169	116.58	33.00	149.58	54.7%	57.6%						58.1%	49.7%					
9.15 - 4.83	51382	13787	65169	116.58	33.00	149.58	56.9%	59.9%						60.4%	51.6%					
4.83 - 4.58	51446	9839	61284	116.58	30.00	146.58	61.8%	60.2%							53.8%					
4.58 - 0	51446	9839	61284	116.58	30.00	146.58	64.3%	62.6%							56.0%					

Note: Section capacity checked using 5 degree increments.

**Rating per TIA-222-H Section 15.5.*

Monopole Flange Plate Connection

Elevation = 181.583 ft.

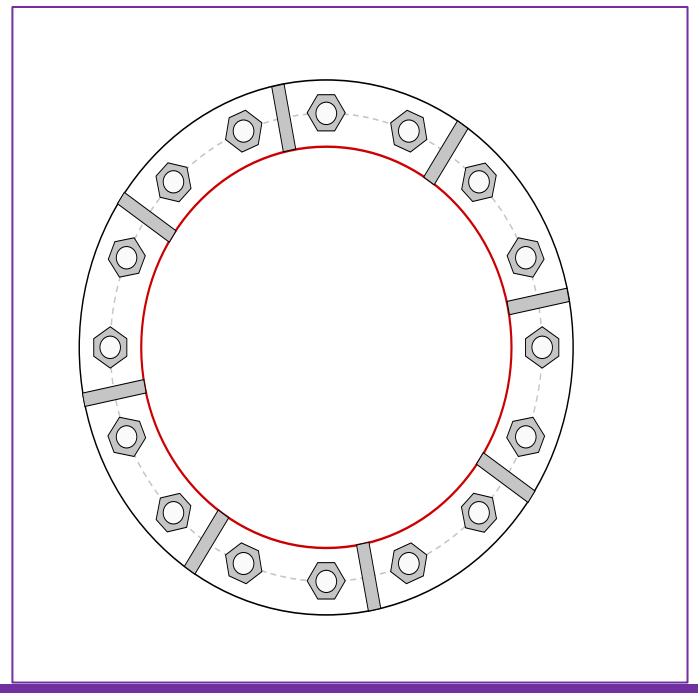
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

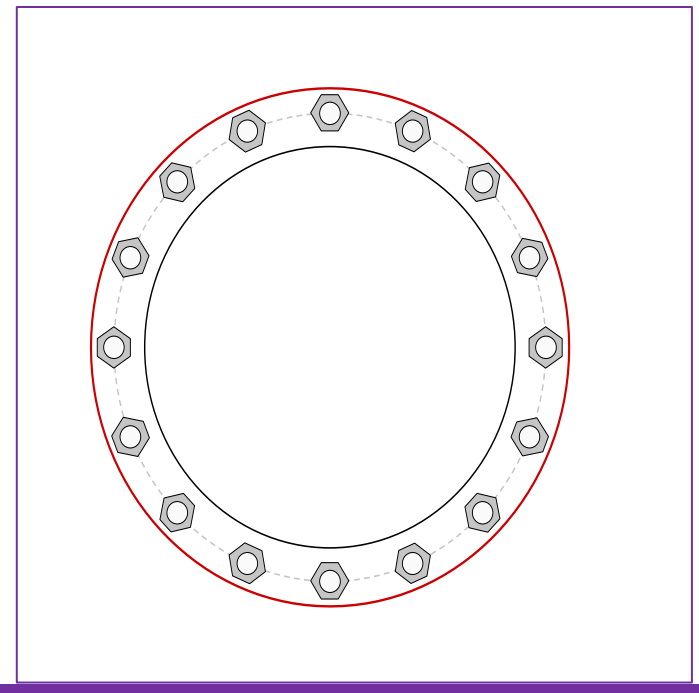
Applied Loads	
Moment (kip-ft)	16.50
Axial Force (kips)	5.76
Shear Force (kips)	4.40

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(16) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 21" BC

Top Plate Data

24" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

18" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(8) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

18" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	2.00	
Allowable (kips)	54.54	
Stress Rating:	**3.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

Monopole Flange Plate Connection

Elevation = 141.417 ft.

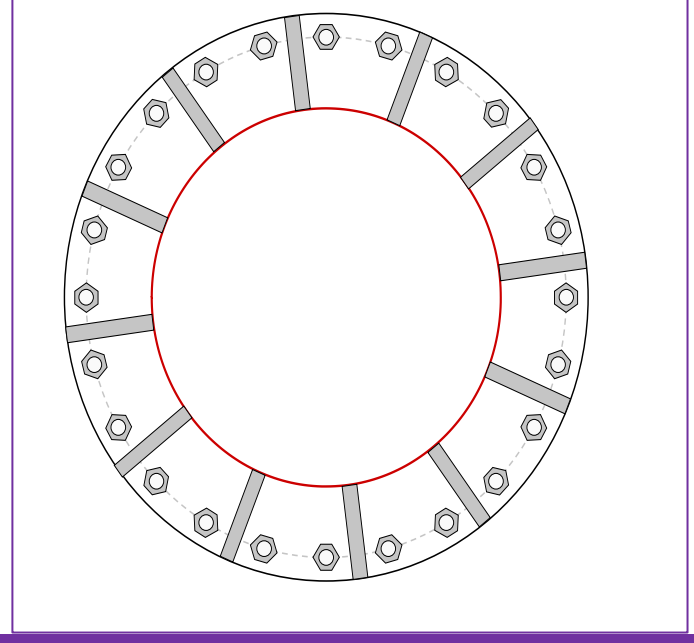
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

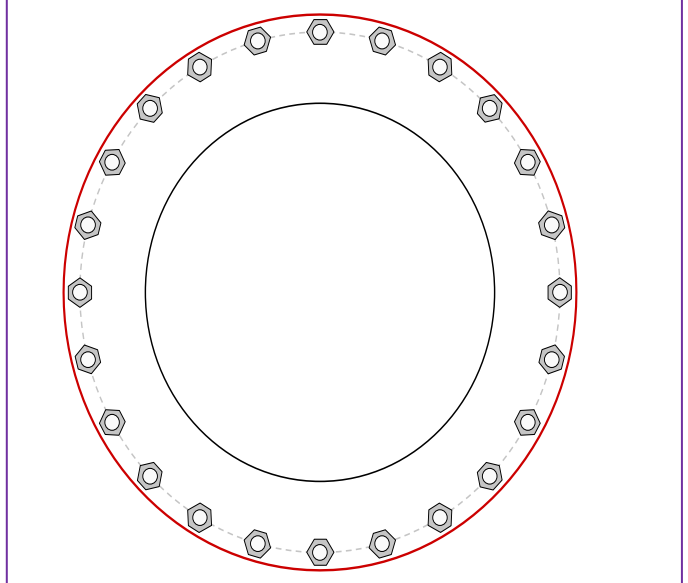
Applied Loads	
Moment (kip-ft)	443.76
Axial Force (kips)	23.26
Shear Force (kips)	20.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(24) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

24" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(12) 8"H x 6"W x 1"T, Notch: 1"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	25.92	
Allowable (kips)	54.52	
Stress Rating:	**45.3%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

Monopole Flange Plate Connection

Elevation = 121.167 ft.

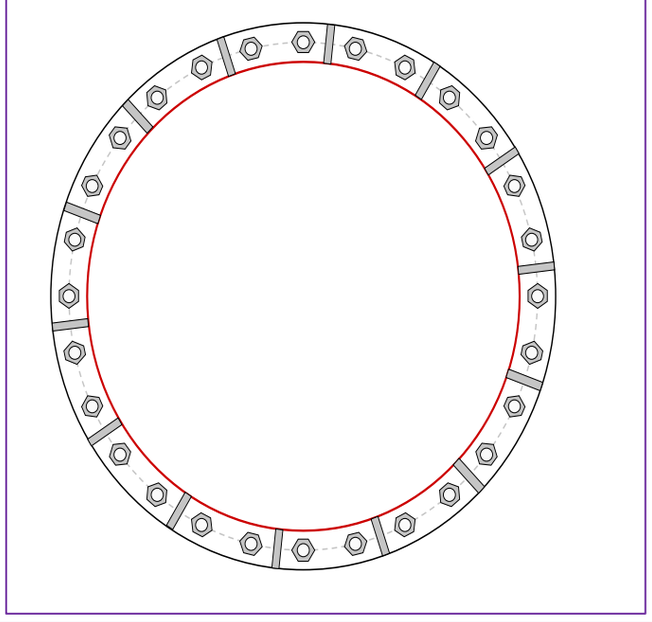
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

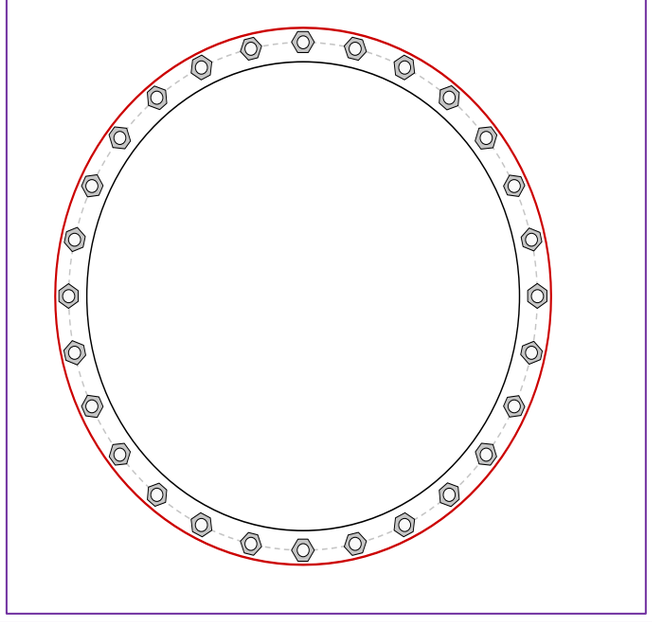
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	443.18	Moment (kip-ft)	428.64
Axial Force (kips)	29.26	Axial Force (kips)	0.00
Shear Force (kips)	22.22	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(28) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

Top Plate Data

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(14) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(3) Bolted, 4.5''x1'', A572-65, Lu=20", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	18.43	
Allowable (kips)	54.53	
Stress Rating:	**32.2%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	12.28	(Flexural (b/Le>2))
Allowable Stress (ksi):	32.40	
Stress Rating:	**36.1%**	**Pass**
Tension Side Stress Rating:	**12.3%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	12.77	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**37.5%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**51.2%**	**Pass**
Vertical Weld:	**32.9%**	**Pass**
Plate Flexure+Shear:	**22.0%**	**Pass**
Plate Tension+Shear:	**37.7%**	**Pass**
Plate Compression:	**48.9%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**16.8%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	159.49	
Max Tension (kip):	159.49	
Comp. Capacity (kip):	166.81	
Tens. Capacity (kip):	195.00	(Rupture)
Comp. Stress Rating:	**91.1%**	**Pass**
Tens. Stress Rating:	**77.9%**	**Pass**

Monopole Flange Plate Connection

Elevation = 100.917 ft.

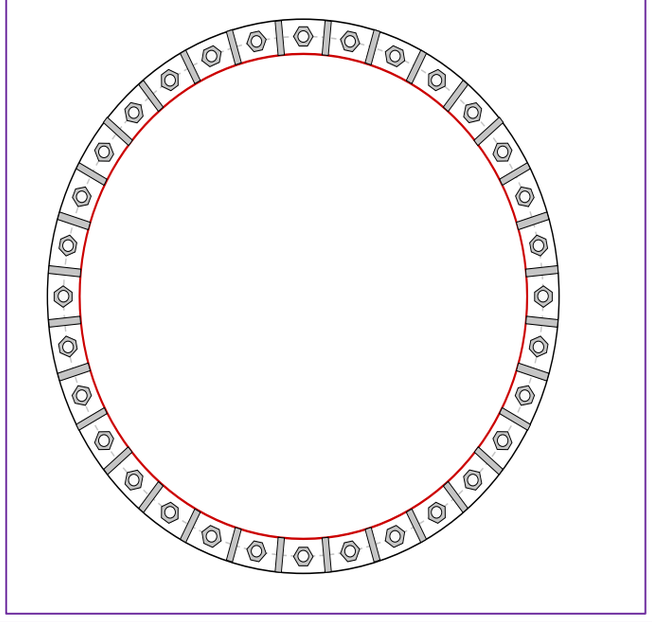
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

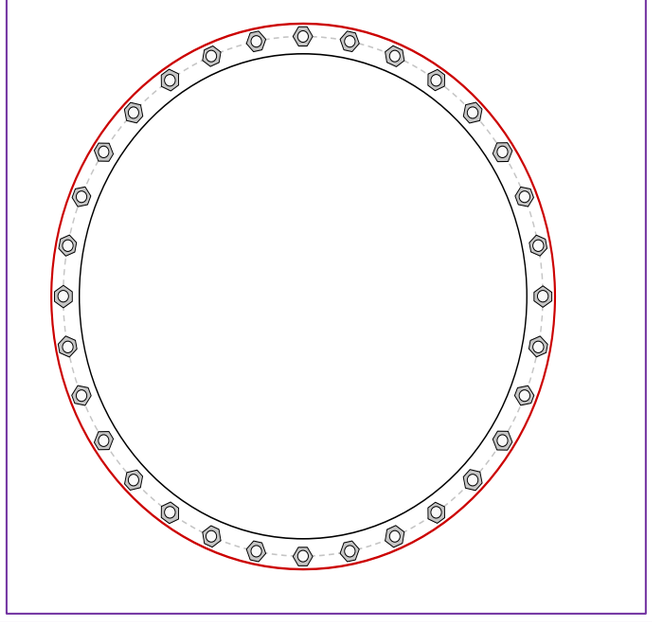
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	506.47	Moment (kip-ft)	836.10
Axial Force (kips)	36.12	Axial Force (kips)	0.00
Shear Force (kips)	24.82	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 45" BC

Top Plate Data

48" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

42" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(6) Bolted, 4.5''x1'', A572-65, Lu=20", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	15.75	
Allowable (kips)	54.53	
Stress Rating:	**27.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	10.67	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**31.4%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	11.18	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**32.9%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**32.2%**	**Pass**
Vertical Weld:	**20.7%**	**Pass**
Plate Flexure+Shear:	**12.3%**	**Pass**
Plate Tension+Shear:	**22.1%**	**Pass**
Plate Compression:	**30.7%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**10.5%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	136.51	
Max Tension (kip):	136.51	
Comp. Capacity (kip):	166.81	
Tens. Capacity (kip):	195.00	(Rupture)
Comp. Stress Rating:	**77.9%**	**Pass**
Tens. Stress Rating:	**66.7%**	**Pass**

Monopole Flange Plate Connection

Elevation = 80.833 ft.

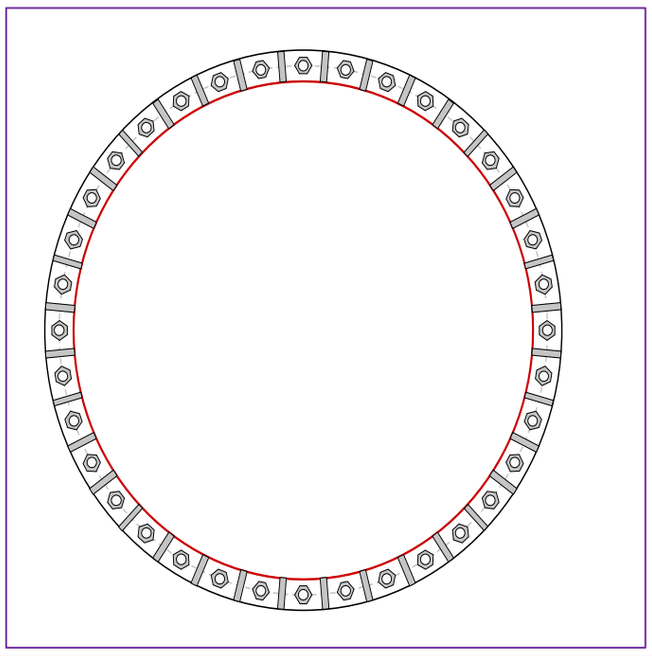
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

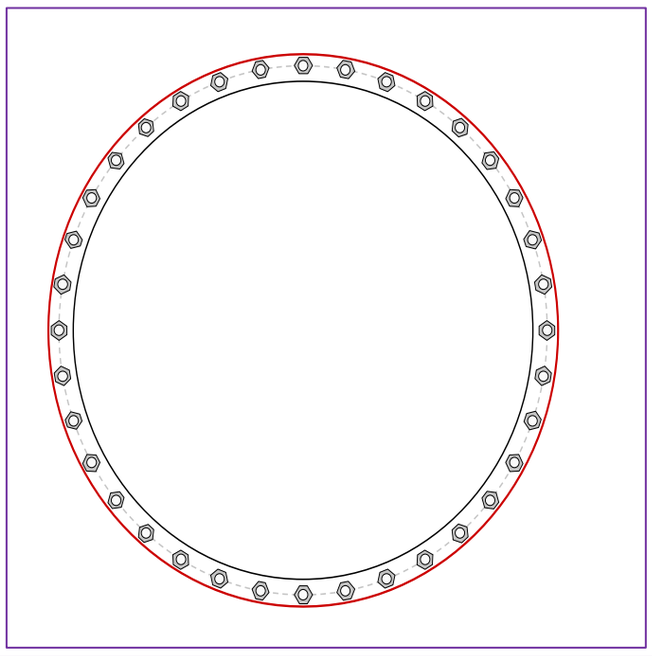
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	615.77	Moment (kip-ft)	1250.60
Axial Force (kips)	45.85	Axial Force (kips)	0.00
Shear Force (kips)	27.88	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(36) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 51" BC

Top Plate Data

54" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

48" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(36) 5"H x 3"W x 0.625"T, Notch: 0.75"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

N/A

Top Pole Data

48" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(3) Bolted, 4.5''x1'', A572-65, Lu=20", Neglect Flange in MOI: No

Bridge Stiffener Group 2 Data

(3) Bolted, 6.5''x1.25'', A572-65, Lu=19", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	14.82	
Allowable (kips)	54.53	
Stress Rating:	**25.9%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	10.28	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**30.2%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	10.77	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**31.6%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**30.5%**	**Pass**
Vertical Weld:	**19.6%**	**Pass**
Plate Flexure+Shear:	**11.6%**	**Pass**
Plate Tension+Shear:	**20.8%**	**Pass**
Plate Compression:	**29.1%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**N/A**
Vertical Weld:	**N/A**
Plate Flexure+Shear:	**N/A**
Plate Tension+Shear:	**N/A**
Plate Compression:	**N/A**

Top Pole Capacity

Punching Shear:	**10.0%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**N/A**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	128.92	
Max Tension (kip):	128.92	
Comp. Capacity (kip):	166.81	
Tens. Capacity (kip):	195.00	(Rupture)
Comp. Stress Rating:	**73.6%**	**Pass**
Tens. Stress Rating:	**63.0%**	**Pass**

Bridge Stiffener Group 2 Analysis Capacity

Max Compression (kip):	233.83	
Max Tension (kip):	233.83	
Comp. Capacity (kip):	365.20	
Tens. Capacity (kip):	393.75	(Rupture)
Comp. Stress Rating:	**61.0%**	**Pass**
Tens. Stress Rating:	**56.6%**	**Pass**

Monopole Flange Plate Connection

Elevation = 60.583 ft.

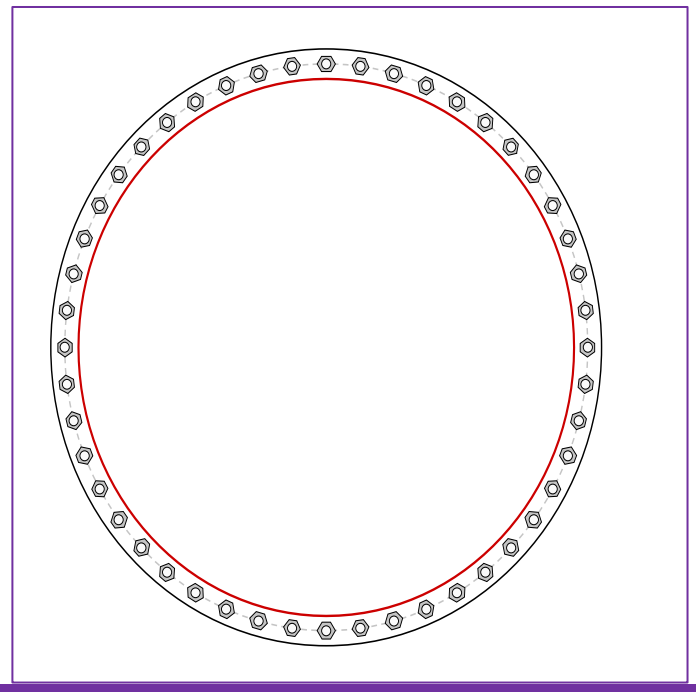
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

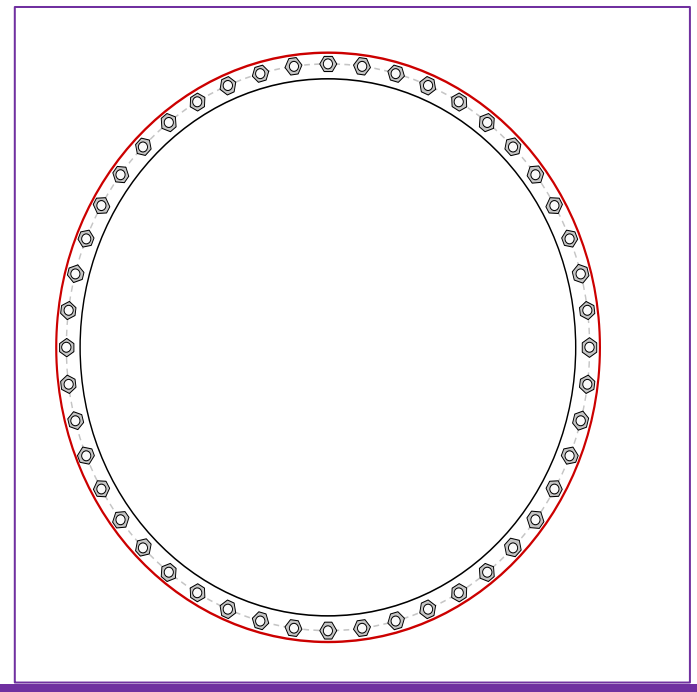
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	583.74	Moment (kip-ft)	1890.93
Axial Force (kips)	63.49	Axial Force (kips)	0.00
Shear Force (kips)	32.60	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(48) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 57" BC

Top Plate Data

60" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Top Pole Data

54" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 4.5''x1'', A572-65, Lu=20", Neglect Flange in MOI: No

Bottom Plate Data

54" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 2 Data

(6) Bolted, 8.5''x1.25'', A572-65, Lu=16.5", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	8.92	
Allowable (kips)	54.53	
Stress Rating:	**15.6%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	8.14	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**23.9%**	**Pass**
Tension Side Stress Rating:	**6.9%**	**Pass**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	81.38	
Max Tension (kip):	81.38	
Comp. Capacity (kip):	166.81	
Tens. Capacity (kip):	195.00	(Rupture)
Comp. Stress Rating:	**46.5%**	**Pass**
Tens. Stress Rating:	**39.7%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	8.59	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**25.2%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bridge Stiffener Group 2 Analysis Capacity

Max Compression (kip):	192.94	
Max Tension (kip):	192.94	
Comp. Capacity (kip):	509.53	
Tens. Capacity (kip):	543.75	(Rupture)
Comp. Stress Rating:	**36.1%**	**Pass**
Tens. Stress Rating:	**33.8%**	**Pass**

Monopole Flange Plate Connection

Elevation = 40.333 ft.

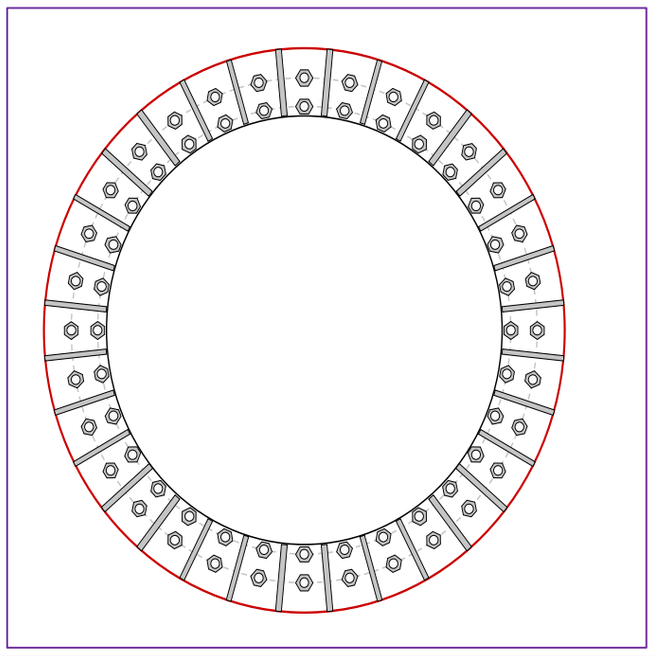
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

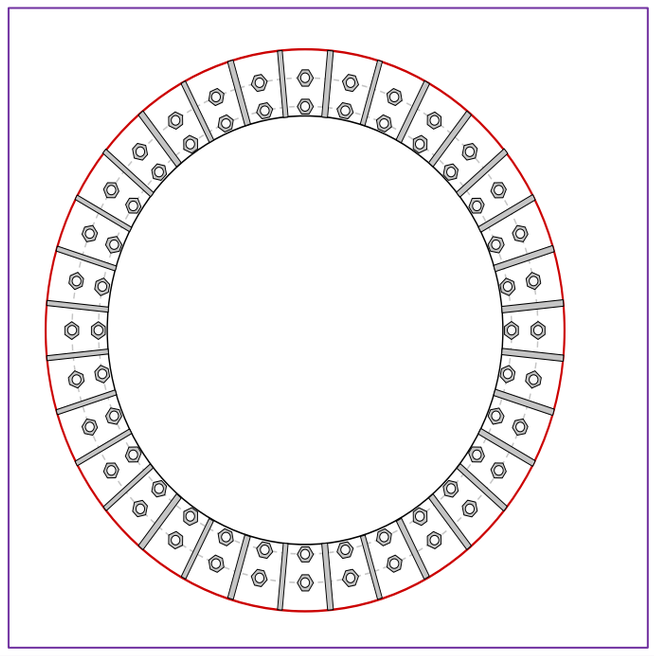
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	835.04	Moment (kip-ft)	2335.79
Axial Force (kips)	76.79	Axial Force (kips)	0.00
Shear Force (kips)	35.86	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 53" BC
GROUP 2: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 47" BC

Top Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

60" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(4) Bolted, 6''x1'', A572-65, Lu=16", Neglect Flange in MOI: No

Bridge Stiffener Group 2 Data

(6) Bolted, 6.5''x1.25'', A572-65, Lu=25", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	11.73	
Allowable (kips)	54.54	
Stress Rating:	**20.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	7.92	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**23.3%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	8.05	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**23.7%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**18.8%**	**Pass**
Vertical Weld:	**16.5%**	**Pass**
Plate Flexure+Shear:	**9.7%**	**Pass**
Plate Tension+Shear:	**12.2%**	**Pass**
Plate Compression:	**27.1%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**16.6%**	**Pass**
Vertical Weld:	**14.5%**	**Pass**
Plate Flexure+Shear:	**8.4%**	**Pass**
Plate Tension+Shear:	**10.7%**	**Pass**
Plate Compression:	**23.9%**	**Pass**

Top Pole Capacity

Punching Shear:	**8.8%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**5.9%**	**Pass**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	150.76	
Max Tension (kip):	150.76	
Comp. Capacity (kip):	262.12	
Tens. Capacity (kip):	285.00	(Rupture)
Comp. Stress Rating:	**54.8%**	**Pass**
Tens. Stress Rating:	**50.4%**	**Pass**

Bridge Stiffener Group 2 Analysis Capacity

Max Compression (kip):	204.99	
Max Tension (kip):	204.99	
Comp. Capacity (kip):	301.18	
Tens. Capacity (kip):	393.75	(Rupture)
Comp. Stress Rating:	**64.8%**	**Pass**
Tens. Stress Rating:	**49.6%**	**Pass**

CCIplate

Elevation (ft)	40.333	*(Flange)*

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending
1	Yes	Yes	Yes
2	No	No	Yes

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, n:	l_w (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1	A325	53	0.5	0	N-Included		No
2	1	11.25	1	A325	53	0.5	0	N-Included		No
3	1	22.5	1	A325	53	0.5	0	N-Included		No
4	1	33.75	1	A325	53	0.5	0	N-Included		No
5	1	45	1	A325	53	0.5	0	N-Included		No
6	1	56.25	1	A325	53	0.5	0	N-Included		No
7	1	67.5	1	A325	53	0.5	0	N-Included		No
8	1	78.75	1	A325	53	0.5	0	N-Included		No
9	1	90	1	A325	53	0.5	0	N-Included		No
10	1	101.25	1	A325	53	0.5	0	N-Included		No
11	1	112.5	1	A325	53	0.5	0	N-Included		No
12	1	123.75	1	A325	53	0.5	0	N-Included		No
13	1	135	1	A325	53	0.5	0	N-Included		No
14	1	146.25	1	A325	53	0.5	0	N-Included		No
15	1	157.5	1	A325	53	0.5	0	N-Included		No
16	1	168.75	1	A325	53	0.5	0	N-Included		No
17	1	180	1	A325	53	0.5	0	N-Included		No
18	1	191.25	1	A325	53	0.5	0	N-Included		No
19	1	202.5	1	A325	53	0.5	0	N-Included		No
20	1	213.75	1	A325	53	0.5	0	N-Included		No
21	1	225	1	A325	53	0.5	0	N-Included		No
22	1	236.25	1	A325	53	0.5	0	N-Included		No
23	1	247.5	1	A325	53	0.5	0	N-Included		No
24	1	258.75	1	A325	53	0.5	0	N-Included		No
25	1	270	1	A325	53	0.5	0	N-Included		No
26	1	281.25	1	A325	53	0.5	0	N-Included		No
27	1	292.5	1	A325	53	0.5	0	N-Included		No
28	1	303.75	1	A325	53	0.5	0	N-Included		No
29	1	315	1	A325	53	0.5	0	N-Included		No
30	1	326.25	1	A325	53	0.5	0	N-Included		No
31	1	337.5	1	A325	53	0.5	0	N-Included		No
32	1	348.75	1	A325	53	0.5	0	N-Included		No
33	2	0	1	A325	47	0.5	0	N-Included		No
34	2	11.25	1	A325	47	0.5	0	N-Included		No
35	2	22.5	1	A325	47	0.5	0	N-Included		No
36	2	33.75	1	A325	47	0.5	0	N-Included		No
37	2	45	1	A325	47	0.5	0	N-Included		No
38	2	56.25	1	A325	47	0.5	0	N-Included		No
39	2	67.5	1	A325	47	0.5	0	N-Included		No
40	2	78.75	1	A325	47	0.5	0	N-Included		No
41	2	90	1	A325	47	0.5	0	N-Included		No
42	2	101.25	1	A325	47	0.5	0	N-Included		No
43	2	112.5	1	A325	47	0.5	0	N-Included		No
44	2	123.75	1	A325	47	0.5	0	N-Included		No
45	2	135	1	A325	47	0.5	0	N-Included		No
46	2	146.25	1	A325	47	0.5	0	N-Included		No
47	2	157.5	1	A325	47	0.5	0	N-Included		No
48	2	168.75	1	A325	47	0.5	0	N-Included		No
49	2	180	1	A325	47	0.5	0	N-Included		No
50	2	191.25	1	A325	47	0.5	0	N-Included		No
51	2	202.5	1	A325	47	0.5	0	N-Included		No
52	2	213.75	1	A325	47	0.5	0	N-Included		No
53	2	225	1	A325	47	0.5	0	N-Included		No
54	2	236.25	1	A325	47	0.5	0	N-Included		No
55	2	247.5	1	A325	47	0.5	0	N-Included		No
56	2	258.75	1	A325	47	0.5	0	N-Included		No
57	2	270	1	A325	47	0.5	0	N-Included		No
58	2	281.25	1	A325	47	0.5	0	N-Included		No
59	2	292.5	1	A325	47	0.5	0	N-Included		No
60	2	303.75	1	A325	47	0.5	0	N-Included		No
61	2	315	1	A325	47	0.5	0	N-Included		No
62	2	326.25	1	A325	47	0.5	0	N-Included		No
63	2	337.5	1	A325	47	0.5	0	N-Included		No
64	2	348.75	1	A325	47	0.5	0	N-Included		No

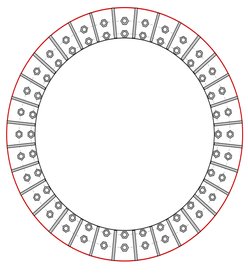
Custom Stiffener Connection - Top Plate

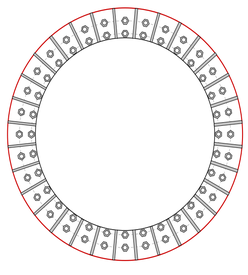
Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Custom Stiffener Connection - Bottom Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic





Monopole Flange Plate Connection

Elevation = 20.083 ft.

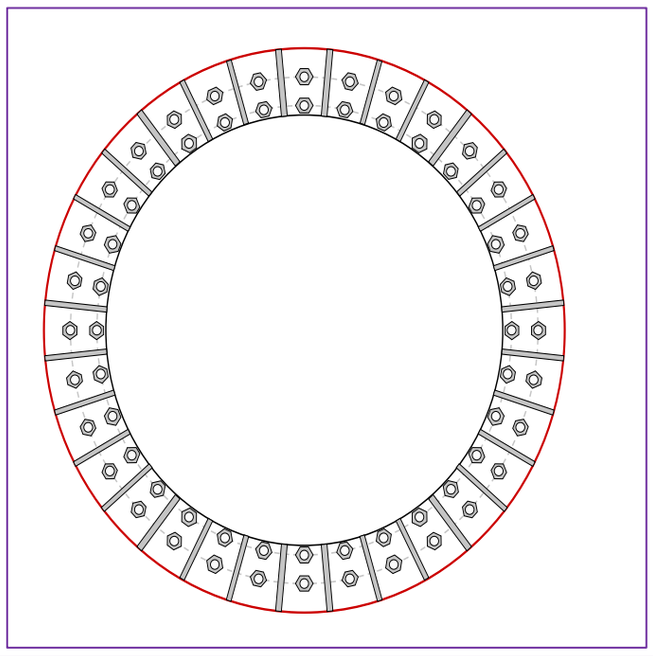
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

TIA-222 Revision	H

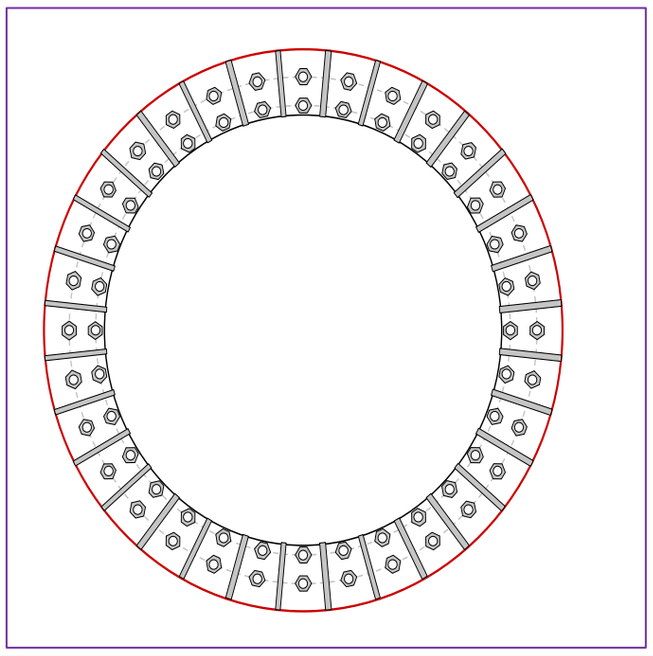
Applied Loads to Flange Connections		Applied Loads to Bridge Stiffeners	
Moment (kip-ft)	1033.76	Moment (kip-ft)	2891.63
Axial Force (kips)	90.88	Axial Force (kips)	0.00
Shear Force (kips)	38.91	Shear Force (kips)	0.00

**TIA-222-H Section 15.5 Applied*

Top Plate - Internal



Bottom Plate - Internal



Connection Properties

Bolt Data

GROUP 1: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 53" BC
GROUP 2: (32) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 47" BC

Top Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

45" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Bottom Stiffener Data

(32) 10"H x 7"W x 0.625"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Top Pole Data

60" x 0.5" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bridge Stiffener Group 1 Data

(6) Bolted, 6.5''x1.25'', A572-65, Lu=24", Neglect Flange in MOI: No

Bridge Stiffener Group 2 Data

(4) Bolted, 6''x1'', A572-65, Lu=16", Neglect Flange in MOI: No

Analysis Results

Bolt Capacity

Max Load (kips)	14.52	
Allowable (kips)	54.54	
Stress Rating:	**25.4%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	9.93	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**29.2%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Bottom Plate Capacity

Max Stress (ksi):	10.10	(Roark's Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**29.7%**	**Pass**
Tension Side Stress Rating:	**N/A**	

Top Stiffener Capacity

Horizontal Weld:	**20.5%**	**Pass**
Vertical Weld:	**17.9%**	**Pass**
Plate Flexure+Shear:	**10.7%**	**Pass**
Plate Tension+Shear:	**13.4%**	**Pass**
Plate Compression:	**29.5%**	**Pass**

Bottom Stiffener Capacity

Horizontal Weld:	**18.4%**	**Pass**
Vertical Weld:	**15.7%**	**Pass**
Plate Flexure+Shear:	**9.1%**	**Pass**
Plate Tension+Shear:	**12.0%**	**Pass**
Plate Compression:	**26.1%**	**Pass**

Top Pole Capacity

Punching Shear:	**7.2%**	**Pass**

Bottom Pole Capacity

Punching Shear:	**5.0%**	**Pass**

Bridge Stiffener Group 1 Analysis Capacity

Max Compression (kip):	253.77	
Max Tension (kip):	253.77	
Comp. Capacity (kip):	312.15	
Tens. Capacity (kip):	393.75	(Rupture)
Comp. Stress Rating:	**77.4%**	**Pass**
Tens. Stress Rating:	**61.4%**	**Pass**

Bridge Stiffener Group 2 Analysis Capacity

Max Compression (kip):	186.63	
Max Tension (kip):	186.63	
Comp. Capacity (kip):	262.12	
Tens. Capacity (kip):	285.00	(Rupture)
Comp. Stress Rating:	**67.8%**	**Pass**
Tens. Stress Rating:	**62.4%**	**Pass**

CCIplate

Elevation (ft)	20.083	*(Flange)*

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending
1	Yes	Yes	Yes
2	No	No	Yes

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, n:	l_w (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1	A325	53	0.5	0	N-Included		No
2	1	11.25	1	A325	53	0.5	0	N-Included		No
3	1	22.5	1	A325	53	0.5	0	N-Included		No
4	1	33.75	1	A325	53	0.5	0	N-Included		No
5	1	45	1	A325	53	0.5	0	N-Included		No
6	1	56.25	1	A325	53	0.5	0	N-Included		No
7	1	67.5	1	A325	53	0.5	0	N-Included		No
8	1	78.75	1	A325	53	0.5	0	N-Included		No
9	1	90	1	A325	53	0.5	0	N-Included		No
10	1	101.25	1	A325	53	0.5	0	N-Included		No
11	1	112.5	1	A325	53	0.5	0	N-Included		No
12	1	123.75	1	A325	53	0.5	0	N-Included		No
13	1	135	1	A325	53	0.5	0	N-Included		No
14	1	146.25	1	A325	53	0.5	0	N-Included		No
15	1	157.5	1	A325	53	0.5	0	N-Included		No
16	1	168.75	1	A325	53	0.5	0	N-Included		No
17	1	180	1	A325	53	0.5	0	N-Included		No
18	1	191.25	1	A325	53	0.5	0	N-Included		No
19	1	202.5	1	A325	53	0.5	0	N-Included		No
20	1	213.75	1	A325	53	0.5	0	N-Included		No
21	1	225	1	A325	53	0.5	0	N-Included		No
22	1	236.25	1	A325	53	0.5	0	N-Included		No
23	1	247.5	1	A325	53	0.5	0	N-Included		No
24	1	258.75	1	A325	53	0.5	0	N-Included		No
25	1	270	1	A325	53	0.5	0	N-Included		No
26	1	281.25	1	A325	53	0.5	0	N-Included		No
27	1	292.5	1	A325	53	0.5	0	N-Included		No
28	1	303.75	1	A325	53	0.5	0	N-Included		No
29	1	315	1	A325	53	0.5	0	N-Included		No
30	1	326.25	1	A325	53	0.5	0	N-Included		No
31	1	337.5	1	A325	53	0.5	0	N-Included		No
32	1	348.75	1	A325	53	0.5	0	N-Included		No
33	2	0	1	A325	47	0.5	0	N-Included		No
34	2	11.25	1	A325	47	0.5	0	N-Included		No
35	2	22.5	1	A325	47	0.5	0	N-Included		No
36	2	33.75	1	A325	47	0.5	0	N-Included		No
37	2	45	1	A325	47	0.5	0	N-Included		No
38	2	56.25	1	A325	47	0.5	0	N-Included		No
39	2	67.5	1	A325	47	0.5	0	N-Included		No
40	2	78.75	1	A325	47	0.5	0	N-Included		No
41	2	90	1	A325	47	0.5	0	N-Included		No
42	2	101.25	1	A325	47	0.5	0	N-Included		No
43	2	112.5	1	A325	47	0.5	0	N-Included		No
44	2	123.75	1	A325	47	0.5	0	N-Included		No
45	2	135	1	A325	47	0.5	0	N-Included		No
46	2	146.25	1	A325	47	0.5	0	N-Included		No
47	2	157.5	1	A325	47	0.5	0	N-Included		No
48	2	168.75	1	A325	47	0.5	0	N-Included		No
49	2	180	1	A325	47	0.5	0	N-Included		No
50	2	191.25	1	A325	47	0.5	0	N-Included		No
51	2	202.5	1	A325	47	0.5	0	N-Included		No
52	2	213.75	1	A325	47	0.5	0	N-Included		No
53	2	225	1	A325	47	0.5	0	N-Included		No
54	2	236.25	1	A325	47	0.5	0	N-Included		No
55	2	247.5	1	A325	47	0.5	0	N-Included		No
56	2	258.75	1	A325	47	0.5	0	N-Included		No
57	2	270	1	A325	47	0.5	0	N-Included		No
58	2	281.25	1	A325	47	0.5	0	N-Included		No
59	2	292.5	1	A325	47	0.5	0	N-Included		No
60	2	303.75	1	A325	47	0.5	0	N-Included		No
61	2	315	1	A325	47	0.5	0	N-Included		No
62	2	326.25	1	A325	47	0.5	0	N-Included		No
63	2	337.5	1	A325	47	0.5	0	N-Included		No
64	2	348.75	1	A325	47	0.5	0	N-Included		No

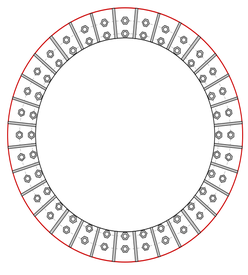
Custom Stiffener Connection - Top Plate

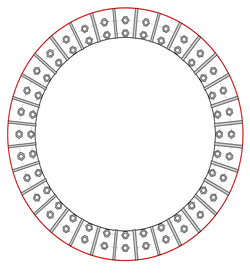
Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Custom Stiffener Connection - Bottom Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic





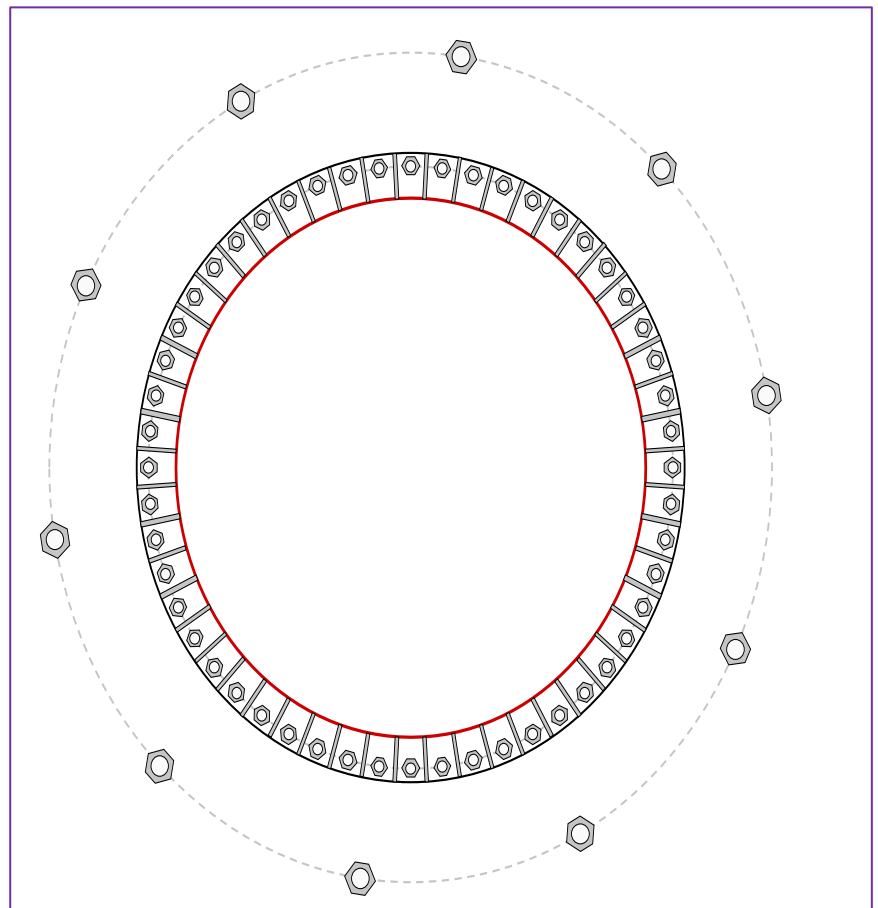
Monopole Base Plate Connection

Site Info	
BU #	826217
Site Name	Newington_1
Order #	654632 Rev.0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	4731.62
Axial Force (kips)	104.85
Shear Force (kips)	41.30

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (52) 1-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi) on 67" BC
GROUP 2: (10) 2-1/4" ø bolts (A687 N; Fy=105 ksi, Fu=125 ksi) on 92.3" BC

Base Plate Data

70" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Stiffener Data

(52) 6"H x 5"W x 0.5"T, Notch: 0.5"
plate: Fy= 36 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.3125" fillet
vert. weld: 0.3125" fillet

Pole Data

60" x 0.625" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_t = 28.08	ϕPn_t = 90.84	**Stress Rating**
Vu = 0.48	ϕVn = 57.52	**29.4%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 131.29	ϕPn_t = 304.69	**Stress Rating**
Vu = 1.62	ϕVn = 186.38	**41.0%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	2.44	(Shear)
Allowable Stress (ksi):	21.6	
Stress Rating:	**10.8%**	**Pass**

Stiffener Summary

Horizontal Weld:	**32.2%**	**Pass**
Vertical Weld:	**35.0%**	**Pass**
Plate Flexure+Shear:	**31.8%**	**Pass**
Plate Tension+Shear:	**28.6%**	**Pass**
Plate Compression:	**69.9%**	**Pass**

Pole Summary

Punching Shear:	**12.1%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	Yes	No	
2	Yes	Yes	No	No	No	

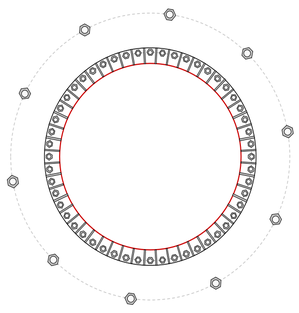
Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, n:	I_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1.25	A687	67	0.55	0	N-Included		No
2	1	6.92307692	1.25	A687	67	0.55	0	N-Included		No
3	1	13.8461538	1.25	A687	67	0.55	0	N-Included		No
4	1	20.7692308	1.25	A687	67	0.55	0	N-Included		No
5	1	27.6923077	1.25	A687	67	0.55	0	N-Included		No
6	1	34.6153846	1.25	A687	67	0.55	0	N-Included		No
7	1	41.5384615	1.25	A687	67	0.55	0	N-Included		No
8	1	48.4615385	1.25	A687	67	0.55	0	N-Included		No
9	1	55.3846154	1.25	A687	67	0.55	0	N-Included		No
10	1	62.3076923	1.25	A687	67	0.55	0	N-Included		No
11	1	69.2307692	1.25	A687	67	0.55	0	N-Included		No
12	1	76.1538462	1.25	A687	67	0.55	0	N-Included		No
13	1	83.0769231	1.25	A687	67	0.55	0	N-Included		No
14	1	90	1.25	A687	67	0.55	0	N-Included		No
15	1	96.9230769	1.25	A687	67	0.55	0	N-Included		No
16	1	103.846154	1.25	A687	67	0.55	0	N-Included		No
17	1	110.769231	1.25	A687	67	0.55	0	N-Included		No
18	1	117.692308	1.25	A687	67	0.55	0	N-Included		No
19	1	124.615385	1.25	A687	67	0.55	0	N-Included		No
20	1	131.538462	1.25	A687	67	0.55	0	N-Included		No
21	1	138.461538	1.25	A687	67	0.55	0	N-Included		No
22	1	145.384615	1.25	A687	67	0.55	0	N-Included		No
23	1	152.307692	1.25	A687	67	0.55	0	N-Included		No
24	1	159.230769	1.25	A687	67	0.55	0	N-Included		No
25	1	166.153846	1.25	A687	67	0.55	0	N-Included		No
26	1	173.076923	1.25	A687	67	0.55	0	N-Included		No
27	1	180	1.25	A687	67	0.55	0	N-Included		No
28	1	186.923077	1.25	A687	67	0.55	0	N-Included		No
29	1	193.846154	1.25	A687	67	0.55	0	N-Included		No
30	1	200.769231	1.25	A687	67	0.55	0	N-Included		No
31	1	207.692308	1.25	A687	67	0.55	0	N-Included		No
32	1	214.615385	1.25	A687	67	0.55	0	N-Included		No
33	1	221.538462	1.25	A687	67	0.55	0	N-Included		No
34	1	228.461538	1.25	A687	67	0.55	0	N-Included		No
35	1	235.384615	1.25	A687	67	0.55	0	N-Included		No
36	1	242.307692	1.25	A687	67	0.55	0	N-Included		No
37	1	249.230769	1.25	A687	67	0.55	0	N-Included		No
38	1	256.153846	1.25	A687	67	0.55	0	N-Included		No
39	1	263.076923	1.25	A687	67	0.55	0	N-Included		No
40	1	270	1.25	A687	67	0.55	0	N-Included		No
41	1	276.923077	1.25	A687	67	0.55	0	N-Included		No
42	1	283.846154	1.25	A687	67	0.55	0	N-Included		No
43	1	290.769231	1.25	A687	67	0.55	0	N-Included		No
44	1	297.692308	1.25	A687	67	0.55	0	N-Included		No
45	1	304.615385	1.25	A687	67	0.55	0	N-Included		No
46	1	311.538462	1.25	A687	67	0.55	0	N-Included		No
47	1	318.461538	1.25	A687	67	0.55	0	N-Included		No
48	1	325.384615	1.25	A687	67	0.55	0	N-Included		No
49	1	332.307692	1.25	A687	67	0.55	0	N-Included		No
50	1	339.230769	1.25	A687	67	0.55	0	N-Included		No
51	1	346.153846	1.25	A687	67	0.55	0	N-Included		No
52	1	353.076923	1.25	A687	67	0.55	0	N-Included		No
53	2	10	2.25	A687	92.3	0.5	0	N-Included		No
54	2	46	2.25	A687	92.3	0.5	0	N-Included		No
55	2	82	2.25	A687	92.3	0.5	0	N-Included		No
56	2	118	2.25	A687	92.3	0.5	0	N-Included		No
57	2	154	2.25	A687	92.3	0.5	0	N-Included		No
58	2	190	2.25	A687	92.3	0.5	0	N-Included		No
59	2	226	2.25	A687	92.3	0.5	0	N-Included		No
60	2	262	2.25	A687	92.3	0.5	0	N-Included		No
61	2	298	2.25	A687	92.3	0.5	0	N-Included		No
62	2	334	2.25	A687	92.3	0.5	0	N-Included		No

Custom Stiffener Connection

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	3.46153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	10.3846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	17.3076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	24.2307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	31.1538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	38.0769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	45	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	51.9230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	58.8461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	65.7692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	72.6923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	79.6153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	86.5384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	93.4615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	100.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	107.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	114.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	121.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	128.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	135	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	141.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	148.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	155.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	162.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	169.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	176.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	183.461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	190.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	197.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	204.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	211.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	218.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
33	1	225	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
34	1	231.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
35	1	238.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
36	1	245.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
37	1	252.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
38	1	259.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
39	1	266.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
40	1	273.461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
41	1	280.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
42	1	287.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
43	1	294.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
44	1	301.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
45	1	308.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
46	1	315	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
47	1	321.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
48	1	328.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
49	1	335.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
50	1	342.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
51	1	349.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
52	1	356.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic



Pier and Pad Foundation

BU # :	826217
Site Name:	Newington_1
App. Number:	654632 Rev.0

TIA-222 Revision:	H
Tower Type:	Monopole

Top & Bot. Pad Rein. Different?:	☐
Block Foundation?:	☐
Rectangular Pad?:	☐

Superstructure Analysis Reactions

Compression, P_{comp}:	104.86	kips
Base Shear, Vu_comp:	41.28	kips
Moment, M_u:	4731.62	ft-kips
Tower Height, **H**:	191.67	ft
BP Dist. Above Fdn, bp_{dist}:	2.5	in

Pier Properties

Pier Shape:	Circular	
Pier Diameter, **dpier**:	7	ft
Ext. Above Grade, **E**:	0.5	ft
Pier Rebar Size, **Sc**:	9	
Pier Rebar Quantity, **mc**:	34	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	11	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties

Depth, **D**:	9	ft
Pad Width, W_1:	20.5	ft
Pad Thickness, **T**:	2.5	ft
Pad Rebar Size (Bottom dir. 2), Sp_2:	11	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	30	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties

Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties

Total Soil Unit Weight, γ:	130	pcf
Ultimate Gross Bearing, Qult:	16.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	36	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:	0.35	
Neglected Depth, **N**:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	N/A	ft

<--Toggle between Gross and Net

Foundation Analysis Checks

	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	333.76	41.28	**11.8%**	**Pass**
Bearing Pressure (ksf)	12.00	5.78	**48.1%**	**Pass**
*Overturning (kip*ft)*	6364.96	5132.38	**80.6%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	5676.33	5020.58	**84.2%**	**Pass**
Pier Compression (kip)	24494.62	153.35	**0.6%**	**Pass**
*Pad Flexure (kip*ft)*	4887.26	2704.47	**52.7%**	**Pass**
Pad Shear - 1-way (kips)	580.76	441.92	**72.5%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.000	**0.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	6892.45	3012.35	**41.6%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Structural Rating*:	**84.2%**
Soil Rating*:	**80.6%**

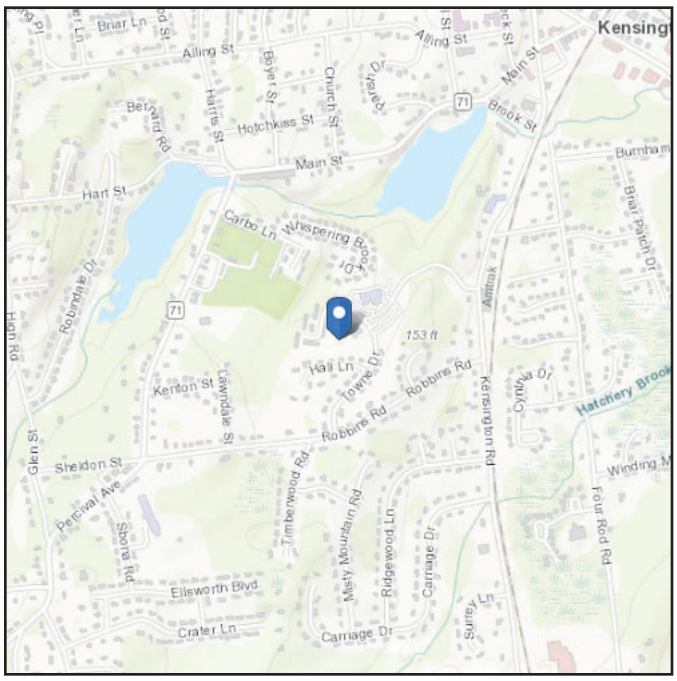
Version 4.1.1

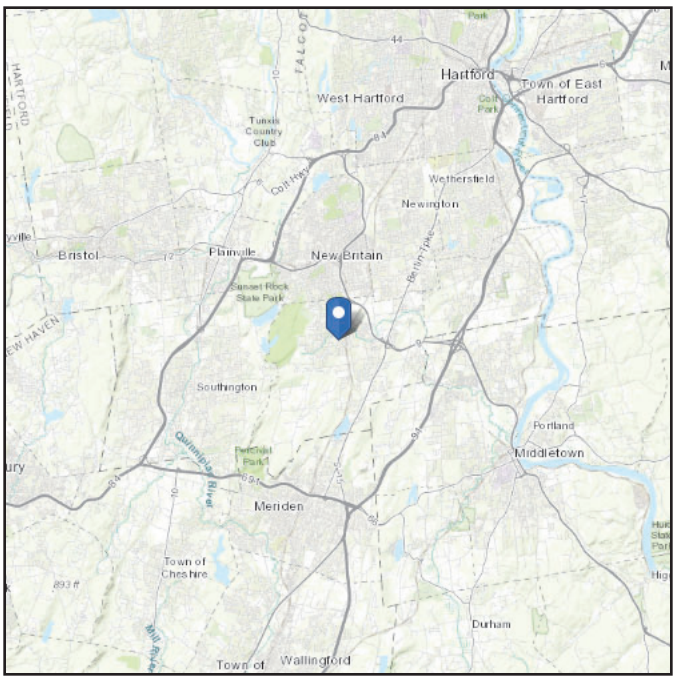
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 133.49 ft (NAVD 88)
Latitude: 41.626194
Longitude: -72.775647





Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Fri Jul 08 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

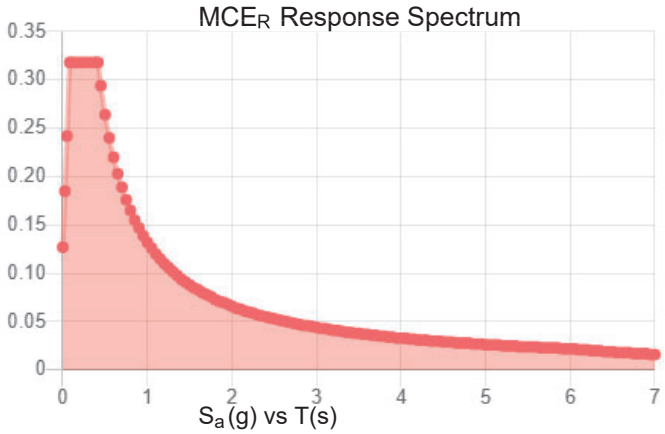
Seismic

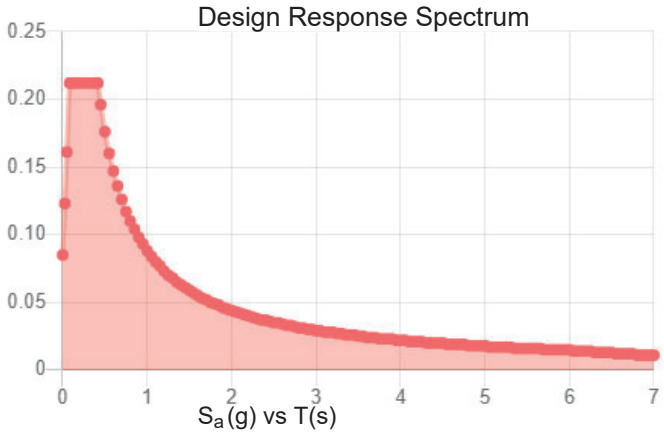
Site Soil Class: D - Stiff Soil

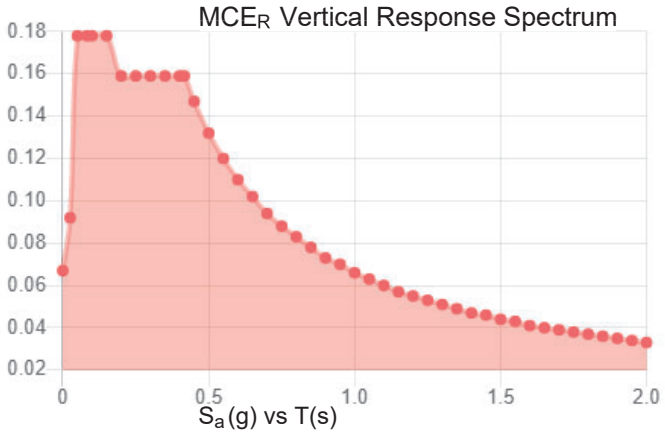
Results:

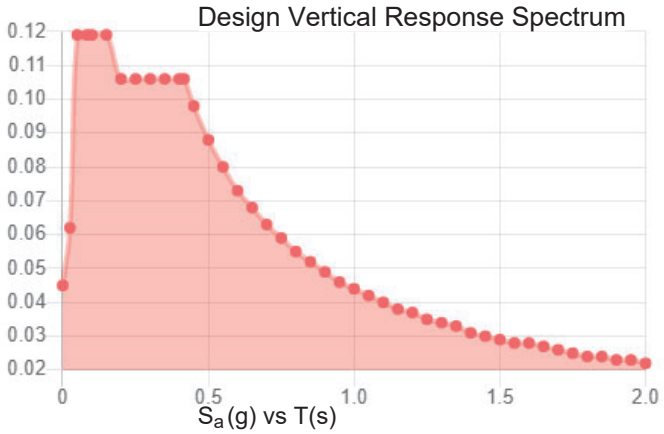
S_S :	0.199	S_{D1} :	0.088
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.109
F_v :	2.4	PGA_M :	0.173
S_{MS} :	0.318	F_{PGA} :	1.582
S_{M1} :	0.132	I_e :	1
S_{DS} :	0.212	C_v :	0.7

Seismic Design Category B









Data Accessed: **Fri Jul 08 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.50 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Fri Jul 08 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.