Robinson+Cole

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Also admitted in Massachusetts

November 24, 2015

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
340 Bloomfield Avenue, Windsor, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 127-foot level of the existing 148-foot tower at 340 Bloomfield Avenue in Windsor, Connecticut (the "Property"). The tower is owned by Crown Castle ("Crown"). The Council approved Cellco's use of the tower in 2004. Cellco now intends to modify its facility by replacing six (6) of its existing antennas with three (3) model SBNHH-1D65B, 1900 MHz antennas and three (3) model SBNHH-1D65B, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to install three (3) remote radio heads ("RRHs") behind its antennas. Included in Attachment 1 are specifications for Cellco's replacement antennas and RRHs.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mayor Donald Trinks and Peter Souza, Windsor's Town Manager. The Town of Windsor is the owner of the Property. A copy of this letter is also being sent to Crown, the tower owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. The replacement antennas and RRHs will be located at the 127-foot level on the 148-foot tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included behind Attachment 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Donald Trinks, Windsor Mayor
Peter Souza, Windsor Town Manager
Crown Castle
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SBNHH-1D65B

Andrew® Tri-band Antenna, 698–896 and 2x 1695–2360 MHz, 65° horizontal beamwidth, internal RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
CPR at Boresight, dB	20	23	20	20	17	21
CPR at Sector, dB	14	10	12	10	9	1
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
	0 ° | 14.6	0 ° | 14.5	0 ° | 17.4	0 ° | 17.8	0 ° | 18.1	0 ° | 18.2
Gain by Beam Tilt, average, dBi	7 ° | 14.6	7 ° | 14.4	3 ° | 17.5	3 ° | 17.9	3 ° | 18.3	3 ° | 18.4
	14 ° | 14.2	14 ° | 13.6	7 ° | 17.4	7 ° | 17.9	7 ° | 18.2	7 ° | 18.4
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® multiband with internal RET
Band	Multiband
Brand	DualPol® | Teletilt®
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Performance Note	Outdoor usage

Product Specifications

SBNHH-1D65B

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	6
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Speed, maximum	241 km/h | 150 mph

Dimensions

Depth	180.0 mm | 7.1 in
Length	1851.0 mm | 72.9 in
Width	301.0 mm | 11.9 in
Net Weight	18.4 kg | 40.6 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Multi-RET)
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
RET System	Teletilt®

Packed Dimensions

Depth	299.0 mm | 11.8 in
Length	1970.0 mm | 77.6 in
Width	409.0 mm | 16.1 in
Shipping Weight	31.0 kg | 68.3 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

Product Specifications

SBNHH-1D65B

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

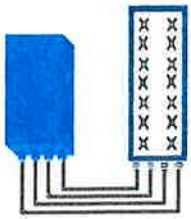
Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R
or
2x60W with 2T4R

Can be switched between modes via SW w/o site visit

Alcatel·Lucent

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.) Volume in L Weight in kg (lb) (w/o mounting HW)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield) 38 (with solar shield) 26 (57.2) (with solar shield)
DC voltage range DC power consumption	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption 550W typical @100% RF load (in 2Tx or 4TX mode)
Environmental conditions Wind load (@150km/h or 93mph)	-40°C (-40°F) /+55°C (+131°F) IP65 Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

ATTACHMENT 2

	General	Power	Density					
Site Name: Windsor 3								
Tower Height: 148'								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T UMTS	2	565	148.5	0.0200	880	0.5867	0.34%	
*AT&T UMTS	2	1077	148.5	0.0381	1900	1.0000	0.38%	
*AT&T GSM	1	283	148.5	0.0050	880	0.5867	0.09%	
*AT&T GSM	4	646	148.5	0.0458	1900	1.0000	0.46%	
*AT&T LTE	1	1615	148.5	0.0286	740	0.4933	0.58%	
*T-Mobile GSM/UMTS	4	1167	143	0.0894	1900/2100	1.0000	0.89%	
*T-Mobile AWS/LTE	2	2334	143	0.0894	2100	1.0000	0.89%	
*T-Mobile LTE	1	865	143	0.0166	700	0.4667	0.36%	
*Clearwire	2	153	130	0.0072	2496	1.0000	0.07%	
*Clearwire	1	211	130	0.0049	23 GHz	1.0000	0.05%	
*Sprint CDMA/LTE	3	35	110	0.0035	1900	1.0000	0.03%	
*Sprint CDMA/LTE	1	20	110	0.0007	850	0.5667	0.01%	
*Sprint CDMA/LTE	2	35	110	0.0023	2500	1.0000	0.02%	
*Town			var.				8.83%	
Verizon	**11**	**451**	**127**	**0.1106**	**1970**	**1.0000**	**11.06%**	
Verizon	**9**	**411**	**127**	**0.0825**	**869**	**0.5793**	**14.23%**	
Verizon	**1**	**3500**	**127**	**0.0780**	**2145**	**1.0000**	**7.80%**	
Verizon	**1**	**2100**	**127**	**0.0468**	**746**	**0.4973**	**9.41%**	
								55.5%
* Source: Siting Council								

ATTACHMENT 3

Date: **September 24, 2015**

SSOE™

Timothy Liebrock
Crown Castle
12725 Morris Road Extension, Suite 400
Alpharetta, GA 30004
(770) 375-4941

SSOE Group
1001 Madison Ave.
Toledo, OH 43604
(419) 255-3830
thill@ssoe.com

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate** **Carrier Site Name:**	 Windsor 3, CT
Crown Castle Designation:	**Crown Castle BU Number:** **Crown Castle Site Name:** **Crown Castle JDE Job Number:** **Crown Castle Work Order Number:** **Crown Castle Application Number:**	855662 WINDSORCENTRAL 348161 1124543 312324 Rev. 0
Engineering Firm Designation:	**SSOE Group Project Number:**	015-00428-00 BC 1114
Site Data:	**340 Bloomfield Avenue, Windsor, CT 06095, Hartford County** **Latitude *41° 51' 9.34"*, Longitude *-72° 39' 37.79"*** **148 Foot – Modified Summit Monopole Tower**	

Dear Mr. Timothy Liebrock,

SSOE Group is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 828347, in accordance with application 312324, revision 0.

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:

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the TIA/EIA-222-F standard and 2005 CT State Building Code with 2009 amendment based upon a wind speed of 80 mph fastest mile.

We at *SSOE Group* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: Tieschia Hill

Respectfully submitted by:

STATE OF CONNECTICUT
BARRY W. BURGESS
NO. 25185
LICENSED
PROFESSIONAL ENGINEER

Barry W. Burgess, PE
Section Manager

9/24/2015

Barry W. Burgess

TABLE OF CONTENTS

1) INTRODUCTION

The existing 148' monopole has eighteen sides and is evenly tapered from 51.30" (flat-flat) at the base to 24.00" (flat-flat) at the top. It has four major sections, connected with slip joints. The structure is galvanized and has no tower lighting.

The tower was originally designed for AT&T/Bechtel by Summit Manufacturing, LLC of West Hazleton, Pennsylvania for an 80 mph wind speed with 0.5" radial ice in accordance with TIA/EIA-222-F 1996.

Modifications designed by B+T Group (Project #: 91728.005.01, dated 10/29/14), which consisted of installing flat plate reinforcement to the tower shaft from 0'-6"- 35'-6" and 25'-6"-95'-6", were considered in this analysis.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no ice, 38 mph with 1" ice thickness and 50 mph under service loads.

Table 1 – Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
126.0	127.0	3	Alcatel Lucent	RRH2x60-700			
		6	Commscope	SBNHH-1D65B w/ Mount Pipe			

Table 2 – Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
147.0	155.0	1	RFS Celwave	PD320-2	1 3 12	7/8 1-1/4 1-5/8	
	147.0	1	Raycap	DC6-48-60-18-8F			
		3	Ericsson	RRUS 11			
		2	KMW Communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe			
		6	Kathrein	800 10121 w/ Mount Pipe			
		12	Kathrein	860 10025			
		12	Powerwave Technologies	LGP13519			
		1	Powerwave Technologies	P65-15-XLH-RR w/ Mount Pipe			
		1		Platform Mount [LP 1201-1]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
142.0	143.0	3	Commscope	LNX-6515DS-VTM w/ Mount Pipe	13	1-5/8	
		3	Ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe			
		3	Ericsson	ERICSSON AIR 21 B4A B2P w/ Mount Pipe			
	142.0	3	Ericsson	RRUS 11 B12			
		3	Ericsson	KRY 112 144/1			
		1		Platform Mount [LP 1201-1]			
126.0	127.0	6	Andrew	HBXX-6517DS-A2M w/ Mount Pipe			1
		3	Alcatel Lucent	RRH2X60-AWS	14	1-5/8	
		3	Alcatel Lucent	RRH2X60-PCS			
		3	Antel	BXA-70063-4CF-EDIN-X w/ Mount Pipe			
		1	Antel	BXA-70080-6CF-4 w/ Mount Pipe			
		2	Powerwave Technologies	P65-16-XL-R w/ Mount Pipe			
		2	RFS Celwave	DB-T1-6Z-8AB-0Z			
		3	RFS Celwave	FD9R6004/2C-3L			
	126.0	3	RFS Celwave	FD9R6004/2C-3L			
		1		Platform Mount [LP 403-1]			
111.0	111.0	3	Alcatel Lucent	TME-800MHz 2X50W RRH W/FILTER			
		3	Alcatel Lucent	PCS 1900MHz 4x45W-65MHz			
		1		Pipe Mount [PM 601-3]			
109.0	118.0	1	Decibel	DB205-L	3 3 1 3	7/8 5/16 5/8 1-1/4	
	113.0	1	Sinclair	SD212-SF3P2SNM			
	110.0	3	Alcatel Lucent	TD-RRH8x20-25			
		4	RFS Celwave	APXVSPP18-C-A20 w/ Mount Pipe			
		3	RFS Celwave	APXVTM14-C-120 w/ Mount Pipe			
	109.0	1		Platform Mount [LP 1201-1]			
81.0	83.0	1	Sinclair	SRL227	2	7/8	
	81.0	1		Side Arm Mount [SO 702-3]			
	76.0	1	Sinclair	SD212			
74.0	75.0	1	Radiowaves	HP2-23	1	1/4	
	74.0	1		Pipe Mount [PM 601-1]			
50.0	51.0	1	PCTEL	GPS-TMG-HR-26N	1	1/2	
	50.0	1		Side Arm Mount [SO 701-1]			

Notes:
1) Existing equipment to be removed; not considered in this analysis.

Table 3 – Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
148.0	148.0	12	Allgon	7184.14	-	-
		1		14-ft. Low Profile Platform		
143.0	143.0	12	Swedcom	ALP-9212-N	-	-
		1		14-ft. Low Profile Platform		
128.0	128.0	12	Swedcom	ALP-9212-N	-	-
		1		14-ft. Low Profile Platform		
113.0	113.0	12	Swedcom	ALP-9212-N	-	-
		1		14-ft. Low Profile Platform		
98.0	98.0	12	Swedcom	ALP-9212-N	-	-
		1		14-ft. Low Profile Platform		
83.0	83.0	12	Swedcom	ALP-9212-N	-	-
		1		14-ft. Low Profile Platform		

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
Original Tower Drawings	Summit Manufacturing, LLC Job #: 11986, dated 11/8/00	Doc ID#: 5338627	Crown DMZ
Foundation Drawings	Summit Manufacturing, LLC Job #: 11986, dated 11/8/00	Doc ID#: 4864324	Crown DMZ
Geotechnical Report	Tectonic Engineering Consultants Project #: 2323.138, dated 9/29/00	Doc ID#: 5269642	Crown DMZ
Modification Drawings	B+T Group Project #: 91728.005.01, dated 10/29/14	Doc ID#: 5373232	Crown DMZ

3.1) Analysis Method

tnxTower (version 6.1.4.1), 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.

3.2) Assumptions

1) The tower and foundation were constructed in accordance with their original design and maintained per the manufacturer's specifications, are in good condition, and the tower is twist free and plumb.
2) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
3) All equipment model numbers, quantities, and centerline elevations are as provided in the CCI CAD package, dated 9/22/15 with any adjustments as noted below.

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

4) ANALYSIS RESULTS

Table 5 – Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
148 - 143	Pole	TP24.975x24x0.2188	Pole	4.6%	Pass
143 - 138	Pole	TP25.95x24.975x0.2188	Pole	13.8%	Pass
138 - 133	Pole	TP26.925x25.95x0.2188	Pole	22.1%	Pass
133 - 128	Pole	TP27.901x26.925x0.2188	Pole	29.5%	Pass
128 - 123	Pole	TP28.876x27.901x0.2188	Pole	39.8%	Pass
123 - 119.75	Pole	TP30.241x28.876x0.2188	Pole	46.5%	Pass
119.75 - 114.75	Pole	TP30.047x29.072x0.25	Pole	50.7%	Pass
114.75 - 109.75	Pole	TP31.022x30.047x0.25	Pole	58.5%	Pass
109.75 - 104.75	Pole	TP31.997x31.022x0.25	Pole	68.3%	Pass
104.75 - 99.75	Pole	TP32.972x31.997x0.25	Pole	77.0%	Pass
99.75 - 94.75	Pole	TP33.947x32.972x0.25	Pole	84.7%	Pass
94.75 - 93.5	Pole	TP34.191x33.947x0.25	Pole	86.5%	Pass
93.5 - 93.25	Pole + Reinf.	TP34.24x34.191x0.4375	Reinf. 5 Bolt Shear	64.3%	Pass
93.25 - 88.25	Pole + Reinf.	TP35.215x34.24x0.4313	Reinf. 5 Compression	69.1%	Pass
88.25 - 83.25	Pole + Reinf.	TP36.19x35.215x0.425	Reinf. 5 Compression	74.4%	Pass
83.25 - 79.5	Pole + Reinf.	TP37.847x36.19x0.425	Reinf. 5 Compression	78.3%	Pass
79.5 - 74.5	Pole + Reinf.	TP37.396x36.421x0.4875	Reinf. 5 Compression	74.2%	Pass
74.5 - 69.5	Pole + Reinf.	TP38.371x37.396x0.475	Reinf. 5 Compression	78.2%	Pass
69.5 - 64.5	Pole + Reinf.	TP39.346x38.371x0.475	Reinf. 5 Compression	82.0%	Pass
64.5 - 60.5	Pole + Reinf.	TP40.126x39.346x0.4688	Reinf. 5 Bolt Shear	86.2%	Pass
60.5 - 60.25	Pole + Reinf.	TP40.175x40.126x0.525	Reinf. 3 Bolt Shear	76.3%	Pass
60.25 - 55.25	Pole + Reinf.	TP41.15x40.175x0.525	Reinf. 3 Compression	78.2%	Pass
55.25 - 50.25	Pole + Reinf.	TP42.125x41.15x0.5125	Reinf. 3 Compression	81.1%	Pass
50.25 - 45.25	Pole + Reinf.	TP43.101x42.125x0.5125	Reinf. 3 Compression	83.9%	Pass
45.25 - 45	Pole + Reinf.	TP44.222x43.101x0.5125	Reinf. 3 Compression	84.0%	Pass
45 - 38.5	Pole + Reinf.	TP43.792x42.524x0.575	Reinf. 3 Compression	79.7%	Pass

38.5 - 35.5	Pole + Reinf.	TP44.377x43.792x0.575	Reinf. 4 Bolt Shear	82.3%	Pass
35.5 - 35.25	Pole + Reinf.	TP44.426x44.377x0.575	Reinf. 3 Compression	80.9%	Pass
35.25 - 31.75	Pole + Reinf.	TP45.108x44.426x0.575	Reinf. 3 Compression	82.3%	Pass
31.75 - 31.5	Pole + Reinf.	TP45.157x45.108x0.725	Reinf. 2 Compression	67.7%	Pass
31.5 - 28.25	Pole + Reinf.	TP45.791x45.157x0.725	Reinf. 2 Compression	68.8%	Pass
28.25 - 28	Pole + Reinf.	TP45.84x45.791x0.5375	Reinf. 1 Compression	77.6%	Pass
28 - 23	Pole + Reinf.	TP46.815x45.84x0.5375	Reinf. 1 Compression	79.4%	Pass
23 - 18	Pole + Reinf.	TP47.79x46.815x0.525	Reinf. 1 Compression	81.0%	Pass
18 - 13	Pole + Reinf.	TP48.765x47.79x0.525	Reinf. 1 Compression	82.5%	Pass
13 - 8	Pole + Reinf.	TP49.74x48.765x0.525	Reinf. 1 Compression	84.0%	Pass
8 - 3	Pole + Reinf.	TP50.715x49.74x0.525	Reinf. 1 Compression	85.3%	Pass
3 - 0	Pole + Reinf.	TP51.3x50.715x0.5188	Reinf. 1 Bolt Shear	86.5%	Pass
				Summary	
			Pole	86.5%	Pass
			Reinforcement	86.5%	Pass
			Overall	**86.5%**	**Pass**

Table 6 – Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods		91.8%	Pass
1	Base Plate		91.9%	Pass
1	Foundation (Structural)		97.4%	Pass
1	Foundation (Soil Interaction)		83.3%	Pass

Structure Rating (max from all components) =	**97.4%**

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

4.1) Recommendations

The existing tower and its foundations are sufficient for the proposed loads and do not require modifications.

5) DISCLAIMER OF WARRANTIES

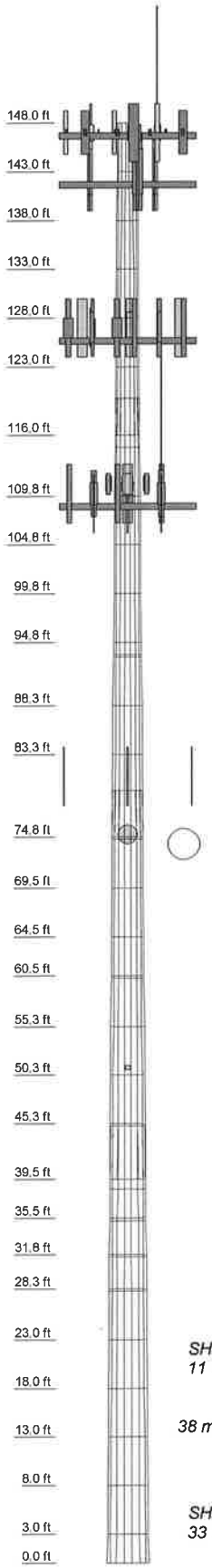
SSOE Group has not performed a site visit to the tower to verify member sizes or antenna/coax loading. SSOE Group shall be contacted immediately if the existing conditions are not as represented on the tower elevation contained in this report in order to evaluate the significance of the discrepancy. SSOE Group has not performed a condition assessment of the tower foundation. This report does not replace a full tower inspection

The engineering services rendered by SSOE Group in connection with this structural analysis are limited to an analysis of the tower structure and theoretical capacity of its main structural members. Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as part of our work. We recommend that material of suitable size and strength be purchased from a reputable tower manufacturer.

SSOE Group makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. SSOE Group will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data contained in this report. The maximum liability of SSOE Group pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

TNXTOWER OUTPUT



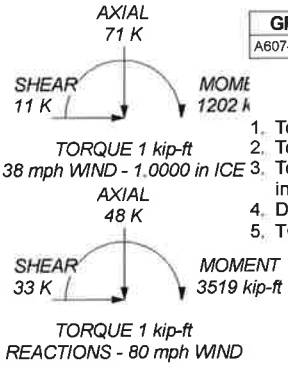
Section	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Length (ft)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	3.00
Number of Sides	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Thickness (in)	0.2188	0.2188	0.2188	0.2188	0.2188	0.2188	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.4250	0.4375	0.4750	0.4750	0.5125	0.5125	0.5125	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5250	0.5180
Socket Length (ft)						3.75																													
Top Dia (in)	24.0000	24.9752	25.9503	26.9255	27.9006	28.8758	29.8509	30.8261	31.9971	31.9971	32.9721	34.2385	35.2145	36.1895	37.3965	38.3715	39.3462	40.1787	41.1503	42.1254	43.1006	43.8832	44.8583	45.8335	46.8147	47.7897	48.7648	49.7399	50.7150	51.6900	52.6652	53.6403	54.6155	55.5905	56.5657
Bot Dia (in)	24.9752	25.9503	26.9255	27.9006	28.8758	29.8509	30.8261	31.9971	31.9971	32.9721	34.2385	35.2145	36.1895	37.3965	38.3715	39.3462	40.1787	41.1503	42.1254	43.1006	43.8832	44.8583	45.8335	46.8147	47.7897	48.7648	49.7399	50.7150	51.6900	52.6652	53.6403	54.6155	55.5905	56.5657	57.5408
Grade	A607-65																																		
Weight (K)	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8	1.4	0.9	1.0	0.8	1.1	1.1	1.1	1.3	1.7	0.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.9

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) 800 10121 w/ Mount Pipe	147	P65-16-XL-R w/ Mount Pipe	126
RRUS 11	147	FD9R6004/2C-3L	126
(4) 860 10025	147	FD9R6004/2C-3L	126
(2) 6' x 2" mount pipe	147	RRH2x60-700	126
(2) 800 10121 w/ Mount Pipe	147	(2) SBNHH-1D65B w/ Mount Pipe	126
(4) LGP13519	147	RRH2X60-PCS	126
RRUS 11	147	RRH2X60-AWS	126
DC6-48-60-18-8F	147	BXA-70063-4CF-EDIN-X w/ Mount Pipe	126
PD320-2	147		
6' x 2" mount pipe	147	BXA-70080-6CF-4 w/ Mount Pipe	126
AM-X-CD-16-65-00T-RET w/ Mount Pipe	147	FD9R6004/2C-3L	126
		FD9R6004/2C-3L	126
(4) 860 10025	147	RRH2x60-700	126
(2) 800 10121 w/ Mount Pipe	147	(2) SBNHH-1D65B w/ Mount Pipe	126
(4) LGP13519	147	(2) DB-T1-6Z-8AB-0Z	126
RRUS 11	147	RRH2X60-PCS	126
AM-X-CD-16-65-00T-RET w/ Mount Pipe	147	RRH2X60-AWS	126
		Platform Mount [LP 403-1]	126
(4) 860 10025	147	BXA-70063-4CF-EDIN-X w/ Mount Pipe	126
P65-15-XLH-RR w/ Mount Pipe	147		
(4) LGP13519	147	PCS 1900MHz 4x45W-65MHz	111
Platform Mount [LP 1201-1]	147	TME-800MHz 2X50W RRH W/FILTER	111
Detuning Arm Mount	147	PCS 1900MHz 4x45W-65MHz	111
KRY 112 144/1	142	TME-800MHz 2X50W RRH W/FILTER	111
RRUS 11 B12	142	PCS 1900MHz 4x45W-65MHz	111
LNX-6515DS-VTM w/ Mount Pipe	142	Pipe Mount [PM 601-3]	111
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	142	TME-800MHz 2X50W RRH W/FILTER	111
		TD-RRH8x20-25	109
6' x 2" mount pipe	142	APXVSPP18-C-A20 w/ Mount Pipe	109
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	142	(2) 6' x 2" mount pipe	109
		APXVSPP18-C-A20 w/ Mount Pipe	109
RRUS 11 B12	142	DB205-L	109
KRY 112 144/1	142	SD212-SF3P2SNM	109
LNX-6515DS-VTM w/ Mount Pipe	142	APXVTM14-C-120 w/ Mount Pipe	109
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	142	TD-RRH8x20-25	109
		(3) 6' x 2" mount pipe	109
6' x 2" mount pipe	142	(2) APXVSPP18-C-A20 w/ Mount Pipe	109
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	142	APXVTM14-C-120 w/ Mount Pipe	109
		TD-RRH8x20-25	109
KRY 112 144/1	142	(2) 6' x 2" mount pipe	109
RRUS 11 B12	142	Platform Mount [LP 1201-1]	109
LNX-6515DS-VTM w/ Mount Pipe	142	APXVTM14-C-120 w/ Mount Pipe	109
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	142	6' x 2" mount pipe	81
		SD212	81
6' x 2" mount pipe	142	6' x 2" mount pipe	81
Platform Mount [LP 1201-1]	142	6' x 2" mount pipe	81
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	142	Side Arm Mount [SO 702-3]	81
		SRL227	81
P65-16-XL-R w/ Mount Pipe	126	Pipe Mount [PM 601-1]	74
FD9R6004/2C-3L	126	HP2-23	74
FD9R6004/2C-3L	126	Detuning Arm Mount	55
RRH2x60-700	126	GPS-TMG-HR-26N	50
(2) SBNHH-1D65B w/ Mount Pipe	126	Side Arm Mount [SO 701-1]	50
RRH2X60-PCS	126	Detuning Arm Mount	15
RRH2X60-AWS	126		
BXA-70063-4CF-EDIN-X w/ Mount Pipe	126		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			



TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 86.5%

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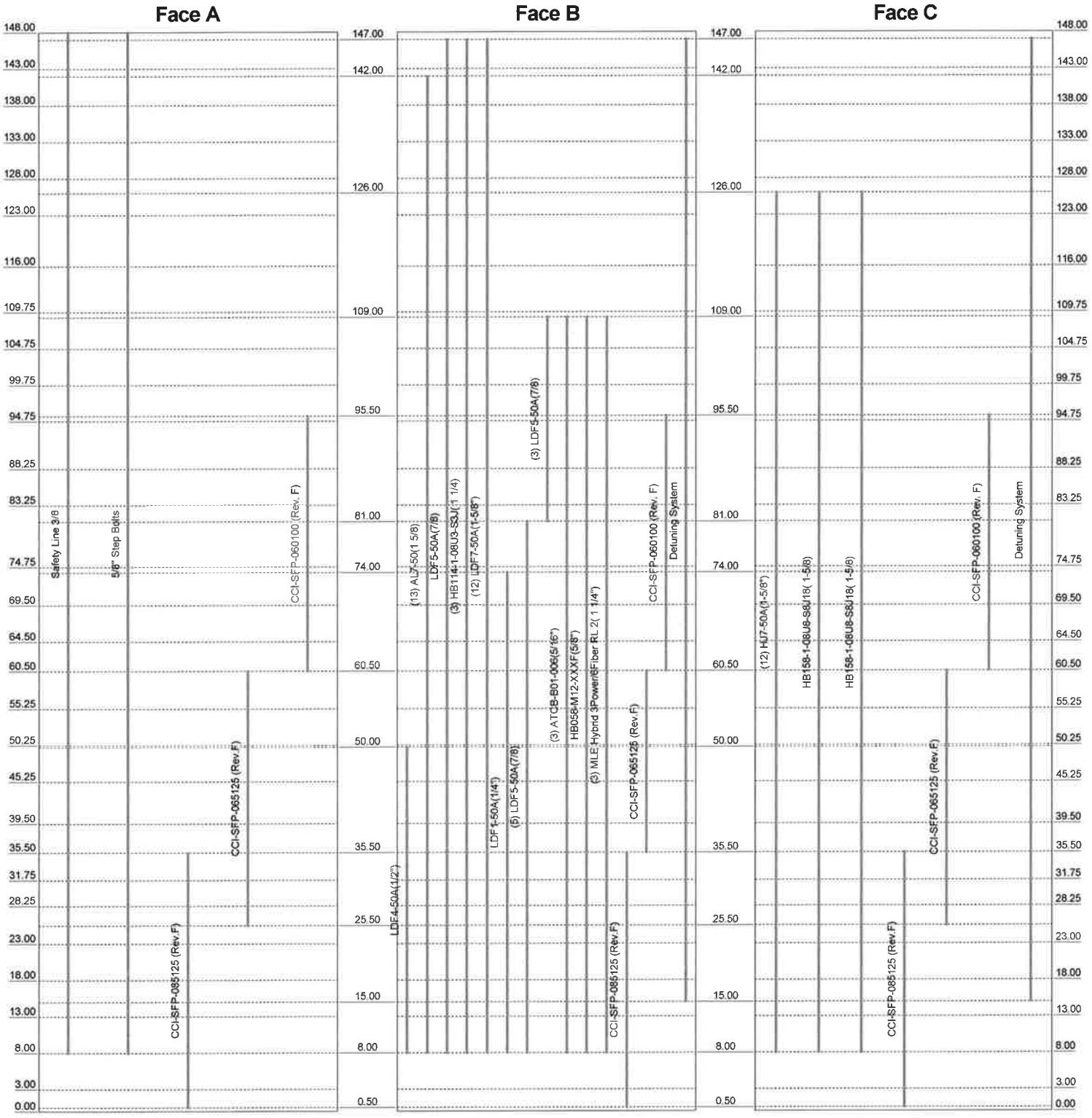
SSOE Group
320 Seven Springs Way. Suite 350
Brentwood TN, 37027
Phone: (615) 661-7585
FAX: (615) 661-7569

Job: *BU 855662*			
Project: *015-00428-00*			
Client: CCI	Drawn by: 15056	App'd:	
Code: TIA/EIA-222-F	Date: 09/24/15	Scale: N	
Path: F:\TIE\Teschia\Crown Projects\855662 WI\DSO\RCENTRAL\Structural\tnx\Modified_855662.eri		Dwg No.	

0' - 148'

Round | Flat | App In Face | App Out Face | Truss Leg



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SSOE Group
320 Seven Springs Way. Suite 350
Brentwood TN, 37027
Phone: (615) 661-7585
FAX: (615) 661-7569

Job: *BU 855662*			
Project: *015-00428-00*			
Client: CCI	Drawn by: 15056	App'd:	
Code: TIA/EIA-222-F	Date: 09/24/15	Scale: N	
Path: F:\TIE\Teschia\Crown Projects\855662 WINDSOR(CENTRAL)\Structural\tnx\Modified_855662.eri		Dwg No.	

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in Hartford County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
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	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	All Leg Panels Have Same Allowable
√ Escalate Ice	√ Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination	Use TIA-222-G Tension Splice Capacity Exemption	

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	148.00-143.00	5.00	0.00	18	24.0000	24.9752	0.2188	0.8750	A607-65 (65 ksi)
L2	143.00-138.00	5.00	0.00	18	24.9752	25.9503	0.2188	0.8750	A607-65 (65 ksi)
L3	138.00-133.00	5.00	0.00	18	25.9503	26.9255	0.2188	0.8750	A607-65 (65 ksi)
L4	133.00-128.00	5.00	0.00	18	26.9255	27.9006	0.2188	0.8750	A607-65 (65 ksi)
L5	128.00-123.00	5.00	0.00	18	27.9006	28.8758	0.2188	0.8750	A607-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
									(65 ksi)
L6	123.00-116.00	7.00	3.75	18	28.8758	30.2410	0.2188	0.8750	A607-65 (65 ksi)
L7	116.00-114.75	5.00	0.00	18	29.0721	30.0471	0.2500	1.0000	A607-65 (65 ksi)
L8	114.75-109.75	5.00	0.00	18	30.0471	31.0221	0.2500	1.0000	A607-65 (65 ksi)
L9	109.75-104.75	5.00	0.00	18	31.0221	31.9971	0.2500	1.0000	A607-65 (65 ksi)
L10	104.75-99.75	5.00	0.00	18	31.9971	32.9721	0.2500	1.0000	A607-65 (65 ksi)
L11	99.75-94.75	5.00	0.00	18	32.9721	33.9471	0.2500	1.0000	A607-65 (65 ksi)
L12	94.75-93.50	1.25	0.00	18	33.9471	34.1908	0.2500	1.0000	A607-65 (65 ksi)
L13	93.50-93.25	0.25	0.00	18	34.1908	34.2396	0.4375	1.7500	A607-65 (65 ksi)
L14	93.25-88.25	5.00	0.00	18	34.2396	35.2145	0.4313	1.7250	A607-65 (65 ksi)
L15	88.25-83.25	5.00	0.00	18	35.2145	36.1895	0.4250	1.7000	A607-65 (65 ksi)
L16	83.25-74.75	8.50	4.75	18	36.1895	37.8470	0.4250	1.7000	A607-65 (65 ksi)
L17	74.75-74.50	5.00	0.00	18	36.4208	37.3959	0.4875	1.9500	A607-65 (65 ksi)
L18	74.50-69.50	5.00	0.00	18	37.3959	38.3711	0.4750	1.9000	A607-65 (65 ksi)
L19	69.50-64.50	5.00	0.00	18	38.3711	39.3462	0.4750	1.9000	A607-65 (65 ksi)
L20	64.50-60.50	4.00	0.00	18	39.3462	40.1264	0.4688	1.8750	A607-65 (65 ksi)
L21	60.50-60.25	0.25	0.00	18	40.1264	40.1751	0.5250	2.1000	A607-65 (65 ksi)
L22	60.25-55.25	5.00	0.00	18	40.1751	41.1503	0.5250	2.1000	A607-65 (65 ksi)
L23	55.25-50.25	5.00	0.00	18	41.1503	42.1254	0.5125	2.0500	A607-65 (65 ksi)
L24	50.25-45.25	5.00	0.00	18	42.1254	43.1006	0.5125	2.0500	A607-65 (65 ksi)
L25	45.25-39.50	5.75	5.50	18	43.1006	44.2220	0.5125	2.0500	A607-65 (65 ksi)
L26	39.50-38.50	6.50	0.00	18	42.5243	43.7919	0.5750	2.3000	A607-65 (65 ksi)
L27	38.50-35.50	3.00	0.00	18	43.7919	44.3770	0.5750	2.3000	A607-65 (65 ksi)
L28	35.50-35.25	0.25	0.00	18	44.3770	44.4257	0.5750	2.3000	A607-65 (65 ksi)
L29	35.25-31.75	3.50	0.00	18	44.4257	45.1083	0.5750	2.3000	A607-65 (65 ksi)
L30	31.75-31.50	0.25	0.00	18	45.1083	45.1570	0.7250	2.9000	A607-65 (65 ksi)
L31	31.50-28.25	3.25	0.00	18	45.1570	45.7908	0.7250	2.9000	A607-65 (65 ksi)
L32	28.25-28.00	0.25	0.00	18	45.7908	45.8396	0.5375	2.1500	A607-65 (65 ksi)
L33	28.00-23.00	5.00	0.00	18	45.8396	46.8147	0.5375	2.1500	A607-65 (65 ksi)
L34	23.00-18.00	5.00	0.00	18	46.8147	47.7897	0.5250	2.1000	A607-65 (65 ksi)
L35	18.00-13.00	5.00	0.00	18	47.7897	48.7648	0.5250	2.1000	A607-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L36	13.00-8.00	5.00	0.00	18	48.7648	49.7399	0.5250	2.1000	A607-65 (65 ksi)
L37	8.00-3.00	5.00	0.00	18	49.7399	50.7150	0.5250	2.1000	A607-65 (65 ksi)
L38	3.00-0.00	3.00		18	50.7150	51.3000	0.5188	2.0750	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	24.3702	16.5116	1179.7676	8.4423	12.1920	96.7657	2361.0876	8.2574	3.8390	17.55
	25.3604	17.1887	1330.9301	8.7885	12.6874	104.9019	2663.6114	8.5960	4.0106	18.334
L2	25.3604	17.1887	1330.9301	8.7885	12.6874	104.9019	2663.6114	8.5960	4.0106	18.334
	26.3506	17.8657	1494.4828	9.1347	13.1828	113.3665	2990.9320	8.9346	4.1823	19.119
L3	26.3506	17.8657	1494.4828	9.1347	13.1828	113.3665	2990.9320	8.9346	4.1823	19.119
	27.3408	18.5428	1670.9138	9.4809	13.6781	122.1594	3344.0261	9.2732	4.3539	19.903
L4	27.3408	18.5428	1670.9138	9.4809	13.6781	122.1594	3344.0261	9.2732	4.3539	19.903
	28.3310	19.2199	1860.7111	9.8271	14.1735	131.2808	3723.8705	9.6118	4.5255	20.688
L5	28.3310	19.2199	1860.7111	9.8271	14.1735	131.2808	3723.8705	9.6118	4.5255	20.688
	29.3212	19.8969	2064.3628	10.1732	14.6689	140.7306	4131.4420	9.9504	4.6971	21.473
L6	29.3212	19.8969	2064.3628	10.1732	14.6689	140.7306	4131.4420	9.9504	4.6971	21.473
	30.7075	20.8448	2373.6799	10.6579	15.3624	154.5120	4750.4831	10.4244	4.9374	22.571
L7	30.2631	22.8704	2400.2845	10.2319	14.7686	162.5257	4803.7274	11.4374	4.6767	18.707
	30.5106	23.6440	2652.2055	10.5780	15.2639	173.7563	5307.9008	11.8243	4.8483	19.393
L8	30.5106	23.6440	2652.2055	10.5780	15.2639	173.7563	5307.9008	11.8243	4.8483	19.393
	31.5007	24.4177	2921.1639	10.9241	15.7592	185.3621	5846.1716	12.2112	5.0199	20.08
L9	31.5007	24.4177	2921.1639	10.9241	15.7592	185.3621	5846.1716	12.2112	5.0199	20.08
	32.4907	25.1913	3207.7173	11.2702	16.2545	197.3431	6419.6555	12.5981	5.1915	20.766
L10	32.4907	25.1913	3207.7173	11.2702	16.2545	197.3431	6419.6555	12.5981	5.1915	20.766
	33.4807	25.9650	3512.4232	11.6163	16.7498	209.6992	7029.4682	12.9849	5.3631	21.452
L11	33.4807	25.9650	3512.4232	11.6163	16.7498	209.6992	7029.4682	12.9849	5.3631	21.452
	34.4707	26.7386	3835.8391	11.9625	17.2451	222.4306	7676.7254	13.3718	5.5347	22.139
L12	34.4707	26.7386	3835.8391	11.9625	17.2451	222.4306	7676.7254	13.3718	5.5347	22.139
	34.7183	26.9320	3919.6818	12.0490	17.3689	225.6720	7844.5212	13.4686	5.5776	22.31
L13	34.7183	46.8707	6746.3886	11.9824	17.3689	388.4171	13501.6543	23.4398	5.2476	11.994
	34.7678	46.9384	6775.6619	11.9997	17.3937	389.5470	13560.2394	23.4736	5.2562	12.014
L14	34.7678	46.2764	6682.5722	12.0019	17.3937	384.1951	13373.9375	23.1426	5.2672	12.214
	35.7578	47.6109	7277.5542	12.3481	17.8890	406.8176	14564.6844	23.8100	5.4388	12.612
L15	35.7578	46.9293	7175.9492	12.3503	17.8890	401.1378	14361.3407	23.4691	5.4498	12.823
	36.7478	48.2446	7796.3386	12.6964	18.3843	424.0764	15602.9357	24.1269	5.6214	13.227
L16	36.7478	48.2446	7796.3386	12.6964	18.3843	424.0764	15602.9357	24.1269	5.6214	13.227
	38.4309	50.4804	8931.2919	13.2848	19.2263	464.5357	17874.3359	25.2450	5.9131	13.913
L17	37.9233	55.6004	9070.0357	12.7563	18.5017	490.2259	18152.0060	27.8055	5.5521	11.389
	37.9728	57.1093	9828.6824	13.1025	18.9971	517.3773	19670.2977	28.5601	5.7237	11.741
L18	37.9728	55.6638	9586.3984	13.1069	18.9971	504.6236	19185.4108	27.8372	5.7457	12.096
	38.9630	57.1340	10366.2244	13.4531	19.4925	531.8057	20746.0890	28.5724	5.9173	12.457
L19	38.9630	57.1340	10366.2244	13.4531	19.4925	531.8057	20746.0890	28.5724	5.9173	12.457
	39.9532	58.6042	11187.2347	13.7993	19.9879	559.7008	22389.1898	29.3077	6.0889	12.819
L20	39.9532	57.8424	11045.3604	13.8015	19.9879	552.6028	22105.2545	28.9267	6.0999	13.013
	40.7454	59.0031	11723.7075	14.0784	20.3842	575.1374	23462.8413	29.5071	6.2372	13.306
L21	40.7454	65.9897	13074.7588	14.0585	20.3842	641.4168	26166.7217	33.0011	6.1382	11.692
	40.7949	66.0710	13123.1118	14.0758	20.4090	643.0075	26263.4912	33.0418	6.1468	11.708
L22	40.7949	66.0710	13123.1118	14.0758	20.4090	643.0075	26263.4912	33.0418	6.1468	11.708
	41.7851	67.6959	14115.3692	14.4220	20.9043	675.2365	28249.3119	33.8544	6.3184	12.035
L23	41.7851	66.1044	13792.0122	14.4264	20.9043	659.7681	27602.1723	33.0585	6.3404	12.372

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
	42.7753	67.6907	14808.8982	14.7726	21.3997	692.0139	29637.2824	33.8518	6.5121	12.706
L24	42.7753	67.6907	14808.8982	14.7726	21.3997	692.0139	29637.2824	33.8518	6.5121	12.706
	43.7655	69.2770	15874.5781	15.1188	21.8951	725.0291	31770.0443	34.6451	6.6837	13.041
L25	43.7655	69.2770	15874.5781	15.1188	21.8951	725.0291	31770.0443	34.6451	6.6837	13.041
	44.9042	71.1012	17161.9154	15.5169	22.4648	763.9478	34346.4130	35.5573	6.8811	13.426
L26	44.2695	76.5596	17021.0875	14.8920	21.6024	787.9272	34064.5719	38.2871	6.4723	11.256
	44.4675	78.8731	18611.1779	15.3420	22.2463	836.5966	37246.8448	39.4440	6.6954	11.644
L27	44.4675	78.8731	18611.1779	15.3420	22.2463	836.5966	37246.8448	39.4440	6.6954	11.644
	45.0616	79.9408	19377.2968	15.5497	22.5435	859.5513	38780.0908	39.9780	6.7983	11.823
L28	45.0616	79.9408	19377.2968	15.5497	22.5435	859.5513	38780.0908	39.9780	6.7983	11.823
	45.1111	80.0298	19442.0725	15.5670	22.5683	861.4783	38909.7273	40.0225	6.8069	11.838
L29	45.1111	80.0298	19442.0725	15.5670	22.5683	861.4783	38909.7273	40.0225	6.8069	11.838
	45.8041	81.2755	20364.1454	15.8093	22.9150	888.6817	40755.0864	40.6455	6.9271	12.047
L30	45.8041	102.1326	25417.9478	15.7561	22.9150	1109.2272	50869.3411	51.0760	6.6631	9.19
	45.8537	102.2448	25501.8024	15.7734	22.9398	1111.6851	51037.1608	51.1321	6.6716	9.202
L31	45.8537	102.2448	25501.8024	15.7734	22.9398	1111.6851	51037.1608	51.1321	6.6716	9.202
	46.4972	103.7032	26608.7507	15.9984	23.2617	1143.8847	53252.5139	51.8615	6.7832	9.356
L32	46.4972	77.2033	19974.4326	16.0649	23.2617	858.6817	39975.1482	38.6090	7.1132	13.234
	46.5467	77.2865	20039.0606	16.0822	23.2865	860.5438	40104.4892	38.6506	7.1218	13.25
L33	46.5467	77.2865	20039.0606	16.0822	23.2865	860.5438	40104.4892	38.6506	7.1218	13.25
	47.5368	78.9500	21361.0634	16.4284	23.7818	898.2088	42750.2343	39.4825	7.2934	13.569
L34	47.5368	77.1348	20881.2061	16.4328	23.7818	878.0313	41789.8883	38.5747	7.3154	13.934
	48.5270	78.7596	22228.7620	16.7790	24.2772	915.6236	44486.7732	39.3873	7.4870	14.261
L35	48.5270	78.7596	22228.7620	16.7790	24.2772	915.6236	44486.7732	39.3873	7.4870	14.261
	49.5171	80.3844	23633.0811	17.1251	24.7725	954.0039	47297.2593	40.1998	7.6586	14.588
L36	49.5171	80.3844	23633.0811	17.1251	24.7725	954.0039	47297.2593	40.1998	7.6586	14.588
	50.5072	82.0092	25095.3346	17.4713	25.2679	993.1722	50223.6904	41.0124	7.8302	14.915
L37	50.5072	82.0092	25095.3346	17.4713	25.2679	993.1722	50223.6904	41.0124	7.8302	14.915
	51.4973	83.6340	26616.6935	17.8174	25.7632	1033.1285	53268.4099	41.8250	8.0018	15.242
L38	51.4973	82.6487	26309.6544	17.8197	25.7632	1021.2108	52653.9278	41.3322	8.0128	15.446
	52.0914	83.6120	27240.3475	18.0273	26.0604	1045.2774	54516.5385	41.8139	8.1158	15.645

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
L1 148.00-143.00				1	1	1		
L2 143.00-138.00				1	1	1		
L3 138.00-133.00				1	1	1		
L4 133.00-128.00				1	1	1		
L5 128.00-123.00				1	1	1		
L6 123.00-116.00				1	1	1		
L7 116.00-114.75				1	1	1		
L8 114.75-109.75				1	1	1		
L9 109.75-104.75				1	1	1		
L10 104.75-99.75				1	1	1		
L11 99.75-94.75				1	1	1		
L12 94.75-93.50				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
L13 93.50-93.25				1	1	0.958094		
L14 93.25-88.25				1	1	0.960809		
L15 88.25-83.25				1	1	0.964226		
L16 83.25-74.75				1	1	0.956693		
L17 74.75-74.50				1	1	0.959261		
L18 74.50-69.50				1	1	0.975776		
L19 69.50-64.50				1	1	0.967801		
L20 64.50-60.50				1	1	0.974373		
L21 60.50-60.25				1	1	0.967363		
L22 60.25-55.25				1	1	0.958431		
L23 55.25-50.25				1	1	0.972793		
L24 50.25-45.25				1	1	0.964481		
L25 45.25-39.50				1	1	0.964075		
L26 39.50-38.50				1	1	0.964244		
L27 38.50-35.50				1	1	0.960076		
L28 35.50-35.25				1	1	0.990973		
L29 35.25-31.75				1	1	0.98578		
L30 31.75-31.50				1	1	0.992017		
L31 31.50-28.25				1	1	0.98534		
L32 28.25-28.00				1	1	1.11262		
L33 28.00-23.00				1	1	1.10388		
L34 23.00-18.00				1	1	1.12128		
L35 18.00-13.00				1	1	1.11305		
L36 13.00-8.00				1	1	1.10515		
L37 8.00-3.00				1	1	1.09756		
L38 3.00-0.00				1	1	1.10618		

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight plf

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF4-50A(1/2")	B	No	CaAa (Out Of Face)	50.00 - 8.00	1	No Ice	0.06	0.15
						1/2" Ice	0.16	0.84
						1" Ice	0.26	2.14
						2" Ice	0.46	6.58
						4" Ice	0.86	22.78
AL7-50(1 5/8)	B	No	Inside Pole	142.00 - 8.00	13	No Ice	0.00	0.52
						1/2" Ice	0.00	0.52
						1" Ice	0.00	0.52
						2" Ice	0.00	0.52
						4" Ice	0.00	0.52
LDF5-50A(7/8)	B	No	Inside Pole	147.00 - 8.00	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
						4" Ice	0.00	0.33
HB114-1-08U3-S3J(1 1/4)	B	No	Inside Pole	147.00 - 8.00	3	No Ice	0.00	0.90
						1/2" Ice	0.00	0.90
						1" Ice	0.00	0.90
						2" Ice	0.00	0.90
						4" Ice	0.00	0.90
LDF7-50A(1-5/8")	B	No	Inside Pole	147.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
LDF1-50A(1/4")	B	No	Inside Pole	74.00 - 8.00	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
						4" Ice	0.00	0.06
LDF5-50A(7/8)	B	No	Inside Pole	81.00 - 8.00	5	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
						4" Ice	0.00	0.33
LDF5-50A(7/8)	B	No	Inside Pole	109.00 - 81.00	3	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
						4" Ice	0.00	0.33
ATCB-B01-006(5/16")	B	No	Inside Pole	109.00 - 8.00	3	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
						4" Ice	0.00	0.07
HB058-M12-XXXF(5/8")	B	No	Inside Pole	109.00 - 8.00	1	No Ice	0.00	0.24
						1/2" Ice	0.00	0.24
						1" Ice	0.00	0.24
						2" Ice	0.00	0.24
						4" Ice	0.00	0.24
MLE Hybrid 3Power/6Fiber RL 2(1 1/4")	B	No	Inside Pole	109.00 - 8.00	3	No Ice	0.00	0.68
						1/2" Ice	0.00	0.68
						1" Ice	0.00	0.68
						2" Ice	0.00	0.68
						4" Ice	0.00	0.68
HJ7-50A(1-5/8")	C	No	Inside Pole	126.00 - 8.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
						2" Ice	0.00	1.04
						4" Ice	0.00	1.04
HB158-1-08U8-S8J18(	C	No	CaAa (Out Of	126.00 - 8.00	1	No Ice	0.20	1.30

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft²/ft	Weight plf
1-5/8)			Face)			1/2" Ice	0.30	2.81
						1" Ice	0.40	4.94
						2" Ice	0.60	11.02
						4" Ice	1.00	30.52
HB158-1-08U8-S8J18(1-5/8)	C	No	CaAa (Out Of Face)	126.00 - 8.00	1	No Ice	0.00	1.30
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
Safety Line 3/8	A	No	CaAa (Out Of Face)	148.00 - 8.00	1	No Ice	0.04	0.22
						1/2" Ice	0.14	0.75
						1" Ice	0.24	1.28
						2" Ice	0.44	2.34
						4" Ice	0.84	4.46
5/8" Step Bolts	A	No	CaAa (Out Of Face)	148.00 - 8.00	1	No Ice	0.04	1.00
						1/2" Ice	0.14	1.56
						1" Ice	0.24	2.73
						2" Ice	0.44	6.91
						4" Ice	0.84	22.58
CCI-SFP-085125 (Rev.F)	A	No	CaAa (Out Of Face)	35.50 - 0.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-085125 (Rev.F)	B	No	CaAa (Out Of Face)	35.50 - 0.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-085125 (Rev.F)	C	No	CaAa (Out Of Face)	35.50 - 0.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-065125 (Rev.F)	A	No	CaAa (Out Of Face)	60.50 - 25.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-065125 (Rev.F)	C	No	CaAa (Out Of Face)	60.50 - 25.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-065125 (Rev.F)	B	No	CaAa (Out Of Face)	60.50 - 35.50	1	No Ice	0.21	0.00
						1/2" Ice	0.32	0.00
						1" Ice	0.43	0.00
						2" Ice	0.65	0.00
						4" Ice	1.10	0.00
CCI-SFP-060100 (Rev. F)	A	No	CaAa (Out Of Face)	95.50 - 60.50	1	No Ice	0.17	0.00
						1/2" Ice	0.28	0.00
						1" Ice	0.39	0.00
						2" Ice	0.61	0.00
						4" Ice	1.06	0.00
CCI-SFP-060100 (Rev. F)	B	No	CaAa (Out Of Face)	95.50 - 60.50	1	No Ice	0.17	0.00
						1/2" Ice	0.28	0.00
						1" Ice	0.39	0.00
						2" Ice	0.61	0.00
						4" Ice	1.06	0.00
CCI-SFP-060100 (Rev. F)	C	No	CaAa (Out Of Face)	95.50 - 60.50	1	No Ice	0.17	0.00
						1/2" Ice	0.28	0.00

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						1" Ice	0.39	0.00
						2" Ice	0.61	0.00
						4" Ice	1.06	0.00
Detuning System	C	No	CaAa (Out Of Face)	147.00 - 15.00	1	No Ice	0.05	0.37
						1/2" Ice	0.30	1.90
						1" Ice	0.40	4.03
						2" Ice	0.60	10.14
						4" Ice	1.00	29.69
Detuning System	B	No	CaAa (Out Of Face)	147.00 - 15.00	1	No Ice	0.05	0.37
						1/2" Ice	0.30	1.90
						1" Ice	0.40	4.03
						2" Ice	0.60	10.14
						4" Ice	1.00	29.69

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	148.00-143.00	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.183	0.05
		C	0.000	0.000	0.000	0.183	0.00
L2	143.00-138.00	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.09
		C	0.000	0.000	0.000	0.229	0.00
L3	138.00-133.00	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.10
		C	0.000	0.000	0.000	0.229	0.00
L4	133.00-128.00	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.10
		C	0.000	0.000	0.000	0.229	0.00
L5	128.00-123.00	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.10
		C	0.000	0.000	0.000	0.823	0.05
L6	123.00-116.00	A	0.000	0.000	0.000	0.554	0.01
		B	0.000	0.000	0.000	0.321	0.14
		C	0.000	0.000	0.000	1.707	0.11
L7	116.00-114.75	A	0.000	0.000	0.000	0.099	0.00
		B	0.000	0.000	0.000	0.057	0.02
		C	0.000	0.000	0.000	0.305	0.02
L8	114.75-109.75	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.10
		C	0.000	0.000	0.000	1.219	0.08
L9	109.75-104.75	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.11
		C	0.000	0.000	0.000	1.219	0.08
L10	104.75-99.75	A	0.000	0.000	0.000	0.396	0.01
		B	0.000	0.000	0.000	0.229	0.12
		C	0.000	0.000	0.000	1.219	0.08
L11	99.75-94.75	A	0.000	0.000	0.000	0.521	0.01
		B	0.000	0.000	0.000	0.354	0.12
		C	0.000	0.000	0.000	1.344	0.08
L12	94.75-93.50	A	0.000	0.000	0.000	0.307	0.00
		B	0.000	0.000	0.000	0.266	0.03
		C	0.000	0.000	0.000	0.513	0.02
L13	93.50-93.25	A	0.000	0.000	0.000	0.061	0.00
		B	0.000	0.000	0.000	0.053	0.01
		C	0.000	0.000	0.000	0.103	0.00

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
L14	93.25-88.25	A	0.000	0.000	0.000	1.229	0.01
		B	0.000	0.000	0.000	1.062	0.12
		C	0.000	0.000	0.000	2.052	0.08
L15	88.25-83.25	A	0.000	0.000	0.000	1.229	0.01
		B	0.000	0.000	0.000	1.062	0.12
		C	0.000	0.000	0.000	2.052	0.08
L16	83.25-74.75	A	0.000	0.000	0.000	2.090	0.01
		B	0.000	0.000	0.000	1.806	0.20
		C	0.000	0.000	0.000	3.489	0.13
L17	74.75-74.50	A	0.000	0.000	0.000	0.061	0.00
		B	0.000	0.000	0.000	0.053	0.01
		C	0.000	0.000	0.000	0.103	0.00
L18	74.50-69.50	A	0.000	0.000	0.000	1.229	0.01
		B	0.000	0.000	0.000	1.062	0.12
		C	0.000	0.000	0.000	2.052	0.08
L19	69.50-64.50	A	0.000	0.000	0.000	1.229	0.01
		B	0.000	0.000	0.000	1.062	0.12
		C	0.000	0.000	0.000	2.052	0.08
L20	64.50-60.50	A	0.000	0.000	0.000	0.983	0.00
		B	0.000	0.000	0.000	0.850	0.10
		C	0.000	0.000	0.000	1.642	0.06
L21	60.50-60.25	A	0.000	0.000	0.000	0.072	0.00
		B	0.000	0.000	0.000	0.064	0.01
		C	0.000	0.000	0.000	0.113	0.00
L22	60.25-55.25	A	0.000	0.000	0.000	1.437	0.01
		B	0.000	0.000	0.000	1.271	0.12
		C	0.000	0.000	0.000	2.261	0.08
L23	55.25-50.25	A	0.000	0.000	0.000	1.437	0.01
		B	0.000	0.000	0.000	1.271	0.12
		C	0.000	0.000	0.000	2.261	0.08
L24	50.25-45.25	A	0.000	0.000	0.000	1.437	0.01
		B	0.000	0.000	0.000	1.570	0.12
		C	0.000	0.000	0.000	2.261	0.08
L25	45.25-39.50	A	0.000	0.000	0.000	1.653	0.01
		B	0.000	0.000	0.000	1.824	0.14
		C	0.000	0.000	0.000	2.600	0.09
L26	39.50-38.50	A	0.000	0.000	0.000	0.287	0.00
		B	0.000	0.000	0.000	0.317	0.02
		C	0.000	0.000	0.000	0.452	0.02
L27	38.50-35.50	A	0.000	0.000	0.000	0.862	0.00
		B	0.000	0.000	0.000	0.951	0.07
		C	0.000	0.000	0.000	1.356	0.05
L28	35.50-35.25	A	0.000	0.000	0.000	0.124	0.00
		B	0.000	0.000	0.000	0.079	0.01
		C	0.000	0.000	0.000	0.165	0.00
L29	35.25-31.75	A	0.000	0.000	0.000	1.735	0.00
		B	0.000	0.000	0.000	1.110	0.09
		C	0.000	0.000	0.000	2.312	0.05
L30	31.75-31.50	A	0.000	0.000	0.000	0.124	0.00
		B	0.000	0.000	0.000	0.079	0.01
		C	0.000	0.000	0.000	0.165	0.00
L31	31.50-28.25	A	0.000	0.000	0.000	1.611	0.00
		B	0.000	0.000	0.000	1.031	0.08
		C	0.000	0.000	0.000	2.147	0.05
L32	28.25-28.00	A	0.000	0.000	0.000	0.124	0.00
		B	0.000	0.000	0.000	0.079	0.01
		C	0.000	0.000	0.000	0.165	0.00
L33	28.00-23.00	A	0.000	0.000	0.000	1.958	0.01
		B	0.000	0.000	0.000	1.586	0.12
		C	0.000	0.000	0.000	2.782	0.08
L34	23.00-18.00	A	0.000	0.000	0.000	1.437	0.01

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
		B	0.000	0.000	0.000	1.586	0.12
		C	0.000	0.000	0.000	2.261	0.08
L35	18.00-13.00	A	0.000	0.000	0.000	1.437	0.01
		B	0.000	0.000	0.000	1.494	0.12
		C	0.000	0.000	0.000	2.169	0.08
L36	13.00-8.00	A	0.000	0.000	0.000	1.437	0.01
		B	0.000	0.000	0.000	1.357	0.12
		C	0.000	0.000	0.000	2.032	0.08
L37	8.00-3.00	A	0.000	0.000	0.000	1.042	0.00
		B	0.000	0.000	0.000	1.042	0.00
		C	0.000	0.000	0.000	1.042	0.00
L38	3.00-0.00	A	0.000	0.000	0.000	0.521	0.00
		B	0.000	0.000	0.000	0.521	0.00
		C	0.000	0.000	0.000	0.521	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	148.00-143.00	A	1.195	0.000	0.000	0.000	2.786	0.03
		B		0.000	0.000	0.000	1.756	0.07
		C		0.000	0.000	0.000	1.756	0.02
L2	143.00-138.00	A	1.190	0.000	0.000	0.000	2.776	0.03
		B		0.000	0.000	0.000	2.190	0.12
		C		0.000	0.000	0.000	2.190	0.03
L3	138.00-133.00	A	1.185	0.000	0.000	0.000	2.765	0.02
		B		0.000	0.000	0.000	2.185	0.12
		C		0.000	0.000	0.000	2.185	0.03
L4	133.00-128.00	A	1.179	0.000	0.000	0.000	2.755	0.02
		B		0.000	0.000	0.000	2.179	0.12
		C		0.000	0.000	0.000	2.179	0.03
L5	128.00-123.00	A	1.174	0.000	0.000	0.000	2.744	0.02
		B		0.000	0.000	0.000	2.174	0.12
		C		0.000	0.000	0.000	3.472	0.08
L6	123.00-116.00	A	1.167	0.000	0.000	0.000	3.822	0.03
		B		0.000	0.000	0.000	3.034	0.17
		C		0.000	0.000	0.000	6.053	0.16
L7	116.00-114.75	A	1.162	0.000	0.000	0.000	0.682	0.01
		B		0.000	0.000	0.000	0.542	0.03
		C		0.000	0.000	0.000	1.081	0.03
L8	114.75-109.75	A	1.158	0.000	0.000	0.000	2.712	0.02
		B		0.000	0.000	0.000	2.158	0.12
		C		0.000	0.000	0.000	4.306	0.12
L9	109.75-104.75	A	1.152	0.000	0.000	0.000	2.700	0.02
		B		0.000	0.000	0.000	2.152	0.14
		C		0.000	0.000	0.000	4.294	0.12
L10	104.75-99.75	A	1.145	0.000	0.000	0.000	2.687	0.02
		B		0.000	0.000	0.000	2.145	0.14
		C		0.000	0.000	0.000	4.281	0.12
L11	99.75-94.75	A	1.138	0.000	0.000	0.000	2.988	0.02
		B		0.000	0.000	0.000	2.453	0.14
		C		0.000	0.000	0.000	4.582	0.12
L12	94.75-93.50	A	1.134	0.000	0.000	0.000	1.189	0.01
		B		0.000	0.000	0.000	1.057	0.03
		C		0.000	0.000	0.000	1.588	0.03
L13	93.50-93.25	A	1.133	0.000	0.000	0.000	0.238	0.00
		B		0.000	0.000	0.000	0.211	0.01

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
		C		0.000	0.000	0.000	0.317	0.01
L14	93.25-88.25	A	1.129	0.000	0.000	0.000	4.742	0.02
		B		0.000	0.000	0.000	4.217	0.14
		C		0.000	0.000	0.000	6.336	0.12
L15	88.25-83.25	A	1.121	0.000	0.000	0.000	4.718	0.02
		B		0.000	0.000	0.000	4.201	0.14
		C		0.000	0.000	0.000	6.312	0.11
L16	83.25-74.75	A	1.110	0.000	0.000	0.000	7.962	0.04
		B		0.000	0.000	0.000	7.102	0.24
		C		0.000	0.000	0.000	10.672	0.19
L17	74.75-74.50	A	1.103	0.000	0.000	0.000	0.234	0.00
		B		0.000	0.000	0.000	0.209	0.01
		C		0.000	0.000	0.000	0.314	0.01
L18	74.50-69.50	A	1.098	0.000	0.000	0.000	4.646	0.02
		B		0.000	0.000	0.000	4.152	0.14
		C		0.000	0.000	0.000	6.240	0.11
L19	69.50-64.50	A	1.089	0.000	0.000	0.000	4.616	0.02
		B		0.000	0.000	0.000	4.132	0.14
		C		0.000	0.000	0.000	6.210	0.11
L20	64.50-60.50	A	1.080	0.000	0.000	0.000	3.670	0.02
		B		0.000	0.000	0.000	3.290	0.11
		C		0.000	0.000	0.000	4.946	0.09
L21	60.50-60.25	A	1.075	0.000	0.000	0.000	0.239	0.00
		B		0.000	0.000	0.000	0.216	0.01
		C		0.000	0.000	0.000	0.319	0.01
L22	60.25-55.25	A	1.069	0.000	0.000	0.000	4.765	0.02
		B		0.000	0.000	0.000	4.299	0.14
		C		0.000	0.000	0.000	6.359	0.11
L23	55.25-50.25	A	1.058	0.000	0.000	0.000	4.729	0.02
		B		0.000	0.000	0.000	4.275	0.14
		C		0.000	0.000	0.000	6.323	0.11
L24	50.25-45.25	A	1.045	0.000	0.000	0.000	4.690	0.02
		B		0.000	0.000	0.000	5.541	0.15
		C		0.000	0.000	0.000	6.284	0.11
L25	45.25-39.50	A	1.030	0.000	0.000	0.000	5.340	0.02
		B		0.000	0.000	0.000	6.397	0.17
		C		0.000	0.000	0.000	7.173	0.13
L26	39.50-38.50	A	1.020	0.000	0.000	0.000	0.929	0.00
		B		0.000	0.000	0.000	1.112	0.03
		C		0.000	0.000	0.000	1.247	0.02
L27	38.50-35.50	A	1.014	0.000	0.000	0.000	2.755	0.01
		B		0.000	0.000	0.000	3.306	0.09
		C		0.000	0.000	0.000	3.711	0.06
L28	35.50-35.25	A	1.008	0.000	0.000	0.000	0.337	0.00
		B		0.000	0.000	0.000	0.275	0.01
		C		0.000	0.000	0.000	0.417	0.01
L29	35.25-31.75	A	1.002	0.000	0.000	0.000	4.696	0.01
		B		0.000	0.000	0.000	3.831	0.11
		C		0.000	0.000	0.000	5.812	0.08
L30	31.75-31.50	A	1.000	0.000	0.000	0.000	0.335	0.00
		B		0.000	0.000	0.000	0.273	0.01
		C		0.000	0.000	0.000	0.415	0.01
L31	31.50-28.25	A	1.000	0.000	0.000	0.000	4.356	0.01
		B		0.000	0.000	0.000	3.554	0.10
		C		0.000	0.000	0.000	5.392	0.07
L32	28.25-28.00	A	1.000	0.000	0.000	0.000	0.335	0.00
		B		0.000	0.000	0.000	0.273	0.01
		C		0.000	0.000	0.000	0.415	0.01
L33	28.00-23.00	A	1.000	0.000	0.000	0.000	5.625	0.02
		B		0.000	0.000	0.000	5.468	0.15
		C		0.000	0.000	0.000	7.219	0.11

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L34	23.00-18.00	A	1.000	0.000	0.000	0.000	4.549	0.02
		B		0.000	0.000	0.000	5.468	0.15
		C		0.000	0.000	0.000	6.143	0.11
L35	18.00-13.00	A	1.000	0.000	0.000	0.000	4.549	0.02
		B		0.000	0.000	0.000	4.668	0.14
		C		0.000	0.000	0.000	5.343	0.10
L36	13.00-8.00	A	1.000	0.000	0.000	0.000	4.549	0.02
		B		0.000	0.000	0.000	3.468	0.13
		C		0.000	0.000	0.000	4.143	0.09
L37	8.00-3.00	A	1.000	0.000	0.000	0.000	2.153	0.00
		B		0.000	0.000	0.000	2.153	0.00
		C		0.000	0.000	0.000	2.153	0.00
L38	3.00-0.00	A	1.000	0.000	0.000	0.000	1.076	0.00
		B		0.000	0.000	0.000	1.076	0.00
		C		0.000	0.000	0.000	1.076	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	148.00-143.00	0.0000	-0.0591	0.0000	-0.1789
L2	143.00-138.00	0.0000	-0.0463	0.0000	-0.0994
L3	138.00-133.00	0.0000	-0.0464	0.0000	-0.1003
L4	133.00-128.00	0.0000	-0.0466	0.0000	-0.1010
L5	128.00-123.00	-0.1384	0.0353	-0.1895	0.0140
L6	123.00-116.00	-0.2237	0.0856	-0.3066	0.0846
L7	116.00-114.75	-0.2241	0.0858	-0.3083	0.0851
L8	114.75-109.75	-0.2247	0.0860	-0.3106	0.0868
L9	109.75-104.75	-0.2255	0.0863	-0.3145	0.0887
L10	104.75-99.75	-0.2264	0.0867	-0.3182	0.0906
L11	99.75-94.75	-0.2219	0.0849	-0.3095	0.0890
L12	94.75-93.50	-0.1969	0.0754	-0.2570	0.0744
L13	93.50-93.25	-0.1971	0.0755	-0.2576	0.0746
L14	93.25-88.25	-0.1978	0.0757	-0.2594	0.0756
L15	88.25-83.25	-0.1991	0.0762	-0.2629	0.0774
L16	83.25-74.75	-0.2007	0.0768	-0.2673	0.0799
L17	74.75-74.50	-0.2011	0.0770	-0.2686	0.0803
L18	74.50-69.50	-0.2017	0.0772	-0.2698	0.0821
L19	69.50-64.50	-0.2028	0.0776	-0.2728	0.0841
L20	64.50-60.50	-0.2038	0.0780	-0.2753	0.0859
L21	60.50-60.25	-0.1983	0.0759	-0.2712	0.0852
L22	60.25-55.25	-0.1989	0.0761	-0.2726	0.0863
L23	55.25-50.25	-0.1999	0.0765	-0.2751	0.0884
L24	50.25-45.25	-0.1384	0.1106	-0.0974	0.1854
L25	45.25-39.50	-0.1359	0.1129	-0.0899	0.1932
L26	39.50-38.50	-0.1359	0.1129	-0.0899	0.1933
L27	38.50-35.50	-0.1362	0.1132	-0.0907	0.1951
L28	35.50-35.25	-0.3190	-0.0075	-0.3418	0.0244
L29	35.25-31.75	-0.3197	-0.0076	-0.3431	0.0251
L30	31.75-31.50	-0.3205	-0.0076	-0.3445	0.0254
L31	31.50-28.25	-0.3211	-0.0076	-0.3459	0.0255
L32	28.25-28.00	-0.3218	-0.0076	-0.3473	0.0256
L33	28.00-23.00	-0.2335	0.0512	-0.2277	0.1086
L34	23.00-18.00	-0.1383	0.1149	-0.0942	0.2024
L35	18.00-13.00	-0.1399	0.0942	-0.0993	0.0768
L36	13.00-8.00	-0.1420	0.0623	-0.1074	-0.1366

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L37	8.00-3.00	0.0000	0.0000	0.0000	0.0000
L38	3.00-0.00	0.0000	0.0000	0.0000	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) 800 10121 w/ Mount Pipe	A	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.69 6.18 6.67 7.69 9.84	4.60 5.34 6.04 7.51 10.82	0.07 0.11 0.17 0.30 0.67
RRUS 11	A	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	0.05 0.07 0.10 0.15 0.31
(4) 860 10025	A	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.18 0.25 0.33 0.51 0.98	0.15 0.21 0.29 0.47 0.93	0.00 0.00 0.01 0.01 0.05
(2) 6' x 2" mount pipe	A	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
(2) 800 10121 w/ Mount Pipe	B	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.69 6.18 6.67 7.69 9.84	4.60 5.34 6.04 7.51 10.82	0.07 0.11 0.17 0.30 0.67
(4) LGP13519	B	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.34 0.42 0.51 0.73 1.25	0.21 0.28 0.36 0.55 1.03	0.01 0.01 0.01 0.02 0.07
RRUS 11	B	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	0.05 0.07 0.10 0.15 0.31
DC6-48-60-18-8F	B	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.22 2.44 2.66 3.15 4.21	2.22 2.44 2.66 3.15 4.21	0.02 0.04 0.06 0.12 0.27
PD320-2	B	From Centroid-Face	3.94 -0.69 8.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.08 3.21 4.35 6.67	1.67 2.79 3.93 6.25	0.02 0.03 0.05 0.12

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						4" Ice	10.32	10.07	0.36
6' x 2" mount pipe	B	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Centroid-Face	3.94 -0.69 0.00	90.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0.07 0.14 0.21 0.38 0.87
(4) 860 10025	B	From Centroid-Face	3.94 -0.69 0.00	90.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.18 0.25 0.33 0.51 0.98	0.15 0.21 0.29 0.47 0.93	0.00 0.00 0.01 0.01 0.05
(2) 800 10121 w/ Mount Pipe	C	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.69 6.18 6.67 7.69 9.84	4.60 5.34 6.04 7.51 10.82	0.07 0.11 0.17 0.30 0.67
(4) LGP13519	C	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.34 0.42 0.51 0.73 1.25	0.21 0.28 0.36 0.55 1.03	0.01 0.01 0.01 0.02 0.07
RRUS 11	C	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	0.05 0.07 0.10 0.15 0.31
AM-X-CD-16-65-00T-RET w/ Mount Pipe	C	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0.07 0.14 0.21 0.38 0.87
(4) 860 10025	C	From Centroid-Face	3.94 -0.69 0.00	-10.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.18 0.25 0.33 0.51 0.98	0.15 0.21 0.29 0.47 0.93	0.00 0.00 0.01 0.01 0.05
P65-15-XLH-RR w/ Mount Pipe	C	From Centroid-Face	3.94 -0.69 0.00	90.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.84 6.29 6.76 7.72 9.77	3.67 4.28 4.90 6.23 9.28	0.05 0.09 0.14 0.26 0.61
(4) LGP13519	C	From Centroid-Face	3.94 -0.69 0.00	90.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.34 0.42 0.51 0.73 1.25	0.21 0.28 0.36 0.55 1.03	0.01 0.01 0.01 0.02 0.07
Platform Mount [LP 1201-1]	C	None		0.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	23.10 26.80 30.50 37.90 52.70	23.10 26.80 30.50 37.90 52.70	2.10 2.50 2.90 3.70 5.30
ERICSSON AIR 21 B2A	A	From	3.86	-15.0000	142.00	No Ice	6.83	5.64	0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
B4P w/ Mount Pipe		Centroid-Face	-1.04 1.00			1/2" Ice 1" Ice 2" Ice 4" Ice	7.35 7.86 8.93 11.18	6.48 7.26 8.86 12.29	0.17 0.23 0.38 0.81
KRY 112 144/1	A	From Centroid-Face	3.86 -1.04 0.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	0.01 0.01 0.02 0.03 0.08
RRUS 11 B12	A	From Centroid-Face	3.86 -1.04 0.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	1.36 1.54 1.73 2.13 3.04	0.05 0.07 0.10 0.15 0.31
LNX-6515DS-VTM w/ Mount Pipe	A	From Centroid-Face	3.86 -1.04 1.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	11.68 12.40 13.14 14.60 17.87	9.84 11.37 12.91 15.27 20.14	0.08 0.17 0.27 0.51 1.15
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Centroid-Face	3.86 -1.04 1.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
6' x 2" mount pipe	A	From Centroid-Face	3.86 -1.04 0.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Centroid-Face	3.86 -1.04 1.00	-14.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
RRUS 11 B12	B	From Centroid-Face	3.86 -1.04 0.00	-14.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	1.36 1.54 1.73 2.13 3.04	0.05 0.07 0.10 0.15 0.31
KRY 112 144/1	B	From Centroid-Face	3.86 -1.04 0.00	-14.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	0.01 0.01 0.02 0.03 0.08
LNX-6515DS-VTM w/ Mount Pipe	B	From Centroid-Face	3.86 -1.04 1.00	-14.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	11.68 12.40 13.14 14.60 17.87	9.84 11.37 12.91 15.27 20.14	0.08 0.17 0.27 0.51 1.15
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Centroid-Face	3.86 -1.04 1.00	-14.0000	142.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.83 7.35 7.86 8.93 11.18	5.64 6.48 7.26 8.86 12.29	0.11 0.17 0.23 0.38 0.81
6' x 2" mount pipe	B	From Centroid-Face	3.86 -1.04 0.00	-15.0000	142.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	0.02 0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	3.06	3.06	0.09
						4" Ice	4.70	4.70	0.23
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Centroid-Face	3.86 -1.04 1.00	0.0000	142.00	No Ice	6.83	5.64	0.11
						1/2" Ice	7.35	6.48	0.17
						1" Ice	7.86	7.26	0.23
						2" Ice	8.93	8.86	0.38
						4" Ice	11.18	12.29	0.81
KRY 112 144/1	C	From Centroid-Face	3.86 -1.04 0.00	0.0000	142.00	No Ice	0.41	0.20	0.01
						1/2" Ice	0.50	0.27	0.01
						1" Ice	0.59	0.35	0.02
						2" Ice	0.81	0.53	0.03
						4" Ice	1.36	1.00	0.08
RRUS 11 B12	C	From Centroid-Face	3.86 -1.04 0.00	0.0000	142.00	No Ice	0.00	1.36	0.05
						1/2" Ice	0.00	1.54	0.07
						1" Ice	0.00	1.73	0.10
						2" Ice	0.00	2.13	0.15
						4" Ice	0.00	3.04	0.31
LNX-6515DS-VTM w/ Mount Pipe	C	From Centroid-Face	3.86 -1.04 1.00	0.0000	142.00	No Ice	11.68	9.84	0.08
						1/2" Ice	12.40	11.37	0.17
						1" Ice	13.14	12.91	0.27
						2" Ice	14.60	15.27	0.51
						4" Ice	17.87	20.14	1.15
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Centroid-Face	3.86 -1.04 1.00	0.0000	142.00	No Ice	6.83	5.64	0.11
						1/2" Ice	7.35	6.48	0.17
						1" Ice	7.86	7.26	0.23
						2" Ice	8.93	8.86	0.38
						4" Ice	11.18	12.29	0.81
6' x 2" mount pipe	C	From Centroid-Face	3.86 -1.04 0.00	-15.0000	142.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						1" Ice	2.29	2.29	0.05
						2" Ice	3.06	3.06	0.09
						4" Ice	4.70	4.70	0.23
Platform Mount [LP 1201-1]	C	None		0.0000	142.00	No Ice	23.10	23.10	2.10
						1/2" Ice	26.80	26.80	2.50
						1" Ice	30.50	30.50	2.90
						2" Ice	37.90	37.90	3.70
						4" Ice	52.70	52.70	5.30
BXA-70063-4CF-EDIN-X w/ Mount Pipe	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice	5.40	3.69	0.03
						1/2" Ice	5.84	4.29	0.07
						1" Ice	6.30	4.91	0.12
						2" Ice	7.24	6.26	0.23
						4" Ice	9.26	9.29	0.58
P65-16-XL-R w/ Mount Pipe	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice	8.64	6.36	0.06
						1/2" Ice	9.29	7.54	0.12
						1" Ice	9.91	8.43	0.20
						2" Ice	11.18	10.24	0.37
						4" Ice	13.83	14.10	0.86
FD9R6004/2C-3L	A	From Centroid-Leg	3.98 0.35 0.00	5.0000	126.00	No Ice	0.37	0.08	0.00
						1/2" Ice	0.45	0.14	0.01
						1" Ice	0.54	0.20	0.01
						2" Ice	0.75	0.34	0.02
						4" Ice	1.28	0.74	0.06
FD9R6004/2C-3L	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice	0.37	0.08	0.00
						1/2" Ice	0.45	0.14	0.01
						1" Ice	0.54	0.20	0.01
						2" Ice	0.75	0.34	0.02
						4" Ice	1.28	0.74	0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
RRH2x60-700	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.96 4.27 4.60 5.27 6.72	1.82 2.08 2.36 2.96 4.25	0.06 0.08 0.11 0.17 0.35
(2) SBNHH-1D65B w/ Mount Pipe	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.58 9.24 9.86 11.14 13.80	7.02 8.21 9.11 10.94 14.98	0.07 0.14 0.21 0.39 0.90
RRH2X60-PCS	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	0.06 0.08 0.10 0.16 0.31
RRH2X60-AWS	A	From Centroid-Leg	3.98 0.35 1.00	5.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.96 4.27 4.60 5.27 6.72	1.82 2.08 2.36 2.96 4.25	0.06 0.08 0.11 0.17 0.35
BXA-70063-4CF-EDIN-X w/ Mount Pipe	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.40 5.84 6.30 7.24 9.26	3.69 4.29 4.91 6.26 9.29	0.03 0.07 0.12 0.23 0.58
P65-16-XL-R w/ Mount Pipe	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.64 9.29 9.91 11.18 13.83	6.36 7.54 8.43 10.24 14.10	0.06 0.12 0.20 0.37 0.86
FD9R6004/2C-3L	B	From Centroid-Leg	3.98 0.35 0.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.01 0.01 0.02 0.06
FD9R6004/2C-3L	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.01 0.01 0.02 0.06
RRH2x60-700	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.96 4.27 4.60 5.27 6.72	1.82 2.08 2.36 2.96 4.25	0.06 0.08 0.11 0.17 0.35
(2) SBNHH-1D65B w/ Mount Pipe	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.58 9.24 9.86 11.14 13.80	7.02 8.21 9.11 10.94 14.98	0.07 0.14 0.21 0.39 0.90
RRH2X60-PCS	B	From Centroid-Leg	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	0.06 0.08 0.10 0.16 0.31
RRH2X60-AWS	B	From Centroid-Leg	3.98 0.35	0.0000	126.00	No Ice 1/2" Ice	3.96 4.27	1.82 2.08	0.06 0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		g	1.00			1" Ice	4.60	2.36	0.11
						2" Ice	5.27	2.96	0.17
						4" Ice	6.72	4.25	0.35
BXA-70063-4CF-EDIN-X w/ Mount Pipe	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.40 5.84 6.30 7.24 9.26	3.69 4.29 4.91 6.26 9.29	0.03 0.07 0.12 0.23 0.58
BXA-70080-6CF-4 w/ Mount Pipe	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.01 6.56 7.08 8.17 10.69	6.20 7.36 8.23 10.02 13.84	0.04 0.10 0.16 0.31 0.75
FD9R6004/2C-3L	C	From Centroid-Le g	3.98 0.35 0.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.01 0.01 0.02 0.06
FD9R6004/2C-3L	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.37 0.45 0.54 0.75 1.28	0.08 0.14 0.20 0.34 0.74	0.00 0.01 0.01 0.02 0.06
RRH2x60-700	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.96 4.27 4.60 5.27 6.72	1.82 2.08 2.36 2.96 4.25	0.06 0.08 0.11 0.17 0.35
(2) SBNHH-1D65B w/ Mount Pipe	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.58 9.24 9.86 11.14 13.80	7.02 8.21 9.11 10.94 14.98	0.07 0.14 0.21 0.39 0.90
(2) DB-T1-6Z-8AB-0Z	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.60 5.92 6.24 6.91 8.37	2.33 2.56 2.79 3.28 4.37	0.04 0.08 0.12 0.21 0.45
RRH2X60-PCS	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.57 2.79 3.02 3.52 4.61	2.01 2.22 2.43 2.89 3.92	0.06 0.08 0.10 0.16 0.31
RRH2X60-AWS	C	From Centroid-Le g	3.98 0.35 1.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.96 4.27 4.60 5.27 6.72	1.82 2.08 2.36 2.96 4.25	0.06 0.08 0.11 0.17 0.35
Platform Mount [LP 403-1]	C	None		0.0000	126.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.85 24.30 29.75 40.65 62.45	18.85 24.30 29.75 40.65 62.45	1.50 1.80 2.09 2.69 3.87
TME-800MHz 2X50W RRH W/FILTER	A	From Leg	1.00 0.00 0.00	0.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.40 2.61 2.83 3.30	2.25 2.46 2.68 3.13	0.06 0.09 0.11 0.17

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						4" Ice	4.34	4.15	0.34
PCS 1900MHz 4x45W-65MHz	A	From Leg	1.00 0.00 0.00	0.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35
TME-800MHz 2X50W RRH W/FILTER	B	From Leg	1.00 0.00 0.00	-30.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.40 2.61 2.83 3.30 4.34	2.25 2.46 2.68 3.13 4.15	0.06 0.09 0.11 0.17 0.34
PCS 1900MHz 4x45W-65MHz	B	From Leg	1.00 0.00 0.00	-30.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35
TME-800MHz 2X50W RRH W/FILTER	C	From Leg	1.00 0.00 0.00	30.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.40 2.61 2.83 3.30 4.34	2.25 2.46 2.68 3.13 4.15	0.06 0.09 0.11 0.17 0.34
PCS 1900MHz 4x45W-65MHz	C	From Leg	1.00 0.00 0.00	30.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35
Pipe Mount [PM 601-3]	C	None		0.0000	111.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.39 5.48 6.57 8.75 13.11	4.39 5.48 6.57 8.75 13.11	0.20 0.24 0.28 0.36 0.53
APXVTM14-C-120 w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 1.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.13 7.66 8.18 9.26 11.53	4.96 5.75 6.47 8.01 11.41	0.08 0.13 0.19 0.34 0.75
TD-RRH8x20-25	A	From Centroid-Leg	4.00 0.00 1.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
APXVSPP18-C-A20 w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 1.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.95 8.13 9.02 10.84 14.85	0.08 0.15 0.23 0.41 0.91
(2) 6' x 2" mount pipe	A	From Centroid-Leg	4.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
APXVSPP18-C-A20 w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 1.00	-30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.95 8.13 9.02 10.84 14.85	0.08 0.15 0.23 0.41 0.91
DB205-L	B	From	4.00	0.0000	109.00	No Ice	1.72	1.72	0.04

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		Centroid-Leg	0.00 9.00			1/2" Ice 1" Ice 2" Ice 4" Ice	3.45 5.20 8.75 15.69	3.45 5.20 8.75 15.69	0.05 0.08 0.16 0.47
SD212-SF3P2SNM	B	From Centroid-Leg	4.00 0.00 4.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.62 2.82 4.55 6.24 8.74	1.32 2.01 4.55 6.24 8.74	0.02 0.05 0.06 0.13 0.35
APXVTM14-C-120 w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 1.00	-30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.13 7.66 8.18 9.26 11.53	4.96 5.75 6.47 8.01 11.41	0.08 0.13 0.19 0.34 0.75
TD-RRH8x20-25	B	From Centroid-Leg	4.00 0.00 1.00	-30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
(3) 6' x 2" mount pipe	B	From Centroid-Leg	4.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
(2) APXVSPP18-C-A20 w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 1.00	30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.95 8.13 9.02 10.84 14.85	0.08 0.15 0.23 0.41 0.91
APXVTM14-C-120 w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 1.00	30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.13 7.66 8.18 9.26 11.53	4.96 5.75 6.47 8.01 11.41	0.08 0.13 0.19 0.34 0.75
TD-RRH8x20-25	C	From Centroid-Leg	4.00 0.00 1.00	30.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
(2) 6' x 2" mount pipe	C	From Centroid-Leg	4.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0.02 0.03 0.05 0.09 0.23
Platform Mount [LP 1201-1]	C	None		0.0000	109.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	23.10 26.80 30.50 37.90 52.70	23.10 26.80 30.50 37.90 52.70	2.10 2.50 2.90 3.70 5.30
SRL227	A	From Leg	6.00 0.00 2.00	0.0000	81.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.40 13.22 19.04 30.68 53.96	7.40 13.22 19.04 30.68 53.96	0.04 0.10 0.16 0.29 0.54
6' x 2" mount pipe	A	From Leg	6.00 0.00 0.00	0.0000	81.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	0.02 0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	3.06	3.06	0.09
						4" Ice	4.70	4.70	0.23
SD212	B	From Leg	6.00 0.00 -5.00	0.0000	81.00	No Ice	1.80	1.80	0.02
						1/2" Ice	3.30	3.30	0.04
						1" Ice	4.80	4.80	0.06
						2" Ice	7.80	7.80	0.10
						4" Ice	13.80	13.80	0.18
6' x 2" mount pipe	B	From Leg	6.00 0.00 0.00	0.0000	81.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						1" Ice	2.29	2.29	0.05
						2" Ice	3.06	3.06	0.09
						4" Ice	4.70	4.70	0.23
6' x 2" mount pipe	C	From Leg	6.00 0.00 0.00	0.0000	81.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						1" Ice	2.29	2.29	0.05
						2" Ice	3.06	3.06	0.09
						4" Ice	4.70	4.70	0.23
Side Arm Mount [SO 702-3]	C	None		0.0000	81.00	No Ice	3.22	3.22	0.08
						1/2" Ice	4.15	4.15	0.11
						1" Ice	5.08	5.08	0.15
						2" Ice	6.94	6.94	0.21
						4" Ice	10.66	10.66	0.34
Pipe Mount [PM 601-1]	A	From Leg	0.50 0.00 0.00	0.0000	74.00	No Ice	3.00	0.90	0.07
						1/2" Ice	3.74	1.12	0.08
						1" Ice	4.48	1.34	0.09
						2" Ice	5.96	1.78	0.12
						4" Ice	8.92	2.66	0.18
GPS-TMG-HR-26N	A	From Leg	3.00 0.00 1.00	0.0000	50.00	No Ice	0.24	0.16	0.00
						1/2" Ice	0.31	0.21	0.00
						1" Ice	0.39	0.28	0.01
						2" Ice	0.57	0.44	0.02
						4" Ice	1.04	0.86	0.06
Side Arm Mount [SO 701-1]	A	From Leg	1.50 0.00 0.00	0.0000	50.00	No Ice	0.85	1.67	0.07
						1/2" Ice	1.14	2.34	0.08
						1" Ice	1.43	3.01	0.09
						2" Ice	2.01	4.35	0.12
						4" Ice	3.17	7.03	0.18
Detuning Arm Mount	C	None		0.0000	147.00	No Ice	2.08	2.08	0.20
						1/2" Ice	2.88	2.88	0.26
						1" Ice	3.68	3.68	0.32
						2" Ice	5.28	5.28	0.44
						4" Ice	8.48	8.48	0.68
Detuning Arm Mount	C	None		0.0000	55.00	No Ice	2.08	2.08	0.20
						1/2" Ice	2.88	2.88	0.26
						1" Ice	3.68	3.68	0.32
						2" Ice	5.28	5.28	0.44
						4" Ice	8.48	8.48	0.68
Detuning Arm Mount	C	None		0.0000	15.00	No Ice	2.08	2.08	0.20
						1/2" Ice	2.88	2.88	0.26
						1" Ice	3.68	3.68	0.32
						2" Ice	5.28	5.28	0.44
						4" Ice	8.48	8.48	0.68

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight K
HP2-23	A	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 1.00	0.0000		74.00	2.04	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.27 3.55 3.82 4.37 5.46	0.03 0.05 0.03 0.03 0.03

Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	148 - 143	Pole	Max Tension	14	0.00	0.00	0.00
			Max. Compression	14	-6.69	-1.46	-0.65
			Max. Mx	5	-3.19	-19.24	-0.24
			Max. My	8	-3.19	-0.38	-19.12
			Max. Vy	5	4.67	-19.24	-0.24
			Max. Vx	8	4.70	-0.38	-19.12
			Max. Torque	3			-1.97
L2	143 - 138	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-13.48	-1.46	-0.66
			Max. Mx	5	-6.43	-64.25	-0.29
			Max. My	8	-6.43	-0.42	-64.37
			Max. Vy	5	9.49	-64.25	-0.29
			Max. Vx	8	9.54	-0.42	-64.37
			Max. Torque	3			-2.08
L3	138 - 133	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-14.16	-1.47	-0.67
			Max. Mx	5	-6.83	-112.59	-0.35
			Max. My	8	-6.83	-0.48	-112.92
			Max. Vy	5	9.85	-112.59	-0.35
			Max. Vx	8	9.89	-0.48	-112.92
			Max. Torque	3			-2.08
L4	133 - 128	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-14.87	-1.47	-0.68
			Max. Mx	5	-7.25	-162.72	-0.41
			Max. My	8	-7.25	-0.54	-163.28
			Max. Vy	5	10.21	-162.72	-0.41
			Max. Vx	8	10.25	-0.54	-163.28
			Max. Torque	3			-2.08
L5	128 - 123	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-21.74	-0.61	-1.10
			Max. Mx	5	-10.08	-236.30	-0.09
			Max. My	8	-10.10	0.02	-237.05
			Max. Vy	5	16.30	-236.30	-0.09
			Max. Vx	8	16.25	0.02	-237.05
			Max. Torque	3			-2.07
L6	123 - 116	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-22.28	-0.60	-1.12
			Max. Mx	5	-10.44	-289.68	0.24
			Max. My	8	-10.45	0.37	-290.28
			Max. Vy	5	16.56	-289.68	0.24
			Max. Vx	8	16.51	0.37	-290.28
			Max. Torque	3			-1.44
L7	116 - 114.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-23.59	-0.57	-1.15
			Max. Mx	5	-11.28	-373.56	0.76
			Max. My	8	-11.29	0.91	-373.94
			Max. Vy	5	17.00	-373.56	0.76
			Max. Vx	8	16.95	0.91	-373.94
			Max. Torque	3			-1.44
L8	114.75 - 109.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-25.50	-0.54	-1.17
			Max. Mx	5	-12.40	-460.50	1.28
			Max. My	8	-12.42	1.45	-460.65
			Max. Vy	5	18.20	-460.50	1.28
			Max. Vx	8	18.14	1.45	-460.65
			Max. Torque	3			-1.44
L9	109.75 -	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
	104.75						
			Max. Compression	14	-32.08	-0.38	-2.14
			Max. Mx	5	-15.87	-573.06	1.58
			Max. My	8	-15.91	1.92	-571.50
			Max. Vy	5	22.66	-573.06	1.58
			Max. Vx	8	22.27	1.92	-571.50
			Max. Torque	11			3.06
L10	104.75 - 99.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-33.03	-0.34	-2.16
			Max. Mx	5	-16.58	-687.25	2.08
			Max. My	8	-16.62	2.44	-683.76
			Max. Vy	5	23.04	-687.25	2.08
			Max. Vx	8	22.65	2.44	-683.76
			Max. Torque	11			3.06
L11	99.75 - 94.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.01	-0.31	-2.18
			Max. Mx	5	-17.32	-803.32	2.58
			Max. My	8	-17.35	2.96	-797.90
			Max. Vy	5	23.42	-803.32	2.58
			Max. Vx	8	23.03	2.96	-797.90
			Max. Torque	11			3.06
L12	94.75 - 93.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.25	-0.30	-2.19
			Max. Mx	5	-17.50	-832.64	2.71
			Max. My	8	-17.54	3.09	-826.74
			Max. Vy	5	23.53	-832.64	2.71
			Max. Vx	8	23.14	3.09	-826.74
			Max. Torque	11			3.06
L13	93.5 - 93.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.32	-0.30	-2.19
			Max. Mx	5	-17.57	-838.52	2.73
			Max. My	8	-17.60	3.12	-832.53
			Max. Vy	5	23.55	-838.52	2.73
			Max. Vx	8	23.16	3.12	-832.53
			Max. Torque	11			3.06
L14	93.25 - 88.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-35.61	-0.26	-2.21
			Max. Mx	5	-18.57	-957.49	3.24
			Max. My	8	-18.61	3.64	-949.56
			Max. Vy	5	24.05	-957.49	3.24
			Max. Vx	8	23.67	3.64	-949.56
			Max. Torque	11			3.06
L15	88.25 - 83.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-36.92	-0.22	-2.23
			Max. Mx	5	-19.61	-1078.96	3.74
			Max. My	8	-19.64	4.16	-1069.10
			Max. Vy	5	24.55	-1078.96	3.74
			Max. Vx	8	24.16	4.16	-1069.10
			Max. Torque	11			3.07
L16	83.25 - 74.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-38.47	-0.59	-1.16
			Max. Mx	5	-20.56	-1172.90	4.23
			Max. My	8	-20.59	4.47	-1161.29
			Max. Vy	5	25.52	-1172.90	4.23
			Max. Vx	8	25.13	4.47	-1161.29
			Max. Torque	11			3.07
L17	74.75 - 74.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-40.98	-0.55	-1.10
			Max. Mx	5	-22.51	-1301.91	4.81
			Max. My	8	-22.54	4.99	-1288.33
			Max. Vy	5	26.15	-1301.91	4.81

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	8	25.84	4.99	-1288.33
			Max. Torque	10			1.57
L18	74.5 - 69.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-42.56	-0.52	-0.93
			Max. Mx	5	-23.77	-1434.00	5.51
			Max. My	8	-23.79	5.52	-1419.05
			Max. Vy	5	26.67	-1434.00	5.51
			Max. Vx	8	26.43	5.52	-1419.05
			Max. Torque	10			1.57
L19	69.5 - 64.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-44.05	-0.48	-0.95
			Max. Mx	5	-25.00	-1568.46	6.08
			Max. My	8	-25.02	6.04	-1552.32
			Max. Vy	5	27.14	-1568.46	6.08
			Max. Vx	8	26.90	6.04	-1552.32
			Max. Torque	10			1.51
L20	64.5 - 60.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-45.27	-0.45	-0.97
			Max. Mx	5	-26.00	-1677.70	6.53
			Max. My	8	-26.02	6.46	-1660.60
			Max. Vy	5	27.50	-1677.70	6.53
			Max. Vx	8	27.26	6.46	-1660.60
			Max. Torque	10			1.51
L21	60.5 - 60.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-45.35	-0.44	-0.97
			Max. Mx	5	-26.08	-1684.57	6.56
			Max. My	8	-26.09	6.49	-1667.42
			Max. Vy	5	27.52	-1684.57	6.56
			Max. Vx	8	27.28	6.49	-1667.42
			Max. Torque	10			1.51
L22	60.25 - 55.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-46.99	-0.40	-0.99
			Max. Mx	5	-27.43	-1823.35	7.12
			Max. My	8	-27.45	7.01	-1805.00
			Max. Vy	5	28.01	-1823.35	7.12
			Max. Vx	8	27.76	7.01	-1805.00
			Max. Torque	10			1.51
L23	55.25 - 50.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-48.98	-0.37	-1.02
			Max. Mx	5	-29.02	-1964.82	7.69
			Max. My	8	-29.03	7.53	-1945.28
			Max. Vy	11	-28.54	1964.66	-7.52
			Max. Vx	8	28.30	7.53	-1945.28
			Max. Torque	10			1.51
L24	50.25 - 45.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-50.77	-0.34	-0.71
			Max. Mx	5	-30.49	-2108.89	8.46
			Max. My	8	-30.51	8.06	-2087.85
			Max. Vy	11	-29.06	2108.77	-7.76
			Max. Vx	8	28.79	8.06	-2087.85
			Max. Torque	10			1.51
L25	45.25 - 39.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-50.85	-0.34	-0.71
			Max. Mx	5	-30.57	-2116.16	8.49
			Max. My	8	-30.58	8.08	-2095.04
			Max. Vy	11	-29.07	2116.04	-7.78
			Max. Vx	8	28.81	8.08	-2095.04
			Max. Torque	3			-1.39
L26	39.5 - 38.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-54.82	-0.31	-0.76
			Max. Mx	5	-33.81	-2307.31	9.22

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	8	-33.82	8.76	-2284.50
			Max. Vy	11	-29.75	2307.24	-8.36
			Max. Vx	8	29.48	8.76	-2284.50
			Max. Torque	3			-1.38
L27	38.5 - 35.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-55.94	-0.30	-0.78
			Max. Mx	5	-34.76	-2396.88	9.56
			Max. My	8	-34.77	9.08	-2373.29
			Max. Vy	11	-30.00	2396.83	-8.63
			Max. Vx	8	29.73	9.08	-2373.29
			Max. Torque	3			-1.38
L28	35.5 - 35.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-56.03	-0.30	-0.78
			Max. Mx	5	-34.84	-2404.38	9.59
			Max. My	8	-34.86	9.10	-2380.73
			Max. Vy	11	-30.02	2404.33	-8.65
			Max. Vx	8	29.75	9.10	-2380.73
			Max. Torque	3			-1.38
L29	35.25 - 31.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-57.37	-0.28	-0.80
			Max. Mx	5	-35.98	-2509.97	9.98
			Max. My	8	-35.99	9.47	-2485.42
			Max. Vy	11	-30.35	2509.96	-8.96
			Max. Vx	8	30.09	9.47	-2485.42
			Max. Torque	3			-1.38
L30	31.75 - 31.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-57.49	-0.28	-0.80
			Max. Mx	5	-36.09	-2517.56	10.01
			Max. My	8	-36.10	9.50	-2492.94
			Max. Vy	11	-30.37	2517.55	-8.98
			Max. Vx	8	30.10	9.50	-2492.94
			Max. Torque	3			-1.37
L31	31.5 - 28.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-58.97	-0.27	-0.82
			Max. Mx	11	-37.38	2616.76	-9.27
			Max. My	8	-37.39	9.83	-2591.29
			Max. Vy	11	-30.69	2616.76	-9.27
			Max. Vx	8	30.43	9.83	-2591.29
			Max. Torque	3			-1.37
L32	28.25 - 28	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-59.08	-0.26	-0.83
			Max. Mx	11	-37.48	2624.43	-9.30
			Max. My	8	-37.49	9.86	-2598.90
			Max. Vy	11	-30.71	2624.43	-9.30
			Max. Vx	8	30.45	9.86	-2598.90
			Max. Torque	3			-1.36
L33	28 - 23	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-61.11	-0.24	-0.86
			Max. Mx	11	-39.23	2779.04	-9.74
			Max. My	8	-39.24	10.38	-2752.18
			Max. Vy	11	-31.14	2779.04	-9.74
			Max. Vx	8	30.88	10.38	-2752.18
			Max. Torque	3			-1.36
L34	23 - 18	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-63.17	-0.22	-0.90
			Max. Mx	11	-41.02	2935.70	-10.18
			Max. My	8	-41.03	10.90	-2907.51
			Max. Vy	11	-31.54	2935.70	-10.18
			Max. Vx	8	31.27	10.90	-2907.51
			Max. Torque	3			-1.35
L35	18 - 13	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	14	-65.57	-0.19	-0.91
			Max. Mx	11	-43.03	3094.41	-10.62
			Max. My	8	-43.03	11.42	-3064.90
			Max. Vy	11	-31.98	3094.41	-10.62
			Max. Vx	8	31.72	11.42	-3064.90
			Max. Torque	3			-1.35
L36	13 - 8	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-67.64	-0.17	-0.91
			Max. Mx	11	-44.86	3255.19	-11.05
			Max. My	8	-44.86	11.94	-3224.36
			Max. Vy	11	-32.35	3255.19	-11.05
			Max. Vx	8	32.09	11.94	-3224.36
			Max. Torque	3			-1.35
L37	8 - 3	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-69.50	-0.17	-0.91
			Max. Mx	11	-46.51	3417.68	-11.48
			Max. My	8	-46.51	12.43	-3385.56
			Max. Vy	11	-32.67	3417.68	-11.48
			Max. Vx	8	32.42	12.43	-3385.56
			Max. Torque	3			-1.34
L38	3 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-70.63	-0.17	-0.91
			Max. Mx	11	-47.51	3515.94	-11.73
			Max. My	8	-47.51	12.72	-3483.04
			Max. Vy	11	-32.86	3515.94	-11.73
			Max. Vx	8	32.60	12.72	-3483.04
			Max. Torque	3			-1.34

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	18	70.63	-11.19	0.02
	Max. H_x	11	47.52	32.84	-0.09
	Max. H_z	2	47.52	-0.10	32.56
	Max. M_x	2	3480.72	-0.10	32.56
	Max. M_z	5	3515.75	-32.84	0.11
	Max. Torsion	9	1.34	16.50	-28.28
	Min. Vert	1	47.52	0.00	0.00
	Min. H_x	5	47.52	-32.84	0.11
	Min. H_z	8	47.52	0.10	-32.59
	Min. M_x	8	-3483.04	0.10	-32.59
	Min. M_z	11	-3515.94	32.84	-0.09
	Min. Torsion	3	-1.34	-16.49	28.25

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	47.52	0.00	0.00	0.06	0.10	0.00
Dead+Wind 0 deg - No Ice	47.52	0.10	-32.56	-3480.72	-12.53	1.02

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
Dead+Wind 30 deg - No Ice	47.52	16.49	-28.25	-3021.35	-1767.57	1.34
Dead+Wind 60 deg - No Ice	47.52	28.48	-16.39	-1753.01	-3050.11	1.27
Dead+Wind 90 deg - No Ice	47.52	32.84	-0.11	-13.52	-3515.75	0.85
Dead+Wind 120 deg - No Ice	47.52	28.37	16.24	1733.37	-3036.92	0.31
Dead+Wind 150 deg - No Ice	47.52	16.33	28.18	3011.14	-1746.25	-0.38
Dead+Wind 180 deg - No Ice	47.52	-0.10	32.59	3483.04	12.72	-0.98
Dead+Wind 210 deg - No Ice	47.52	-16.50	28.28	3023.72	1768.29	-1.34
Dead+Wind 240 deg - No Ice	47.52	-28.47	16.41	1755.21	3049.69	-1.33
Dead+Wind 270 deg - No Ice	47.52	-32.84	0.09	11.73	3515.94	-0.88
Dead+Wind 300 deg - No Ice	47.52	-28.38	-16.22	-1731.16	3037.71	-0.28
Dead+Wind 330 deg - No Ice	47.52	-16.32	-28.16	-3008.76	1745.92	0.41
Dead+Ice+Temp	70.63	0.00	0.00	0.91	-0.17	-0.00
Dead+Wind 0 deg+Ice+Temp	70.63	0.02	-11.14	-1193.09	-2.65	0.66
Dead+Wind 30 deg+Ice+Temp	70.63	5.61	-9.66	-1034.53	-602.66	0.40
Dead+Wind 60 deg+Ice+Temp	70.63	9.70	-5.59	-598.66	-1041.56	0.02
Dead+Wind 90 deg+Ice+Temp	70.63	11.19	-0.02	-1.72	-1201.52	-0.36
Dead+Wind 120 deg+Ice+Temp	70.63	9.68	5.57	596.96	-1038.93	-0.62
Dead+Wind 150 deg+Ice+Temp	70.63	5.58	9.65	1034.68	-598.54	-0.74
Dead+Wind 180 deg+Ice+Temp	70.63	-0.02	11.15	1195.69	2.27	-0.66
Dead+Wind 210 deg+Ice+Temp	70.63	-5.61	9.67	1037.14	602.42	-0.40
Dead+Wind 240 deg+Ice+Temp	70.63	-9.70	5.60	601.23	1041.00	-0.03
Dead+Wind 270 deg+Ice+Temp	70.63	-11.19	0.02	3.21	1201.14	0.36
Dead+Wind 300 deg+Ice+Temp	70.63	-9.68	-5.56	-594.39	1038.71	0.64
Dead+Wind 330 deg+Ice+Temp	70.63	-5.57	-9.64	-1032.06	598.01	0.74
Dead+Wind 0 deg - Service	47.52	0.04	-12.72	-1360.80	-4.84	0.40
Dead+Wind 30 deg - Service	47.52	6.44	-11.04	-1181.21	-691.01	0.53
Dead+Wind 60 deg - Service	47.52	11.12	-6.40	-685.33	-1192.46	0.50
Dead+Wind 90 deg - Service	47.52	12.83	-0.04	-5.23	-1374.51	0.34
Dead+Wind 120 deg - Service	47.52	11.08	6.35	677.74	-1187.29	0.13
Dead+Wind 150 deg - Service	47.52	6.38	11.01	1177.31	-682.67	-0.15
Dead+Wind 180 deg - Service	47.52	-0.04	12.73	1361.80	5.03	-0.39
Dead+Wind 210 deg - Service	47.52	-6.44	11.05	1182.24	691.40	-0.53
Dead+Wind 240 deg - Service	47.52	-11.12	6.41	686.29	1192.40	-0.52
Dead+Wind 270 deg - Service	47.52	-12.83	0.03	4.64	1374.69	-0.35
Dead+Wind 300 deg - Service	47.52	-11.09	-6.33	-676.78	1187.71	-0.11
Dead+Wind 330 deg - Service	47.52	-6.38	-11.00	-1176.27	682.65	0.16

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	-47.52	0.00	0.00	47.52	0.00	0.000%
2	0.10	-47.52	-32.56	-0.10	47.52	32.56	0.000%
3	16.49	-47.52	-28.25	-16.49	47.52	28.25	0.000%
4	28.48	-47.52	-16.39	-28.48	47.52	16.39	0.000%
5	32.84	-47.52	-0.11	-32.84	47.52	0.11	0.000%
6	28.37	-47.52	16.24	-28.37	47.52	-16.24	0.000%
7	16.33	-47.52	28.18	-16.33	47.52	-28.18	0.000%
8	-0.10	-47.52	32.59	0.10	47.52	-32.59	0.000%
9	-16.50	-47.52	28.28	16.50	47.52	-28.28	0.000%
10	-28.47	-47.52	16.41	28.47	47.52	-16.41	0.000%
11	-32.84	-47.52	0.09	32.84	47.52	-0.09	0.000%
12	-28.38	-47.52	-16.22	28.38	47.52	16.22	0.000%
13	-16.32	-47.52	-28.16	16.32	47.52	28.16	0.000%
14	0.00	-70.63	0.00	-0.00	70.63	-0.00	0.000%
15	0.02	-70.63	-11.14	-0.02	70.63	11.14	0.000%
16	5.61	-70.63	-9.66	-5.61	70.63	9.66	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
17	9.70	-70.63	-5.59	-9.70	70.63	5.59	0.000%
18	11.19	-70.63	-0.02	-11.19	70.63	0.02	0.000%
19	9.68	-70.63	5.57	-9.68	70.63	-5.57	0.000%
20	5.58	-70.63	9.65	-5.58	70.63	-9.65	0.000%
21	-0.02	-70.63	11.15	0.02	70.63	-11.15	0.000%
22	-5.61	-70.63	9.67	5.61	70.63	-9.67	0.000%
23	-9.70	-70.63	5.60	9.70	70.63	-5.60	0.000%
24	-11.19	-70.63	0.02	11.19	70.63	-0.02	0.000%
25	-9.68	-70.63	-5.56	9.68	70.63	5.56	0.000%
26	-5.57	-70.63	-9.64	5.57	70.63	9.64	0.000%
27	0.04	-47.52	-12.72	-0.04	47.52	12.72	0.000%
28	6.44	-47.52	-11.04	-6.44	47.52	11.04	0.000%
29	11.12	-47.52	-6.40	-11.12	47.52	6.40	0.000%
30	12.83	-47.52	-0.04	-12.83	47.52	0.04	0.000%
31	11.08	-47.52	6.35	-11.08	47.52	-6.35	0.000%
32	6.38	-47.52	11.01	-6.38	47.52	-11.01	0.000%
33	-0.04	-47.52	12.73	0.04	47.52	-12.73	0.000%
34	-6.44	-47.52	11.05	6.44	47.52	-11.05	0.000%
35	-11.12	-47.52	6.41	11.12	47.52	-6.41	0.000%
36	-12.83	-47.52	0.03	12.83	47.52	-0.03	0.000%
37	-11.09	-47.52	-6.33	11.09	47.52	6.33	0.000%
38	-6.38	-47.52	-11.00	6.38	47.52	11.00	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00022656
3	Yes	6	0.00000001	0.00019920
4	Yes	6	0.00000001	0.00018830
5	Yes	5	0.00000001	0.00018342
6	Yes	6	0.00000001	0.00019338
7	Yes	6	0.00000001	0.00019133
8	Yes	5	0.00000001	0.00015012
9	Yes	6	0.00000001	0.00018843
10	Yes	6	0.00000001	0.00020037
11	Yes	5	0.00000001	0.00026367
12	Yes	6	0.00000001	0.00018855
13	Yes	6	0.00000001	0.00018956
14	Yes	4	0.00000001	0.00003220
15	Yes	6	0.00000001	0.00032177
16	Yes	6	0.00000001	0.00038318
17	Yes	6	0.00000001	0.00038267
18	Yes	6	0.00000001	0.00032480
19	Yes	6	0.00000001	0.00038211
20	Yes	6	0.00000001	0.00038374
21	Yes	6	0.00000001	0.00032377
22	Yes	6	0.00000001	0.00038260
23	Yes	6	0.00000001	0.00038475
24	Yes	6	0.00000001	0.00032409
25	Yes	6	0.00000001	0.00038143
26	Yes	6	0.00000001	0.00037819
27	Yes	5	0.00000001	0.00006656
28	Yes	5	0.00000001	0.00049311
29	Yes	5	0.00000001	0.00044513

30	Yes	5	0.00000001	0.00006810
31	Yes	5	0.00000001	0.00047039
32	Yes	5	0.00000001	0.00046102
33	Yes	5	0.00000001	0.00006239
34	Yes	5	0.00000001	0.00044578
35	Yes	5	0.00000001	0.00049894
36	Yes	5	0.00000001	0.00007303
37	Yes	5	0.00000001	0.00044856
38	Yes	5	0.00000001	0.00045276

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
L1	148 - 143 (1)	TP24.9752x24x0.2188	5.00	0.00	0.0	39.000	17.1887	-3.19	670.36	0.005
L2	143 - 138 (2)	TP25.9503x24.9752x0.2188	5.00	0.00	0.0	39.000	17.8657	-6.43	696.76	0.009
L3	138 - 133 (3)	TP26.9255x25.9503x0.2188	5.00	0.00	0.0	39.000	18.5428	-6.83	723.17	0.009
L4	133 - 128 (4)	TP27.9006x26.9255x0.2188	5.00	0.00	0.0	39.000	19.2199	-7.25	749.58	0.010
L5	128 - 123 (5)	TP28.8758x27.9006x0.2188	5.00	0.00	0.0	39.000	19.8969	-10.10	775.98	0.013
L6	123 - 116 (6)	TP30.241x28.8758x0.2188	7.00	0.00	0.0	39.000	20.3370	-10.44	793.14	0.013
L7	116 - 114.75 (7)	TP30.0471x29.0721x0.25	5.00	0.00	0.0	39.000	23.6440	-11.28	922.12	0.012
L8	114.75 - 109.75 (8)	TP31.0221x30.0471x0.25	5.00	0.00	0.0	39.000	24.4177	-12.40	952.29	0.013
L9	109.75 - 104.75 (9)	TP31.9971x31.0221x0.25	5.00	0.00	0.0	39.000	25.1913	-15.87	982.46	0.016
L10	104.75 - 99.75 (10)	TP32.9721x31.9971x0.25	5.00	0.00	0.0	39.000	25.9650	-16.58	1012.63	0.016
L11	99.75 - 94.75 (11)	TP33.9471x32.9721x0.25	5.00	0.00	0.0	39.000	26.7386	-17.32	1042.81	0.017
L12	94.75 - 93.5 (12)	TP34.1908x33.9471x0.25	1.25	0.00	0.0	39.000	26.9320	-17.50	1050.35	0.017
L13	93.5 - 93.25 (13)	TP34.2396x34.1908x0.4375	0.25	0.00	0.0	39.000	46.9384	-17.57	1830.60	0.010
L14	93.25 - 88.25 (14)	TP35.2145x34.2396x0.4313	5.00	0.00	0.0	39.000	47.6109	-18.57	1856.83	0.010
L15	88.25 - 83.25 (15)	TP36.1895x35.2145x0.425	5.00	0.00	0.0	39.000	48.2446	-19.61	1881.54	0.010
L16	83.25 - 74.75 (16)	TP37.847x36.1895x0.425	8.50	0.00	0.0	39.000	49.2310	-20.56	1920.01	0.011
L17	74.75 - 74.5 (17)	TP37.3959x36.4208x0.4875	5.00	0.00	0.0	39.000	57.1093	-22.51	2227.26	0.010
L18	74.5 - 69.5 (18)	TP38.3711x37.3959x0.475	5.00	0.00	0.0	39.000	57.1340	-23.77	2228.23	0.011
L19	69.5 - 64.5 (19)	TP39.3462x38.3711x0.475	5.00	0.00	0.0	39.000	58.6042	-25.00	2285.56	0.011
L20	64.5 - 60.5 (20)	TP40.1264x39.3462x0.4688	4.00	0.00	0.0	39.000	59.0031	-26.00	2301.12	0.011
L21	60.5 - 60.25 (21)	TP40.1751x40.1264x0.525	0.25	0.00	0.0	39.000	66.0710	-26.07	2576.77	0.010
L22	60.25 - 55.25 (22)	TP41.1503x40.1751x0.525	5.00	0.00	0.0	39.000	67.6959	-27.43	2640.14	0.010
L23	55.25 - 50.25 (23)	TP42.1254x41.1503x0.5125	5.00	0.00	0.0	39.000	67.6907	-29.02	2639.94	0.011
L24	50.25 - 45.25 (24)	TP43.1006x42.1254x0.5125	5.00	0.00	0.0	39.000	69.2770	-30.49	2701.80	0.011
L25	45.25 - 39.5 (25)	TP44.222x43.1006x0.5125	5.75	0.00	0.0	39.000	69.3563	-30.57	2704.89	0.011
L26	39.5 - 38.5 (26)	TP43.7919x42.5243x0.575	6.50	0.00	0.0	39.000	78.8731	-33.81	3076.05	0.011
L27	38.5 - 35.5 (27)	TP44.377x43.7919x0.575	3.00	0.00	0.0	39.000	79.9408	-34.75	3117.69	0.011
L28	35.5 - 35.25 (28)	TP44.4257x44.377x0.575	0.25	0.00	0.0	39.000	80.0298	-34.84	3121.16	0.011
L29	35.25 - 31.75 (29)	TP45.1083x44.4257x0.575	3.50	0.00	0.0	39.000	81.2755	-35.98	3169.74	0.011

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
L30	31.75 - 31.5 (30)	TP45.157x45.1083x0.725	0.25	0.00	0.0	39.000	102.2450	-36.09	3987.55	0.009
L31	31.5 - 28.25 (31)	TP45.7908x45.157x0.725	3.25	0.00	0.0	39.000	103.7030	-37.38	4044.43	0.009
L32	28.25 - 28 (32)	TP45.8396x45.7908x0.5375	0.25	0.00	0.0	39.000	77.2865	-37.47	3014.17	0.012
L33	28 - 23 (33)	TP46.8147x45.8396x0.5375	5.00	0.00	0.0	39.000	78.9500	-39.23	3079.05	0.013
L34	23 - 18 (34)	TP47.7897x46.8147x0.525	5.00	0.00	0.0	39.000	78.7596	-41.02	3071.62	0.013
L35	18 - 13 (35)	TP48.7648x47.7897x0.525	5.00	0.00	0.0	39.000	80.3844	-43.03	3134.99	0.014
L36	13 - 8 (36)	TP49.7399x48.7648x0.525	5.00	0.00	0.0	39.000	82.0092	-44.86	3198.36	0.014
L37	8 - 3 (37)	TP50.715x49.7399x0.525	5.00	0.00	0.0	39.000	83.6340	-46.51	3261.73	0.014
L38	3 - 0 (38)	TP51.3x50.715x0.5188	3.00	0.00	0.0	39.000	83.6120	-47.51	3260.87	0.015

Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M_x kip-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y kip-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	148 - 143 (1)	TP24.9752x24x0.2188	19.40	2.219	39.000	0.057	0.00	0.000	39.000	0.000
L2	143 - 138 (2)	TP25.9503x24.9752x0.2188	64.60	6.838	39.000	0.175	0.00	0.000	39.000	0.000
L3	138 - 133 (3)	TP26.9255x25.9503x0.2188	113.15	11.115	39.000	0.285	0.00	0.000	39.000	0.000
L4	133 - 128 (4)	TP27.9006x26.9255x0.2188	163.49	14.944	39.000	0.383	0.00	0.000	39.000	0.000
L5	128 - 123 (5)	TP28.8758x27.9006x0.2188	237.04	20.213	39.000	0.518	0.00	0.000	39.000	0.000
L6	123 - 116 (6)	TP30.241x28.8758x0.2188	290.45	23.702	39.000	0.608	0.00	0.000	39.000	0.000
L7	116 - 114.75 (7)	TP30.0471x29.0721x0.25	374.63	25.873	39.000	0.663	0.00	0.000	39.000	0.000
L8	114.75 - 109.75 (8)	TP31.0221x30.0471x0.25	461.87	29.900	39.000	0.767	0.00	0.000	39.000	0.000
L9	109.75 - 104.75 (9)	TP31.9971x31.0221x0.25	574.34	34.924	39.000	0.895	0.00	0.000	39.000	0.000
L10	104.75 - 99.75 (10)	TP32.9721x31.9971x0.25	688.51	39.400	39.000	1.010	0.00	0.000	39.000	0.000
L11	99.75 - 94.75 (11)	TP33.9471x32.9721x0.25	804.56	43.406	39.000	1.113	0.00	0.000	39.000	0.000
L12	94.75 - 93.5 (12)	TP34.1908x33.9471x0.25	833.88	44.341	39.000	1.137	0.00	0.000	39.000	0.000
L13	93.5 - 93.25 (13)	TP34.2396x34.1908x0.4375	839.77	25.869	39.000	0.663	0.00	0.000	39.000	0.000
L14	93.25 - 88.25 (14)	TP35.2145x34.2396x0.4313	958.72	28.279	39.000	0.725	0.00	0.000	39.000	0.000
L15	88.25 - 83.25 (15)	TP36.1895x35.2145x0.425	1080.17	30.565	39.000	0.784	0.00	0.000	39.000	0.000
L16	83.25 - 74.75 (16)	TP37.847x36.1895x0.425	1173.80	31.890	39.000	0.818	0.00	0.000	39.000	0.000
L17	74.75 - 74.5 (17)	TP37.3959x36.4208x0.4875	1302.78	30.216	39.000	0.775	0.00	0.000	39.000	0.000
L18	74.5 - 69.5 (18)	TP38.3711x37.3959x0.475	1434.96	32.379	39.000	0.830	0.00	0.000	39.000	0.000
L19	69.5 - 64.5 (19)	TP39.3462x38.3711x0.475	1569.60	33.652	39.000	0.863	0.00	0.000	39.000	0.000
L20	64.5 - 60.5 (20)	TP40.1264x39.3462x0.4688	1678.97	35.031	39.000	0.898	0.00	0.000	39.000	0.000
L21	60.5 - 60.25 (21)	TP40.1751x40.1264x0.525	1685.86	31.462	39.000	0.807	0.00	0.000	39.000	0.000
L22	60.25 - 55.25 (22)	TP41.1503x40.1751x0.525	1824.81	32.430	39.000	0.832	0.00	0.000	39.000	0.000
L23	55.25 - 50.25 (23)	TP42.1254x41.1503x0.5125	1966.46	34.100	39.000	0.874	0.00	0.000	39.000	0.000
L24	50.25 - 45.25 (24)	TP43.1006x42.1254x0.5125	2110.57	34.932	39.000	0.896	0.00	0.000	39.000	0.000
L25	45.25 - 39.5 (25)	TP44.222x43.1006x0.5125	2117.84	34.972	39.000	0.897	0.00	0.000	39.000	0.000

Section No.	Elevation ft	Size	Actual M_x kip-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y kip-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L26	39.5 - 38.5 (26)	TP43.7919x42.5243x0.575	2309.18	33.123	39.000	0.849	0.00	0.000	39.000	0.000
L27	38.5 - 35.5 (27)	TP44.377x43.7919x0.575	2398.84	33.490	39.000	0.859	0.00	0.000	39.000	0.000
L28	35.5 - 35.25 (28)	TP44.4257x44.377x0.575	2406.35	33.519	39.000	0.859	0.00	0.000	39.000	0.000
L29	35.25 - 31.75 (29)	TP45.1083x44.4257x0.575	2512.05	33.921	39.000	0.870	0.00	0.000	39.000	0.000
L30	31.75 - 31.5 (30)	TP45.157x45.1083x0.725	2519.65	27.198	39.000	0.697	0.00	0.000	39.000	0.000
L31	31.5 - 28.25 (31)	TP45.7908x45.157x0.725	2618.93	27.474	39.000	0.704	0.00	0.000	39.000	0.000
L32	28.25 - 28 (32)	TP45.8396x45.7908x0.5375	2626.61	36.627	39.000	0.939	0.00	0.000	39.000	0.000
L33	28 - 23 (33)	TP46.8147x45.8396x0.5375	2781.33	37.158	39.000	0.953	0.00	0.000	39.000	0.000
L34	23 - 18 (34)	TP47.7897x46.8147x0.525	2938.09	38.506	39.000	0.987	0.00	0.000	39.000	0.000
L35	18 - 13 (35)	TP48.7648x47.7897x0.525	3096.91	38.955	39.000	0.999	0.00	0.000	39.000	0.000
L36	13 - 8 (36)	TP49.7399x48.7648x0.525	3257.79	39.362	39.000	1.009	0.00	0.000	39.000	0.000
L37	8 - 3 (37)	TP50.715x49.7399x0.525	3420.40	39.729	39.000	1.019	0.00	0.000	39.000	0.000
L38	3 - 0 (38)	TP51.3x50.715x0.5188	3518.72	40.396	39.000	1.036	0.00	0.000	39.000	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V K	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L1	148 - 143 (1)	TP24.9752x24x0.2188	4.72	0.274	26.000	0.021	0.34	0.019	26.000	0.001
L2	143 - 138 (2)	TP25.9503x24.9752x0.2188	9.53	0.534	26.000	0.041	1.38	0.071	26.000	0.003
L3	138 - 133 (3)	TP26.9255x25.9503x0.2188	9.89	0.533	26.000	0.041	1.39	0.066	26.000	0.003
L4	133 - 128 (4)	TP27.9006x26.9255x0.2188	10.25	0.533	26.000	0.041	1.39	0.062	26.000	0.002
L5	128 - 123 (5)	TP28.8758x27.9006x0.2188	16.25	0.817	26.000	0.063	1.09	0.045	26.000	0.002
L6	123 - 116 (6)	TP30.241x28.8758x0.2188	16.62	0.817	26.000	0.063	1.42	0.057	26.000	0.002
L7	116 - 114.75 (7)	TP30.0471x29.0721x0.25	17.05	0.721	26.000	0.055	1.42	0.048	26.000	0.002
L8	114.75 - 109.75 (8)	TP31.0221x30.0471x0.25	18.24	0.747	26.000	0.057	1.42	0.045	26.000	0.002
L9	109.75 - 104.75 (9)	TP31.9971x31.0221x0.25	22.65	0.899	26.000	0.069	3.01	0.089	26.000	0.003
L10	104.75 - 99.75 (10)	TP32.9721x31.9971x0.25	23.03	0.887	26.000	0.068	3.01	0.084	26.000	0.003
L11	99.75 - 94.75 (11)	TP33.9471x32.9721x0.25	23.41	0.875	26.000	0.067	3.01	0.079	26.000	0.003
L12	94.75 - 93.5 (12)	TP34.1908x33.9471x0.25	23.52	0.873	26.000	0.067	3.01	0.078	26.000	0.003
L13	93.5 - 93.25 (13)	TP34.2396x34.1908x0.4375	23.54	0.501	26.000	0.039	3.01	0.045	26.000	0.002
L14	93.25 - 88.25 (14)	TP35.2145x34.2396x0.4313	24.05	0.505	26.000	0.039	3.01	0.043	26.000	0.002
L15	88.25 - 83.25 (15)	TP36.1895x35.2145x0.425	24.54	0.509	26.000	0.039	3.00	0.041	26.000	0.002
L16	83.25 - 74.75 (16)	TP37.847x36.1895x0.425	25.51	0.518	26.000	0.040	1.68	0.022	26.000	0.001
L17	74.75 - 74.5 (17)	TP37.3959x36.4208x0.4875	26.17	0.458	26.000	0.035	1.57	0.018	26.000	0.001
L18	74.5 - 69.5 (18)	TP38.3711x37.3959x0.475	26.70	0.467	26.000	0.036	1.51	0.017	26.000	0.001
L19	69.5 - 64.5 (19)	TP39.3462x38.3711x0.475	27.17	0.464	26.000	0.036	1.51	0.016	26.000	0.001
L20	64.5 - 60.5 (20)	TP40.1264x39.3462x0.4688	27.53	0.467	26.000	0.036	1.51	0.015	26.000	0.001
L21	60.5 - 60.25 (21)	TP40.1751x40.1264x0.525	27.55	0.417	26.000	0.032	1.51	0.014	26.000	0.001

Section No.	Elevation ft	Size	Actual V K	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L22	60.25 - 55.25 (22)	TP41.1503x40.1751x0.525	28.03	0.414	26.000	0.032	1.51	0.013	26.000	0.001
L23	55.25 - 50.25 (23)	TP42.1254x41.1503x0.5125	28.57	0.422	26.000	0.032	1.51	0.013	26.000	0.000
L24	50.25 - 45.25 (24)	TP43.1006x42.1254x0.5125	29.08	0.420	26.000	0.032	1.34	0.011	26.000	0.000
L25	45.25 - 39.5 (25)	TP44.222x43.1006x0.5125	29.10	0.420	26.000	0.032	1.34	0.011	26.000	0.000
L26	39.5 - 38.5 (26)	TP43.7919x42.5243x0.575	29.77	0.377	26.000	0.029	1.34	0.009	26.000	0.000
L27	38.5 - 35.5 (27)	TP44.377x43.7919x0.575	30.02	0.376	26.000	0.029	1.34	0.009	26.000	0.000
L28	35.5 - 35.25 (28)	TP44.4257x44.377x0.575	30.04	0.375	26.000	0.029	1.34	0.009	26.000	0.000
L29	35.25 - 31.75 (29)	TP45.1083x44.4257x0.575	30.37	0.374	26.000	0.029	1.34	0.009	26.000	0.000
L30	31.75 - 31.5 (30)	TP45.157x45.1083x0.725	30.39	0.297	26.000	0.023	1.34	0.007	26.000	0.000
L31	31.5 - 28.25 (31)	TP45.7908x45.157x0.725	30.71	0.296	26.000	0.023	1.33	0.007	26.000	0.000
L32	28.25 - 28 (32)	TP45.8396x45.7908x0.5375	30.73	0.398	26.000	0.031	1.33	0.009	26.000	0.000
L33	28 - 23 (33)	TP46.8147x45.8396x0.5375	31.17	0.395	26.000	0.030	1.33	0.009	26.000	0.000
L34	23 - 18 (34)	TP47.7897x46.8147x0.525	31.56	0.401	26.000	0.031	1.33	0.008	26.000	0.000
L35	18 - 13 (35)	TP48.7648x47.7897x0.525	32.00	0.398	26.000	0.031	1.33	0.008	26.000	0.000
L36	13 - 8 (36)	TP49.7399x48.7648x0.525	32.37	0.395	26.000	0.030	1.33	0.008	26.000	0.000
L37	8 - 3 (37)	TP50.715x49.7399x0.525	32.70	0.391	26.000	0.030	1.33	0.008	26.000	0.000
L38	3 - 0 (38)	TP51.3x50.715x0.5188	32.88	0.393	26.000	0.030	1.33	0.007	26.000	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	148 - 143 (1)	0.005	0.057	0.000	0.021	0.001	0.062 ✔	1.333	H1-3+VT ✔
L2	143 - 138 (2)	0.009	0.175	0.000	0.041	0.003	0.185 ✔	1.333	H1-3+VT ✔
L3	138 - 133 (3)	0.009	0.285	0.000	0.041	0.003	0.295 ✔	1.333	H1-3+VT ✔
L4	133 - 128 (4)	0.010	0.383	0.000	0.041	0.002	0.393 ✔	1.333	H1-3+VT ✔
L5	128 - 123 (5)	0.013	0.518	0.000	0.063	0.002	0.532 ✔	1.333	H1-3+VT ✔
L6	123 - 116 (6)	0.013	0.608	0.000	0.063	0.002	0.622 ✔	1.333	H1-3+VT ✔
L7	116 - 114.75 (7)	0.012	0.663	0.000	0.055	0.002	0.677 ✔	1.333	H1-3+VT ✔
L8	114.75 - 109.75 (8)	0.013	0.767	0.000	0.057	0.002	0.781 ✔	1.333	H1-3+VT ✔
L9	109.75 - 104.75 (9)	0.016	0.895	0.000	0.069	0.003	0.913 ✔	1.333	H1-3+VT ✔
L10	104.75 - 99.75 (10)	0.016	1.010	0.000	0.068	0.003	1.028 ✔	1.333	H1-3+VT ✔

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L11	99.75 - 94.75 (11)	0.017	1.113	0.000	0.067	0.003	1.131 ✔	1.333	H1-3+VT ✔
L12	94.75 - 93.5 (12)	0.017	1.137	0.000	0.067	0.003	1.155 ✔	1.333	H1-3+VT ✔
L13	93.5 - 93.25 (13)	0.010	0.663	0.000	0.039	0.002	0.673 ✔	1.333	H1-3+VT ✔
L14	93.25 - 88.25 (14)	0.010	0.725	0.000	0.039	0.002	0.736 ✔	1.333	H1-3+VT ✔
L15	88.25 - 83.25 (15)	0.010	0.784	0.000	0.039	0.002	0.795 ✔	1.333	H1-3+VT ✔
L16	83.25 - 74.75 (16)	0.011	0.818	0.000	0.040	0.001	0.829 ✔	1.333	H1-3+VT ✔
L17	74.75 - 74.5 (17)	0.010	0.775	0.000	0.035	0.001	0.785 ✔	1.333	H1-3+VT ✔
L18	74.5 - 69.5 (18)	0.011	0.830	0.000	0.036	0.001	0.841 ✔	1.333	H1-3+VT ✔
L19	69.5 - 64.5 (19)	0.011	0.863	0.000	0.036	0.001	0.874 ✔	1.333	H1-3+VT ✔
L20	64.5 - 60.5 (20)	0.011	0.898	0.000	0.036	0.001	0.910 ✔	1.333	H1-3+VT ✔
L21	60.5 - 60.25 (21)	0.010	0.807	0.000	0.032	0.001	0.817 ✔	1.333	H1-3+VT ✔
L22	60.25 - 55.25 (22)	0.010	0.832	0.000	0.032	0.001	0.842 ✔	1.333	H1-3+VT ✔
L23	55.25 - 50.25 (23)	0.011	0.874	0.000	0.032	0.000	0.886 ✔	1.333	H1-3+VT ✔
L24	50.25 - 45.25 (24)	0.011	0.896	0.000	0.032	0.000	0.907 ✔	1.333	H1-3+VT ✔
L25	45.25 - 39.5 (25)	0.011	0.897	0.000	0.032	0.000	0.908 ✔	1.333	H1-3+VT ✔
L26	39.5 - 38.5 (26)	0.011	0.849	0.000	0.029	0.000	0.861 ✔	1.333	H1-3+VT ✔
L27	38.5 - 35.5 (27)	0.011	0.859	0.000	0.029	0.000	0.870 ✔	1.333	H1-3+VT ✔
L28	35.5 - 35.25 (28)	0.011	0.859	0.000	0.029	0.000	0.871 ✔	1.333	H1-3+VT ✔
L29	35.25 - 31.75 (29)	0.011	0.870	0.000	0.029	0.000	0.881 ✔	1.333	H1-3+VT ✔
L30	31.75 - 31.5 (30)	0.009	0.697	0.000	0.023	0.000	0.707 ✔	1.333	H1-3+VT ✔
L31	31.5 - 28.25 (31)	0.009	0.704	0.000	0.023	0.000	0.714 ✔	1.333	H1-3+VT ✔
L32	28.25 - 28 (32)	0.012	0.939	0.000	0.031	0.000	0.952 ✔	1.333	H1-3+VT ✔
L33	28 - 23 (33)	0.013	0.953	0.000	0.030	0.000	0.966 ✔	1.333	H1-3+VT ✔
L34	23 - 18 (34)	0.013	0.987	0.000	0.031	0.000	1.001 ✔	1.333	H1-3+VT ✔
L35	18 - 13 (35)	0.014	0.999	0.000	0.031	0.000	1.013 ✔	1.333	H1-3+VT ✔
L36	13 - 8 (36)	0.014	1.009	0.000	0.030	0.000	1.024 ✔	1.333	H1-3+VT ✔

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L37	8 - 3 (37)	0.014	1.019	0.000	0.030	0.000	1.033 ✔	1.333	H1-3+VT ✔
L38	3 - 0 (38)	0.015	1.036	0.000	0.030	0.000	1.051 ✔	1.333	H1-3+VT ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	148 - 143	Pole	TP24.9752x24x0.2188	1	-3.19	*	4.6%	Pass(1)
L2	143 - 138	Pole	TP25.9503x24.9752x0.2188	2	-6.43	*	13.8%	Pass(1)
L3	138 - 133	Pole	TP26.9255x25.9503x0.2188	3	-6.83	*	22.1%	Pass(1)
L4	133 - 128	Pole	TP27.9006x26.9255x0.2188	4	-7.25	*	29.5%	Pass(1)
L5	128 - 123	Pole	TP28.8758x27.9006x0.2188	5	-10.10	*	39.8%	Pass(1)
L6	123 - 116	Pole	TP30.241x28.8758x0.2188	6	-10.44	*	46.5%	Pass(1)
L7	116 - 114.75	Pole	TP30.0471x29.0721x0.25	7	-11.28	*	50.7%	Pass(1)
L8	114.75 - 109.75	Pole	TP31.0221x30.0471x0.25	8	-12.40	*	58.5%	Pass(1)
L9	109.75 - 104.75	Pole	TP31.9971x31.0221x0.25	9	-15.87	*	68.3%	Pass(1)
L10	104.75 - 99.75	Pole	TP32.9721x31.9971x0.25	10	-16.58	*	77.0%	Pass(1)
L11	99.75 - 94.75	Pole	TP33.9471x32.9721x0.25	11	-17.32	*	84.7%	Pass(1)
L12	94.75 - 93.5	Pole	TP34.1908x33.9471x0.25	12	-17.50	*	86.5%	Pass(1)
L13	93.5 - 93.25	Pole	TP34.2396x34.1908x0.4375	13	-17.57	*	64.3%	Pass(1)
L14	93.25 - 88.25	Pole	TP35.2145x34.2396x0.4313	14	-18.57	*	69.1%	Pass(1)
L15	88.25 - 83.25	Pole	TP36.1895x35.2145x0.425	15	-19.61	*	74.4%	Pass(1)
L16	83.25 - 74.75	Pole	TP37.847x36.1895x0.425	16	-20.56	*	78.3%	Pass(1)
L17	74.75 - 74.5	Pole	TP37.3959x36.4208x0.4875	17	-22.51	*	74.2%	Pass(1)
L18	74.5 - 69.5	Pole	TP38.3711x37.3959x0.475	18	-23.77	*	78.2%	Pass(1)
L19	69.5 - 64.5	Pole	TP39.3462x38.3711x0.475	19	-25.00	*	82.0%	Pass(1)
L20	64.5 - 60.5	Pole	TP40.1264x39.3462x0.4688	20	-26.00	*	86.2%	Pass(1)
L21	60.5 - 60.25	Pole	TP40.1751x40.1264x0.525	21	-26.07	*	76.3%	Pass(1)
L22	60.25 - 55.25	Pole	TP41.1503x40.1751x0.525	22	-27.43	*	78.2%	Pass(1)
L23	55.25 - 50.25	Pole	TP42.1254x41.1503x0.5125	23	-29.02	*	81.1%	Pass(1)
L24	50.25 - 45.25	Pole	TP43.1006x42.1254x0.5125	24	-30.49	*	83.9%	Pass(1)
L25	45.25 - 39.5	Pole	TP44.222x43.1006x0.5125	25	-30.57	*	84.0%	Pass(1)
L26	39.5 - 38.5	Pole	TP43.7919x42.5243x0.575	26	-33.81	*	79.7%	Pass(1)
L27	38.5 - 35.5	Pole	TP44.377x43.7919x0.575	27	-34.75	*	82.3%	Pass(1)
L28	35.5 - 35.25	Pole	TP44.4257x44.377x0.575	28	-34.84	*	80.9%	Pass(1)
L29	35.25 - 31.75	Pole	TP45.1083x44.4257x0.575	29	-35.98	*	82.3%	Pass(1)
L30	31.75 - 31.5	Pole	TP45.157x45.1083x0.725	30	-36.09	*	67.7%	Pass(1)
L31	31.5 - 28.25	Pole	TP45.7908x45.157x0.725	31	-37.38	*	68.8%	Pass(1)
L32	28.25 - 28	Pole	TP45.8396x45.7908x0.5375	32	-37.47	*	77.6%	Pass(1)
L33	28 - 23	Pole	TP46.8147x45.8396x0.5375	33	-39.23	*	79.4%	Pass(1)
L34	23 - 18	Pole	TP47.7897x46.8147x0.525	34	-41.02	*	81.0%	Pass(1)
L35	18 - 13	Pole	TP48.7648x47.7897x0.525	35	-43.03	*	82.5%	Pass(1)
L36	13 - 8	Pole	TP49.7399x48.7648x0.525	36	-44.86	*	84.0%	Pass(1)
L37	8 - 3	Pole	TP50.715x49.7399x0.525	37	-46.51	*	85.3%	Pass(1)
L38	3 - 0	Pole	TP51.3x50.715x0.5188	38	-47.51	*	86.5%	Pass(1)

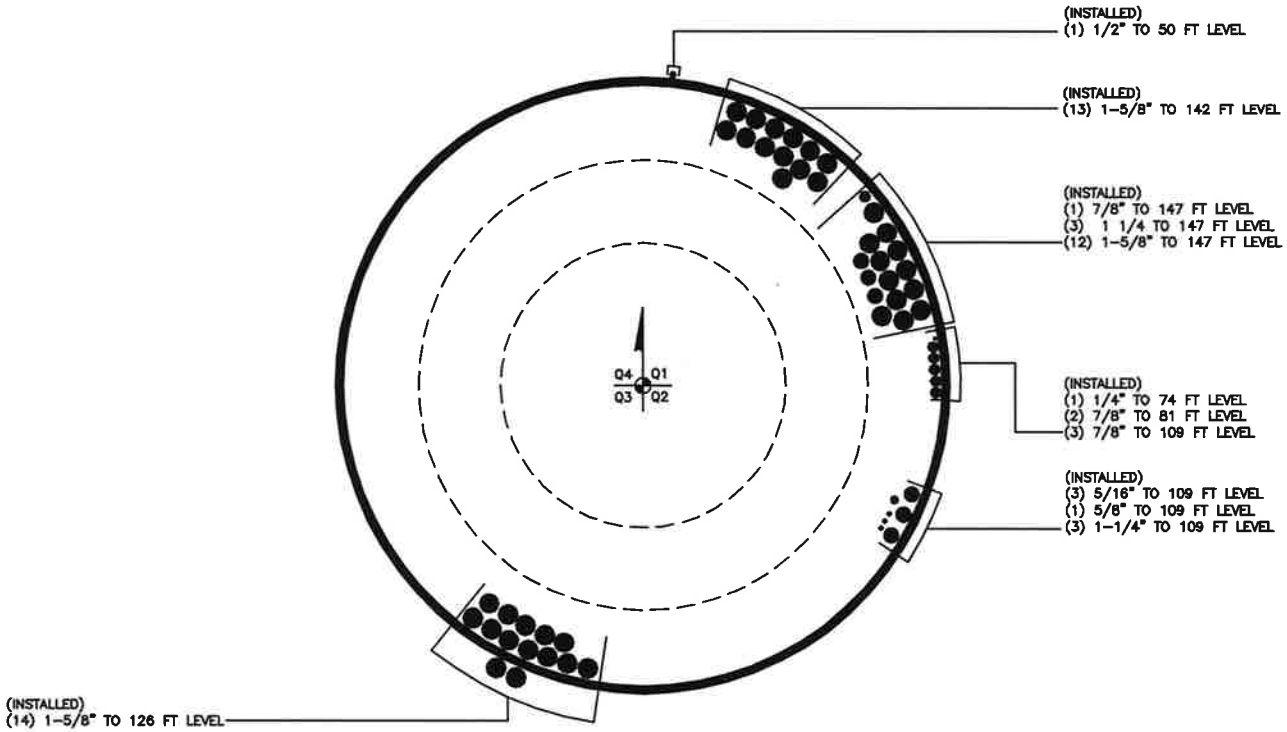
Summary	ELC:	Existing/Proposed (LC5)
Pole (L12)	86.5	Pass(1)
Rating =	86.5	Pass(1)

Notes:
1) Capacities have been modified to consider tower modifications.

Program Version 6.1.4.1 - 12/17/2013 File:F:/TIE/Tieschia/Crown Projects/855662 WINDSORCENTRAL/Structural/tnx/Modified_855662.eri

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 855662 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Additional Calculations

CCIpole

per TIA-222- F

Site BU: 855662

Work Order: 1124543

CROWN CASTLE

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	148	32	3.75	18	24	30.241	0.21875	0.875	A607-65
2	119.75	45	4.75	18	29.07	37.847	0.25	1	A607-65
3	79.5	40	5.5	18	36.42	44.222	0.3125	1.25	A607-65
4	45	45	0	18	42.52	51.3	0.375	1.5	A607-65

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	31.75	plate	CCI-SFP-085125	2								X					X					
2	0	35.5	plate	CCI-SFP-085125	1																		X
3	28.25	60.5	plate	CCI-SFP-065125	2						X						X						
4	35.5	60.5	plate	CCI-SFP-065125	1																		X
5	60.5	93.5	plate	CCI-SFP-060100	3						X						X						X
6																							
7																							
8																							
9																							
10																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in^2)	Bolt Hole Size (in)	Reinforcement Material
1	8.5	1.25	10.625	0.625	45.000	45.000	17.000	9.063	1.1875	A572-65
2	8.5	1.25	10.625	0.625	45.000	45.000	17.000	9.063	1.1875	A572-65
3	6.5	1.25	8.125	0.625	33.000	33.000	19.000	6.563	1.1875	A572-65
4	6.5	1.25	8.125	0.625	33.000	33.000	19.000	6.563	1.1875	A572-65
5	6	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
148 - 143	Pole	TP24.975x24x0.2188	Pole	4.6%	Pass
143 - 138	Pole	TP25.95x24.975x0.2188	Pole	13.8%	Pass
138 - 133	Pole	TP26.925x25.95x0.2188	Pole	22.1%	Pass
133 - 128	Pole	TP27.901x26.925x0.2188	Pole	29.5%	Pass
128 - 123	Pole	TP28.876x27.901x0.2188	Pole	39.8%	Pass
123 - 119.75	Pole	TP30.241x28.876x0.2188	Pole	46.5%	Pass
119.75 - 114.75	Pole	TP30.047x29.072x0.25	Pole	50.7%	Pass
114.75 - 109.75	Pole	TP31.022x30.047x0.25	Pole	58.5%	Pass
109.75 - 104.75	Pole	TP31.997x31.022x0.25	Pole	68.3%	Pass
104.75 - 99.75	Pole	TP32.972x31.997x0.25	Pole	77.0%	Pass
99.75 - 94.75	Pole	TP33.947x32.972x0.25	Pole	84.7%	Pass
94.75 - 93.5	Pole	TP34.191x33.947x0.25	Pole	86.5%	Pass
93.5 - 93.25	Pole + Reinf.	TP34.24x34.191x0.4375	Reinf. 5 Bolt Shear	64.3%	Pass
93.25 - 88.25	Pole + Reinf.	TP35.215x34.24x0.4313	Reinf. 5 Compression	69.1%	Pass
88.25 - 83.25	Pole + Reinf.	TP36.19x35.215x0.425	Reinf. 5 Compression	74.4%	Pass
83.25 - 79.5	Pole + Reinf.	TP37.847x36.19x0.425	Reinf. 5 Compression	78.3%	Pass
79.5 - 74.5	Pole + Reinf.	TP37.396x36.421x0.4875	Reinf. 5 Compression	74.2%	Pass
74.5 - 69.5	Pole + Reinf.	TP38.371x37.396x0.475	Reinf. 5 Compression	78.2%	Pass
69.5 - 64.5	Pole + Reinf.	TP39.346x38.371x0.475	Reinf. 5 Compression	82.0%	Pass
64.5 - 60.5	Pole + Reinf.	TP40.126x39.346x0.4688	Reinf. 5 Bolt Shear	86.2%	Pass
60.5 - 60.25	Pole + Reinf.	TP40.175x40.126x0.525	Reinf. 3 Bolt Shear	76.3%	Pass
60.25 - 55.25	Pole + Reinf.	TP41.15x40.175x0.525	Reinf. 3 Compression	78.2%	Pass
55.25 - 50.25	Pole + Reinf.	TP42.125x41.15x0.5125	Reinf. 3 Compression	81.1%	Pass
50.25 - 45.25	Pole + Reinf.	TP43.101x42.125x0.5125	Reinf. 3 Compression	83.9%	Pass
45.25 - 45	Pole + Reinf.	TP44.222x43.101x0.5125	Reinf. 3 Compression	84.0%	Pass
45 - 38.5	Pole + Reinf.	TP43.792x42.524x0.575	Reinf. 3 Compression	79.7%	Pass
38.5 - 35.5	Pole + Reinf.	TP44.377x43.792x0.575	Reinf. 4 Bolt Shear	82.3%	Pass
35.5 - 35.25	Pole + Reinf.	TP44.426x44.377x0.575	Reinf. 3 Compression	80.9%	Pass
35.25 - 31.75	Pole + Reinf.	TP45.108x44.426x0.575	Reinf. 3 Compression	82.3%	Pass
31.75 - 31.5	Pole + Reinf.	TP45.157x45.108x0.725	Reinf. 2 Compression	67.7%	Pass
31.5 - 28.25	Pole + Reinf.	TP45.791x45.157x0.725	Reinf. 2 Compression	68.8%	Pass
28.25 - 28	Pole + Reinf.	TP45.84x45.791x0.5375	Reinf. 1 Compression	77.6%	Pass
28 - 23	Pole + Reinf.	TP46.815x45.84x0.5375	Reinf. 1 Compression	79.4%	Pass
23 - 18	Pole + Reinf.	TP47.79x46.815x0.525	Reinf. 1 Compression	81.0%	Pass
18 - 13	Pole + Reinf.	TP48.765x47.79x0.525	Reinf. 1 Compression	82.5%	Pass
13 - 8	Pole + Reinf.	TP49.74x48.765x0.525	Reinf. 1 Compression	84.0%	Pass
8 - 3	Pole + Reinf.	TP50.715x49.74x0.525	Reinf. 1 Compression	85.3%	Pass
3 - 0	Pole + Reinf.	TP51.3x50.715x0.5188	Reinf. 1 Bolt Shear	86.5%	Pass
				Summary	
			Pole	86.5%	Pass
			Reinforcement	86.5%	Pass
			Overall	86.5%	Pass

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F /G

Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *855662*
Site Name: *WINDSORCENTRAL*
App #: *312324 Rev. 0*

Anchor Rod Data		
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	58	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	57	in
Thick:	2.75	in
Grade:	55	ksi
Clip Distance:	6	in

Stiffener Data (Welding at both sides)		
Configuration:	Unstiffened	
Weld Type:		**
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	51.3	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round

Stress Increase Factor		
ASD ASIF:	1.333	

Base Reactions		
TIA Revision:	F	
Unfactored Moment, M:	3519	ft-kips
Unfactored Axial, P:	48	kips
Unfactored Shear, V:	33	kips

Anchor Rod Results

TIA F --> Maximum Rod Tension	179.0 Kips
Allowable Tension:	195.0 Kips
Anchor Rod Stress Ratio:	91.8% Pass

Base Plate Results	Flexural Check
Base Plate Stress:	50.5 ksi
Allowable PL Bending Stress:	55.0 ksi
Base Plate Stress Ratio:	91.9% Pass

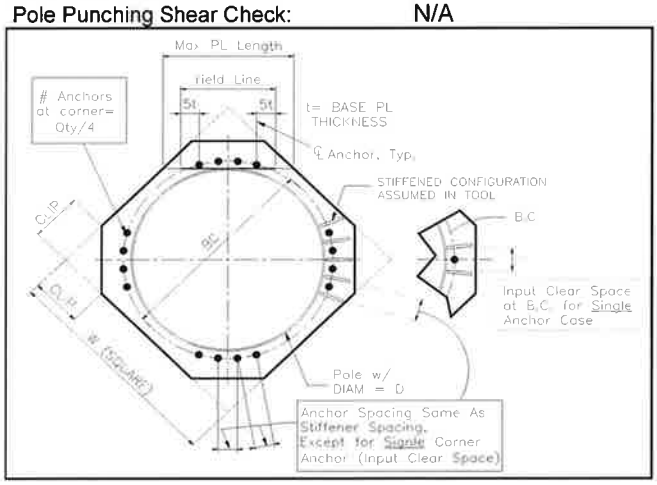
PL Ref. Data
Yield Line (in): 29.31
Max PL Length: 29.31

N/A - Unstiffened
Stiffener Results

Horizontal Weld :	N/A
Vertical Weld:	N/A
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	N/A
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	N/A
Plate Comp. (AISC Bracket):	N/A

Pole Results

Pole Punching Shear Check:	N/A



** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Project Title: BU# 855662 WINDSORCENTRAL
Project Notes: 015-00428-00

Calculation Method: Full 8CD

******* I N P U T D A T A

Pier Properties

Diameter (ft)	Distance of Top of Pier above Ground (ft)	Concrete Strength (ksi)	Steel Yield Strength (ksi)
7.00	0.50	3.00	60.00

Soil Properties

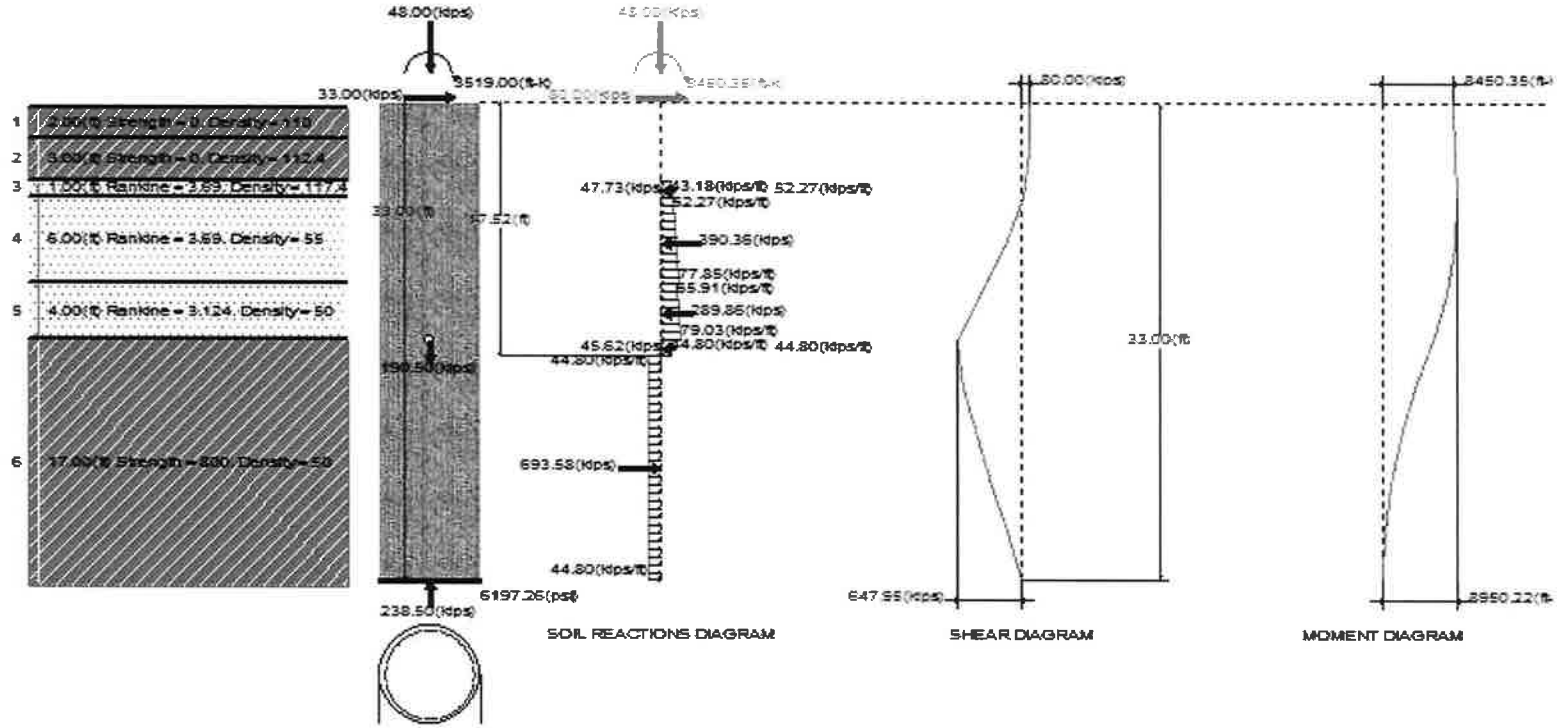
Layer	Type	Thickness (ft)	Depth at Top of Layer (ft)	Density (lbs/ft^3)	CU (psf)	KP	PHI (deg)
1	Clay	2.00	0.00	110.0			
2	Clay	3.00	2.00	112.4			
3	Sand	1.00	5.00	117.4		3.690	35.00
4	Sand	6.00	6.00	55.0		3.690	35.00
5	Sand	4.00	12.00	50.0		3.124	31.00
6	Clay	17.00	16.00	50.0	800.0		

Design (Factored) Loads at Top of Pier

Moment	Axial Load	Shear Load	Additional Safety Factor Against

(ft-k)	(kips)	(kips)	Soil Failure
3519.0	48.0	33.00	2.40

******* R E S U L T S



Calculated Pier Properties

Length (ft)	Weight (kips)	Pressure Due To Axial Load (psf)	Pressure Due To Weight (psf)	Total End-Bearing Pressure (psf)
33.000	190.498	1247.3	4950.0	6197.3

Ultimate Resisting Forces Along Pier

Type	Distance of Top of Layer to Top of Pier (ft)	Thickness (ft)	Density (lbs/ft^3)	CU (psf)	KP	Force (kips)	Arm (ft)
Clay	0.50	2.00	110.0			0.00	1.50
Clay	2.50	3.00	112.4			0.00	4.00
Sand	5.50	1.00	117.4		3.690	47.73	6.02
Sand	6.50	6.00	55.0		3.690	390.36	9.70
Sand	12.50	4.00	50.0		3.124	289.86	14.56
Clay	16.50	1.02	50.0	800.0		45.62	17.01
Clay	17.52	15.48	50.0	800.0		-693.58	25.26

Shear and Moments Along Pier

Distance below Top of Pier (ft)	Shear (with Safety Factor) (kips)	Moment (with Safety Factor) (ft-k)	Shear (without Safety Factor) (kips)	Moment (without Safety Factor) (ft-k)
0.00	80.0	8450.4	33.3	3521.0
3.30	80.0	8714.4	33.3	3631.0
6.60	27.0	8950.2	11.3	3729.3
9.90	-170.1	8726.9	-70.9	3636.2
13.20	-405.0	7779.5	-168.8	3241.5
16.50	-648.0	6051.9	-270.0	2521.6
19.80	-591.4	3903.0	-246.4	1626.2
23.10	-443.5	2195.4	-184.8	914.8
26.40	-295.7	975.7	-123.2	406.6
29.70	-147.8	243.9	-61.6	101.6
33.00	0.0	0.0	0.0	0.0

Reinforcement and Capacity

Total Reinforcement Percent	Reinforcement Area (in^2)	Usable Axial Capacity (kips)	Usable Moment Capacity (ft-k)
0.44	24.38	48.0	3784.3

US Standard Re-Bars (Select one of the following)

Quantity	Name	Area (in^2)	Diameter (in)	Spacing (in)
122	#4	0.20	0.500	1.91
79	#5	0.31	0.625	2.94
56	#6	0.44	0.750	4.15
41	#7	0.60	0.875	5.67
31	#8	0.79	1.000	7.50
25	#9	1.00	1.128	9.30
20	#10	1.27	1.270	11.62
16	#11	1.56	1.410	14.53
11	#14	2.25	1.693	21.13

Moment Capacity of Drilled Concrete Shaft (Caisson) for TIA Rev F or G

Note: Shaft assumed to have ties, not spiral, transverse reinforcing

Site Data

BU#: *855662*
Site Name: *WINDSORCENTRAL*
App #: *312324 Rev. 0*

Enter Load Factors Below:		
For M (WL)	1.3	<---- Enter Factor
For P (DL)	1.3	<---- Enter Factor

Pier Properties

Concrete:

Pier Diameter =	7.0	ft
Concrete Area =	5541.8	in^2

Reinforcement:

Clear Cover to **Tie**=	4.00	in
Horiz. **Tie** Bar Size=	5	
Vert. Cage Diameter =	6.11	ft
Vert. Cage Diameter =	73.34	in
Vertical Bar Size =	11	
Bar Diameter =	1.41	in
Bar Area =	1.56	in^2
Number of Bars =	20	
As Total=	31.2	in^2
A s/ Aconc, Rho:	0.0056	0.56%

ACI 10.5 , ACI 21.10.4, and IBC 1810.
Min As for Flexural, Tension Controlled, Shafts:
(3)*(Sqrt(f'c)/Fy: 0.0027
200 / Fy: 0.0033

Minimum Rho Check:

Actual Req'd Min. Rho:	0.33%	Flexural
Provided Rho:	0.56%	OK

Maximum Shaft Superimposed Forces

TIA Revision:	F	
Max. Service Shaft M:	3731.86	ft-kips (* Note)
Max. Service Shaft P:	48	kips
Max Axial Force Type:	Comp.	

(*) Note: Max Shaft Superimposed Moment does not necessarily equal to the shaft top reaction moment

Load Factor	Shaft Factored Loads		
1.30	Mu:	4851.418	ft-kips
1.30	Pu:	62.4	kips

Material Properties

Concrete Comp. strength, f'c =	3000	psi
Reinforcement yield strength, Fy =	60	ksi
Reinforcing Modulus of Elasticity, E =	29000	ksi
Reinforcement yield strain =	0.00207	
Limiting compressive strain =	0.003	

ACI 318 Code

Select Analysis ACI Code= 2002

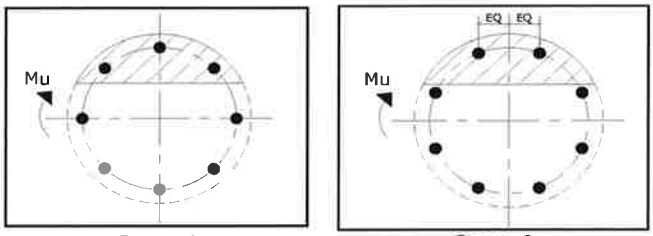
Seismic Properties

Seismic Design Category = B
Seismic Risk = **Low**

Solve (Run) <-- Press Upon Completing All Input

Results:

Governing Orientation Case: **1**



Case 1 Case 2

Dist. From Edge to Neutral Axis: **13.73** in
Extreme Steel Strain, εt: **0.0142**
εt > 0.0050, Tension Controlled
Reduction Factor,φ: **0.900**

Ref. Shaft Max Axial Capacities, ϕ Max(Pn or Tn):		
Max Pu = (φ=0.65) Pn.		
Pn per ACI 318 (10-2)	8280.46	kips
at Mu=(ϕ=0.65)Mn=	5016.69	ft-kips
Max Tu, (φ=0.9) Tn =	1684.8	kips
at Mu=ϕ=(0.90)Mn=	0.00	ft-kips

Output Note: Negative Pu=Tension

For Axial Compression, φ Pn = Pu:	62.40	kips
Drilled Shaft Moment Capacity, φMn:	**4978.94**	ft-kips
Drilled Shaft Superimposed Mu:	**4851.42**	ft-kips

(Mu/φMn, Drilled Shaft Flexure CSR:	**97.4%**

SSOE™

Caisson Analysis (F)
855662 WINDSORCENTRAL
015-00428-00

Moment =	3519.00	k*ft
Axial =	48.00	k
Shear =	33.00	k

Foundation Data		
Diameter =	7	ft
Length =	33	ft
Rebar Size =	#11	
# of bars =	20	
Tie Size =	#5	
Clear Cover =	4	in
f'c =	3	ksi

Soil Capacity From Caisson Program Using Additional Safety Factors

Additional Safety Factor from Caisson = 2.4

$$\text{Capacity} = \frac{\text{Safety Factor of 2}}{\text{Additional Safety Factor}} = \frac{2.00}{2.40} = 83.3\% \quad \textbf{O.K.}$$