STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

May 31, 2019

Kyle Richers
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, NJ 07430

RE: **EM-SPRINT-158-190417** – Sprint notice of intent to modify an existing telecommunications facility located at 515 Post Road East, Westport, Connecticut.

Dear Mr. Richers:

The Connecticut Siting Council (Council) is in receipt of your correspondence of May 23, 2019 submitted in response to the Council's April 18, 2019 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

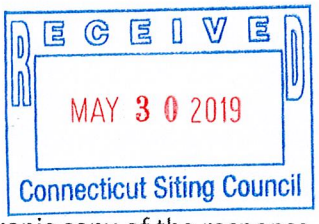
MAB/IN/emr

file copy

Kyle Richers

From: Nwankwo, Ifeanyi <Ifeanyi.Nwankwo@ct.gov>
Sent: Thursday, May 23, 2019 11:16 AM
To: 'Kyle Richers'
Cc: CSC-DL Siting Council; jshappy@transcendwireless.com
Subject: RE: Council Incomplete Letter for EM-SPRINT-158-190417-PostRoadEast-Westport

Flag Status: Flagged



Hi Kyle

Good Morning, and thanks for your email. The Council requires one hard copy and one electronic copy of the response to the incomplete request for exempt modifications.

Please kindly provide one hard copy each of the response for both the 515 Post Road East, Westport and Reef Road, Fairfield incomplete requests.

Thank you.

Best Regards
Ifeanyichukwu Nwankwo
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051
P: 860.827.2941 | F: 860.827.2950 | E: Ifeanyi.Nwankwo@ct.gov

www.ct.gov/csc

Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

From: Kyle Richers [mailto:krichers@transcendwireless.com]
Sent: Thursday, May 23, 2019 9:14 AM
To: Robidoux, Evan
Cc: CSC-DL Siting Council; jshappy@transcendwireless.com
Subject: RE: Council Incomplete Letter for EM-SPRINT-158-190417-PostRoadEast-Westport

Good Morning,

Please find the attached revised structural analysis, per the comments received from the Council on 4/24.

RAMAKER & ASSOCIATES, INC.
100% EMPLOYEE-OWNED

May 13, 2019

Mike Kithcart
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, NJ 07430

Ramaker & Associates, Inc.
855 Community Drive
Sauk City, WI 53583

SUBJECT: **STRUCTURAL ASSESSMENT**
148-FOOT MONOPOLE TOWER

CARRIER: **SPRINT**

SITE: **CT03XC355**
515 POST ROAD EAST
WESTPORT, FAIRFIELD COUNTY, CONNECTICUT 06880
RAMAKER & ASSOCIATES PROJECT NUMBER: 39392

RESULTS:	**TOWER:**	**64.7%**	**PASS**
	FOUNDATION:	**51.0%**	**PASS**

Dear Mike Kithcart:

Ramaker & Associates, Inc. (RAMAKER) respectfully submits this structural assessment for the above-mentioned site. The purpose of this report is to determine the structural integrity of the existing structure with the existing and proposed loading. Engineering recommendations regarding the analysis results are provided in the following pages.

RAMAKER developed a finite element model of the tower using tnxTower analysis software. All information contained herein is valid only for the described structure configuration and loading conditions. RAMAKER reserves the right to modify our recommendations should alterations to the tower loading occur.

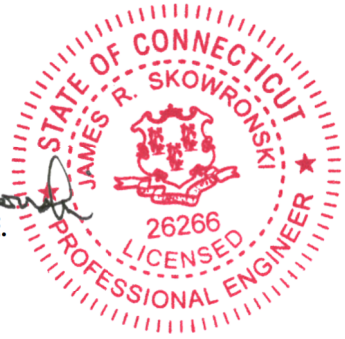
If you have any questions or comments, please do not hesitate to contact our office.

Sincerely,

RAMAKER & ASSOCIATES, INC.

Thomas E. Moore
Project Engineer

James R. Skowronski, P.E.
Supervising Engineer



ANALYSIS CRITERIA

State Building Code	2018 CT State Building Code
Adopted Building Code	2015 IBC
Referenced Standard	TIA-222-G
Risk Category	III
Ultimate Design Wind Speed, V_{ult}	130 mph (3 sec. gust)
Nominal Design Wind Speed, V_{asd}	101 mph (3 sec. gust)
Design Wind Speed w/ Ice	50 mph (3 sec. gust)
Ice Thickness	3/4 inch
Exposure Category	B
Topographic Feature	None

SUPPORTING DOCUMENTATION

- Structural analysis by Destek, job number 1829074, dated 8/24/18
- Structural analysis by Black & Veatch, job number 182896, dated 7/5/16
- Structural analysis by FDH Velocitel, job number 15TGPG1400, dated 12/7/15
- Structural analysis by Black & Veatch, job number 182896, dated 9/30/15
- Structural analysis by PJF, job number 37513-1197.003.7805, dated 7/7/14
- Structural analysis by PJF, job number 32910-0089 Final R1, dated 4/13/11
- Construction drawings by RAMAKER, project number 39392
- Site visit(s) conducted by RAMAKER
- Other pertinent data procured or assumed by RAMAKER during site due diligence activities

TOWER LOADING

RAMAKER understands that the loading to be used for this analysis will consist of the antenna equipment, mount, and cable configurations as shown in the following chart:

Elevation	Appurtenance	Mount	Coax	Owner	Status
148	**(3) RFS APXVSPP18-C-A20**	(1) Platform **w/Handrail & Kickers**	(3) Hybrid (1) 1-1/4 (6) 5/16 (2) 1/2 (2) Conduit **(1) Hybrid**	Sprint	**Remove**
	(3) Argus LLPX310R				
	(3) CW RRH				
	(1) Decibel DB420-B				Existing
	(3) ALU 800MHz 2x50W RRH				
	(2) Andrew VHLP800-11				
	(3) Commscope NNVV-65B-R4				**Proposed**
	(3) Nokia AAHC				
	(3) ALU 800MHz 2x50W RRH				
	(3) ALU 1900MHz 4x45W RRH	(1) Collar Mount			Existing
144	(1) Andrew VHLP2.5-10W	(1) Pipe Mount	(1) EW90	--	Existing
120	(3) Powerwave 7770.00	(1) Platform w/Handrail	(12) 1-5/8 (1) 3/8 (2) 5/8	AT&T	Existing
	(3) Quintel QS66512-2				
	(3) CCI HPA-65R-BUU-H6				
	(6) Powerwave LGP214nn				
	(3) Ericsson RRUS-11				
	(3) Ericsson RRUS-32				
	(3) Ericsson RRUS-32 B2				
	(3) Ericsson RRUS-32 B66				
	(2) Raycap DC6-48-60-18-8F				
96	(1) RFS PD220	(1) Low Profile Platform	(8) 7/8 (5) 1/2	--	Existing
	(1) Decibel DB205-A				
	(1) Decibel DB224				
	(1) Decibel DB420-B				
	(1) Andrew DB806E-XT				
	(2) RFS PD1110				
	(2) RFS PD201-1				
	(3) RFS PD83-1				
82	(3) RFS APXV18-206516S-C-A20	(1) Low Profile Platform	(18) 7/8 (6) 1-1/4	--	Existing
	(9) EMS RR90-17-00DPL2				
	(6) Andrew ETW190VS12UB				
	(3) RFS ATMAA1412D-1A20				
72	(3) Kathrein 800 10504	(3) Pipe Mount	(6) 1-5/8	--	Existing
53	(2) Radial Larsen BSA150B	(1) Standoff	(2) 1/2	--	Existing
50	(1) BULLET III		(1) 1/2	--	Existing

TOWER RESULTS

The maximum tower member stress capacities under the loading conditions previously described are as follows:

Component Type	Percent Capacity	Pass/Fail
Pole (overall)	64.7	Pass
Reinforcement (overall)	63.7	Pass
Anchor Rod	56.9	Pass
Stiffener	38.7	Pass
Base Plate	16.2	Pass
RATING	**64.7**	**PASS**

Results of the analysis show that the existing tower will be stressed to a maximum of 64.7 percent of capacity. Therefore, the existing tower will pass the TIA-222-G analysis requirements under proposed loading conditions.

FOUNDATION RESULTS

The maximum foundation stress capacities are as follows:

Component Type	Percent Capacity	Pass/Fail
Caisson - Soil Interaction	51.0	Pass
Caisson - Structural	40.9	Pass
RATING	**51.0**	**PASS**

The foundations were analyzed utilizing the structural reports referenced above. Results of the analysis show that the existing foundation will be stressed to a maximum of 51.0 percent of capacity. Therefore, the existing foundation will pass the TIA-222-G analysis requirements under proposed loading conditions.

LIMITATIONS

The recommendations contained within this report were developed using the supporting documentation as previously described. All recommendations pertain only to the proposed antenna installation activities as described in this report. RAMAKER assumes no responsibility for failures caused by factors beyond our control. These include but are not limited to the following:

- Missing, corroding, and/or deteriorating members
- Improper manufacturing and/or construction
- Improper maintenance

RAMAKER assumes no responsibility for modifications completed prior to or hereafter in which RAMAKER was not directly involved. These modifications include but are not limited to the following:

- Replacing or strengthening bracing members
- Reinforcing or extending vertical members
- Installing or removing antenna mounting gates or side arms
- Changing loading configurations

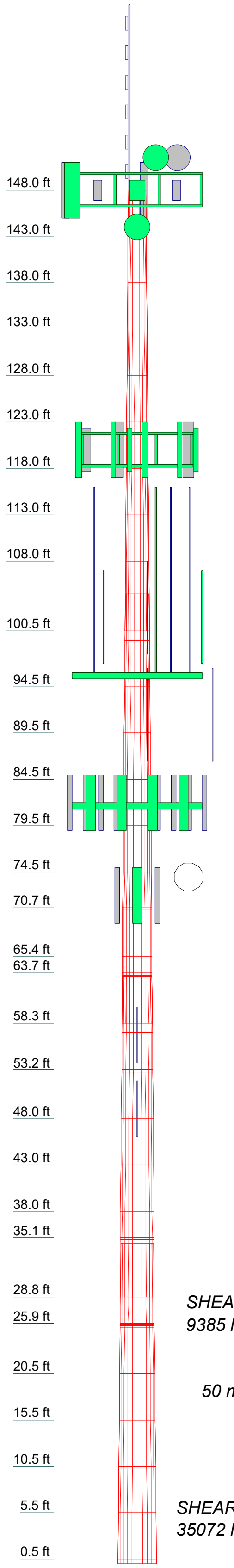
The tower owner is responsible for verifying that the existing loading on the structure is consistent with the loading applied to the structure within this report. If there is any information contrary to that contained herein, or if there are any defects arising from the original design, material, fabrication and erection deficiencies, this report should be disregarded and RAMAKER should be contacted immediately. RAMAKER is not liable for any representation, recommendation, or conclusion not expressly stated herein.

This analysis pertains only to the tower structure, and no analyses or conclusions were made regarding the antenna and equipment mounting structure(s). Analysis and certification of the antenna and equipment mounting structure(s) is performed and submitted separately.

ATTACHMENTS

- Analysis Figures
- Analysis Calculations

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	5.00	12	0.2500		22.0000	23.0151	A607-60	304.8
2	5.00	12	0.2500		23.0151	24.0302		318.7
3	5.00	12	0.2500		24.0302	25.0452		332.6
4	5.00	12	0.2500		25.0452	26.0603		346.6
5	5.00	12	0.2500		26.0603	27.0753		360.5
6	5.00	12	0.2500		27.0753	28.0904		374.4
7	5.00	12	0.2500		28.0904	29.1054		388.3
8	5.00	12	0.2500		29.1054	30.1204		402.2
9	7.50	12	0.2500	4.00	30.1204	31.6430		629.3
10	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
11	5.00	12	0.3750		31.3460	32.3610		646.7
12	5.00	12	0.3750		32.3610	33.3761		667.6
13	5.00	12	0.3750		33.3761	34.3911		688.4
14	5.00	12	0.3750		34.3911	35.4061		709.3
15	5.00	12	0.3750		35.4061	36.4211		730.1
16	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
17	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
18	5.00	12	[illegible]		[illegible]	[illegible]		[illegible]
19	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
20	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
21	[illegible]	12	[illegible]	5.00	[illegible]	[illegible]		[illegible]
22	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
23	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
24	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
25	5.00	12	0.4375		[illegible]	[illegible]		961.4
26	5.00	12	0.4375		41.0552	42.0703		985.7
27	5.00	12	0.4375		42.0703	43.0854		1010.0
28	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
29	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
30	[illegible]	12	[illegible]	5.75	[illegible]	[illegible]		[illegible]
31–35	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
36	5.00	12	[illegible]		[illegible]	[illegible]		[illegible]
37	5.00	12	0.7375		45.7586	46.7736		1801.2
38	5.00	12	0.7375		46.7736	47.7885		1829.2
39	5.00	12	0.7250		47.7885	48.8035		1857.1
40	5.00	12	0.7250		48.8035	49.8185		1885.0
41	0.50	12	[illegible]		[illegible]	[illegible]		[illegible]
								29569



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB420-B	148	DC6-48-60-18-8F	120
6' x 2" Pipe Mount	148	DC6-48-60-18-8F	120
NNVV-65B-R4 w/Mount Pipe	148	4'x2" Pipe Mount	120
NNVV-65B-R4 w/Mount Pipe	148	4'x2" Pipe Mount	120
NNVV-65B-R4 w/Mount Pipe	148	Platform Mount [LP 301-1]	120
AAHC w/Mount Pipe	148	7770.00	120
AAHC w/Mount Pipe	148	7770.00	120
AAHC w/Mount Pipe	148	7770.00	120
800MHz 2x50W RRH	148	PD201-1	96
800MHz 2x50W RRH	148	PD83-1	96
800MHz 2x50W RRH	148	PD83-1	96
800MHz 2x50W RRH	148	PD83-1	96
800MHz 2x50W RRH	148	PD220	96
800MHz 2x50W RRH	148	DB205-A	96
1900MHz 4x45W RRH	148	DB224	96
1900MHz 4x45W RRH	148	DB806E-XT	96
1900MHz 4x45W RRH	148	DB420-B	96
(2) 6' x 2" Pipe Mount	148	(2) 6' x 2" Pipe Mount	96
(2) 6' x 2" Pipe Mount	148	(4) 6' x 2" Pipe Mount	96
(2) 6' x 2" Pipe Mount	148	(3) 6' x 2" Pipe Mount	96
Side Arm Mount [SO 102-3]	148	Platform Mount [LP 1201-1]	96
Miscellaneous [NA 510-1]	148	PD1110	96
Platform Mount [LP 1201-1]	148	PD1110	96
Miscellaneous [NA 509-3]	148	PD201-1	96
VHLP800-11	148	(3) RR90-17-00DPL2 w/Mount Pipe	82
VHLP800-11	148	(3) RR90-17-00DPL2 w/Mount Pipe	82
Pipe Mount [PM 601-1]	144	(3) RR90-17-00DPL2 w/Mount Pipe	82
VHLP2.5-10W	144	(2) ETW190VS12UB	82
QS66512-2	120	(2) ETW190VS12UB	82
QS66512-2	120	(2) ETW190VS12UB	82
QS66512-2	120	ATMAA1412D-1A20	82
HPA-65R-BUU-H6	120	ATMAA1412D-1A20	82
HPA-65R-BUU-H6	120	ATMAA1412D-1A20	82
HPA-65R-BUU-H6	120	Platform Mount [LP 1201-1]	82
(2) LGP214nn	120	APXV18-206516S-C-A20 w/Mount Pipe	82
(2) LGP214nn	120	APXV18-206516S-C-A20 w/Mount Pipe	82
(2) LGP214nn	120	APXV18-206516S-C-A20 w/Mount Pipe	82
RRUS-11	120	Side Arm Mount [SO 102-3]	72
RRUS-11	120	800 10504 w/Mount Pipe	72
RRUS-11	120	800 10504 w/Mount Pipe	72
RRUS-32	120	800 10504 w/Mount Pipe	72
RRUS-32	120	Side Arm Mount [SO 702-1]	53
RRUS-32	120	BSA150B	53
RRUS-32 B2	120	BSA150B	53
RRUS-32 B2	120	8'x2" Antenna Mount Pipe	53
RRUS-32 B2	120	BULLET III	50
RRUS-32 B66	120		
RRUS-32 B66	120		
RRUS-32 B66	120		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi			

ALL REACTIONS ARE FACTORED

AXIAL 98067 lb
SHEAR 9385 lb
MOMENT 99[illegible]
TORQUE 1680 lb-ft
50 mph WIND - 0.7500 in ICE

AXIAL 56228 lb
SHEAR 35072 lb
MOMENT 3426606 lb-ft
TORQUE 5942 lb-ft
REACTIONS - 101 mph WIND

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 101 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class III.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 64.9%

Ramaker & Associates, Inc
855 Community Drive
Sauk City, WI 53583
Phone: (608) 643-4100
FAX: (608) 643-7999

Job: **CT03XC355**			
Project: **39392**			
Client: Sprint	Drawn by: TEM	App'd:	
Code: TIA-222-G	Date: 05/13/19	Scale: NTS	
Path: I:\39300\39392\Structural\tnx\39392 rev1 CCI.eri		Dwg No. E-1	

Tower Input Data

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

Tower is located in Fairfield County, Connecticut.
ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
Basic wind speed of 101 mph.
Structure Class III.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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	12	22.0000	23.0151	0.2500	1.0000	A607-60

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
									(60 ksi)
L2	143.00-138.00	5.00	0.00	12	23.0151	24.0301	0.2500	1.0000	A607-60 (60 ksi)
L3	138.00-133.00	5.00	0.00	12	24.0301	25.0452	0.2500	1.0000	A607-60 (60 ksi)
L4	133.00-128.00	5.00	0.00	12	25.0452	26.0602	0.2500	1.0000	A607-60 (60 ksi)
L5	128.00-123.00	5.00	0.00	12	26.0602	27.0753	0.2500	1.0000	A607-60 (60 ksi)
L6	123.00-118.00	5.00	0.00	12	27.0753	28.0903	0.2500	1.0000	A607-60 (60 ksi)
L7	118.00-113.00	5.00	0.00	12	28.0903	29.1054	0.2500	1.0000	A607-60 (60 ksi)
L8	113.00-108.00	5.00	0.00	12	29.1054	30.1204	0.2500	1.0000	A607-60 (60 ksi)
L9	108.00-100.50	7.50	4.00	12	30.1204	31.6430	0.2500	1.0000	A607-60 (60 ksi)
L10	100.50-99.50	5.00	0.00	12	30.3310	31.3460	0.3750	1.5000	A607-60 (60 ksi)
L11	99.50-94.50	5.00	0.00	12	31.3460	32.3610	0.3750	1.5000	A607-60 (60 ksi)
L12	94.50-89.50	5.00	0.00	12	32.3610	33.3761	0.3750	1.5000	A607-60 (60 ksi)
L13	89.50-84.50	5.00	0.00	12	33.3761	34.3911	0.3750	1.5000	A607-60 (60 ksi)
L14	84.50-79.50	5.00	0.00	12	34.3911	35.4061	0.3750	1.5000	A607-60 (60 ksi)
L15	79.50-74.50	5.00	0.00	12	35.4061	36.4211	0.3750	1.5000	A607-60 (60 ksi)
L16	74.50-70.67	3.83	0.00	12	36.4211	37.1993	0.3750	1.5000	A607-60 (60 ksi)
L17	70.67-70.42	0.25	0.00	12	37.1993	37.2500	0.3750	1.5000	A607-60 (60 ksi)
L18	70.42-65.42	5.00	0.00	12	37.2500	38.2651	0.3750	1.5000	A607-60 (60 ksi)
L19	65.42-63.67	1.75	0.00	12	38.2651	38.6203	0.3750	1.5000	A607-60 (60 ksi)
L20	63.67-63.42	0.25	0.00	12	38.6203	38.6711	0.3750	1.5000	A607-60 (60 ksi)
L21	63.42-58.25	5.17	5.00	12	38.6711	39.7200	0.3750	1.5000	A607-60 (60 ksi)
L22	58.25-57.25	6.00	0.00	12	37.9550	39.1731	0.4375	1.7500	A607-60 (60 ksi)
L23	57.25-53.23	4.02	0.00	12	39.1731	39.9894	0.4375	1.7500	A607-60 (60 ksi)
L24	53.23-52.98	0.25	0.00	12	39.9894	40.0401	0.4375	1.7500	A607-60 (60 ksi)
L25	52.98-47.98	5.00	0.00	12	40.0401	41.0552	0.4375	1.7500	A607-60 (60 ksi)
L26	47.98-42.98	5.00	0.00	12	41.0552	42.0703	0.4375	1.7500	A607-60 (60 ksi)
L27	42.98-37.98	5.00	0.00	12	42.0703	43.0854	0.4375	1.7500	A607-60 (60 ksi)
L28	37.98-35.13	2.85	0.00	12	43.0854	43.6648	0.4375	1.7500	A607-60 (60 ksi)
L29	35.13-34.88	0.25	0.00	12	43.6648	43.7155	0.6375	2.5500	A607-60 (60 ksi)
L30	34.88-28.75	6.13	5.75	12	43.7155	44.9590	0.6375	2.5500	A607-60 (60 ksi)
L31	28.75-27.75	6.75	0.00	12	42.9167	44.2869	0.7000	2.8000	A607-60 (60 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
L32	27.75-25.88	1.88	0.00	12	44.2869	44.6675	0.6875	2.7500	A607-60 (60 ksi)
L33	25.88-25.75	0.13	0.00	12	44.6675	44.6929	0.5000	2.0000	A607-60 (60 ksi)
L34	25.75-25.63	0.13	0.00	12	44.6929	44.7182	0.7500	3.0000	A607-60 (60 ksi)
L35	25.63-25.50	0.13	0.00	12	44.7182	44.7436	0.7500	3.0000	A607-60 (60 ksi)
L36	25.50-20.50	5.00	0.00	12	44.7436	45.7586	0.7500	3.0000	A607-60 (60 ksi)
L37	20.50-15.50	5.00	0.00	12	45.7586	46.7736	0.7375	2.9500	A607-60 (60 ksi)
L38	15.50-10.50	5.00	0.00	12	46.7736	47.7885	0.7375	2.9500	A607-60 (60 ksi)
L39	10.50-5.50	5.00	0.00	12	47.7885	48.8035	0.7250	2.9000	A607-60 (60 ksi)
L40	5.50-0.50	5.00	0.00	12	48.8035	49.8185	0.7250	2.9000	A607-60 (60 ksi)
L41	0.50-0.00	0.50		12	49.8185	49.9200	0.7250	2.9000	A607-60 (60 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	22.6879	17.5087	1057.2060	7.7865	11.3960	92.7699	2142.1860	8.6173	5.2260	20.904
	23.7387	18.3259	1212.2378	8.1499	11.9218	101.6825	2456.3223	9.0194	5.4980	21.992
L2	23.7387	18.3259	1212.2378	8.1499	11.9218	101.6825	2456.3223	9.0194	5.4980	21.992
	24.7896	19.1430	1381.7299	8.5133	12.4476	111.0038	2799.7593	9.4216	5.7701	23.08
L3	24.7896	19.1430	1381.7299	8.5133	12.4476	111.0038	2799.7593	9.4216	5.7701	23.08
	25.8405	19.9601	1566.3271	8.8767	12.9734	120.7338	3173.8034	9.8238	6.0421	24.168
L4	25.8405	19.9601	1566.3271	8.8767	12.9734	120.7338	3173.8034	9.8238	6.0421	24.168
	26.8913	20.7772	1766.6742	9.2401	13.4992	130.8726	3579.7609	10.2259	6.3141	25.257
L5	26.8913	20.7772	1766.6742	9.2401	13.4992	130.8726	3579.7609	10.2259	6.3141	25.257
	27.9422	21.5943	1983.4160	9.6034	14.0250	141.4202	4018.9385	10.6281	6.5862	26.345
L6	27.9422	21.5943	1983.4160	9.6034	14.0250	141.4202	4018.9385	10.6281	6.5862	26.345
	28.9930	22.4115	2217.1971	9.9668	14.5508	152.3765	4492.6424	11.0302	6.8582	27.433
L7	28.9930	22.4115	2217.1971	9.9668	14.5508	152.3765	4492.6424	11.0302	6.8582	27.433
	30.0439	23.2286	2468.6624	10.3302	15.0766	163.7415	5002.1793	11.4324	7.1302	28.521
L8	30.0439	23.2286	2468.6624	10.3302	15.0766	163.7415	5002.1793	11.4324	7.1302	28.521
	31.0948	24.0457	2738.4566	10.6936	15.6024	175.5153	5548.8555	11.8346	7.4023	29.609
L9	31.0948	24.0457	2738.4566	10.6936	15.6024	175.5153	5548.8555	11.8346	7.4023	29.609
	32.6711	25.2714	3178.9251	11.2387	16.3911	193.9425	6441.3640	12.4378	7.8103	31.241
L10	32.1093	36.1718	4143.0743	10.7242	15.7114	263.6980	8394.9918	17.8027	7.1237	18.997
	32.3195	37.3975	4578.6593	11.0876	16.2372	281.9854	9277.6051	18.4059	7.3957	19.722
L11	32.3195	37.3975	4578.6593	11.0876	16.2372	281.9854	9277.6051	18.4059	7.3957	19.722
	33.3703	38.6231	5043.7523	11.4510	16.7630	300.8859	10220.0095	19.0091	7.6678	20.447
L12	33.3703	38.6231	5043.7523	11.4510	16.7630	300.8859	10220.0095	19.0091	7.6678	20.447
	34.4211	39.8488	5539.3202	11.8144	17.2888	320.3994	11224.1644	19.6124	7.9398	21.173
L13	34.4211	39.8488	5539.3202	11.8144	17.2888	320.3994	11224.1644	19.6124	7.9398	21.173
	35.4720	41.0744	6066.3302	12.1778	17.8146	340.5261	12292.0296	20.2156	8.2118	21.898
L14	35.4720	41.0744	6066.3302	12.1778	17.8146	340.5261	12292.0296	20.2156	8.2118	21.898
	36.5228	42.3001	6625.7493	12.5411	18.3404	361.2659	13425.5645	20.8188	8.4838	22.624
L15	36.5228	42.3001	6625.7493	12.5411	18.3404	361.2659	13425.5645	20.8188	8.4838	22.624
	37.5737	43.5257	7218.5447	12.9045	18.8662	382.6188	14626.7286	21.4220	8.7559	23.349
L16	37.5737	43.5257	7218.5447	12.9045	18.8662	382.6188	14626.7286	21.4220	8.7559	23.349

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
	38.3792	44.4653	7696.1859	13.1831	19.2692	399.4030	15594.5591	21.8845	8.9644	23.905
L17	38.3792	44.4653	7696.1859	13.1831	19.2692	399.4030	15594.5591	21.8845	8.9644	23.905
	38.4318	44.5266	7728.0506	13.2013	19.2955	400.5103	15659.1258	21.9146	8.9780	23.941
L18	38.4318	44.5266	7728.0506	13.2013	19.2955	400.5103	15659.1258	21.9146	8.9780	23.941
	39.4826	45.7522	8383.9514	13.5646	19.8213	422.9769	16988.1586	22.5179	9.2500	24.667
L19	39.4826	45.7522	8383.9514	13.5646	19.8213	422.9769	16988.1586	22.5179	9.2500	24.667
	39.8504	46.1812	8621.9958	13.6918	20.0053	430.9851	17470.5011	22.7290	9.3452	24.921
L20	39.8504	46.1812	8621.9958	13.6918	20.0053	430.9851	17470.5011	22.7290	9.3452	24.921
	39.9029	46.2425	8656.3656	13.7100	20.0316	432.1352	17540.1436	22.7592	9.3588	24.957
L21	39.9029	46.2425	8656.3656	13.7100	20.0316	432.1352	17540.1436	22.7592	9.3588	24.957
	40.9889	47.5091	9387.3225	14.0855	20.5750	456.2499	19021.2604	23.3825	9.6400	25.707
L22	40.1904	52.8527	9495.5572	13.4313	19.6607	482.9721	19240.5733	26.0125	8.9994	20.57
	40.4006	54.5687	10450.7973	13.8673	20.2916	515.0296	21176.1487	26.8571	9.3259	21.316
L23	40.4006	54.5687	10450.7973	13.8673	20.2916	515.0296	21176.1487	26.8571	9.3259	21.316
	41.2457	55.7187	11125.5494	14.1596	20.7145	537.0899	22543.3793	27.4231	9.5447	21.816
L24	41.2457	55.7187	11125.5494	14.1596	20.7145	537.0899	22543.3793	27.4231	9.5447	21.816
	41.2983	55.7902	11168.4340	14.1777	20.7408	538.4767	22630.2752	27.4582	9.5583	21.847
L25	41.2983	55.7902	11168.4340	14.1777	20.7408	538.4767	22630.2752	27.4582	9.5583	21.847
	42.3492	57.2202	12049.4271	14.5411	21.2666	566.5892	24415.4061	28.1620	9.8303	22.469
L26	42.3492	57.2202	12049.4271	14.5411	21.2666	566.5892	24415.4061	28.1620	9.8303	22.469
	43.4000	58.6502	12975.5730	14.9045	21.7924	595.4170	26292.0287	28.8658	10.1023	23.091
L27	43.4000	58.6502	12975.5730	14.9045	21.7924	595.4170	26292.0287	28.8658	10.1023	23.091
	44.4509	60.0802	13948.0001	15.2679	22.3182	624.9602	28262.4296	29.5696	10.3744	23.713
L28	44.4509	60.0802	13948.0001	15.2679	22.3182	624.9602	28262.4296	29.5696	10.3744	23.713
	45.0508	60.8964	14524.2431	15.4754	22.6184	642.1441	29430.0543	29.9714	10.5297	24.068
L29	44.9802	88.3242	20871.4966	15.4038	22.6184	922.7681	42291.3107	43.4705	9.9937	15.676
	45.0328	88.4284	20945.4422	15.4219	22.6446	924.9623	42441.1444	43.5218	10.0073	15.698
L30	45.0328	88.4284	20945.4422	15.4219	22.6446	924.9623	42441.1444	43.5218	10.0073	15.698
	46.3201	90.9810	22812.1050	15.8671	23.2888	979.5327	46223.5093	44.7781	10.3405	16.22
L31	45.3921	95.1564	21646.6910	15.1136	22.2308	973.7239	43862.0647	46.8331	9.6257	13.751
	45.6022	98.2448	23823.5899	15.6041	22.9406	1038.4901	48273.0521	48.3531	9.9929	14.276
L32	45.6066	96.5181	23418.3051	15.6086	22.9406	1020.8234	47451.8351	47.5033	10.0264	14.584
	46.0007	97.3607	24036.9900	15.7448	23.1378	1038.8640	48705.4585	47.9180	10.1284	14.732
L33	46.0668	71.1097	17705.9879	15.8120	23.1378	765.2420	35877.1318	34.9980	10.6309	21.262
	46.0931	71.1505	17736.5219	15.8210	23.1509	766.1264	35939.0020	35.0181	10.6377	21.275
L34	46.0049	106.1220	26155.8208	15.7315	23.1509	1129.7968	52998.7842	52.2300	9.9677	13.29
	46.0312	106.1833	26201.1573	15.7406	23.1641	1131.1129	53090.6482	52.2602	9.9745	13.299
L35	46.0312	106.1833	26201.1573	15.7406	23.1641	1131.1129	53090.6482	52.2602	9.9745	13.299
	46.0574	106.2446	26246.5462	15.7497	23.1772	1132.4298	53182.6184	52.2904	9.9813	13.308
L36	46.0574	106.2446	26246.5462	15.7497	23.1772	1132.4298	53182.6184	52.2904	9.9813	13.308
	47.1082	108.6958	28105.3812	16.1131	23.7030	1185.7333	56949.1220	53.4967	10.2533	13.671
L37	47.1126	106.9138	27659.9910	16.1176	23.7030	1166.9428	56046.6407	52.6197	10.2868	13.948
	48.1634	109.3242	29573.2220	16.4809	24.2287	1220.5859	59923.3654	53.8060	10.5588	14.317
L38	48.1634	109.3242	29573.2220	16.4809	24.2287	1220.5859	59923.3654	53.8060	10.5588	14.317
	49.2142	111.7345	31572.7042	16.8443	24.7545	1275.4345	63974.8586	54.9923	10.8308	14.686
L39	49.2186	109.8699	31062.3174	16.8488	24.7545	1254.8166	62940.6764	54.0746	10.8643	14.985
	50.2694	112.2393	33115.6478	17.2121	25.2802	1309.9427	67101.2805	55.2408	11.1363	15.36
L40	50.2694	112.2393	33115.6478	17.2121	25.2802	1309.9427	67101.2805	55.2408	11.1363	15.36
	51.3202	114.6088	35257.5293	17.5755	25.8060	1366.2540	71441.3132	56.4070	11.4084	15.736
L41	51.3202	114.6088	35257.5293	17.5755	25.8060	1366.2540	71441.3132	56.4070	11.4084	15.736
	51.4252	114.8457	35476.6598	17.6118	25.8586	1371.9503	71885.3309	56.5236	11.4356	15.773

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

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L5 128.00-123.00				1	1	1			
L6 123.00-118.00				1	1	1			
L7 118.00-113.00				1	1	1			
L8 113.00-108.00				1	1	1			
L9 108.00-100.50				1	1	1			
L10 100.50-99.50				1	1	1			
L11 99.50-94.50				1	1	1			
L12 94.50-89.50				1	1	1			
L13 89.50-84.50				1	1	1			
L14 84.50-79.50				1	1	1			
L15 79.50-74.50				1	1	1			
L16 74.50-70.67				1	1	1			
L17 70.67-70.42				1	1	1			
L18 70.42-65.42				1	1	1			
L19 65.42-63.67				1	1	1			
L20 63.67-63.42				1	1	1			
L21 63.42-58.25				1	1	1			
L22 58.25-57.25				1	1	1			
L23 57.25-53.23				1	1	1			
L24 53.23-52.98				1	1	1			
L25 52.98-47.98				1	1	1			
L26 47.98-42.98				1	1	1			
L27 42.98-37.98				1	1	1			
L28 37.98-35.13				1	1	1			
L29 35.13-34.88				1	1	0.965503			
L30 34.88-28.75				1	1	0.96501			
L31 28.75-27.75				1	1	0.966024			
L32 27.75-25.88				1	1	0.98109			
L33 25.88-25.75				1	1	1			
L34 25.75-25.63				1	1	0.976971			
L35 25.63-25.50				1	1	0.976792			
L36 25.50-20.50				1	1	0.969798			
L37 20.50-15.50				1	1	0.979171			
L38 15.50-10.50				1	1	0.972673			
L39 10.50-5.50				1	1	0.982858			
L40 5.50-0.50				1	1	0.976796			
L41 0.50-0.00				1	1	0.976203			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
**********										
CCI-WAFP-065125	A	No	Surface Af (CaAa)	35.13 - 0.00	1	1	0.000 0.000	6.5000	15.5000	0.00
CCI-WAFP-065125	B	No	Surface Af (CaAa)	35.13 - 0.00	1	1	0.000 0.000	6.5000	15.5000	0.00
CCI-WAFP-065125	C	No	Surface Af (CaAa)	28.50 - 0.00	1	1	0.250 0.250	6.5000	15.5000	0.00
CCI-WAFP-065125	C	No	Surface Af (CaAa)	28.50 - 0.00	1	1	-0.250 -0.250	6.5000	15.5000	0.00
CCI-SFP-065125	C	No	Surface Af (CaAa)	35.13 - 23.13	1	1	0.000 0.000	6.5000	15.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
CCI-SFP-060100	A	No	Surface Af (CaAa)	55.23 - 35.13	1	1	0.000 0.000	6.0000	14.0000	0.00
CCI-SFP-060100	C	No	Surface Af (CaAa)	55.23 - 35.13	1	1	0.000 0.000	6.0000	14.0000	0.00
CCI-SFP-060100	B	No	Surface Af (CaAa)	55.23 - 35.13	1	1	0.000 0.000	6.0000	14.0000	0.00
CCI-SFP-045100	A	No	Surface Af (CaAa)	72.17 - 62.17	1	1	0.500 0.500	4.5000	11.0000	0.00
CCI-SFP-045100	C	No	Surface Af (CaAa)	72.17 - 62.17	1	1	0.500 0.500	4.5000	11.0000	0.00
CCI-SFP-045100	B	No	Surface Af (CaAa)	72.17 - 62.17	1	1	0.500 0.500	4.5000	11.0000	0.00
**********										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
**********									
Safety Line 3/8	C	No	No	CaAa (Out Of Face)	148.00 - 10.00	1	No Ice 1/2" Ice 1" Ice	0.04 0.14 0.24	0.22 0.75 1.28
Step Bolts	C	No	No	CaAa (Out Of Face)	148.00 - 10.00	1	No Ice 1/2" Ice 1" Ice	0.04 0.14 0.24	1.00 1.55 2.71
**********									
1 1/4	C	No	No	Inside Pole	148.00 - 8.00	4	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.66 0.66 0.66
1 1/4	C	No	No	Inside Pole	148.00 - 8.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.66 0.66 0.66
5/16	C	No	No	Inside Pole	148.00 - 8.00	6	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.09 0.09 0.09
1/2	C	No	No	Inside Pole	148.00 - 8.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.25 0.25 0.25
2" Innerduct	C	No	No	Inside Pole	148.00 - 8.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.22 0.22 0.22
**********									
EW90	C	No	No	Inside Pole	144.00 - 8.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.32 0.32 0.32
**********									
1 5/8	B	No	No	Inside Pole	120.00 - 8.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.04 1.04 1.04
3/8	B	No	No	Inside Pole	120.00 - 8.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.08 0.08 0.08
5/8	B	No	No	Inside Pole	120.00 - 8.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.40 0.40 0.40

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
**********									
7/8	A	No	No	Inside Pole	96.00 - 8.00	8	No Ice	0.00	0.54
							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
1/2	A	No	No	Inside Pole	96.00 - 8.00	5	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
**********									
7/8	A	No	No	Inside Pole	82.00 - 8.00	18	No Ice	0.00	0.54
							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
1 1/4	A	No	No	Inside Pole	82.00 - 8.00	6	No Ice	0.00	0.66
							1/2" Ice	0.00	0.66
							1" Ice	0.00	0.66
**********									
1 5/8	C	No	No	Inside Pole	72.00 - 8.00	6	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
**********									
1/2	B	No	No	Inside Pole	53.00 - 8.00	2	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
**********									
1/2	A	No	No	Inside Pole	50.00 - 8.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
**********									

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 lb
L1	148.00-143.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.388	30.31
L2	143.00-138.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.388	31.59
L3	138.00-133.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.388	31.59
L4	133.00-128.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.388	31.59
L5	128.00-123.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.388	31.59
L6	123.00-118.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	26.72
		C	0.000	0.000	0.000	0.388	31.59
L7	118.00-113.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L8	113.00-108.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59

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 lb
L9	108.00-100.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	100.20
		C	0.000	0.000	0.000	0.581	47.38
L10	100.50-99.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	13.36
		C	0.000	0.000	0.000	0.077	6.32
L11	99.50-94.50	A	0.000	0.000	0.000	0.000	8.36
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L12	94.50-89.50	A	0.000	0.000	0.000	0.000	27.85
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L13	89.50-84.50	A	0.000	0.000	0.000	0.000	27.85
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L14	84.50-79.50	A	0.000	0.000	0.000	0.000	62.05
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L15	79.50-74.50	A	0.000	0.000	0.000	0.000	96.25
		B	0.000	0.000	0.000	0.000	66.80
		C	0.000	0.000	0.000	0.388	31.59
L16	74.50-70.67	A	0.000	0.000	1.125	0.000	73.79
		B	0.000	0.000	1.125	0.000	51.21
		C	0.000	0.000	1.125	0.297	32.53
L17	70.67-70.42	A	0.000	0.000	0.188	0.000	4.81
		B	0.000	0.000	0.188	0.000	3.34
		C	0.000	0.000	0.188	0.019	3.14
L18	70.42-65.42	A	0.000	0.000	3.750	0.000	96.25
		B	0.000	0.000	3.750	0.000	66.80
		C	0.000	0.000	3.750	0.388	62.79
L19	65.42-63.67	A	0.000	0.000	1.313	0.000	33.69
		B	0.000	0.000	1.313	0.000	23.38
		C	0.000	0.000	1.313	0.136	21.98
L20	63.67-63.42	A	0.000	0.000	0.188	0.000	4.81
		B	0.000	0.000	0.188	0.000	3.34
		C	0.000	0.000	0.188	0.019	3.14
L21	63.42-58.25	A	0.000	0.000	0.938	0.000	99.46
		B	0.000	0.000	0.938	0.000	69.03
		C	0.000	0.000	0.938	0.400	64.89
L22	58.25-57.25	A	0.000	0.000	0.000	0.000	19.25
		B	0.000	0.000	0.000	0.000	13.36
		C	0.000	0.000	0.000	0.077	12.56
L23	57.25-53.23	A	0.000	0.000	2.000	0.000	77.40
		B	0.000	0.000	2.000	0.000	53.72
		C	0.000	0.000	2.000	0.312	50.50
L24	53.23-52.98	A	0.000	0.000	0.250	0.000	4.81
		B	0.000	0.000	0.250	0.000	3.35
		C	0.000	0.000	0.250	0.019	3.14
L25	52.98-47.98	A	0.000	0.000	5.000	0.000	96.76
		B	0.000	0.000	5.000	0.000	69.30
		C	0.000	0.000	5.000	0.388	62.79
L26	47.98-42.98	A	0.000	0.000	5.000	0.000	97.50
		B	0.000	0.000	5.000	0.000	69.30
		C	0.000	0.000	5.000	0.388	62.79
L27	42.98-37.98	A	0.000	0.000	5.000	0.000	97.50
		B	0.000	0.000	5.000	0.000	69.30
		C	0.000	0.000	5.000	0.388	62.79
L28	37.98-35.13	A	0.000	0.000	2.854	0.000	55.65
		B	0.000	0.000	2.854	0.000	39.56
		C	0.000	0.000	2.854	0.221	35.84
L29	35.13-34.88	A	0.000	0.000	0.271	0.000	4.88

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 lb
		B	0.000	0.000	0.271	0.000	3.46
		C	0.000	0.000	0.256	0.019	3.14
L30	34.88-28.75	A	0.000	0.000	6.635	0.000	119.44
		B	0.000	0.000	6.635	0.000	84.89
		C	0.000	0.000	6.277	0.475	76.92
L31	28.75-27.75	A	0.000	0.000	1.083	0.000	19.50
		B	0.000	0.000	1.083	0.000	13.86
		C	0.000	0.000	2.650	0.077	12.56
L32	27.75-25.88	A	0.000	0.000	2.031	0.000	36.56
		B	0.000	0.000	2.031	0.000	25.99
		C	0.000	0.000	5.984	0.145	23.55
L33	25.88-25.75	A	0.000	0.000	0.135	0.000	2.44
		B	0.000	0.000	0.135	0.000	1.73
		C	0.000	0.000	0.399	0.010	1.57
L34	25.75-25.63	A	0.000	0.000	0.135	0.000	2.44
		B	0.000	0.000	0.135	0.000	1.73
		C	0.000	0.000	0.399	0.010	1.57
L35	25.63-25.50	A	0.000	0.000	0.135	0.000	2.44
		B	0.000	0.000	0.135	0.000	1.73
		C	0.000	0.000	0.399	0.010	1.57
L36	25.50-20.50	A	0.000	0.000	5.417	0.000	97.50
		B	0.000	0.000	5.417	0.000	69.30
		C	0.000	0.000	13.267	0.388	62.79
L37	20.50-15.50	A	0.000	0.000	5.417	0.000	97.50
		B	0.000	0.000	5.417	0.000	69.30
		C	0.000	0.000	10.833	0.388	62.79
L38	15.50-10.50	A	0.000	0.000	5.417	0.000	97.50
		B	0.000	0.000	5.417	0.000	69.30
		C	0.000	0.000	10.833	0.388	62.79
L39	10.50-5.50	A	0.000	0.000	5.417	0.000	48.75
		B	0.000	0.000	5.417	0.000	34.65
		C	0.000	0.000	10.833	0.039	28.96
L40	5.50-0.50	A	0.000	0.000	5.417	0.000	0.00
		B	0.000	0.000	5.417	0.000	0.00
		C	0.000	0.000	10.833	0.000	0.00
L41	0.50-0.00	A	0.000	0.000	0.542	0.000	0.00
		B	0.000	0.000	0.542	0.000	0.00
		C	0.000	0.000	1.083	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	148.00-143.00	A	2.175	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.737	77.99
L2	143.00-138.00	A	2.167	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.722	78.94
L3	138.00-133.00	A	2.159	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.706	78.59
L4	133.00-128.00	A	2.151	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.690	78.23
L5	128.00-123.00	A	2.143	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00

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 lb
		C		0.000	0.000	0.000	4.673	77.86
L6	123.00-118.00	A	2.134	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	26.72
		C		0.000	0.000	0.000	4.656	77.47
L7	118.00-113.00	A	2.125	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.638	77.07
L8	113.00-108.00	A	2.116	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.619	76.65
L9	108.00-100.50	A	2.104	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	100.20
		C		0.000	0.000	0.000	6.892	114.16
L10	100.50-99.50	A	2.095	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	13.36
		C		0.000	0.000	0.000	0.919	15.22
L11	99.50-94.50	A	2.088	0.000	0.000	0.000	0.000	8.36
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.564	75.44
L12	94.50-89.50	A	2.077	0.000	0.000	0.000	0.000	27.85
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.542	74.95
L13	89.50-84.50	A	2.066	0.000	0.000	0.000	0.000	27.85
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.519	74.43
L14	84.50-79.50	A	2.054	0.000	0.000	0.000	0.000	62.05
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.495	73.89
L15	79.50-74.50	A	2.041	0.000	0.000	0.000	0.000	96.25
		B		0.000	0.000	0.000	0.000	66.80
		C		0.000	0.000	0.000	4.469	73.32
L16	74.50-70.67	A	2.029	0.000	0.000	1.459	0.000	95.89
		B		0.000	0.000	1.459	0.000	73.32
		C		0.000	0.000	1.459	3.408	86.22
L17	70.67-70.42	A	2.023	0.000	0.000	0.243	0.000	8.48
		B		0.000	0.000	0.243	0.000	7.01
		C		0.000	0.000	0.243	0.222	8.86
L18	70.42-65.42	A	2.015	0.000	0.000	4.856	0.000	169.25
		B		0.000	0.000	4.856	0.000	139.80
		C		0.000	0.000	4.856	4.418	176.39
L19	65.42-63.67	A	2.005	0.000	0.000	1.698	0.000	59.05
		B		0.000	0.000	1.698	0.000	48.75
		C		0.000	0.000	1.698	1.539	61.40
L20	63.67-63.42	A	2.002	0.000	0.000	0.242	0.000	8.43
		B		0.000	0.000	0.242	0.000	6.96
		C		0.000	0.000	0.242	0.220	8.76
L21	63.42-58.25	A	1.993	0.000	0.000	1.211	0.000	117.43
		B		0.000	0.000	1.211	0.000	87.00
		C		0.000	0.000	1.211	4.520	123.93
L22	58.25-57.25	A	1.983	0.000	0.000	0.000	0.000	19.25
		B		0.000	0.000	0.000	0.000	13.36
		C		0.000	0.000	0.000	0.875	20.51
L23	57.25-53.23	A	1.974	0.000	0.000	2.782	0.000	110.37
		B		0.000	0.000	2.782	0.000	86.69
		C		0.000	0.000	2.782	3.487	115.03
L24	53.23-52.98	A	1.966	0.000	0.000	0.347	0.000	8.91
		B		0.000	0.000	0.347	0.000	7.45
		C		0.000	0.000	0.347	0.216	9.19
L25	52.98-47.98	A	1.956	0.000	0.000	6.939	0.000	178.18
		B		0.000	0.000	6.939	0.000	150.73
		C		0.000	0.000	6.939	4.300	183.00

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 lb
L26	47.98-42.98	A	1.936	0.000	0.000	6.923	0.000	177.79
		B		0.000	0.000	6.923	0.000	149.59
		C		0.000	0.000	6.923	4.260	181.34
L27	42.98-37.98	A	1.914	0.000	0.000	6.904	0.000	176.55
		B		0.000	0.000	6.904	0.000	148.35
		C		0.000	0.000	6.904	4.215	179.51
L28	37.98-35.13	A	1.894	0.000	0.000	3.932	0.000	100.16
		B		0.000	0.000	3.932	0.000	84.07
		C		0.000	0.000	3.932	2.384	101.56
L29	35.13-34.88	A	1.886	0.000	0.000	0.365	0.000	9.03
		B		0.000	0.000	0.365	0.000	7.62
		C		0.000	0.000	0.306	0.208	9.14
L30	34.88-28.75	A	1.868	0.000	0.000	8.924	0.000	219.87
		B		0.000	0.000	8.924	0.000	185.33
		C		0.000	0.000	7.483	5.051	222.04
L31	28.75-27.75	A	1.846	0.000	0.000	1.457	0.000	35.90
		B		0.000	0.000	1.457	0.000	30.26
		C		0.000	0.000	3.408	0.825	60.85
L32	27.75-25.88	A	1.836	0.000	0.000	2.720	0.000	66.63
		B		0.000	0.000	2.720	0.000	56.05
		C		0.000	0.000	7.724	1.523	127.11
L33	25.88-25.75	A	1.830	0.000	0.000	0.181	0.000	4.43
		B		0.000	0.000	0.181	0.000	3.73
		C		0.000	0.000	0.515	0.101	8.44
L34	25.75-25.63	A	1.829	0.000	0.000	0.181	0.000	4.43
		B		0.000	0.000	0.181	0.000	3.73
		C		0.000	0.000	0.514	0.101	8.44
L35	25.63-25.50	A	1.828	0.000	0.000	0.181	0.000	4.43
		B		0.000	0.000	0.181	0.000	3.72
		C		0.000	0.000	0.514	0.101	8.43
L36	25.50-20.50	A	1.808	0.000	0.000	7.225	0.000	176.08
		B		0.000	0.000	7.225	0.000	147.88
		C		0.000	0.000	17.337	4.004	292.20
L37	20.50-15.50	A	1.765	0.000	0.000	7.181	0.000	173.60
		B		0.000	0.000	7.181	0.000	145.40
		C		0.000	0.000	14.363	3.917	248.78
L38	15.50-10.50	A	1.708	0.000	0.000	7.125	0.000	170.46
		B		0.000	0.000	7.125	0.000	142.26
		C		0.000	0.000	14.250	3.804	241.01
L39	10.50-5.50	A	1.627	0.000	0.000	7.044	0.000	117.27
		B		0.000	0.000	7.044	0.000	103.17
		C		0.000	0.000	14.088	0.364	169.02
L40	5.50-0.50	A	1.475	0.000	0.000	6.891	0.000	60.46
		B		0.000	0.000	6.891	0.000	60.46
		C		0.000	0.000	13.783	0.000	120.92
L41	0.50-0.00	A	1.151	0.000	0.000	0.657	0.000	4.44
		B		0.000	0.000	0.657	0.000	4.44
		C		0.000	0.000	1.313	0.000	8.88

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	-0.3754	0.2167	-2.4931	1.4394
L2	143.00-138.00	-0.3760	0.2171	-2.5286	1.4599
L3	138.00-133.00	-0.3765	0.2174	-2.5613	1.4788
L4	133.00-128.00	-0.3770	0.2177	-2.5916	1.4962

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L5	128.00-123.00	-0.3774	0.2179	-2.6194	1.5123
L6	123.00-118.00	-0.3778	0.2181	-2.6451	1.5271
L7	118.00-113.00	-0.3782	0.2184	-2.6685	1.5407
L8	113.00-108.00	-0.3786	0.2186	-2.6899	1.5530
L9	108.00-100.50	-0.3790	0.2188	-2.7138	1.5668
L10	100.50-99.50	-0.3796	0.2192	-2.7257	1.5737
L11	99.50-94.50	-0.3798	0.2193	-2.7283	1.5752
L12	94.50-89.50	-0.3801	0.2194	-2.7431	1.5837
L13	89.50-84.50	-0.3803	0.2196	-2.7560	1.5912
L14	84.50-79.50	-0.3806	0.2197	-2.7670	1.5976
L15	79.50-74.50	-0.3808	0.2199	-2.7762	1.6028
L16	74.50-70.67	-0.2996	0.1730	-2.2729	1.3123
L17	70.67-70.42	-0.2260	0.1305	-1.7759	1.0253
L18	70.42-65.42	-0.2273	0.1312	-1.7844	1.0302
L19	65.42-63.67	-0.2290	0.1322	-1.7947	1.0362
L20	63.67-63.42	-0.2295	0.1325	-1.7976	1.0378
L21	63.42-58.25	-0.3295	0.1902	-2.4658	1.4236
L22	58.25-57.25	-0.3817	0.2204	-2.7909	1.6113
L23	57.25-53.23	-0.2672	0.1543	-2.0031	1.1565
L24	53.23-52.98	-0.2061	0.1190	-1.5672	0.9048
L25	52.98-47.98	-0.2073	0.1197	-1.5734	0.9084
L26	47.98-42.98	-0.2097	0.1211	-1.5839	0.9145
L27	42.98-37.98	-0.2121	0.1224	-1.5922	0.9193
L28	37.98-35.13	-0.2138	0.1235	-1.5971	0.9221
L29	35.13-34.88	-0.2089	-0.0669	-1.5971	0.3816
L30	34.88-28.75	-0.2103	-0.0673	-1.5991	0.3816
L31	28.75-27.75	-0.1707	2.5944	-1.3073	2.8778
L32	27.75-25.88	-0.1613	3.2831	-1.2237	3.5238
L33	25.88-25.75	-0.1617	3.2894	-1.2235	3.5303
L34	25.75-25.63	-0.1618	3.2930	-1.2243	3.5338
L35	25.63-25.50	-0.1619	3.2940	-1.2244	3.5348
L36	25.50-20.50	-0.1730	2.0858	-1.2886	2.5172
L37	20.50-15.50	-0.1853	0.8600	-1.3477	1.4966
L38	15.50-10.50	-0.1874	0.8685	-1.3345	1.4961
L39	10.50-5.50	-0.0189	0.7847	-0.1371	0.8548
L40	5.50-0.50	0.0000	0.7814	0.0000	0.7822
L41	0.50-0.00	0.0000	0.7852	0.0000	0.7721

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L16	37	CCI-SFP-045100	70.67 - 72.17	1.0000	1.0000
L16	38	CCI-SFP-045100	70.67 - 72.17	1.0000	1.0000
L16	39	CCI-SFP-045100	70.67 - 72.17	1.0000	1.0000
L17	37	CCI-SFP-045100	70.42 - 70.67	1.0000	1.0000
L17	38	CCI-SFP-045100	70.42 - 70.67	1.0000	1.0000
L17	39	CCI-SFP-045100	70.42 - 70.67	1.0000	1.0000
L18	37	CCI-SFP-045100	65.42 - 70.42	1.0000	1.0000
L18	38	CCI-SFP-045100	65.42 - 70.42	1.0000	1.0000
L18	39	CCI-SFP-045100	65.42 - 70.42	1.0000	1.0000
L19	37	CCI-SFP-045100	63.67 - 65.42	1.0000	1.0000
L19	38	CCI-SFP-045100	63.67 - 65.42	1.0000	1.0000
L19	39	CCI-SFP-045100	63.67 - 65.42	1.0000	1.0000
L20	37	CCI-SFP-045100	63.42 - 63.67	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L20	38	CCI-SFP-045100	63.42 - 63.67	1.0000	1.0000
L20	39	CCI-SFP-045100	63.42 - 63.67	1.0000	1.0000
L21	37	CCI-SFP-045100	62.17 - 63.42	1.0000	1.0000
L21	38	CCI-SFP-045100	62.17 - 63.42	1.0000	1.0000
L21	39	CCI-SFP-045100	62.17 - 63.42	1.0000	1.0000
L23	34	CCI-SFP-060100	53.23 - 55.23	1.0000	1.0000
L23	35	CCI-SFP-060100	53.23 - 55.23	1.0000	1.0000
L23	36	CCI-SFP-060100	53.23 - 55.23	1.0000	1.0000
L24	34	CCI-SFP-060100	52.98 - 53.23	1.0000	1.0000
L24	35	CCI-SFP-060100	52.98 - 53.23	1.0000	1.0000
L24	36	CCI-SFP-060100	52.98 - 53.23	1.0000	1.0000
L25	34	CCI-SFP-060100	47.98 - 52.98	1.0000	1.0000
L25	35	CCI-SFP-060100	47.98 - 52.98	1.0000	1.0000
L25	36	CCI-SFP-060100	47.98 - 52.98	1.0000	1.0000
L26	34	CCI-SFP-060100	42.98 - 47.98	1.0000	1.0000
L26	35	CCI-SFP-060100	42.98 - 47.98	1.0000	1.0000
L26	36	CCI-SFP-060100	42.98 - 47.98	1.0000	1.0000
L27	34	CCI-SFP-060100	37.98 - 42.98	1.0000	1.0000
L27	35	CCI-SFP-060100	37.98 - 42.98	1.0000	1.0000
L27	36	CCI-SFP-060100	37.98 - 42.98	1.0000	1.0000
L28	34	CCI-SFP-060100	35.13 - 37.98	1.0000	1.0000
L28	35	CCI-SFP-060100	35.13 - 37.98	1.0000	1.0000
L28	36	CCI-SFP-060100	35.13 - 37.98	1.0000	1.0000
L29	29	CCI-WAFP-065125	34.88 - 35.13	1.0000	1.0000
L29	30	CCI-WAFP-065125	34.88 - 35.13	1.0000	1.0000
L29	33	CCI-SFP-065125	34.88 - 35.13	1.0000	1.0000
L30	29	CCI-WAFP-065125	28.75 - 34.88	1.0000	1.0000
L30	30	CCI-WAFP-065125	28.75 - 34.88	1.0000	1.0000
L30	33	CCI-SFP-065125	28.75 - 34.88	1.0000	1.0000
L30	31	CCI-WAFP-065125	28.75 - 28.50	1.0000	1.0000
L30	32	CCI-WAFP-065125	28.75 - 28.50	1.0000	1.0000
L32	29	CCI-WAFP-065125	25.88 - 27.75	1.0000	1.0000
L32	30	CCI-WAFP-065125	25.88 - 27.75	1.0000	1.0000
L32	31	CCI-WAFP-065125	25.88 - 27.75	1.0000	1.0000
L32	32	CCI-WAFP-065125	25.88 - 27.75	1.0000	1.0000
L32	33	CCI-SFP-065125	25.88 - 27.75	1.0000	1.0000
L33	29	CCI-WAFP-065125	25.75 - 25.88	1.0000	1.0000
L33	30	CCI-WAFP-065125	25.75 - 25.88	1.0000	1.0000
L33	31	CCI-WAFP-065125	25.75 - 25.88	1.0000	1.0000
L33	32	CCI-WAFP-065125	25.75 - 25.88	1.0000	1.0000
L33	33	CCI-SFP-065125	25.75 - 25.88	1.0000	1.0000
L34	29	CCI-WAFP-065125	25.63 - 25.75	1.0000	1.0000
L34	30	CCI-WAFP-065125	25.63 - 25.75	1.0000	1.0000
L34	31	CCI-WAFP-065125	25.63 - 25.75	1.0000	1.0000
L34	32	CCI-WAFP-065125	25.63 - 25.75	1.0000	1.0000
L34	33	CCI-SFP-065125	25.63 - 25.75	1.0000	1.0000
L35	29	CCI-WAFP-065125	25.50 - 25.63	1.0000	1.0000
L35	30	CCI-WAFP-065125	25.50 - 25.63	1.0000	1.0000
L35	31	CCI-WAFP-065125	25.50 - 25.63	1.0000	1.0000
L35	32	CCI-WAFP-065125	25.50 - 25.63	1.0000	1.0000
L35	33	CCI-SFP-065125	25.50 - 25.63	1.0000	1.0000
L36	29	CCI-WAFP-065125	20.50 - 25.50	1.0000	1.0000
L36	30	CCI-WAFP-065125	20.50 - 25.50	1.0000	1.0000
L36	31	CCI-WAFP-065125	20.50 - 25.50	1.0000	1.0000
L36	32	CCI-WAFP-065125	20.50 - 25.50	1.0000	1.0000
L36	33	CCI-SFP-065125	23.13 - 25.50	1.0000	1.0000
L37	29	CCI-WAFP-065125	15.50 - 20.50	1.0000	1.0000
L37	30	CCI-WAFP-065125	15.50 - 20.50	1.0000	1.0000
L37	31	CCI-WAFP-065125	15.50 - 20.50	1.0000	1.0000
L37	32	CCI-WAFP-065125	15.50 - 20.50	1.0000	1.0000
L38	29	CCI-WAFP-065125	10.50 - 15.50	1.0000	1.0000
L38	30	CCI-WAFP-065125	10.50 - 15.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L38	31	CCI-WAFP-065125	10.50 - 15.50	1.0000	1.0000
L38	32	CCI-WAFP-065125	10.50 - 15.50	1.0000	1.0000
L39	29	CCI-WAFP-065125	5.50 - 10.50	1.0000	1.0000
L39	30	CCI-WAFP-065125	5.50 - 10.50	1.0000	1.0000
L39	31	CCI-WAFP-065125	5.50 - 10.50	1.0000	1.0000
L39	32	CCI-WAFP-065125	5.50 - 10.50	1.0000	1.0000
L40	29	CCI-WAFP-065125	0.50 - 5.50	1.0000	1.0000
L40	30	CCI-WAFP-065125	0.50 - 5.50	1.0000	1.0000
L40	31	CCI-WAFP-065125	0.50 - 5.50	1.0000	1.0000
L40	32	CCI-WAFP-065125	0.50 - 5.50	1.0000	1.0000
L41	29	CCI-WAFP-065125	0.00 - 0.50	1.0000	1.0000
L41	30	CCI-WAFP-065125	0.00 - 0.50	1.0000	1.0000
L41	31	CCI-WAFP-065125	0.00 - 0.50	1.0000	1.0000
L41	32	CCI-WAFP-065125	0.00 - 0.50	1.0000	1.0000

Discrete Tower Loads

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 lb
**********									
DB420-B	A	From Face	0.00	0.0000	148.00	No Ice	3.33	3.33	34.00
			0.00			1/2" Ice	5.99	5.99	44.20
			10.00			1" Ice	8.66	8.66	54.40
6' x 2" Pipe Mount	A	From Face	0.00	0.0000	148.00	No Ice	1.43	1.43	21.90
			0.00			1/2" Ice	1.92	1.92	32.73
			1.00			1" Ice	2.29	2.29	47.61
**********									
NNVV-65B-R4 w/Mount Pipe	A	From Face	4.00	0.0000	148.00	No Ice	12.51	7.41	102.95
			-7.00			1/2" Ice	13.11	8.60	193.58
			0.00			1" Ice	13.67	9.50	292.74
NNVV-65B-R4 w/Mount Pipe	B	From Face	4.00	0.0000	148.00	No Ice	12.51	7.41	102.95
			-7.00			1/2" Ice	13.11	8.60	193.58
			0.00			1" Ice	13.67	9.50	292.74
NNVV-65B-R4 w/Mount Pipe	C	From Face	4.00	0.0000	148.00	No Ice	12.51	7.41	102.95
			7.00			1/2" Ice	13.11	8.60	193.58
			0.00			1" Ice	13.67	9.50	292.74
AAHC w/Mount Pipe	A	From Face	4.00	0.0000	148.00	No Ice	4.37	2.65	114.65
			0.00			1/2" Ice	4.68	3.03	155.03
			0.00			1" Ice	5.00	3.43	200.23
AAHC w/Mount Pipe	B	From Face	4.00	0.0000	148.00	No Ice	4.37	2.65	114.65
			0.00			1/2" Ice	4.68	3.03	155.03
			0.00			1" Ice	5.00	3.43	200.23
AAHC w/Mount Pipe	C	From Face	4.00	0.0000	148.00	No Ice	4.37	2.65	114.65
			0.00			1/2" Ice	4.68	3.03	155.03
			0.00			1" Ice	5.00	3.43	200.23
800MHz 2x50W RRH	A	From Face	4.00	0.0000	148.00	No Ice	2.06	1.93	64.00
			-2.00			1/2" Ice	2.24	2.11	86.12
			0.50			1" Ice	2.43	2.29	111.30
800MHz 2x50W RRH	B	From Face	4.00	0.0000	148.00	No Ice	2.06	1.93	64.00
			-7.00			1/2" Ice	2.24	2.11	86.12
			0.50			1" Ice	2.43	2.29	111.30
800MHz 2x50W RRH	C	From Face	4.00	0.0000	148.00	No Ice	2.06	1.93	64.00
			7.00			1/2" Ice	2.24	2.11	86.12
			0.50			1" Ice	2.43	2.29	111.30

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 lb
800MHz 2x50W RRH	A	From Face	4.00 0.00 2.50	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.06 2.24 2.43	1.93 2.11 2.29	64.00 86.12 111.30
800MHz 2x50W RRH	B	From Face	4.00 -7.00 0.50	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.06 2.24 2.43	1.93 2.11 2.29	64.00 86.12 111.30
800MHz 2x50W RRH	C	From Face	4.00 7.00 2.50	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.06 2.24 2.43	1.93 2.11 2.29	64.00 86.12 111.30
1900MHz 4x45W RRH	A	From Leg	0.50 0.00 1.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	59.50 82.62 108.98
1900MHz 4x45W RRH	B	From Leg	0.50 0.00 1.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	59.50 82.62 108.98
1900MHz 4x45W RRH	C	From Leg	0.50 0.00 1.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	59.50 82.62 108.98
(2) 6' x 2" Pipe Mount	A	From Face	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	21.90 32.73 47.61
(2) 6' x 2" Pipe Mount	B	From Face	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	21.90 32.73 47.61
(2) 6' x 2" Pipe Mount	C	From Face	4.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	21.90 32.73 47.61
Side Arm Mount [SO 102-3]	C	None		0.0000	148.00	No Ice 1/2" Ice 1" Ice	3.00 3.48 3.96	3.00 3.48 3.96	81.00 111.00 141.00
Miscellaneous [NA 510-1]	C	None		0.0000	148.00	No Ice 1/2" Ice 1" Ice	6.00 8.50 11.00	6.00 8.50 11.00	255.70 339.50 423.30
Platform Mount [LP 1201-1]	C	None		0.0000	148.00	No Ice 1/2" Ice 1" Ice	23.10 26.80 30.50	23.10 26.80 30.50	2100.00 2500.00 2900.00
Miscellaneous [NA 509-3]	C	None		0.0000	148.00	No Ice 1/2" Ice 1" Ice	11.84 16.96 22.08	11.84 16.96 22.08	275.00 296.20 317.40
**********									
Pipe Mount [PM 601-1]	C	From Face	0.50 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	3.00 3.74 4.48	0.90 1.12 1.34	65.00 79.14 93.27
**********									
7770.00	A	From Leg	3.00 -5.50 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	5.57 5.93 6.30	2.92 3.27 3.62	12.10 44.85 82.42
7770.00	B	From Leg	3.00 -5.50 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	5.57 5.93 6.30	2.92 3.27 3.62	12.10 44.85 82.42
7770.00	C	From Leg	3.00 -5.50 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	5.57 5.93 6.30	2.92 3.27 3.62	12.10 44.85 82.42
QS66512-2	A	From Leg	3.00 -2.00 0.00	0.0000	120.00	No Ice 1/2" Ice 1" Ice	8.13 8.59 9.05	6.80 7.27 7.72	111.00 168.20 231.66
QS66512-2	B	From Leg	3.00	0.0000	120.00	No Ice	8.13	6.80	111.00

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 lb
			-2.00			1/2" Ice	8.59	7.27	168.20
			0.00			1" Ice	9.05	7.72	231.66
QS66512-2	C	From Leg	3.00	0.0000	120.00	No Ice	8.13	6.80	111.00
			-2.00			1/2" Ice	8.59	7.27	168.20
			0.00			1" Ice	9.05	7.72	231.66
HPA-65R-BUU-H6	A	From Leg	3.00	0.0000	120.00	No Ice	9.66	5.52	51.00
			5.50			1/2" Ice	10.13	5.97	109.43
			0.00			1" Ice	10.61	6.43	174.17
HPA-65R-BUU-H6	B	From Leg	3.00	0.0000	120.00	No Ice	9.66	5.52	51.00
			5.50			1/2" Ice	10.13	5.97	109.43
			0.00			1" Ice	10.61	6.43	174.17
HPA-65R-BUU-H6	C	From Leg	3.00	0.0000	120.00	No Ice	9.66	5.52	51.00
			5.50			1/2" Ice	10.13	5.97	109.43
			0.00			1" Ice	10.61	6.43	174.17
(2) LGP214nn	A	From Leg	3.00	0.0000	120.00	No Ice	1.11	0.21	14.10
			0.00			1/2" Ice	1.25	0.28	21.30
			0.00			1" Ice	1.39	0.35	30.39
(2) LGP214nn	B	From Leg	3.00	0.0000	120.00	No Ice	1.11	0.21	14.10
			0.00			1/2" Ice	1.25	0.28	21.30
			0.00			1" Ice	1.39	0.35	30.39
(2) LGP214nn	C	From Leg	3.00	0.0000	120.00	No Ice	1.11	0.21	14.10
			0.00			1/2" Ice	1.25	0.28	21.30
			0.00			1" Ice	1.39	0.35	30.39
RRUS-11	A	From Leg	3.00	0.0000	120.00	No Ice	2.78	1.19	50.71
			5.50			1/2" Ice	2.99	1.33	71.49
			0.00			1" Ice	3.21	1.49	95.32
RRUS-11	B	From Leg	3.00	0.0000	120.00	No Ice	2.78	1.19	50.71
			5.50			1/2" Ice	2.99	1.33	71.49
			0.00			1" Ice	3.21	1.49	95.32
RRUS-11	C	From Leg	3.00	0.0000	120.00	No Ice	2.78	1.19	50.71
			5.50			1/2" Ice	2.99	1.33	71.49
			0.00			1" Ice	3.21	1.49	95.32
RRUS-32	A	From Leg	3.00	0.0000	120.00	No Ice	2.69	1.59	50.80
			-2.00			1/2" Ice	2.91	1.78	71.33
			0.00			1" Ice	3.14	1.97	95.01
RRUS-32	B	From Leg	3.00	0.0000	120.00	No Ice	2.69	1.59	50.80
			-2.00			1/2" Ice	2.91	1.78	71.33
			0.00			1" Ice	3.14	1.97	95.01
RRUS-32	C	From Leg	3.00	0.0000	120.00	No Ice	2.69	1.59	50.80
			-2.00			1/2" Ice	2.91	1.78	71.33
			0.00			1" Ice	3.14	1.97	95.01
RRUS-32 B2	A	From Leg	3.00	0.0000	120.00	No Ice	2.73	1.67	52.90
			0.00			1/2" Ice	2.95	1.86	73.96
			0.00			1" Ice	3.18	2.05	98.21
RRUS-32 B2	B	From Leg	3.00	0.0000	120.00	No Ice	2.73	1.67	52.90
			0.00			1/2" Ice	2.95	1.86	73.96
			0.00			1" Ice	3.18	2.05	98.21
RRUS-32 B2	C	From Leg	3.00	0.0000	120.00	No Ice	2.73	1.67	52.90
			0.00			1/2" Ice	2.95	1.86	73.96
			0.00			1" Ice	3.18	2.05	98.21
RRUS-32 B66	A	From Leg	3.00	0.0000	120.00	No Ice	2.74	1.67	53.00
			0.00			1/2" Ice	2.96	1.86	74.11
			0.00			1" Ice	3.19	2.05	98.42
RRUS-32 B66	B	From Leg	3.00	0.0000	120.00	No Ice	2.74	1.67	53.00
			0.00			1/2" Ice	2.96	1.86	74.11
			0.00			1" Ice	3.19	2.05	98.42
RRUS-32 B66	C	From Leg	3.00	0.0000	120.00	No Ice	2.74	1.67	53.00

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 lb
			0.00			1/2" Ice	2.96	1.86	74.11
			0.00			1" Ice	3.19	2.05	98.42
DC6-48-60-18-8F	B	From Face	1.00	0.0000	120.00	No Ice	0.92	0.92	32.80
			0.00			1/2" Ice	1.46	1.46	50.52
			1.00			1" Ice	1.64	1.64	70.72
DC6-48-60-18-8F	C	From Face	1.00	0.0000	120.00	No Ice	0.92	0.92	32.80
			0.00			1/2" Ice	1.46	1.46	50.52
			1.00			1" Ice	1.64	1.64	70.72
4'x2" Pipe Mount	B	From Face	1.00	0.0000	120.00	No Ice	0.87	0.87	14.64
			0.00			1/2" Ice	1.11	1.11	21.95
			0.00			1" Ice	1.36	1.36	32.11
4'x2" Pipe Mount	C	From Face	1.00	0.0000	120.00	No Ice	0.87	0.87	14.64
			0.00			1/2" Ice	1.11	1.11	21.95
			0.00			1" Ice	1.36	1.36	32.11
Platform Mount [LP 301-1]	C	None		0.0000	120.00	No Ice	30.10	30.10	1588.50
						1/2" Ice	40.80	40.80	2029.18
						1" Ice	51.50	51.50	2469.86
**********									
PD1110	A	From Face	4.00	0.0000	96.00	No Ice	3.06	3.06	25.00
			2.00			1/2" Ice	5.10	5.10	60.00
			6.00			1" Ice	7.14	7.14	95.00
PD1110	C	From Face	4.00	0.0000	96.00	No Ice	3.06	3.06	25.00
			-7.00			1/2" Ice	5.10	5.10	60.00
			6.00			1" Ice	7.14	7.14	95.00
PD201-1	B	From Face	4.00	0.0000	96.00	No Ice	1.18	1.18	4.00
			7.00			1/2" Ice	2.09	2.09	14.05
			-4.50			1" Ice	3.02	3.02	29.87
PD201-1	B	From Face	4.00	0.0000	96.00	No Ice	1.18	1.18	4.00
			-7.00			1/2" Ice	2.09	2.09	14.05
			-4.50			1" Ice	3.02	3.02	29.87
PD83-1	C	From Face	4.00	0.0000	96.00	No Ice	3.70	3.70	17.00
			-2.00			1/2" Ice	5.58	5.58	45.48
			10.00			1" Ice	7.47	7.47	85.62
PD83-1	B	From Face	4.00	0.0000	96.00	No Ice	3.70	3.70	17.00
			-2.00			1/2" Ice	5.58	5.58	45.48
			10.00			1" Ice	7.47	7.47	85.62
PD83-1	A	From Face	4.00	0.0000	96.00	No Ice	3.70	3.70	17.00
			0.00			1/2" Ice	5.58	5.58	45.48
			10.00			1" Ice	7.47	7.47	85.62
PD220	B	From Face	4.00	0.0000	96.00	No Ice	3.56	3.56	23.00
			2.00			1/2" Ice	7.13	7.13	46.00
			10.00			1" Ice	10.70	10.70	69.00
DB205-A	B	From Face	4.00	0.0000	96.00	No Ice	1.20	1.20	38.00
			-7.00			1/2" Ice	2.16	2.16	49.40
			7.00			1" Ice	3.12	3.12	60.80
DB224	C	From Face	4.00	0.0000	96.00	No Ice	3.15	3.15	32.00
			0.00			1/2" Ice	5.67	5.67	41.60
			11.00			1" Ice	8.19	8.19	51.20
DB806E-XT	B	From Leg	4.00	0.0000	96.00	No Ice	2.40	2.40	16.00
			7.00			1/2" Ice	3.19	3.19	33.51
			5.50			1" Ice	3.67	3.67	56.37
DB420-B	C	From Face	4.00	0.0000	96.00	No Ice	3.33	3.33	34.00
			7.00			1/2" Ice	5.99	5.99	44.20
			10.00			1" Ice	8.66	8.66	54.40
(2) 6' x 2" Pipe Mount	A	From Face	4.00	0.0000	96.00	No Ice	1.43	1.43	21.90
			0.00			1/2" Ice	1.92	1.92	32.73
			0.00			1" Ice	2.29	2.29	47.61

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 lb
(4) 6' x 2" Pipe Mount	B	From Face	4.00 0.00 0.00	0.0000	96.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	21.90 32.73 47.61
(3) 6' x 2" Pipe Mount	C	From Face	4.00 0.00 0.00	0.0000	96.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29	1.43 1.92 2.29	21.90 32.73 47.61
Platform Mount [LP 1201-1]	C	None		0.0000	96.00	No Ice 1/2" Ice 1" Ice	23.10 26.80 30.50	23.10 26.80 30.50	2100.00 2500.00 2900.00
**********									
APXV18-206516S-C-A20 w/Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	3.76 4.18 4.59	3.31 4.03 4.70	39.68 73.84 113.84
APXV18-206516S-C-A20 w/Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	3.76 4.18 4.59	3.31 4.03 4.70	39.68 73.84 113.84
APXV18-206516S-C-A20 w/Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	3.76 4.18 4.59	3.31 4.03 4.70	39.68 73.84 113.84
(3) RR90-17-00DPL2 w/Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	4.91 5.50 6.00	3.64 4.70 5.48	43.55 84.46 131.77
(3) RR90-17-00DPL2 w/Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	4.91 5.50 6.00	3.64 4.70 5.48	43.55 84.46 131.77
(3) RR90-17-00DPL2 w/Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	82.00	No Ice 1/2" Ice 1" Ice	4.91 5.50 6.00	3.64 4.70 5.48	43.55 84.46 131.77
(2) ETW190VS12UB	A	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	0.57 0.67 0.77	0.32 0.40 0.49	14.60 19.55 26.03
(2) ETW190VS12UB	B	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	0.57 0.67 0.77	0.32 0.40 0.49	14.60 19.55 26.03
(2) ETW190VS12UB	C	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	0.57 0.67 0.77	0.32 0.40 0.49	14.60 19.55 26.03
ATMAA1412D-1A20	A	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	1.00 1.13 1.26	0.41 0.50 0.59	13.00 20.62 30.11
ATMAA1412D-1A20	B	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	1.00 1.13 1.26	0.41 0.50 0.59	13.00 20.62 30.11
ATMAA1412D-1A20	C	From Face	4.00 0.00 0.50	0.0000	82.00	No Ice 1/2" Ice 1" Ice	1.00 1.13 1.26	0.41 0.50 0.59	13.00 20.62 30.11
Platform Mount [LP 1201-1]	C	None		0.0000	82.00	No Ice 1/2" Ice 1" Ice	23.10 26.80 30.50	23.10 26.80 30.50	2100.00 2500.00 2900.00
**********									
800 10504 w/Mount Pipe	A	From Face	1.00 0.00 0.00	0.0000	72.00	No Ice 1/2" Ice 1" Ice	3.47 3.84 4.23	3.05 3.68 4.33	38.05 69.36 106.43
800 10504 w/Mount Pipe	B	From Face	1.00 0.00 0.00	0.0000	72.00	No Ice 1/2" Ice 1" Ice	3.47 3.84 4.23	3.05 3.68 4.33	38.05 69.36 106.43
800 10504 w/Mount Pipe	C	From Face	1.00	0.0000	72.00	No Ice	3.47	3.05	38.05

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 lb
			0.00			1/2" Ice	3.84	3.68	69.36
			0.00			1" Ice	4.23	4.33	106.43
Side Arm Mount [SO 102-3]	C	None		0.0000	72.00	No Ice	3.00	3.00	81.00
						1/2" Ice	3.48	3.48	111.00
						1" Ice	3.96	3.96	141.00
**********									
BSA150B	A	From Leg	6.00	0.0000	53.00	No Ice	2.33	2.33	100.00
			0.00			1/2" Ice	3.13	3.13	150.00
			4.00			1" Ice	3.93	3.93	200.00
BSA150B	A	From Leg	6.00	0.0000	53.00	No Ice	2.33	2.33	100.00
			0.00			1/2" Ice	3.13	3.13	150.00
			-4.00			1" Ice	3.93	3.93	200.00
8'x2" Antenna Mount Pipe	A	From Leg	6.00	0.0000	53.00	No Ice	1.90	1.90	30.00
			0.00			1/2" Ice	2.73	2.73	44.34
			0.00			1" Ice	3.40	3.40	63.96
Side Arm Mount [SO 702-1]	A	From Leg	3.00	0.0000	53.00	No Ice	1.00	1.43	27.00
			0.00			1/2" Ice	1.25	2.05	38.00
			0.00			1" Ice	1.50	2.67	49.00
**********									
BULLET III	A	From Leg	0.00	0.0000	50.00	No Ice	0.04	0.04	0.38
			0.00			1/2" Ice	0.07	0.07	1.27
			0.00			1" Ice	0.11	0.11	2.75
**********									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
**********											
VHLP800-11	B	Paraboloid w/Shroud (HP)	From Face	3.00	0.0000		148.00	2.92	No Ice	6.68	48.00
				2.00					1/2" Ice	7.07	76.00
				3.50					1" Ice	7.46	104.00
VHLP800-11	C	Paraboloid w/Shroud (HP)	From Face	3.00	0.0000		148.00	2.92	No Ice	6.68	48.00
				-2.00					1/2" Ice	7.07	76.00
				3.50					1" Ice	7.46	104.00
**********											
VHLP2.5-10W	C	Paraboloid w/Shroud (HP)	From Face	0.50	0.0000		144.00	2.92	No Ice	6.68	48.00
				0.00					1/2" Ice	7.07	76.00
				0.00					1" Ice	7.46	104.00
**********											

Force Totals

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Leg Weight	29569.27					

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Bracing Weight	0.00					
Total Member Self-Weight	29569.27			-1953.97	2420.19	
Total Weight	46856.26			-1953.97	2420.19	
Wind 0 deg - No Ice		80.52	-21919.96	-2076157.66	-9775.22	-3422.09
Wind 30 deg - No Ice		10849.50	-19029.81	-1805143.75	-1018294.02	-3115.14
Wind 60 deg - No Ice		18694.37	-11115.16	-1062091.84	-1750796.53	-1743.53
Wind 90 deg - No Ice		21647.30	-22.13	-5467.75	-2030946.48	254.65
Wind 120 deg - No Ice		18713.55	10922.50	1029352.76	-1753598.55	1891.73
Wind 150 deg - No Ice		10758.22	18898.30	1781695.54	-1004556.94	3022.61
Wind 180 deg - No Ice		-128.82	21832.25	2059331.73	21933.88	3549.27
Wind 210 deg - No Ice		-10864.56	18963.59	1791583.74	1025504.09	3065.84
Wind 240 deg - No Ice		-18765.93	11045.72	1048014.86	1766371.81	1530.36
Wind 270 deg - No Ice		-21697.85	125.70	16922.37	2043444.89	-467.11
Wind 300 deg - No Ice		-18719.27	-10980.78	-1041738.46	1759411.20	-1805.74
Wind 330 deg - No Ice		-10743.39	-19022.76	-1804077.89	1007062.96	-2760.86
Member Ice	13797.14					
Total Weight Ice	87224.01			-4364.93	9767.76	
Wind 0 deg - Ice		23.76	-9385.08	-923564.73	6169.28	-1332.44
Wind 30 deg - Ice		4657.01	-8141.45	-802443.54	-444232.30	-977.81
Wind 60 deg - Ice		8037.41	-4738.31	-470759.70	-772242.60	-293.33
Wind 90 deg - Ice		9298.76	-6.53	-5402.56	-895852.41	516.75
Wind 120 deg - Ice		8043.06	4681.48	453524.42	-773068.84	1101.99
Wind 150 deg - Ice		4630.08	8102.66	787949.84	-440179.33	1392.15
Wind 180 deg - Ice		-38.01	9359.21	911025.01	15525.61	1369.96
Wind 210 deg - Ice		-4661.46	8121.92	790867.53	464467.45	963.27
Wind 240 deg - Ice		-8058.52	4717.83	459031.02	794945.11	230.45
Wind 270 deg - Ice		-9313.68	37.08	1204.06	917647.55	-579.44
Wind 300 deg - Ice		-8044.76	-4698.66	-464754.07	792891.75	-1076.63
Wind 330 deg - Ice		-4625.70	-8139.37	-802129.01	459025.63	-1314.92
Total Weight	46856.26			-1953.97	2420.19	
Wind 0 deg - Service		25.42	-6921.41	-657025.26	-1645.06	-1080.55
Wind 30 deg - Service		3425.82	-6008.82	-571450.31	-320093.46	-983.63
Wind 60 deg - Service		5902.91	-3509.71	-336825.34	-551387.37	-550.54
Wind 90 deg - Service		6835.32	-6.99	-3187.29	-639847.10	80.41
Wind 120 deg - Service		5908.96	3448.87	323566.10	-552272.13	597.33
Wind 150 deg - Service		3397.00	5967.30	561124.74	-315755.86	954.42
Wind 180 deg - Service		-40.68	6893.72	648790.73	8367.36	1120.71
Wind 210 deg - Service		-3430.58	5987.91	564247.02	325253.20	968.07
Wind 240 deg - Service		-5925.50	3487.78	329458.82	559188.49	483.22
Wind 270 deg - Service		-6851.28	39.69	3882.58	646676.68	-147.49
Wind 300 deg - Service		-5910.77	-3467.28	-330398.59	556990.62	-570.18
Wind 330 deg - Service		-3392.32	-6006.60	-571113.76	319430.26	-871.76

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice

Comb. No.	Description
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	148 - 143	Pole	Max Tension	1	0.00	-0.01	-0.00
			Max. Compression	26	-12463.20	12035.08	1144.97
			Max. Mx	20	-5063.02	38908.33	-985.71
			Max. My	2	-5020.59	1483.93	37122.97
			Max. Vy	20	-6711.12	38908.33	-985.71
			Max. Vx	2	-7089.93	1483.93	37122.97
			Max. Torque	14			-7265.83
L2	143 - 138	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13279.55	12190.76	1130.01
			Max. Mx	20	-5448.98	73774.08	-2035.31
			Max. My	2	-5405.83	870.68	73875.37
			Max. Vy	20	-7237.12	73774.08	-2035.31
			Max. Vx	2	-7616.76	870.68	73875.37

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Torque	14			-7280.99
L3	138 - 133	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-14124.59	12340.16	1113.45
			Max. Mx	20	-5855.25	111301.33	-3086.18
			Max. My	2	-5811.80	252.23	113292.62
			Max. Vy	20	-7776.20	111301.33	-3086.18
			Max. Vx	2	-8156.54	252.23	113292.62
			Max. Torque	14			-7296.37
L4	133 - 128	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-14998.17	12483.30	1095.34
			Max. Mx	20	-6282.04	151553.73	-4137.93
			Max. My	2	-6238.66	-371.00	155437.72
			Max. Vy	20	-8327.64	151553.73	-4137.93
			Max. Vx	2	-8708.55	-371.00	155437.72
			Max. Torque	14			-7311.97
L5	128 - 123	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15900.11	12620.18	1075.76
			Max. Mx	20	-6729.57	194591.17	-5190.19
			Max. My	2	-6686.61	-998.66	200369.90
			Max. Vy	20	-8890.67	194591.17	-5190.19
			Max. Vx	2	-9272.01	-998.66	200369.90
			Max. Torque	14			-7327.83
L6	123 - 118	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-26483.02	12384.24	835.22
			Max. Mx	20	-10378.08	250353.34	-6305.47
			Max. My	2	-10327.94	-1722.45	258083.34
			Max. Vy	20	-14416.17	250353.34	-6305.47
			Max. Vx	2	-14802.85	-1722.45	258083.34
			Max. Torque	14			-7337.45
L7	118 - 113	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-27521.29	12548.11	818.26
			Max. Mx	20	-10964.54	323864.66	-7376.82
			Max. My	2	-10915.97	-2353.16	333516.45
			Max. Vy	20	-14994.28	323864.66	-7376.82
			Max. Vx	2	-15380.98	-2353.16	333516.45
			Max. Torque	14			-7201.39
L8	113 - 108	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-28587.34	12700.00	799.85
			Max. Mx	20	-11576.93	400276.33	-8446.18
			Max. My	2	-11530.33	-2989.49	411849.16
			Max. Vy	20	-15577.48	400276.33	-8446.18
			Max. Vx	2	-15964.04	-2989.49	411849.16
			Max. Torque	14			-7217.86
L9	108 - 100.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29352.99	12799.75	785.91
			Max. Mx	20	-12019.98	455500.23	-9193.22
			Max. My	2	-11974.93	-3437.78	468416.77
			Max. Vy	20	-15986.66	455500.23	-9193.22
			Max. Vx	2	-16373.06	-3437.78	468416.77
			Max. Torque	14			-7229.48
L10	100.5 - 99.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31458.85	12937.65	766.09
			Max. Mx	20	-13290.28	537073.11	-10262.22
			Max. My	2	-13246.08	-4077.91	551911.68
			Max. Vy	20	-16640.78	537073.11	-10262.22
			Max. Vx	2	-17028.12	-4077.91	551911.68
			Max. Torque	14			-7247.39
L11	99.5 - 94.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39660.59	10154.00	351.56
			Max. Mx	20	-17089.22	637646.52	-11386.42
			Max. My	2	-17043.00	-4972.01	654629.97

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Vy	20	-20406.86	637646.52	-11386.42
			Max. Vx	2	-20797.69	-4972.01	654629.97
			Max. Torque	14			-7257.77
L12	94.5 - 89.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41111.04	10297.06	333.71
			Max. Mx	20	-18072.50	741173.78	-12463.51
			Max. My	2	-18028.54	-5619.20	760097.42
			Max. Vy	20	-21014.29	741173.78	-12463.51
			Max. Vx	2	-21404.83	-5619.20	760097.42
			Max. Torque	12			-5689.33
L13	89.5 - 84.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42596.46	10434.70	315.45
			Max. Mx	20	-19088.05	847736.42	-13537.41
			Max. My	2	-19046.53	-6268.03	868598.06
			Max. Vy	20	-21622.13	847736.42	-13537.41
			Max. Vx	2	-22012.24	-6268.03	868598.06
			Max. Torque	12			-5710.46
L14	84.5 - 79.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51896.64	10573.06	298.42
			Max. Mx	20	-23329.27	964551.12	-14612.59
			Max. My	2	-23287.68	-6919.14	987355.44
			Max. Vy	20	-25083.18	964551.12	-14612.59
			Max. Vx	2	-25475.67	-6919.14	987355.44
			Max. Torque	12			-5731.89
L15	79.5 - 74.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53533.04	10711.05	282.69
			Max. Mx	20	-24501.96	1091417.67	-15687.95
			Max. My	2	-24463.39	-7572.25	1116167.78
			Max. Vy	20	-25679.24	1091417.67	-15687.95
			Max. Vx	2	-26070.81	-7572.25	1116167.78
			Max. Torque	12			-5753.54
L16	74.5 - 70.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55742.59	10812.55	270.59
			Max. Mx	20	-25643.66	1191365.54	-16508.96
			Max. My	2	-25606.99	-8073.16	1217603.90
			Max. Vy	20	-26646.63	1191365.54	-16508.96
			Max. Vx	2	-27037.73	-8073.16	1217603.90
			Max. Torque	12			-5770.30
L17	70.667 - 70.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55839.48	10819.95	269.97
			Max. Mx	20	-25716.94	1198028.84	-16564.03
			Max. My	2	-25680.82	-8105.54	1224363.64
			Max. Vy	20	-26672.45	1198028.84	-16564.03
			Max. Vx	2	-27058.25	-8105.54	1224363.64
			Max. Torque	12			-5771.28
L18	70.417 - 65.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-57793.54	10946.16	254.25
			Max. Mx	20	-26980.78	1332814.03	-17628.75
			Max. My	2	-26947.69	-8759.68	1361085.46
			Max. Vy	20	-27259.14	1332814.03	-17628.75
			Max. Vx	2	-27648.79	-8759.68	1361085.46
			Max. Torque	12			-5793.43
L19	65.417 - 63.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58484.75	10988.97	248.80
			Max. Mx	20	-27425.01	1380679.60	-18000.65
			Max. My	2	-27392.79	-8988.05	1409627.17
			Max. Vy	20	-27470.35	1380679.60	-18000.65
			Max. Vx	2	-27859.92	-8988.05	1409627.17
			Max. Torque	12			-5801.26
L20	63.667 - 63.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58583.80	10995.93	248.19

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Mx	20	-27506.17	1387547.29	-18054.55
			Max. My	2	-27474.70	-9020.93	1416590.79
			Max. Vy	20	-27489.69	1387547.29	-18054.55
			Max. Vx	2	-27873.73	-9020.93	1416590.79
			Max. Torque	12			-5802.24
L21	63.417 - 58.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-58644.63	11000.50	247.75
			Max. Mx	20	-27550.55	1392138.84	-18090.67
			Max. My	2	-27519.23	-9042.37	1421246.47
			Max. Vy	20	-27516.14	1392138.84	-18090.67
			Max. Vx	2	-27893.63	-9042.37	1421246.47
			Max. Torque	12			-5802.96
L22	58.25 - 57.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62468.76	11143.97	229.46
			Max. Mx	20	-30187.14	1559544.72	-19363.61
			Max. My	2	-30157.55	-9824.84	1590970.05
			Max. Vy	20	-28293.53	1559544.72	-19363.61
			Max. Vx	2	-28682.73	-9824.84	1590970.05
			Max. Torque	12			-5830.48
L23	57.25 - 53.229	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64135.65	11237.38	218.06
			Max. Mx	20	-31379.27	1674181.91	-20214.09
			Max. My	2	-31352.25	-10350.85	1707157.18
			Max. Vy	20	-28745.87	1674181.91	-20214.09
			Max. Vx	2	-29133.97	-10350.85	1707157.18
			Max. Torque	12			-5848.22
L24	53.229 - 52.979	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-65078.73	11243.89	6374.36
			Max. Mx	20	-31762.15	1681390.12	-18060.06
			Max. My	2	-31735.86	-10383.23	1716728.52
			Max. Vy	20	-29067.59	1681390.12	-18060.06
			Max. Vx	2	-29435.13	-10383.23	1716728.52
			Max. Torque	12			-5848.09
L25	52.979 - 47.979	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67318.65	11354.59	6371.69
			Max. Mx	20	-33274.70	1828062.58	-19113.72
			Max. My	2	-33251.49	-11036.68	1865245.22
			Max. Vy	20	-29621.05	1828062.58	-19113.72
			Max. Vx	2	-29992.08	-11036.68	1865245.22
			Max. Torque	14			-5796.82
L26	47.979 - 42.979	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-69583.44	11460.49	6351.46
			Max. Mx	20	-34830.45	1977448.07	-20164.04
			Max. My	2	-34810.64	-11688.81	2016464.24
			Max. Vy	20	-30155.91	1977448.07	-20164.04
			Max. Vx	2	-30525.08	-11688.81	2016464.24
			Max. Torque	14			-5815.72
L27	42.979 - 37.979	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-71878.88	11542.68	6318.20
			Max. Mx	20	-36420.37	2129462.16	-21209.11
			Max. My	2	-36404.00	-12339.39	2170301.62
			Max. Vy	20	-30673.50	2129462.16	-21209.11
			Max. Vx	2	-31040.67	-12339.39	2170301.62
			Max. Torque	14			-5834.59
L28	37.979 - 35.125	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73202.27	11582.24	6295.22
			Max. Mx	20	-37338.04	2217378.82	-21803.14
			Max. My	2	-37323.48	-12709.67	2259254.16
			Max. Vy	20	-30965.94	2217378.82	-21803.14
			Max. Vx	2	-31332.13	-12709.67	2259254.16
			Max. Torque	14			-5845.32

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L29	35.125 - 34.875	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73344.36	11586.59	6293.36
			Max. Mx	20	-37457.27	2225119.69	-21855.28
			Max. My	2	-37443.29	-12742.49	2267085.19
			Max. Vy	20	-30980.20	2225119.69	-21855.28
			Max. Vx	2	-31342.18	-12742.49	2267085.19
			Max. Torque	14			-5846.22
L30	34.875 - 28.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73557.52	11591.49	6290.26
			Max. Mx	20	-37613.11	2236742.57	-21933.11
			Max. My	2	-37599.27	-12791.04	2278844.03
			Max. Vy	20	-31018.29	2236742.57	-21933.11
			Max. Vx	2	-31382.40	-12791.04	2278844.03
			Max. Torque	14			-5847.61
L31	28.75 - 27.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80284.15	11685.36	6188.95
			Max. Mx	20	-42639.78	2448864.72	-23335.84
			Max. My	2	-42627.48	-13661.72	2493410.69
			Max. Vy	20	-31827.95	2448864.72	-23335.84
			Max. Vx	2	-32193.44	-13661.72	2493410.69
			Max. Torque	14			-5873.22
L32	27.75 - 25.875	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81479.02	11711.03	6059.42
			Max. Mx	20	-43491.67	2508706.10	-23724.90
			Max. My	2	-43480.02	-13903.79	2553930.06
			Max. Vy	20	-32030.27	2508706.10	-23724.90
			Max. Vx	2	-32395.56	-13903.79	2553930.06
			Max. Torque	14			-5880.18
L33	25.875 - 25.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81546.39	11714.00	6051.02
			Max. Mx	20	-43551.52	2512709.39	-23751.00
			Max. My	2	-43540.36	-13920.40	2557977.61
			Max. Vy	20	-32041.93	2512709.39	-23751.00
			Max. Vx	2	-32391.70	-13920.40	2557977.61
			Max. Torque	14			-5880.62
L34	25.75 - 25.625	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81630.38	11716.29	6042.49
			Max. Mx	20	-43613.51	2516713.09	-23777.04
			Max. My	2	-43602.42	-13936.42	2562026.48
			Max. Vy	20	-32054.10	2516713.09	-23777.04
			Max. Vx	2	-32404.10	-13936.42	2562026.48
			Max. Torque	14			-5881.08
L35	25.625 - 25.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81714.39	11718.01	6033.86
			Max. Mx	20	-43675.08	2520718.45	-23802.95
			Max. My	2	-43664.04	-13952.57	2566076.98
			Max. Vy	20	-32067.14	2520718.45	-23802.95
			Max. Vx	2	-32417.14	-13952.57	2566076.98
			Max. Torque	14			-5881.55
L36	25.5 - 20.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-85037.23	11785.06	5769.53
			Max. Mx	20	-46141.75	2682275.19	-24837.16
			Max. My	2	-46132.64	-14597.64	2729436.47
			Max. Vy	20	-32582.95	2682275.19	-24837.16
			Max. Vx	2	-32946.36	-14597.64	2729436.47
			Max. Torque	14			-5900.54
L37	20.5 - 15.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-88343.08	11853.44	5579.19
			Max. Mx	20	-48651.89	2846459.25	-25867.71
			Max. My	2	-48644.94	-15240.93	2895414.44
			Max. Vy	20	-33109.31	2846459.25	-25867.71

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Vx	2	-33471.15	-15240.93	2895414.44
			Max. Torque	14			-5920.01
L38	15.5 - 10.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-91661.62	11920.81	5392.59
			Max. Mx	20	-51197.76	3013278.82	-26893.84
			Max. My	2	-51192.97	-15882.19	3064019.08
			Max. Vy	20	-33638.14	3013278.82	-26893.84
			Max. Vx	2	-33998.27	-15882.19	3064019.08
			Max. Torque	14			-5939.99
L39	10.5 - 5.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-94810.66	11927.03	5247.34
			Max. Mx	20	-53639.71	3182702.99	-27908.51
			Max. My	2	-53637.11	-16532.59	3235236.77
			Max. Vy	20	-34156.74	3182702.99	-27908.51
			Max. Vx	2	-34514.99	-16532.59	3235236.77
			Max. Torque	14			-5941.89
L40	5.5 - 0.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-97783.47	11926.77	5119.92
			Max. Mx	20	-55982.45	3354720.49	-28917.01
			Max. My	2	-55982.04	-17181.95	3409039.75
			Max. Vy	20	-34677.03	3354720.49	-28917.01
			Max. Vx	2	-35033.27	-17181.95	3409039.75
			Max. Torque	14			-5941.87
L41	0.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-98066.65	11926.75	5110.45
			Max. Mx	20	-56223.40	3372065.42	-29017.52
			Max. My	2	-56223.31	-17246.95	3426562.65
			Max. Vy	20	-34722.63	3372065.42	-29017.52
			Max. Vx	2	-35078.56	-17246.95	3426562.65
			Max. Torque	14			-5941.84

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	98066.65	-0.02	-0.00
	Max. H_x	21	42170.62	34716.19	-201.11
	Max. H_z	2	56227.51	-128.82	35071.83
	Max. M_x	2	3426562.65	-128.82	35071.83
	Max. M_z	8	3353105.20	-34635.14	35.40
	Max. Torsion	2	5648.16	-128.82	35071.83
	Min. Vert	9	42170.60	-34634.84	35.40
	Min. H_x	8	56227.49	-34635.14	35.40
	Min. H_z	15	42170.63	206.11	-34931.54
	Min. M_x	14	-3400250.05	206.11	-34931.50
	Min. M_z	20	-3372065.42	34716.01	-201.11
	Min. Torsion	14	-5941.84	206.11	-34931.50

Tower Mast Reaction Summary

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only	46856.26	0.89	0.18	-1949.27	2395.98	0.01
1.2 Dead+1.6 Wind 0 deg - No Ice	56227.51	128.82	-35071.83	-3426562.65	-17247.14	-5648.16
0.9 Dead+1.6 Wind 0 deg - No Ice	42170.63	128.82	-35071.77	-3398055.25	-17842.28	-5582.92
1.2 Dead+1.6 Wind 30 deg - No Ice	56227.51	17359.18	-30447.66	-2979271.91	-1681700.54	-5208.06
0.9 Dead+1.6 Wind 30 deg - No Ice	42170.63	17359.19	-30447.67	-2954390.63	-1668860.80	-5141.90
1.2 Dead+1.6 Wind 60 deg - No Ice	56227.51	29910.98	-17784.25	-1752920.22	-2890594.51	-3019.62
0.9 Dead+1.6 Wind 60 deg - No Ice	42170.63	29910.97	-17784.24	-1737953.55	-2868018.37	-2969.49
1.2 Dead+1.6 Wind 90 deg - No Ice	56227.49	34635.14	-35.40	-8303.67	-3353105.20	309.61
0.9 Dead+1.6 Wind 90 deg - No Ice	42170.60	34634.84	-35.40	-7612.72	-3326719.52	327.94
1.2 Dead+1.6 Wind 120 deg - No Ice	56227.51	29941.64	17475.99	1700033.93	-2895307.96	3064.42
0.9 Dead+1.6 Wind 120 deg - No Ice	42170.63	29941.65	17475.99	1686825.69	-2872681.84	3047.28
1.2 Dead+1.6 Wind 150 deg - No Ice	56227.51	17213.12	30237.24	2941946.88	-1658858.53	4997.25
0.9 Dead+1.6 Wind 150 deg - No Ice	42170.63	17213.13	30237.26	2918650.66	-1646258.37	4949.58
1.2 Dead+1.6 Wind 180 deg - No Ice	56227.51	-206.11	34931.50	3400250.05	35609.13	5941.84
0.9 Dead+1.6 Wind 180 deg - No Ice	42170.63	-206.11	34931.54	3373221.48	34449.39	5875.95
1.2 Dead+1.6 Wind 210 deg - No Ice	56227.51	-17383.29	30341.72	2958401.75	1691854.76	5129.44
0.9 Dead+1.6 Wind 210 deg - No Ice	42170.63	-17383.28	30341.71	2934921.96	1677338.70	5063.76
1.2 Dead+1.6 Wind 240 deg - No Ice	56227.51	-30025.44	17673.13	1731135.80	2914686.46	2588.79
0.9 Dead+1.6 Wind 240 deg - No Ice	42170.63	-30025.46	17673.13	1717589.80	2890283.83	2540.28
1.2 Dead+1.6 Wind 270 deg - No Ice	56227.49	-34716.01	201.11	29017.50	3372065.42	-707.43
0.9 Dead+1.6 Wind 270 deg - No Ice	42170.62	-34716.19	201.11	29310.43	3343961.82	-725.87
1.2 Dead+1.6 Wind 300 deg - No Ice	56227.51	-29950.79	-17569.23	-1719030.37	2903116.60	-2929.31
0.9 Dead+1.6 Wind 300 deg - No Ice	42170.63	-29950.81	-17569.24	-1704420.08	2878837.53	-2911.80
1.2 Dead+1.6 Wind 330 deg - No Ice	56227.51	-17189.41	-30436.39	-2977553.69	1661107.75	-4519.36
0.9 Dead+1.6 Wind 330 deg - No Ice	42170.63	-17189.41	-30436.39	-2952680.44	1646922.70	-4471.58
1.2 Dead+1.0 Ice+1.0 Temp	98066.65	0.02	0.00	-5110.45	11926.75	0.02
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	98066.65	23.76	-9385.06	-991070.45	8112.51	-1638.79
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	98066.65	4657.01	-8141.44	-861208.63	-474756.60	-1273.93
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	98066.65	8037.39	-4738.30	-505563.10	-826369.63	-502.11
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	98066.65	9298.74	-6.53	-6318.12	-958956.40	459.80
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	98066.65	8043.05	4681.47	485895.36	-827276.79	1207.53
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	98066.65	4630.07	8102.64	844548.11	-470316.52	1630.91
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	98066.65	-38.01	9359.19	976556.73	18370.52	1679.95
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	98066.65	-4661.45	8121.91	847751.59	499645.62	1257.95
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	98066.65	-8058.51	4717.83	491935.86	853965.29	432.61
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	98066.65	-9313.67	37.08	924.61	985560.24	-523.33
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	98066.65	-8044.75	-4698.66	-498983.27	851714.09	-1183.03
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	98066.65	-4625.70	-8139.36	-860866.24	493674.80	-1552.60
Dead+Wind 0 deg - Service	46856.26	25.42	-6920.95	-674561.23	-1416.58	-1121.15
Dead+Wind 30 deg - Service	46856.26	3425.60	-6008.42	-586703.42	-328350.40	-1025.99
Dead+Wind 60 deg - Service	46856.26	5902.53	-3509.47	-345814.91	-565791.94	-584.04
Dead+Wind 90 deg - Service	46856.26	6834.88	-6.98	-3162.52	-656634.54	68.29
Dead+Wind 120 deg - Service	46856.26	5908.58	3448.65	332366.99	-566707.83	608.36
Dead+Wind 150 deg - Service	46856.26	3396.78	5966.91	576294.46	-323860.04	985.45
Dead+Wind 180 deg - Service	46856.26	-40.67	6893.27	666317.40	8951.52	1164.50
Dead+Wind 210 deg - Service	46856.26	-3430.48	5987.74	579555.30	334284.62	1010.19
Dead+Wind 240 deg - Service	46856.26	-5925.11	3487.55	338469.51	574444.64	513.04
Dead+Wind 270 deg - Service	46856.26	-6850.83	39.69	4158.42	664282.13	-137.27
Dead+Wind 300 deg - Service	46856.26	-5910.38	-3467.04	-339160.70	572169.60	-581.54
Dead+Wind 330 deg - Service	46856.26	-3392.22	-6006.42	-586383.57	328253.50	-900.99

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	0.00	-46856.26	0.00	-0.89	46856.26	-0.18	0.002%
2	128.82	-56227.51	-35071.93	-128.82	56227.51	35071.83	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
3	128.82	-42170.63	-35071.93	-128.82	42170.63	35071.77	0.000%
4	17359.20	-56227.51	-30447.70	-17359.18	56227.51	30447.66	0.000%
5	17359.20	-42170.63	-30447.70	-17359.19	42170.63	30447.67	0.000%
6	29911.00	-56227.51	-17784.25	-29910.98	56227.51	17784.25	0.000%
7	29911.00	-42170.63	-17784.25	-29910.97	42170.63	17784.24	0.000%
8	34635.68	-56227.51	-35.40	-34635.14	56227.49	35.40	0.001%
9	34635.68	-42170.63	-35.40	-34634.84	42170.60	35.40	0.002%
10	29941.67	-56227.51	17476.01	-29941.64	56227.51	-17475.99	0.000%
11	29941.67	-42170.63	17476.01	-29941.65	42170.63	-17475.99	0.000%
12	17213.14	-56227.51	30237.28	-17213.12	56227.51	-30237.24	0.000%
13	17213.14	-42170.63	30237.28	-17213.13	42170.63	-30237.26	0.000%
14	-206.11	-56227.51	34931.61	206.11	56227.51	-34931.50	0.000%
15	-206.11	-42170.63	34931.61	206.11	42170.63	-34931.54	0.000%
16	-17383.30	-56227.51	30341.74	17383.29	56227.51	-30341.72	0.000%
17	-17383.30	-42170.63	30341.74	17383.28	42170.63	-30341.71	0.000%
18	-30025.48	-56227.51	17673.15	30025.44	56227.51	-17673.13	0.000%
19	-30025.48	-42170.63	17673.15	30025.46	42170.63	-17673.13	0.000%
20	-34716.56	-56227.51	201.11	34716.01	56227.49	-201.11	0.001%
21	-34716.56	-42170.63	201.11	34716.19	42170.62	-201.11	0.001%
22	-29950.83	-56227.51	-17569.25	29950.79	56227.51	17569.23	0.000%
23	-29950.83	-42170.63	-17569.25	29950.81	42170.63	17569.24	0.000%
24	-17189.42	-56227.51	-30436.41	17189.41	56227.51	30436.39	0.000%
25	-17189.42	-42170.63	-30436.41	17189.41	42170.63	30436.39	0.000%
26	0.00	-98066.65	0.00	-0.02	98066.65	-0.00	0.000%
27	23.76	-98066.65	-9385.08	-23.76	98066.65	9385.06	0.000%
28	4657.01	-98066.65	-8141.45	-4657.01	98066.65	8141.44	0.000%
29	8037.41	-98066.65	-4738.31	-8037.39	98066.65	4738.30	0.000%
30	9298.76	-98066.65	-6.53	-9298.74	98066.65	6.53	0.000%
31	8043.06	-98066.65	4681.48	-8043.05	98066.65	-4681.47	0.000%
32	4630.08	-98066.65	8102.66	-4630.07	98066.65	-8102.64	0.000%
33	-38.01	-98066.65	9359.21	38.01	98066.65	-9359.19	0.000%
34	-4661.46	-98066.65	8121.92	4661.45	98066.65	-8121.91	0.000%
35	-8058.52	-98066.65	4717.83	8058.51	98066.65	-4717.83	0.000%
36	-9313.68	-98066.65	37.08	9313.67	98066.65	-37.08	0.000%
37	-8044.76	-98066.65	-4698.66	8044.75	98066.65	4698.66	0.000%
38	-4625.70	-98066.65	-8139.37	4625.70	98066.65	8139.36	0.000%
39	25.42	-46856.26	-6921.41	-25.42	46856.26	6920.95	0.001%
40	3425.82	-46856.26	-6008.82	-3425.60	46856.26	6008.42	0.001%
41	5902.91	-46856.26	-3509.71	-5902.53	46856.26	3509.47	0.001%
42	6835.32	-46856.26	-6.99	-6834.88	46856.26	6.98	0.001%
43	5908.96	-46856.26	3448.87	-5908.58	46856.26	-3448.65	0.001%
44	3397.00	-46856.26	5967.30	-3396.78	46856.26	-5966.91	0.001%
45	-40.68	-46856.26	6893.72	40.67	46856.26	-6893.27	0.001%
46	-3430.58	-46856.26	5987.91	3430.48	46856.26	-5987.74	0.000%
47	-5925.50	-46856.26	3487.78	5925.11	46856.26	-3487.55	0.001%
48	-6851.28	-46856.26	39.69	6850.83	46856.26	-39.69	0.001%
49	-5910.77	-46856.26	-3467.28	5910.38	46856.26	3467.04	0.001%
50	-3392.32	-46856.26	-6006.60	3392.22	46856.26	6006.42	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00002875
2	Yes	19	0.00000001	0.00007625
3	Yes	18	0.00000001	0.00012980
4	Yes	20	0.00000001	0.00013278
5	Yes	20	0.00000001	0.00009861

6	Yes	21	0.00000001	0.00006680
7	Yes	20	0.00000001	0.00011355
8	Yes	17	0.00000001	0.00010478
9	Yes	16	0.00000001	0.00014431
10	Yes	20	0.00000001	0.00014995
11	Yes	20	0.00000001	0.00011227
12	Yes	20	0.00000001	0.00012660
13	Yes	20	0.00000001	0.00009419
14	Yes	19	0.00000001	0.00009178
15	Yes	19	0.00000001	0.00006992
16	Yes	21	0.00000001	0.00007079
17	Yes	20	0.00000001	0.00012040
18	Yes	20	0.00000001	0.00013987
19	Yes	20	0.00000001	0.00010398
20	Yes	17	0.00000001	0.00014592
21	Yes	17	0.00000001	0.00010566
22	Yes	20	0.00000001	0.00013506
23	Yes	20	0.00000001	0.00010026
24	Yes	21	0.00000001	0.00007001
25	Yes	20	0.00000001	0.00011906
26	Yes	16	0.00000001	0.00008438
27	Yes	20	0.00000001	0.00014862
28	Yes	21	0.00000001	0.00007081
29	Yes	20	0.00000001	0.00014686
30	Yes	20	0.00000001	0.00013966
31	Yes	20	0.00000001	0.00014486
32	Yes	20	0.00000001	0.00014681
33	Yes	20	0.00000001	0.00014613
34	Yes	21	0.00000001	0.00007259
35	Yes	21	0.00000001	0.00007289
36	Yes	22	0.00000001	0.00007612
37	Yes	21	0.00000001	0.00007300
38	Yes	21	0.00000001	0.00007328
39	Yes	15	0.00000001	0.00011793
40	Yes	15	0.00000001	0.00013242
41	Yes	15	0.00000001	0.00014205
42	Yes	15	0.00000001	0.00008508
43	Yes	15	0.00000001	0.00014364
44	Yes	15	0.00000001	0.00012913
45	Yes	15	0.00000001	0.00011998
46	Yes	16	0.00000001	0.00007869
47	Yes	15	0.00000001	0.00012949
48	Yes	15	0.00000001	0.00008838
49	Yes	15	0.00000001	0.00012964
50	Yes	16	0.00000001	0.00007848

Maximum Tower Deflections - Service Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		°	°
L1	148 - 143	15.238	39	0.9415	0.0168
L2	143 - 138	14.258	39	0.9345	0.0146
L3	138 - 133	13.287	39	0.9213	0.0126
L4	133 - 128	12.332	39	0.9026	0.0109
L5	128 - 123	11.398	39	0.8799	0.0094
L6	123 - 118	10.491	39	0.8533	0.0080
L7	118 - 113	9.612	39	0.8232	0.0068
L8	113 - 108	8.768	39	0.7880	0.0057
L9	108 - 100.5	7.964	39	0.7480	0.0048
L10	104.5 - 99.5	7.426	39	0.7177	0.0041

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L11	99.5 - 94.5	6.685	39	0.6958	0.0037
L12	94.5 - 89.5	5.974	39	0.6611	0.0033
L13	89.5 - 84.5	5.301	39	0.6238	0.0029
L14	84.5 - 79.5	4.669	39	0.5846	0.0025
L15	79.5 - 74.5	4.077	39	0.5439	0.0022
L16	74.5 - 70.667	3.530	39	0.5016	0.0019
L17	70.667 - 70.417	3.141	39	0.4681	0.0017
L18	70.417 - 65.417	3.116	39	0.4659	0.0017
L19	65.417 - 63.667	2.652	39	0.4212	0.0015
L20	63.667 - 63.417	2.500	39	0.4055	0.0014
L21	63.417 - 58.25	2.479	39	0.4032	0.0014
L22	63.25 - 57.25	2.465	39	0.4017	0.0014
L23	57.25 - 53.229	1.977	39	0.3712	0.0012
L24	53.229 - 52.979	1.679	39	0.3369	0.0011
L25	52.979 - 47.979	1.661	39	0.3348	0.0011
L26	47.979 - 42.979	1.333	39	0.2916	0.0009
L27	42.979 - 37.979	1.051	39	0.2481	0.0007
L28	37.979 - 35.125	0.814	39	0.2046	0.0006
L29	35.125 - 34.875	0.699	39	0.1797	0.0005
L30	34.875 - 28.75	0.689	39	0.1782	0.0005
L31	34.5 - 27.75	0.675	39	0.1759	0.0005
L32	27.75 - 25.875	0.441	39	0.1529	0.0004
L33	25.875 - 25.75	0.383	39	0.1419	0.0004
L34	25.75 - 25.625	0.380	39	0.1409	0.0004
L35	25.625 - 25.5	0.376	39	0.1402	0.0004
L36	25.5 - 20.5	0.372	39	0.1395	0.0004
L37	20.5 - 15.5	0.240	39	0.1122	0.0003
L38	15.5 - 10.5	0.137	39	0.0847	0.0002
L39	10.5 - 5.5	0.063	39	0.0574	0.0001
L40	5.5 - 0.5	0.017	39	0.0299	0.0001
L41	0.5 - 0	0.000	39	0.0000	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
151.50	VHLP800-11	39	15.238	0.9415	0.0168	25589
148.00	DB420-B	39	15.238	0.9415	0.0168	25589
144.00	VHLP2.5-10W	39	14.453	0.9363	0.0150	25589
120.00	7770.00	39	9.960	0.8358	0.0073	9176
96.00	PD1110	39	6.184	0.6727	0.0034	8366
82.00	APXV18-206516S-C-A20 w/Mount Pipe	39	4.368	0.5645	0.0024	7030
72.00	800 10504 w/Mount Pipe	39	3.273	0.4798	0.0018	6543
53.00	BSA150B	39	1.663	0.3350	0.0011	6709
50.00	BULLET III	39	1.460	0.3092	0.0009	6616

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	148 - 143	77.469	2	4.7687	0.0843
L2	143 - 138	72.492	2	4.7429	0.0730

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L3	138 - 133	67.559	2	4.6825	0.0632
L4	133 - 128	62.706	2	4.5926	0.0545
L5	128 - 123	57.959	2	4.4783	0.0469
L6	123 - 118	53.343	2	4.3435	0.0401
L7	118 - 113	48.877	2	4.1906	0.0340
L8	113 - 108	44.584	2	4.0112	0.0287
L9	108 - 100.5	40.491	2	3.8078	0.0239
L10	104.5 - 99.5	37.758	2	3.6534	0.0208
L11	99.5 - 94.5	33.986	2	3.5419	0.0188
L12	94.5 - 89.5	30.371	2	3.3648	0.0164
L13	89.5 - 84.5	26.948	2	3.1747	0.0145
L14	84.5 - 79.5	23.728	2	2.9751	0.0128
L15	79.5 - 74.5	20.722	2	2.7675	0.0112
L16	74.5 - 70.667	17.937	2	2.5514	0.0098
L17	70.667 - 70.417	15.958	2	2.3808	0.0088
L18	70.417 - 65.417	15.834	2	2.3696	0.0087
L19	65.417 - 63.667	13.472	2	2.1413	0.0074
L20	63.667 - 63.417	12.702	2	2.0613	0.0070
L21	63.417 - 58.25	12.594	2	2.0497	0.0070
L22	63.25 - 57.25	12.523	2	2.0419	0.0069
L23	57.25 - 53.229	10.043	2	1.8865	0.0062
L24	53.229 - 52.979	8.528	2	1.7116	0.0054
L25	52.979 - 47.979	8.439	2	1.7007	0.0054
L26	47.979 - 42.979	6.773	2	1.4812	0.0045
L27	42.979 - 37.979	5.337	2	1.2606	0.0036
L28	37.979 - 35.125	4.133	2	1.0393	0.0029
L29	35.125 - 34.875	3.549	2	0.9130	0.0024
L30	34.875 - 28.75	3.502	2	0.9053	0.0024
L31	34.5 - 27.75	3.431	2	0.8937	0.0024
L32	27.75 - 25.875	2.241	2	0.7768	0.0020
L33	25.875 - 25.75	1.947	2	0.7208	0.0018
L34	25.75 - 25.625	1.928	2	0.7157	0.0018
L35	25.625 - 25.5	1.909	2	0.7122	0.0018
L36	25.5 - 20.5	1.891	2	0.7088	0.0018
L37	20.5 - 15.5	1.221	2	0.5701	0.0014
L38	15.5 - 10.5	0.697	2	0.4303	0.0010
L39	10.5 - 5.5	0.320	2	0.2916	0.0007
L40	5.5 - 0.5	0.087	2	0.1520	0.0003
L41	0.5 - 0	0.001	2	0.0137	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
151.50	VHLP800-11	2	77.469	4.7687	0.0843	6411
148.00	DB420-B	2	77.469	4.7687	0.0843	6411
144.00	VHLP2.5-10W	2	73.485	4.7502	0.0752	6411
120.00	7770.00	2	50.644	4.2547	0.0364	1849
96.00	PD1110	2	31.437	3.4240	0.0171	1652
82.00	APXV18-206516S-C-A20 w/Mount Pipe	2	22.198	2.8722	0.0120	1385
72.00	800 10504 w/Mount Pipe	2	16.631	2.4405	0.0091	1287
53.00	BSA150B	2	8.446	1.7016	0.0054	1321
50.00	BULLET III	2	7.418	1.5706	0.0048	1304

Compression Checks

Pole Design Data

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	lb	lb	
L1	148 - 143 (1)	TP23.0151x22x0.25	5.00	0.00	0.0	18.3259	-5047.81	1243390.00	0.004
L2	143 - 138 (2)	TP24.0301x23.0151x0.25	5.00	0.00	0.0	19.1430	-5433.57	1280700.00	0.004
L3	138 - 133 (3)	TP25.0452x24.0301x0.25	5.00	0.00	0.0	19.9601	-5811.80	1316460.00	0.004
L4	133 - 128 (4)	TP26.0602x25.0452x0.25	5.00	0.00	0.0	20.7772	-6238.66	1350670.00	0.005
L5	128 - 123 (5)	TP27.0753x26.0602x0.25	5.00	0.00	0.0	21.5943	-6686.61	1383330.00	0.005
L6	123 - 118 (6)	TP28.0903x27.0753x0.25	5.00	0.00	0.0	22.4115	-10327.90	1414450.00	0.007
L7	118 - 113 (7)	TP29.1054x28.0903x0.25	5.00	0.00	0.0	23.2286	-10916.00	1444010.00	0.008
L8	113 - 108 (8)	TP30.1204x29.1054x0.25	5.00	0.00	0.0	24.0457	-11530.30	1472030.00	0.008
L9	108 - 100.5 (9)	TP31.643x30.1204x0.25	7.50	0.00	0.0	24.6177	-11974.90	1490720.00	0.008
L10	100.5 - 99.5 (10)	TP31.346x30.331x0.375	5.00	0.00	0.0	37.3975	-13246.10	2544520.00	0.005
L11	99.5 - 94.5 (11)	TP32.361x31.346x0.375	5.00	0.00	0.0	38.6231	-17043.00	2627920.00	0.006
L12	94.5 - 89.5 (12)	TP33.3761x32.361x0.375	5.00	0.00	0.0	39.8488	-18028.50	2711310.00	0.007
L13	89.5 - 84.5 (13)	TP34.3911x33.3761x0.375	5.00	0.00	0.0	41.0744	-19046.50	2790220.00	0.007
L14	84.5 - 79.5 (14)	TP35.4061x34.3911x0.375	5.00	0.00	0.0	42.3001	-23287.70	2846760.00	0.008
L15	79.5 - 74.5 (15)	TP36.4211x35.4061x0.375	5.00	0.00	0.0	43.5257	-24463.40	2901760.00	0.008
L16	74.5 - 70.667 (16)	TP37.1993x36.4211x0.375	3.83	0.00	0.0	44.4653	-25607.00	2942880.00	0.009
L17	70.667 - 70.417 (17)	TP37.25x37.1993x0.375	0.25	0.00	0.0	44.5266	-25680.80	2945530.00	0.009
L18	70.417 - 65.417 (18)	TP38.2651x37.25x0.375	5.00	0.00	0.0	45.7522	-26947.70	2997710.00	0.009
L19	65.417 - 63.667 (19)	TP38.6203x38.2651x0.375	1.75	0.00	0.0	46.1812	-27392.80	3015610.00	0.009
L20	63.667 - 63.417 (20)	TP38.6711x38.6203x0.375	0.25	0.00	0.0	46.2425	-27474.70	3018160.00	0.009
L21	63.417 - 58.25 (21)	TP39.72x38.6711x0.375	5.17	0.00	0.0	46.2834	-27519.20	3019850.00	0.009
L22	58.25 - 57.25 (22)	TP39.1731x37.955x0.4375	6.00	0.00	0.0	54.5687	-30157.60	3712860.00	0.008
L23	57.25 - 53.229 (23)	TP39.9894x39.1731x0.4375	4.02	0.00	0.0	55.7187	-31352.20	3788980.00	0.008
L24	53.229 - 52.979 (24)	TP40.0401x39.9894x0.4375	0.25	0.00	0.0	55.7902	-31735.90	3792340.00	0.008
L25	52.979 - 47.979 (25)	TP41.0552x40.0401x0.4375	5.00	0.00	0.0	57.2202	-33251.50	3858570.00	0.009
L26	47.979 - 42.979 (26)	TP42.0703x41.0552x0.4375	5.00	0.00	0.0	58.6502	-34810.60	3923250.00	0.009
L27	42.979 - 37.979 (27)	TP43.0854x42.0703x0.4375	5.00	0.00	0.0	60.0802	-36404.00	3986380.00	0.009
L28	37.979 - 35.125 (28)	TP43.6648x43.0854x0.4375	2.85	0.00	0.0	60.8964	-37323.50	4021720.00	0.009
L29	35.125 - 34.875 (29)	TP43.7155x43.6648x0.6375	0.25	0.00	0.0	88.4284	-37443.30	6016670.00	0.006
L30	34.875 - 28.75 (30)	TP44.959x43.7155x0.6375	6.13	0.00	0.0	88.5847	-37599.30	6027300.00	0.006
L31	28.75 - 27.75 (31)	TP44.2869x42.9167x0.7	6.75	0.00	0.0	98.2448	-42627.50	6684580.00	0.006
L32	27.75 - 25.875 (32)	TP44.6675x44.2869x0.6875	1.88	0.00	0.0	97.3607	-43480.00	6624420.00	0.007
L33	25.875 - 25.75 (33)	TP44.6929x44.6675x0.5	0.13	0.00	0.0	71.1505	-43540.40	4841080.00	0.009
L34	25.75 - 25.625 (34)	TP44.7182x44.6929x0.75	0.13	0.00	0.0	106.1830	-43602.40	7224710.00	0.006
L35	25.625 - 25.5 (35)	TP44.7436x44.7182x0.75	0.13	0.00	0.0	106.2450	-43664.00	7228880.00	0.006
L36	25.5 - 20.5 (36)	TP45.7586x44.7436x0.75	5.00	0.00	0.0	108.6960	-46132.60	7395660.00	0.006
L37	20.5 - 15.5 (37)	TP46.7736x45.7586x0.7375	5.00	0.00	0.0	109.3240	-48644.90	7438420.00	0.007
L38	15.5 - 10.5 (38)	TP47.7885x46.7736x0.7375	5.00	0.00	0.0	111.7340	-51193.00	7602410.00	0.007
L39	10.5 - 5.5 (39)	TP48.8035x47.7885x0.725	5.00	0.00	0.0	112.2390	-53637.10	7636760.00	0.007
L40	5.5 - 0.5 (40)	TP49.8185x48.8035x0.725	5.00	0.00	0.0	114.6090	-55982.00	7797980.00	0.007
L41	0.5 - 0 (41)	TP49.92x49.8185x0.725	0.50	0.00	0.0	114.8460	-56223.30	7814100.00	0.007

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		lb-ft	lb-ft		lb-ft	lb-ft	
L1	148 - 143 (1)	TP23.0151x22x0.25	38919.33	574920.83	0.068	0.00	574920.83	0.000
L2	143 - 138 (2)	TP24.0301x23.0151x0.25	74443.67	618861.67	0.120	0.00	618861.67	0.000

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L3	138 - 133 (3)	TP25.0452x24.0301x0.25	113292.50	663577.50	0.171	0.00	663577.50	0.000
L4	133 - 128 (4)	TP26.0602x25.0452x0.25	155438.33	708971.67	0.219	0.00	708971.67	0.000
L5	128 - 123 (5)	TP27.0753x26.0602x0.25	200372.50	754946.67	0.265	0.00	754946.67	0.000
L6	123 - 118 (6)	TP28.0903x27.0753x0.25	258089.17	801406.67	0.322	0.00	801406.67	0.000
L7	118 - 113 (7)	TP29.1054x28.0903x0.25	333525.00	848258.33	0.393	0.00	848258.33	0.000
L8	113 - 108 (8)	TP30.1204x29.1054x0.25	411860.00	895391.67	0.460	0.00	895391.67	0.000
L9	108 - 100.5 (9)	TP31.643x30.1204x0.25	468429.17	928508.33	0.504	0.00	928508.33	0.000
L10	100.5 - 99.5 (10)	TP31.346x30.331x0.375	551926.67	1598858.33	0.345	0.00	1598858.33	0.000
L11	99.5 - 94.5 (11)	TP32.361x31.346x0.375	654649.17	1706025.00	0.384	0.00	1706025.00	0.000
L12	94.5 - 89.5 (12)	TP33.3761x32.361x0.375	760118.33	1816666.67	0.418	0.00	1816666.67	0.000
L13	89.5 - 84.5 (13)	TP34.3911x33.3761x0.375	868616.67	1927683.33	0.451	0.00	1927683.33	0.000
L14	84.5 - 79.5 (14)	TP35.4061x34.3911x0.375	987383.33	2026075.00	0.487	0.00	2026075.00	0.000
L15	79.5 - 74.5 (15)	TP36.4211x35.4061x0.375	1116191.67	2125691.67	0.525	0.00	2125691.67	0.000
L16	74.5 - 70.667 (16)	TP37.1993x36.4211x0.375	1217633.33	2202833.33	0.553	0.00	2202833.33	0.000
L17	70.667 - 70.417 (17)	TP37.25x37.1993x0.375	1224391.67	2207883.33	0.555	0.00	2207883.33	0.000
L18	70.417 - 65.417 (18)	TP38.2651x37.25x0.375	1361116.67	2309475.00	0.589	0.00	2309475.00	0.000
L19	65.417 - 63.667 (19)	TP38.6203x38.2651x0.375	1409658.33	2345258.33	0.601	0.00	2345258.33	0.000
L20	63.667 - 63.417 (20)	TP38.6711x38.6203x0.375	1416616.67	2350383.33	0.603	0.00	2350383.33	0.000
L21	63.417 - 58.25 (21)	TP39.72x38.6711x0.375	1421275.00	2353808.33	0.604	0.00	2353808.33	0.000
L22	58.25 - 57.25 (22)	TP39.1731x37.955x0.4375	1591000.00	2920216.67	0.545	0.00	2920216.67	0.000
L23	57.25 - 53.229 (23)	TP39.9894x39.1731x0.4375	1707191.67	3043600.00	0.561	0.00	3043600.00	0.000
L24	53.229 - 52.979 (24)	TP40.0401x39.9894x0.4375	1716758.33	3050241.67	0.563	0.00	3050241.67	0.000
L25	52.979 - 47.979 (25)	TP41.0552x40.0401x0.4375	1865275.00	3183933.33	0.586	0.00	3183933.33	0.000
L26	47.979 - 42.979 (26)	TP42.0703x41.0552x0.4375	2016500.00	3319066.67	0.608	0.00	3319066.67	0.000
L27	42.979 - 37.979 (27)	TP43.0854x42.0703x0.4375	2170333.33	3455558.33	0.628	0.00	3455558.33	0.000
L28	37.979 - 35.125 (28)	TP43.6648x43.0854x0.4375	2259291.67	3534041.67	0.639	0.00	3534041.67	0.000
L29	35.125 - 34.875 (29)	TP43.7155x43.6648x0.6375	2267125.00	5244533.33	0.432	0.00	5244533.33	0.000
L30	34.875 - 28.75 (30)	TP44.959x43.7155x0.6375	2278883.33	5263225.00	0.433	0.00	5263225.00	0.000
L31	28.75 - 27.75 (31)	TP44.2869x42.9167x0.7	2493450.00	5888241.33	0.423	0.00	5888241.33	0.000
L32	27.75 - 25.875 (32)	TP44.6675x44.2869x0.6875	2553966.67	5890358.00	0.434	0.00	5890358.00	0.000
L33	25.875 - 25.75 (33)	TP44.6929x44.6675x0.5	2558016.67	4343933.33	0.589	0.00	4343933.33	0.000
L34	25.75 - 25.625 (34)	TP44.7182x44.6929x0.75	2562066.67	6413408.00	0.399	0.00	6413408.00	0.000
L35	25.625 - 25.5 (35)	TP44.7436x44.7182x0.75	2566116.67	6420874.67	0.400	0.00	6420874.67	0.000
L36	25.5 - 20.5 (36)	TP45.7586x44.7436x0.75	2729475.00	6723108.00	0.406	0.00	6723108.00	0.000
L37	20.5 - 15.5 (37)	TP46.7736x45.7586x0.7375	2895458.33	6920724.67	0.418	0.00	6920724.67	0.000
L38	15.5 - 10.5 (38)	TP47.7885x46.7736x0.7375	3064058.33	7231716.67	0.424	0.00	7231716.67	0.000
L39	10.5 - 5.5 (39)	TP48.8035x47.7885x0.725	3235275.00	7427374.67	0.436	0.00	7427374.67	0.000
L40	5.5 - 0.5 (40)	TP49.8185x48.8035x0.725	3409083.33	7746658.00	0.440	0.00	7746658.00	0.000
L41	0.5 - 0 (41)	TP49.92x49.8185x0.725	3426608.33	7778958.00	0.440	0.00	7778958.00	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	148 - 143 (1)	TP23.0151x22x0.25	6849.34	621696.00	0.011	2990.41	1170091.67	0.003
L2	143 - 138 (2)	TP24.0301x23.0151x0.25	7375.31	640349.00	0.012	2990.22	1259325.00	0.002
L3	138 - 133 (3)	TP25.0452x24.0301x0.25	8157.47	654715.00	0.012	7010.37	1350116.67	0.005
L4	133 - 128 (4)	TP26.0602x25.0452x0.25	8709.43	671975.00	0.013	7025.93	1442291.67	0.005
L5	128 - 123 (5)	TP27.0753x26.0602x0.25	9272.85	688461.00	0.013	7041.72	1535625.00	0.005
L6	123 - 118 (6)	TP28.0903x27.0753x0.25	14803.40	704173.00	0.021	6899.05	1629941.67	0.004
L7	118 - 113 (7)	TP29.1054x28.0903x0.25	15381.50	719112.00	0.021	6915.27	1725041.67	0.004
L8	113 - 108 (8)	TP30.1204x29.1054x0.25	15964.50	736016.00	0.022	6931.67	1820725.00	0.004
L9	108 - 100.5 (9)	TP31.643x30.1204x0.25	16373.60	745362.00	0.022	6943.24	1887950.00	0.004
L10	100.5 - 99.5 (10)	TP31.346x30.331x0.375	17028.60	1272260.00	0.013	6961.09	3255250.00	0.002
L11	99.5 - 94.5 (11)	TP32.361x31.346x0.375	20798.10	1313960.00	0.016	5329.83	3472991.67	0.002

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L12	94.5 - 89.5 (12)	TP33.3761x32.361x0.375	21405.20	1355660.00	0.016	5347.59	3697783.33	0.001
L13	89.5 - 84.5 (13)	TP34.3911x33.3761x0.375	22012.60	1395110.00	0.016	5365.58	3923316.67	0.001
L14	84.5 - 79.5 (14)	TP35.4061x34.3911x0.375	25476.00	1423380.00	0.018	5383.79	4123133.33	0.001
L15	79.5 - 74.5 (15)	TP36.4211x35.4061x0.375	26071.10	1450880.00	0.018	5402.21	4325425.00	0.001
L16	74.5 - 70.667 (16)	TP37.1993x36.4211x0.375	27038.00	1471440.00	0.018	5416.53	4482050.00	0.001
L17	70.667 - 70.417 (17)	TP37.25x37.1993x0.375	27058.50	1472760.00	0.018	5417.28	4492308.33	0.001
L18	70.417 - 65.417 (18)	TP38.2651x37.25x0.375	27649.10	1498860.00	0.018	5436.19	4698583.33	0.001
L19	65.417 - 63.667 (19)	TP38.6203x38.2651x0.375	27860.20	1507810.00	0.018	5442.94	4771241.67	0.001
L20	63.667 - 63.417 (20)	TP38.6711x38.6203x0.375	27874.00	1509080.00	0.018	5443.64	4781641.67	0.001
L21	63.417 - 58.25 (21)	TP39.72x38.6711x0.375	27893.90	1509930.00	0.018	5444.25	4788591.67	0.001
L22	58.25 - 57.25 (22)	TP39.1731x37.955x0.4375	28683.00	1856430.00	0.015	5467.91	5943908.00	0.001
L23	57.25 - 53.229 (23)	TP39.9894x39.1731x0.4375	29134.30	1894490.00	0.015	5483.03	6194558.00	0.001
L24	53.229 - 52.979 (24)	TP40.0401x39.9894x0.4375	29435.40	1896170.00	0.016	5484.08	6208050.00	0.001
L25	52.979 - 47.979 (25)	TP41.0552x40.0401x0.4375	29992.40	1929280.00	0.016	5503.07	6479541.33	0.001
L26	47.979 - 42.979 (26)	TP42.0703x41.0552x0.4375	30525.40	1961620.00	0.016	5521.98	6753966.67	0.001
L27	42.979 - 37.979 (27)	TP43.0854x42.0703x0.4375	31040.90	1993190.00	0.016	5540.88	7031124.67	0.001
L28	37.979 - 35.125 (28)	TP43.6648x43.0854x0.4375	31332.40	2010860.00	0.016	5551.65	7190483.33	0.001
L29	35.125 - 34.875 (29)	TP43.7155x43.6648x0.6375	31342.40	3008340.00	0.010	5552.49	10687416.67	0.001
L30	34.875 - 28.75 (30)	TP44.959x43.7155x0.6375	31382.70	3013650.00	0.010	5553.89	10725416.67	0.001
L31	28.75 - 27.75 (31)	TP44.2869x42.9167x0.7	32193.70	3342290.00	0.010	5579.51	12004166.67	0.000
L32	27.75 - 25.875 (32)	TP44.6675x44.2869x0.6875	32395.80	3312210.00	0.010	5586.52	12006749.33	0.000
L33	25.875 - 25.75 (33)	TP44.6929x44.6675x0.5	32391.90	2420540.00	0.013	5586.90	8841833.33	0.001
L34	25.75 - 25.625 (34)	TP44.7182x44.6929x0.75	32404.30	3612360.00	0.009	5587.36	13079166.67	0.000
L35	25.625 - 25.5 (35)	TP44.7436x44.7182x0.75	32417.40	3614440.00	0.009	5587.83	13094333.33	0.000
L36	25.5 - 20.5 (36)	TP45.7586x44.7436x0.75	32946.60	3697830.00	0.009	5606.85	13708916.00	0.000
L37	20.5 - 15.5 (37)	TP46.7736x45.7586x0.7375	33471.40	3719210.00	0.009	5626.32	14108833.33	0.000
L38	15.5 - 10.5 (38)	TP47.7885x46.7736x0.7375	33998.50	3801210.00	0.009	5646.32	14741166.67	0.000
L39	10.5 - 5.5 (39)	TP48.8035x47.7885x0.725	34515.20	3818380.00	0.009	5648.23	15137000.00	0.000
L40	5.5 - 0.5 (40)	TP49.8185x48.8035x0.725	35033.50	3898990.00	0.009	5648.17	15786082.67	0.000
L41	0.5 - 0 (41)	TP49.92x49.8185x0.725	35078.80	3907050.00	0.009	5648.16	15851749.33	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	148 - 143 (1)	0.004	0.068	0.000	0.011	0.003	0.072 ✔	1.000	4.8.2 ✔
L2	143 - 138 (2)	0.004	0.120	0.000	0.012	0.002	0.125 ✔	1.000	4.8.2 ✔
L3	138 - 133 (3)	0.004	0.171	0.000	0.012	0.005	0.175 ✔	1.000	4.8.2 ✔
L4	133 - 128 (4)	0.005	0.219	0.000	0.013	0.005	0.224 ✔	1.000	4.8.2 ✔
L5	128 - 123 (5)	0.005	0.265	0.000	0.013	0.005	0.271 ✔	1.000	4.8.2 ✔
L6	123 - 118 (6)	0.007	0.322	0.000	0.021	0.004	0.330 ✔	1.000	4.8.2 ✔
L7	118 - 113 (7)	0.008	0.393	0.000	0.021	0.004	0.401 ✔	1.000	4.8.2 ✔
L8	113 - 108 (8)	0.008	0.460	0.000	0.022	0.004	0.468 ✔	1.000	4.8.2 ✔
L9	108 - 100.5 (9)	0.008	0.504	0.000	0.022	0.004	0.513 ✔	1.000	4.8.2 ✔
L10	100.5 - 99.5 (10)	0.005	0.345	0.000	0.013	0.002	0.351 ✔	1.000	4.8.2 ✔
L11	99.5 - 94.5 (11)	0.006	0.384	0.000	0.016	0.002	0.391 ✔	1.000	4.8.2 ✔
L12	94.5 - 89.5 (12)	0.007	0.418	0.000	0.016	0.001	0.425 ✔	1.000	4.8.2 ✔
L13	89.5 - 84.5 (13)	0.007	0.451	0.000	0.016	0.001	0.458 ✔	1.000	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L14	84.5 - 79.5 (14)	0.008	0.487	0.000	0.018	0.001	0.496 ✔	1.000	4.8.2 ✔
L15	79.5 - 74.5 (15)	0.008	0.525	0.000	0.018	0.001	0.534 ✔	1.000	4.8.2 ✔
L16	74.5 - 70.667 (16)	0.009	0.553	0.000	0.018	0.001	0.562 ✔	1.000	4.8.2 ✔
L17	70.667 - 70.417 (17)	0.009	0.555	0.000	0.018	0.001	0.564 ✔	1.000	4.8.2 ✔
L18	70.417 - 65.417 (18)	0.009	0.589	0.000	0.018	0.001	0.599 ✔	1.000	4.8.2 ✔
L19	65.417 - 63.667 (19)	0.009	0.601	0.000	0.018	0.001	0.611 ✔	1.000	4.8.2 ✔
L20	63.667 - 63.417 (20)	0.009	0.603	0.000	0.018	0.001	0.612 ✔	1.000	4.8.2 ✔
L21	63.417 - 58.25 (21)	0.009	0.604	0.000	0.018	0.001	0.613 ✔	1.000	4.8.2 ✔
L22	58.25 - 57.25 (22)	0.008	0.545	0.000	0.015	0.001	0.553 ✔	1.000	4.8.2 ✔
L23	57.25 - 53.229 (23)	0.008	0.561	0.000	0.015	0.001	0.569 ✔	1.000	4.8.2 ✔
L24	53.229 - 52.979 (24)	0.008	0.563	0.000	0.016	0.001	0.571 ✔	1.000	4.8.2 ✔
L25	52.979 - 47.979 (25)	0.009	0.586	0.000	0.016	0.001	0.595 ✔	1.000	4.8.2 ✔
L26	47.979 - 42.979 (26)	0.009	0.608	0.000	0.016	0.001	0.617 ✔	1.000	4.8.2 ✔
L27	42.979 - 37.979 (27)	0.009	0.628	0.000	0.016	0.001	0.637 ✔	1.000	4.8.2 ✔
L28	37.979 - 35.125 (28)	0.009	0.639	0.000	0.016	0.001	0.649 ✔	1.000	4.8.2 ✔
L29	35.125 - 34.875 (29)	0.006	0.432	0.000	0.010	0.001	0.439 ✔	1.000	4.8.2 ✔
L30	34.875 - 28.75 (30)	0.006	0.433	0.000	0.010	0.001	0.439 ✔	1.000	4.8.2 ✔
L31	28.75 - 27.75 (31)	0.006	0.423	0.000	0.010	0.000	0.430 ✔	1.000	4.8.2 ✔
L32	27.75 - 25.875 (32)	0.007	0.434	0.000	0.010	0.000	0.440 ✔	1.000	4.8.2 ✔
L33	25.875 - 25.75 (33)	0.009	0.589	0.000	0.013	0.001	0.598 ✔	1.000	4.8.2 ✔
L34	25.75 - 25.625 (34)	0.006	0.399	0.000	0.009	0.000	0.406 ✔	1.000	4.8.2 ✔
L35	25.625 - 25.5 (35)	0.006	0.400	0.000	0.009	0.000	0.406 ✔	1.000	4.8.2 ✔
L36	25.5 - 20.5 (36)	0.006	0.406	0.000	0.009	0.000	0.412 ✔	1.000	4.8.2 ✔
L37	20.5 - 15.5 (37)	0.007	0.418	0.000	0.009	0.000	0.425 ✔	1.000	4.8.2 ✔
L38	15.5 - 10.5 (38)	0.007	0.424	0.000	0.009	0.000	0.431 ✔	1.000	4.8.2 ✔
L39	10.5 - 5.5 (39)	0.007	0.436	0.000	0.009	0.000	0.443 ✔	1.000	4.8.2 ✔
L40	5.5 - 0.5 (40)	0.007	0.440	0.000	0.009	0.000	0.447 ✔	1.000	4.8.2 ✔
L41	0.5 - 0 (41)	0.007	0.440	0.000	0.009	0.000	0.448 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	148 - 143	Pole	TP23.0151x22x0.25	1	-5047.81	1243390.00	7.2	Pass
L2	143 - 138	Pole	TP24.0301x23.0151x0.25	2	-5433.57	1280700.00	12.5	Pass
L3	138 - 133	Pole	TP25.0452x24.0301x0.25	3	-5811.80	1316460.00	17.5	Pass
L4	133 - 128	Pole	TP26.0602x25.0452x0.25	4	-6238.66	1350670.00	22.4	Pass
L5	128 - 123	Pole	TP27.0753x26.0602x0.25	5	-6686.61	1383330.00	27.1	Pass
L6	123 - 118	Pole	TP28.0903x27.0753x0.25	6	-10327.90	1414450.00	33.0	Pass
L7	118 - 113	Pole	TP29.1054x28.0903x0.25	7	-10916.00	1444010.00	40.1	Pass
L8	113 - 108	Pole	TP30.1204x29.1054x0.25	8	-11530.30	1472030.00	46.8	Pass
L9	108 - 100.5	Pole	TP31.643x30.1204x0.25	9	-11974.90	1490720.00	51.3	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L10	100.5 - 99.5	Pole	TP31.346x30.331x0.375	10	-13246.10	2544520.00	35.1	Pass
L11	99.5 - 94.5	Pole	TP32.361x31.346x0.375	11	-17043.00	2627920.00	39.1	Pass
L12	94.5 - 89.5	Pole	TP33.3761x32.361x0.375	12	-18028.50	2711310.00	42.5	Pass
L13	89.5 - 84.5	Pole	TP34.3911x33.3761x0.375	13	-19046.50	2790220.00	45.8	Pass
L14	84.5 - 79.5	Pole	TP35.4061x34.3911x0.375	14	-23287.70	2846760.00	49.6	Pass
L15	79.5 - 74.5	Pole	TP36.4211x35.4061x0.375	15	-24463.40	2901760.00	53.4	Pass
L16	74.5 - 70.667	Pole	TP37.1993x36.4211x0.375	16	-25607.00	2942880.00	56.2	Pass
L17	70.667 - 70.417	Pole	TP37.25x37.1993x0.375	17	-25680.80	2945530.00	56.4	Pass
L18	70.417 - 65.417	Pole	TP38.2651x37.25x0.375	18	-26947.70	2997710.00	59.9	Pass
L19	65.417 - 63.667	Pole	TP38.6203x38.2651x0.375	19	-27392.80	3015610.00	61.1	Pass
L20	63.667 - 63.417	Pole	TP38.6711x38.6203x0.375	20	-27474.70	3018160.00	61.2	Pass
L21	63.417 - 58.25	Pole	TP39.72x38.6711x0.375	21	-27519.20	3019850.00	61.3	Pass
L22	58.25 - 57.25	Pole	TP39.1731x37.955x0.4375	22	-30157.60	3712860.00	55.3	Pass
L23	57.25 - 53.229	Pole	TP39.9894x39.1731x0.4375	23	-31352.20	3788980.00	56.9	Pass
L24	53.229 - 52.979	Pole	TP40.0401x39.9894x0.4375	24	-31735.90	3792340.00	57.1	Pass
L25	52.979 - 47.979	Pole	TP41.0552x40.0401x0.4375	25	-33251.50	3858570.00	59.5	Pass
L26	47.979 - 42.979	Pole	TP42.0703x41.0552x0.4375	26	-34810.60	3923250.00	61.7	Pass
L27	42.979 - 37.979	Pole	TP43.0854x42.0703x0.4375	27	-36404.00	3986380.00	63.7	Pass
L28	37.979 - 35.125	Pole	TP43.6648x43.0854x0.4375	28	-37323.50	4021720.00	64.9	Pass
L29	35.125 - 34.875	Pole	TP43.7155x43.6648x0.6375	29	-37443.30	6016670.00	43.9	Pass
L30	34.875 - 28.75	Pole	TP44.959x43.7155x0.6375	30	-37599.30	6027300.00	43.9	Pass
L31	28.75 - 27.75	Pole	TP44.2869x42.9167x0.7	31	-42627.50	6684580.00	43.0	Pass
L32	27.75 - 25.875	Pole	TP44.6675x44.2869x0.6875	32	-43480.00	6624420.00	44.0	Pass
L33	25.875 - 25.75	Pole	TP44.6929x44.6675x0.5	33	-43540.40	4841080.00	59.8	Pass
L34	25.75 - 25.625	Pole	TP44.7182x44.6929x0.75	34	-43602.40	7224710.00	40.6	Pass
L35	25.625 - 25.5	Pole	TP44.7436x44.7182x0.75	35	-43664.00	7228880.00	40.6	Pass
L36	25.5 - 20.5	Pole	TP45.7586x44.7436x0.75	36	-46132.60	7395660.00	41.2	Pass
L37	20.5 - 15.5	Pole	TP46.7736x45.7586x0.7375	37	-48644.90	7438420.00	42.5	Pass
L38	15.5 - 10.5	Pole	TP47.7885x46.7736x0.7375	38	-51193.00	7602410.00	43.1	Pass
L39	10.5 - 5.5	Pole	TP48.8035x47.7885x0.725	39	-53637.10	7636760.00	44.3	Pass
L40	5.5 - 0.5	Pole	TP49.8185x48.8035x0.725	40	-55982.00	7797980.00	44.7	Pass
L41	0.5 - 0	Pole	TP49.92x49.8185x0.725	41	-56223.30	7814100.00	44.8	Pass
							Summary	
						Pole (L28)	64.9	Pass
						RATING =	**64.9**	**Pass**

CCIpole

per TIA-222- G

Site: CT03XC355

Project: 39392

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	47.5	4	12	22	31.643	0.25	Auto	A607-60
2	104.5	46.25	5	12	30.33	39.72	0.375	Auto	A607-60
3	63.25	34.5	5.75	12	37.95	44.959	0.4375	Auto	A607-60
4	34.5	34.5	0	12	42.92	49.92	0.5	Auto	A607-60

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
1	0	35.125	plate	CCI-WSFP-065125	2			0								0	
2	0	25.75	plate	CCI-WSFP-065125	2						0		0				
3	25.875	35.125	plate	CCI-SFP-065125	1							0					
4	35.125	53.229	plate	CCI-SFP-060100	3			0				0				0	
5	63.667	70.667	plate	CCI-SFP-045100	3	0				0				0			
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	6.5	1.25	8.125	0.625	n/a	33.000	19.000	6.563	1.1875	A572-65
2	6.5	1.25	8.125	0.625	n/a	33.000	19.000	6.563	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	1	6	0.5	24.000	24.000	16.000	4.750	1.1875	A572-65
5	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	148 - 143	5		12	22.000	23.015	0.25	A607-60	1.000
2	143 - 138	5		12	23.015	24.030	0.25	A607-60	1.000
3	138 - 133	5		12	24.030	25.045	0.25	A607-60	1.000
4	133 - 128	5		12	25.045	26.060	0.25	A607-60	1.000
5	128 - 123	5		12	26.060	27.075	0.25	A607-60	1.000
6	123 - 118	5		12	27.075	28.090	0.25	A607-60	1.000
7	118 - 113	5		12	28.090	29.105	0.25	A607-60	1.000
8	113 - 108	5		12	29.105	30.120	0.25	A607-60	1.000
9	108 - 104.5	7.5	4	12	30.120	31.643	0.25	A607-60	1.000
10	104.5 - 99.5	5		12	30.331	31.346	0.375	A607-60	1.000
11	99.5 - 94.5	5		12	31.346	32.361	0.375	A607-60	1.000
12	94.5 - 89.5	5		12	32.361	33.376	0.375	A607-60	1.000
13	89.5 - 84.5	5		12	33.376	34.391	0.375	A607-60	1.000
14	84.5 - 79.5	5		12	34.391	35.406	0.375	A607-60	1.000
15	79.5 - 74.5	5		12	35.406	36.421	0.375	A607-60	1.000
16	74.5 - 70.667	3.833		12	36.421	37.199	0.375	A607-60	1.000
17	70.667 - 70.417	0.25		12	37.199	37.250	0.375	A607-60	1.000
18	70.417 - 65.417	5		12	37.250	38.265	0.375	A607-60	1.000
19	65.417 - 63.667	1.75		12	38.265	38.620	0.375	A607-60	1.000
20	63.667 - 63.417	0.25		12	38.620	38.671	0.375	A607-60	1.000
21	63.417 - 63.25	5.167	5	12	38.671	39.720	0.375	A607-60	1.000
22	63.25 - 57.25	6		12	37.955	39.173	0.4375	A607-60	1.000
23	57.25 - 53.229	4.021		12	39.173	39.989	0.4375	A607-60	1.000
24	53.229 - 52.979	0.25		12	39.989	40.040	0.4375	A607-60	1.000
25	52.979 - 47.979	5		12	40.040	41.055	0.4375	A607-60	1.000
26	47.979 - 42.979	5		12	41.055	42.070	0.4375	A607-60	1.000
27	42.979 - 37.979	5		12	42.070	43.085	0.4375	A607-60	1.000
28	37.979 - 35.125	2.854		12	43.085	43.665	0.4375	A607-60	1.000
29	35.125 - 34.875	0.25		12	43.665	43.716	0.6375	A607-60	0.966
30	34.875 - 34.5	6.125	5.75	12	43.716	44.959	0.6375	A607-60	0.965
31	34.5 - 27.75	6.75		12	42.917	44.287	0.7	A607-60	0.966
32	27.75 - 25.875	1.875		12	44.287	44.667	0.6875	A607-60	0.981
33	25.875 - 25.75	0.125		12	44.667	44.693	0.5	A607-60	1.000
34	25.75 - 25.625	0.125		12	44.693	44.718	0.75	A607-60	0.977
35	25.625 - 25.5	0.125		12	44.718	44.744	0.75	A607-60	0.977
36	25.5 - 20.5	5		12	44.744	45.759	0.75	A607-60	0.970
37	20.5 - 15.5	5		12	45.759	46.774	0.7375	A607-60	0.979
38	15.5 - 10.5	5		12	46.774	47.789	0.7375	A607-60	0.973
39	10.5 - 5.5	5		12	47.789	48.804	0.725	A607-60	0.983
40	5.5 - 0.5	5		12	48.804	49.819	0.725	A607-60	0.977
41	0.5 - 0	0.5		12	49.819	49.920	0.725	A607-60	0.976

TNX Section Forces

Increment (ft): 5

	Section Height (ft)	TNX Output P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	148 - 143	5.06	38.92	6.71
2	143 - 138	5.43	74.44	7.38
3	138 - 133	5.81	113.29	8.16
4	133 - 128	6.24	155.44	8.71
5	128 - 123	6.69	200.37	9.27
6	123 - 118	10.33	258.09	14.80
7	118 - 113	10.92	333.52	15.38
8	113 - 108	11.53	411.86	15.96
9	108 - 104.5	11.97	468.43	16.37
10	104.5 - 99.5	13.25	551.93	17.03
11	99.5 - 94.5	17.04	654.65	20.80
12	94.5 - 89.5	18.03	760.12	21.41
13	89.5 - 84.5	19.05	868.62	22.01
14	84.5 - 79.5	23.29	987.38	25.48
15	79.5 - 74.5	24.46	1116.19	26.07
16	74.5 - 70.667	25.61	1217.63	27.04
17	70.667 - 70.417	25.68	1224.39	27.06
18	70.417 - 65.417	26.95	1361.11	27.65
19	65.417 - 63.667	27.39	1409.66	27.86
20	63.667 - 63.417	27.47	1416.62	27.87
21	63.417 - 63.25	27.52	1421.28	27.89
22	63.25 - 57.25	30.16	1591.00	28.68
23	57.25 - 53.229	31.35	1707.19	29.13
24	53.229 - 52.979	31.74	1716.76	29.44
25	52.979 - 47.979	33.25	1865.28	29.99
26	47.979 - 42.979	34.81	2016.50	30.53
27	42.979 - 37.979	36.40	2170.34	31.04
28	37.979 - 35.125	37.32	2259.29	31.33
29	35.125 - 34.875	37.44	2267.12	31.34
30	34.875 - 34.5	37.60	2278.88	31.38
31	34.5 - 27.75	42.63	2493.45	32.19
32	27.75 - 25.875	43.48	2553.97	32.40
33	25.875 - 25.75	43.54	2558.02	32.39
34	25.75 - 25.625	43.60	2562.06	32.40
35	25.625 - 25.5	43.66	2566.11	32.42
36	25.5 - 20.5	46.13	2729.48	32.95
37	20.5 - 15.5	48.64	2895.45	33.47
38	15.5 - 10.5	51.19	3064.06	34.00
39	10.5 - 5.5	53.64	3235.28	34.52
40	5.5 - 0.5	55.98	3409.08	35.03
41	0.5 - 0	56.22	3426.61	35.08

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
148 - 143	Pole	TP23.015x22x0.25	Pole	7.2%	Pass
143 - 138	Pole	TP24.03x23.015x0.25	Pole	12.4%	Pass
138 - 133	Pole	TP25.045x24.03x0.25	Pole	17.5%	Pass
133 - 128	Pole	TP26.06x25.045x0.25	Pole	22.3%	Pass
128 - 123	Pole	TP27.075x26.06x0.25	Pole	27.0%	Pass
123 - 118	Pole	TP28.09x27.075x0.25	Pole	32.9%	Pass
118 - 113	Pole	TP29.105x28.09x0.25	Pole	40.0%	Pass
113 - 108	Pole	TP30.12x29.105x0.25	Pole	46.7%	Pass
108 - 104.5	Pole	TP31.643x30.12x0.25	Pole	51.2%	Pass
104.5 - 99.5	Pole	TP31.346x30.331x0.375	Pole	35.0%	Pass
99.5 - 94.5	Pole	TP32.361x31.346x0.375	Pole	38.9%	Pass
94.5 - 89.5	Pole	TP33.376x32.361x0.375	Pole	42.4%	Pass
89.5 - 84.5	Pole	TP34.391x33.376x0.375	Pole	45.6%	Pass
84.5 - 79.5	Pole	TP35.406x34.391x0.375	Pole	49.4%	Pass
79.5 - 74.5	Pole	TP36.421x35.406x0.375	Pole	53.2%	Pass
74.5 - 70.67	Pole	TP37.199x36.421x0.375	Pole	56.0%	Pass
70.67 - 70.42	Pole	TP37.25x37.199x0.375	Pole	56.2%	Pass
70.42 - 65.42	Pole	TP38.265x37.25x0.375	Pole	59.7%	Pass
65.42 - 63.67	Pole	TP38.62x38.265x0.375	Pole	60.9%	Pass
63.67 - 63.42	Pole	TP38.671x38.62x0.375	Pole	61.1%	Pass
63.42 - 63.25	Pole	TP39.72x38.671x0.375	Pole	61.2%	Pass
63.25 - 57.25	Pole	TP39.173x37.955x0.4375	Pole	55.2%	Pass
57.25 - 53.23	Pole	TP39.989x39.173x0.4375	Pole	56.8%	Pass
53.23 - 52.98	Pole	TP40.04x39.989x0.4375	Pole	57.0%	Pass
52.98 - 47.98	Pole	TP41.055x40.04x0.4375	Pole	59.3%	Pass
47.98 - 42.98	Pole	TP42.07x41.055x0.4375	Pole	61.5%	Pass
42.98 - 37.98	Pole	TP43.085x42.07x0.4375	Pole	63.6%	Pass
37.98 - 35.13	Pole	TP43.665x43.085x0.4375	Pole	64.7%	Pass
35.13 - 34.88	Pole + Reinf.	TP43.716x43.665x0.6375	Reinf. 1 Tension Rupture	61.4%	Pass
34.88 - 34.5	Pole + Reinf.	TP44.959x43.716x0.6375	Reinf. 1 Tension Rupture	61.5%	Pass
34.5 - 27.75	Pole + Reinf.	TP44.287x42.917x0.7	Reinf. 1 Tension Rupture	60.2%	Pass
27.75 - 25.88	Pole + Reinf.	TP44.667x44.287x0.6875	Reinf. 1 Tension Rupture	60.7%	Pass
25.88 - 25.75	Pole	TP44.693x44.667x0.5	Pole	59.6%	Pass
25.75 - 25.63	Pole + Reinf.	TP44.718x44.693x0.75	Reinf. 1 Tension Rupture	57.6%	Pass
25.63 - 25.5	Pole + Reinf.	TP44.744x44.718x0.75	Reinf. 1 Tension Rupture	57.6%	Pass
25.5 - 20.5	Pole + Reinf.	TP45.759x44.744x0.75	Reinf. 1 Tension Rupture	59.0%	Pass
20.5 - 15.5	Pole + Reinf.	TP46.774x45.759x0.7375	Reinf. 1 Tension Rupture	60.2%	Pass
15.5 - 10.5	Pole + Reinf.	TP47.789x46.774x0.7375	Reinf. 1 Tension Rupture	61.4%	Pass
10.5 - 5.5	Pole + Reinf.	TP48.804x47.789x0.725	Reinf. 1 Tension Rupture	62.5%	Pass
5.5 - 0.5	Pole + Reinf.	TP49.819x48.804x0.725	Reinf. 1 Tension Rupture	63.6%	Pass
0.5 - 0	Pole + Reinf.	TP49.92x49.819x0.725	Reinf. 1 Tension Rupture	63.7%	Pass
				Summary	
			Pole	64.7%	Pass
			Reinforcement	63.7%	Pass
			Overall	64.7%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity					
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5
148 - 143	1214	n/a	1214	18.30	n/a	18.30	7.2%					
143 - 138	1384	n/a	1384	19.12	n/a	19.12	12.4%					
138 - 133	1568	n/a	1568	19.93	n/a	19.93	17.5%					
133 - 128	1769	n/a	1769	20.75	n/a	20.75	22.3%					
128 - 123	1986	n/a	1986	21.56	n/a	21.56	27.0%					
123 - 118	2220	n/a	2220	22.38	n/a	22.38	32.9%					
118 - 113	2472	n/a	2472	23.20	n/a	23.20	40.0%					
113 - 108	2742	n/a	2742	24.01	n/a	24.01	46.7%					
108 - 104.5	2943	n/a	2943	24.58	n/a	24.58	51.2%					
104.5 - 99.5	4585	n/a	4585	37.34	n/a	37.34	35.0%					
99.5 - 94.5	5051	n/a	5051	38.57	n/a	38.57	38.9%					
94.5 - 89.5	5547	n/a	5547	39.79	n/a	39.79	42.4%					
89.5 - 84.5	6075	n/a	6075	41.02	n/a	41.02	45.6%					
84.5 - 79.5	6635	n/a	6635	42.24	n/a	42.24	49.4%					
79.5 - 74.5	7228	n/a	7228	43.46	n/a	43.46	53.2%					
74.5 - 70.67	7707	n/a	7707	44.40	n/a	44.40	56.0%					
70.67 - 70.42	7739	n/a	7739	44.46	n/a	44.46	56.2%					
70.42 - 65.42	8395	n/a	8395	45.69	n/a	45.69	59.7%					
65.42 - 63.67	8634	n/a	8634	46.12	n/a	46.12	60.9%					
63.67 - 63.42	8668	n/a	8668	46.18	n/a	46.18	61.1%					
63.42 - 63.25	8691	n/a	8691	46.22	n/a	46.22	61.2%					
63.25 - 57.25	10465	n/a	10465	54.49	n/a	54.49	55.2%					
57.25 - 53.23	11141	n/a	11141	55.64	n/a	55.64	56.8%					
53.23 - 52.98	11184	n/a	11184	55.71	n/a	55.71	57.0%					
52.98 - 47.98	12066	n/a	12066	57.14	n/a	57.14	59.3%					
47.98 - 42.98	12993	n/a	12993	58.57	n/a	58.57	61.5%					
42.98 - 37.98	13967	n/a	13967	59.99	n/a	59.99	63.6%					
37.98 - 35.13	14544	n/a	14544	60.81	n/a	60.81	64.7%					
35.13 - 34.88	14595	6205	20800	60.88	24.38	85.26	44.0%	61.4%		61.4%		
34.88 - 34.5	14672	6226	20898	60.99	24.38	85.36	44.2%	61.5%		61.5%		
34.5 - 27.75	17276	6363	23638	70.40	24.38	94.77	41.9%	60.2%		60.2%		
27.75 - 25.88	17730	6469	24199	71.01	24.38	95.38	42.3%	60.7%		60.7%		
25.88 - 25.75	17761	n/a	17761	71.05	n/a	71.05	59.6%					
25.75 - 25.63	17832	8544	26376	71.09	32.50	103.59	41.0%	57.6%	53.4%			
25.63 - 25.5	17863	8553	26416	71.13	32.50	103.63	41.1%	57.6%	53.4%			
25.5 - 20.5	19119	8933	28052	72.76	32.50	105.26	42.1%	59.0%	54.7%			
20.5 - 15.5	20433	9322	29755	74.39	32.50	106.89	43.3%	60.2%	56.0%			
15.5 - 10.5	21806	9719	31525	76.03	32.50	108.53	44.5%	61.4%	57.1%			
10.5 - 5.5	23239	10125	33363	77.66	32.50	110.16	45.6%	62.5%	58.2%			
5.5 - 0.5	24733	10538	35271	79.29	32.50	111.79	46.8%	63.6%	59.3%			
0.5 - 0	24886	10580	35466	79.45	32.50	111.95	46.9%	63.7%	59.4%			

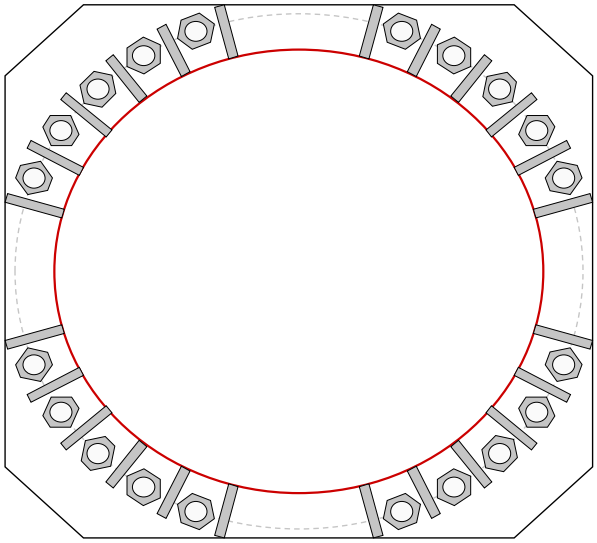
Note: Section capacity checked in 5 degree increments.

Monopole Base Plate Connection

Site Info	
BU #	39392
Site Name	CT03XC355
Order #	

Analysis Considerations	
TIA-222 Revision	G
Grout Considered:	No
l_{ar} (in)	2
Eta Factor, η	0.5

Applied Loads	
Moment (kip-ft)	3426.61
Axial Force (kips)	56.22
Shear Force (kips)	35.08



Connection Properties

Anchor Rod Data

(20) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 58" BC
Anchor Spacing: 6 in

Base Plate Data

60" OD x 2.75" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Stiffener Data

(24) 18"H x 6"W x 1"T, Notch: 0.75"
plate: Fy= 50 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.5" groove, 45° dbl bevel, 0.5" fillet
vert. weld: 0.375" fillet

Pole Data

49.92" x 0.5" 12-sided pole (A607-60; Fy=60 ksi, Fu=75 ksi)

Analysis Results

Anchor Rod Summary		*(units of kips, kip-in)*
Pu_c = 144.51	ϕPn_t = 260	**Stress Rating**
Vu = 1.75	ϕVn = n/a	**56.9%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary		
Max Stress (ksi):	4.38	(Shear)
Allowable Stress (ksi):	27	
Stress Rating:	**16.2%**	**Pass**

Stiffener Summary		
Horizontal Weld:	**36.8%**	**Pass**
Vertical Weld:	**32.5%**	**Pass**
Plate Flexure+Shear:	**8.8%**	**Pass**
Plate Tension+Shear:	**37.5%**	**Pass**
Plate Compression:	**38.7%**	**Pass**
Pole Summary		
Punching Shear:	**7.9%**	**Pass**

Drilled Pier Foundation

Project #:	39392
Site Name:	CT03XC355

TIA-222 Revison:	G
Tower Type:	Monopole

Applied Loads	Comp.	Uplift
Moment (kip-ft)	3426.606	
Axial Force (kips)	56.22331	
Shear Force (kips)	35.07879	

Material Properties		
Concrete Strength, f'c:	3	ksi
Rebar Strength, Fy:	60	ksi

Pier Design Data		
Depth	22.5	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 22.5' below grade		
Pier Diameter	7	ft
Rebar Quantity	40	
Rebar Size	11	
Clear Cover to Ties	4	in
Tie Size	5	

Analysis Results		
Soil Lateral Capacity	*Compression*	*Uplift*
$D_{v=0}$ (ft from TOC)	9.40	-
Soil Safety Factor	2.61	-
Max Moment (kip-ft)	3751.41	-
Rating	*51.0%*	-
Soil Vertical Capacity	*Compression*	*Uplift*
Skin Friction (kips)	285.67	-
End Bearing (kips)	3108.59	-
Weight of Concrete (kips)	159.33	-
Total Capacity (kips)	3394.25	-
Axial (kips)	215.55	-
Rating	*6.4%*	-
Reinforced Concrete Capacity	*Compression*	*Uplift*
Critical Depth (ft from TOC)	9.32	-
Critical Moment (kip-ft)	3751.26	-
Critical Moment Capacity	9175.17	-
Rating	*40.9%*	-

Soil Interaction Rating	**51.0%**
Structural Foundation Rating	**40.9%**

Check Limitation	
N/A	☐
Load Z Normalization:	☐

Soil Profile				
Groundwater Depth	n/a	ft	# of Layers	10

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3.5	3.5	100	150			0.000	0.000	0.000	0.000			Cohesionless
2	3.5	8	4.5	100	150			0.000	0.000	0.000	0.000			Cohesionless
3	8	13	5	135	150		45	0.000	0.000	0.760	0.000			Cohesionless
4	13	18	5	135	150		45	0.000	0.000	1.210	0.000			Cohesionless
5	18	22.5	4.5	135	150		45	0.000	0.000	1.660	0.000	107.7		Cohesionless
6														
7														
8														
9														
10														