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

December 12, 2018

Paul F. Sagristano
Cherundolo Consulting
1280 Route 46 West, Suite 9
Parsippany, NJ 07054

RE: **EM-SPRINT-083-180918** – Sprint Spectrum Realty Company, LP notice of intent to modify an existing telecommunications facility located at 290 Preston Avenue, Middletown, Connecticut.

Dear Mr. Sagristano:

The Connecticut Siting Council (Council) is in receipt of your correspondence of December 7, 2018 submitted in response to the Council's September 28, 2018, 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/FOC/emr

Robidoux, Evan

From: Paul Sagristano <psagristano@lrivassoc.com>
Sent: Friday, December 07, 2018 12:55 PM
To: Bachman, Melanie
Cc: CSC-DL Siting Council
Subject: 290 Preston Ave - Rerun Structural Analysis incorporating Mount Analysis as requested by CSC
Attachments: CT43XC816_DO MACRO UPGRADE_Structural Analysis_12.06.2018.pdf

Melanie: Attached please find a re-run Structural Analysis with Mount Analysis referenced as requested by CSC. Please let me know if you require anything else as regards this submission. Thank you!

Best,

Paul F. Sagristano
917-841-0247

RAMAKER & ASSOCIATES, INC.
100% EMPLOYEE-OWNED

December 6, 2018

Tom Jupin
Charles Cherundolo Consulting, Inc.
1280 Route 46 West
Parsippany, NJ 07054

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

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

CARRIER: **SPRINT**

SITE: **MIDDLETOWN-AT&T (CT43XC816)**
290 PRESTON AVENUE
MIDDLETOWN, MIDDLESEX COUNTY, CONNECTICUT
RAMAKER & ASSOCIATES PROJECT NUMBER: 28802

RESULTS:			
	TOWER:	**99.4%**	**PASS**
	FOUNDATION:	**98.5%**	**PASS**
	MOUNT:		**PASS WITH MODIFICATIONS**

Dear Tom Jupin:

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.

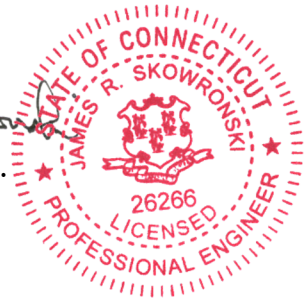
If you have any questions or comments, please do not hesitate to contact our office.

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
Building Code	2015 IBC
TIA-222 Revision	TIA-222-G
Risk Category	II
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

- Mount modification by RAMAKER, job number 28802, dated August 21, 2018
- Mount analysis by RAMAKER, job number 28802, dated June 4, 2018
- Mount analysis by Armor Tower, site name CT43XC816, dated March 3, 2014
- Structural analysis by GPD, job number 2018723.01.14635.03, dated May 31, 2018
- Structural analysis by B+T Group, job number 86667.004.01, dated November 7, 2013
- Structural analysis by B+T Group, job number 86667.002.01, dated June 22, 2013
- Structural analysis by B+T Group, job number 86667.002.01a, dated March 20, 2013
- Construction drawings by RAMAKER, project number 28802
- 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	(1) 8' Lightning Rod	Top of Tower	--	--	Existing
	(6) Powerwave 7770.00	Low Profile Platform	(12) 1-5/8 (2) Power (1) Fiber	AT&T	Existing
	(1) CCI HPA-65R-BUU-H6				
	(4) Commscope SBNHH-1D65C				
	(1) Commscope SBNHH-1D65A				
	(12) Powerwave LGP21401				
	(3) Ericsson RRUS 32 B2				
	(3) Ericsson RRUS-11				
	(1) Raycap DC6-48-60-18-8F				
140	(6) Ericsson AIR21	Low Profile Platform	(18) 1-5/8 (1) Hybrid	T-Mobile	Existing
	(2) RFS APX16DWV-16DWVS-C				
	(3) TMA				
135	(3) ALU 1900MHz 4x45W RRH	Collar Mount	(3) Hybrid **(1) Hybrid**	Sprint	Existing
	(3) ALU 800MHz 2x50W RRH				
130	(3) RFS APXVSPP18-C-A20	Low Profile Platform **w/SitePro1 HRK12 Handrail Kit & PRK-1245L Reinforcement Kit**			
	(3) RFS APXVTM14-ALU-I20				**Proposed**
	(3) ALU TD-RRHx20				
110	(1) Andrew LNX-6514DS-T4M	Low Profile Platform	(12) 1-5/8 (1) Hybrid	Verizon	Existing
	(2) Amphenol BXA-70063-6CF				
	(3) Andrew HBX-6517DS-VTM				
	(3) Andrew HBX-6516DS-VTM				
	(3) Andrew LNX-6513DS-T4M				
	(3) ALU RRH 2x40 AWS				
	(6) RFS FD9R6004/2C-3L				
	(1) RFS DB-T1-6Z-8AB-0Z				
105	(1) Radiowaves HP3-11	(1) Pipe Mount	(1) EW90	City	Existing
100	(2) RFI CC807-08	(3) 6' Standoff	(3) 7/8 (1) 1/2	City	Existing
	(1) dBSpectra DS1F00F36U-D				
	(1) Bird Technologies DS428E83I01T				
90	(3) Kathrein 742-213	(3) Pipe Mount	(6) 1-5/8	Metro PCS	Existing
55	(1) GPS	(1) 1' Standoff	(1) 3/8	Metro PCS	Existing
50	(1) GPS	(1) 1' Standoff	(1) 1/2	Unknown	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	88.9	Pass
Reinforcement	99.4	Pass
Anchor Rod - Original	80.6	Pass
Anchor Rod - Additional	61.2	Pass
Base Plate	69.5	Pass
RATING	**99.4**	**PASS**

Note: A rating of 105% or less is within engineering tolerances and considered acceptable.

Results of the analysis show that the existing tower will be stressed to a maximum of 99.4 percent of capacity. Therefore, the existing tower will pass the TIA-222-G analysis requirements under proposed loading conditions.

DISH TWIST/SWAY RESULTS

The twist/sway results for a 60-mph service wind speed are as follows:

Elevation	Dish	Deflection (in)	Tilt (deg)	Twist (deg)
105	Radiowaves HP3-11	10.797	1.0510	0.0028

MOUNT RESULTS

By engineering calculation and inspection, the modified antenna and equipment mounting structure(s) are capable of supporting the proposed loading configurations without causing an overstress condition in the antenna and equipment mounting structure(s), provided the proposed structural modifications are completed prior to antenna and equipment installation. See the associated construction drawings by RAMAKER for required modifications.

FOUNDATION RESULTS

The maximum foundation stress capacities are as follows:

Component Type	Percent Capacity	Pass/Fail
Pad & Pier - Soil Interaction	98.5	Pass
Pad & Pier - Structural	71.5	Pass
RATING	**98.5**	**PASS**

Note: A rating of 105% or less is within engineering tolerances and considered acceptable.

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 98.5 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

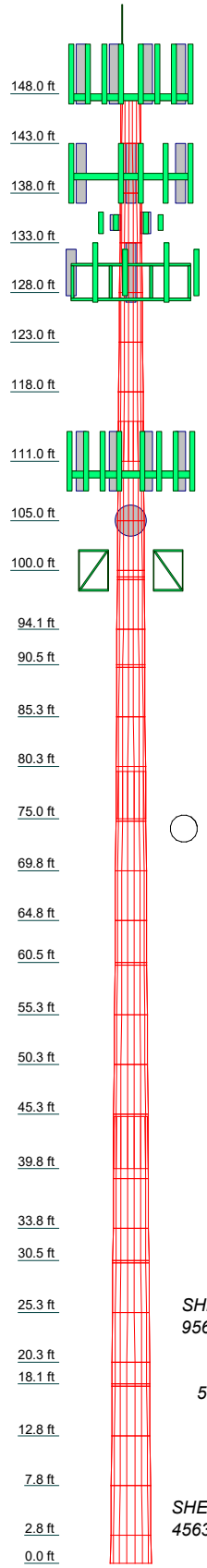
The tower owner is responsible for verifying that the existing loading on the structure is consistent with the loading applied to the structure within this report. If there is any information contrary to that contained herein, or if there are any defects arising from the original design, material, fabrication 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	18	0.2500		24.0000	24.9001		326.7
2	5.00	18	0.2500		24.9001	25.8003		338.9
3	5.00	18	0.2500		25.8003	26.7004		351.0
4	5.00	18	0.2500		26.7004	27.6005		363.2
5	5.00	18	0.2500		27.6005	28.5007		375.3
6	5.00	18	0.2500		28.5007	29.4008		387.5
7	5.00	18	0.2500	4.00	29.4008	30.3010		562.9
8	5.00	18	0.2500		30.3010	31.2011		400.2
9	5.00	18	0.2500		31.2011	32.1013		412.3
10	5.00	18	0.2500		32.1013	33.0014		424.5
12	5.00	18	0.2500		33.0014	33.8976		436.7
13	5.00	18	0.2500		33.8976	34.7977		438.9
14	5.00	18	0.2500		34.7977	35.6977		721.7
16	5.00	18	0.4250		33.8976	34.7977		744.9
17	5.00	18	0.4250		34.7977	35.6977		757.2
18	5.00	18	0.4250		35.6977	36.5978		815.3
19	5.00	18	0.4750		36.5978	37.4979		832.8
20	5.00	18	0.4750		36.1359	37.0881		897.8
21	5.00	18	0.4750		37.0881	37.9882		913.1
22	5.25	18	0.4688		37.9882	38.8883		788.6
23	5.00	18	0.5000		38.8883	39.7884		804.1
24	5.00	18	0.5000		38.7984	39.6985		1084.4
25	5.00	18	0.5375		39.6985	40.5987		1099.7
26	5.00	18	0.5375		40.5987	41.4988		1115.0
27	6.250	18	0.5375	5.25	41.4988	42.4890		1254.6
28	5.00	18	0.5625		42.4890	43.4891		1273.6
29	5.00	18	0.5750		43.4891	44.4892		1280.6
30	5.25	18	0.5750		44.4892	45.4893		1293.3
31	5.00	18	0.6000		45.4893	46.4894		1305.9
32	5.00	18	0.6250		46.4894	47.4895		1405.2
33	5.00	18	0.6250		47.4895	48.5007		1423.6
34	5.00	18	0.6250		48.5007	49.5119		1424.0
36	5.00	18	0.6250		49.5119	50.5231		1467.3
37	5.00	18	0.6000		50.5231	51.5343		1485.6
38	5.00	18	0.6000		51.5343	52.5455		1504.0
39	2.83	18	0.6000		52.5455	53.1567		861.5
					48.5100	49.0200	A607-65	27838.7



ALL REACTIONS ARE FACTORED

AXIAL 105190 lb

SHEAR 9563 lb

MOMENT 1052900 lb-ft

TORQUE 908 lb-ft

50 mph WIND - 0.7500 in ICE

AXIAL 59482 lb

SHEAR 45633 lb

MOMENT 4578686 lb-ft

TORQUE 3739 lb-ft

REACTIONS - 101 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod 3/4"x8'	148	APXVSPP18-C w/Mount Pipe	130
(2) 7770.00 w/Mount Pipe	148	TD-RRH8x20	130
(2) 7770.00 w/Mount Pipe	148	TD-RRH8x20	130
(2) 7770.00 w/Mount Pipe	148	TD-RRH8x20	130
HPA-65R-BUU-H6 w/Mount Pipe	148	APXVTM14-ALU-120 w/Mount Pipe	130
SBNHH-1D65C w/Mount Pipe	148	Platform Mount [LP 1201-1] (Sprint)	129
(2) SBNHH-1D65C w/Mount Pipe	148	Miscellaneous [NA 509-3] (Sprint)	125
SBNHH-1D65A w/Mount Pipe	148	LNX-6514DS-T4M w/Mount Pipe	110
SBNHH-1D65C w/Mount Pipe	148	BXA-70063-6CF w/Mount Pipe	110
(4) LGP214nn	148	BXA-70063-6CF w/Mount Pipe	110
(4) LGP214nn	148	HBX-6517DS-VTM w/Mount Pipe	110
(4) LGP214nn	148	HBX-6517DS-VTM w/Mount Pipe	110
RRUS 32 B2	148	HBX-6517DS-VTM w/Mount Pipe	110
RRUS 32 B2	148	LNX-6513DS w/Mount Pipe	110
RRUS 32 B2	148	LNX-6513DS w/Mount Pipe	110
RRUS-11	148	LNX-6513DS w/Mount Pipe	110
RRUS-11	148	HBX-6516DS-VTM w/Mount Pipe	110
RRUS-11	148	HBX-6516DS-VTM w/Mount Pipe	110
DC6-48-60-18-8F	148	HBX-6516DS-VTM w/Mount Pipe	110
Platform Mount [LP 1201-1] (ATT)	148	RRH 2x40 AWS	110
(2) AIR21 B2A/B4P w/Mount Pipe	140	RRH 2x40 AWS	110
(2) AIR21 B2A/B4P w/Mount Pipe	140	RRH 2x40 AWS	110
(2) AIR21 B2A/B4P w/Mount Pipe	140	(2) FD9R6004/1C-3L	110
APX16DWV-16DWVS-C w/Mount Pipe	140	(2) FD9R6004/1C-3L	110
APX16DWV-16DWVS-C w/Mount Pipe	140	(2) FD9R6004/1C-3L	110
KRY 112 71	140	DB-T1-6Z-8AB-0Z	110
KRY 112 71	140	Platform Mount [LP 1201-1] (Verizon)	110
KRY 112 71	140	4'x2" Pipe Mount	105
Platform Mount [LP 1201-1] (TMO)	140	HP3-11	105
1900MHz 4x45W RRH	135	DS428E-83I-01-T TTA	100
1900MHz 4x45W RRH	135	CC807-08	100
1900MHz 4x45W RRH	135	DS1F00F36U-D	100
800MHz 2x50W RRH	135	Side Arm Mount [SO 602-1]	100
800MHz 2x50W RRH	135	Side Arm Mount [SO 602-1]	100
800MHz 2x50W RRH	135	Side Arm Mount [SO 602-1]	100
(2) 5' x 2" Pipe Mount	135	CC807-08	100
(2) 5' x 2" Pipe Mount	135	742 213 w/Mount Pipe	90
(2) 5' x 2" Pipe Mount	135	742 213 w/Mount Pipe	90
Side Arm Mount [SO 104-3] (Sprint)	135	742 213 w/Mount Pipe	90
Miscellaneous [NA 507-1] (Sprint)	132	Side Arm Mount [SO 309-1]	55
APXVTM14-ALU-120 w/Mount Pipe	130	GPS	55
APXVTM14-ALU-120 w/Mount Pipe	130	Side Arm Mount [SO 309-1]	50
APXVSPP18-C w/Mount Pipe	130	GPS	50
APXVSPP18-C w/Mount Pipe	130		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Middlesex 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 II.
7. Topographic Category 1 with Crest Height of 0.00 ft

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

Job: ***CT43XC816***			
Project: ***28802***			
Client: Sprint	Drawn by: TEM		App'd:
Code: TIA-222-G	Date: 12/06/18		Scale: NTS
Path: I:\28800\28802\Structural\Tower\TNX\28802 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 Middlesex County, Connecticut.
ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
Basic wind speed of 101 mph.
Structure Class II.
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*

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	148.00-143.00	5.00	0.00	18	24.0000	24.9001	0.2500	1.0000	A607-65 (65 ksi)
L2	143.00-138.00	5.00	0.00	18	24.9001	25.8003	0.2500	1.0000	A607-65 (65 ksi)
L3	138.00-133.00	5.00	0.00	18	25.8003	26.7004	0.2500	1.0000	A607-65 (65 ksi)
L4	133.00-128.00	5.00	0.00	18	26.7004	27.6005	0.2500	1.0000	A607-65 (65 ksi)
L5	128.00-123.00	5.00	0.00	18	27.6005	28.5007	0.2500	1.0000	A607-65 (65 ksi)
L6	123.00-118.00	5.00	0.00	18	28.5007	29.4008	0.2500	1.0000	A607-65 (65 ksi)
L7	118.00-111.00	7.00	4.00	18	29.4008	30.6610	0.2500	1.0000	A607-65 (65 ksi)
L8	111.00-110.00	5.00	0.00	18	29.4409	30.3412	0.2500	1.0000	A607-65 (65 ksi)
L9	110.00-105.00	5.00	0.00	18	30.3412	31.2414	0.2500	1.0000	A607-65 (65 ksi)
L10	105.00-100.00	5.00	0.00	18	31.2414	32.1417	0.2500	1.0000	A607-65 (65 ksi)
L11	100.00-99.33	0.67	0.00	18	32.1417	32.2623	0.2500	1.0000	A607-65 (65 ksi)
L12	99.33-99.08	0.25	0.00	18	32.2623	32.3073	0.2500	1.0000	A607-65 (65 ksi)
L13	99.08-94.08	5.00	0.00	18	32.3073	33.2076	0.2500	1.0000	A607-65 (65 ksi)
L14	94.08-90.50	3.58	0.00	18	33.2076	33.8522	0.2500	1.0000	A607-65 (65 ksi)
L15	90.50-90.25	0.25	0.00	18	33.8522	33.8972	0.4313	1.7250	A607-65 (65 ksi)
L16	90.25-85.25	5.00	0.00	18	33.8972	34.7975	0.4250	1.7000	A607-65 (65 ksi)
L17	85.25-80.25	5.00	0.00	18	34.7975	35.6977	0.4250	1.7000	A607-65 (65 ksi)
L18	80.25-75.00	5.25	4.75	18	35.6977	36.6430	0.4250	1.7000	A607-65 (65 ksi)
L19	75.00-74.75	5.00	0.00	18	35.2877	36.1879	0.4875	1.9500	A607-65 (65 ksi)
L20	74.75-69.75	5.00	0.00	18	36.1879	37.0881	0.4750	1.9000	A607-65 (65 ksi)
L21	69.75-64.75	5.00	0.00	18	37.0881	37.9882	0.4750	1.9000	A607-65 (65 ksi)
L22	64.75-60.50	4.25	0.00	18	37.9882	38.7534	0.4688	1.8750	A607-65 (65 ksi)
L23	60.50-60.25	0.25	0.00	18	38.7534	38.7984	0.5500	2.2000	A607-65 (65 ksi)
L24	60.25-55.25	5.00	0.00	18	38.7984	39.6985	0.5500	2.2000	A607-65 (65 ksi)
L25	55.25-50.25	5.00	0.00	18	39.6985	40.5987	0.5375	2.1500	A607-65 (65 ksi)
L26	50.25-45.25	5.00	0.00	18	40.5987	41.4988	0.5375	2.1500	A607-65 (65 ksi)
L27	45.25-39.75	5.50	5.25	18	41.4988	42.4890	0.5375	2.1500	A607-65 (65 ksi)
L28	39.75-38.75	6.25	0.00	18	40.9188	42.0440	0.6000	2.4000	A607-65 (65 ksi)
L29	38.75-33.75	5.00	0.00	18	42.0440	42.9441	0.5875	2.3500	A607-65 (65 ksi)
L30	33.75-30.50	3.25	0.00	18	42.9441	43.5292	0.5875	2.3500	A607-65 (65 ksi)
L31	30.50-30.25	0.25	0.00	18	43.5292	43.5742	0.6375	2.5500	A607-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L32	30.25-25.25	5.00	0.00	18	43.5742	44.4743	0.6250	2.5000	(65 ksi) A607-65 (65 ksi)
L33	25.25-20.25	5.00	0.00	18	44.4743	45.3745	0.6250	2.5000	A607-65 (65 ksi)
L34	20.25-18.08	2.17	0.00	18	45.3745	45.7646	0.6250	2.5000	A607-65 (65 ksi)
L35	18.08-17.83	0.25	0.00	18	45.7646	45.8096	0.6125	2.4500	A607-65 (65 ksi)
L36	17.83-12.83	5.00	0.00	18	45.8096	46.7097	0.6125	2.4500	A607-65 (65 ksi)
L37	12.83-7.83	5.00	0.00	18	46.7097	47.6099	0.6000	2.4000	A607-65 (65 ksi)
L38	7.83-2.83	5.00	0.00	18	47.6099	48.5100	0.6000	2.4000	A607-65 (65 ksi)
L39	2.83-0.00	2.83		18	48.5100	49.0200	0.6000	2.4000	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	24.3317	18.8456	1342.9976	8.4313	12.1920	110.1540	2687.7623	9.4246	3.7840	15.136
	25.2457	19.5599	1501.5586	8.7508	12.6493	118.7072	3005.0931	9.7818	3.9424	15.77
L2	25.2457	19.5599	1501.5586	8.7508	12.6493	118.7072	3005.0931	9.7818	3.9424	15.77
	26.1597	20.2741	1672.1332	9.0703	13.1065	127.5801	3346.4667	10.1390	4.1008	16.403
L3	26.1597	20.2741	1672.1332	9.0703	13.1065	127.5801	3346.4667	10.1390	4.1008	16.403
	27.0737	20.9884	1855.1600	9.3899	13.5638	136.7728	3712.7611	10.4962	4.2593	17.037
L4	27.0737	20.9884	1855.1600	9.3899	13.5638	136.7728	3712.7611	10.4962	4.2593	17.037
	27.9878	21.7027	2051.0777	9.7094	14.0211	146.2853	4104.8544	10.8534	4.4177	17.671
L5	27.9878	21.7027	2051.0777	9.7094	14.0211	146.2853	4104.8544	10.8534	4.4177	17.671
	28.9018	22.4169	2260.3251	10.0290	14.4783	156.1177	4523.6243	11.2106	4.5761	18.304
L6	28.9018	22.4169	2260.3251	10.0290	14.4783	156.1177	4523.6243	11.2106	4.5761	18.304
	29.8158	23.1312	2483.3407	10.3485	14.9356	166.2698	4969.9489	11.5678	4.7345	18.938
L7	29.8158	23.1312	2483.3407	10.3485	14.9356	166.2698	4969.9489	11.5678	4.7345	18.938
	31.0954	24.1311	2819.5285	10.7959	15.5758	181.0200	5642.7670	12.0679	4.9563	19.825
L8	30.5878	23.1630	2493.5982	10.3628	14.9560	166.7293	4990.4775	11.5837	4.7416	18.966
	30.7707	23.8773	2731.4985	10.6824	15.4133	177.2169	5466.5912	11.9409	4.9000	19.6
L9	30.7707	23.8773	2731.4985	10.6824	15.4133	177.2169	5466.5912	11.9409	4.9000	19.6
	31.6848	24.5917	2984.0683	11.0020	15.8706	188.0244	5972.0632	12.2982	5.0585	20.234
L10	31.6848	24.5917	2984.0683	11.0020	15.8706	188.0244	5972.0632	12.2982	5.0585	20.234
	32.5990	25.3061	3251.7464	11.3215	16.3280	199.1519	6507.7716	12.6554	5.2169	20.868
L11	32.5990	25.3061	3251.7464	11.3215	16.3280	199.1519	6507.7716	12.6554	5.2169	20.868
	32.7214	25.4018	3288.7869	11.3644	16.3893	200.6672	6581.9013	12.7033	5.2382	20.953
L12	32.7214	25.4018	3288.7869	11.3644	16.3893	200.6672	6581.9013	12.7033	5.2382	20.953
	32.7672	25.4375	3302.6797	11.3804	16.4121	201.2341	6609.7052	12.7212	5.2461	20.984
L13	32.7672	25.4375	3302.6797	11.3804	16.4121	201.2341	6609.7052	12.7212	5.2461	20.984
	33.6813	26.1519	3588.8136	11.6999	16.8695	212.7403	7182.3494	13.0784	5.4045	21.618
L14	33.6813	26.1519	3588.8136	11.6999	16.8695	212.7403	7182.3494	13.0784	5.4045	21.618
	34.3358	26.6633	3803.5302	11.9288	17.1969	221.1752	7612.0651	13.3342	5.5180	22.072
L15	34.3079	45.7462	6455.4897	11.8644	17.1969	375.3866	12919.4737	22.8774	5.1990	12.056
	34.3536	45.8078	6481.6087	11.8804	17.2198	376.4049	12971.7461	22.9082	5.2069	12.074
L16	34.3546	45.1523	6391.2519	11.8826	17.2198	371.1577	12790.9135	22.5804	5.2179	12.277
	35.2687	46.3667	6920.9409	12.2022	17.6771	391.5199	13850.9886	23.1878	5.3764	12.65
L17	35.2687	46.3667	6920.9409	12.2022	17.6771	391.5199	13850.9886	23.1878	5.3764	12.65
	36.1829	47.5811	7479.1161	12.5218	18.1344	412.4260	14968.0735	23.7951	5.5348	13.023

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
L18	36.1829	47.5811	7479.1161	12.5218	18.1344	412.4260	14968.0735	23.7951	5.5348	13.023
	37.1427	48.8563	8096.6748	12.8574	18.6146	434.9626	16204.0034	24.4328	5.7012	13.415
L19	36.6253	53.8473	8238.8401	12.3541	17.9262	459.5983	16488.5210	26.9288	5.3526	10.98
	36.6710	55.2401	8894.8465	12.6736	18.3835	483.8506	17801.3970	27.6253	5.5111	11.305
L20	36.6729	53.8426	8675.8803	12.6781	18.3835	471.9396	17363.1766	26.9264	5.5331	11.649
	37.5869	55.1997	9348.5907	12.9976	18.8407	496.1903	18709.4824	27.6051	5.6915	11.982
L21	37.5869	55.1997	9348.5907	12.9976	18.8407	496.1903	18709.4824	27.6051	5.6915	11.982
	38.5010	56.5568	10055.2058	13.3172	19.2980	521.0487	20123.6425	28.2838	5.8499	12.316
L22	38.5019	55.8219	9927.8610	13.3194	19.2980	514.4499	19868.7853	27.9163	5.8609	12.503
	39.2789	56.9603	10547.7066	13.5910	19.6867	535.7782	21109.2922	28.4856	5.9956	12.791
L23	39.2663	66.6916	12297.3477	13.5622	19.6867	624.6525	24610.8765	33.3521	5.8526	10.641
	39.3120	66.7702	12340.8618	13.5782	19.7096	626.1356	24697.9621	33.3914	5.8605	10.655
L24	39.3120	66.7702	12340.8618	13.5782	19.7096	626.1356	24697.9621	33.3914	5.8605	10.655
	40.2261	68.3416	13232.8368	13.8977	20.1668	656.1679	26483.0857	34.1773	6.0189	10.944
L25	40.2280	66.8097	12944.4820	13.9022	20.1668	641.8694	25905.9967	33.4112	6.0409	11.239
	41.1421	68.3454	13857.7839	14.2217	20.6241	671.9211	27733.8023	34.1792	6.1994	11.534
L26	41.1421	68.3454	13857.7839	14.2217	20.6241	671.9211	27733.8023	34.1792	6.1994	11.534
	42.0561	69.8810	14813.0650	14.5413	21.0814	702.6602	29645.6214	34.9472	6.3578	11.828
L27	42.0561	69.8810	14813.0650	14.5413	21.0814	702.6602	29645.6214	34.9472	6.3578	11.828
	43.0615	71.5703	15913.4859	14.8928	21.5844	737.2675	31847.9111	35.7920	6.5321	12.153
L28	42.4172	76.7832	15769.5600	14.3132	20.7868	758.6345	31559.8700	38.3989	6.1457	10.243
	42.6000	78.9259	17126.9702	14.7126	21.3584	801.8864	34276.4765	39.4705	6.3437	10.573
L29	42.6020	77.3050	16785.3371	14.7171	21.3584	785.8911	33592.7608	38.6598	6.3657	10.835
	43.5160	78.9835	17902.6098	15.0366	21.8156	820.6328	35828.7764	39.4992	6.5242	11.105
L30	43.5160	78.9835	17902.6098	15.0366	21.8156	820.6328	35828.7764	39.4992	6.5242	11.105
	44.1101	80.0745	18654.7863	15.2443	22.1128	843.6179	37334.1190	40.0448	6.6271	11.28
L31	44.1024	86.7882	20171.8010	15.2266	22.1128	912.2212	40370.1446	43.4023	6.5391	10.257
	44.1481	86.8792	20235.3667	15.2425	22.1357	914.1506	40497.3597	43.4479	6.5471	10.27
L32	44.1500	85.2005	19855.9265	15.2470	22.1357	897.0091	39737.9799	42.6084	6.5691	10.51
	45.0640	86.9861	21130.6947	15.5665	22.5930	935.2775	42289.1937	43.5013	6.7275	10.764
L33	45.0640	86.9861	21130.6947	15.5665	22.5930	935.2775	42289.1937	43.5013	6.7275	10.764
	45.9780	88.7718	22458.8884	15.8861	23.0502	974.3454	44947.3288	44.3943	6.8859	11.017
L34	45.9780	88.7718	22458.8884	15.8861	23.0502	974.3454	44947.3288	44.3943	6.8859	11.017
	46.3742	89.5457	23051.3988	16.0246	23.2484	991.5257	46133.1292	44.7813	6.9546	11.127
L35	46.3761	87.7791	22609.1431	16.0290	23.2484	972.5027	45248.0359	43.8979	6.9766	11.39
	46.4218	87.8665	22676.8192	16.0450	23.2713	974.4553	45383.4771	43.9416	6.9845	11.403
L36	46.4218	87.8665	22676.8192	16.0450	23.2713	974.4553	45383.4771	43.9416	6.9845	11.403
	47.3358	89.6165	24058.8518	16.3645	23.7285	1013.9204	48149.3609	44.8167	7.1429	11.662
L37	47.3377	87.8114	23587.0325	16.3690	23.7285	994.0363	47205.1013	43.9140	7.1649	11.942
	48.2518	89.5256	24995.5342	16.6885	24.1858	1033.4794	50023.9582	44.7713	7.3233	12.206
L38	48.2518	89.5256	24995.5342	16.6885	24.1858	1033.4794	50023.9582	44.7713	7.3233	12.206
	49.1658	91.2398	26459.0212	17.0080	24.6431	1073.6900	52952.8579	45.6286	7.4818	12.47
L39	49.1658	91.2398	26459.0212	17.0080	24.6431	1073.6900	52952.8579	45.6286	7.4818	12.47
	49.6837	92.2110	27313.0361	17.1891	24.9022	1096.8139	54662.0113	46.1143	7.5715	12.619

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			
L5 128.00-123.00				1	1	1			
L6 123.00-118.00				1	1	1			
L7 118.00-111.00				1	1	1			
L8 111.00-110.00				1	1	1			
L9 110.00-105.00				1	1	1			
L10 105.00-100.00				1	1	1			
L11 100.00-99.33				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
L12 99.33-99.08				1	1	1			
L13 99.08-94.08				1	1	1			
L14 94.08-90.50				1	1	1			
L15 90.50-90.25				1	1	0.952888			
L16 90.25-85.25				1	1	0.956807			
L17 85.25-80.25				1	1	0.9474			
L18 80.25-75.00				1	1	0.946486			
L19 75.00-74.75				1	1	0.951021			
L20 74.75-69.75				1	1	0.967893			
L21 69.75-64.75				1	1	0.960454			
L22 64.75-60.50				1	1	0.966974			
L23 60.50-60.25				1	1	0.952283			
L24 60.25-55.25				1	1	0.943451			
L25 55.25-50.25				1	1	0.956462			
L26 50.25-45.25				1	1	0.94822			
L27 45.25-39.75				1	1	0.947817			
L28 39.75-38.75				1	1	0.950352			
L29 38.75-33.75				1	1	0.963225			
L30 33.75-30.50				1	1	0.958798			
L31 30.50-30.25				1	1	0.948201			
L32 30.25-25.25				1	1	0.959352			
L33 25.25-20.25				1	1	0.952124			
L34 20.25-18.08				1	1	0.949081			
L35 18.08-17.83				1	1	0.978981			
L36 17.83-12.83				1	1	0.97182			
L37 12.83-7.83				1	1	0.984774			
L38 7.83-2.83				1	1	0.978014			
L39 2.83-0.00				1	1	0.974296			

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
**********										
Step Bolts (148)	A	Yes	Surface Ar (CaAa)	148.00 - 0.00	1	1	0.000 0.000	0.4000		1.00
Safety Line 3/8 (148)	A	Yes	Surface Ar (CaAa)	148.00 - 0.00	1	1	0.000 0.000	0.3750		0.22
**********										
1 5/8 (148)	C	Yes	Surface Ar (CaAa)	148.00 - 0.00	12	6	-0.200 0.200	1.9800		1.04
PWRT-608-S Power Cable (148)	C	Yes	Surface Ar (CaAa)	148.00 - 0.00	2	2	-0.050 0.050	0.8200		0.62
RFFT-36SM-001-175M Fiber Cable (148)	C	Yes	Surface Ar (CaAa)	148.00 - 0.00	1	1	0.000 0.000	0.4000		0.09
**********										
1 5/8 (90)	B	Yes	Surface Ar (CaAa)	90.00 - 0.00	6	6	-0.200 0.200	1.9800		1.04
**********										
3/8 (55)	B	Yes	Surface Ar (CaAa)	55.00 - 0.00	1	1	0.000 0.000	0.4400		0.08
**********										
1/2	B	Yes	Surface Ar (CaAa)	55.00 - 0.00	1	1	0.000	0.5800		0.25

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
(50)							0.000			
**********										
**********										
MP3-03	A	Yes	Surface Af (CaAa)	101.75 - 90.50	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03	B	Yes	Surface Af (CaAa)	101.75 - 90.50	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-03	C	Yes	Surface Af (CaAa)	101.75 - 90.50	1	1	0.000 0.000	4.0600	11.2600	0.00
MP3-05	A	Yes	Surface Af (CaAa)	90.50 - 60.50	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05	B	Yes	Surface Af (CaAa)	90.50 - 60.50	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-05	C	Yes	Surface Af (CaAa)	90.50 - 60.50	1	1	0.000 0.000	5.3300	14.8400	0.00
MP3-06	A	Yes	Surface Af (CaAa)	60.50 - 30.50	1	1	0.000 0.000	6.8900	19.0000	0.00
MP3-06	B	Yes	Surface Af (CaAa)	60.50 - 30.50	1	1	0.000 0.000	6.8900	19.0000	0.00
MP3-06	C	Yes	Surface Af (CaAa)	60.50 - 30.50	1	1	0.000 0.000	6.8900	19.0000	0.00
MP3-08	A	Yes	Surface Af (CaAa)	30.50 - 0.00	1	1	0.000 0.000	7.9300	21.4600	0.00
MP3-08	B	Yes	Surface Af (CaAa)	30.50 - 0.00	1	1	0.000 0.000	7.9300	21.4600	0.00
MP3-08	C	Yes	Surface Af (CaAa)	30.50 - 0.00	1	1	0.000 0.000	7.9300	21.4600	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
**********									
1 5/8 (140)	A	No	Yes	Inside Pole	140.00 - 0.00	18	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.04 1.04 1.04
1 5/8 (140)	A	No	Yes	Inside Pole	140.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.04 1.04 1.04
**********									
1 1/4 (130)	B	No	Yes	Inside Pole	130.00 - 0.00	3	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.66 0.66 0.66
1 1/4 (130)	B	No	Yes	Inside Pole	130.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.66 0.66 0.66
**********									
1 5/8 (110)	C	No	Yes	Inside Pole	110.00 - 0.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.04 1.04 1.04
1 5/8 (110)	C	No	Yes	Inside Pole	110.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.04 1.04 1.04
**********									

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
EW90	C	No	Yes	Inside Pole	105.00 - 0.00	1	No Ice	0.00	0.32
(105)							1/2" Ice	0.00	0.32
							1" Ice	0.00	0.32
**********									
7/8	A	No	Yes	Inside Pole	100.00 - 0.00	3	No Ice	0.00	0.54
(100)							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
1/2	A	No	Yes	Inside Pole	100.00 - 0.00	1	No Ice	0.00	0.25
(100)							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	0.388	0.000	6.10
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	6.960	0.000	69.06
L2	143.00-138.00	A	0.000	0.000	0.388	0.000	45.62
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	6.960	0.000	69.06
L3	138.00-133.00	A	0.000	0.000	0.388	0.000	104.90
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	6.960	0.000	69.06
L4	133.00-128.00	A	0.000	0.000	0.388	0.000	104.90
		B	0.000	0.000	0.000	0.000	5.28
		C	0.000	0.000	6.960	0.000	69.06
L5	128.00-123.00	A	0.000	0.000	0.388	0.000	104.90
		B	0.000	0.000	0.000	0.000	13.20
		C	0.000	0.000	6.960	0.000	69.06
L6	123.00-118.00	A	0.000	0.000	0.388	0.000	104.90
		B	0.000	0.000	0.000	0.000	13.20
		C	0.000	0.000	6.960	0.000	69.06
L7	118.00-111.00	A	0.000	0.000	0.542	0.000	146.86
		B	0.000	0.000	0.000	0.000	18.48
		C	0.000	0.000	9.744	0.000	96.68
L8	111.00-110.00	A	0.000	0.000	0.077	0.000	20.98
		B	0.000	0.000	0.000	0.000	2.64
		C	0.000	0.000	1.392	0.000	13.81
L9	110.00-105.00	A	0.000	0.000	0.388	0.000	104.90
		B	0.000	0.000	0.000	0.000	13.20
		C	0.000	0.000	6.960	0.000	136.66
L10	105.00-100.00	A	0.000	0.000	1.572	0.000	104.90
		B	0.000	0.000	1.184	0.000	13.20
		C	0.000	0.000	8.144	0.000	138.26
L11	100.00-99.33	A	0.000	0.000	0.505	0.000	15.31
		B	0.000	0.000	0.453	0.000	1.77
		C	0.000	0.000	1.386	0.000	18.53
L12	99.33-99.08	A	0.000	0.000	0.189	0.000	5.71
		B	0.000	0.000	0.169	0.000	0.66
		C	0.000	0.000	0.517	0.000	6.91

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
L13	99.08-94.08	A	0.000	0.000	3.771	0.000	114.25
		B	0.000	0.000	3.383	0.000	13.20
		C	0.000	0.000	10.343	0.000	138.26
L14	94.08-90.50	A	0.000	0.000	2.700	0.000	81.80
		B	0.000	0.000	2.422	0.000	9.45
		C	0.000	0.000	7.406	0.000	98.99
L15	90.50-90.25	A	0.000	0.000	0.241	0.000	5.71
		B	0.000	0.000	0.222	0.000	0.66
		C	0.000	0.000	0.570	0.000	6.91
L16	90.25-85.25	A	0.000	0.000	4.829	0.000	114.25
		B	0.000	0.000	10.085	0.000	42.84
		C	0.000	0.000	11.402	0.000	138.26
L17	85.25-80.25	A	0.000	0.000	4.829	0.000	114.25
		B	0.000	0.000	10.382	0.000	44.40
		C	0.000	0.000	11.402	0.000	138.26
L18	80.25-75.00	A	0.000	0.000	5.071	0.000	119.96
		B	0.000	0.000	10.901	0.000	46.62
		C	0.000	0.000	11.972	0.000	145.17
L19	75.00-74.75	A	0.000	0.000	0.241	0.000	5.71
		B	0.000	0.000	0.519	0.000	2.22
		C	0.000	0.000	0.570	0.000	6.91
L20	74.75-69.75	A	0.000	0.000	4.829	0.000	114.25
		B	0.000	0.000	10.382	0.000	44.40
		C	0.000	0.000	11.402	0.000	138.26
L21	69.75-64.75	A	0.000	0.000	4.829	0.000	114.25
		B	0.000	0.000	10.382	0.000	44.40
		C	0.000	0.000	11.402	0.000	138.26
L22	64.75-60.50	A	0.000	0.000	4.105	0.000	97.11
		B	0.000	0.000	8.824	0.000	37.74
		C	0.000	0.000	9.691	0.000	117.52
L23	60.50-60.25	A	0.000	0.000	0.306	0.000	5.71
		B	0.000	0.000	0.584	0.000	2.22
		C	0.000	0.000	0.635	0.000	6.91
L24	60.25-55.25	A	0.000	0.000	6.129	0.000	114.25
		B	0.000	0.000	11.682	0.000	44.40
		C	0.000	0.000	12.702	0.000	138.26
L25	55.25-50.25	A	0.000	0.000	6.129	0.000	114.25
		B	0.000	0.000	12.166	0.000	45.97
		C	0.000	0.000	12.702	0.000	138.26
L26	50.25-45.25	A	0.000	0.000	6.129	0.000	114.25
		B	0.000	0.000	12.192	0.000	46.05
		C	0.000	0.000	12.702	0.000	138.26
L27	45.25-39.75	A	0.000	0.000	6.742	0.000	125.68
		B	0.000	0.000	13.411	0.000	50.66
		C	0.000	0.000	13.972	0.000	152.08
L28	39.75-38.75	A	0.000	0.000	1.226	0.000	22.85
		B	0.000	0.000	2.438	0.000	9.21
		C	0.000	0.000	2.540	0.000	27.65
L29	38.75-33.75	A	0.000	0.000	6.129	0.000	114.25
		B	0.000	0.000	12.192	0.000	46.05
		C	0.000	0.000	12.702	0.000	138.26
L30	33.75-30.50	A	0.000	0.000	3.984	0.000	74.26
		B	0.000	0.000	7.925	0.000	29.93
		C	0.000	0.000	8.256	0.000	89.87
L31	30.50-30.25	A	0.000	0.000	0.350	0.000	5.71
		B	0.000	0.000	0.653	0.000	2.30
		C	0.000	0.000	0.678	0.000	6.91
L32	30.25-25.25	A	0.000	0.000	6.996	0.000	114.25
		B	0.000	0.000	13.058	0.000	46.05
		C	0.000	0.000	13.568	0.000	138.26
L33	25.25-20.25	A	0.000	0.000	6.996	0.000	114.25

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	13.058	0.000	46.05
		C	0.000	0.000	13.568	0.000	138.26
L34	20.25-18.08	A	0.000	0.000	3.032	0.000	49.52
		B	0.000	0.000	5.659	0.000	19.96
		C	0.000	0.000	5.881	0.000	59.92
L35	18.08-17.83	A	0.000	0.000	0.350	0.000	5.71
		B	0.000	0.000	0.653	0.000	2.30
		C	0.000	0.000	0.678	0.000	6.91
L36	17.83-12.83	A	0.000	0.000	6.996	0.000	114.25
		B	0.000	0.000	13.058	0.000	46.05
		C	0.000	0.000	13.568	0.000	138.26
L37	12.83-7.83	A	0.000	0.000	6.996	0.000	114.25
		B	0.000	0.000	13.058	0.000	46.05
		C	0.000	0.000	13.568	0.000	138.26
L38	7.83-2.83	A	0.000	0.000	6.996	0.000	114.25
		B	0.000	0.000	13.058	0.000	46.05
		C	0.000	0.000	13.568	0.000	138.26
L39	2.83-0.00	A	0.000	0.000	3.964	0.000	64.73
		B	0.000	0.000	7.399	0.000	26.09
		C	0.000	0.000	7.688	0.000	78.34

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	1.740	0.000	0.000	3.867	0.000	51.32
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	14.740	0.000	321.88
L2	143.00-138.00	A	1.734	0.000	0.000	3.855	0.000	90.55
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	14.718	0.000	321.03
L3	138.00-133.00	A	1.728	0.000	0.000	3.843	0.000	149.54
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	14.696	0.000	320.15
L4	133.00-128.00	A	1.721	0.000	0.000	3.830	0.000	149.24
		B		0.000	0.000	0.000	0.000	5.28
		C		0.000	0.000	14.674	0.000	319.25
L5	128.00-123.00	A	1.714	0.000	0.000	3.816	0.000	148.92
		B		0.000	0.000	0.000	0.000	13.20
		C		0.000	0.000	14.650	0.000	318.31
L6	123.00-118.00	A	1.707	0.000	0.000	3.802	0.000	148.60
		B		0.000	0.000	0.000	0.000	13.20
		C		0.000	0.000	14.626	0.000	317.34
L7	118.00-111.00	A	1.699	0.000	0.000	5.299	0.000	207.47
		B		0.000	0.000	0.000	0.000	18.48
		C		0.000	0.000	20.434	0.000	442.58
L8	111.00-110.00	A	1.693	0.000	0.000	0.757	0.000	29.64
		B		0.000	0.000	0.000	0.000	2.64
		C		0.000	0.000	2.919	0.000	63.23
L9	110.00-105.00	A	1.688	0.000	0.000	3.764	0.000	147.70
		B		0.000	0.000	0.000	0.000	13.20
		C		0.000	0.000	14.558	0.000	382.25
L10	105.00-100.00	A	1.680	0.000	0.000	5.360	0.000	167.48
		B		0.000	0.000	1.613	0.000	33.34
		C		0.000	0.000	16.143	0.000	402.88
L11	100.00-99.33	A	1.675	0.000	0.000	1.118	0.000	28.65
		B		0.000	0.000	0.617	0.000	9.45

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	2.562	0.000	58.88
L12	99.33-99.08	A	1.675	0.000	0.000	0.417	0.000	10.69
		B		0.000	0.000	0.230	0.000	3.53
		C		0.000	0.000	0.956	0.000	21.96
L13	99.08-94.08	A	1.670	0.000	0.000	8.330	0.000	213.32
		B		0.000	0.000	4.603	0.000	70.29
		C		0.000	0.000	19.098	0.000	438.46
L14	94.08-90.50	A	1.662	0.000	0.000	5.951	0.000	152.24
		B		0.000	0.000	3.293	0.000	50.08
		C		0.000	0.000	13.652	0.000	312.94
L15	90.50-90.25	A	1.659	0.000	0.000	0.490	0.000	11.19
		B		0.000	0.000	0.305	0.000	4.07
		C		0.000	0.000	1.028	0.000	22.40
L16	90.25-85.25	A	1.654	0.000	0.000	9.791	0.000	223.38
		B		0.000	0.000	15.114	0.000	213.86
		C		0.000	0.000	20.535	0.000	447.04
L17	85.25-80.25	A	1.644	0.000	0.000	9.762	0.000	222.43
		B		0.000	0.000	15.567	0.000	219.65
		C		0.000	0.000	20.492	0.000	445.20
L18	80.25-75.00	A	1.634	0.000	0.000	10.218	0.000	232.47
		B		0.000	0.000	16.320	0.000	229.27
		C		0.000	0.000	21.467	0.000	465.37
L19	75.00-74.75	A	1.628	0.000	0.000	0.487	0.000	11.07
		B		0.000	0.000	0.777	0.000	10.92
		C		0.000	0.000	1.022	0.000	22.16
L20	74.75-69.75	A	1.622	0.000	0.000	9.696	0.000	220.26
		B		0.000	0.000	15.517	0.000	216.91
		C		0.000	0.000	20.392	0.000	441.00
L21	69.75-64.75	A	1.611	0.000	0.000	9.661	0.000	219.14
		B		0.000	0.000	15.491	0.000	215.49
		C		0.000	0.000	20.340	0.000	438.82
L22	64.75-60.50	A	1.599	0.000	0.000	8.183	0.000	185.33
		B		0.000	0.000	13.145	0.000	181.97
		C		0.000	0.000	17.245	0.000	371.17
L23	60.50-60.25	A	1.593	0.000	0.000	0.545	0.000	11.52
		B		0.000	0.000	0.838	0.000	11.31
		C		0.000	0.000	1.078	0.000	22.42
L24	60.25-55.25	A	1.586	0.000	0.000	10.888	0.000	229.63
		B		0.000	0.000	16.736	0.000	225.34
		C		0.000	0.000	21.530	0.000	447.08
L25	55.25-50.25	A	1.572	0.000	0.000	10.845	0.000	228.15
		B		0.000	0.000	20.175	0.000	263.03
		C		0.000	0.000	21.466	0.000	444.30
L26	50.25-45.25	A	1.556	0.000	0.000	10.798	0.000	226.55
		B		0.000	0.000	20.291	0.000	262.40
		C		0.000	0.000	21.396	0.000	441.27
L27	45.25-39.75	A	1.538	0.000	0.000	11.819	0.000	247.17
		B		0.000	0.000	22.236	0.000	285.20
		C		0.000	0.000	23.446	0.000	481.57
L28	39.75-38.75	A	1.526	0.000	0.000	2.149	0.000	44.94
		B		0.000	0.000	4.043	0.000	51.86
		C		0.000	0.000	4.263	0.000	87.56
L29	38.75-33.75	A	1.514	0.000	0.000	10.672	0.000	222.24
		B		0.000	0.000	20.112	0.000	255.10
		C		0.000	0.000	21.205	0.000	433.13
L30	33.75-30.50	A	1.496	0.000	0.000	6.901	0.000	143.27
		B		0.000	0.000	13.022	0.000	163.79
		C		0.000	0.000	13.730	0.000	279.28
L31	30.50-30.25	A	1.488	0.000	0.000	0.573	0.000	11.33
		B		0.000	0.000	1.043	0.000	12.88
		C		0.000	0.000	1.098	0.000	21.76

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
L32	30.25-25.25	A	1.474	0.000	0.000	11.418	0.000	225.29
		B		0.000	0.000	20.809	0.000	255.34
		C		0.000	0.000	21.892	0.000	432.58
L33	25.25-20.25	A	1.445	0.000	0.000	11.331	0.000	222.29
		B		0.000	0.000	20.685	0.000	250.30
		C		0.000	0.000	21.762	0.000	426.97
L34	20.25-18.08	A	1.421	0.000	0.000	4.879	0.000	95.25
		B		0.000	0.000	8.920	0.000	106.65
		C		0.000	0.000	9.384	0.000	183.01
L35	18.08-17.83	A	1.411	0.000	0.000	0.562	0.000	10.94
		B		0.000	0.000	1.027	0.000	12.23
		C		0.000	0.000	1.080	0.000	21.03
L36	17.83-12.83	A	1.389	0.000	0.000	11.164	0.000	216.58
		B		0.000	0.000	20.448	0.000	240.72
		C		0.000	0.000	21.510	0.000	416.28
L37	12.83-7.83	A	1.335	0.000	0.000	11.002	0.000	211.21
		B		0.000	0.000	20.219	0.000	231.65
		C		0.000	0.000	21.268	0.000	406.15
L38	7.83-2.83	A	1.250	0.000	0.000	10.746	0.000	202.91
		B		0.000	0.000	19.855	0.000	217.54
		C		0.000	0.000	20.883	0.000	390.34
L39	2.83-0.00	A	1.095	0.000	0.000	5.825	0.000	106.84
		B		0.000	0.000	10.876	0.000	109.29
		C		0.000	0.000	11.436	0.000	205.46

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	Step Bolts	143.00 - 148.00	1.0000	1.0000
L1	3	Safety Line 3/8	143.00 - 148.00	1.0000	1.0000
L1	5	1 5/8	143.00 - 148.00	1.0000	1.0000
L1	6	PWRT-608-S Power Cable	143.00 - 148.00	1.0000	1.0000
L1	7	RFFT-36SM-001-175M Fiber Cable	143.00 - 148.00	1.0000	1.0000
L2	2	Step Bolts	138.00 - 143.00	1.0000	1.0000
L2	3	Safety Line 3/8	138.00 - 143.00	1.0000	1.0000
L2	5	1 5/8	138.00 - 143.00	1.0000	1.0000
L2	6	PWRT-608-S Power Cable	138.00 - 143.00	1.0000	1.0000
L2	7	RFFT-36SM-001-175M Fiber Cable	138.00 - 143.00	1.0000	1.0000
L3	2	Step Bolts	133.00 - 138.00	1.0000	1.0000
L3	3	Safety Line 3/8	133.00 - 138.00	1.0000	1.0000
L3	5	1 5/8	133.00 - 138.00	1.0000	1.0000
L3	6	PWRT-608-S Power Cable	133.00 - 138.00	1.0000	1.0000
L3	7	RFFT-36SM-001-175M Fiber Cable	133.00 - 138.00	1.0000	1.0000
L4	2	Step Bolts	128.00 - 133.00	1.0000	1.0000
L4	3	Safety Line 3/8	128.00 - 133.00	1.0000	1.0000
L4	5	1 5/8	128.00 - 133.00	1.0000	1.0000
L4	6	PWRT-608-S Power Cable	128.00 - 133.00	1.0000	1.0000
L4	7	RFFT-36SM-001-175M Fiber Cable	128.00 - 133.00	1.0000	1.0000
L5	2	Step Bolts	123.00 - 128.00	1.0000	1.0000
L5	3	Safety Line 3/8	123.00 - 128.00	1.0000	1.0000
L5	5	1 5/8	123.00 - 128.00	1.0000	1.0000
L5	6	PWRT-608-S Power Cable	123.00 - 128.00	1.0000	1.0000
L5	7	RFFT-36SM-001-175M Fiber Cable	123.00 - 128.00	1.0000	1.0000
L6	2	Step Bolts	118.00 - 123.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L6	3	Safety Line 3/8	118.00 - 123.00	1.0000	1.0000
L6	5	1 5/8	118.00 - 123.00	1.0000	1.0000
L6	6	PWRT-608-S Power Cable	118.00 - 123.00	1.0000	1.0000
L6	7	RFFT-36SM-001-175M Fiber Cable	118.00 - 123.00	1.0000	1.0000
L7	2	Step Bolts	111.00 - 118.00	1.0000	1.0000
L7	3	Safety Line 3/8	111.00 - 118.00	1.0000	1.0000
L7	5	1 5/8	111.00 - 118.00	1.0000	1.0000
L7	6	PWRT-608-S Power Cable	111.00 - 118.00	1.0000	1.0000
L7	7	RFFT-36SM-001-175M Fiber Cable	111.00 - 118.00	1.0000	1.0000
L9	2	Step Bolts	105.00 - 110.00	1.0000	1.0000
L9	3	Safety Line 3/8	105.00 - 110.00	1.0000	1.0000
L9	5	1 5/8	105.00 - 110.00	1.0000	1.0000
L9	6	PWRT-608-S Power Cable	105.00 - 110.00	1.0000	1.0000
L9	7	RFFT-36SM-001-175M Fiber Cable	105.00 - 110.00	1.0000	1.0000
L10	2	Step Bolts	100.00 - 105.00	1.0000	1.0000
L10	3	Safety Line 3/8	100.00 - 105.00	1.0000	1.0000
L10	5	1 5/8	100.00 - 105.00	1.0000	1.0000
L10	6	PWRT-608-S Power Cable	100.00 - 105.00	1.0000	1.0000
L10	7	RFFT-36SM-001-175M Fiber Cable	100.00 - 105.00	1.0000	1.0000
L10	30	MP3-03	100.00 - 101.75	1.0000	1.0000
L10	31	MP3-03	100.00 - 101.75	1.0000	1.0000
L10	32	MP3-03	100.00 - 101.75	1.0000	1.0000
L11	2	Step Bolts	99.33 - 100.00	1.0000	1.0000
L11	3	Safety Line 3/8	99.33 - 100.00	1.0000	1.0000
L11	5	1 5/8	99.33 - 100.00	1.0000	1.0000
L11	6	PWRT-608-S Power Cable	99.33 - 100.00	1.0000	1.0000
L11	7	RFFT-36SM-001-175M Fiber Cable	99.33 - 100.00	1.0000	1.0000
L11	30	MP3-03	99.33 - 100.00	1.0000	1.0000
L11	31	MP3-03	99.33 - 100.00	1.0000	1.0000
L11	32	MP3-03	99.33 - 100.00	1.0000	1.0000
L12	2	Step Bolts	99.08 - 99.33	1.0000	1.0000
L12	3	Safety Line 3/8	99.08 - 99.33	1.0000	1.0000
L12	5	1 5/8	99.08 - 99.33	1.0000	1.0000
L12	6	PWRT-608-S Power Cable	99.08 - 99.33	1.0000	1.0000
L12	7	RFFT-36SM-001-175M Fiber Cable	99.08 - 99.33	1.0000	1.0000
L12	30	MP3-03	99.08 - 99.33	1.0000	1.0000
L12	31	MP3-03	99.08 - 99.33	1.0000	1.0000
L12	32	MP3-03	99.08 - 99.33	1.0000	1.0000
L13	2	Step Bolts	94.08 - 99.08	1.0000	1.0000
L13	3	Safety Line 3/8	94.08 - 99.08	1.0000	1.0000
L13	5	1 5/8	94.08 - 99.08	1.0000	1.0000
L13	6	PWRT-608-S Power Cable	94.08 - 99.08	1.0000	1.0000
L13	7	RFFT-36SM-001-175M Fiber Cable	94.08 - 99.08	1.0000	1.0000
L13	30	MP3-03	94.08 - 99.08	1.0000	1.0000
L13	31	MP3-03	94.08 - 99.08	1.0000	1.0000
L13	32	MP3-03	94.08 - 99.08	1.0000	1.0000
L14	2	Step Bolts	90.50 - 94.08	1.0000	1.0000
L14	3	Safety Line 3/8	90.50 - 94.08	1.0000	1.0000
L14	5	1 5/8	90.50 - 94.08	1.0000	1.0000
L14	6	PWRT-608-S Power Cable	90.50 - 94.08	1.0000	1.0000
L14	7	RFFT-36SM-001-175M Fiber Cable	90.50 - 94.08	1.0000	1.0000
L14	30	MP3-03	90.50 - 94.08	1.0000	1.0000
L14	31	MP3-03	90.50 - 94.08	1.0000	1.0000
L14	32	MP3-03	90.50 - 94.08	1.0000	1.0000
L15	2	Step Bolts	90.25 - 90.50	1.0000	1.0000
L15	3	Safety Line 3/8	90.25 - 90.50	1.0000	1.0000
L15	5	1 5/8	90.25 - 90.50	1.0000	1.0000
L15	6	PWRT-608-S Power Cable	90.25 - 90.50	1.0000	1.0000
L15	7	RFFT-36SM-001-175M Fiber Cable	90.25 - 90.50	1.0000	1.0000
L15	33	MP3-05	90.25 - 90.50	1.0000	1.0000
L15	34	MP3-05	90.25 - 90.50	1.0000	1.0000
L15	35	MP3-05	90.25 - 90.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L16	2	Step Bolts	85.25 - 90.25	1.0000	1.0000
L16	3	Safety Line 3/8	85.25 - 90.25	1.0000	1.0000
L16	5	1 5/8	85.25 - 90.25	1.0000	1.0000
L16	6	PWRT-608-S Power Cable	85.25 - 90.25	1.0000	1.0000
L16	7	RFFT-36SM-001-175M Fiber Cable	85.25 - 90.25	1.0000	1.0000
L16	23	1 5/8	85.25 - 90.00	1.0000	1.0000
L16	33	MP3-05	85.25 - 90.25	1.0000	1.0000
L16	34	MP3-05	85.25 - 90.25	1.0000	1.0000
L16	35	MP3-05	85.25 - 90.25	1.0000	1.0000
L17	2	Step Bolts	80.25 - 85.25	1.0000	1.0000
L17	3	Safety Line 3/8	80.25 - 85.25	1.0000	1.0000
L17	5	1 5/8	80.25 - 85.25	1.0000	1.0000
L17	6	PWRT-608-S Power Cable	80.25 - 85.25	1.0000	1.0000
L17	7	RFFT-36SM-001-175M Fiber Cable	80.25 - 85.25	1.0000	1.0000
L17	23	1 5/8	80.25 - 85.25	1.0000	1.0000
L17	33	MP3-05	80.25 - 85.25	1.0000	1.0000
L17	34	MP3-05	80.25 - 85.25	1.0000	1.0000
L17	35	MP3-05	80.25 - 85.25	1.0000	1.0000
L18	2	Step Bolts	75.00 - 80.25	1.0000	1.0000
L18	3	Safety Line 3/8	75.00 - 80.25	1.0000	1.0000
L18	5	1 5/8	75.00 - 80.25	1.0000	1.0000
L18	6	PWRT-608-S Power Cable	75.00 - 80.25	1.0000	1.0000
L18	7	RFFT-36SM-001-175M Fiber Cable	75.00 - 80.25	1.0000	1.0000
L18	23	1 5/8	75.00 - 80.25	1.0000	1.0000
L18	33	MP3-05	75.00 - 80.25	1.0000	1.0000
L18	34	MP3-05	75.00 - 80.25	1.0000	1.0000
L18	35	MP3-05	75.00 - 80.25	1.0000	1.0000
L20	2	Step Bolts	69.75 - 74.75	1.0000	1.0000
L20	3	Safety Line 3/8	69.75 - 74.75	1.0000	1.0000
L20	5	1 5/8	69.75 - 74.75	1.0000	1.0000
L20	6	PWRT-608-S Power Cable	69.75 - 74.75	1.0000	1.0000
L20	7	RFFT-36SM-001-175M Fiber Cable	69.75 - 74.75	1.0000	1.0000
L20	23	1 5/8	69.75 - 74.75	1.0000	1.0000
L20	33	MP3-05	69.75 - 74.75	1.0000	1.0000
L20	34	MP3-05	69.75 - 74.75	1.0000	1.0000
L20	35	MP3-05	69.75 - 74.75	1.0000	1.0000
L21	2	Step Bolts	64.75 - 69.75	1.0000	1.0000
L21	3	Safety Line 3/8	64.75 - 69.75	1.0000	1.0000
L21	5	1 5/8	64.75 - 69.75	1.0000	1.0000
L21	6	PWRT-608-S Power Cable	64.75 - 69.75	1.0000	1.0000
L21	7	RFFT-36SM-001-175M Fiber Cable	64.75 - 69.75	1.0000	1.0000
L21	23	1 5/8	64.75 - 69.75	1.0000	1.0000
L21	33	MP3-05	64.75 - 69.75	1.0000	1.0000
L21	34	MP3-05	64.75 - 69.75	1.0000	1.0000
L21	35	MP3-05	64.75 - 69.75	1.0000	1.0000
L22	2	Step Bolts	60.50 - 64.75	1.0000	1.0000
L22	3	Safety Line 3/8	60.50 - 64.75	1.0000	1.0000
L22	5	1 5/8	60.50 - 64.75	1.0000	1.0000
L22	6	PWRT-608-S Power Cable	60.50 - 64.75	1.0000	1.0000
L22	7	RFFT-36SM-001-175M Fiber Cable	60.50 - 64.75	1.0000	1.0000
L22	23	1 5/8	60.50 - 64.75	1.0000	1.0000
L22	33	MP3-05	60.50 - 64.75	1.0000	1.0000
L22	34	MP3-05	60.50 - 64.75	1.0000	1.0000
L22	35	MP3-05	60.50 - 64.75	1.0000	1.0000
L23	2	Step Bolts	60.25 - 60.50	1.0000	1.0000
L23	3	Safety Line 3/8	60.25 - 60.50	1.0000	1.0000
L23	5	1 5/8	60.25 - 60.50	1.0000	1.0000
L23	6	PWRT-608-S Power Cable	60.25 - 60.50	1.0000	1.0000
L23	7	RFFT-36SM-001-175M Fiber Cable	60.25 - 60.50	1.0000	1.0000
L23	23	1 5/8	60.25 - 60.50	1.0000	1.0000
L23	36	MP3-06	60.25 - 60.50	1.0000	1.0000
L23	37	MP3-06	60.25 - 60.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L23	38	MP3-06	60.25 - 60.50	1.0000	1.0000
L24	2	Step Bolts	55.25 - 60.25	1.0000	1.0000
L24	3	Safety Line 3/8	55.25 - 60.25	1.0000	1.0000
L24	5	1 5/8	55.25 - 60.25	1.0000	1.0000
L24	6	PWRT-608-S Power Cable	55.25 - 60.25	1.0000	1.0000
L24	7	RFFT-36SM-001-175M Fiber Cable	55.25 - 60.25	1.0000	1.0000
L24	23	1 5/8	55.25 - 60.25	1.0000	1.0000
L24	36	MP3-06	55.25 - 60.25	1.0000	1.0000
L24	37	MP3-06	55.25 - 60.25	1.0000	1.0000
L24	38	MP3-06	55.25 - 60.25	1.0000	1.0000
L25	2	Step Bolts	50.25 - 55.25	1.0000	1.0000
L25	3	Safety Line 3/8	50.25 - 55.25	1.0000	1.0000
L25	5	1 5/8	50.25 - 55.25	1.0000	1.0000
L25	6	PWRT-608-S Power Cable	50.25 - 55.25	1.0000	1.0000
L25	7	RFFT-36SM-001-175M Fiber Cable	50.25 - 55.25	1.0000	1.0000
L25	23	1 5/8	50.25 - 55.25	1.0000	1.0000
L25	25	3/8	50.25 - 55.00	1.0000	1.0000
L25	27	1/2	50.25 - 55.00	1.0000	1.0000
L25	36	MP3-06	50.25 - 55.25	1.0000	1.0000
L25	37	MP3-06	50.25 - 55.25	1.0000	1.0000
L25	38	MP3-06	50.25 - 55.25	1.0000	1.0000
L26	2	Step Bolts	45.25 - 50.25	1.0000	1.0000
L26	3	Safety Line 3/8	45.25 - 50.25	1.0000	1.0000
L26	5	1 5/8	45.25 - 50.25	1.0000	1.0000
L26	6	PWRT-608-S Power Cable	45.25 - 50.25	1.0000	1.0000
L26	7	RFFT-36SM-001-175M Fiber Cable	45.25 - 50.25	1.0000	1.0000
L26	23	1 5/8	45.25 - 50.25	1.0000	1.0000
L26	25	3/8	45.25 - 50.25	1.0000	1.0000
L26	27	1/2	45.25 - 50.25	1.0000	1.0000
L26	36	MP3-06	45.25 - 50.25	1.0000	1.0000
L26	37	MP3-06	45.25 - 50.25	1.0000	1.0000
L26	38	MP3-06	45.25 - 50.25	1.0000	1.0000
L27	2	Step Bolts	39.75 - 45.25	1.0000	1.0000
L27	3	Safety Line 3/8	39.75 - 45.25	1.0000	1.0000
L27	5	1 5/8	39.75 - 45.25	1.0000	1.0000
L27	6	PWRT-608-S Power Cable	39.75 - 45.25	1.0000	1.0000
L27	7	RFFT-36SM-001-175M Fiber Cable	39.75 - 45.25	1.0000	1.0000
L27	23	1 5/8	39.75 - 45.25	1.0000	1.0000
L27	25	3/8	39.75 - 45.25	1.0000	1.0000
L27	27	1/2	39.75 - 45.25	1.0000	1.0000
L27	36	MP3-06	39.75 - 45.25	1.0000	1.0000
L27	37	MP3-06	39.75 - 45.25	1.0000	1.0000
L27	38	MP3-06	39.75 - 45.25	1.0000	1.0000
L29	2	Step Bolts	33.75 - 38.75	1.0000	1.0000
L29	3	Safety Line 3/8	33.75 - 38.75	1.0000	1.0000
L29	5	1 5/8	33.75 - 38.75	1.0000	1.0000
L29	6	PWRT-608-S Power Cable	33.75 - 38.75	1.0000	1.0000
L29	7	RFFT-36SM-001-175M Fiber Cable	33.75 - 38.75	1.0000	1.0000
L29	23	1 5/8	33.75 - 38.75	1.0000	1.0000
L29	25	3/8	33.75 - 38.75	1.0000	1.0000
L29	27	1/2	33.75 - 38.75	1.0000	1.0000
L29	36	MP3-06	33.75 - 38.75	1.0000	1.0000
L29	37	MP3-06	33.75 - 38.75	1.0000	1.0000
L29	38	MP3-06	33.75 - 38.75	1.0000	1.0000
L30	2	Step Bolts	30.50 - 33.75	1.0000	1.0000
L30	3	Safety Line 3/8	30.50 - 33.75	1.0000	1.0000
L30	5	1 5/8	30.50 - 33.75	1.0000	1.0000
L30	6	PWRT-608-S Power Cable	30.50 - 33.75	1.0000	1.0000
L30	7	RFFT-36SM-001-175M Fiber Cable	30.50 - 33.75	1.0000	1.0000
L30	23	1 5/8	30.50 - 33.75	1.0000	1.0000
L30	25	3/8	30.50 - 33.75	1.0000	1.0000
L30	27	1/2	30.50 - 33.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L30	36	MP3-06	30.50 - 33.75	1.0000	1.0000
L30	37	MP3-06	30.50 - 33.75	1.0000	1.0000
L30	38	MP3-06	30.50 - 33.75	1.0000	1.0000
L31	2	Step Bolts	30.25 - 30.50	1.0000	1.0000
L31	3	Safety Line 3/8	30.25 - 30.50	1.0000	1.0000
L31	5	1 5/8	30.25 - 30.50	1.0000	1.0000
L31	6	PWRT-608-S Power Cable	30.25 - 30.50	1.0000	1.0000
L31	7	RFFT-36SM-001-175M Fiber Cable	30.25 - 30.50	1.0000	1.0000
L31	23	1 5/8	30.25 - 30.50	1.0000	1.0000
L31	25	3/8	30.25 - 30.50	1.0000	1.0000
L31	27	1/2	30.25 - 30.50	1.0000	1.0000
L31	39	MP3-08	30.25 - 30.50	1.0000	1.0000
L31	40	MP3-08	30.25 - 30.50	1.0000	1.0000
L31	41	MP3-08	30.25 - 30.50	1.0000	1.0000
L32	2	Step Bolts	25.25 - 30.25	1.0000	1.0000
L32	3	Safety Line 3/8	25.25 - 30.25	1.0000	1.0000
L32	5	1 5/8	25.25 - 30.25	1.0000	1.0000
L32	6	PWRT-608-S Power Cable	25.25 - 30.25	1.0000	1.0000
L32	7	RFFT-36SM-001-175M Fiber Cable	25.25 - 30.25	1.0000	1.0000
L32	23	1 5/8	25.25 - 30.25	1.0000	1.0000
L32	25	3/8	25.25 - 30.25	1.0000	1.0000
L32	27	1/2	25.25 - 30.25	1.0000	1.0000
L32	39	MP3-08	25.25 - 30.25	1.0000	1.0000
L32	40	MP3-08	25.25 - 30.25	1.0000	1.0000
L32	41	MP3-08	25.25 - 30.25	1.0000	1.0000
L33	2	Step Bolts	20.25 - 25.25	1.0000	1.0000
L33	3	Safety Line 3/8	20.25 - 25.25	1.0000	1.0000
L33	5	1 5/8	20.25 - 25.25	1.0000	1.0000
L33	6	PWRT-608-S Power Cable	20.25 - 25.25	1.0000	1.0000
L33	7	RFFT-36SM-001-175M Fiber Cable	20.25 - 25.25	1.0000	1.0000
L33	23	1 5/8	20.25 - 25.25	1.0000	1.0000
L33	25	3/8	20.25 - 25.25	1.0000	1.0000
L33	27	1/2	20.25 - 25.25	1.0000	1.0000
L33	39	MP3-08	20.25 - 25.25	1.0000	1.0000
L33	40	MP3-08	20.25 - 25.25	1.0000	1.0000
L33	41	MP3-08	20.25 - 25.25	1.0000	1.0000
L34	2	Step Bolts	18.08 - 20.25	1.0000	1.0000
L34	3	Safety Line 3/8	18.08 - 20.25	1.0000	1.0000
L34	5	1 5/8	18.08 - 20.25	1.0000	1.0000
L34	6	PWRT-608-S Power Cable	18.08 - 20.25	1.0000	1.0000
L34	7	RFFT-36SM-001-175M Fiber Cable	18.08 - 20.25	1.0000	1.0000
L34	23	1 5/8	18.08 - 20.25	1.0000	1.0000
L34	25	3/8	18.08 - 20.25	1.0000	1.0000
L34	27	1/2	18.08 - 20.25	1.0000	1.0000
L34	39	MP3-08	18.08 - 20.25	1.0000	1.0000
L34	40	MP3-08	18.08 - 20.25	1.0000	1.0000
L34	41	MP3-08	18.08 - 20.25	1.0000	1.0000
L35	2	Step Bolts	17.83 - 18.08	1.0000	1.0000
L35	3	Safety Line 3/8	17.83 - 18.08	1.0000	1.0000
L35	5	1 5/8	17.83 - 18.08	1.0000	1.0000
L35	6	PWRT-608-S Power Cable	17.83 - 18.08	1.0000	1.0000
L35	7	RFFT-36SM-001-175M Fiber Cable	17.83 - 18.08	1.0000	1.0000
L35	23	1 5/8	17.83 - 18.08	1.0000	1.0000
L35	25	3/8	17.83 - 18.08	1.0000	1.0000
L35	27	1/2	17.83 - 18.08	1.0000	1.0000
L35	39	MP3-08	17.83 - 18.08	1.0000	1.0000
L35	40	MP3-08	17.83 - 18.08	1.0000	1.0000
L35	41	MP3-08	17.83 - 18.08	1.0000	1.0000
L36	2	Step Bolts	12.83 - 17.83	1.0000	1.0000
L36	3	Safety Line 3/8	12.83 - 17.83	1.0000	1.0000
L36	5	1 5/8	12.83 - 17.83	1.0000	1.0000
L36	6	PWRT-608-S Power Cable	12.83 - 17.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L36	7	RFFT-36SM-001-175M Fiber Cable	12.83 - 17.83	1.0000	1.0000
L36	23	1 5/8	12.83 - 17.83	1.0000	1.0000
L36	25	3/8	12.83 - 17.83	1.0000	1.0000
L36	27	1/2	12.83 - 17.83	1.0000	1.0000
L36	39	MP3-08	12.83 - 17.83	1.0000	1.0000
L36	40	MP3-08	12.83 - 17.83	1.0000	1.0000
L36	41	MP3-08	12.83 - 17.83	1.0000	1.0000
L37	2	Step Bolts	7.83 - 12.83	1.0000	1.0000
L37	3	Safety Line 3/8	7.83 - 12.83	1.0000	1.0000
L37	5	1 5/8	7.83 - 12.83	1.0000	1.0000
L37	6	PWRT-608-S Power Cable	7.83 - 12.83	1.0000	1.0000
L37	7	RFFT-36SM-001-175M Fiber Cable	7.83 - 12.83	1.0000	1.0000
L37	23	1 5/8	7.83 - 12.83	1.0000	1.0000
L37	25	3/8	7.83 - 12.83	1.0000	1.0000
L37	27	1/2	7.83 - 12.83	1.0000	1.0000
L37	39	MP3-08	7.83 - 12.83	1.0000	1.0000
L37	40	MP3-08	7.83 - 12.83	1.0000	1.0000
L37	41	MP3-08	7.83 - 12.83	1.0000	1.0000
L38	2	Step Bolts	2.83 - 7.83	1.0000	1.0000
L38	3	Safety Line 3/8	2.83 - 7.83	1.0000	1.0000
L38	5	1 5/8	2.83 - 7.83	1.0000	1.0000
L38	6	PWRT-608-S Power Cable	2.83 - 7.83	1.0000	1.0000
L38	7	RFFT-36SM-001-175M Fiber Cable	2.83 - 7.83	1.0000	1.0000
L38	23	1 5/8	2.83 - 7.83	1.0000	1.0000
L38	25	3/8	2.83 - 7.83	1.0000	1.0000
L38	27	1/2	2.83 - 7.83	1.0000	1.0000
L38	39	MP3-08	2.83 - 7.83	1.0000	1.0000
L38	40	MP3-08	2.83 - 7.83	1.0000	1.0000
L38	41	MP3-08	2.83 - 7.83	1.0000	1.0000
L39	2	Step Bolts	0.00 - 2.83	1.0000	1.0000
L39	3	Safety Line 3/8	0.00 - 2.83	1.0000	1.0000
L39	5	1 5/8	0.00 - 2.83	1.0000	1.0000
L39	6	PWRT-608-S Power Cable	0.00 - 2.83	1.0000	1.0000
L39	7	RFFT-36SM-001-175M Fiber Cable	0.00 - 2.83	1.0000	1.0000
L39	23	1 5/8	0.00 - 2.83	1.0000	1.0000
L39	25	3/8	0.00 - 2.83	1.0000	1.0000
L39	27	1/2	0.00 - 2.83	1.0000	1.0000
L39	39	MP3-08	0.00 - 2.83	1.0000	1.0000
L39	40	MP3-08	0.00 - 2.83	1.0000	1.0000
L39	41	MP3-08	0.00 - 2.83	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
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Lightning Rod 3/4"x8'	C	From Leg	0.00 0.00 4.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	0.60 1.41 2.25	0.60 1.41 2.25	10.00 16.19 27.49
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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) 7770.00 w/Mount Pipe	A	From Leg	3.00 0.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	5.66 6.04 6.44	4.11 4.76 5.43	30.35 76.38 128.70
(2) 7770.00 w/Mount Pipe	B	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	5.66 6.04 6.44	4.11 4.76 5.43	30.35 76.38 128.70
(2) 7770.00 w/Mount Pipe	C	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	5.66 6.04 6.44	4.11 4.76 5.43	30.35 76.38 128.70
HPA-65R-BUU-H6 w/Mount Pipe	A	From Leg	3.00 0.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	9.90 10.47 11.01	7.18 8.36 9.26	76.55 153.48 238.58
SBNHH-1D65C w/Mount Pipe	A	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	11.64 12.36 13.08	9.84 11.36 12.90	98.99 188.41 287.78
(2) SBNHH-1D65C w/Mount Pipe	B	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	11.64 12.36 13.08	9.84 11.36 12.90	98.99 188.41 287.78
SBNHH-1D65A w/Mount Pipe	C	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	6.20 6.68 7.14	5.29 6.15 6.87	62.82 117.64 179.12
SBNHH-1D65C w/Mount Pipe	C	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	11.64 12.36 13.08	9.84 11.36 12.90	98.99 188.41 287.78
(4) LGP214nn	A	From Leg	3.00 0.00 1.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	1.11 1.25 1.39	0.21 0.28 0.35	14.10 21.30 30.39
(4) LGP214nn	B	From Leg	3.00 0.00 1.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	1.11 1.25 1.39	0.21 0.28 0.35	14.10 21.30 30.39
(4) LGP214nn	C	From Leg	3.00 0.00 1.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	1.11 1.25 1.39	0.21 0.28 0.35	14.10 21.30 30.39
RRUS 32 B2	A	From Leg	3.00 0.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.74 2.96 3.19	1.67 1.86 2.05	60.00 81.11 105.42
RRUS 32 B2	B	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	2.74 2.96 3.19	1.67 1.86 2.05	60.00 81.11 105.42
RRUS 32 B2	C	From Leg	3.00 0.00 2.00	40.0000	148.00	No Ice 1/2" Ice 1" Ice	2.74 2.96 3.19	1.67 1.86 2.05	60.00 81.11 105.42
RRUS-11	A	From Leg	3.00 0.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.78 2.99 3.21	1.19 1.33 1.49	50.71 71.49 95.32
RRUS-11	B	From Leg	3.00 40.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.78 2.99 3.21	1.19 1.33 1.49	50.71 71.49 95.32
RRUS-11	C	From Leg	3.00 40.00 2.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	2.78 2.99 3.21	1.19 1.33 1.49	50.71 71.49 95.32
DC6-48-60-18-8F	A	From Leg	3.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice 1" Ice	0.92 1.46 1.64	0.92 1.46 1.64	32.80 50.52 70.72
Platform Mount [LP 1201-1] (ATT)	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

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
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(2) AIR21 B2A/B4P w/Mount Pipe	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.74 7.45 8.11	6.12 7.29 8.31	112.20 174.30 243.53
(2) AIR21 B2A/B4P w/Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.74 7.45 8.11	6.12 7.29 8.31	112.20 174.30 243.53
(2) AIR21 B2A/B4P w/Mount Pipe	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.74 7.45 8.11	6.12 7.29 8.31	112.20 174.30 243.53
APX16DWV-16DWVS-C w/Mount Pipe	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.67 7.06 7.47	3.34 3.99 4.64	57.85 104.67 157.84
APX16DWV-16DWVS-C w/Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.67 7.06 7.47	3.34 3.99 4.64	57.85 104.67 157.84
KRY 112 71	A	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
KRY 112 71	B	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
KRY 112 71	C	From Leg	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
Platform Mount [LP 1201-1] (TMO)	C	None		0.0000	140.00	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
**********									
1900MHz 4x45W RRH	A	From Leg	1.50 1.50 0.00	0.0000	135.00	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	1.50 1.50 0.00	0.0000	135.00	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	1.50 1.50 0.00	0.0000	135.00	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
800MHz 2x50W RRH	A	From Leg	1.50 -1.50 0.00	0.0000	135.00	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 Leg	1.50 -1.50 0.00	0.0000	135.00	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 Leg	1.50 -1.50 0.00	0.0000	135.00	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
(2) 5' x 2" Pipe Mount	A	From Leg	1.50 0.00 0.00	0.0000	135.00	No Ice 1/2" Ice 1" Ice	1.19 1.50 1.81	1.19 1.50 1.81	29.00 38.07 50.59
(2) 5' x 2" Pipe Mount	B	From Leg	1.50 0.00 0.00	0.0000	135.00	No Ice 1/2" Ice 1" Ice	1.19 1.50 1.81	1.19 1.50 1.81	29.00 38.07 50.59
(2) 5' x 2" Pipe Mount	C	From Leg	1.50 0.00 0.00	0.0000	135.00	No Ice 1/2" Ice 1" Ice	1.19 1.50 1.81	1.19 1.50 1.81	29.00 38.07 50.59
Side Arm Mount [SO 104-3]	C	None		0.0000	135.00	No Ice	3.30	3.30	287.00

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
(Sprint)						1/2" Ice	4.13	4.13	317.00
						1" Ice	4.96	4.96	347.00
**********									
APXVTM14-ALU-120 w/Mount Pipe	A	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	6.53 6.97 7.40	4.91 5.67 6.38	87.78 141.88 202.64
APXVTM14-ALU-120 w/Mount Pipe	B	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	6.53 6.97 7.40	4.91 5.67 6.38	87.78 141.88 202.64
APXVTM14-ALU-120 w/Mount Pipe	C	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	6.53 6.97 7.40	4.91 5.67 6.38	87.78 141.88 202.64
APXVSPP18-C w/Mount Pipe	A	From Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	8.31 8.87 9.40	6.95 8.13 9.03	82.55 150.82 227.06
APXVSPP18-C w/Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	8.31 8.87 9.40	6.95 8.13 9.03	82.55 150.82 227.06
APXVSPP18-C w/Mount Pipe	C	From Leg	3.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	8.31 8.87 9.40	6.95 8.13 9.03	82.55 150.82 227.06
TD-RRH8x20	A	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 97.14 127.80
TD-RRH8x20	B	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 97.14 127.80
TD-RRH8x20	C	From Leg	3.00 -6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 97.14 127.80
Platform Mount [LP 1201-1] (Sprint)	C	None		0.0000	129.00	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 507-1] (Sprint)	C	None		0.0000	132.00	No Ice 1/2" Ice 1" Ice	4.80 6.70 8.60	4.80 6.70 8.60	245.00 294.00 343.00
Miscellaneous [NA 509-3] (Sprint)	C	None		0.0000	125.00	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
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LNX-6514DS-T4M w/Mount Pipe	A	From Leg	3.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	8.41 8.97 9.50	7.08 8.27 9.18	64.16 133.31 210.50
BXA-70063-6CF w/Mount Pipe	B	From Leg	3.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	7.88 8.44 8.96	6.28 7.45 8.33	42.55 105.94 177.13
BXA-70063-6CF w/Mount Pipe	C	From Leg	3.00 0.00 1.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	7.88 8.44 8.96	6.28 7.45 8.33	42.55 105.94 177.13
HBX-6517DS-VTM w/Mount Pipe	A	From Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	5.42 5.97 6.49	4.96 6.14 7.03	44.25 90.00 143.32
HBX-6517DS-VTM w/Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	5.42 5.97 6.49	4.96 6.14 7.03	44.25 90.00 143.32
HBX-6517DS-VTM w/Mount Pipe	C	From Leg	3.00 0.00	0.0000	110.00	No Ice 1/2" Ice	5.42 5.97	4.96 6.14	44.25 90.00

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" Ice	6.49	7.03	143.32
LNX-6513DS w/Mount Pipe	A	From Leg	3.00	0.0000	110.00	No Ice	6.66	5.74	55.20
			0.00			1/2" Ice	7.38	6.92	115.14
			0.00			1" Ice	8.04	7.94	182.13
LNX-6513DS w/Mount Pipe	B	From Leg	3.00	0.0000	110.00	No Ice	6.66	5.74	55.20
			0.00			1/2" Ice	7.38	6.92	115.14
			0.00			1" Ice	8.04	7.94	182.13
LNX-6513DS w/Mount Pipe	C	From Leg	3.00	0.0000	110.00	No Ice	6.66	5.74	55.20
			0.00			1/2" Ice	7.38	6.92	115.14
			0.00			1" Ice	8.04	7.94	182.13
HBX-6516DS-VTM w/Mount Pipe	A	From Leg	3.00	0.0000	110.00	No Ice	3.57	3.25	29.87
			0.00			1/2" Ice	3.97	3.93	63.05
			0.00			1" Ice	4.37	4.59	101.94
HBX-6516DS-VTM w/Mount Pipe	B	From Leg	3.00	0.0000	110.00	No Ice	3.57	3.25	29.87
			0.00			1/2" Ice	3.97	3.93	63.05
			0.00			1" Ice	4.37	4.59	101.94
HBX-6516DS-VTM w/Mount Pipe	C	From Leg	3.00	0.0000	110.00	No Ice	3.57	3.25	29.87
			0.00			1/2" Ice	3.97	3.93	63.05
			0.00			1" Ice	4.37	4.59	101.94
RRH 2x40 AWS	A	From Leg	3.00	0.0000	110.00	No Ice	2.16	1.42	44.00
			0.00			1/2" Ice	2.36	1.59	61.40
			0.00			1" Ice	2.57	1.77	81.69
RRH 2x40 AWS	B	From Leg	3.00	0.0000	110.00	No Ice	2.16	1.42	44.00
			0.00			1/2" Ice	2.36	1.59	61.40
			0.00			1" Ice	2.57	1.77	81.69
RRH 2x40 AWS	C	From Leg	3.00	0.0000	110.00	No Ice	2.16	1.42	44.00
			0.00			1/2" Ice	2.36	1.59	61.40
			0.00			1" Ice	2.57	1.77	81.69
(2) FD9R6004/1C-3L	A	From Leg	3.00	0.0000	110.00	No Ice	0.31	0.09	2.60
			0.00			1/2" Ice	0.39	0.13	4.90
			1.00			1" Ice	0.47	0.19	8.29
(2) FD9R6004/1C-3L	B	From Leg	3.00	0.0000	110.00	No Ice	0.31	0.09	2.60
			0.00			1/2" Ice	0.39	0.13	4.90
			1.00			1" Ice	0.47	0.19	8.29
(2) FD9R6004/1C-3L	C	From Leg	3.00	0.0000	110.00	No Ice	0.31	0.09	2.60
			0.00			1/2" Ice	0.39	0.13	4.90
			1.00			1" Ice	0.47	0.19	8.29
DB-T1-6Z-8AB-0Z	A	From Leg	3.00	0.0000	110.00	No Ice	4.80	2.00	44.00
			0.00			1/2" Ice	5.07	2.19	80.13
			0.00			1" Ice	5.35	2.39	120.22
Platform Mount [LP 1201-1] (Verizon)	C	None		0.0000	110.00	No Ice	23.10	23.10	2100.00
						1/2" Ice	26.80	26.80	2500.00
						1" Ice	30.50	30.50	2900.00
**********									
4'x2" Pipe Mount	A	From Leg	0.50	0.0000	105.00	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
**********									
CC807-08	A	From Leg	6.00	0.0000	100.00	No Ice	2.85	2.85	27.00
			0.00			1/2" Ice	3.83	3.83	47.72
			5.00			1" Ice	4.67	4.67	74.70
DS428E-83I-01-T TTA	A	From Leg	3.00	0.0000	100.00	No Ice	0.40	0.46	8.90
			0.00			1/2" Ice	0.48	0.55	13.92
			0.00			1" Ice	0.57	0.65	20.46
CC807-08	B	From Leg	6.00	0.0000	100.00	No Ice	2.85	2.85	27.00
			0.00			1/2" Ice	3.83	3.83	47.72
			5.00			1" Ice	4.67	4.67	74.70

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
DS1F00F36U-D	C	From Leg	6.00	0.0000	100.00	No Ice	1.41	1.41	25.00
			0.00			1/2" Ice	1.76	1.76	35.60
			4.00			1" Ice	2.10	2.10	49.98
Side Arm Mount [SO 602-1]	A	From Leg	3.00	0.0000	100.00	No Ice	2.72	12.93	145.70
			0.00			1/2" Ice	4.11	17.82	223.26
			0.00			1" Ice	5.50	22.71	300.83
Side Arm Mount [SO 602-1]	B	From Leg	3.00	0.0000	100.00	No Ice	2.72	12.93	145.70
			0.00			1/2" Ice	4.11	17.82	223.26
			0.00			1" Ice	5.50	22.71	300.83
Side Arm Mount [SO 602-1]	C	From Leg	3.00	0.0000	100.00	No Ice	2.72	12.93	145.70
			0.00			1/2" Ice	4.11	17.82	223.26
			0.00			1" Ice	5.50	22.71	300.83
**********									
742 213 w/Mount Pipe	A	From Leg	0.50	0.0000	90.00	No Ice	3.59	3.20	42.31
			0.00			1/2" Ice	4.09	4.04	75.77
			0.00			1" Ice	4.54	4.74	115.04
742 213 w/Mount Pipe	B	From Leg	0.50	0.0000	90.00	No Ice	3.59	3.20	42.31
			0.00			1/2" Ice	4.09	4.04	75.77
			0.00			1" Ice	4.54	4.74	115.04
742 213 w/Mount Pipe	C	From Leg	0.50	0.0000	90.00	No Ice	3.59	3.20	42.31
			0.00			1/2" Ice	4.09	4.04	75.77
			0.00			1" Ice	4.54	4.74	115.04
**********									
GPS	A	From Leg	1.00	0.0000	55.00	No Ice	1.00	1.00	10.00
			0.00			1/2" Ice	1.50	1.50	15.00
			0.00			1" Ice	2.00	2.00	20.00
Side Arm Mount [SO 309-1]	A	From Leg	0.50	0.0000	55.00	No Ice	2.82	2.20	40.00
			0.00			1/2" Ice	4.07	3.16	61.95
			0.00			1" Ice	5.32	4.12	83.89
**********									
GPS	A	From Leg	1.00	0.0000	50.00	No Ice	1.00	1.00	10.00
			0.00			1/2" Ice	1.50	1.50	15.00
			0.00			1" Ice	2.00	2.00	20.00
Side Arm Mount [SO 309-1]	A	From Leg	0.50	0.0000	50.00	No Ice	2.82	2.20	40.00
			0.00			1/2" Ice	4.07	3.16	61.95
			0.00			1" Ice	5.32	4.12	83.89
**********									

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
**********											
HP3-11	A	Paraboloid w/Shroud (HP)	From Leg	1.00	0.0000		105.00	3.20	No Ice	8.04	50.00
				0.00					1/2" Ice	8.47	87.17
				0.00					1" Ice	8.90	124.34
**********											

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	27838.65					
Bracing Weight	0.00					
Total Member Self-Weight	27838.65			-920.89	1695.65	
Total Weight	49568.33			-920.89	1695.65	
Wind 0 deg - No Ice		-148.05	-19153.58	-2074386.90	23518.20	-1996.04
Wind 30 deg - No Ice		9273.03	-16665.76	-1795691.46	-988791.46	-2224.55
Wind 60 deg - No Ice		18138.69	-10668.31	-1155641.91	-1959526.00	-1922.21
Wind 90 deg - No Ice		28520.23	124.01	18376.59	-2734984.29	-1112.36
Wind 120 deg - No Ice		19876.02	11902.77	1260026.11	-2088874.49	188.57
Wind 150 deg - No Ice		9817.42	17346.08	1840644.90	-1038975.62	1283.03
Wind 180 deg - No Ice		148.05	19207.69	2078226.56	-20126.91	1996.04
Wind 210 deg - No Ice		-9285.91	16721.59	1799711.48	993535.48	2174.22
Wind 240 deg - No Ice		-18123.23	10719.84	1159211.02	1961294.03	1807.47
Wind 270 deg - No Ice		-28520.23	-172.10	-25268.52	2738375.59	1112.36
Wind 300 deg - No Ice		-19891.48	-11851.24	-1256457.00	2093889.05	-73.84
Wind 330 deg - No Ice		-9804.54	-17290.25	-1836624.88	1041014.19	-1232.70
Member Ice	10872.29					
Total Weight Ice	94218.28			-3347.98	3790.61	
Wind 0 deg - Ice		-26.02	-8075.46	-843756.87	7618.38	-619.71
Wind 30 deg - Ice		3954.58	-6985.47	-729766.84	-406107.50	-785.76
Wind 60 deg - Ice		7045.55	-4121.38	-434241.33	-732796.06	-760.13
Wind 90 deg - Ice		9562.90	19.06	-250.51	-946804.31	-533.01
Wind 120 deg - Ice		7289.11	4309.53	445699.00	-753403.48	-107.24
Wind 150 deg - Ice		4003.37	7027.63	728594.01	-413128.63	302.16
Wind 180 deg - Ice		26.02	8091.11	838704.09	-37.16	619.71
Wind 210 deg - Ice		-3958.31	7001.62	724766.23	414079.95	771.21
Wind 240 deg - Ice		-7041.08	4136.29	429110.31	739907.79	726.95
Wind 270 deg - Ice		-9562.90	-32.97	-7906.06	954385.52	533.01
Wind 300 deg - Ice		-7293.58	-4294.62	-450830.02	761454.18	140.42
Wind 330 deg - Ice		-3999.64	-7011.49	-733594.62	420318.62	-287.61
Total Weight	49568.33			-920.89	1695.65	
Wind 0 deg - Service		-46.75	-6047.91	-655635.44	8586.30	-630.27
Wind 30 deg - Service		2928.04	-5262.36	-567634.98	-311059.09	-702.42
Wind 60 deg - Service		5727.45	-3368.61	-365533.88	-617576.79	-606.95
Wind 90 deg - Service		9005.50	39.16	5172.46	-862434.35	-351.24
Wind 120 deg - Service		6276.02	3758.40	397233.87	-658419.68	59.54
Wind 150 deg - Service		3099.93	5477.17	580569.20	-326905.17	405.13
Wind 180 deg - Service		46.75	6064.99	655587.63	-5195.01	630.27
Wind 210 deg - Service		-2932.11	5279.98	567644.12	314877.52	686.53
Wind 240 deg - Service		-5722.56	3384.88	365400.64	620455.53	570.72
Wind 270 deg - Service		-9005.50	-54.34	-8608.86	865825.65	351.24
Wind 300 deg - Service		-6280.90	-3742.13	-397367.11	662323.53	-23.31
Wind 330 deg - Service		-3095.87	-5459.54	-580560.06	329869.33	-389.24

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice

Comb. No.	Description
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
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	26	0.00	-0.43	-0.27
			Max. Compression	26	-10696.38	5394.71	482.00
			Max. Mx	20	-3786.04	40934.82	1419.32
			Max. My	2	-3918.48	3158.75	39787.80
			Max. Vy	20	-6555.73	40934.82	1419.32

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Vx	14	6379.89	691.28	-39516.36
			Max. Torque	2			4258.50
L2	143 - 138	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-18703.18	4511.08	1036.03
			Max. Mx	20	-7390.17	82349.61	2597.51
			Max. My	2	-7642.05	4048.32	79471.97
			Max. Vy	20	-10782.79	82349.61	2597.51
			Max. Vx	14	10111.20	-541.84	-78921.51
			Max. Torque	2			4258.37
L3	138 - 133	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21874.82	4565.97	1062.02
			Max. Mx	20	-8826.98	140501.24	3852.37
			Max. My	2	-9159.64	5328.34	132973.78
			Max. Vy	20	-12686.56	140501.24	3852.37
			Max. Vx	14	11492.85	-1752.72	-132425.31
			Max. Torque	2			3790.55
L4	133 - 128	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-30160.22	4625.80	1092.20
			Max. Mx	20	-12720.65	212298.14	5122.55
			Max. My	2	-13176.57	6623.36	197442.63
			Max. Vy	20	-17070.18	212298.14	5122.55
			Max. Vx	14	15304.69	-2974.65	-196896.56
			Max. Torque	2			3790.10
L5	128 - 123	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31846.06	4692.28	1127.99
			Max. Mx	20	-13617.15	301007.01	6414.19
			Max. My	2	-14137.50	7939.46	276035.06
			Max. Vy	20	-18539.16	301007.01	6414.19
			Max. Vx	14	16255.43	-4211.89	-275492.08
			Max. Torque	2			3789.42
L6	123 - 118	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33150.66	4753.63	1163.51
			Max. Mx	20	-14278.23	395896.00	7707.65
			Max. My	2	-14846.17	9252.33	358219.08
			Max. Vy	20	-19429.22	395896.00	7707.65
			Max. Vx	14	16629.40	-5453.89	-357679.63
			Max. Torque	2			3788.47
L7	118 - 111	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33945.21	4787.75	1184.55
			Max. Mx	20	-14690.90	454957.64	8483.57
			Max. My	2	-15283.63	10037.28	408419.55
			Max. Vy	20	-19958.21	454957.64	8483.57
			Max. Vx	14	16850.58	-6200.73	-407882.42
			Max. Torque	2			3787.27
L8	111 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35929.66	4842.58	1220.01
			Max. Mx	20	-15747.10	557131.92	9778.46
			Max. My	2	-16385.61	11346.00	493724.92
			Max. Vy	20	-20910.58	557131.92	9778.46
			Max. Vx	14	17273.22	-7447.07	-493192.04
			Max. Torque	2			3785.81
L9	110 - 105	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-45022.12	4904.02	2284.26
			Max. Mx	20	-19606.06	684627.22	11385.80
			Max. My	2	-20329.95	12672.69	602258.39
			Max. Vy	20	-25772.51	684627.22	11385.80
			Max. Vx	14	21657.06	-8708.20	-601059.76
			Max. Torque	2			3785.45
L10	105 - 100	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46772.85	4958.38	2848.58
			Max. Mx	20	-20546.92	816894.61	12992.31

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. My	2	-21278.89	13989.51	713479.00
			Max. Vy	20	-26895.58	816894.61	12992.31
			Max. Vx	14	22473.49	-9969.59	-712379.53
			Max. Torque	2			3782.26
L11	100 - 99.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48675.67	4663.70	3178.83
			Max. Mx	20	-21186.51	837356.89	13220.98
			Max. My	2	-21940.74	14179.76	730957.59
			Max. Vy	20	-28402.98	837356.89	13220.98
			Max. Vx	14	23895.54	-10124.97	-729807.47
			Max. Torque	4			3488.77
L12	99.33 - 99.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48758.00	4668.49	3182.07
			Max. Mx	20	-21240.61	844461.03	13297.46
			Max. My	2	-21993.20	14247.32	736909.58
			Max. Vy	8	28452.97	-840162.05	-11100.45
			Max. Vx	14	23909.43	-10187.19	-735781.48
			Max. Torque	4			3487.59
L13	99.08 - 94.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50414.70	4713.74	3215.31
			Max. Mx	20	-22180.19	988810.90	14790.88
			Max. My	2	-22937.49	15553.67	856766.36
			Max. Vy	20	-29318.86	988810.90	14790.88
			Max. Vx	14	24228.50	-11448.53	-856078.67
			Max. Torque	4			3487.33
L14	94.08 - 90.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51612.57	4743.74	3237.42
			Max. Mx	20	-22883.33	1094809.83	15855.94
			Max. My	2	-23634.61	16483.23	943525.49
			Max. Vy	20	-29933.65	1094809.83	15855.94
			Max. Vx	14	24447.36	-12349.45	-943153.80
			Max. Torque	4			3485.32
L15	90.5 - 90.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51715.61	4750.52	3241.86
			Max. Mx	20	-22968.68	1102294.64	15932.74
			Max. My	2	-23713.89	16550.93	949613.51
			Max. Vy	8	29977.60	-1097954.20	-12986.65
			Max. Vx	14	24454.37	-12410.99	-949263.96
			Max. Torque	4			3484.14
L16	90.25 - 85.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-54486.93	4784.77	3267.86
			Max. Mx	20	-24389.22	1256539.21	17414.37
			Max. My	14	-25143.67	-13667.20	-1074501.93
			Max. Vy	20	-31356.35	1256539.21	17414.37
			Max. Vx	14	25264.87	-13667.20	-1074501.93
			Max. Torque	4			3484.03
L17	85.25 - 80.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-56716.61	4820.02	3294.38
			Max. Mx	20	-25731.33	1415596.90	18894.76
			Max. My	14	-26484.53	-14921.57	-1201683.64
			Max. Vy	20	-32291.80	1415596.90	18894.76
			Max. Vx	14	25628.10	-14921.57	-1201683.64
			Max. Torque	4			3482.83
L18	80.25 - 75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-56941.03	4824.77	3297.79
			Max. Mx	20	-25875.28	1431759.66	19043.12
			Max. My	14	-26625.32	-15046.74	-1214501.26
			Max. Vy	20	-32378.13	1431759.66	19043.12
			Max. Vx	14	25658.94	-15046.74	-1214501.26
			Max. Torque	4			3481.69
L19	75 - 74.75	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Compression	26	-60570.66	4861.60	3325.30
			Max. Mx	20	-28193.39	1596250.14	20525.07
			Max. My	14	-28958.77	-16299.55	-1343928.47
			Max. Vy	8	33438.85	-1591846.17	-16274.97
			Max. Vx	14	26118.72	-16299.55	-1343928.47
			Max. Torque	4			3481.05
L20	74.75 - 69.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62968.69	4888.61	3346.76
			Max. Mx	20	-29711.34	1765612.35	22002.36
			Max. My	14	-30465.97	-17556.87	-1475360.66
			Max. Vy	20	-34341.24	1765612.35	22002.36
			Max. Vx	14	26472.68	-17556.87	-1475360.66
			Max. Torque	4			3480.89
L21	69.75 - 64.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-65386.41	4917.44	3369.25
			Max. Mx	20	-31272.17	1939469.76	23476.63
			Max. My	14	-32003.87	-18810.90	-1608507.74
			Max. Vy	20	-35232.30	1939469.76	23476.63
			Max. Vx	14	26810.80	-18810.90	-1608507.74
			Max. Torque	4			3479.72
L22	64.75 - 60.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67456.92	4933.93	3382.38
			Max. Mx	20	-32624.24	2090711.99	24725.31
			Max. My	14	-33329.80	-19874.56	-1722985.96
			Max. Vy	20	-35973.72	2090711.99	24725.31
			Max. Vx	14	27088.43	-19874.56	-1722985.96
			Max. Torque	4			3478.57
L23	60.5 - 60.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67589.86	4939.12	3385.59
			Max. Mx	20	-32727.10	2099707.15	24800.01
			Max. My	14	-33425.70	-19936.29	-1729756.94
			Max. Vy	8	36022.46	-2095248.16	-19341.77
			Max. Vx	14	27097.94	-19936.29	-1729756.94
			Max. Torque	4			3477.75
L24	60.25 - 55.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-70252.35	4933.06	3381.84
			Max. Mx	20	-34481.16	2281941.84	26262.77
			Max. My	14	-35155.42	-21185.01	-1866058.86
			Max. Vy	20	-36908.57	2281941.84	26262.77
			Max. Vx	14	27441.95	-21185.01	-1866058.86
			Max. Torque	4			3477.62
L25	55.25 - 50.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73117.03	4931.88	3707.79
			Max. Mx	20	-36335.84	2469134.32	27844.75
			Max. My	14	-36973.24	-22430.08	-2004546.97
			Max. Vy	20	-37893.58	2469134.32	27844.75
			Max. Vx	14	27906.10	-22430.08	-2004546.97
			Max. Torque	4			3610.93
L26	50.25 - 45.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-75998.50	4930.71	4037.33
			Max. Mx	20	-38220.76	2661162.10	29423.78
			Max. My	14	-38813.91	-23671.47	-2145293.28
			Max. Vy	20	-38847.85	2661162.10	29423.78
			Max. Vx	14	28351.26	-23671.47	-2145293.28
			Max. Torque	4			3742.82
L27	45.25 - 39.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-76135.89	4934.89	4039.93
			Max. Mx	20	-38326.33	2670875.15	29496.78
			Max. My	14	-38911.67	-23733.11	-2152379.71
			Max. Vy	8	38892.03	-2666365.81	-22286.78
			Max. Vx	14	28358.87	-23733.11	-2152379.71

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
			Max. Torque	4			3742.09
L28	39.75 - 38.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81634.80	4929.32	4036.48
			Max. Mx	20	-42169.67	2917511.85	31308.08
			Max. My	14	-42735.90	-25281.08	-2331154.65
			Max. Vy	20	-40043.25	2917511.85	31308.08
			Max. Vx	14	28849.03	-25281.08	-2331154.65
			Max. Torque	4			3741.61
L29	38.75 - 33.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-84553.01	4928.07	4035.70
			Max. Mx	20	-44210.82	3119542.67	32751.66
			Max. My	14	-44721.03	-26517.68	-2476004.20
			Max. Vy	20	-40806.92	3119542.67	32751.66
			Max. Vx	14	29120.38	-26517.68	-2476004.20
			Max. Torque	4			3741.47
L30	33.75 - 30.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86458.55	4927.16	4035.14
			Max. Mx	20	-45553.77	3252873.32	33685.74
			Max. My	14	-46024.77	-27318.63	-2570863.70
			Max. Vy	20	-41283.72	3252873.32	33685.74
			Max. Vx	14	29287.20	-27318.63	-2570863.70
			Max. Torque	4			3740.82
L31	30.5 - 30.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86612.24	4931.27	4037.69
			Max. Mx	20	-45678.13	3263193.82	33757.70
			Max. My	14	-46139.55	-27380.02	-2578183.12
			Max. Vy	8	41319.11	-3258641.84	-25353.41
			Max. Vx	14	29289.92	-27380.02	-2578183.12
			Max. Torque	4			3740.50
L32	30.25 - 25.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-89685.42	4926.00	4034.42
			Max. Mx	20	-47859.07	3471507.57	35187.55
			Max. My	14	-48264.56	-28607.45	-2725234.29
			Max. Vy	20	-42046.59	3471507.57	35187.55
			Max. Vx	14	29552.53	-28607.45	-2725234.29
			Max. Torque	4			3740.43
L33	25.25 - 20.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-92766.58	4924.71	4033.62
			Max. Mx	20	-50081.04	3683454.31	36609.31
			Max. My	14	-50420.03	-29828.97	-2873544.25
			Max. Vy	20	-42772.61	3683454.31	36609.31
			Max. Vx	14	29802.59	-29828.97	-2873544.25
			Max. Torque	4			3739.95
L34	20.25 - 18.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-94104.70	4924.07	4033.22
			Max. Mx	20	-51052.86	3776437.62	37222.76
			Max. My	14	-51362.17	-30356.42	-2938207.31
			Max. Vy	20	-43088.16	3776437.62	37222.76
			Max. Vx	14	29910.99	-30356.42	-2938207.31
			Max. Torque	4			3739.56
L35	18.083 - 17.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-94260.20	4926.69	4034.85
			Max. Mx	20	-51181.34	3787208.75	37293.38
			Max. My	14	-51480.31	-30417.30	-2945682.35
			Max. Vy	8	43117.90	-3782626.92	-27904.06
			Max. Vx	14	29911.87	-30417.30	-2945682.35
			Max. Torque	4			3739.45
L36	17.833 - 12.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-97362.80	4922.72	4032.39
			Max. Mx	20	-53454.80	4004508.53	38701.47
			Max. My	14	-53684.55	-31629.12	-3095811.15

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	-43840.85	4004508.53	38701.47
			Max. Vx	14	30162.76	-31629.12	-3095811.15
			Max. Torque	4			3739.40
L37	12.833 - 7.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-100453.98	4921.35	4031.54
			Max. Mx	20	-55773.01	4225375.09	40099.28
			Max. My	14	-55920.85	-32833.72	-3247120.82
			Max. Vy	20	-44551.49	4225375.09	40099.28
			Max. Vx	14	30395.73	-32833.72	-3247120.82
			Max. Torque	4			3739.13
L38	7.833 - 2.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-103509.60	4919.97	4030.68
			Max. Mx	20	-58119.55	4449779.59	41486.14
			Max. My	14	-58180.34	-34030.34	-3399579.59
			Max. Vy	20	-45258.09	4449779.59	41486.14
			Max. Vx	14	30623.74	-34030.34	-3399579.59
			Max. Torque	4			3738.94
L39	2.833 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-105189.71	4919.17	4030.18
			Max. Mx	20	-59454.98	4578491.40	42266.94
			Max. My	14	-59468.13	-34704.45	-3486464.28
			Max. Vy	20	-45667.22	4578491.40	42266.94
			Max. Vx	14	30758.84	-34704.45	-3486464.28
			Max. Torque	4			3738.84

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	105189.71	-0.18	-0.11
	Max. H_x	20	59481.98	45632.05	275.36
	Max. H_z	3	44611.49	236.88	30645.56
	Max. M_x	2	3479396.84	236.88	30645.46
	Max. M_z	8	4573878.32	-45630.84	-198.39
	Max. Torsion	4	3738.86	-14836.84	26665.20
	Min. Vert	9	44611.44	-45631.38	-198.40
	Min. H_x	9	44611.44	-45631.38	-198.40
	Min. H_z	14	59481.98	-236.88	-30732.04
	Min. M_x	14	-3486464.28	-236.88	-30732.04
	Min. M_z	20	-4578491.40	45632.05	275.36
	Min. Torsion	16	-3622.35	14857.45	-26754.52

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	49568.33	0.76	0.26	-914.15	1675.08	-0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	59481.98	-236.88	-30645.46	-3479396.84	39122.98	-3361.24
0.9 Dead+1.6 Wind 0 deg - No Ice	44611.49	-236.88	-30645.56	-3436036.19	37991.25	-3311.69
1.2 Dead+1.6 Wind 30 deg - No Ice	59482.00	14836.84	-26665.20	-3011595.81	-1658819.72	-3738.86
0.9 Dead+1.6 Wind 30 deg - No Ice	44611.50	14836.84	-26665.19	-2974125.86	-1639001.17	-3687.55

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
1.2 Dead+1.6 Wind 60 deg - No Ice	59482.00	29021.88	-17069.28	-1937452.93	-3286506.82	-3216.30
0.9 Dead+1.6 Wind 60 deg - No Ice	44611.50	29021.89	-17069.29	-1913266.52	-3246529.55	-3172.56
1.2 Dead+1.6 Wind 90 deg - No Ice	59481.90	45630.84	198.39	31498.09	-4573878.32	-1818.93
0.9 Dead+1.6 Wind 90 deg - No Ice	44611.44	45631.38	198.40	31318.34	-4521082.36	-1799.15
1.2 Dead+1.6 Wind 120 deg - No Ice	59482.00	31801.61	19044.43	2111513.00	-3499986.89	357.44
0.9 Dead+1.6 Wind 120 deg - No Ice	44611.50	31801.62	19044.43	2086154.44	-3458162.66	345.00
1.2 Dead+1.6 Wind 150 deg - No Ice	59482.00	15707.86	27753.70	3086922.23	-1742923.00	2162.56
0.9 Dead+1.6 Wind 150 deg - No Ice	44611.50	15707.87	27753.71	3049279.31	-1722056.20	2127.75
1.2 Dead+1.6 Wind 180 deg - No Ice	59481.98	236.88	30732.04	3486464.28	-34704.90	3332.59
0.9 Dead+1.6 Wind 180 deg - No Ice	44611.48	236.88	30731.93	3443609.79	-34760.14	3283.58
1.2 Dead+1.6 Wind 210 deg - No Ice	59482.00	-14857.45	26754.52	3018992.67	1665492.46	3622.35
0.9 Dead+1.6 Wind 210 deg - No Ice	44611.50	-14857.46	26754.53	2982045.16	1644461.32	3571.69
1.2 Dead+1.6 Wind 240 deg - No Ice	59482.00	-28997.14	17151.73	1944122.33	3288244.81	3026.18
0.9 Dead+1.6 Wind 240 deg - No Ice	44611.50	-28997.15	17151.74	1920460.49	3247100.85	2982.45
1.2 Dead+1.6 Wind 270 deg - No Ice	59481.98	-45632.05	-275.36	-42266.61	4578491.40	1861.87
0.9 Dead+1.6 Wind 270 deg - No Ice	44611.47	-45631.92	-275.36	-41373.78	4524410.37	1841.23
1.2 Dead+1.6 Wind 300 deg - No Ice	59482.00	-31826.35	-18961.97	-2104893.30	3507152.06	-128.66
0.9 Dead+1.6 Wind 300 deg - No Ice	44611.50	-31826.36	-18961.98	-2078996.54	3464101.11	-117.20
1.2 Dead+1.6 Wind 330 deg - No Ice	59482.00	-15687.25	-27664.38	-3079572.40	1745114.64	-2074.67
0.9 Dead+1.6 Wind 330 deg - No Ice	44611.50	-15687.25	-27664.39	-3041395.91	1723078.74	-2040.05
1.2 Dead+1.0 Ice+1.0 Temp	105189.71	0.18	0.11	-4030.18	4919.17	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	105189.71	-26.01	-8075.35	-932680.31	9439.51	-725.41
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	105189.71	3954.53	-6985.37	-806691.67	-447640.46	-907.98
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	105189.71	7045.46	-4121.33	-480323.68	-808877.34	-869.87
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	105189.71	9562.78	19.06	-669.87	-1042697.81	-600.66
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	105189.71	7289.01	4309.47	491746.56	-831079.68	-107.15
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	105189.71	4003.31	7027.54	804471.26	-455543.44	362.98
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	105189.71	26.02	8091.00	926086.60	804.46	724.88
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	105189.71	-3958.25	7001.52	800157.92	458311.72	892.88
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	105189.71	-7040.98	4136.23	473649.21	818612.90	836.75
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	105189.71	-9562.78	-32.97	-9304.72	1052947.08	601.17
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	105189.71	-7293.48	-4294.56	-498426.23	841840.71	140.99
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	105189.71	-3999.58	-7011.39	-811010.21	465363.30	-348.37
Dead+Wind 0 deg - Service	49568.32	-46.73	-6046.95	-682434.06	9066.84	-662.03
Dead+Wind 30 deg - Service	49568.33	2927.83	-5261.98	-590820.40	-323615.70	-735.37
Dead+Wind 60 deg - Service	49568.33	5727.26	-3368.50	-380488.28	-642736.81	-634.92
Dead+Wind 90 deg - Service	49568.32	9004.34	39.15	5416.59	-895587.72	-363.36
Dead+Wind 120 deg - Service	49568.33	6275.83	3758.28	413200.77	-684757.03	68.09
Dead+Wind 150 deg - Service	49568.33	3099.72	5476.79	604138.51	-340118.54	427.35
Dead+Wind 180 deg - Service	49568.32	46.74	6064.04	682324.88	-5381.49	661.02
Dead+Wind 210 deg - Service	49568.33	-2931.90	5279.60	590770.78	327744.03	718.16
Dead+Wind 240 deg - Service	49568.32	-5722.15	3384.64	380275.32	645865.60	598.36
Dead+Wind 270 deg - Service	49568.32	-9004.33	-54.33	-9031.41	899274.28	364.85
Dead+Wind 300 deg - Service	49568.33	-6280.71	-3742.01	-413398.85	688975.13	-30.06
Dead+Wind 330 deg - Service	49568.33	-3095.65	-5459.16	-604189.53	343363.19	-411.11

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	-49568.33	0.00	-0.76	49568.33	-0.26	0.002%
2	-236.89	-59482.00	-30645.72	236.88	59481.98	30645.46	0.000%
3	-236.89	-44611.50	-30645.72	236.88	44611.49	30645.56	0.000%
4	14836.85	-59482.00	-26665.22	-14836.84	59482.00	26665.20	0.000%
5	14836.85	-44611.50	-26665.22	-14836.84	44611.50	26665.19	0.000%
6	29021.90	-59482.00	-17069.29	-29021.88	59482.00	17069.28	0.000%
7	29021.90	-44611.50	-17069.29	-29021.89	44611.50	17069.29	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
8	45632.37	-59482.00	198.41	-45630.84	59481.90	-198.39	0.002%
9	45632.37	-44611.50	198.41	-45631.38	44611.44	-198.40	0.002%
10	31801.64	-59482.00	19044.44	-31801.61	59482.00	-19044.43	0.000%
11	31801.64	-44611.50	19044.44	-31801.62	44611.50	-19044.43	0.000%
12	15707.87	-59482.00	27753.72	-15707.86	59482.00	-27753.70	0.000%
13	15707.87	-44611.50	27753.72	-15707.87	44611.50	-27753.71	0.000%
14	236.89	-59482.00	30732.30	-236.88	59481.98	-30732.04	0.000%
15	236.89	-44611.50	30732.30	-236.88	44611.48	-30731.93	0.001%
16	-14857.46	-59482.00	26754.54	14857.45	59482.00	-26754.52	0.000%
17	-14857.46	-44611.50	26754.54	14857.46	44611.50	-26754.53	0.000%
18	-28997.17	-59482.00	17151.74	28997.14	59482.00	-17151.73	0.000%
19	-28997.17	-44611.50	17151.74	28997.15	44611.50	-17151.74	0.000%
20	-45632.37	-59482.00	-275.36	45632.05	59481.98	275.36	0.000%
21	-45632.37	-44611.50	-275.36	45631.92	44611.47	275.36	0.001%
22	-31826.37	-59482.00	-18961.99	31826.35	59482.00	18961.97	0.000%
23	-31826.37	-44611.50	-18961.99	31826.36	44611.50	18961.98	0.000%
24	-15687.26	-59482.00	-27664.40	15687.25	59482.00	27664.38	0.000%
25	-15687.26	-44611.50	-27664.40	15687.25	44611.50	27664.39	0.000%
26	0.00	-105189.71	0.00	-0.18	105189.71	-0.11	0.000%
27	-26.02	-105189.71	-8075.46	26.01	105189.71	8075.35	0.000%
28	3954.58	-105189.71	-6985.47	-3954.53	105189.71	6985.37	0.000%
29	7045.55	-105189.71	-4121.38	-7045.46	105189.71	4121.33	0.000%
30	9562.90	-105189.71	19.06	-9562.78	105189.71	-19.06	0.000%
31	7289.11	-105189.71	4309.53	-7289.01	105189.71	-4309.47	0.000%
32	4003.37	-105189.71	7027.63	-4003.31	105189.71	-7027.54	0.000%
33	26.02	-105189.71	8091.11	-26.02	105189.71	-8091.00	0.000%
34	-3958.31	-105189.71	7001.62	3958.25	105189.71	-7001.52	0.000%
35	-7041.08	-105189.71	4136.29	7040.98	105189.71	-4136.23	0.000%
36	-9562.90	-105189.71	-32.97	9562.78	105189.71	32.97	0.000%
37	-7293.58	-105189.71	-4294.62	7293.48	105189.71	4294.56	0.000%
38	-3999.64	-105189.71	-7011.49	3999.58	105189.71	7011.39	0.000%
39	-46.75	-49568.33	-6047.91	46.73	49568.32	6046.95	0.002%
40	2928.04	-49568.33	-5262.36	-2927.83	49568.33	5261.98	0.001%
41	5727.45	-49568.33	-3368.61	-5727.26	49568.33	3368.50	0.000%
42	9005.50	-49568.33	39.16	-9004.34	49568.32	-39.15	0.002%
43	6276.02	-49568.33	3758.40	-6275.83	49568.33	-3758.28	0.000%
44	3099.93	-49568.33	5477.17	-3099.72	49568.33	-5476.79	0.001%
45	46.75	-49568.33	6064.99	-46.74	49568.32	-6064.04	0.002%
46	-2932.11	-49568.33	5279.98	2931.90	49568.33	-5279.60	0.001%
47	-5722.56	-49568.33	3384.88	5722.15	49568.32	-3384.64	0.001%
48	-9005.50	-49568.33	-54.34	9004.33	49568.32	54.33	0.002%
49	-6280.90	-49568.33	-3742.13	6280.71	49568.33	3742.01	0.000%
50	-3095.87	-49568.33	-5459.54	3095.65	49568.33	5459.16	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000997
2	Yes	19	0.00000001	0.00013789
3	Yes	19	0.00000001	0.00010317
4	Yes	22	0.00000001	0.00009170
5	Yes	21	0.00000001	0.00014434
6	Yes	22	0.00000001	0.00013454
7	Yes	22	0.00000001	0.00009271
8	Yes	17	0.00002394	0.00012336

9	Yes	17	0.00000001	0.00008222
10	Yes	22	0.00000001	0.00014735
11	Yes	22	0.00000001	0.00010038
12	Yes	22	0.00000001	0.00010146
13	Yes	22	0.00000001	0.00007058
14	Yes	19	0.00000001	0.00007959
15	Yes	18	0.00000001	0.00012905
16	Yes	22	0.00000001	0.00010367
17	Yes	22	0.00000001	0.00007252
18	Yes	22	0.00000001	0.00012664
19	Yes	22	0.00000001	0.00008703
20	Yes	19	0.00000001	0.00009676
21	Yes	18	0.00000001	0.00014939
22	Yes	22	0.00000001	0.00014625
23	Yes	22	0.00000001	0.00009944
24	Yes	22	0.00000001	0.00010885
25	Yes	22	0.00000001	0.00007574
26	Yes	13	0.00000001	0.00013660
27	Yes	20	0.00000001	0.00012196
28	Yes	20	0.00000001	0.00013556
29	Yes	20	0.00000001	0.00014179
30	Yes	20	0.00000001	0.00013091
31	Yes	20	0.00000001	0.00014357
32	Yes	20	0.00000001	0.00013579
33	Yes	20	0.00000001	0.00012008
34	Yes	20	0.00000001	0.00013789
35	Yes	20	0.00000001	0.00014210
36	Yes	20	0.00000001	0.00013414
37	Yes	20	0.00000001	0.00014887
38	Yes	20	0.00000001	0.00014122
39	Yes	15	0.00000001	0.00011374
40	Yes	16	0.00000001	0.00009470
41	Yes	17	0.00000001	0.00007856
42	Yes	15	0.00009043	0.00009118
43	Yes	17	0.00000001	0.00008034
44	Yes	16	0.00000001	0.00010406
45	Yes	15	0.00000001	0.00010589
46	Yes	16	0.00000001	0.00013035
47	Yes	16	0.00000001	0.00013249
48	Yes	15	0.00009057	0.00009933
49	Yes	17	0.00000001	0.00007924
50	Yes	16	0.00000001	0.00012961

Maximum Tower Deflections - Service Wind

Section No.	*Elevation*	*Horz. Deflection*	*Gov. Load Comb.*	*Tilt*	*Twist*
	ft	*in*		°	°
L1	148 - 143	21.778	48	1.3104	0.0083
L2	143 - 138	20.408	48	1.3040	0.0073
L3	138 - 133	19.049	48	1.2924	0.0064
L4	133 - 128	17.704	48	1.2739	0.0056
L5	128 - 123	16.383	48	1.2482	0.0050
L6	123 - 118	15.093	48	1.2143	0.0043
L7	118 - 111	13.843	48	1.1727	0.0038
L8	115 - 110	13.115	48	1.1445	0.0034
L9	110 - 105	11.931	48	1.1121	0.0031
L10	105 - 100	10.797	48	1.0510	0.0027
L11	100 - 99.33	9.732	48	0.9835	0.0023
L12	99.33 - 99.08	9.594	48	0.9741	0.0022

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	99.08 - 94.08	9.544	48	0.9705	0.0022
L14	94.08 - 90.5	8.566	48	0.8960	0.0019
L15	90.5 - 90.25	7.915	48	0.8395	0.0016
L16	90.25 - 85.25	7.871	48	0.8371	0.0016
L17	85.25 - 80.25	7.020	48	0.7876	0.0014
L18	80.25 - 75	6.222	48	0.7357	0.0013
L19	79.75 - 74.75	6.146	48	0.7304	0.0013
L20	74.75 - 69.75	5.394	48	0.7034	0.0012
L21	69.75 - 64.75	4.685	48	0.6513	0.0010
L22	64.75 - 60.5	4.030	48	0.5980	0.0009
L23	60.5 - 60.25	3.519	48	0.5513	0.0008
L24	60.25 - 55.25	3.490	48	0.5489	0.0008
L25	55.25 - 50.25	2.940	48	0.5010	0.0007
L26	50.25 - 45.25	2.442	48	0.4516	0.0006
L27	45.25 - 39.75	1.995	48	0.4016	0.0005
L28	45 - 38.75	1.974	48	0.3991	0.0005
L29	38.75 - 33.75	1.472	48	0.3639	0.0005
L30	33.75 - 30.5	1.116	48	0.3154	0.0004
L31	30.5 - 30.25	0.912	48	0.2837	0.0003
L32	30.25 - 25.25	0.897	48	0.2815	0.0003
L33	25.25 - 20.25	0.627	48	0.2356	0.0003
L34	20.25 - 18.083	0.404	48	0.1897	0.0002
L35	18.083 - 17.833	0.322	48	0.1699	0.0002
L36	17.833 - 12.833	0.313	48	0.1676	0.0002
L37	12.833 - 7.833	0.162	48	0.1210	0.0001
L38	7.833 - 2.833	0.060	48	0.0737	0.0001
L39	2.833 - 0	0.008	48	0.0266	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
148.00	Lightning Rod 3/4"x8'	48	21.778	1.3104	0.0083	31664
140.00	(2) AIR21 B2A/B4P w/Mount Pipe	48	19.591	1.2978	0.0067	22331
135.00	1900MHz 4x45W RRH	48	18.240	1.2821	0.0059	14787
132.00	Miscellaneous [NA 507-1]	48	17.438	1.2694	0.0055	11925
130.00	APXVTM14-ALU-120 w/Mount Pipe	48	16.908	1.2594	0.0052	10556
129.00	Platform Mount [LP 1201-1]	48	16.645	1.2540	0.0051	9993
125.00	Miscellaneous [NA 509-3]	48	15.605	1.2287	0.0046	8262
110.00	LNX-6514DS-T4M w/Mount Pipe	48	11.931	1.1121	0.0032	5871
105.00	HP3-11	48	10.797	1.0510	0.0028	4454
100.00	CC807-08	48	9.732	0.9835	0.0023	4069
90.00	742 213 w/Mount Pipe	48	7.827	0.8348	0.0017	4683
55.00	GPS	48	2.914	0.4986	0.0007	5878
50.00	GPS	48	2.418	0.4491	0.0006	5756

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	148 - 143	110.627	20	6.6351	0.0430
L2	143 - 138	103.705	20	6.6100	0.0377
L3	138 - 133	96.823	20	6.5571	0.0331
L4	133 - 128	90.015	20	6.4682	0.0292
L5	128 - 123	83.318	20	6.3415	0.0257
L6	123 - 118	76.775	20	6.1728	0.0224
L7	118 - 111	70.429	20	5.9642	0.0195
L8	115 - 110	66.732	20	5.8221	0.0178
L9	110 - 105	60.717	20	5.6584	0.0162
L10	105 - 100	54.959	20	5.3494	0.0139
L11	100 - 99.33	49.541	20	5.0071	0.0118
L12	99.33 - 99.08	48.843	20	4.9591	0.0115
L13	99.08 - 94.08	48.584	20	4.9410	0.0114
L14	94.08 - 90.5	43.611	20	4.5627	0.0096
L15	90.5 - 90.25	40.300	20	4.2757	0.0084
L16	90.25 - 85.25	40.077	20	4.2636	0.0083
L17	85.25 - 80.25	35.747	20	4.0116	0.0074
L18	80.25 - 75	31.686	20	3.7477	0.0065
L19	79.75 - 74.75	31.295	20	3.7207	0.0064
L20	74.75 - 69.75	27.469	20	3.5833	0.0060
L21	69.75 - 64.75	23.857	20	3.3180	0.0053
L22	64.75 - 60.5	20.526	20	3.0464	0.0047
L23	60.5 - 60.25	17.921	20	2.8083	0.0042
L24	60.25 - 55.25	17.775	20	2.7963	0.0041
L25	55.25 - 50.25	14.975	20	2.5525	0.0037
L26	50.25 - 45.25	12.434	20	2.3003	0.0032
L27	45.25 - 39.75	10.159	20	2.0458	0.0027
L28	45 - 38.75	10.052	20	2.0330	0.0027
L29	38.75 - 33.75	7.495	20	1.8539	0.0024
L30	33.75 - 30.5	5.683	20	1.6063	0.0020
L31	30.5 - 30.25	4.645	20	1.4451	0.0018
L32	30.25 - 25.25	4.570	20	1.4337	0.0017
L33	25.25 - 20.25	3.191	20	1.1999	0.0014
L34	20.25 - 18.083	2.057	20	0.9664	0.0011
L35	18.083 - 17.833	1.641	20	0.8653	0.0010
L36	17.833 - 12.833	1.596	20	0.8534	0.0010
L37	12.833 - 7.833	0.826	20	0.6162	0.0007
L38	7.833 - 2.833	0.307	20	0.3752	0.0004
L39	2.833 - 0	0.040	20	0.1353	0.0001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
148.00	Lightning Rod 3/4"x8'	20	110.627	6.6351	0.0430	7384
140.00	(2) AIR21 B2A/B4P w/Mount Pipe	20	99.569	6.5824	0.0349	4963
135.00	1900MHz 4x45W RRH	20	92.727	6.5081	0.0307	3127
132.00	Miscellaneous [NA 507-1]	20	88.665	6.4461	0.0285	2492
130.00	APXVTM14-ALU-120 w/Mount Pipe	20	85.981	6.3973	0.0271	2191
129.00	Platform Mount [LP 1201-1]	20	84.647	6.3703	0.0264	2068
125.00	Miscellaneous [NA 509-3]	20	79.372	6.2446	0.0237	1695
110.00	LNX-6514DS-T4M w/Mount Pipe	20	60.717	5.6584	0.0162	1183
105.00	HP3-11	20	54.959	5.3494	0.0139	894
100.00	CC807-08	20	49.541	5.0071	0.0118	814
90.00	742 213 w/Mount Pipe	20	39.854	4.2518	0.0083	931
55.00	GPS	20	14.842	2.5401	0.0037	1158

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
50.00	GPS	20	12.314	2.2877	0.0032	1133

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	148 - 147	TP24.9001x24x0.25	5.00	0.00	0.0	18.9885	-3480.24	1410750.00	0.002
	147 - 146					19.1313	-3559.10	1421360.00	0.003
	146 - 145					19.2742	-3638.57	1431980.00	0.003
	145 - 144					19.4170	-3718.66	1442590.00	0.003
	144 - 143					19.5599	-3799.36	1453200.00	0.003
L2	143 - 142	TP25.8003x24.9001x0.25	5.00	0.00	0.0	19.7027	-3890.44	1463810.00	0.003
	142 - 141					19.8456	-3982.15	1474430.00	0.003
	141 - 140					19.9884	-4074.51	1482440.00	0.003
	140 - 139					20.1313	-7330.70	1490330.00	0.005
	139 - 138					20.2741	-7425.21	1498190.00	0.005
L3	138 - 137	TP26.7004x25.8003x0.25	5.00	0.00	0.0	20.4170	-7535.02	1506000.00	0.005
	137 - 136					20.5598	-7645.67	1513780.00	0.005
	136 - 135					20.7027	-7757.18	1521520.00	0.005
	135 - 134					20.8455	-8764.25	1529230.00	0.006
	134 - 133					20.9884	-8877.89	1536890.00	0.006
L4	133 - 132	TP27.6005x26.7004x0.25	5.00	0.00	0.0	21.1312	-8994.03	1544520.00	0.006
	132 - 131					21.2741	-9379.60	1552100.00	0.006
	131 - 130					21.4170	-9497.75	1559650.00	0.006
	130 - 129					21.5598	-10287.20	1567160.00	0.007
	129 - 128					21.7027	-12801.80	1574630.00	0.008
L5	128 - 127	TP28.5007x27.6005x0.25	5.00	0.00	0.0	21.8455	-12926.90	1582070.00	0.008
	127 - 126					21.9884	-13053.20	1589460.00	0.008
	126 - 125					22.1312	-13180.70	1596820.00	0.008
	125 - 124					22.2741	-13581.70	1604140.00	0.008
	124 - 123					22.4169	-13712.00	1611420.00	0.009
L6	123 - 122	TP29.4008x28.5007x0.25	5.00	0.00	0.0	22.5598	-13851.10	1618660.00	0.009
	122 - 121					22.7026	-13991.40	1625870.00	0.009
	121 - 120					22.8455	-14132.80	1633030.00	0.009
	120 - 119					22.9883	-14275.50	1640160.00	0.009
	119 - 118					23.1312	-14419.20	1647250.00	0.009
L7	118 - 117	TP30.661x29.4008x0.25	7.00	0.00	0.0	23.2740	-14564.40	1654300.00	0.009
	117 - 116					23.4169	-14710.70	1661310.00	0.009
	116 - 115					23.5597	-14858.10	1668280.00	0.009
	115 - 111					24.1311	-7888.36	1695800.00	0.005
L8	115 - 111	TP30.3412x29.4409x0.25	5.00	0.00	0.0	23.7345	-7704.67	1676760.00	0.005
	111 - 110					23.8773	-15747.10	1683650.00	0.009
L9	110 - 109	TP31.2414x30.3412x0.25	5.00	0.00	0.0	24.0202	-18925.80	1690500.00	0.011
	109 - 108					24.1631	-19093.60	1697320.00	0.011
	108 - 107					24.3059	-19262.90	1704090.00	0.011
	107 - 106					24.4488	-19433.70	1710830.00	0.011
	106 - 105					24.5917	-19606.10	1717530.00	0.011
L10	105 - 104	TP32.1417x31.2414x0.25	5.00	0.00	0.0	24.7346	-19833.60	1724190.00	0.012
	104 - 103					24.8774	-20009.70	1730810.00	0.012
	103 - 102					25.0203	-20187.30	1737390.00	0.012
	102 - 101					25.1632	-20366.30	1743930.00	0.012

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	
	101 - 100					25.3060	-20546.90	1750440.00	0.012
L11	100 - 99.33 (11)	TP32.2623x32.1417x0.25	0.67	0.00	0.0	25.4018	-21186.50	1754780.00	0.012
L12	99.33 - 99.08 (12)	TP32.3073x32.2623x0.25	0.25	0.00	0.0	25.4375	-21240.60	1756390.00	0.012
L13	99.08 - 98.08	TP33.2076x32.3073x0.25	5.00	0.00	0.0	25.5804	-21414.60	1762820.00	0.012
	98.08 - 97.08					25.7232	-21603.60	1769220.00	0.012
	97.08 - 96.08					25.8661	-21794.30	1775570.00	0.012
	96.08 - 95.08					26.0090	-21986.50	1781890.00	0.012
	95.08 - 94.08					26.1519	-22180.20	1788170.00	0.012
L14	94.08 - 92.8867	TP33.8522x33.2076x0.25	3.58	0.00	0.0	26.3223	-22409.80	1795610.00	0.012
	92.8867 - 91.6933					26.4928	-22645.50	1803000.00	0.013
	91.6933 - 90.5					26.6633	-22883.30	1810340.00	0.013
L15	90.5 - 90.25 (15)	TP33.8972x33.8522x0.4313	0.25	0.00	0.0	45.8078	-22968.70	3403290.00	0.007
L16	90.25 - 89.25	TP34.7975x33.8972x0.425	5.00	0.00	0.0	45.3952	-23338.10	3372640.00	0.007
	89.25 - 88.25					45.6381	-23598.60	3390680.00	0.007
	88.25 - 87.25					45.8810	-23860.60	3408730.00	0.007
	87.25 - 86.25					46.1238	-24124.20	3426770.00	0.007
	86.25 - 85.25					46.3667	-24389.20	3444820.00	0.007
L17	85.25 - 84.25	TP35.6977x34.7975x0.425	5.00	0.00	0.0	46.6096	-24654.70	3462860.00	0.007
	84.25 - 83.25					46.8525	-24921.60	3480910.00	0.007
	83.25 - 82.25					47.0954	-25190.00	3498950.00	0.007
	82.25 - 81.25					47.3383	-25459.90	3517000.00	0.007
	81.25 - 80.25					47.5811	-25731.30	3535040.00	0.007
L18	80.25 - 79.75	TP36.643x35.6977x0.425	5.25	0.00	0.0	47.7026	-25875.30	3544060.00	0.007
	79.75 - 75					48.8563	-13264.00	3629780.00	0.004
L19	79.75 - 75	TP36.1879x35.2877x0.4875	5.00	0.00	0.0	55.1705	-14820.50	4098890.00	0.004
	75 - 74.75					55.2401	-28193.40	4104070.00	0.007
L20	74.75 - 73.75	TP37.0881x36.1879x0.475	5.00	0.00	0.0	54.1140	-28484.70	4020400.00	0.007
	73.75 - 72.75					54.3854	-28789.00	4040560.00	0.007
	72.75 - 71.75					54.6568	-29094.90	4060730.00	0.007
	71.75 - 70.75					54.9283	-29402.40	4080900.00	0.007
	70.75 - 69.75					55.1997	-29711.30	4101060.00	0.007
L21	69.75 - 68.75	TP37.9882x37.0881x0.475	5.00	0.00	0.0	55.4711	-30020.50	4121230.00	0.007
	68.75 - 67.75					55.7425	-30331.10	4141390.00	0.007
	67.75 - 66.75					56.0140	-30643.30	4161560.00	0.007
	66.75 - 65.75					56.2854	-30957.00	4181720.00	0.007
	65.75 - 64.75					56.5568	-31272.20	4201890.00	0.007
L22	64.75 - 63.6875	TP38.7534x37.9882x0.4688	4.25	0.00	0.0	56.1065	-31606.70	4168430.00	0.008
	63.6875 - 62.625					56.3911	-31944.20	4189580.00	0.008
	62.625 - 61.5625					56.6757	-32283.40	4210720.00	0.008
	61.5625 - 60.5					56.9603	-32624.20	4231870.00	0.008
L23	60.5 - 60.25 (23)	TP38.7984x38.7534x0.55	0.25	0.00	0.0	66.7702	-32727.10	4960690.00	0.007
L24	60.25 - 59.25	TP39.6985x38.7984x0.55	5.00	0.00	0.0	67.0844	-33065.60	4984040.00	0.007
	59.25 - 58.25					67.3987	-33417.10	5007390.00	0.007
	58.25 - 57.25					67.7130	-33770.20	5030740.00	0.007
	57.25 - 56.25					68.0273	-34124.90	5054090.00	0.007
	56.25 - 55.25					68.3416	-34481.20	5077440.00	0.007
L25	55.25 - 54.25	TP40.5987x39.6985x0.5375	5.00	0.00	0.0	67.1168	-34892.40	4986440.00	0.007
	54.25 - 53.25					67.4240	-35250.90	5009260.00	0.007
	53.25 - 52.25					67.7311	-35611.00	5032080.00	0.007
	52.25 - 51.25					68.0382	-35972.60	5054900.00	0.007
	51.25 - 50.25					68.3454	-36335.80	5077720.00	0.007
L26	50.25 - 49.25	TP41.4988x40.5987x0.5375	5.00	0.00	0.0	68.6525	-36754.00	5100540.00	0.007
	49.25 - 48.25					68.9596	-37118.40	5123360.00	0.007
	48.25 - 47.25					69.2668	-37484.30	5146180.00	0.007
	47.25 - 46.25					69.5739	-37851.80	5168990.00	0.007
	46.25 - 45.25					69.8811	-38220.80	5191810.00	0.007
L27	45.25 - 45	TP42.489x41.4988x0.5375	5.50	0.00	0.0	69.9578	-38326.30	5197520.00	0.007
	45 - 39.75					71.5703	-19983.80	5317320.00	0.004
L28	45 - 39.75	TP42.044x40.9188x0.6	6.25	0.00	0.0	78.5831	-21751.90	5838330.00	0.004
	39.75 - 38.75					78.9259	-42169.70	5863800.00	0.007

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L29	38.75 - 37.75	TP42.9441x42.044x0.5875	5.00	0.00	0.0	77.6407	-42574.40	5768310.00	0.007
	37.75 - 36.75					77.9764	-42981.10	5793250.00	0.007
	36.75 - 35.75					78.3121	-43389.40	5818200.00	0.007
	35.75 - 34.75					78.6478	-43799.30	5843140.00	0.007
	34.75 - 33.75					78.9835	-44210.80	5868080.00	0.008
L30	33.75 - 32.6667	TP43.5292x42.9441x0.5875	3.25	0.00	0.0	79.3471	-44655.60	5895100.00	0.008
	32.6667 - 31.5833					79.7108	-45103.80	5922110.00	0.008
	31.5833 - 30.5					80.0745	-45553.80	5949130.00	0.008
L31	30.5 - 30.25 (31)	TP43.5742x43.5292x0.6375	0.25	0.00	0.0	86.8792	-45678.10	6454690.00	0.007
L32	30.25 - 29.25	TP44.4743x43.5742x0.625	5.00	0.00	0.0	85.5576	-46100.80	6356500.00	0.007
	29.25 - 28.25					85.9148	-46537.90	6383040.00	0.007
	28.25 - 27.25					86.2719	-46976.60	6409570.00	0.007
	27.25 - 26.25					86.6290	-47417.00	6436100.00	0.007
	26.25 - 25.25					86.9861	-47859.10	6462640.00	0.007
L33	25.25 - 24.25	TP45.3745x44.4743x0.625	5.00	0.00	0.0	87.3433	-48300.20	6489170.00	0.007
	24.25 - 23.25					87.7004	-48743.00	6515700.00	0.007
	23.25 - 22.25					88.0575	-49187.40	6542230.00	0.008
	22.25 - 21.25					88.4146	-49633.40	6568770.00	0.008
	21.25 - 20.25					88.7718	-50081.00	6595300.00	0.008
L34	20.25 - 19.1665	TP45.7646x45.3745x0.625	2.17	0.00	0.0	89.1587	-50565.30	6624050.00	0.008
	19.1665 - 18.083					89.5457	-51052.90	6652800.00	0.008
L35	18.083 - 17.833 (35)	TP45.8096x45.7646x0.6125	0.25	0.00	0.0	87.8665	-51181.30	6528050.00	0.008
L36	17.833 - 16.833	TP46.7097x45.8096x0.6125	5.00	0.00	0.0	88.2165	-51622.00	6554050.00	0.008
	16.833 - 15.833					88.5665	-52077.80	6580050.00	0.008
	15.833 - 14.833					88.9165	-52535.10	6606050.00	0.008
	14.833 - 13.833					89.2665	-52994.20	6632050.00	0.008
	13.833 - 12.833					89.6165	-53454.80	6658060.00	0.008
L37	12.833 - 11.833	TP47.6099x46.7097x0.6	5.00	0.00	0.0	88.1542	-53914.90	6549420.00	0.008
	11.833 - 10.833					88.4970	-54377.00	6574890.00	0.008
	10.833 - 9.833					88.8399	-54840.70	6600360.00	0.008
	9.833 - 8.833					89.1827	-55306.10	6625830.00	0.008
	8.833 - 7.833					89.5256	-55773.00	6651300.00	0.008
L38	7.833 - 6.833	TP48.51x47.6099x0.6	5.00	0.00	0.0	89.8684	-56239.10	6676770.00	0.008
	6.833 - 5.833					90.2113	-56706.80	6702250.00	0.008
	5.833 - 4.833					90.5541	-57176.10	6727720.00	0.008
	4.833 - 3.833					90.8969	-57647.00	6753190.00	0.009
	3.833 - 2.833					91.2398	-58119.60	6778660.00	0.009
L39	2.833 - 1.4165	TP49.02x48.51x0.6	2.83	0.00	0.0	91.7254	-58781.70	6814740.00	0.009
	1.4165 - 0					92.2110	-59455.00	6850820.00	0.009

Pole Bending Design Data

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 $\frac{M_{uy}}{\phi M_{ny}}$
L1	148 - 147	TP24.9001x24x0.25	16499.33	692423.33	0.024	0.00	692423.33	0.000
	147 - 146		22671.50	702935.00	0.032	0.00	702935.00	0.000
	146 - 145		29008.50	713525.83	0.041	0.00	713525.83	0.000
	145 - 144		35510.25	724196.67	0.049	0.00	724196.67	0.000
	144 - 143		42177.42	734945.83	0.057	0.00	734945.83	0.000
L2	143 - 142	TP25.8003x24.9001x0.25	49009.92	745774.17	0.066	0.00	745774.17	0.000
	142 - 141		56007.83	756681.67	0.074	0.00	756681.67	0.000
	141 - 140		63172.25	766323.33	0.082	0.00	766323.33	0.000
	140 - 139		73765.75	775964.17	0.095	0.00	775964.17	0.000
	139 - 138		84660.83	785643.33	0.108	0.00	785643.33	0.000
L3	138 - 137	TP26.7004x25.8003x0.25	95724.17	795360.83	0.120	0.00	795360.83	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 $\frac{M_{uy}}{\phi M_{ny}}$
	137 - 136		106955.83	805116.67	0.133	0.00	805116.67	0.000
	136 - 135		118356.67	814910.00	0.145	0.00	814910.00	0.000
	135 - 134		130934.17	824740.00	0.159	0.00	824740.00	0.000
	134 - 133		143682.50	834608.33	0.172	0.00	834608.33	0.000
L4	133 - 132	TP27.6005x26.7004x0.25	156600.00	844508.33	0.185	0.00	844508.33	0.000
	132 - 131		169941.67	854450.00	0.199	0.00	854450.00	0.000
	131 - 130		183454.17	864425.00	0.212	0.00	864425.00	0.000
	130 - 129		199019.17	874433.33	0.228	0.00	874433.33	0.000
	129 - 128		216086.67	884475.00	0.244	0.00	884475.00	0.000
L5	128 - 127	TP28.5007x27.6005x0.25	233323.33	894558.33	0.261	0.00	894558.33	0.000
	127 - 126		250728.33	904666.67	0.277	0.00	904666.67	0.000
	126 - 125		268303.33	914808.33	0.293	0.00	914808.33	0.000
	125 - 124		286623.33	924991.67	0.310	0.00	924991.67	0.000
	124 - 123		305113.33	935200.00	0.326	0.00	935200.00	0.000
L6	123 - 122	TP29.4008x28.5007x0.25	323736.67	945441.67	0.342	0.00	945441.67	0.000
	122 - 121		342457.50	955716.67	0.358	0.00	955716.67	0.000
	121 - 120		361274.17	966016.67	0.374	0.00	966016.67	0.000
	120 - 119		380187.50	976350.00	0.389	0.00	976350.00	0.000
	119 - 118		399197.50	986716.67	0.405	0.00	986716.67	0.000
L7	118 - 117	TP30.661x29.4008x0.25	418302.50	997116.67	0.420	0.00	997116.67	0.000
	117 - 116		437502.50	1007541.67	0.434	0.00	1007541.67	0.000
	116 - 115		456795.00	1017991.67	0.449	0.00	1017991.67	0.000
	115 - 111		275062.50	1060083.33	0.259	0.00	1060083.33	0.000
L8	115 - 111	TP30.3412x29.4409x0.25	261338.33	1030816.67	0.254	0.00	1030816.67	0.000
	111 - 110		557217.50	1041333.33	0.535	0.00	1041333.33	0.000
L9	110 - 109	TP31.2414x30.3412x0.25	583043.33	1051883.33	0.554	0.00	1051883.33	0.000
	109 - 108		608206.67	1062450.00	0.572	0.00	1062450.00	0.000
	108 - 107		633540.83	1073050.00	0.590	0.00	1073050.00	0.000
	107 - 106		659045.83	1083675.00	0.608	0.00	1083675.00	0.000
	106 - 105		684721.67	1094325.00	0.626	0.00	1094325.00	0.000
L10	105 - 104	TP32.1417x31.2414x0.25	710836.67	1105008.33	0.643	0.00	1105008.33	0.000
	104 - 103		737119.17	1115708.33	0.661	0.00	1115708.33	0.000
	103 - 102		763574.17	1126433.33	0.678	0.00	1126433.33	0.000
	102 - 101		790200.00	1137183.33	0.695	0.00	1137183.33	0.000
	101 - 100		816998.33	1147958.33	0.712	0.00	1147958.33	0.000
L11	100 - 99.33 (11)	TP32.2623x32.1417x0.25	837458.33	1155191.67	0.725	0.00	1155191.67	0.000
L12	99.33 - 99.08 (12)	TP32.3073x32.2623x0.25	844566.67	1157891.67	0.729	0.00	1157891.67	0.000
L13	99.08 - 98.08	TP33.2076x32.3073x0.25	873091.67	1168708.33	0.747	0.00	1168708.33	0.000
	98.08 - 97.08		901791.67	1179550.00	0.765	0.00	1179550.00	0.000
	97.08 - 96.08		930658.33	1190416.67	0.782	0.00	1190416.67	0.000
	96.08 - 95.08		959700.00	1201300.00	0.799	0.00	1201300.00	0.000
	95.08 - 94.08		988925.00	1212200.00	0.816	0.00	1212200.00	0.000
L14	94.08 - 92.8867	TP33.8522x33.2076x0.25	1024016.67	1225241.67	0.836	0.00	1225241.67	0.000
	92.8867 - 91.6933		1059350.00	1238316.67	0.855	0.00	1238316.67	0.000
	91.6933 - 90.5		1094925.00	1251408.33	0.875	0.00	1251408.33	0.000
L15	90.5 - 90.25 (15)	TP33.8972x33.8522x0.4313	1102408.33	2330416.67	0.473	0.00	2330416.67	0.000
L16	90.25 - 89.25	TP34.7975x33.8972x0.425	1132791.67	2322875.00	0.488	0.00	2322875.00	0.000
	89.25 - 88.25		1163475.00	2347950.00	0.496	0.00	2347950.00	0.000
	88.25 - 87.25		1194350.00	2373166.67	0.503	0.00	2373166.67	0.000
	87.25 - 86.25		1225408.33	2398516.67	0.511	0.00	2398516.67	0.000
	86.25 - 85.25		1256658.33	2424000.00	0.518	0.00	2424000.00	0.000
L17	85.25 - 84.25	TP35.6977x34.7975x0.425	1288100.00	2449616.67	0.526	0.00	2449616.67	0.000
	84.25 - 83.25		1319725.00	2475366.67	0.533	0.00	2475366.67	0.000
	83.25 - 82.25		1351533.33	2501258.33	0.540	0.00	2501258.33	0.000
	82.25 - 81.25		1383533.33	2527275.00	0.547	0.00	2527275.00	0.000
	81.25 - 80.25		1415725.00	2553433.33	0.554	0.00	2553433.33	0.000
L18	80.25 - 79.75	TP36.643x35.6977x0.425	1431883.33	2566558.33	0.558	0.00	2566558.33	0.000
	79.75 - 75		758624.17	2692966.67	0.282	0.00	2692966.67	0.000
L19	79.75 - 75	TP36.1879x35.2877x0.4875	829407.50	2988041.67	0.278	0.00	2988041.67	0.000
	75 - 74.75		1596383.33	2995641.67	0.533	0.00	2995641.67	0.000

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	
L20	74.75 - 73.75	TP37.0881x36.1879x0.475	1629891.67	2951625.00	0.552	0.00	2951625.00	0.000
	73.75 - 72.75		1663583.33	2981500.00	0.558	0.00	2981500.00	0.000
	72.75 - 71.75		1697458.33	3011533.33	0.564	0.00	3011533.33	0.000
	71.75 - 70.75		1731516.67	3041708.33	0.569	0.00	3041708.33	0.000
	70.75 - 69.75		1765750.00	3072041.67	0.575	0.00	3072041.67	0.000
L21	69.75 - 68.75	TP37.9882x37.0881x0.475	1800166.67	3102516.67	0.580	0.00	3102516.67	0.000
	68.75 - 67.75		1834758.33	3133150.00	0.586	0.00	3133150.00	0.000
	67.75 - 66.75		1869533.33	3163933.33	0.591	0.00	3163933.33	0.000
	66.75 - 65.75		1904483.33	3194858.33	0.596	0.00	3194858.33	0.000
	65.75 - 64.75		1939608.33	3225941.67	0.601	0.00	3225941.67	0.000
L22	64.75 - 63.6875	TP38.7534x37.9882x0.4688	1977125.00	3217850.00	0.614	0.00	3217850.00	0.000
	63.6875 - 62.625		2014841.67	3250775.00	0.620	0.00	3250775.00	0.000
	62.625 - 61.5625		2052750.00	3283875.00	0.625	0.00	3283875.00	0.000
	61.5625 - 60.5		2090858.33	3317133.33	0.630	0.00	3317133.33	0.000
L23	60.5 - 60.25 (23)	TP38.7984x38.7534x0.55	2099850.00	3876558.33	0.542	0.00	3876558.33	0.000
L24	60.25 - 59.25	TP39.6985x38.7984x0.55	2135941.67	3913400.00	0.546	0.00	3913400.00	0.000
	59.25 - 58.25		2172216.67	3950416.67	0.550	0.00	3950416.67	0.000
	58.25 - 57.25		2208658.33	3987600.00	0.554	0.00	3987600.00	0.000
	57.25 - 56.25		2245291.67	4024966.67	0.558	0.00	4024966.67	0.000
	56.25 - 55.25		2282091.67	4062500.00	0.562	0.00	4062500.00	0.000
L25	55.25 - 54.25	TP40.5987x39.6985x0.5375	2319166.67	4010841.67	0.578	0.00	4010841.67	0.000
	54.25 - 53.25		2356433.33	4047883.33	0.582	0.00	4047883.33	0.000
	53.25 - 52.25		2393883.33	4085100.00	0.586	0.00	4085100.00	0.000
	52.25 - 51.25		2431500.00	4122483.33	0.590	0.00	4122483.33	0.000
	51.25 - 50.25		2469291.67	4160033.33	0.594	0.00	4160033.33	0.000
L26	50.25 - 49.25	TP41.4988x40.5987x0.5375	2507341.67	4197750.00	0.597	0.00	4197750.00	0.000
	49.25 - 48.25		2545583.33	4235650.00	0.601	0.00	4235650.00	0.000
	48.25 - 47.25		2584000.00	4273708.33	0.605	0.00	4273708.33	0.000
	47.25 - 46.25		2622575.00	4311941.67	0.608	0.00	4311941.67	0.000
	46.25 - 45.25		2661325.00	4350341.67	0.612	0.00	4350341.67	0.000
L27	45.25 - 45	TP42.489x41.4988x0.5375	2671041.67	4359975.00	0.613	0.00	4359975.00	0.000
	45 - 39.75		1396025.00	4564608.33	0.306	0.00	4564608.33	0.000
L28	45 - 39.75	TP42.044x40.9188x0.6	1481708.33	4921333.33	0.301	0.00	4921333.33	0.000
	39.75 - 38.75		2917683.33	4964675.00	0.588	0.00	4964675.00	0.000
L29	38.75 - 37.75	TP42.9441x42.044x0.5875	2957783.33	4908291.67	0.603	0.00	4908291.67	0.000
	37.75 - 36.75		2998033.33	4951125.00	0.606	0.00	4951125.00	0.000
	36.75 - 35.75		3038441.67	4994150.00	0.608	0.00	4994150.00	0.000
	35.75 - 34.75		3079000.00	5037350.00	0.611	0.00	5037350.00	0.000
	34.75 - 33.75		3119716.67	5080741.67	0.614	0.00	5080741.67	0.000
L30	33.75 - 32.6667	TP43.5292x42.9441x0.5875	3163991.67	5127958.33	0.617	0.00	5127958.33	0.000
	32.6667 - 31.5833		3208433.33	5175391.67	0.620	0.00	5175391.67	0.000
	31.5833 - 30.5		3253050.00	5223050.00	0.623	0.00	5223050.00	0.000
L31	30.5 - 30.25 (31)	TP43.5742x43.5292x0.6375	3263366.67	5659733.33	0.577	0.00	5659733.33	0.000
L32	30.25 - 29.25	TP44.4743x43.5742x0.625	3304741.67	5600600.00	0.590	0.00	5600600.00	0.000
	29.25 - 28.25		3346258.33	5647783.33	0.592	0.00	5647783.33	0.000
	28.25 - 27.25		3387925.00	5695174.67	0.595	0.00	5695174.67	0.000
	27.25 - 26.25		3429733.33	5742758.00	0.597	0.00	5742758.00	0.000
	26.25 - 25.25		3471683.33	5790533.33	0.600	0.00	5790533.33	0.000
L33	25.25 - 24.25	TP45.3745x44.4743x0.625	3513783.33	5838516.67	0.602	0.00	5838516.67	0.000
	24.25 - 23.25		3556033.33	5886691.33	0.604	0.00	5886691.33	0.000
	23.25 - 22.25		3598425.00	5935066.67	0.606	0.00	5935066.67	0.000
	22.25 - 21.25		3640958.33	5983641.33	0.608	0.00	5983641.33	0.000
	21.25 - 20.25		3683633.33	6032416.67	0.611	0.00	6032416.67	0.000
L34	20.25 - 19.1665	TP45.7646x45.3745x0.625	3730041.67	6085483.33	0.613	0.00	6085483.33	0.000
	19.1665 - 18.083		3776625.00	6138783.33	0.615	0.00	6138783.33	0.000
L35	18.083 - 17.833 (35)	TP45.8096x45.7646x0.6125	3787391.67	6033100.00	0.628	0.00	6033100.00	0.000
L36	17.833 - 16.833	TP46.7097x45.8096x0.6125	3830566.67	6081574.67	0.630	0.00	6081574.67	0.000
	16.833 - 15.833		3873883.33	6130250.00	0.632	0.00	6130250.00	0.000
	15.833 - 14.833		3917341.67	6179116.67	0.634	0.00	6179116.67	0.000
	14.833 - 13.833		3960950.00	6228174.67	0.636	0.00	6228174.67	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 $\frac{M_{uy}}{\phi M_{ny}}$
	13.833 - 12.833		4004691.67	6277433.33	0.638	0.00	6277433.33	0.000
L37	12.833 - 11.833	TP47.6099x46.7097x0.6	4048583.33	6202783.33	0.653	0.00	6202783.33	0.000
	11.833 - 10.833		4092616.67	6251441.33	0.655	0.00	6251441.33	0.000
	10.833 - 9.833		4136791.67	6300274.67	0.657	0.00	6300274.67	0.000
	9.833 - 8.833		4181108.33	6349308.00	0.659	0.00	6349308.00	0.000
	8.833 - 7.833		4225566.67	6398533.33	0.660	0.00	6398533.33	0.000
L38	7.833 - 6.833	TP48.51x47.6099x0.6	4270166.67	6447941.33	0.662	0.00	6447941.33	0.000
	6.833 - 5.833		4314908.33	6497541.33	0.664	0.00	6497541.33	0.000
	5.833 - 4.833		4359783.33	6547333.33	0.666	0.00	6547333.33	0.000
	4.833 - 3.833		4404808.33	6597308.00	0.668	0.00	6597308.00	0.000
	3.833 - 2.833		4449975.00	6647483.33	0.669	0.00	6647483.33	0.000
L39	2.833 - 1.4165	TP49.02x48.51x0.6	4514191.67	6718874.67	0.672	0.00	6718874.67	0.000
	1.4165 - 0		4578683.33	6790650.00	0.674	0.00	6790650.00	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 - 147	TP24.9001x24x0.25	6097.94	705374.00	0.009	2477.70	1388725.00	0.002
	147 - 146		6260.02	710681.00	0.009	2477.69	1409791.67	0.002
	146 - 145		6423.21	715988.00	0.009	2477.67	1431008.33	0.002
	145 - 144		6587.51	721294.00	0.009	2477.66	1452391.67	0.002
	144 - 143		6752.92	726601.00	0.009	2477.63	1473933.33	0.002
L2	143 - 142	TP25.8003x24.9001x0.25	6917.67	731907.00	0.009	2477.61	1495633.33	0.002
	142 - 141		7083.50	737214.00	0.010	2477.58	1517500.00	0.002
	141 - 140		7250.40	741219.00	0.010	2477.54	1536816.67	0.002
	140 - 139		10813.90	745166.00	0.015	2007.29	1556133.33	0.001
	139 - 138		10982.20	749094.00	0.015	2007.26	1575525.00	0.001
L3	138 - 137	TP26.7004x25.8003x0.25	11150.10	753002.00	0.015	2007.21	1595000.00	0.001
	137 - 136		11319.00	756892.00	0.015	2007.16	1614550.00	0.001
	136 - 135		11488.70	760762.00	0.015	2007.10	1634166.67	0.001
	135 - 134		12666.30	764613.00	0.017	2007.04	1653866.67	0.001
	134 - 133		12837.50	768445.00	0.017	2006.97	1673633.33	0.001
L4	133 - 132	TP27.6005x26.7004x0.25	13006.70	772258.00	0.017	2006.90	1693475.00	0.001
	132 - 131		13430.90	776051.00	0.017	2006.83	1713391.67	0.001
	131 - 130		13601.60	779826.00	0.017	2006.73	1733375.00	0.001
	130 - 129		15655.90	783581.00	0.020	2006.65	1753433.33	0.001
	129 - 128		17158.30	787317.00	0.022	2006.55	1773558.33	0.001
L5	128 - 127	TP28.5007x27.6005x0.25	17327.00	791034.00	0.022	2006.45	1793750.00	0.001
	127 - 126		17496.20	794732.00	0.022	2006.33	1814008.33	0.001
	126 - 125		17666.00	798410.00	0.022	2006.22	1834333.33	0.001
	125 - 124		18411.80	802070.00	0.023	2006.09	1854725.00	0.001
	124 - 123		18582.60	805710.00	0.023	2005.97	1875183.33	0.001
L6	123 - 122	TP29.4008x28.5007x0.25	18679.30	809331.00	0.023	2005.83	1895700.00	0.001
	122 - 121		18776.00	812933.00	0.023	2005.68	1916283.33	0.001
	121 - 120		18872.80	816516.00	0.023	2005.54	1936933.33	0.001
	120 - 119		18969.60	820079.00	0.023	2005.39	1957641.67	0.001
	119 - 118		19066.50	823624.00	0.023	2005.23	1978408.33	0.001
L7	118 - 117	TP30.661x29.4008x0.25	19160.60	827149.00	0.023	2005.08	1999233.33	0.001
	117 - 116		19254.80	830655.00	0.023	2004.92	2020116.67	0.001
	116 - 115		19349.00	834142.00	0.023	2004.76	2041066.67	0.001
	115 - 111		10811.50	847898.00	0.013	68.11	2125400.00	0.000
L8	115 - 111	TP30.3412x29.4409x0.25	9934.03	838381.00	0.012	64.49	2066758.33	0.000
	111 - 110		20912.20	841826.00	0.025	132.53	2087833.33	0.000
L9	110 - 109	TP31.2414x30.3412x0.25	25088.80	845252.00	0.030	321.42	2108958.33	0.000

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 $\frac{T_u}{\phi T_n}$
	109 - 108		25259.70	848658.00	0.030	321.34	2130141.67	0.000
	108 - 107		25430.80	852046.00	0.030	321.26	2151375.00	0.000
	107 - 106		25602.20	855414.00	0.030	321.18	2172658.33	0.000
	106 - 105		25773.90	858763.00	0.030	321.08	2194000.00	0.000
L10	105 - 104	TP32.1417x31.2414x0.25	26209.50	862093.00	0.030	1018.52	2215391.67	0.000
	104 - 103		26381.00	865403.00	0.030	1018.37	2236833.33	0.000
	103 - 102		26552.90	868695.00	0.031	1018.22	2258325.00	0.000
	102 - 101		26724.90	871967.00	0.031	1018.06	2279858.33	0.000
	101 - 100		26897.30	875220.00	0.031	1017.89	2301441.67	0.000
L11	100 - 99.33 (11)	TP32.2623x32.1417x0.25	28404.60	877389.00	0.032	1338.59	2315933.33	0.001
L12	99.33 - 99.08 (12)	TP32.3073x32.2623x0.25	28446.00	878196.00	0.032	1338.52	2321341.67	0.001
L13	99.08 - 98.08	TP33.2076x32.3073x0.25	28625.70	881412.00	0.032	1338.37	2343016.67	0.001
	98.08 - 97.08		28799.10	884609.00	0.033	1338.17	2364733.33	0.001
	97.08 - 96.08		28972.70	887787.00	0.033	1337.98	2386500.00	0.001
	96.08 - 95.08		29146.40	890946.00	0.033	1337.77	2408300.00	0.001
	95.08 - 94.08		29320.40	894086.00	0.033	1337.57	2430150.00	0.001
L14	94.08 - 92.8867	TP33.8522x33.2076x0.25	29527.00	897807.00	0.033	1337.33	2456275.00	0.001
	92.8867 - 91.6933		29730.90	901502.00	0.033	1337.08	2482458.33	0.001
	91.6933 - 90.5		29935.10	905169.00	0.033	1336.83	2508700.00	0.001
L15	90.5 - 90.25 (15)	TP33.8972x33.8522x0.4313	29969.40	1701640.00	0.018	1336.74	4675575.00	0.000
L16	90.25 - 89.25	TP34.7975x33.8972x0.425	30598.50	1686320.00	0.018	1336.67	4660258.33	0.000
	89.25 - 88.25		30787.70	1695340.00	0.018	1336.55	4710525.00	0.000
	88.25 - 87.25		30977.30	1704360.00	0.018	1336.42	4761066.67	0.000
	87.25 - 86.25		31167.30	1713390.00	0.018	1336.29	4811875.00	0.000
	86.25 - 85.25		31357.80	1722410.00	0.018	1336.16	4862950.00	0.000
L17	85.25 - 84.25	TP35.6977x34.7975x0.425	31544.10	1731430.00	0.018	1336.02	4914291.67	0.000
	84.25 - 83.25		31730.80	1740450.00	0.018	1335.89	4965908.33	0.000
	83.25 - 82.25		31917.80	1749480.00	0.018	1335.75	5017791.67	0.000
	82.25 - 81.25		32105.30	1758500.00	0.018	1335.62	5069950.00	0.000
	81.25 - 80.25		32293.20	1767520.00	0.018	1335.48	5122375.00	0.000
L18	80.25 - 79.75	TP36.643x35.6977x0.425	32379.50	1772030.00	0.018	1335.39	5148691.67	0.000
	79.75 - 75		16200.50	1814890.00	0.009	637.45	5402033.33	0.000
L19	79.75 - 75	TP36.1879x35.2877x0.4875	17205.20	2049450.00	0.008	697.53	5995674.67	0.000
	75 - 74.75		33428.10	2052030.00	0.016	1335.02	6010908.00	0.000
L20	74.75 - 73.75	TP37.0881x36.1879x0.475	33614.80	2010200.00	0.017	1334.92	5922216.67	0.000
	73.75 - 72.75		33796.30	2020280.00	0.017	1334.77	5982108.00	0.000
	72.75 - 71.75		33978.00	2030360.00	0.017	1334.63	6042300.00	0.000
	71.75 - 70.75		34160.10	2040450.00	0.017	1334.49	6102791.33	0.000
	70.75 - 69.75		34342.50	2050530.00	0.017	1334.35	6163583.33	0.000
L21	69.75 - 68.75	TP37.9882x37.0881x0.475	34520.10	2060610.00	0.017	1334.21	6224674.67	0.000
	68.75 - 67.75		34698.10	2070700.00	0.017	1334.07	6286074.67	0.000
	67.75 - 66.75		34876.30	2080780.00	0.017	1333.92	6347774.67	0.000
	66.75 - 65.75		35054.80	2090860.00	0.017	1333.78	6409766.67	0.000
	65.75 - 64.75		35233.50	2100940.00	0.017	1333.64	6472066.67	0.000
L22	64.75 - 63.6875	TP38.7534x37.9882x0.4688	35419.30	2084220.00	0.017	1333.49	6455608.00	0.000
	63.6875 - 62.625		35604.20	2094790.00	0.017	1333.33	6521608.00	0.000
	62.625 - 61.5625		35789.40	2105360.00	0.017	1333.18	6587941.33	0.000
	61.5625 - 60.5		35974.90	2115930.00	0.017	1333.03	6654616.67	0.000
L23	60.5 - 60.25 (23)	TP38.7984x38.7534x0.55	36010.70	2480340.00	0.015	1332.97	7779358.00	0.000
L24	60.25 - 59.25	TP39.6985x38.7984x0.55	36194.90	2492020.00	0.015	1332.87	7853208.00	0.000
	59.25 - 58.25		36373.20	2503690.00	0.015	1332.75	7927408.00	0.000
	58.25 - 57.25		36551.80	2515370.00	0.015	1332.63	8001950.00	0.000
	57.25 - 56.25		36730.60	2527040.00	0.015	1332.51	8076850.00	0.000
	56.25 - 55.25		36909.70	2538720.00	0.015	1332.38	8152091.33	0.000
L25	55.25 - 54.25	TP40.5987x39.6985x0.5375	37201.70	2493220.00	0.015	1600.42	8047983.33	0.000
	54.25 - 53.25		37374.60	2504630.00	0.015	1600.29	8122233.33	0.000
	53.25 - 52.25		37547.80	2516040.00	0.015	1600.17	8196824.67	0.000
	52.25 - 51.25		37721.10	2527450.00	0.015	1600.04	8271750.00	0.000
	51.25 - 50.25		37894.70	2538860.00	0.015	1599.92	8347000.00	0.000
L26	50.25 - 49.25	TP41.4988x40.5987x0.5375	38177.70	2550270.00	0.015	1865.08	8422666.67	0.000

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 $\frac{T_u}{\phi T_n}$
	49.25 - 48.25		38345.20	2561680.00	0.015	1864.96	8498583.33	0.000
	48.25 - 47.25		38512.90	2573090.00	0.015	1864.83	8574916.67	0.000
	47.25 - 46.25		38680.80	2584500.00	0.015	1864.70	8651500.00	0.000
	46.25 - 45.25		38848.90	2595910.00	0.015	1864.58	8728500.00	0.000
L27	45.25 - 45	TP42.489x41.4988x0.5375	38880.30	2598760.00	0.015	1864.53	8747833.33	0.000
	45 - 39.75		19615.30	2658660.00	0.007	904.08	9158000.00	0.000
L28	45 - 39.75	TP42.044x40.9188x0.6	20301.60	2919170.00	0.007	960.02	9876250.00	0.000
	39.75 - 38.75		40044.30	2931900.00	0.014	1864.14	9963083.33	0.000
L29	38.75 - 37.75	TP42.9441x42.044x0.5875	40197.10	2884160.00	0.014	1864.03	9849416.67	0.000
	37.75 - 36.75		40349.70	2896630.00	0.014	1863.92	9935250.00	0.000
	36.75 - 35.75		40502.30	2909100.00	0.014	1863.82	10021500.00	0.000
	35.75 - 34.75		40655.10	2921570.00	0.014	1863.72	10108083.33	0.000
	34.75 - 33.75		40807.90	2934040.00	0.014	1863.61	10195083.33	0.000
L30	33.75 - 32.6667	TP43.5292x42.9441x0.5875	40967.80	2947550.00	0.014	1863.50	10289750.00	0.000
	32.6667 - 31.5833		41126.20	2961060.00	0.014	1863.40	10384833.33	0.000
	31.5833 - 30.5		41284.70	2974570.00	0.014	1863.30	10480333.33	0.000
L31	30.5 - 30.25 (31)	TP43.5742x43.5292x0.6375	41308.40	3227350.00	0.013	1863.26	11358582.67	0.000
L32	30.25 - 29.25	TP44.4743x43.5742x0.625	41464.50	3178250.00	0.013	1863.19	11239249.33	0.000
	29.25 - 28.25		41610.20	3191520.00	0.013	1863.11	11333916.00	0.000
	28.25 - 27.25		41755.90	3204790.00	0.013	1863.03	11428833.33	0.000
	27.25 - 26.25		41901.70	3218050.00	0.013	1862.95	11524249.33	0.000
	26.25 - 25.25		42047.60	3231320.00	0.013	1862.87	11620082.67	0.000
L33	25.25 - 24.25	TP45.3745x44.4743x0.625	42192.70	3244580.00	0.013	1862.80	11716249.33	0.000
	24.25 - 23.25		42337.80	3257850.00	0.013	1862.72	11812833.33	0.000
	23.25 - 22.25		42483.00	3271120.00	0.013	1862.66	11909749.33	0.000
	22.25 - 21.25		42628.30	3284380.00	0.013	1862.59	12007166.67	0.000
	21.25 - 20.25		42773.60	3297650.00	0.013	1862.53	12104916.00	0.000
L34	20.25 - 19.1665	TP45.7646x45.3745x0.625	42932.10	3312020.00	0.013	1862.47	12211333.33	0.000
	19.1665 - 18.083		43089.10	3326400.00	0.013	1862.40	12318166.67	0.000
L35	18.083 - 17.833 (35)	TP45.8096x45.7646x0.6125	43110.50	3264020.00	0.013	1862.38	12105500.00	0.000
L36	17.833 - 16.833	TP46.7097x45.8096x0.6125	43267.30	3277020.00	0.013	1862.33	12202749.33	0.000
	16.833 - 15.833		43410.90	3290020.00	0.013	1862.28	12300249.33	0.000
	15.833 - 14.833		43554.50	3303030.00	0.013	1862.23	12398249.33	0.000
	14.833 - 13.833		43698.10	3316030.00	0.013	1862.18	12496582.67	0.000
	13.833 - 12.833		43841.80	3329030.00	0.013	1862.14	12595333.33	0.000
L37	12.833 - 11.833	TP47.6099x46.7097x0.6	43984.20	3274710.00	0.013	1862.10	12444916.00	0.000
	11.833 - 10.833		44126.20	3287440.00	0.013	1862.06	12542416.00	0.000
	10.833 - 9.833		44268.30	3300180.00	0.013	1862.03	12640333.33	0.000
	9.833 - 8.833		44410.30	3312920.00	0.013	1861.99	12738666.67	0.000
	8.833 - 7.833		44552.40	3325650.00	0.013	1861.97	12837249.33	0.000
L38	7.833 - 6.833	TP48.51x47.6099x0.6	44693.70	3338390.00	0.013	1861.94	12936333.33	0.000
	6.833 - 5.833		44835.00	3351120.00	0.013	1861.92	13035749.33	0.000
	5.833 - 4.833		44976.30	3363860.00	0.013	1861.90	13135582.67	0.000
	4.833 - 3.833		45117.60	3376590.00	0.013	1861.88	13235749.33	0.000
	3.833 - 2.833		45258.90	3389330.00	0.013	1861.87	13336249.33	0.000
L39	2.833 - 1.4165	TP49.02x48.51x0.6	45468.60	3407370.00	0.013	1861.84	13479416.00	0.000
	1.4165 - 0		45668.10	3425410.00	0.013	1861.83	13623249.33	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 - 147	0.002	0.024	0.000	0.009	0.002	0.026 ✔	1.000	4.8.2 ✔

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	147 - 146	0.003	0.032	0.000	0.009	0.002	0.035 ✓	1.000	4.8.2 ✓
	146 - 145	0.003	0.041	0.000	0.009	0.002	0.043 ✓	1.000	4.8.2 ✓
	145 - 144	0.003	0.049	0.000	0.009	0.002	0.052 ✓	1.000	4.8.2 ✓
	144 - 143	0.003	0.057	0.000	0.009	0.002	0.060 ✓	1.000	4.8.2 ✓
L2	143 - 142	0.003	0.066	0.000	0.009	0.002	0.068 ✓	1.000	4.8.2 ✓
	142 - 141	0.003	0.074	0.000	0.010	0.002	0.077 ✓	1.000	4.8.2 ✓
	141 - 140	0.003	0.082	0.000	0.010	0.002	0.085 ✓	1.000	4.8.2 ✓
	140 - 139	0.005	0.095	0.000	0.015	0.001	0.100 ✓	1.000	4.8.2 ✓
	139 - 138	0.005	0.108	0.000	0.015	0.001	0.113 ✓	1.000	4.8.2 ✓
L3	138 - 137	0.005	0.120	0.000	0.015	0.001	0.126 ✓	1.000	4.8.2 ✓
	137 - 136	0.005	0.133	0.000	0.015	0.001	0.138 ✓	1.000	4.8.2 ✓
	136 - 135	0.005	0.145	0.000	0.015	0.001	0.151 ✓	1.000	4.8.2 ✓
	135 - 134	0.006	0.159	0.000	0.017	0.001	0.165 ✓	1.000	4.8.2 ✓
	134 - 133	0.006	0.172	0.000	0.017	0.001	0.178 ✓	1.000	4.8.2 ✓
L4	133 - 132	0.006	0.185	0.000	0.017	0.001	0.192 ✓	1.000	4.8.2 ✓
	132 - 131	0.006	0.199	0.000	0.017	0.001	0.205 ✓	1.000	4.8.2 ✓
	131 - 130	0.006	0.212	0.000	0.017	0.001	0.219 ✓	1.000	4.8.2 ✓
	130 - 129	0.007	0.228	0.000	0.020	0.001	0.235 ✓	1.000	4.8.2 ✓
	129 - 128	0.008	0.244	0.000	0.022	0.001	0.253 ✓	1.000	4.8.2 ✓
L5	128 - 127	0.008	0.261	0.000	0.022	0.001	0.270 ✓	1.000	4.8.2 ✓
	127 - 126	0.008	0.277	0.000	0.022	0.001	0.286 ✓	1.000	4.8.2 ✓
	126 - 125	0.008	0.293	0.000	0.022	0.001	0.302 ✓	1.000	4.8.2 ✓
	125 - 124	0.008	0.310	0.000	0.023	0.001	0.319 ✓	1.000	4.8.2 ✓
	124 - 123	0.009	0.326	0.000	0.023	0.001	0.335 ✓	1.000	4.8.2 ✓
L6	123 - 122	0.009	0.342	0.000	0.023	0.001	0.352 ✓	1.000	4.8.2 ✓
	122 - 121	0.009	0.358	0.000	0.023	0.001	0.368 ✓	1.000	4.8.2 ✓
	121 - 120	0.009	0.374	0.000	0.023	0.001	0.383 ✓	1.000	4.8.2 ✓
	120 - 119	0.009	0.389	0.000	0.023	0.001	0.399 ✓	1.000	4.8.2 ✓
	119 - 118	0.009	0.405	0.000	0.023	0.001	0.414 ✓	1.000	4.8.2 ✓
L7	118 - 117	0.009	0.420	0.000	0.023	0.001	0.429 ✓	1.000	4.8.2 ✓
	117 - 116	0.009	0.434	0.000	0.023	0.001	0.444 ✓	1.000	4.8.2 ✓
	116 - 115	0.009	0.449	0.000	0.023	0.001	0.458 ✓	1.000	4.8.2 ✓
	115 - 111	0.005	0.259	0.000	0.013	0.000	0.264 ✓	1.000	4.8.2 ✓
L8	115 - 111	0.005	0.254	0.000	0.012	0.000	0.258 ✓	1.000	4.8.2 ✓
	111 - 110	0.009	0.535	0.000	0.025	0.000	0.545 ✓	1.000	4.8.2 ✓
L9	110 - 109	0.011	0.554	0.000	0.030	0.000	0.566 ✓	1.000	4.8.2 ✓
	109 - 108	0.011	0.572	0.000	0.030	0.000	0.585 ✓	1.000	4.8.2 ✓
	108 - 107	0.011	0.590	0.000	0.030	0.000	0.603 ✓	1.000	4.8.2 ✓
	107 - 106	0.011	0.608	0.000	0.030	0.000	0.620 ✓	1.000	4.8.2 ✓
	106 - 105	0.011	0.626	0.000	0.030	0.000	0.638 ✓	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
L10	105 - 104	0.012	0.643	0.000	0.030	0.000	0.656 ✔	1.000	4.8.2 ✔
	104 - 103	0.012	0.661	0.000	0.030	0.000	0.673 ✔	1.000	4.8.2 ✔
	103 - 102	0.012	0.678	0.000	0.031	0.000	0.690 ✔	1.000	4.8.2 ✔
	102 - 101	0.012	0.695	0.000	0.031	0.000	0.708 ✔	1.000	4.8.2 ✔
	101 - 100	0.012	0.712	0.000	0.031	0.000	0.724 ✔	1.000	4.8.2 ✔
L11	100 - 99.33 (11)	0.012	0.725	0.000	0.032	0.001	0.738 ✔	1.000	4.8.2 ✔
L12	99.33 - 99.08 (12)	0.012	0.729	0.000	0.032	0.001	0.743 ✔	1.000	4.8.2 ✔
L13	99.08 - 98.08	0.012	0.747	0.000	0.032	0.001	0.760 ✔	1.000	4.8.2 ✔
	98.08 - 97.08	0.012	0.765	0.000	0.033	0.001	0.778 ✔	1.000	4.8.2 ✔
	97.08 - 96.08	0.012	0.782	0.000	0.033	0.001	0.795 ✔	1.000	4.8.2 ✔
	96.08 - 95.08	0.012	0.799	0.000	0.033	0.001	0.812 ✔	1.000	4.8.2 ✔
	95.08 - 94.08	0.012	0.816	0.000	0.033	0.001	0.829 ✔	1.000	4.8.2 ✔
L14	94.08 - 92.8867	0.012	0.836	0.000	0.033	0.001	0.849 ✔	1.000	4.8.2 ✔
	92.8867 - 91.6933	0.013	0.855	0.000	0.033	0.001	0.869 ✔	1.000	4.8.2 ✔
	91.6933 - 90.5	0.013	0.875	0.000	0.033	0.001	0.889 ✔	1.000	4.8.2 ✔
L15	90.5 - 90.25 (15)	0.007	0.473	0.000	0.018	0.000	0.480 ✔	1.000	4.8.2 ✔
L16	90.25 - 89.25	0.007	0.488	0.000	0.018	0.000	0.495 ✔	1.000	4.8.2 ✔
	89.25 - 88.25	0.007	0.496	0.000	0.018	0.000	0.503 ✔	1.000	4.8.2 ✔
	88.25 - 87.25	0.007	0.503	0.000	0.018	0.000	0.511 ✔	1.000	4.8.2 ✔
	87.25 - 86.25	0.007	0.511	0.000	0.018	0.000	0.518 ✔	1.000	4.8.2 ✔
	86.25 - 85.25	0.007	0.518	0.000	0.018	0.000	0.526 ✔	1.000	4.8.2 ✔
L17	85.25 - 84.25	0.007	0.526	0.000	0.018	0.000	0.533 ✔	1.000	4.8.2 ✔
	84.25 - 83.25	0.007	0.533	0.000	0.018	0.000	0.541 ✔	1.000	4.8.2 ✔
	83.25 - 82.25	0.007	0.540	0.000	0.018	0.000	0.548 ✔	1.000	4.8.2 ✔
	82.25 - 81.25	0.007	0.547	0.000	0.018	0.000	0.555 ✔	1.000	4.8.2 ✔
	81.25 - 80.25	0.007	0.554	0.000	0.018	0.000	0.562 ✔	1.000	4.8.2 ✔
L18	80.25 - 79.75	0.007	0.558	0.000	0.018	0.000	0.566 ✔	1.000	4.8.2 ✔
	79.75 - 75	0.004	0.282	0.000	0.009	0.000	0.285 ✔	1.000	4.8.2 ✔
L19	79.75 - 75	0.004	0.278	0.000	0.008	0.000	0.281 ✔	1.000	4.8.2 ✔
	75 - 74.75	0.007	0.533	0.000	0.016	0.000	0.540 ✔	1.000	4.8.2 ✔
L20	74.75 - 73.75	0.007	0.552	0.000	0.017	0.000	0.560 ✔	1.000	4.8.2 ✔
	73.75 - 72.75	0.007	0.558	0.000	0.017	0.000	0.565 ✔	1.000	4.8.2 ✔
	72.75 - 71.75	0.007	0.564	0.000	0.017	0.000	0.571 ✔	1.000	4.8.2 ✔
	71.75 - 70.75	0.007	0.569	0.000	0.017	0.000	0.577 ✔	1.000	4.8.2 ✔
	70.75 - 69.75	0.007	0.575	0.000	0.017	0.000	0.582 ✔	1.000	4.8.2 ✔
L21	69.75 - 68.75	0.007	0.580	0.000	0.017	0.000	0.588 ✔	1.000	4.8.2 ✔
	68.75 - 67.75	0.007	0.586	0.000	0.017	0.000	0.593 ✔	1.000	4.8.2 ✔
	67.75 - 66.75	0.007	0.591	0.000	0.017	0.000	0.599 ✔	1.000	4.8.2 ✔
	66.75 - 65.75	0.007	0.596	0.000	0.017	0.000	0.604 ✔	1.000	4.8.2 ✔
	65.75 - 64.75	0.007	0.601	0.000	0.017	0.000	0.609 ✔	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
L22	64.75 - 63.6875	0.008	0.614	0.000	0.017	0.000	0.622 ✔	1.000	4.8.2 ✔
	63.6875 - 62.625	0.008	0.620	0.000	0.017	0.000	0.628 ✔	1.000	4.8.2 ✔
	62.625 - 61.5625	0.008	0.625	0.000	0.017	0.000	0.633 ✔	1.000	4.8.2 ✔
	61.5625 - 60.5	0.008	0.630	0.000	0.017	0.000	0.638 ✔	1.000	4.8.2 ✔
L23	60.5 - 60.25 (23)	0.007	0.542	0.000	0.015	0.000	0.548 ✔	1.000	4.8.2 ✔
L24	60.25 - 59.25	0.007	0.546	0.000	0.015	0.000	0.553 ✔	1.000	4.8.2 ✔
	59.25 - 58.25	0.007	0.550	0.000	0.015	0.000	0.557 ✔	1.000	4.8.2 ✔
	58.25 - 57.25	0.007	0.554	0.000	0.015	0.000	0.561 ✔	1.000	4.8.2 ✔
	57.25 - 56.25	0.007	0.558	0.000	0.015	0.000	0.565 ✔	1.000	4.8.2 ✔
	56.25 - 55.25	0.007	0.562	0.000	0.015	0.000	0.569 ✔	1.000	4.8.2 ✔
L25	55.25 - 54.25	0.007	0.578	0.000	0.015	0.000	0.585 ✔	1.000	4.8.2 ✔
	54.25 - 53.25	0.007	0.582	0.000	0.015	0.000	0.589 ✔	1.000	4.8.2 ✔
	53.25 - 52.25	0.007	0.586	0.000	0.015	0.000	0.593 ✔	1.000	4.8.2 ✔
	52.25 - 51.25	0.007	0.590	0.000	0.015	0.000	0.597 ✔	1.000	4.8.2 ✔
	51.25 - 50.25	0.007	0.594	0.000	0.015	0.000	0.601 ✔	1.000	4.8.2 ✔
L26	50.25 - 49.25	0.007	0.597	0.000	0.015	0.000	0.605 ✔	1.000	4.8.2 ✔
	49.25 - 48.25	0.007	0.601	0.000	0.015	0.000	0.608 ✔	1.000	4.8.2 ✔
	48.25 - 47.25	0.007	0.605	0.000	0.015	0.000	0.612 ✔	1.000	4.8.2 ✔
	47.25 - 46.25	0.007	0.608	0.000	0.015	0.000	0.616 ✔	1.000	4.8.2 ✔
	46.25 - 45.25	0.007	0.612	0.000	0.015	0.000	0.619 ✔	1.000	4.8.2 ✔
L27	45.25 - 45	0.007	0.613	0.000	0.015	0.000	0.620 ✔	1.000	4.8.2 ✔
	45 - 39.75	0.004	0.306	0.000	0.007	0.000	0.310 ✔	1.000	4.8.2 ✔
L28	45 - 39.75	0.004	0.301	0.000	0.007	0.000	0.305 ✔	1.000	4.8.2 ✔
	39.75 - 38.75	0.007	0.588	0.000	0.014	0.000	0.595 ✔	1.000	4.8.2 ✔
L29	38.75 - 37.75	0.007	0.603	0.000	0.014	0.000	0.610 ✔	1.000	4.8.2 ✔
	37.75 - 36.75	0.007	0.606	0.000	0.014	0.000	0.613 ✔	1.000	4.8.2 ✔
	36.75 - 35.75	0.007	0.608	0.000	0.014	0.000	0.616 ✔	1.000	4.8.2 ✔
	35.75 - 34.75	0.007	0.611	0.000	0.014	0.000	0.619 ✔	1.000	4.8.2 ✔
	34.75 - 33.75	0.008	0.614	0.000	0.014	0.000	0.622 ✔	1.000	4.8.2 ✔
L30	33.75 - 32.6667	0.008	0.617	0.000	0.014	0.000	0.625 ✔	1.000	4.8.2 ✔
	32.6667 - 31.5833	0.008	0.620	0.000	0.014	0.000	0.628 ✔	1.000	4.8.2 ✔
	31.5833 - 30.5	0.008	0.623	0.000	0.014	0.000	0.631 ✔	1.000	4.8.2 ✔
L31	30.5 - 30.25 (31)	0.007	0.577	0.000	0.013	0.000	0.584 ✔	1.000	4.8.2 ✔
L32	30.25 - 29.25	0.007	0.590	0.000	0.013	0.000	0.597 ✔	1.000	4.8.2 ✔
	29.25 - 28.25	0.007	0.592	0.000	0.013	0.000	0.600 ✔	1.000	4.8.2 ✔
	28.25 - 27.25	0.007	0.595	0.000	0.013	0.000	0.602 ✔	1.000	4.8.2 ✔
	27.25 - 26.25	0.007	0.597	0.000	0.013	0.000	0.605 ✔	1.000	4.8.2 ✔
	26.25 - 25.25	0.007	0.600	0.000	0.013	0.000	0.607 ✔	1.000	4.8.2 ✔
L33	25.25 - 24.25	0.007	0.602	0.000	0.013	0.000	0.609 ✔	1.000	4.8.2 ✔
	24.25 - 23.25	0.007	0.604	0.000	0.013	0.000	0.612 ✔	1.000	4.8.2 ✔

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	23.25 - 22.25	0.008	0.606	0.000	0.013	0.000	0.614 ✔	1.000	4.8.2 ✔
	22.25 - 21.25	0.008	0.608	0.000	0.013	0.000	0.616 ✔	1.000	4.8.2 ✔
	21.25 - 20.25	0.008	0.611	0.000	0.013	0.000	0.618 ✔	1.000	4.8.2 ✔
L34	20.25 - 19.1665	0.008	0.613	0.000	0.013	0.000	0.621 ✔	1.000	4.8.2 ✔
	19.1665 - 18.083	0.008	0.615	0.000	0.013	0.000	0.623 ✔	1.000	4.8.2 ✔
L35	18.083 - 17.833 (35)	0.008	0.628	0.000	0.013	0.000	0.636 ✔	1.000	4.8.2 ✔
L36	17.833 - 16.833	0.008	0.630	0.000	0.013	0.000	0.638 ✔	1.000	4.8.2 ✔
	16.833 - 15.833	0.008	0.632	0.000	0.013	0.000	0.640 ✔	1.000	4.8.2 ✔
	15.833 - 14.833	0.008	0.634	0.000	0.013	0.000	0.642 ✔	1.000	4.8.2 ✔
	14.833 - 13.833	0.008	0.636	0.000	0.013	0.000	0.644 ✔	1.000	4.8.2 ✔
	13.833 - 12.833	0.008	0.638	0.000	0.013	0.000	0.646 ✔	1.000	4.8.2 ✔
L37	12.833 - 11.833	0.008	0.653	0.000	0.013	0.000	0.661 ✔	1.000	4.8.2 ✔
	11.833 - 10.833	0.008	0.655	0.000	0.013	0.000	0.663 ✔	1.000	4.8.2 ✔
	10.833 - 9.833	0.008	0.657	0.000	0.013	0.000	0.665 ✔	1.000	4.8.2 ✔
	9.833 - 8.833	0.008	0.659	0.000	0.013	0.000	0.667 ✔	1.000	4.8.2 ✔
	8.833 - 7.833	0.008	0.660	0.000	0.013	0.000	0.669 ✔	1.000	4.8.2 ✔
L38	7.833 - 6.833	0.008	0.662	0.000	0.013	0.000	0.671 ✔	1.000	4.8.2 ✔
	6.833 - 5.833	0.008	0.664	0.000	0.013	0.000	0.673 ✔	1.000	4.8.2 ✔
	5.833 - 4.833	0.008	0.666	0.000	0.013	0.000	0.675 ✔	1.000	4.8.2 ✔
	4.833 - 3.833	0.009	0.668	0.000	0.013	0.000	0.676 ✔	1.000	4.8.2 ✔
	3.833 - 2.833	0.009	0.669	0.000	0.013	0.000	0.678 ✔	1.000	4.8.2 ✔
L39	2.833 - 1.4165	0.009	0.672	0.000	0.013	0.000	0.681 ✔	1.000	4.8.2 ✔
	1.4165 - 0	0.009	0.674	0.000	0.013	0.000	0.683 ✔	1.000	4.8.2 ✔

SEE SPREADSHEET OUTPUT FOR CAPACITY CALCULATIONS.

CCIpole

per TIA-222- G

Site BU: 28802

Work Order:

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	37	4	18	24	30.661	0.25	Auto	A607-65
2	115	40	4.75	18	29.44	36.643	0.25	Auto	A607-65
3	79.75	40	5.25	18	35.29	42.489	0.3125	Auto	A607-65
4	45	45	0	18	40.92	49.02	0.375	Auto	A607-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0	18.083	channel	MP3-05 (1.1875in)	2					x		x											
2	18.083	30.5	channel	MP3-08 (1.1875in)	1						x												
3	0	30.5	channel	MP3-08 (1.1875in)	2												x						x
4	30.5	60.5	channel	MP3-06 (1.1875in)	3						x						x						x
5	60.5	90.5	channel	MP3-05 (1.1875in)	3						x						x						x
6	90.5	99.33	channel	MP3-03 (1.1875in)	3						x						x						x
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	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
2	7.93	2.8	10.32	0.95	47.000	44.000	24.000	9.370	1.1875	A572-65
3	7.93	2.8	10.32	0.95	47.000	44.000	24.000	9.370	1.1875	A572-65
4	6.89	2.61	8.47	0.93	41.000	41.000	24.000	7.670	1.1875	A572-65
5	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
6	4.06	1.57	2.92	0.59	14.000	14.000	18.000	2.545	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		18	24.000	24.900	0.25	A607-65	1.000
2	143 - 138	5		18	24.900	25.800	0.25	A607-65	1.000
3	138 - 133	5		18	25.800	26.700	0.25	A607-65	1.000
4	133 - 128	5		18	26.700	27.601	0.25	A607-65	1.000
5	128 - 123	5		18	27.601	28.501	0.25	A607-65	1.000
6	123 - 118	5		18	28.501	29.401	0.25	A607-65	1.000
7	118 - 115	7	4	18	29.401	30.661	0.25	A607-65	1.000
8	115 - 110	5		18	29.441	30.341	0.25	A607-65	1.000
9	110 - 105	5		18	30.341	31.241	0.25	A607-65	1.000
10	105 - 100	5		18	31.241	32.142	0.25	A607-65	1.000
11	100 - 99.33	0.67		18	32.142	32.262	0.25	A607-65	1.000
12	99.33 - 99.08	0.25		18	32.262	32.307	0.25	A607-65	1.000
13	99.08 - 94.08	5		18	32.307	33.208	0.25	A607-65	1.000
14	94.08 - 90.5	3.58		18	33.208	33.852	0.25	A607-65	1.000
15	90.5 - 90.25	0.25		18	33.852	33.897	0.43125	A607-65	0.953
16	90.25 - 85.25	5		18	33.897	34.797	0.425	A607-65	0.957
17	85.25 - 80.25	5		18	34.797	35.698	0.425	A607-65	0.947
18	80.25 - 79.75	5.25	4.75	18	35.698	36.643	0.425	A607-65	0.946
19	79.75 - 74.75	5		18	35.288	36.188	0.4875	A607-65	0.951
20	74.75 - 69.75	5		18	36.188	37.088	0.475	A607-65	0.968
21	69.75 - 64.75	5		18	37.088	37.988	0.475	A607-65	0.960
22	64.75 - 60.5	4.25		18	37.988	38.753	0.46875	A607-65	0.967
23	60.5 - 60.25	0.25		18	38.753	38.798	0.55	A607-65	0.952
24	60.25 - 55.25	5		18	38.798	39.699	0.55	A607-65	0.943
25	55.25 - 50.25	5		18	39.699	40.599	0.5375	A607-65	0.956
26	50.25 - 45.25	5		18	40.599	41.499	0.5375	A607-65	0.948
27	45.25 - 45	5.5	5.25	18	41.499	42.489	0.5375	A607-65	0.948
28	45 - 38.75	6.25		18	40.919	42.044	0.6	A607-65	0.950
29	38.75 - 33.75	5		18	42.044	42.944	0.5875	A607-65	0.963
30	33.75 - 30.5	3.25		18	42.944	43.529	0.5875	A607-65	0.959
31	30.5 - 30.25	0.25		18	43.529	43.574	0.6375	A607-65	0.948
32	30.25 - 25.25	5		18	43.574	44.474	0.625	A607-65	0.959
33	25.25 - 20.25	5		18	44.474	45.374	0.625	A607-65	0.952
34	20.25 - 18.083	2.167		18	45.374	45.765	0.625	A607-65	0.949
35	18.083 - 17.833	0.25		18	45.765	45.810	0.6125	A607-65	0.979
36	17.833 - 12.833	5		18	45.810	46.710	0.6125	A607-65	0.972
37	12.833 - 7.833	5		18	46.710	47.610	0.6	A607-65	0.985
38	7.833 - 2.833	5		18	47.610	48.510	0.6	A607-65	0.978
39	2.833 - 0	2.833		18	48.510	49.020	0.6	A607-65	0.974

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	148 - 143	3.80	42.18	6.75
2	143 - 138	7.43	84.66	10.98
3	138 - 133	8.88	143.68	12.84
4	133 - 128	12.80	216.09	17.16
5	128 - 123	13.71	305.11	18.58
6	123 - 118	14.42	399.20	19.07
7	118 - 115	14.86	456.80	19.35
8	115 - 110	15.75	557.22	20.91
9	110 - 105	19.61	684.72	25.77
10	105 - 100	21.20	818.48	28.22
11	100 - 99.33	21.19	837.46	28.40
12	99.33 - 99.08	21.24	844.57	28.45
13	99.08 - 94.08	22.18	988.92	29.32
14	94.08 - 90.5	22.88	1094.92	29.94
15	90.5 - 90.25	22.97	1102.41	29.97
16	90.25 - 85.25	24.39	1256.66	31.36
17	85.25 - 80.25	25.73	1415.72	32.29
18	80.25 - 79.75	25.88	1431.89	32.38
19	79.75 - 74.75	28.19	1596.38	33.43
20	74.75 - 69.75	29.71	1765.75	34.34
21	69.75 - 64.75	31.27	1939.61	35.23
22	64.75 - 60.5	32.62	2090.86	35.97
23	60.5 - 60.25	32.73	2099.85	36.01
24	60.25 - 55.25	34.48	2282.09	36.91
25	55.25 - 50.25	36.34	2469.29	37.89
26	50.25 - 45.25	38.22	2661.32	38.85
27	45.25 - 45	38.33	2671.04	38.88
28	45 - 38.75	42.17	2917.68	40.04
29	38.75 - 33.75	44.21	3119.71	40.81
30	33.75 - 30.5	45.55	3253.05	41.28
31	30.5 - 30.25	45.68	3263.37	41.31
32	30.25 - 25.25	47.86	3471.69	42.05
33	25.25 - 20.25	50.08	3683.64	42.77
34	20.25 - 18.083	51.05	3776.62	43.09
35	18.083 - 17.833	51.18	3787.39	43.11
36	17.833 - 12.833	53.45	4004.70	43.84
37	12.833 - 7.833	55.77	4225.57	44.55
38	7.833 - 2.833	58.12	4449.97	45.26
39	2.833 - 0	59.45	4578.69	45.67

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
148 - 143	Pole	TP24.9x24x0.25	Pole	6.0%	Pass
143 - 138	Pole	TP25.8x24.9x0.25	Pole	11.3%	Pass
138 - 133	Pole	TP26.7x25.8x0.25	Pole	17.8%	Pass
133 - 128	Pole	TP27.601x26.7x0.25	Pole	25.3%	Pass
128 - 123	Pole	TP28.501x27.601x0.25	Pole	33.5%	Pass
123 - 118	Pole	TP29.401x28.501x0.25	Pole	41.4%	Pass
118 - 115	Pole	TP30.661x29.401x0.25	Pole	45.8%	Pass
115 - 110	Pole	TP30.341x29.441x0.25	Pole	54.5%	Pass
110 - 105	Pole	TP31.241x30.341x0.25	Pole	63.8%	Pass
105 - 100	Pole	TP32.142x31.241x0.25	Pole	72.6%	Pass
100 - 99.33	Pole	TP32.262x32.142x0.25	Pole	73.8%	Pass
99.33 - 99.08	Pole	TP32.307x32.262x0.25	Pole	74.3%	Pass
99.08 - 94.08	Pole	TP33.208x32.307x0.25	Pole	82.9%	Pass
94.08 - 90.5	Pole	TP33.852x33.208x0.25	Pole	88.9%	Pass
90.5 - 90.25	Pole + Reinf.	TP33.897x33.852x0.4313	Reinf. 5 Tension Rupture	70.6%	Pass
90.25 - 85.25	Pole + Reinf.	TP34.797x33.897x0.425	Reinf. 5 Tension Rupture	77.1%	Pass
85.25 - 80.25	Pole + Reinf.	TP35.698x34.797x0.425	Reinf. 5 Tension Rupture	83.4%	Pass
80.25 - 79.75	Pole + Reinf.	TP36.643x35.698x0.425	Reinf. 5 Tension Rupture	84.0%	Pass
79.75 - 74.75	Pole + Reinf.	TP36.188x35.288x0.4875	Reinf. 5 Tension Rupture	80.0%	Pass
74.75 - 69.75	Pole + Reinf.	TP37.088x36.188x0.475	Reinf. 5 Tension Rupture	84.9%	Pass
69.75 - 64.75	Pole + Reinf.	TP37.988x37.088x0.475	Reinf. 5 Tension Rupture	89.6%	Pass
64.75 - 60.5	Pole + Reinf.	TP38.753x37.988x0.4688	Reinf. 5 Tension Rupture	93.3%	Pass
60.5 - 60.25	Pole + Reinf.	TP38.798x38.753x0.55	Reinf. 4 Tension Rupture	78.6%	Pass
60.25 - 55.25	Pole + Reinf.	TP39.699x38.798x0.55	Reinf. 4 Tension Rupture	82.4%	Pass
55.25 - 50.25	Pole + Reinf.	TP40.599x39.699x0.5375	Reinf. 4 Tension Rupture	86.0%	Pass
50.25 - 45.25	Pole + Reinf.	TP41.499x40.599x0.5375	Reinf. 4 Tension Rupture	89.5%	Pass
45.25 - 45	Pole + Reinf.	TP42.489x41.499x0.5375	Reinf. 4 Tension Rupture	89.6%	Pass
45 - 38.75	Pole + Reinf.	TP42.044x40.919x0.6	Reinf. 4 Tension Rupture	86.0%	Pass
38.75 - 33.75	Pole + Reinf.	TP42.944x42.044x0.5875	Reinf. 4 Tension Rupture	88.8%	Pass
33.75 - 30.5	Pole + Reinf.	TP43.529x42.944x0.5875	Reinf. 4 Tension Rupture	90.5%	Pass
30.5 - 30.25	Pole + Reinf.	TP43.574x43.529x0.6375	Reinf. 3 Tension Rupture	83.7%	Pass
30.25 - 25.25	Pole + Reinf.	TP44.474x43.574x0.625	Reinf. 3 Tension Rupture	86.1%	Pass
25.25 - 20.25	Pole + Reinf.	TP45.374x44.474x0.625	Reinf. 3 Tension Rupture	88.4%	Pass
20.25 - 18.08	Pole + Reinf.	TP45.765x45.374x0.625	Reinf. 3 Tension Rupture	89.4%	Pass
18.08 - 17.83	Pole + Reinf.	TP45.81x45.765x0.6125	Reinf. 1 Tension Rupture	91.9%	Pass
17.83 - 12.83	Pole + Reinf.	TP46.71x45.81x0.6125	Reinf. 1 Tension Rupture	94.1%	Pass
12.83 - 7.83	Pole + Reinf.	TP47.61x46.71x0.6	Reinf. 1 Tension Rupture	96.3%	Pass
7.83 - 2.83	Pole + Reinf.	TP48.51x47.61x0.6	Reinf. 1 Tension Rupture	98.3%	Pass
2.83 - 0	Pole + Reinf.	TP49.02x48.51x0.6	Reinf. 1 Tension Rupture	99.4%	Pass
				Summary	
			Pole	88.9%	Pass
			Reinforcement	99.4%	Pass
			Overall	99.4%	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	R6
148 - 143	1501	n/a	1501	19.56	n/a	19.56	6.0%						
143 - 138	1672	n/a	1672	20.27	n/a	20.27	11.3%						
138 - 133	1855	n/a	1855	20.99	n/a	20.99	17.8%						
133 - 128	2050	n/a	2050	21.70	n/a	21.70	25.3%						
128 - 123	2260	n/a	2260	22.42	n/a	22.42	33.5%						
123 - 118	2482	n/a	2482	23.13	n/a	23.13	41.4%						
118 - 115	2623	n/a	2623	23.56	n/a	23.56	45.8%						
115 - 110	2731	n/a	2731	23.88	n/a	23.88	54.5%						
110 - 105	2983	n/a	2983	24.59	n/a	24.59	63.8%						
105 - 100	3251	n/a	3251	25.31	n/a	25.31	72.6%						
100 - 99.33	3288	n/a	3288	25.40	n/a	25.40	73.8%						
99.33 - 99.08	3301	n/a	3301	25.44	n/a	25.44	74.3%						
99.08 - 94.08	3588	n/a	3588	26.15	n/a	26.15	82.9%						
94.08 - 90.5	3802	n/a	3802	26.66	n/a	26.66	88.9%						
90.5 - 90.25	3817	2678	6495	26.70	16.95	43.65	51.8%					70.6%	
90.25 - 85.25	4132	2815	6947	27.41	16.95	44.36	57.2%					77.1%	
85.25 - 80.25	4464	2955	7419	28.13	16.95	45.08	62.5%					83.4%	
80.25 - 79.75	4498	2969	7467	28.20	16.95	45.15	63.0%					84.0%	
79.75 - 74.75	5784	3033	8817	35.58	16.95	52.53	55.8%					80.0%	
74.75 - 69.75	6230	3179	9409	36.48	16.95	53.43	59.7%					84.9%	
69.75 - 64.75	6699	3328	10027	37.37	16.95	54.32	63.5%					89.6%	
64.75 - 60.5	7116	3458	10573	38.13	16.95	55.08	66.6%					93.3%	
60.5 - 60.25	7141	5276	12417	38.17	25.41	63.58	57.1%				78.6%		
60.25 - 55.25	7654	5511	13165	39.06	25.41	64.47	60.4%				82.4%		
55.25 - 50.25	8190	5752	13942	39.96	25.41	65.37	63.5%				86.0%		
50.25 - 45.25	8752	5997	14749	40.85	25.41	66.26	66.7%				89.5%		
45.25 - 45	8781	6009	14790	40.89	25.41	66.30	66.8%				89.6%		
45 - 38.75	10876	6148	17024	49.59	25.41	75.00	60.8%				86.0%		
38.75 - 33.75	11596	6402	17998	50.67	25.41	76.08	63.2%				88.8%		
33.75 - 30.5	12081	6569	18650	51.36	25.41	76.77	64.7%				90.5%		
30.5 - 30.25	12118	8046	20164	51.42	30.96	82.38	60.1%		83.7%	83.7%			
30.25 - 25.25	12892	8365	21257	52.49	30.96	83.45	62.3%		86.1%	86.1%			
25.25 - 20.25	13698	8692	22389	53.56	30.96	84.52	64.4%		88.4%	88.4%			
20.25 - 18.08	14057	8835	22892	54.02	30.96	84.98	65.3%		89.4%	89.4%			
18.08 - 17.83	14099	8698	22797	54.08	31.94	86.02	66.0%	91.9%		87.8%			
17.83 - 12.83	14954	9029	23982	55.15	31.94	87.09	68.1%	94.1%		90.0%			
12.83 - 7.83	15842	9366	25208	56.22	31.94	88.16	70.2%	96.3%		92.1%			
7.83 - 2.83	16765	9710	26475	57.29	31.94	89.23	72.1%	98.3%		94.0%			
2.83 - 0	17304	9907	27211	57.90	31.94	89.84	73.3%	99.4%		95.1%			

Note: Section capacity checked in 5 degree increments.

Pier and Pad Foundation

Project #:	28802
Site Name:	CT43XC816

TIA-222 Revision:	G
Tower Type:	Monopole

Block Foundation?:	☐

Superstructure Analysis Reactions		
Compression, P_{comp}:	59.48	kips
Base Shear, Vu_comp:	45.63	kips
Moment, M_u:	4578.69	ft-kips
Tower Height, **H**:	148	ft
BP Dist. Above Fdn, bp_{dist}:	0	in

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, **dpier**:	7	ft
Ext. Above Grade, **E**:	0.5	ft
Pier Rebar Size, **Sc**:	11	
Pier Rebar Quantity, **mc**:	28	
Pier Tie/Spiral Size, **St**:	5	
Pier Tie/Spiral Quantity, **mt**:	10	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	8	ft
Pad Width, **W**:	22	ft
Pad Thickness, **T**:	3	ft
Pad Rebar Size, **Sp**:	11	
Pad Rebar Quantity, **mp**:	22	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties		
Rebar Grade, **Fy**:	60000	psi
Concrete Compressive Strength, **F'c**:	3000	psi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties		
Total Soil Unit Weight, γ:	100	pcf
Ultimate Gross Bearing, Qult:	12.000	ksf
Cohesion, **Cu**:		ksf
Friction Angle, φ:	30	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:		
Neglected Depth, **N**:	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	7	ft

<--Toggle between Gross and Net

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating**	**Check**
Lateral (Sliding) (kips)	225.82	45.63	**20.2%**	**Pass**
Bearing Pressure (ksf)	9.00	7.99	**88.7%**	**Pass**
*Overturning (kip*ft)*	5041.65	4966.55	**98.5%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	6752.02	4829.66	**71.5%**	**Pass**
Pier Compression (kip)	18370.97	97.58	**0.5%**	**Pass**
*Pad Flexure (kip*ft)*	4533.68	2824.51	**62.3%**	**Pass**
Pad Shear - 1-way (kips)	669.89	396.36	**59.2%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.164	0.000	**0.0%**	**Pass**

Soil Rating:	**98.5%**
Structural Rating:	**71.5%**

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Job	CT43XC816
Project	28802
By	QAR
Date	8/21/18

Wind Load on Antennas TIA-222-G

$q_z = 0.00256\ K_z\ K_{zt}\ K_d\ V^2\ I$

$F = q_z\ G_h\ C_a\ A_a$

Occupancy :	II		Classification of Structures (Table 2-1)
Exposure :	B		Exposure Category
V :	101	mph	Basic Wind Speed (Annex B)
z :	130	ft	Height above ground level to the center of the antenna
I :	1.00		Importance Factor (Table 2-3)
K_z :	1.07		Velocity Pressure Coefficient (2.6.5.2)
K_{zt} :	1.00		Topographic Factor (2.6.6.4)
K_d :	0.95		Wind Direction Probability Factor (Table 2-2)
q_z :	26.4	psf	Velocity Pressure at Height z
G_h :	1.00		Strength Design of Appurtenances and their Connections

Mount & Antenna Wind Loads

Appurtenance	Height	Width	h/D	Shape	C_a	A_a	Force	Force
	in	*in*				*sq ft*	*lb*	*plf*
TD-RRH8x20	26.1	18.6	1.4	Flat	1.200	3.37	106.9	
APXVTM14-ALU-I20	56.3	12.6	4.5	Flat	1.287	4.93	167.6	
APXVSPP18-C-A20	72.0	11.8	6.1	Flat	1.360	5.90	212.0	
Pipe2STD x 12.5 ft	150.0	2.4	63.2	Round	1.200	2.47	78.5	6.3
Pipe2STD x 5 ft	60.0	2.4	25.3	Round	1.200	0.99	31.4	6.3
HSS4-1/2X4-1/2X3/16 x 2 ft	24.0	4.5	5.3	Flat	1.326	0.75	26.3	13.1
HSS4X4X3/16 x 1.5 ft	18.0	4.0	4.5	Flat	1.289	0.50	17.0	11.4
2L3X3X3/16 x 4 ft	48.0	6.0	8.0	Flat	1.433	2.00	75.8	18.9
L3X3X3/16 x 14 ft	168.0	3.0	56.0	Flat	2.000	3.50	185.0	13.2
L3X3X3/16 x 7 ft	84.0	3.0	28.0	Flat	2.000	1.75	92.5	13.2
L2-1/2X2-1/2X3/16 x 1.5 ft	18.0	2.5	7.2	Flat	1.407	0.31	11.6	7.7
2L2-1/2X2-1/2X3/16X3/8 x 7 ft	84.0	5.4	15.6	Flat	1.688	3.14	139.8	20.0

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Project	28802
By	QAR
Date	8/21/18

Wind Load on Antennas TIA-222-G

$q_z = 0.00256\ K_z\ K_{zt}\ K_d\ V^2\ I$

$F = q_z\ G_h\ C_a\ A_a$

Occupancy :	II		Classification of Structures (Table 2-1)
Exposure :	B		Exposure Category
V :	101	mph	Basic Wind Speed (Annex B)
z :	130	ft	Height above ground level to the center of the antenna
I :	1.00		Importance Factor (Table 2-3)
K_z :	1.07		Velocity Pressure Coefficient (2.6.5.2)
K_{zt} :	1.00		Topographic Factor (2.6.6.4)
K_d :	0.95		Wind Direction Probability Factor (Table 2-2)
q_z :	26.4	psf	Velocity Pressure at Height z
G_h :	1.00		Strength Design of Appurtenances and their Connections

Mount & Antenna Wind Loads

Appurtenance	Height	Depth	h/D	Shape	C_a	A_a	Force	Force
	in	*in*				*sq ft*	*lb*	*plf*
TD-RRH8x20	26.1	6.7	3.9	Flat	1.262	1.21	40.5	
APXVTM14-ALU-I20	56.3	6.3	8.9	Flat	1.465	2.46	95.3	
APXVSPP18-C-A20	72.0	7.9	9.1	Flat	1.470	3.95	153.5	
Pipe2STD x 12.5 ft	150.0	2.4	63.2	Round	1.200	2.47	78.5	6.3
Pipe2STD x 5 ft	60.0	2.4	25.3	Round	1.200	0.99	31.4	6.3
HSS4-1/2X4-1/2X3/16 x 2 ft	24.0	4.5	5.3	Flat	1.326	0.75	26.3	13.1
HSS4X4X3/16 x 1.5 ft	18.0	4.0	4.5	Flat	1.289	0.50	17.0	11.4
2L3X3X3/16 x 4 ft	48.0	3.0	16.0	Flat	1.700	1.00	44.9	11.2
L3X3X3/16 x 14 ft	168.0	3.0	56.0	Flat	2.000	3.50	185.0	13.2
L3X3X3/16 x 7 ft	84.0	3.0	28.0	Flat	2.000	1.75	92.5	13.2
L2-1/2X2-1/2X3/16 x 1.5 ft	18.0	2.5	7.2	Flat	1.407	0.31	11.6	7.7
2L2-1/2X2-1/2X3/16X3/8 x 7 ft	84.0	2.5	33.6	Flat	2.000	1.46	77.1	11.0

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Job	CT43XC816
Project	28802
By	QAR
Date	8/21/18

Ice Wind Load on Antennas TIA-222-G

$q_z = 0.00256\ K_z\ K_{zt}\ K_d\ V^2\ I$

$F = q_z\ G_h\ C_a\ A_a$

Occupancy :	II		Classification of Structures (Table 2-1)
Exposure :	B		Exposure Category
V_i :	50	mph	Basic Wind Speed (Annex B)
z :	130	ft	Height above ground level to the center of the antenna
I :	1.00		Importance Factor (Table 2-3)
K_z :	1.07		Velocity Pressure Coefficient (2.6.5.2)
K_{zt} :	1.00		Topographic Factor (2.6.6.4)
K_d :	0.95		Wind Direction Probability Factor (Table 2-2)
q_z :	6.48	psf	Velocity Pressure at Height z
G_h :	1.00		Strength Design of Appurtenances and their Connections
t_{iz} :	1.72	in	Design Thickness of Radial Ice at Height z (2.6.8)

Mount & Antenna Ice Wind Loads

Appurtenance	Height	Width	h/D	Shape	C_a	A_a	Force	Force
	in	*in*				*sq ft*	*lb*	*plf*
TD-RRH8x20	29.5	22.0	1.3	Flat	1.200	4.52	35.1	
APXVTM14-ALU-I20	59.7	16.0	3.7	Flat	1.254	6.65	54.1	
APXVSPP18-C-A20	75.4	15.2	4.9	Flat	1.309	7.98	67.7	
Pipe2STD x 12.5 ft	153.4	5.8	26.4	Round	1.200	6.20	48.2	3.8
Pipe2STD x 5 ft	63.4	5.8	10.9	Round	0.887	2.56	14.7	2.8
HSS4-1/2X4-1/2X3/16 x 2 ft	27.4	7.9	3.5	Flat	1.242	1.51	12.2	5.3
HSS4X4X3/16 x 1.5 ft	21.4	7.4	2.9	Flat	1.217	1.11	8.7	4.9
2L3X3X3/16 x 4 ft	51.4	9.4	5.4	Flat	1.331	3.37	29.1	6.8
L3X3X3/16 x 14 ft	171.4	6.4	26.6	Flat	2.000	7.67	99.3	7.0
L3X3X3/16 x 7 ft	87.4	6.4	13.6	Flat	1.619	3.91	41.0	5.6
L2-1/2X2-1/2X3/16 x 1.5 ft	21.4	5.9	3.6	Flat	1.249	0.88	7.2	4.0
2L2-1/2X2-1/2X3/16X3/8 x 7 ft	87.4	8.8	9.9	Flat	1.497	5.35	51.9	7.1

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By	QAR
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Ice Wind Load on Antennas TIA-222-G

$q_z = 0.00256\ K_z\ K_{zt}\ K_d\ V^2\ I$

$F = q_z\ G_h\ C_a\ A_a$

Occupancy :	II		Classification of Structures (Table 2-1)
Exposure :	B		Exposure Category
V_i :	50	mph	Basic Wind Speed (Annex B)
z :	130	ft	Height above ground level to the center of the antenna
I :	1.00		Importance Factor (Table 2-3)
K_z :	1.07		Velocity Pressure Coefficient (2.6.5.2)
K_{zt} :	1.00		Topographic Factor (2.6.6.4)
K_d :	0.95		Wind Direction Probability Factor (Table 2-2)
q_z :	6.48	psf	Velocity Pressure at Height z
G_h :	1.00		Strength Design of Appurtenances and their Connections
t_{iz} :	1.72	in	Design Thickness of Radial Ice at Height z (2.6.8)

Mount & Antenna Ice Wind Loads

Appurtenance	Height	Depth	h/D	Shape	C_a	A_a	Force	Force
	in	*in*				*sq ft*	*lb*	*plf*
TD-RRH8x20	29.5	10.1	2.9	Flat	1.218	2.08	16.4	
APXVTM14-ALU-I20	59.7	9.7	6.1	Flat	1.361	4.04	35.6	
APXVSPP18-C-A20	75.4	11.3	6.7	Flat	1.385	5.94	53.3	
Pipe2STD x 12.5 ft	153.4	5.8	26.4	Round	1.200	6.20	48.2	3.8
Pipe2STD x 5 ft	63.4	5.8	10.9	Round	0.887	2.56	14.7	2.8
HSS4-1/2X4-1/2X3/16 x 2 ft	27.4	7.9	3.5	Flat	1.242	1.51	12.2	5.3
HSS4X4X3/16 x 1.5 ft	21.4	7.4	2.9	Flat	1.217	1.11	8.7	4.9
2L3X3X3/16 x 4 ft	51.4	6.4	8.0	Flat	1.433	2.30	21.4	5.0
L3X3X3/16 x 14 ft	171.4	6.4	26.6	Flat	2.000	7.67	99.3	7.0
L3X3X3/16 x 7 ft	87.4	6.4	13.6	Flat	1.619	3.91	41.0	5.6
L2-1/2X2-1/2X3/16 x 1.5 ft	21.4	5.9	3.6	Flat	1.249	0.88	7.2	4.0
2L2-1/2X2-1/2X3/16X3/8 x 7 ft	87.4	5.9	14.7	Flat	1.657	3.61	38.7	5.3

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Job	CT43XC816
Project	28802
By	QAR
Date	8/21/18

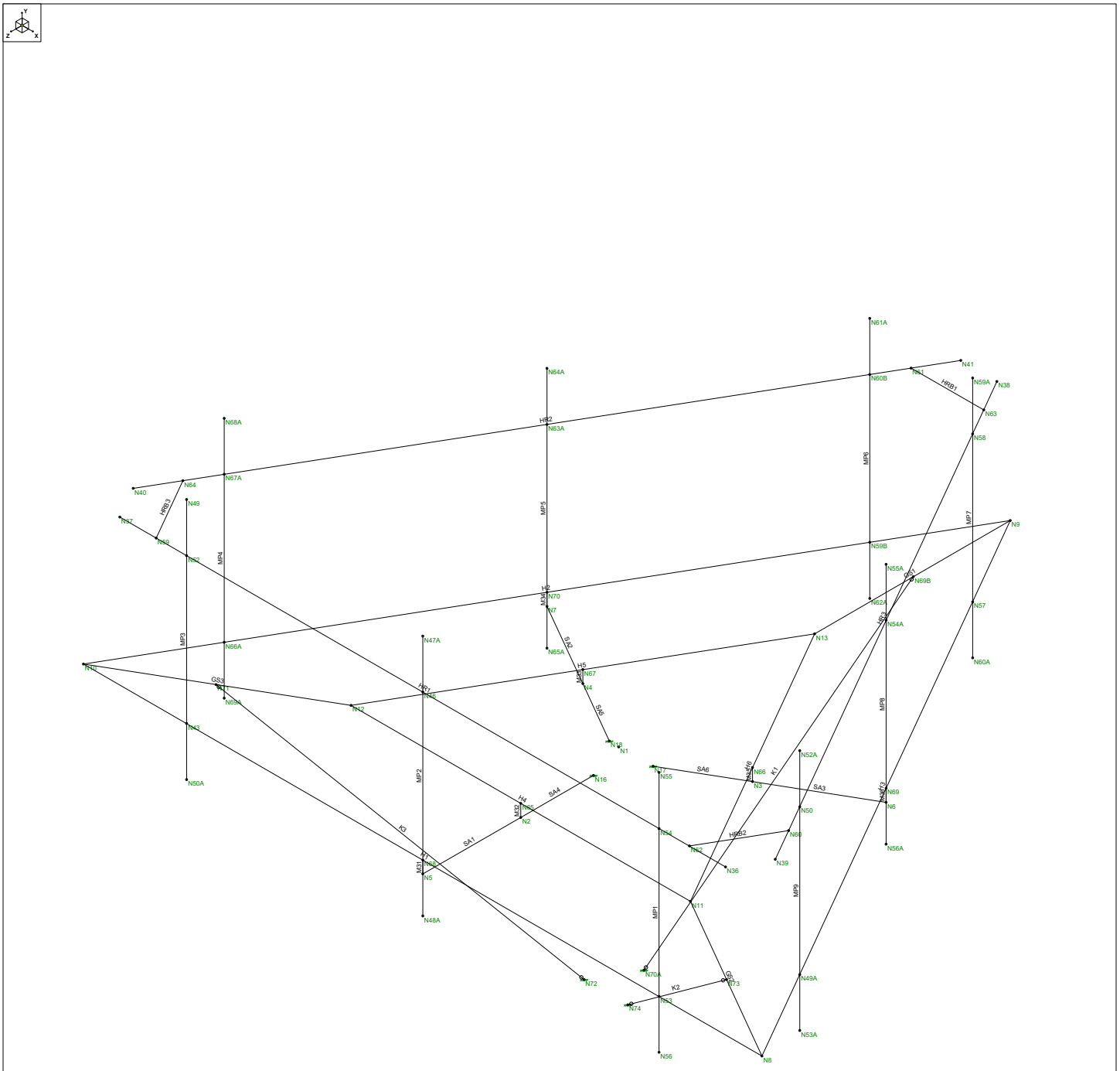
Ice Load on Antennas TIA-222-G

Ice Weight :	56	pcf	Ice Density
t_i :	0.75		Design Ice Thickness
Occupancy :	II		Classification of Structures (Table 2-1)
Exposure :	B		Exposure Category
V_i :	50	mph	Basic Wind Speed (Annex B)
z :	130	ft	Height above ground level to the center of the antenna
I :	1.00		Importance Factor (Table 2-3)
K_{iz} :	1.15		Height Escalation Factor for Ice Thickness
K_{zt} :	1.00		Topographic Factor (2.6.6.4)
t_{iz} :	1.72	in	Design Thickness of Radial Ice at Height z (2.6.8)

Platform Grating :	Expanded	
Ice Load :	8.0	psf

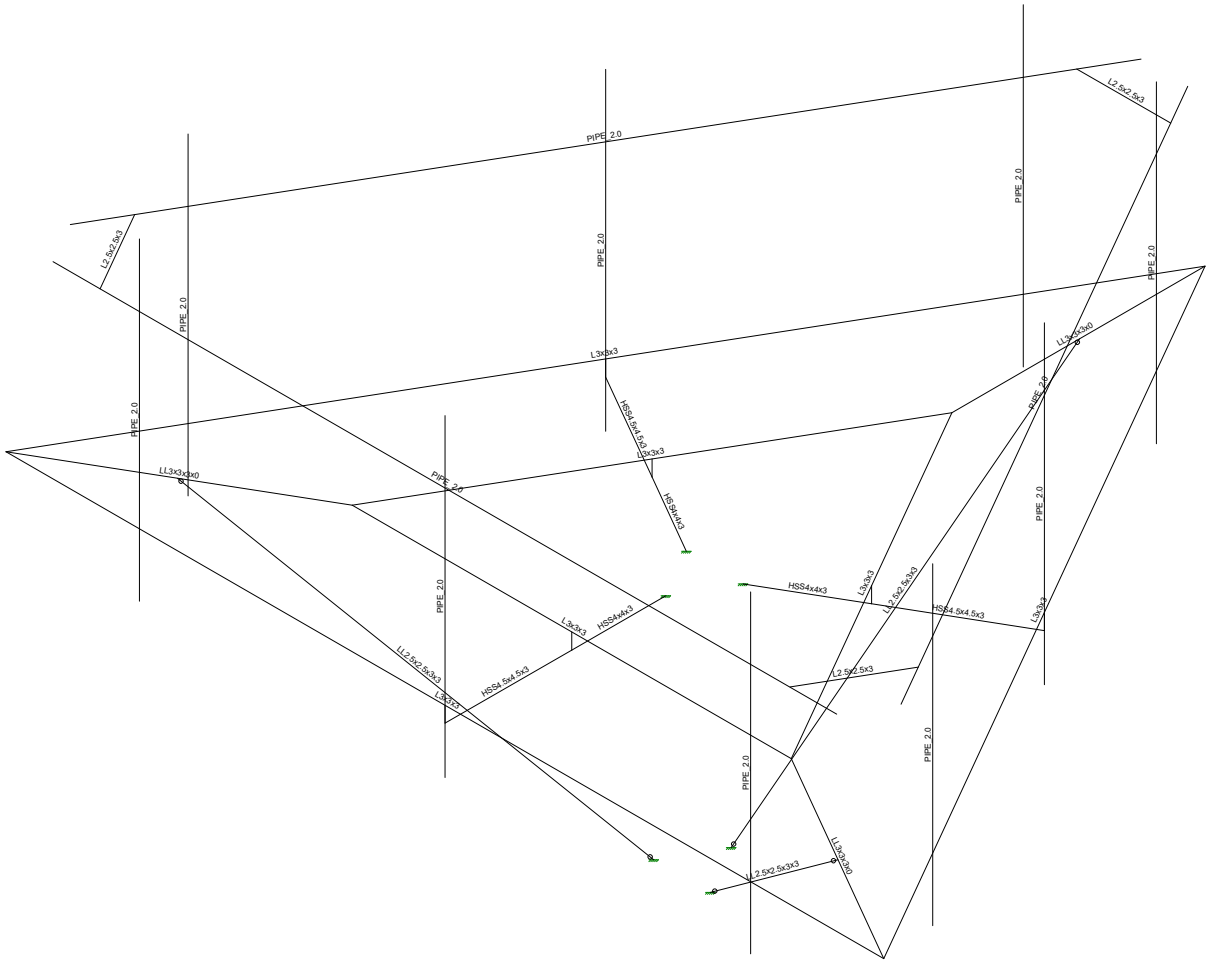
Mount & Antenna Ice Wind Loads

Appurtenance	Height	Width	Depth	Diam.	Area	Perim.	Ice Weight	
	in	*in*	*in*	*in*	*sq in*	*in*	*lb*	*plf*
TD-RRH8x20	29.5	22.0	10.1	19.77	116.15	57.48	98.2	
APXVTM14-ALU-I20	59.7	16.0	9.7	14.09	85.44	44.68	155.9	
APXVSPP18-C-A20	75.4	15.2	11.3	14.20	86.05	46.28	200.8	
Pipe2STD x 12.5 ft	153.4	5.8	5.8	2.38	22.14	12.87	107.6	8.6
Pipe2STD x 5 ft	63.4	5.8	5.8	2.38	22.14	12.87	43.0	8.6
HSS4-1/2X4-1/2X3/16 x 2 ft	27.4	7.9	7.9	6.01	41.81	29.44	32.5	16.3
HSS4X4X3/16 x 1.5 ft	21.4	7.4	7.4	5.31	37.98	27.44	22.2	14.8
2L3X3X3/16 x 4 ft	51.4	9.4	6.4	6.71	45.56	24.88	70.9	17.7
L3X3X3/16 x 14 ft	171.4	6.4	6.4	4.24	32.23	18.88	175.5	12.5
L3X3X3/16 x 7 ft	87.4	6.4	6.4	4.24	32.23	18.88	87.7	12.5
L2-1/2X2-1/2X3/16 x 1.5 ft	21.4	5.9	5.9	3.54	28.41	16.88	16.6	11.0
2L2-1/2X2-1/2X3/16X3/8 x 7 ft	87.4	8.8	5.9	5.93	41.34	22.63	112.5	16.1



Envelope Only Solution

Ramaker & Associates	CT43XC816	SK - 1
JMO		Aug 21, 2018 at 5:11 PM
28802		28802 Mount Rev1.r3d



Envelope Only Solution

Ramaker & Associates	CT43XC816	SK - 2
JMO		Aug 21, 2018 at 5:11 PM
28802		28802 Mount Rev1.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E..Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65 .49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65 .49	50	1.1	65	1.1
3	A992	29000	11154	.3	.65 .49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65 .49	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65 .49	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65 .49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65 .49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	L3x3x3/16	L3x3x3	Beam	Single Angle	A36 Gr.36	Typical	1.09	.948	.948	.014
2	LL3x3x3/16	LL3x3x3x0	Beam	Double Angle (No Ga...	A36 Gr.36	Typical	2.18	3.35	1.9	.027
3	LL2.5x2.5x3/16x3/8	LL2.5x2.5x3x3	Beam	Double Angle (3/8 G...	A36 Gr.36	Typical	1.8	2.46	1.07	.023
4	Pipe 2.0	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	HSS4x4x3/16	HSS4x4x3	Beam	SquareTube	A36 Gr.36	Typical	2.58	6.21	6.21	10
6	HSS4.5x4.5x3/16	HSS4.5x4.5x3	Beam	SquareTube	A36 Gr.36	Typical	2.93	9.02	9.02	14.4
7	L2.5x2.5x3/16	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	SA1	N2	N5		90	HSS4.5x4.5x3/...	Beam	SquareTube	A36 Gr.36	Typical
2	SA2	N4	N7		90	HSS4.5x4.5x3/...	Beam	SquareTube	A36 Gr.36	Typical
3	SA3	N3	N6		90	HSS4.5x4.5x3/...	Beam	SquareTube	A36 Gr.36	Typical
4	H1	N10	N8		270	L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
5	H3	N8	N9		270	L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
6	H2	N9	N10		270	L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
7	H4	N12	N11			L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
8	H6	N11	N13			L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
9	H5	N13	N12			L3x3x3/16	Beam	Single Angle	A36 Gr.36	Typical
10	GS3	N10	N12		180	LL3x3x3/16	Beam	Double Angle (...	A36 Gr.36	Typical
11	GS2	N8	N11		180	LL3x3x3/16	Beam	Double Angle (...	A36 Gr.36	Typical
12	GS1	N9	N13		180	LL3x3x3/16	Beam	Double Angle (...	A36 Gr.36	Typical
13	HR1	N37	N36		270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
14	HR3	N39	N38		270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
15	HR2	N41	N40		270	Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
16	SA4	N16	N2			HSS4x4x3/16	Beam	SquareTube	A36 Gr.36	Typical
17	SA6	N17	N3			HSS4x4x3/16	Beam	SquareTube	A36 Gr.36	Typical
18	SA5	N18	N4			HSS4x4x3/16	Beam	SquareTube	A36 Gr.36	Typical
19	HRB3	N59	N64		180	L2.5x2.5x3/16	Beam	Single Angle	A36 Gr.36	Typical
20	HRB1	N61	N63		180	L2.5x2.5x3/16	Beam	Single Angle	A36 Gr.36	Typical
21	HRB2	N60	N62		180	L2.5x2.5x3/16	Beam	Single Angle	A36 Gr.36	Typical
22	M31	N68	N5			RIGID	None	None	RIGID	Typical
23	M32	N65	N2			RIGID	None	None	RIGID	Typical
24	M33	N67	N4			RIGID	None	None	RIGID	Typical
25	M34	N70	N7			RIGID	None	None	RIGID	Typical
26	M35	N66	N3			RIGID	None	None	RIGID	Typical
27	M36	N69	N6			RIGID	None	None	RIGID	Typical
28	MP3	N50A	N49			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
29	MP2	N48A	N47A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
30	MP1	N56	N55			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
31	MP9	N53A	N52A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
32	MP8	N56A	N55A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
33	MP7	N60A	N59A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
34	MP6	N62A	N61A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
35	MP5	N65A	N64A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
36	MP4	N69A	N68A			Pipe 2.0	Beam	Pipe	A53 Gr.B	Typical
37	K1	N70A	N69B			LL2.5x2.5x3/1...	Beam	Double Angle (...	A36 Gr.36	Typical
38	K3	N72	N71			LL2.5x2.5x3/1...	Beam	Double Angle (...	A36 Gr.36	Typical
39	K2	N74	N73			LL2.5x2.5x3/1...	Beam	Double Angle (...	A36 Gr.36	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribu...	Area(M...	Surface...
1	Dead Load	None		-1			15		3	
2	Antenna Wind 0	None					30			
3	Antenna Wind 30	None					30			
4	Antenna Wind 45	None					30			
5	Antenna Wind 60	None					30			
6	Antenna Wind 90	None					30			
7	Antenna Wind 120	None					30			
8	Antenna Wind 135	None					30			
9	Antenna Wind 150	None					30			
10	Antenna Wind 180	None					30			
11	Antenna Wind 210	None					30			
12	Antenna Wind 225	None					30			
13	Antenna Wind 240	None					30			
14	Antenna Wind 270	None					30			
15	Antenna Wind 300	None					30			
16	Antenna Wind 315	None					30			
17	Antenna Wind 330	None					30			
18	Antenna Ice Dead Load	None					15			
19	Antenna Wind w/Ice 0	None					30			
20	Antenna Wind w/Ice 30	None					30			
21	Antenna Wind w/Ice 45	None					30			
22	Antenna Wind w/Ice 60	None					30			
23	Antenna Wind w/Ice 90	None					30			
24	Antenna Wind w/Ice 120	None					30			
25	Antenna Wind w/Ice 135	None					30			
26	Antenna Wind w/Ice 150	None					30			
27	Antenna Wind w/Ice 180	None					30			
28	Antenna Wind w/Ice 210	None					30			
29	Antenna Wind w/Ice 225	None					30			
30	'Antenna Wind w/Ice 240	None					30			
31	Antenna Wind w/Ice 270	None					30			
32	Antenna Wind w/Ice 300	None					30			
33	Antenna Wind w/Ice 315	None					30			
34	Antenna Wind w/Ice 330	None					30			
35	Member Wind 0	None						66		
36	Member Wind 30	None						66		
37	Member Wind 45	None						66		
38	Member Wind 60	None						66		
39	Member Wind 90	None						66		
40	Member Wind 120	None						66		
41	Member Wind 135	None						66		
42	Member Wind 150	None						66		
43	Member Wind 180	None						66		
44	Member Wind 210	None						66		
45	Member Wind 225	None						66		
46	Member Wind 240	None						66		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribu...	Area(M...	Surface...
47	Member Wind 270	None						66		
48	Member Wind 300	None						66		
49	Member Wind 315	None						66		
50	Member Wind 330	None						66		
51	Member Ice Dead Load	None						33	3	
52	Member Wind w/Ice 0	None						66		
53	Member Wind w/Ice 30	None						66		
54	Member Wind w/Ice 45	None						66		
55	Member Wind w/Ice 60	None						66		
56	Member Wind w/Ice 90	None						66		
57	Member Wind w/Ice 120	None						66		
58	Member Wind w/Ice 135	None						66		
59	Member Wind w/Ice 150	None						66		
60	Member Wind w/Ice 180	None						66		
61	Member Wind w/Ice 210	None						66		
62	Member Wind w/Ice 225	None						66		
63	Member Wind w/Ice 240	None						66		
64	Member Wind w/Ice 270	None						66		
65	Member Wind w/Ice 300	None						66		
66	Member Wind w/Ice 315	None						66		
67	Member Wind w/Ice 330	None						66		
68	LV-1	None					1			
69	LV-2	None					1			
70	LV-3	None					1			
71	LV-4	None					1			
72	LV-5	None					1			
73	LV-6	None					1			
74	LV-7	None					1			
75	LV-8	None					1			
76	LV-9	None					1			
77	LV-10	None								
78	LV-11	None								
79	LV-12	None								
80	LV-13	None								
81	LV-14	None								
82	LV-15	None								
83	LM-1	None					1			
84	LM-2	None					1			
85	LM-3	None					1			
86	LM-4	None					1			
87	LM-5	None					1			
88	LM-6	None					1			
89	LM-7	None					1			
90	LM-8	None					1			
91	LM-9	None					1			
92	LM-10	None								
93	LM-11	None								
94	LM-12	None								
95	LM-13	None								
96	LM-14	None								
97	LM-15	None								
98	BLC 1 Transient Area Loads	None						25		
99	BLC 51 Transient Area Loads	None						25		

Load Combinations

	Description	...	PD..	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
1	1.4D	...	Y		1	1.4																		
2	0.9D + 1.6 (0-Wind)	...	Y		1	.9	2	1.6	35	1.6														
3	0.9D + 1.6 (30-Wind)	...	Y		1	.9	3	1.6	36	1.6														
4	0.9D + 1.6 (45-Wind)	...	Y		1	.9	4	1.6	37	1.6														
5	0.9D + 1.6 (60-Wind)	...	Y		1	.9	5	1.6	38	1.6														
6	0.9D + 1.6 (90-Wind)	...	Y		1	.9	6	1.6	39	1.6														
7	0.9D + 1.6 (120-Wind)	...	Y		1	.9	7	1.6	40	1.6														
8	0.9D + 1.6 (135-Wind)	...	Y		1	.9	8	1.6	41	1.6														
9	0.9D + 1.6 (150-Wind)	...	Y		1	.9	9	1.6	42	1.6														
10	0.9D + 1.6 (180-Wind)	...	Y		1	.9	10	1.6	43	1.6														
11	0.9D + 1.6 (210-Wind)	...	Y		1	.9	11	1.6	44	1.6														
12	0.9D + 1.6 (225-Wind)	...	Y		1	.9	12	1.6	45	1.6														
13	0.9D + 1.6 (240-Wind)	...	Y		1	.9	13	1.6	46	1.6														
14	0.9D + 1.6 (270-Wind)	...	Y		1	.9	14	1.6	47	1.6														
15	0.9D + 1.6 (300-Wind)	...	Y		1	.9	15	1.6	48	1.6														
16	0.9D + 1.6 (315-Wind)	...	Y		1	.9	16	1.6	49	1.6														
17	0.9D + 1.6 (330-Wind)	...	Y		1	.9	17	1.6	50	1.6														
18	1.2D + 1.6 (0-Wind)	...	Y		1	1.2	2	1.6	35	1.6														
19	1.2D + 1.6 (30-Wind)	...	Y		1	1.2	3	1.6	36	1.6														
20	1.2D + 1.6 (45-Wind)	...	Y		1	1.2	4	1.6	37	1.6														
21	1.2D + 1.6 (60-Wind)	...	Y		1	1.2	5	1.6	38	1.6														
22	1.2D + 1.6 (90-Wind)	...	Y		1	1.2	6	1.6	39	1.6														
23	1.2D + 1.6 (120-Wind)	...	Y		1	1.2	7	1.6	40	1.6														
24	1.2D + 1.6 (135-Wind)	...	Y		1	1.2	8	1.6	41	1.6														
25	1.2D + 1.6 (150-Wind)	...	Y		1	1.2	9	1.6	42	1.6														
26	1.2D + 1.6 (180-Wind)	...	Y		1	1.2	10	1.6	43	1.6														
27	1.2D + 1.6 (210-Wind)	...	Y		1	1.2	11	1.6	44	1.6														
28	1.2D + 1.6 (225-Wind)	...	Y		1	1.2	12	1.6	45	1.6														
29	1.2D + 1.6 (240-Wind)	...	Y		1	1.2	13	1.6	46	1.6														
30	1.2D + 1.6 (270-Wind)	...	Y		1	1.2	14	1.6	47	1.6														
31	1.2D + 1.6 (300-Wind)	...	Y		1	1.2	15	1.6	48	1.6														
32	1.2D + 1.6 (315-Wind)	...	Y		1	1.2	16	1.6	49	1.6														
33	1.2D + 1.6 (330-Wind)	...	Y		1	1.2	17	1.6	50	1.6														
34	1.2D + 1.0Di + 1.0 (0-Wind Ice)	...	Y		1	1.2	18	1	51	1	19	1	52	1										
35	1.2D + 1.0Di + 1.0 (30-Wind Ice)	...	Y		1	1.2	18	1	51	1	20	1	53	1										
36	1.2D + 1.0Di + 1.0 (45-Wind Ice)	...	Y		1	1.2	18	1	51	1	21	1	54	1										
37	1.2D + 1.0Di + 1.0 (60-Wind Ice)	...	Y		1	1.2	18	1	51	1	22	1	55	1										
38	1.2D + 1.0Di + 1.0 (90-Wind Ice)	...	Y		1	1.2	18	1	51	1	23	1	56	1										
39	1.2D + 1.0Di + 1.0 (120-Wind Ice)	...	Y		1	1.2	18	1	51	1	24	1	57	1										
40	1.2D + 1.0Di + 1.0 (135-Wind Ice)	...	Y		1	1.2	18	1	51	1	25	1	58	1										
41	1.2D + 1.0Di + 1.0 (150-Wind Ice)	...	Y		1	1.2	18	1	51	1	26	1	59	1										
42	1.2D + 1.0Di + 1.0 (180-Wind Ice)	...	Y		1	1.2	18	1	51	1	27	1	60	1										
43	1.2D + 1.0Di + 1.0 (210-Wind Ice)	...	Y		1	1.2	18	1	51	1	28	1	61	1										
44	1.2D + 1.0Di + 1.0 (225-Wind Ice)	...	Y		1	1.2	18	1	51	1	29	1	62	1										
45	1.2D + 1.0Di + 1.0 (240-Wind Ice)	...	Y		1	1.2	18	1	51	1	30	1	63	1										
46	1.2D + 1.0Di + 1.0 (270-Wind Ice)	...	Y		1	1.2	18	1	51	1	31	1	64	1										
47	1.2D + 1.0Di + 1.0 (300-Wind Ice)	...	Y		1	1.2	18	1	51	1	32	1	65	1										
48	1.2D + 1.0Di + 1.0 (315-Wind Ice)	...	Y		1	1.2	18	1	51	1	33	1	66	1										
49	1.2D + 1.0Di + 1.0 (330-Wind Ice)	...	Y		1	1.2	18	1	51	1	34	1	67	1										
50	1.2D + 1.5LV-1	...	Y		1	1.2	68	1.5																
51	1.2D + 1.5LV-2	...	Y		1	1.2	69	1.5																
52	1.2D + 1.5LV-3	...	Y		1	1.2	70	1.5																
53	1.2D + 1.5LV-4	...	Y		1	1.2	71	1.5																
54	1.2D + 1.5LV-5	...	Y		1	1.2	72	1.5																
55	1.2D + 1.5LV-6	...	Y		1	1.2	73	1.5																
56	1.2D + 1.5LV-7	...	Y		1	1.2	74	1.5																

Load Combinations (Continued)

	Description	...	PD...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
57	1.2D + 1.5LV-8	...	Y		1	1.2	75	1.5																		
58	1.2D + 1.5LV-9	...	Y		1	1.2	76	1.5																		
59	1.2D + 1.5LV-10	...	Y		1	1.2	77	1.5																		
60	1.2D + 1.5LV-11	...	Y		1	1.2	78	1.5																		
61	1.2D + 1.5LV-12	...	Y		1	1.2	79	1.5																		
62	1.2D + 1.5LV-13	...	Y		1	1.2	80	1.5																		
63	1.2D + 1.5LV-14	...	Y		1	1.2	81	1.5																		
64	1.2D + 1.5LV-15	...	Y		1	1.2	82	1.5																		
65	1.2D + 1.5LM-1 + Maintenance (0-Wind)	...	Y		1	1.2	83	1.5	2	.088	35	.0...														
66	1.2D + 1.5LM-1 + Maintenance (30-Wind)	...	Y		1	1.2	83	1.5	3	.088	36	.0...														
67	1.2D + 1.5LM-1 + Maintenance (45-Wind)	...	Y		1	1.2	83	1.5	4	.088	37	.0...														
68	1.2D + 1.5LM-1 + Maintenance (60-Wind)	...	Y		1	1.2	83	1.5	5	.088	38	.0...														
69	1.2D + 1.5LM-1 + Maintenance (90-Wind)	...	Y		1	1.2	83	1.5	6	.088	39	.0...														
70	1.2D + 1.5LM-1 + Maintenance (120-Wind)	...	Y		1	1.2	83	1.5	7	.088	40	.0...														
71	1.2D + 1.5LM-1 + Maintenance (135-Wind)	...	Y		1	1.2	83	1.5	8	.088	41	.0...														
72	1.2D + 1.5LM-1 + Maintenance (150-Wind)	...	Y		1	1.2	83	1.5	9	.088	42	.0...														
73	1.2D + 1.5LM-1 + Maintenance (180-Wind)	...	Y		1	1.2	83	1.5	10	.088	43	.0...														
74	1.2D + 1.5LM-1 + Maintenance (210-Wind)	...	Y		1	1.2	83	1.5	11	.088	44	.0...														
75	1.2D + 1.5LM-1 + Maintenance (225-Wind)	...	Y		1	1.2	83	1.5	12	.088	45	.0...														
76	1.2D + 1.5LM-1 + Maintenance (240-Wind)	...	Y		1	1.2	83	1.5	13	.088	46	.0...														
77	1.2D + 1.5LM-1 + Maintenance (270-Wind)	...	Y		1	1.2	83	1.5	14	.088	47	.0...														
78	1.2D + 1.5LM-1 + Maintenance (300-Wind)	...	Y		1	1.2	83	1.5	15	.088	48	.0...														
79	1.2D + 1.5LM-1 + Maintenance (315-Wind)	...	Y		1	1.2	83	1.5	16	.088	49	.0...														
80	1.2D + 1.5LM-1 + Maintenance (330-Wind)	...	Y		1	1.2	83	1.5	17	.088	50	.0...														
81	1.2D + 1.5LM-2 + Maintenance (0-Wind)	...	Y		1	1.2	84	1.5	2	.088	35	.0...														
82	1.2D + 1.5LM-2 + Maintenance (30-Wind)	...	Y		1	1.2	84	1.5	3	.088	36	.0...														
83	1.2D + 1.5LM-2 + Maintenance (45-Wind)	...	Y		1	1.2	84	1.5	4	.088	37	.0...														
84	1.2D + 1.5LM-2 + Maintenance (60-Wind)	...	Y		1	1.2	84	1.5	5	.088	38	.0...														
85	1.2D + 1.5LM-2 + Maintenance (90-Wind)	...	Y		1	1.2	84	1.5	6	.088	39	.0...														
86	1.2D + 1.5LM-2 + Maintenance (120-Wind)	...	Y		1	1.2	84	1.5	7	.088	40	.0...														
87	1.2D + 1.5LM-2 + Maintenance (135-Wind)	...	Y		1	1.2	84	1.5	8	.088	41	.0...														
88	1.2D + 1.5LM-2 + Maintenance (150-Wind)	...	Y		1	1.2	84	1.5	9	.088	42	.0...														
89	1.2D + 1.5LM-2 + Maintenance (180-Wind)	...	Y		1	1.2	84	1.5	10	.088	43	.0...														
90	1.2D + 1.5LM-2 + Maintenance (210-Wind)	...	Y		1	1.2	84	1.5	11	.088	44	.0...														
91	1.2D + 1.5LM-2 + Maintenance (225-Wind)	...	Y		1	1.2	84	1.5	12	.088	45	.0...														
92	1.2D + 1.5LM-2 + Maintenance (240-Wind)	...	Y		1	1.2	84	1.5	13	.088	46	.0...														
93	1.2D + 1.5LM-2 + Maintenance (270-Wind)	...	Y		1	1.2	84	1.5	14	.088	47	.0...														
94	1.2D + 1.5LM-2 + Maintenance (300-Wind)	...	Y		1	1.2	84	1.5	15	.088	48	.0...														
95	1.2D + 1.5LM-2 + Maintenance (315-Wind)	...	Y		1	1.2	84	1.5	16	.088	49	.0...														
96	1.2D + 1.5LM-2 + Maintenance (330-Wind)	...	Y		1	1.2	84	1.5	17	.088	50	.0...														
97	1.2D + 1.5LM-3 + Maintenance (0-Wind)	...	Y		1	1.2	85	1.5	2	.088	35	.0...														
98	1.2D + 1.5LM-3 + Maintenance (30-Wind)	...	Y		1	1.2	85	1.5	3	.088	36	.0...														
99	1.2D + 1.5LM-3 + Maintenance (45-Wind)	...	Y		1	1.2	85	1.5	4	.088	37	.0...														
100	1.2D + 1.5LM-3 + Maintenance (60-Wind)	...	Y		1	1.2	85	1.5	5	.088	38	.0...														
101	1.2D + 1.5LM-3 + Maintenance (90-Wind)	...	Y		1	1.2	85	1.5	6	.088	39	.0...														
102	1.2D + 1.5LM-3 + Maintenance (120-Wind)	...	Y		1	1.2	85	1.5	7	.088	40	.0...														
103	1.2D + 1.5LM-3 + Maintenance (135-Wind)	...	Y		1	1.2	85	1.5	8	.088	41	.0...														
104	1.2D + 1.5LM-3 + Maintenance (150-Wind)	...	Y		1	1.2	85	1.5	9	.088	42	.0...														
105	1.2D + 1.5LM-3 + Maintenance (180-Wind)	...	Y		1	1.2	85	1.5	10	.088	43	.0...														
106	1.2D + 1.5LM-3 + Maintenance (210-Wind)	...	Y		1	1.2	85	1.5	11	.088	44	.0...														
107	1.2D + 1.5LM-3 + Maintenance (225-Wind)	...	Y		1	1.2	85	1.5	12	.088	45	.0...														
108	1.2D + 1.5LM-3 + Maintenance (240-Wind)	...	Y		1	1.2	85	1.5	13	.088	46	.0...														
109	1.2D + 1.5LM-3 + Maintenance (270-Wind)	...	Y		1	1.2	85	1.5	14	.088	47	.0...														
110	1.2D + 1.5LM-3 + Maintenance (300-Wind)	...	Y		1	1.2	85	1.5	15	.088	48	.0...														
111	1.2D + 1.5LM-3 + Maintenance (315-Wind)	...	Y		1	1.2	85	1.5	16	.088	49	.0...														
112	1.2D + 1.5LM-3 + Maintenance (330-Wind)	...	Y		1	1.2	85	1.5	17	.088	50	.0...														
113	1.2D + 1.5LM-4 + Maintenance (0-Wind)	...	Y		1	1.2	86	1.5	2	.088	35	.0...														

Load Combinations (Continued)

	Description	...	PD...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
114	1.2D + 1.5LM-4 + Maintenance (30-Wind)	...	Y		1	1.2	86	1.5	3	.088	36	.0...												
115	1.2D + 1.5LM-4 + Maintenance (45-Wind)	...	Y		1	1.2	86	1.5	4	.088	37	.0...												
116	1.2D + 1.5LM-4 + Maintenance (60-Wind)	...	Y		1	1.2	86	1.5	5	.088	38	.0...												
117	1.2D + 1.5LM-4 + Maintenance (90-Wind)	...	Y		1	1.2	86	1.5	6	.088	39	.0...												
118	1.2D + 1.5LM-4 + Maintenance (120-Wind)	...	Y		1	1.2	86	1.5	7	.088	40	.0...												
119	1.2D + 1.5LM-4 + Maintenance (135-Wind)	...	Y		1	1.2	86	1.5	8	.088	41	.0...												
120	1.2D + 1.5LM-4 + Maintenance (150-Wind)	...	Y		1	1.2	86	1.5	9	.088	42	.0...												
121	1.2D + 1.5LM-4 + Maintenance (180-Wind)	...	Y		1	1.2	86	1.5	10	.088	43	.0...												
122	1.2D + 1.5LM-4 + Maintenance (210-Wind)	...	Y		1	1.2	86	1.5	11	.088	44	.0...												
123	1.2D + 1.5LM-4 + Maintenance (225-Wind)	...	Y		1	1.2	86	1.5	12	.088	45	.0...												
124	1.2D + 1.5LM-4 + Maintenance (240-Wind)	...	Y		1	1.2	86	1.5	13	.088	46	.0...												
125	1.2D + 1.5LM-4 + Maintenance (270-Wind)	...	Y		1	1.2	86	1.5	14	.088	47	.0...												
126	1.2D + 1.5LM-4 + Maintenance (300-Wind)	...	Y		1	1.2	86	1.5	15	.088	48	.0...												
127	1.2D + 1.5LM-4 + Maintenance (315-Wind)	...	Y		1	1.2	86	1.5	16	.088	49	.0...												
128	1.2D + 1.5LM-4 + Maintenance (330-Wind)	...	Y		1	1.2	86	1.5	17	.088	50	.0...												
129	1.2D + 1.5LM-5 + Maintenance (0-Wind)	...	Y		1	1.2	87	1.5	2	.088	35	.0...												
130	1.2D + 1.5LM-5 + Maintenance (30-Wind)	...	Y		1	1.2	87	1.5	3	.088	36	.0...												
131	1.2D + 1.5LM-5 + Maintenance (45-Wind)	...	Y		1	1.2	87	1.5	4	.088	37	.0...												
132	1.2D + 1.5LM-5 + Maintenance (60-Wind)	...	Y		1	1.2	87	1.5	5	.088	38	.0...												
133	1.2D + 1.5LM-5 + Maintenance (90-Wind)	...	Y		1	1.2	87	1.5	6	.088	39	.0...												
134	1.2D + 1.5LM-5 + Maintenance (120-Wind)	...	Y		1	1.2	87	1.5	7	.088	40	.0...												
135	1.2D + 1.5LM-5 + Maintenance (135-Wind)	...	Y		1	1.2	87	1.5	8	.088	41	.0...												
136	1.2D + 1.5LM-5 + Maintenance (150-Wind)	...	Y		1	1.2	87	1.5	9	.088	42	.0...												
137	1.2D + 1.5LM-5 + Maintenance (180-Wind)	...	Y		1	1.2	87	1.5	10	.088	43	.0...												
138	1.2D + 1.5LM-5 + Maintenance (210-Wind)	...	Y		1	1.2	87	1.5	11	.088	44	.0...												
139	1.2D + 1.5LM-5 + Maintenance (225-Wind)	...	Y		1	1.2	87	1.5	12	.088	45	.0...												
140	1.2D + 1.5LM-5 + Maintenance (240-Wind)	...	Y		1	1.2	87	1.5	13	.088	46	.0...												
141	1.2D + 1.5LM-5 + Maintenance (270-Wind)	...	Y		1	1.2	87	1.5	14	.088	47	.0...												
142	1.2D + 1.5LM-5 + Maintenance (300-Wind)	...	Y		1	1.2	87	1.5	15	.088	48	.0...												
143	1.2D + 1.5LM-5 + Maintenance (315-Wind)	...	Y		1	1.2	87	1.5	16	.088	49	.0...												
144	1.2D + 1.5LM-5 + Maintenance (330-Wind)	...	Y		1	1.2	87	1.5	17	.088	50	.0...												
145	1.2D + 1.5LM-6 + Maintenance (0-Wind)	...	Y		1	1.2	88	1.5	2	.088	35	.0...												
146	1.2D + 1.5LM-6 + Maintenance (30-Wind)	...	Y		1	1.2	88	1.5	3	.088	36	.0...												
147	1.2D + 1.5LM-6 + Maintenance (45-Wind)	...	Y		1	1.2	88	1.5	4	.088	37	.0...												
148	1.2D + 1.5LM-6 + Maintenance (60-Wind)	...	Y		1	1.2	88	1.5	5	.088	38	.0...												
149	1.2D + 1.5LM-6 + Maintenance (90-Wind)	...	Y		1	1.2	88	1.5	6	.088	39	.0...												
150	1.2D + 1.5LM-6 + Maintenance (120-Wind)	...	Y		1	1.2	88	1.5	7	.088	40	.0...												
151	1.2D + 1.5LM-6 + Maintenance (135-Wind)	...	Y		1	1.2	88	1.5	8	.088	41	.0...												
152	1.2D + 1.5LM-6 + Maintenance (150-Wind)	...	Y		1	1.2	88	1.5	9	.088	42	.0...												
153	1.2D + 1.5LM-6 + Maintenance (180-Wind)	...	Y		1	1.2	88	1.5	10	.088	43	.0...												
154	1.2D + 1.5LM-6 + Maintenance (210-Wind)	...	Y		1	1.2	88	1.5	11	.088	44	.0...												
155	1.2D + 1.5LM-6 + Maintenance (225-Wind)	...	Y		1	1.2	88	1.5	12	.088	45	.0...												
156	1.2D + 1.5LM-6 + Maintenance (240-Wind)	...	Y		1	1.2	88	1.5	13	.088	46	.0...												
157	1.2D + 1.5LM-6 + Maintenance (270-Wind)	...	Y		1	1.2	88	1.5	14	.088	47	.0...												
158	1.2D + 1.5LM-6 + Maintenance (300-Wind)	...	Y		1	1.2	88	1.5	15	.088	48	.0...												
159	1.2D + 1.5LM-6 + Maintenance (315-Wind)	...	Y		1	1.2	88	1.5	16	.088	49	.0...												
160	1.2D + 1.5LM-6 + Maintenance (330-Wind)	...	Y		1	1.2	88	1.5	17	.088	50	.0...												
161	1.2D + 1.5LM-7 + Maintenance (0-Wind)	...	Y		1	1.2	89	1.5	2	.088	35	.0...												
162	1.2D + 1.5LM-7 + Maintenance (30-Wind)	...	Y		1	1.2	89	1.5	3	.088	36	.0...												
163	1.2D + 1.5LM-7 + Maintenance (45-Wind)	...	Y		1	1.2	89	1.5	4	.088	37	.0...												
164	1.2D + 1.5LM-7 + Maintenance (60-Wind)	...	Y		1	1.2	89	1.5	5	.088	38	.0...												
165	1.2D + 1.5LM-7 + Maintenance (90-Wind)	...	Y		1	1.2	89	1.5	6	.088	39	.0...												
166	1.2D + 1.5LM-7 + Maintenance (120-Wind)	...	Y		1	1.2	89	1.5	7	.088	40	.0...												
167	1.2D + 1.5LM-7 + Maintenance (135-Wind)	...	Y		1	1.2	89	1.5	8	.088	41	.0...												
168	1.2D + 1.5LM-7 + Maintenance (150-Wind)	...	Y		1	1.2	89	1.5	9	.088	42	.0...												
169	1.2D + 1.5LM-7 + Maintenance (180-Wind)	...	Y		1	1.2	89	1.5	10	.088	43	.0...												
170	1.2D + 1.5LM-7 + Maintenance (210-Wind)	...	Y		1	1.2	89	1.5	11	.088	44	.0...												

Load Combinations (Continued)

	Description	...	PD...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
171	1.2D + 1.5LM-7 + Maintenance (225-Wind)	...	Y		1	1.2	89	1.5	12	.088	45	.0...												
172	1.2D + 1.5LM-7 + Maintenance (240-Wind)	...	Y		1	1.2	89	1.5	13	.088	46	.0...												
173	1.2D + 1.5LM-7 + Maintenance (270-Wind)	...	Y		1	1.2	89	1.5	14	.088	47	.0...												
174	1.2D + 1.5LM-7 + Maintenance (300-Wind)	...	Y		1	1.2	89	1.5	15	.088	48	.0...												
175	1.2D + 1.5LM-7 + Maintenance (315-Wind)	...	Y		1	1.2	89	1.5	16	.088	49	.0...												
176	1.2D + 1.5LM-7 + Maintenance (330-Wind)	...	Y		1	1.2	89	1.5	17	.088	50	.0...												
177	1.2D + 1.5LM-8 + Maintenance (0-Wind)	...	Y		1	1.2	90	1.5	2	.088	35	.0...												
178	1.2D + 1.5LM-8 + Maintenance (30-Wind)	...	Y		1	1.2	90	1.5	3	.088	36	.0...												
179	1.2D + 1.5LM-8 + Maintenance (45-Wind)	...	Y		1	1.2	90	1.5	4	.088	37	.0...												
180	1.2D + 1.5LM-8 + Maintenance (60-Wind)	...	Y		1	1.2	90	1.5	5	.088	38	.0...												
181	1.2D + 1.5LM-8 + Maintenance (90-Wind)	...	Y		1	1.2	90	1.5	6	.088	39	.0...												
182	1.2D + 1.5LM-8 + Maintenance (120-Wind)	...	Y		1	1.2	90	1.5	7	.088	40	.0...												
183	1.2D + 1.5LM-8 + Maintenance (135-Wind)	...	Y		1	1.2	90	1.5	8	.088	41	.0...												
184	1.2D + 1.5LM-8 + Maintenance (150-Wind)	...	Y		1	1.2	90	1.5	9	.088	42	.0...												
185	1.2D + 1.5LM-8 + Maintenance (180-Wind)	...	Y		1	1.2	90	1.5	10	.088	43	.0...												
186	1.2D + 1.5LM-8 + Maintenance (210-Wind)	...	Y		1	1.2	90	1.5	11	.088	44	.0...												
187	1.2D + 1.5LM-8 + Maintenance (225-Wind)	...	Y		1	1.2	90	1.5	12	.088	45	.0...												
188	1.2D + 1.5LM-8 + Maintenance (240-Wind)	...	Y		1	1.2	90	1.5	13	.088	46	.0...												
189	1.2D + 1.5LM-8 + Maintenance (270-Wind)	...	Y		1	1.2	90	1.5	14	.088	47	.0...												
190	1.2D + 1.5LM-8 + Maintenance (300-Wind)	...	Y		1	1.2	90	1.5	15	.088	48	.0...												
191	1.2D + 1.5LM-8 + Maintenance (315-Wind)	...	Y		1	1.2	90	1.5	16	.088	49	.0...												
192	1.2D + 1.5LM-8 + Maintenance (330-Wind)	...	Y		1	1.2	90	1.5	17	.088	50	.0...												
193	1.2D + 1.5LM-9 + Maintenance (0-Wind)	...	Y		1	1.2	91	1.5	2	.088	35	.0...												
194	1.2D + 1.5LM-9 + Maintenance (30-Wind)	...	Y		1	1.2	91	1.5	3	.088	36	.0...												
195	1.2D + 1.5LM-9 + Maintenance (45-Wind)	...	Y		1	1.2	91	1.5	4	.088	37	.0...												
196	1.2D + 1.5LM-9 + Maintenance (60-Wind)	...	Y		1	1.2	91	1.5	5	.088	38	.0...												
197	1.2D + 1.5LM-9 + Maintenance (90-Wind)	...	Y		1	1.2	91	1.5	6	.088	39	.0...												
198	1.2D + 1.5LM-9 + Maintenance (120-Wind)	...	Y		1	1.2	91	1.5	7	.088	40	.0...												
199	1.2D + 1.5LM-9 + Maintenance (135-Wind)	...	Y		1	1.2	91	1.5	8	.088	41	.0...												
200	1.2D + 1.5LM-9 + Maintenance (150-Wind)	...	Y		1	1.2	91	1.5	9	.088	42	.0...												
201	1.2D + 1.5LM-9 + Maintenance (180-Wind)	...	Y		1	1.2	91	1.5	10	.088	43	.0...												
202	1.2D + 1.5LM-9 + Maintenance (210-Wind)	...	Y		1	1.2	91	1.5	11	.088	44	.0...												
203	1.2D + 1.5LM-9 + Maintenance (225-Wind)	...	Y		1	1.2	91	1.5	12	.088	45	.0...												
204	1.2D + 1.5LM-9 + Maintenance (240-Wind)	...	Y		1	1.2	91	1.5	13	.088	46	.0...												
205	1.2D + 1.5LM-9 + Maintenance (270-Wind)	...	Y		1	1.2	91	1.5	14	.088	47	.0...												
206	1.2D + 1.5LM-9 + Maintenance (300-Wind)	...	Y		1	1.2	91	1.5	15	.088	48	.0...												
207	1.2D + 1.5LM-9 + Maintenance (315-Wind)	...	Y		1	1.2	91	1.5	16	.088	49	.0...												
208	1.2D + 1.5LM-9 + Maintenance (330-Wind)	...	Y		1	1.2	91	1.5	17	.088	50	.0...												
209	1.2D + 1.5LM-10 + Maintenance (0-Wind)	...	Y		1	1.2	92	1.5	2	.088	35	.0...												
210	1.2D + 1.5LM-10 + Maintenance (30-Wind)	...	Y		1	1.2	92	1.5	3	.088	36	.0...												
211	1.2D + 1.5LM-10 + Maintenance (45-Wind)	...	Y		1	1.2	92	1.5	4	.088	37	.0...												
212	1.2D + 1.5LM-10 + Maintenance (60-Wind)	...	Y		1	1.2	92	1.5	5	.088	38	.0...												
213	1.2D + 1.5LM-10 + Maintenance (90-Wind)	...	Y		1	1.2	92	1.5	6	.088	39	.0...												
214	1.2D + 1.5LM-10 + Maintenance (120-Wind)	...	Y		1	1.2	92	1.5	7	.088	40	.0...												
215	1.2D + 1.5LM-10 + Maintenance (135-Wind)	...	Y		1	1.2	92	1.5	8	.088	41	.0...												
216	1.2D + 1.5LM-10 + Maintenance (150-Wind)	...	Y		1	1.2	92	1.5	9	.088	42	.0...												
217	1.2D + 1.5LM-10 + Maintenance (180-Wind)	...	Y		1	1.2	92	1.5	10	.088	43	.0...												
218	1.2D + 1.5LM-10 + Maintenance (210-Wind)	...	Y		1	1.2	92	1.5	11	.088	44	.0...												
219	1.2D + 1.5LM-10 + Maintenance (225-Wind)	...	Y		1	1.2	92	1.5	12	.088	45	.0...												
220	1.2D + 1.5LM-10 + Maintenance (240-Wind)	...	Y		1	1.2	92	1.5	13	.088	46	.0...												
221	1.2D + 1.5LM-10 + Maintenance (270-Wind)	...	Y		1	1.2	92	1.5	14	.088	47	.0...												
222	1.2D + 1.5LM-10 + Maintenance (300-Wind)	...	Y		1	1.2	92	1.5	15	.088	48	.0...												
223	1.2D + 1.5LM-10 + Maintenance (315-Wind)	...	Y		1	1.2	92	1.5	16	.088	49	.0...												
224	1.2D + 1.5LM-10 + Maintenance (330-Wind)	...	Y		1	1.2	92	1.5	17	.088	50	.0...												
225	1.2D + 1.5LM-11 + Maintenance (0-Wind)	...	Y		1	1.2	93	1.5	2	.088	35	.0...												
226	1.2D + 1.5LM-11 + Maintenance (30-Wind)	...	Y		1	1.2	93	1.5	3	.088	36	.0...												
227	1.2D + 1.5LM-11 + Maintenance (45-Wind)	...	Y		1	1.2	93	1.5	4	.088	37	.0...												

Load Combinations (Continued)

	Description	...	PD...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
228	1.2D + 1.5LM-11 + Maintenance (60-Wind)	...	Y		1	1.2	93	1.5	5	.088	38	.0...												
229	1.2D + 1.5LM-11 + Maintenance (90-Wind)	...	Y		1	1.2	93	1.5	6	.088	39	.0...												
230	1.2D + 1.5LM-11 + Maintenance (120-Wind)	...	Y		1	1.2	93	1.5	7	.088	40	.0...												
231	1.2D + 1.5LM-11 + Maintenance (135-Wind)	...	Y		1	1.2	93	1.5	8	.088	41	.0...												
232	1.2D + 1.5LM-11 + Maintenance (150-Wind)	...	Y		1	1.2	93	1.5	9	.088	42	.0...												
233	1.2D + 1.5LM-11 + Maintenance (180-Wind)	...	Y		1	1.2	93	1.5	10	.088	43	.0...												
234	1.2D + 1.5LM-11 + Maintenance (210-Wind)	...	Y		1	1.2	93	1.5	11	.088	44	.0...												
235	1.2D + 1.5LM-11 + Maintenance (225-Wind)	...	Y		1	1.2	93	1.5	12	.088	45	.0...												
236	1.2D + 1.5LM-11 + Maintenance (240-Wind)	...	Y		1	1.2	93	1.5	13	.088	46	.0...												
237	1.2D + 1.5LM-11 + Maintenance (270-Wind)	...	Y		1	1.2	93	1.5	14	.088	47	.0...												
238	1.2D + 1.5LM-11 + Maintenance (300-Wind)	...	Y		1	1.2	93	1.5	15	.088	48	.0...												
239	1.2D + 1.5LM-11 + Maintenance (315-Wind)	...	Y		1	1.2	93	1.5	16	.088	49	.0...												
240	1.2D + 1.5LM-11 + Maintenance (330-Wind)	...	Y		1	1.2	93	1.5	17	.088	50	.0...												
241	1.2D + 1.5LM-12 + Maintenance (0-Wind)	...	Y		1	1.2	94	1.5	2	.088	35	.0...												
242	1.2D + 1.5LM-12 + Maintenance (30-Wind)	...	Y		1	1.2	94	1.5	3	.088	36	.0...												
243	1.2D + 1.5LM-12 + Maintenance (45-Wind)	...	Y		1	1.2	94	1.5	4	.088	37	.0...												
244	1.2D + 1.5LM-12 + Maintenance (60-Wind)	...	Y		1	1.2	94	1.5	5	.088	38	.0...												
245	1.2D + 1.5LM-12 + Maintenance (90-Wind)	...	Y		1	1.2	94	1.5	6	.088	39	.0...												
246	1.2D + 1.5LM-12 + Maintenance (120-Wind)	...	Y		1	1.2	94	1.5	7	.088	40	.0...												
247	1.2D + 1.5LM-12 + Maintenance (135-Wind)	...	Y		1	1.2	94	1.5	8	.088	41	.0...												
248	1.2D + 1.5LM-12 + Maintenance (150-Wind)	...	Y		1	1.2	94	1.5	9	.088	42	.0...												
249	1.2D + 1.5LM-12 + Maintenance (180-Wind)	...	Y		1	1.2	94	1.5	10	.088	43	.0...												
250	1.2D + 1.5LM-12 + Maintenance (210-Wind)	...	Y		1	1.2	94	1.5	11	.088	44	.0...												
251	1.2D + 1.5LM-12 + Maintenance (225-Wind)	...	Y		1	1.2	94	1.5	12	.088	45	.0...												
252	1.2D + 1.5LM-12 + Maintenance (240-Wind)	...	Y		1	1.2	94	1.5	13	.088	46	.0...												
253	1.2D + 1.5LM-12 + Maintenance (270-Wind)	...	Y		1	1.2	94	1.5	14	.088	47	.0...												
254	1.2D + 1.5LM-12 + Maintenance (300-Wind)	...	Y		1	1.2	94	1.5	15	.088	48	.0...												
255	1.2D + 1.5LM-12 + Maintenance (315-Wind)	...	Y		1	1.2	94	1.5	16	.088	49	.0...												
256	1.2D + 1.5LM-12 + Maintenance (330-Wind)	...	Y		1	1.2	94	1.5	17	.088	50	.0...												
257	1.2D + 1.5LM-13 + Maintenance (0-Wind)	...	Y		1	1.2	95	1.5	2	.088	35	.0...												
258	1.2D + 1.5LM-13 + Maintenance (30-Wind)	...	Y		1	1.2	95	1.5	3	.088	36	.0...												
259	1.2D + 1.5LM-13 + Maintenance (45-Wind)	...	Y		1	1.2	95	1.5	4	.088	37	.0...												
260	1.2D + 1.5LM-13 + Maintenance (60-Wind)	...	Y		1	1.2	95	1.5	5	.088	38	.0...												
261	1.2D + 1.5LM-13 + Maintenance (90-Wind)	...	Y		1	1.2	95	1.5	6	.088	39	.0...												
262	1.2D + 1.5LM-13 + Maintenance (120-Wind)	...	Y		1	1.2	95	1.5	7	.088	40	.0...												
263	1.2D + 1.5LM-13 + Maintenance (135-Wind)	...	Y		1	1.2	95	1.5	8	.088	41	.0...												
264	1.2D + 1.5LM-13 + Maintenance (150-Wind)	...	Y		1	1.2	95	1.5	9	.088	42	.0...												
265	1.2D + 1.5LM-13 + Maintenance (180-Wind)	...	Y		1	1.2	95	1.5	10	.088	43	.0...												
266	1.2D + 1.5LM-13 + Maintenance (210-Wind)	...	Y		1	1.2	95	1.5	11	.088	44	.0...												
267	1.2D + 1.5LM-13 + Maintenance (225-Wind)	...	Y		1	1.2	95	1.5	12	.088	45	.0...												
268	1.2D + 1.5LM-13 + Maintenance (240-Wind)	...	Y		1	1.2	95	1.5	13	.088	46	.0...												
269	1.2D + 1.5LM-13 + Maintenance (270-Wind)	...	Y		1	1.2	95	1.5	14	.088	47	.0...												
270	1.2D + 1.5LM-13 + Maintenance (300-Wind)	...	Y		1	1.2	95	1.5	15	.088	48	.0...												
271	1.2D + 1.5LM-13 + Maintenance (315-Wind)	...	Y		1	1.2	95	1.5	16	.088	49	.0...												
272	1.2D + 1.5LM-13 + Maintenance (330-Wind)	...	Y		1	1.2	95	1.5	17	.088	50	.0...												
273	1.2D + 1.5LM-14 + Maintenance (0-Wind)	...	Y		1	1.2	96	1.5	2	.088	35	.0...												
274	1.2D + 1.5LM-14 + Maintenance (30-Wind)	...	Y		1	1.2	96	1.5	3	.088	36	.0...												
275	1.2D + 1.5LM-14 + Maintenance (45-Wind)	...	Y		1	1.2	96	1.5	4	.088	37	.0...												
276	1.2D + 1.5LM-14 + Maintenance (60-Wind)	...	Y		1	1.2	96	1.5	5	.088	38	.0...												
277	1.2D + 1.5LM-14 + Maintenance (90-Wind)	...	Y		1	1.2	96	1.5	6	.088	39	.0...												
278	1.2D + 1.5LM-14 + Maintenance (120-Wind)	...	Y		1	1.2	96	1.5	7	.088	40	.0...												
279	1.2D + 1.5LM-14 + Maintenance (135-Wind)	...	Y		1	1.2	96	1.5	8	.088	41	.0...												
280	1.2D + 1.5LM-14 + Maintenance (150-Wind)	...	Y		1	1.2	96	1.5	9	.088	42	.0...												
281	1.2D + 1.5LM-14 + Maintenance (180-Wind)	...	Y		1	1.2	96	1.5	10	.088	43	.0...												
282	1.2D + 1.5LM-14 + Maintenance (210-Wind)	...	Y		1	1.2	96	1.5	11	.088	44	.0...												
283	1.2D + 1.5LM-14 + Maintenance (225-Wind)	...	Y		1	1.2	96	1.5	12	.088	45	.0...												
284	1.2D + 1.5LM-14 + Maintenance (240-Wind)	...	Y		1	1.2	96	1.5	13	.088	46	.0...												

Load Combinations (Continued)

	Description	...	PD...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	F...	B...	F...	...	F...	...	F...	...	F...	...	F...	...	F...
285	1.2D + 1.5LM-14 + Maintenance (270-Wind)	...	Y		1	1.2	96	1.5	14	.088	47	.0...												
286	1.2D + 1.5LM-14 + Maintenance (300-Wind)	...	Y		1	1.2	96	1.5	15	.088	48	.0...												
287	1.2D + 1.5LM-14 + Maintenance (315-Wind)	...	Y		1	1.2	96	1.5	16	.088	49	.0...												
288	1.2D + 1.5LM-14 + Maintenance (330-Wind)	...	Y		1	1.2	96	1.5	17	.088	50	.0...												
289	1.2D + 1.5LM-15 + Maintenance (0-Wind)	...	Y		1	1.2	97	1.5	2	.088	35	.0...												
290	1.2D + 1.5LM-15 + Maintenance (30-Wind)	...	Y		1	1.2	97	1.5	3	.088	36	.0...												
291	1.2D + 1.5LM-15 + Maintenance (45-Wind)	...	Y		1	1.2	97	1.5	4	.088	37	.0...												
292	1.2D + 1.5LM-15 + Maintenance (60-Wind)	...	Y		1	1.2	97	1.5	5	.088	38	.0...												
293	1.2D + 1.5LM-15 + Maintenance (90-Wind)	...	Y		1	1.2	97	1.5	6	.088	39	.0...												
294	1.2D + 1.5LM-15 + Maintenance (120-Wind)	...	Y		1	1.2	97	1.5	7	.088	40	.0...												
295	1.2D + 1.5LM-15 + Maintenance (135-Wind)	...	Y		1	1.2	97	1.5	8	.088	41	.0...												
296	1.2D + 1.5LM-15 + Maintenance (150-Wind)	...	Y		1	1.2	97	1.5	9	.088	42	.0...												
297	1.2D + 1.5LM-15 + Maintenance (180-Wind)	...	Y		1	1.2	97	1.5	10	.088	43	.0...												
298	1.2D + 1.5LM-15 + Maintenance (210-Wind)	...	Y		1	1.2	97	1.5	11	.088	44	.0...												
299	1.2D + 1.5LM-15 + Maintenance (225-Wind)	...	Y		1	1.2	97	1.5	12	.088	45	.0...												
300	1.2D + 1.5LM-15 + Maintenance (240-Wind)	...	Y		1	1.2	97	1.5	13	.088	46	.0...												
301	1.2D + 1.5LM-15 + Maintenance (270-Wind)	...	Y		1	1.2	97	1.5	14	.088	47	.0...												
302	1.2D + 1.5LM-15 + Maintenance (300-Wind)	...	Y		1	1.2	97	1.5	15	.088	48	.0...												
303	1.2D + 1.5LM-15 + Maintenance (315-Wind)	...	Y		1	1.2	97	1.5	16	.088	49	.0...												
304	1.2D + 1.5LM-15 + Maintenance (330-Wind)	...	Y		1	1.2	97	1.5	17	.088	50	.0...												

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N16	max	1958.039	31	733.17	81	874.296	18	334.968	2	2139.758	16	460.824	23
2		min	-1939.539	7	107.927	10	-804.819	10	-2515.046	89	-2136.662	24	-445.132	15
3	N17	max	1287.418	30	732.282	140	1834.73	2	1276.687	130	2040.73	10	2173.952	133
4		min	-1228.539	6	107.261	5	-1875.838	26	-373.388	11	-2050.261	18	-320.051	14
5	N18	max	1271.903	14	732.467	182	1604.166	2	1259.001	192	2043.169	5	343.981	6
6		min	-1339.554	22	107.402	15	-1629.427	26	-367.931	9	-2046.794	29	-2185.998	189
7	N70A	max	61.207	14	1551.218	34	-57.461	10	0	1	.223	175	.418	147
8		min	-61.196	6	20.465	10	-1911.264	34	0	1	-.32	147	-.291	175
9	N72	max	-50.283	5	1552.642	45	956.81	46	.362	205	.222	73	.146	73
10		min	-1656.779	45	20.925	5	26.34	6	-.252	73	-.319	205	-.209	205
11	N74	max	1644.613	39	1541.851	39	949.422	39	.252	116	.223	116	.146	116
12		min	46.345	15	17.447	15	26.757	15	-.362	108	-.319	108	-.209	108
13	Totals:	max	3762.306	30	6219.111	38	3762.306	2						
14		min	-3762.306	6	1558.676	14	-3762.306	26						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	SA1	HSS4.5x4.5x3	.122	0	29	.031	0	z	85	93982.368	94932	12717	12717	1....	H1-1b
2	SA2	HSS4.5x4.5x3	.123	0	28	.031	0	z	187	93982.368	94932	12717	12717	1....	H1-1b
3	SA3	HSS4.5x4.5x3	.126	0	24	.031	0	z	144	93982.41	94932	12717	12717	1....	H1-1b
4	H1	L3x3x3	.598	14	102	.068	14	z	102	12869.479	35316	1320.097	1421.916	1	H2-1
5	H3	L3x3x3	.598	14	145	.068	14	z	145	12869.479	35316	1320.097	1421.926	1	H2-1
6	H2	L3x3x3	.598	14	204	.068	14	z	204	12869.479	35316	1320.097	1421.914	1	H2-1
7	H4	L3x3x3	.179	3.5	32	.015	0	y	43	25406.116	35316	1320.097	2094.152	1	H2-1
8	H6	L3x3x3	.174	3.5	27	.015	7	y	35	25406.116	35316	1320.097	2094.128	1	H2-1
9	H5	L3x3x3	.178	3.5	25	.015	0	y	49	25406.116	35316	1320.097	2094.128	1	H2-1
10	GS3	LL3x3x3x0	.445	0	205	.051	1.979	y	205	50486.945	70632	4823.218	2344.607	1....	H1-1b
11	GS2	LL3x3x3x0	.445	0	104	.051	1.979	y	104	50486.994	70632	4823.218	2344.607	1....	H1-1b
12	GS1	LL3x3x3x0	.445	0	147	.051	1.979	y	146	50487.072	70632	4823.218	2344.607	1....	H1-1b
13	HR1	PIPE_2.0	.164	1.432	31	.137	11.719		98	18606.359	32130	1871.625	1871.625	2....	H1-1b
14	HR3	PIPE_2.0	.164	1.432	26	.137	11.719		157	18606.359	32130	1871.625	1871.625	2....	H1-1b

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
15	HR2	PIPE_2.0	.169	1.432	20	.137	11.719		200	18606.359	32130	1871.625	1871.625	2....	H1-1b
16	SA4	HSS4x4x3	.332	0	24	.138	0	z	23	83001.728	83592	9909	9909	1....	H1-1b
17	SA6	HSS4x4x3	.309	0	19	.139	0	z	18	83001.693	83592	9909	9909	1....	H1-1b
18	SA5	HSS4x4x3	.309	0	30	.139	0	z	29	83001.728	83592	9909	9909	1....	H1-1b
19	HRB3	L2.5x2.5x3	.291	0	31	.052	0	z	32	26697.818	29192.4	872.574	1971.83	2....	H2-1
20	HRB1	L2.5x2.5x3	.291	0	21	.051	0	z	21	26697.818	29192.4	872.574	1971.83	2....	H2-1
21	HRB2	L2.5x2.5x3	.291	0	26	.051	0	z	26	26697.818	29192.4	872.574	1971.83	2....	H2-1
22	MP3	PIPE_2.0	.160	1.042	30	.052	1.042		27	23808.54	32130	1871.625	1871.625	1....	H1-1b
23	MP2	PIPE_2.0	.434	1.042	18	.062	1.042		30	23808.54	32130	1871.625	1871.625	1....	H1-1b
24	MP1	PIPE_2.0	.209	1.042	23	.069	1.042		25	23808.54	32130	1871.625	1871.625	1....	H1-1b
25	MP9	PIPE_2.0	.160	1.042	25	.052	1.042		22	23808.54	32130	1871.625	1871.625	1....	H1-1b
26	MP8	PIPE_2.0	.434	1.042	29	.062	1.042		25	23808.54	32130	1871.625	1871.625	1....	H1-1b
27	MP7	PIPE_2.0	.209	1.042	18	.069	1.042		19	23808.54	32130	1871.625	1871.625	1....	H1-1b
28	MP6	PIPE_2.0	.160	1.042	19	.054	3.958		32	23808.54	32130	1871.625	1871.625	1....	H1-1b
29	MP5	PIPE_2.0	.434	1.042	23	.062	1.042		20	23808.54	32130	1871.625	1871.625	1....	H1-1b
30	MP4	PIPE_2.0	.209	1.042	29	.069	1.042		30	23808.54	32130	1871.625	1871.625	2....	H1-1b
31	K1	LL2.5x2.5x3x3	.093	3.5	37	.005	7	y	35	31016.938	58320	3954.307	2549.586	1....	H1-1b
32	K3	LL2.5x2.5x3x3	.093	3.5	47	.005	0	y	46	31016.938	58320	3954.307	2549.586	1....	H1-1b
33	K2	LL2.5x2.5x3x3	.093	3.5	42	.005	0	y	41	31016.938	58320	3954.307	2549.586	1....	H1-1b

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

September 28, 2018

Paul F. Sagristano
Cherundolo Consulting
1280 Route 46 West, Suite 9
Parsippany NJ, 07054

RE: **EM-SPRINT-083-180918** – Sprint Spectrum Realty Company, LP notice of intent to modify an existing telecommunications facility located at 290 Preston Avenue, Middletown, Connecticut.

Dear Mr. Sagristano:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on September 18, 2018.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "…any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified a deficiency in the Structural Analysis (SA) Report dated May 31, 2018 provided with the request. The Mount Assessment and the Construction Drawings both prepared by Ramaker and dated August 21, 2018 and August 22, 2018, respectively, both refer to the installation of a Handrail Kit and a platform Reinforcement Kit (see pages 2 and S-1, respectively), as part of the proposed modification.

However the SA Report Appendix A provided with this exempt modification request states in the Tower Analysis Summary Form that the proposed equipment would be installed on the existing mount. This is inconsistent with the Mount Assessment and the Construction Drawings.

Therefore, the exempt modification request is incomplete at this time. The Council recommends that Cherundolo Consulting provide an updated Structural Analysis Report signed by a professional engineer duly licensed in the State of Connecticut, which is consistent with the Mount Assessment and the Construction Drawings on or before October 31, 2018. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to October 31, 2018.

This notice of incompletion shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/FOC/IN

c: The Honorable Daniel T. Drew, Mayor, City of Middletown
Joseph Samolis, Director of Planning, Conservation, and Development, City of Middletown