AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	140 ft Guyed Tower
ATC Asset Name	:	GARDNERS NC
ATC Asset Number	:	21270
Engineering Number	:	14899590_C3_01
Proposed Carrier	:	T-MOBILE
Carrier Site Name	:	Burnlevel
Carrier Site Number	:	5RA0172A
Site Location	:	77 Meadowbranch Lane Bunnlevel, NC 28323-9131 35.3125° N, 78.779° W
County	:	Harnett
Date	:	September 24, 2024
Max Usage	:	72%
Analysis Result	:	Pass

NORTH CAROLINA PROFESSIONAL SEAL 054229 ENGINEER ISAAC P. DODSON

Isaac Dodson

Digitally signed by Isaac Dodson
Date: 2024.10.01 13:31:15 -04'00'

COA: P-1177

Table of Contents

Introduction 3

Supporting Documents 3

Analysis 3

Conclusion 3

Structure Usages 4

Maximum Reactions 4

Tower Loading 5

Standard Conditions ..... Attached

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 140 ft Guyed tower to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower:	Rohn Drawing #C980991, dated May 15, 1998
Geotechnical:	Froehling & Robertson, Inc. Site I.D. #368-214A, dated May 27, 1998

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	91 mph (3-second gust, Vasd) / 118 mph (3-second gust, Vult)
Basic Wind Speed w/ Ice:	30 mph (3-second gust) w/ 0.75" radial ice concurrent
Code(s):	ANSI/TIA-222-G / 2015 IBC / 2018 North Carolina Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.09
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	71.9%	Member X	Section 6	Pass
Diagonal	60.2%	User Input	Section 8	Pass
Horizontal	65.0%	User Input	Section 1	Pass
Bolt	68.8%	-	Section 7	Pass
Torque Arm	3.9%	Tension	Elevation 97 ft	Pass
Cable	62.0%	Tension	Elevation 97 ft	Pass
Serviceability Usage	9.2%	Rotation	Elevation 137 ft	Pass
Foundation	34.2%	Shear	Anchor 1	Pass
Foundation	24.3%	Uplift	Anchor 1	Pass
Foundation	36.9%	Axial	Base	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Guyed – Pivot Base	-	65.8	-	0.8
Guyed Anchor - A1	-	-	14.6	21.1

Reactions shown are maximum overall and not limited by Load Case

Foundation usages were calculated by comparing the maximum reactions from this analysis to the reactions from the original design drawings, factored by 1.35 per ANSI/TIA-222-G, Section 15.5.1

T-MOBILE Final Loading

Elev (ft)	Qty	Equipment	Lines
125.0	3	Ericsson Radio 4449 B71+B85	(2) 2.00" (50.8mm) Hybrid
	3	Ericsson Radio 4460 B25+B66	
	3	RFS APXVAARR24_43-U-NA20	
	3	RFS APXVLL19P_43-C-A20	
	3	Sector Frame	

Install proposed lines in the place of the existing T-MOBILE lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
142.0	1	Raycap DC6-48-60-18-8F(32.8 lbs)	-	AT&T MOBILITY
137.0	1	Kathrein Scala 741-989 / AP16-1940/088D/ADT/XP	(1) 0.28" (7mm) Fiber (2) 0.74" (18.7mm) 8 AWG 7 (2) 0.76" (19.2mm) 8 AWG 6 (12) 2 1/4" Coax (1) 3/8" (0.38"- 9.5mm) RET Control Cable	AT&T MOBILITY
	1	Kathrein Scala 800 10764		
	1	Kathrein Scala 800 10766 (58.4 lbs)		
	1	Powerwave Allgon P45-16-XLH-RR		
	2	Kathrein Scala 742 213		
	3	Ericsson RRUS 4415 B25		
	3	Ericsson RRUS-11 800 MHz		
	3	KMW EPBQ-652L8H8		
	3	Sector Frame		
	6	RFS ATM192012-0		

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by A.T. Engineering Services, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ASSET: GARDNERS NC, 21270 CODE: ANSI/TIA-222-G
CUSTOMER: T-MOBILE PROJECT: 14899590

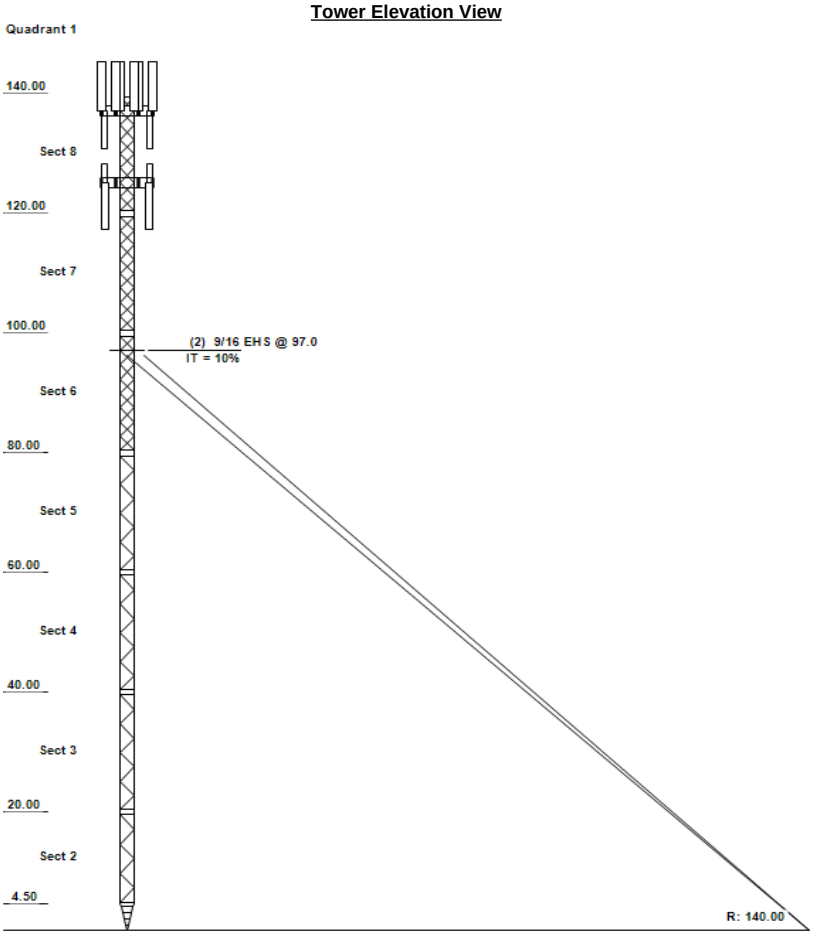
ANALYSIS PARAMETERS

Design Wind:	92 mph	**Ice Wind:**	30 mph w/ 0.75" ice	**Service Wind:**	60 mph
Structure Class:	II	**Exposure:**	C	**S_s:** 0.189	**S_1:** 0.088
				Topo Category:	**1**
Structure Height:	140 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	3.42 ft	**Top Width:**	3.42 ft	**Base Type:**	Pivot

TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	PX 50 ksi 3" DIA PIPE		SAE 36 ksi 4X4X0.25
2 - 4	PX 50 ksi 3" DIA PIPE	PSP 36 ksi Rohn TS1.50L	PSP 36 ksi Rohn TS1.50L
5 - 7	PX 50 ksi 3" DIA PIPE	PSP 36 ksi Rohn TS1.50H	PSP 36 ksi Rohn TS1.50H
8	PST 50 ksi 2-1/2" DIA PIPE	PSP 36 ksi Rohn TS1.50L	PSP 36 ksi Rohn TS1.50L

Tower Elevation View



DISCRETE APPURTENANCE

Elev (ft)	Description
142.0	(1) Raycap DC6-48-60-18-8F(32.8 lbs)
137.0	(1) Kathrein Scala 800 10764
137.0	(1) Powerwave Allgon P45-16-XLH-RR
137.0	(6) RFS ATM192012-0
137.0	(3) KMW EPBQ-652L8H8
137.0	(3) Ericsson RRUS 4415 B25
137.0	(3) Ericsson RRUS-11 800 MHz
137.0	(3) Round Sector Frame
137.0	(2) Kathrein Scala 742 213
137.0	(1) Kathrein Scala 741-989 / AP16-1940/0
137.0	(1) Kathrein Scala 800 10766 (58.4 lbs)
125.0	(3) RFS APXVAARR24_43-U-NA20
125.0	(3) RFS APXVLL19P_43-C-A20
125.0	(3) Ericsson Radio 4460 B25+B66
125.0	(3) Round Sector Frame
125.0	(3) Ericsson Radio 4449 B71+B85
97.0	(1) Torque Arms

LINEAR APPURTENANCE

Elev (ft)	Description
137.0	(2) 0.74" (18.7mm) 8 AWG 7
137.0	(12) 2 1/4" Coax
137.0	(1) 0.28" (7mm) Fiber
137.0	(1) 3/8" (0.38"- 9.5mm) RET Cont
137.0	(2) 0.76" (19.2mm) 8 AWG 6
125.0	(2) 2.00" (50.8mm) Hybrid

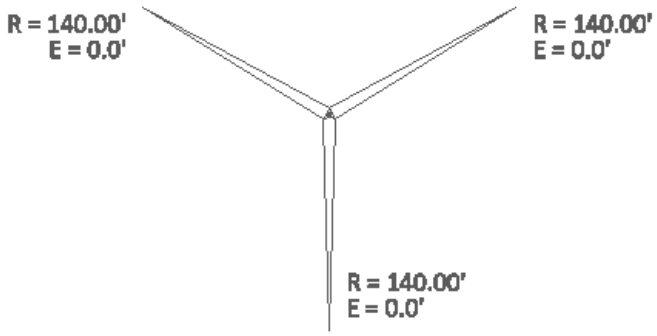
GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (°)	Uplift (k)	Shear (k)
140.0	0.00	0	14.60	21.14
140.0	0.00	120	14.60	21.14
140.0	0.00	240	14.60	21.14

BASE REACTIONS

Axial (k):	65.78
Shear (k):	0.79

Tower Plan View



ANALYSIS PARAMETERS

Location:	Harnett County, NC	**Height:**	140 ft
Type and Shape:	Guyed, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	Rohn	**Bottom Face Width:**	3.42 ft
		Top Face Width:	3.42 ft

ICE & WIND PARAMETERS

Structure Class:	II	**Design Wind Speed Without Ice:**	92 mph
Exposure Category:	C	**Design Wind Speed with Ice:**	30 mph
Topographic Category:	1	**Operational Windspeed:**	60 mph
Crest Height:	0 ft	**Design Ice Thickness:**	0.75 in

SEISMIC PARAMETERS

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil			**Period Based on Rayleigh Method (sec):**	0.95
T_L (sec):	8	**P:**	1.3	**C_s:**	0.059
S_{ds}:	0.202	**S_{d1}:**	0.141	**C_s Max:**	0.059
S_s:	0.189	**S_1:**	0.088	**C_s Min:**	0.030
F_a:	1.600	**F_v:**	2.400		

LOAD CASES

1.2D + 1.6W Normal	1.2D + 1.6W Normal - 92 mph Wind with No Ice
1.2D + 1.6W 60°	1.2D + 1.6W 60° - 92 mph Wind with No Ice
1.2D + 1.6W 90°	1.2D + 1.6W 90° - 92 mph Wind with No Ice
1.2D + 1.6W 120°	1.2D + 1.6W 120° - 92 mph Wind with No Ice
1.2D + 1.6W 180°	1.2D + 1.6W 180° - 92 mph Wind with No Ice
1.2D + 1.6W 210°	1.2D + 1.6W 210° - 92 mph Wind with No Ice
1.2D + 1.6W 240°	1.2D + 1.6W 240° - 92 mph Wind with No Ice
1.2D + 1.6W 300°	1.2D + 1.6W 300° - 92 mph Wind with No Ice
1.2D + 1.6W 330°	1.2D + 1.6W 330° - 92 mph Wind with No Ice
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 30 mph Wind with 0.75" Radial Ice
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 30 mph Wind with 0.75" Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	(1.2 + 0.2Sds) * DL + E Normal - Seismic
(1.2 + 0.2Sds) * DL + E 60°	(1.2 + 0.2Sds) * DL + E 60° - Seismic
(1.2 + 0.2Sds) * DL + E 90°	(1.2 + 0.2Sds) * DL + E 90° - Seismic
(1.2 + 0.2Sds) * DL + E 120°	(1.2 + 0.2Sds) * DL + E 120° - Seismic
(1.2 + 0.2Sds) * DL + E 180°	(1.2 + 0.2Sds) * DL + E 180° - Seismic
(1.2 + 0.2Sds) * DL + E 210°	(1.2 + 0.2Sds) * DL + E 210° - Seismic
(1.2 + 0.2Sds) * DL + E 240°	(1.2 + 0.2Sds) * DL + E 240° - Seismic
(1.2 + 0.2Sds) * DL + E 300°	(1.2 + 0.2Sds) * DL + E 300° - Seismic
(1.2 + 0.2Sds) * DL + E 330°	(1.2 + 0.2Sds) * DL + E 330° - Seismic
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice

LOAD CASES	
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **1.2D + 1.6W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
142.0	Raycap DC6-48-60-18-8F(32.8 lb	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.00	25.10	40	39
137.0	RFS ATM192012-0	6	11	1.0	0.8	11.5	6.0	0.80	0.50	0.4	31.17	24.92	78	79
137.0	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	2.4	180.36	25.00	75	166
137.0	Ericsson RRUS-11 800 MHz	3	54	2.5	1.4	17.8	9.2	0.80	0.67	2.4	330.89	25.00	138	194
137.0	Kathrein Scala 741-989 / AP16-	1	17	3.1	4.3	6.1	2.7	0.80	1.00	0.0	0.00	24.91	85	20
137.0	Kathrein Scala 742 213	2	22	5.1	6.4	6.1	2.7	0.80	0.75	-0.2	41.73	24.90	209	53
137.0	Kathrein Scala 800 10764	1	41	5.9	4.6	11.8	6.0	0.80	1.00	0.5	79.54	24.93	159	49
137.0	Powerwave Allgon P45-16-XLH-RR	1	45	8.1	4.5	17.4	6.5	0.80	1.00	1.5	328.17	24.96	219	54
137.0	Kathrein Scala 800 10766 (58.4	1	58	11.3	8.0	11.8	6.0	0.80	1.00	0.4	122.67	24.92	307	70
137.0	KMW EPBQ-652L8H8	3	62	12.0	8.3	12.0	6.3	0.80	0.68	0.3	198.77	24.92	663	225
137.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	24.91	823	1080
125.0	Ericsson Radio 4449 B71+B85	3	75	1.6	1.3	13.2	10.4	0.80	0.50	0.0	0.00	24.43	66	270
125.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	24.43	137	392
125.0	RFS APXVLL19P_43-C-A20	3	41	8.2	6.3	11.3	4.6	0.80	0.65	0.0	0.00	24.43	428	147
125.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	24.43	807	1080
125.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	-1.1	1,116.58	24.39	1015	460
97.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	23.16	472	600
	Totals	**41**	**4,149**	**294.4**									5,720	4,979

Discrete Appurtenance Properties for LC: **1.2D + 1.0Di + 1.0Wi**

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
142.0	Raycap DC6-48-60-18-8F(32.8 lb	1	94	2.2	2.0	11.0	11.0	0.80	1.00	0.0	0.00	2.67	4	100
137.0	RFS ATM192012-0	6	41	1.6	0.8	11.5	6.0	0.80	0.50	0.4	3.47	2.65	9	262
137.0	Ericsson RRUS 4415 B25	3	94	2.7	1.4	13.4	5.9	0.80	0.50	2.4	17.75	2.66	7	311
137.0	Ericsson RRUS-11 800 MHz	3	128	3.5	1.4	17.8	9.2	0.80	0.67	2.4	30.95	2.66	13	418
137.0	Kathrein Scala 741-989 / AP16-	1	93	4.0	4.3	6.1	2.7	0.80	1.00	0.0	0.00	2.65	7	96
137.0	Kathrein Scala 742 213	2	109	7.6	6.4	6.1	2.7	0.80	0.75	-0.2	4.10	2.65	20	226
137.0	Kathrein Scala 800 10764	1	166	8.0	4.6	11.8	6.0	0.80	1.00	0.5	7.19	2.65	14	175
137.0	Powerwave Allgon P45-16-XLH-RR	1	211	10.2	4.5	17.4	6.5	0.80	1.00	1.5	27.59	2.65	18	220
137.0	Kathrein Scala 800 10766 (58.4	1	270	14.5	8.0	11.8	6.0	0.80	1.00	0.4	10.45	2.65	26	281
137.0	KMW EPBQ-652L8H8	3	287	15.3	8.3	12.0	6.3	0.80	0.68	0.3	16.85	2.65	56	899
137.0	Round Sector Frame	3	663	30.8	0.0	0.0	0.0	0.75	0.75	0.0	0.00	2.65	117	2170
125.0	Ericsson Radio 4449 B71+B85	3	134	2.5	1.3	13.2	10.4	0.80	0.50	0.0	0.00	2.60	7	448
125.0	Ericsson Radio 4460 B25+B66	3	196	3.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	2.60	13	654
125.0	RFS APXVLL19P_43-C-A20	3	191	11.2	6.3	11.3	4.6	0.80	0.65	0.0	0.00	2.60	38	599
125.0	Round Sector Frame	3	663	30.8	0.0	0.0	0.0	0.75	0.75	0.0	0.00	2.60	115	2170
125.0	RFS APXVAARR24_43-U-NA20	3	516	23.9	8.0	24.0	8.7	0.80	0.63	-1.1	87.64	2.59	80	1624
97.0	Torque Arms	1	832	25.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	2.46	52	932
	Totals	**41**	**10,755**	**461.3**									597	11,585

Discrete Appurtenance Properties for LC: **1.0D + 1.0W Service**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
142.0	Raycap DC6-48-60-18-8F(32.8 lb	1	33	1.5	2.0	11.0	11.0	0.80	1.00	0.0	0.00	10.67	11	33
137.0	RFS ATM192012-0	6	11	1.0	0.8	11.5	6.0	0.80	0.50	0.4	8.29	10.60	21	66
137.0	Ericsson RRUS 4415 B25	3	46	1.8	1.4	13.4	5.9	0.80	0.50	2.4	47.94	10.63	20	138
137.0	Ericsson RRUS-11 800 MHz	3	54	2.5	1.4	17.8	9.2	0.80	0.67	2.4	87.96	10.63	37	162
137.0	Kathrein Scala 741-989 / AP16-	1	17	3.1	4.3	6.1	2.7	0.80	1.00	0.0	0.00	10.59	23	16
137.0	Kathrein Scala 742 213	2	22	5.1	6.4	6.1	2.7	0.80	0.75	-0.2	11.09	10.59	55	44
137.0	Kathrein Scala 800 10764	1	41	5.9	4.6	11.8	6.0	0.80	1.00	0.5	21.14	10.60	42	41
137.0	Powerwave Allgon P45-16-XLH-RR	1	45	8.1	4.5	17.4	6.5	0.80	1.00	1.5	87.24	10.62	58	45
137.0	Kathrein Scala 800 10766 (58.4	1	58	11.3	8.0	11.8	6.0	0.80	1.00	0.4	32.61	10.60	82	58
137.0	KMW EPBQ-652L8H8	3	62	12.0	8.3	12.0	6.3	0.80	0.68	0.3	52.84	10.60	176	187
137.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	10.59	219	900
125.0	Ericsson Radio 4449 B71+B85	3	75	1.6	1.3	13.2	10.4	0.80	0.50	0.0	0.00	10.39	17	225
125.0	Ericsson Radio 4460 B25+B66	3	109	2.6	1.6	15.7	12.1	0.80	0.67	0.0	0.00	10.39	36	327
125.0	RFS APXVLL19P_43-C-A20	3	41	8.2	6.3	11.3	4.6	0.80	0.65	0.0	0.00	10.39	114	123
125.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	10.39	215	900
125.0	RFS APXVAARR24_43-U-NA20	3	128	20.2	8.0	24.0	8.7	0.80	0.63	-1.1	296.82	10.37	270	384
97.0	Torque Arms	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.85	126	500
	Totals	**41**	**4,149**	**294.4**									1,521	4,149

TOWER LOADING – LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K_a Override
5.0	137.0	0.74" (18.7mm) 8 AWG 7	2	0.74	0.49	50	3	Block	0.00	N	1.00	1.00	0.00
5.0	137.0	3/8" (0.38"- 9.5mm) RET Contro	1	0.38	0.23	100	3	Individual	0.00	N	1.00	1.00	0.00
5.0	137.0	0.28" (7mm) Fiber	1	0.28	0.04	100	3	Individual	0.00	N	1.00	1.00	0.00
5.0	137.0	2 1/4" Coax	12	2.38	1.22	50	3	Block	0.00	N	1.00	1.00	0.00
0.0	137.0	0.76" (19.2mm) 8 AWG 6	2	0.76	0.53	100	3	Individual	0.00	N	1.00	1.00	0.00
0.0	125.0	2.00" (50.8mm) Hybrid	2	2.00	3.09	100	1	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.6W Normal — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	406	0	167	23	190
													Totals	**10,527**	**0**			**12,326**

1.2D + 1.6W 60° — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	406	0	150	23	173
													Totals	**10,527**	**0**			**12,309**

1.2D + 1.6W 90° — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	406	0	154	23	177
													Totals	**10,527**	**0**			**12,313**

1.2D + 1.6W 120° — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	406	0	167	23	190
													Totals	**10,527**	**0**			**12,326**

1.2D + 1.6W 180° — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	406	0	150	23	173
													Totals	**10,527**	**0**			**12,309**

1.2D + 1.6W 210° — Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157

SECTION FORCES

1.2D + 1.6W 210° Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	406	0	154	23	177
													Totals	**10,527**	**0**			**12,313**

1.2D + 1.6W 240° Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	406	0	167	23	190
													Totals	**10,527**	**0**			**12,326**

1.2D + 1.6W 300° Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	406	0	150	23	173
													Totals	**10,527**	**0**			**12,309**

1.2D + 1.6W 330° Gust Response Factor (Gh): 0.85
92 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	24.63	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	1065	0	898	970	1867
7	110	23.78	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	946	1211	2157
6	90	22.80	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1762	0	907	1161	2068
5	70	21.62	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1549	0	718	1101	1819
4	50	20.14	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	669	1026	1695
3	30	18.09	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1438	0	601	921	1522
2	12.25	15.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	1108	0	406	601	1007
1	2.25	15.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	406	0	154	23	177
													Totals	**10,527**	**0**			**12,313**

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	1.00	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	1.00	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	1.00	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	1.00	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	1.00	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	1.00	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	1.00	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	1.00	1.00	1.1	8.03	15.03	3.37	758	351	21	1	23
													Totals	**32,936**	**22,409**			**1,444**

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.80	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.80	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.80	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.80	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.80	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.80	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.80	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.80	1.00	1.1	7.59	14.20	3.37	758	351	20	1	21
													Totals	**32,936**	**22,409**			**1,443**

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.85	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.85	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.85	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.85	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.85	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.85	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.85	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.85	1.00	1.1	7.70	14.41	3.37	758	351	20	1	22
													Totals	**32,936**	**22,409**			**1,443**

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	1.00	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	1.00	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	1.00	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	1.00	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	1.00	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	1.00	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	1.00	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	1.00	1.00	1.1	8.03	15.03	3.37	758	351	21	1	23
													Totals	**32,936**	**22,409**			**1,444**

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.80	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.80	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.80	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.80	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.80	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.80	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.80	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.80	1.00	1.1	7.59	14.20	3.37	758	351	20	1	21
													Totals	**32,936**	**22,409**			**1,443**

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.85	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.85	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.85	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.85	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.85	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.85	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.85	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.85	1.00	1.1	7.70	14.41	3.37	758	351	20	1	22
													Totals	**32,936**	**22,409**			**1,443**

1.2D + 1.0Di + 1.0Wi 240° Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	1.00	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	1.00	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	1.00	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	1.00	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	1.00	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	1.00	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 240° — Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	1.00	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	1.00	1.00	1.1	8.03	15.03	3.37	758	351	21	1	23
													Totals	**32,936**	**22,409**			**1,444**

1.2D + 1.0Di + 1.0Wi 300° — Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.80	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.80	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.80	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.80	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.80	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.80	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.80	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.80	1.00	1.1	7.59	14.20	3.37	758	351	20	1	21
													Totals	**32,936**	**22,409**			**1,443**

1.2D + 1.0Di + 1.0Wi 330° — Gust Response Factor (Gh): 0.85
30 mph Wind with 0.75" Radial Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	2.62	0.000	50.805	32.56	0.644	1.78	0.85	1.00	1.7	39.67	70.73	32.56	4549	3485	157	71	229
7	110	2.53	0.000	52.232	32.02	0.654	1.78	0.85	1.00	1.7	41.22	73.39	32.02	5707	3945	158	89	247
6	90	2.42	0.000	51.595	31.39	0.647	1.78	0.85	1.00	1.7	40.48	72.14	31.39	5603	3842	149	86	235
5	70	2.30	0.000	37.944	21.62	0.477	1.93	0.85	1.00	1.6	25.77	49.79	21.62	4650	3101	97	120	217
4	50	2.14	0.000	37.228	20.90	0.469	1.94	0.85	1.00	1.6	25.14	48.86	20.90	4410	2972	89	112	201
3	30	1.92	0.000	36.188	19.86	0.457	1.96	0.85	1.00	1.5	24.23	47.53	19.86	4227	2789	78	100	178
2	12.25	1.66	0.000	27.022	14.27	0.443	1.99	0.85	1.00	1.4	17.92	35.56	14.27	3032	1924	50	65	115
1	2.25	1.66	2.221	6.241	3.37	0.858	1.87	0.85	1.00	1.1	7.70	14.41	3.37	758	351	20	1	22
													Totals	**32,936**	**22,409**			**1,443**

1.0D + 1.0W Service Normal — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	339	0	44	6	51
													Totals	**8,773**	**0**			**3,277**

1.0D + 1.0W Service 60° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	339	0	40	6	46
													Totals	**8,773**	**0**			**3,272**

1.0D + 1.0W Service 90° — Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	339	0	41	6	47

SECTION FORCES

1.0D + 1.0W Service 90° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
													Totals	**8,773**	**0**			**3,273**

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	339	0	44	6	51
													Totals	**8,773**	**0**			**3,277**

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	339	0	40	6	46
													Totals	**8,773**	**0**			**3,272**

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	339	0	41	6	47
													Totals	**8,773**	**0**			**3,273**

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	1.00	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	1.00	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	1.00	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	1.00	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	1.00	1.00	0.0	4.29	7.85	0.00	339	0	44	6	51
													Totals	**8,773**	**0**			**3,277**

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.80	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.80	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.80	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.80	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.80	1.00	0.0	3.85	7.04	0.00	339	0	40	6	46
													Totals	**8,773**	**0**			**3,272**

SECTION FORCES

1.0D + 1.0W Service 330°
60 mph Wind with No Ice

Gust Response Factor (Gh): 0.85
Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
8	130	10.48	0.000	18.240	0.00	0.249	2.44	0.85	1.00	0.0	10.98	26.79	0.00	887	0	239	258	496
7	110	10.12	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	251	322	573
6	90	9.70	0.000	20.207	0.00	0.272	2.37	0.85	1.00	0.0	12.33	29.24	0.00	1468	0	241	309	550
5	70	9.20	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1291	0	191	293	484
4	50	8.57	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	178	273	451
3	30	7.69	0.000	16.327	0.00	0.220	2.53	0.85	1.00	0.0	9.65	24.42	0.00	1198	0	160	245	405
2	12.25	6.66	0.000	12.753	0.00	0.222	2.52	0.85	1.00	0.0	7.55	19.06	0.00	923	0	108	160	268
1	2.25	6.66	2.221	2.866	0.00	0.565	1.83	0.85	1.00	0.0	3.96	7.24	0.00	339	0	41	6	47
													Totals	**8,773**	**0**			**3,273**

EQUIVALENT LATERAL FORCE METHOD

(Based on ASCE7-10 Chapters 11,12 & 15)

Spectral Response Acceleration for Short Period (S_S):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.09
Long-Period Transition Period (T_L – Seconds):	8
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	2.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.14
Seismic Response Coefficient (C_s):	0.06
Upper Limit C_S:	0.06
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	0.95
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.23
Total Unfactored Dead Load:	12.92 k
Seismic Base Shear (E):	0.99 k

SEISMIC FORCES

(1.2 + 0.2Sds) * DL + E

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_Z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
8	130.00	887	345,998	0.107	107	1,100
7	110.00	1,468	466,534	0.145	144	1,821
6	90.00	1,468	364,806	0.113	113	1,821
5	70.00	1,291	235,753	0.073	73	1,601
4	50.00	1,198	144,867	0.045	45	1,486
3	30.00	1,198	77,455	0.024	24	1,486
2	12.25	923	19,910	0.006	6	1,145
1	2.25	339	915	0.000	0	420
Raycap DC6-48-60-18-8F(32.8 lbs)	140.00	33	14,009	0.004	4	41
RFS ATM192012-0	137.00	66	27,450	0.008	8	82
Ericsson RRUS 4415 B25	137.00	138	57,395	0.018	18	171
Ericsson RRUS-11 800 MHz	137.00	162	67,376	0.021	21	201
Kathrein Scala 741-989 / AP16-1940/088D/ADT/XP	137.00	16	6,862	0.002	2	20
Kathrein Scala 742 213	137.00	44	18,300	0.006	6	55
Kathrein Scala 800 10764	137.00	41	16,969	0.005	5	51
Powerwave Allgon P45-16-XLH-RR	137.00	45	18,716	0.006	6	56
Kathrein Scala 800 10766 (58.4 lbs)	137.00	58	24,289	0.008	7	72
KMW EPBQ-652L8H8	137.00	187	77,857	0.024	24	232
Round Sector Frame	137.00	900	374,312	0.116	115	1,116
Ericsson Radio 4449 B71+B85	125.00	225	83,633	0.026	26	279
Ericsson Radio 4460 B25+B66	125.00	327	121,547	0.038	37	406
RFS APXVLL19P_43-C-A20	125.00	123	45,608	0.014	14	152
Round Sector Frame	125.00	900	334,532	0.104	103	1,116
RFS APXVAARR24_43-U-NA20	125.00	384	142,622	0.044	44	476
Torque Arms	97.00	500	136,197	0.042	42	620
	Totals	**12,922**	**3,223,909**	**1.000**	**994**	**16,027**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 4.50'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-24.27	1.2D + 1.0Di + 1.0Wi 90°	1.126	100	100	100	11.85	50.00	134.51	0.00	0.00	0	0	18	Member X
H SAE - 4X4X0.25	-0.52	1.2D + 1.0Di + 1.0Wi 240°	2.349	100	100	100	0.00	0.00	7.02	0.00	0.00	0	0	7.4	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H SAE - 4X4X0.25	3.85	1.2D + 1.0Di + 1.0Wi 120°	36.0	58	5.92	0.00	0.00	0.00	0	0	65	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 2 – 4.5' to 20.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-21.80	1.2D + 1.0Di + 1.0Wi 90°	2.439	200	200	200	51.35	50.00	112.07	0.00	0.00	0	0	19.5	Member X
H PSP - Rohn TS1.50L	-0.03	(1.2 + 0.2Sds) * DL + E 180°	3.417	100	100	100	0.00	0.00	7.02	0.00	5.79	1	1	0.4	User Input
D PSP - Rohn TS1.50L	-0.35	1.2D + 1.6W 90°	4.198	100	100	100	0.00	0.00	6.21	0.00	5.79	1	1	5.6	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H PSP - Rohn TS1.50L	2.07	1.2D + 1.0Di + 1.0Wi 330°	36.0	58	5.92	0.00	0.00	0.00	1	1	34.9	User Input
D PSP - Rohn TS1.50L	0.53	1.2D + 1.6W 90°	36.0	58	5.47	0.00	0.00	0.00	1	1	9.8	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 3 – 20.0' to 40.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-20.81	1.2D + 1.0Di + 1.0Wi 60°	2.392	200	200	200	50.36	50.00	112.90	0.00	0.00	0	0	18.4	Member X
H PSP - Rohn TS1.50L	-0.31	1.2D + 1.6W 180°	3.417	100	100	100	0.00	0.00	7.02	0.00	5.79	1	1	4.4	User Input
D PSP - Rohn TS1.50L	-1.32	1.2D + 1.6W N	4.171	100	100	100	0.00	0.00	6.21	0.00	5.79	1	1	21.3	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
H PSP - Rohn TS1.50L	0.40	1.2D + 1.6W N	36.0	58	5.92	0.00	0.00	0.00	1	1	6.7	User Input
D PSP - Rohn TS1.50L	1.38	1.2D + 1.6W 210°	36.0	58	5.47	0.00	0.00	0.00	1	1	25.2	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

FORCE/STRESS SUMMARY

Section 4 – 40.0' to 60.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-32.35	1.2D + 1.6W N	2.392	200	200	200	50.36	50.00	112.90	0.00	0.00	0	0	28.7	Member X
H PSP - Rohn TS1.50L	-0.76	1.2D + 1.6W 180°	3.417	100	100	100	0.00	0.00	7.02	0.00	5.79	1	1	10.8	User Input
D PSP - Rohn TS1.50L	-2.62	1.2D + 1.6W 330°	4.171	100	100	100	0.00	0.00	6.21	0.00	5.79	1	1	42.2	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	11.64	1.2D + 1.6W 180°	50.0	65	135.90	0.00	0.00		0	0	8.6	Member
H PSP - Rohn TS1.50L	0.86	1.2D + 1.6W N	36.0	58	5.92	0.00	0.00	0.00	1	1	14.5	User Input
D PSP - Rohn TS1.50L	2.80	1.2D + 1.6W 210°	36.0	58	5.47	0.00	0.00	0.00	1	1	51.2	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type

Section 5 – 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-59.71	1.2D + 1.6W N	2.392	200	200	200	50.36	50.00	112.90	0.00	0.00	0	0	52.9	Member X
H PSP - Rohn TS1.50H	-1.64	1.2D + 1.6W 180°	3.417	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	16.9	User Input
D PSP - Rohn TS1.50H	-4.01	1.2D + 1.6W 330°	4.171	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	41.3	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	40.77	1.2D + 1.6W 180°	50.0	65	135.90	0.00	0.00		0	0	30	Member
H PSP - Rohn TS1.50H	1.73	1.2D + 1.6W N	36.0	58	9.72	0.00	0.00	0.00	1	1	17.8	User Input
D PSP - Rohn TS1.50H	4.34	1.2D + 1.6W 210°	36.0	58	9.72	0.00	0.00	0.00	1	1	44.7	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	11.64	1.2D + 1.6W 180°	120.41	9.7	4	0.75" A325

Section 6 – 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-93.26	1.2D + 1.6W N	2.392	100	100	100	25.18	50.00	129.74	0.00	0.00	0	0	71.9	Member X
H PSP - Rohn TS1.50H	-0.19	1.2D + 1.6W 240°	3.417	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	1.9	User Input
D PSP - Rohn TS1.50H	-5.85	1.2D + 1.6W 210°	4.171	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	60.1	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	84.28	1.2D + 1.6W 180°	50.0	65	135.90	0.00	0.00		0	0	62	Member
H PSP - Rohn TS1.50H	3.18	1.2D + 1.6W N	36.0	58	9.72	0.00	0.00	0.00	1	1	32.7	User Input
D PSP - Rohn TS1.50H	4.67	1.2D + 1.6W 120°	36.0	58	9.72	0.00	0.00	0.00	1	1	48	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	40.77	1.2D + 1.6W 180°	120.41	33.9	4	0.75" A325

FORCE/STRESS SUMMARY

Section 7 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	-87.77	1.2D + 1.6W N	0.25	100	100	100	2.63	50.00	135.83	0.00	0.00	0	0	64.6	Member X
H PSP - Rohn TS1.50H	-2.95	1.2D + 1.6W N	3.417	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	30.3	User Input
D PSP - Rohn TS1.50H	-5.22	1.2D + 1.6W 330°	4.171	100	100	100	0.00	0.00	9.72	0.00	6.99	1	1	53.7	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PX - 3" DIA PIPE	82.89	1.2D + 1.6W 180°	50.0	65	135.90	0.00	0.00		0	0	61	Member
H PSP - Rohn TS1.50H	0.66	1.2D + 1.6W 180°	36.0	58	9.72	0.00	0.00	0.00	1	1	6.8	User Input
D PSP - Rohn TS1.50H	4.61	1.2D + 1.6W 210°	36.0	58	9.72	0.00	0.00	0.00	1	1	47.4	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	82.83	1.2D + 1.6W 180°	120.41	68.8	4	0.75" A325

Section 8 – 120.0' to 140.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L PST - 2-1/2" DIA PIPE	-29.37	1.2D + 1.6W N	0.25	100	100	100	3.17	50.00	76.62	0.00	0.00	0	0	38.3	Member X
H PSP - Rohn TS1.50L	-0.84	1.2D + 1.6W N	3.417	100	100	100	0.00	0.00	7.02	0.00	5.79	1	1	12	User Input
D PSP - Rohn TS1.50L	-3.32	1.2D + 1.6W 330°	4.171	100	100	100	0.00	0.00	6.21	0.00	5.79	1	1	53.5	User Input

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L PST - 2-1/2" DIA PIPE	25.81	1.2D + 1.6W 180°	50.0	65	76.68	0.00	0.00		0	0	33.7	Member
H PSP - Rohn TS1.50L	0.87	1.2D + 1.6W 180°	36.0	58	5.92	0.00	0.00	0.00	1	1	14.7	User Input
D PSP - Rohn TS1.50L	3.29	1.2D + 1.6W 210°	36.0	58	5.47	0.00	0.00	0.00	1	1	60.2	User Input

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	25.75	1.2D + 1.6W 180°	120.41	21.4	4	0.75" A325

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.6W Normal	96.99	9/16 EHS	A1	T1	21	0.07	0
		9/16 EHS	A1b	T1	21	10.76	51
		9/16 EHS	A1b	T1a	21	11.05	53
		9/16 EHS	A1a	T1a	21	11.05	53
		9/16 EHS	A1	T1b	21	0.07	0
		9/16 EHS	A1a	T1b	21	10.76	51
1.2D + 1.6W 60°	96.99	9/16 EHS	A1b	T1	21	1.56	7
		9/16 EHS	A1	T1	21	1.56	7
		9/16 EHS	A1b	T1a	21	1.53	7
		9/16 EHS	A1a	T1a	21	12.35	59
		9/16 EHS	A1	T1b	21	1.53	7
		9/16 EHS	A1a	T1b	21	12.35	59
1.2D + 1.6W 90°	96.99	9/16 EHS	A1b	T1	21	0.44	2
		9/16 EHS	A1	T1	21	6.58	31
		9/16 EHS	A1b	T1a	21	0.39	2
		9/16 EHS	A1a	T1a	21	12.78	61
		9/16 EHS	A1	T1b	21	6.76	32
		9/16 EHS	A1a	T1b	21	13.04	62
1.2D + 1.6W 120°	96.99	9/16 EHS	A1	T1	21	10.76	51
		9/16 EHS	A1b	T1	21	0.07	0
		9/16 EHS	A1b	T1a	21	0.07	0
		9/16 EHS	A1a	T1a	21	10.76	51
		9/16 EHS	A1a	T1b	21	11.04	53
		9/16 EHS	A1	T1b	21	11.04	53
1.2D + 1.6W 180°	96.99	9/16 EHS	A1b	T1	21	1.53	7
		9/16 EHS	A1	T1	21	12.35	59
		9/16 EHS	A1b	T1a	21	1.56	7
		9/16 EHS	A1a	T1a	21	1.56	7
		9/16 EHS	A1a	T1b	21	1.53	7
		9/16 EHS	A1	T1b	21	12.35	59
1.2D + 1.6W 210°	96.99	9/16 EHS	A1b	T1	21	6.76	32
		9/16 EHS	A1	T1	21	13.05	62
		9/16 EHS	A1b	T1a	21	6.58	31
		9/16 EHS	A1a	T1a	21	0.44	2
		9/16 EHS	A1	T1b	21	12.78	61
		9/16 EHS	A1a	T1b	21	0.39	2
1.2D + 1.6W 240°	96.99	9/16 EHS	A1b	T1	21	11.04	53
		9/16 EHS	A1	T1	21	11.04	53
		9/16 EHS	A1b	T1a	21	10.76	51
		9/16 EHS	A1a	T1a	21	0.07	0
		9/16 EHS	A1	T1b	21	10.76	51
		9/16 EHS	A1a	T1b	21	0.07	0
1.2D + 1.6W 300°	96.99	9/16 EHS	A1	T1	21	1.53	7
		9/16 EHS	A1b	T1	21	12.35	59
		9/16 EHS	A1b	T1a	21	12.35	59
		9/16 EHS	A1a	T1a	21	1.53	7
		9/16 EHS	A1	T1b	21	1.56	7
		9/16 EHS	A1a	T1b	21	1.56	7
1.2D + 1.6W 330°	96.99	9/16 EHS	A1b	T1	21	12.78	61
		9/16 EHS	A1	T1	21	0.39	2
		9/16 EHS	A1b	T1a	21	13.05	62
		9/16 EHS	A1a	T1a	21	6.76	32
		9/16 EHS	A1	T1b	21	0.44	2
		9/16 EHS	A1a	T1b	21	6.58	31
1.2D + 1.0Di + 1.0Wi Normal	96.99	9/16 EHS	A1	T1	21	4.84	23
		9/16 EHS	A1b	T1	21	6.15	29
		9/16 EHS	A1b	T1a	21	6.15	29
		9/16 EHS	A1a	T1a	21	6.15	29
		9/16 EHS	A1	T1b	21	4.84	23

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1a	T1b	21	6.15	29
1.2D + 1.0Di + 1.0Wi 60°	96.99	9/16 EHS	A1b	T1	21	5.22	25
		9/16 EHS	A1	T1	21	5.22	25
		9/16 EHS	A1a	T1a	21	6.53	31
		9/16 EHS	A1b	T1a	21	5.21	25
		9/16 EHS	A1a	T1b	21	6.53	31
		9/16 EHS	A1	T1b	21	5.21	25
1.2D + 1.0Di + 1.0Wi 90°	96.99	9/16 EHS	A1	T1	21	5.69	27
		9/16 EHS	A1b	T1	21	4.93	23
		9/16 EHS	A1b	T1a	21	4.93	23
		9/16 EHS	A1a	T1a	21	6.44	31
		9/16 EHS	A1	T1b	21	5.68	27
		9/16 EHS	A1a	T1b	21	6.44	31
1.2D + 1.0Di + 1.0Wi 120°	96.99	9/16 EHS	A1b	T1	21	4.84	23
		9/16 EHS	A1	T1	21	6.15	29
		9/16 EHS	A1b	T1a	21	4.84	23
		9/16 EHS	A1a	T1a	21	6.15	29
		9/16 EHS	A1a	T1b	21	6.15	29
		9/16 EHS	A1	T1b	21	6.15	29
1.2D + 1.0Di + 1.0Wi 180°	96.99	9/16 EHS	A1	T1	21	6.53	31
		9/16 EHS	A1b	T1	21	5.21	25
		9/16 EHS	A1b	T1a	21	5.22	25
		9/16 EHS	A1a	T1a	21	5.22	25
		9/16 EHS	A1	T1b	21	6.53	31
		9/16 EHS	A1a	T1b	21	5.21	25
1.2D + 1.0Di + 1.0Wi 210°	96.99	9/16 EHS	A1b	T1	21	5.68	27
		9/16 EHS	A1	T1	21	6.44	31
		9/16 EHS	A1b	T1a	21	5.69	27
		9/16 EHS	A1a	T1a	21	4.93	23
		9/16 EHS	A1a	T1b	21	4.93	23
		9/16 EHS	A1	T1b	21	6.44	31
1.2D + 1.0Di + 1.0Wi 240°	96.99	9/16 EHS	A1b	T1	21	6.15	29
		9/16 EHS	A1	T1	21	6.15	29
		9/16 EHS	A1b	T1a	21	6.15	29
		9/16 EHS	A1a	T1a	21	4.84	23
		9/16 EHS	A1	T1b	21	6.15	29
		9/16 EHS	A1a	T1b	21	4.84	23
1.2D + 1.0Di + 1.0Wi 300°	96.99	9/16 EHS	A1b	T1	21	6.53	31
		9/16 EHS	A1	T1	21	5.21	25
		9/16 EHS	A1a	T1a	21	5.21	25
		9/16 EHS	A1b	T1a	21	6.53	31
		9/16 EHS	A1	T1b	21	5.22	25
		9/16 EHS	A1a	T1b	21	5.22	25
1.2D + 1.0Di + 1.0Wi 330°	96.99	9/16 EHS	A1	T1	21	4.93	23
		9/16 EHS	A1b	T1	21	6.44	31
		9/16 EHS	A1b	T1a	21	6.44	31
		9/16 EHS	A1a	T1a	21	5.68	27
		9/16 EHS	A1a	T1b	21	5.69	27
		9/16 EHS	A1	T1b	21	4.93	23
(1.2 + 0.2Sds) * DL + E Normal M2	96.99	9/16 EHS	A1b	T1	21	3.15	15
		9/16 EHS	A1b	T1	21	3.13	15
		9/16 EHS	A1	T1	21	2.48	12
		9/16 EHS	A1	T1	21	2.41	11
		9/16 EHS	A1b	T1a	21	3.18	15
		9/16 EHS	A1a	T1a	21	3.18	15
		9/16 EHS	A1b	T1a	21	3.24	15
		9/16 EHS	A1a	T1a	21	3.24	15
		9/16 EHS	A1	T1b	21	2.48	12
		9/16 EHS	A1a	T1b	21	3.15	15

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1	T1b	21	2.41	11
		9/16 EHS	A1a	T1b	21	3.13	15
(1.2 + 0.2Sds) * DL + E 60° M2	96.99	9/16 EHS	A1b	T1	21	2.63	13
		9/16 EHS	A1b	T1	21	2.68	13
		9/16 EHS	A1	T1	21	2.68	13
		9/16 EHS	A1	T1	21	2.63	13
		9/16 EHS	A1b	T1a	21	2.73	13
		9/16 EHS	A1a	T1a	21	3.39	16
		9/16 EHS	A1b	T1a	21	2.71	13
		9/16 EHS	A1a	T1a	21	3.46	16
		9/16 EHS	A1	T1b	21	2.73	13
		9/16 EHS	A1a	T1b	21	3.46	16
		9/16 EHS	A1	T1b	21	2.71	13
		9/16 EHS	A1a	T1b	21	3.39	16
(1.2 + 0.2Sds) * DL + E 90° M1	96.99	9/16 EHS	A1	T1	21	2.9	14
		9/16 EHS	A1b	T1	21	2.53	12
		9/16 EHS	A1	T1	21	2.88	14
		9/16 EHS	A1b	T1	21	2.46	12
		9/16 EHS	A1b	T1a	21	2.5	12
		9/16 EHS	A1a	T1a	21	3.36	16
		9/16 EHS	A1b	T1a	21	2.55	12
		9/16 EHS	A1a	T1a	21	3.31	16
		9/16 EHS	A1a	T1b	21	3.41	16
		9/16 EHS	A1a	T1b	21	3.34	16
		9/16 EHS	A1	T1b	21	2.98	14
		9/16 EHS	A1	T1b	21	2.96	14
(1.2 + 0.2Sds) * DL + E 120° M1	96.99	9/16 EHS	A1b	T1	21	2.48	12
		9/16 EHS	A1	T1	21	3.15	15
		9/16 EHS	A1	T1	21	3.13	15
		9/16 EHS	A1b	T1	21	2.41	11
		9/16 EHS	A1a	T1a	21	3.13	15
		9/16 EHS	A1b	T1a	21	2.41	11
		9/16 EHS	A1a	T1a	21	3.15	15
		9/16 EHS	A1b	T1a	21	2.48	12
		9/16 EHS	A1a	T1b	21	3.18	15
		9/16 EHS	A1	T1b	21	3.18	15
		9/16 EHS	A1a	T1b	21	3.24	15
		9/16 EHS	A1	T1b	21	3.24	15
(1.2 + 0.2Sds) * DL + E 180° M2	96.99	9/16 EHS	A1	T1	21	3.46	16
		9/16 EHS	A1b	T1	21	2.71	13
		9/16 EHS	A1b	T1	21	2.73	13
		9/16 EHS	A1	T1	21	3.39	16
		9/16 EHS	A1a	T1a	21	2.63	13
		9/16 EHS	A1b	T1a	21	2.63	13
		9/16 EHS	A1a	T1a	21	2.68	13
		9/16 EHS	A1b	T1a	21	2.68	13
		9/16 EHS	A1a	T1b	21	2.73	13
		9/16 EHS	A1a	T1b	21	2.71	13
		9/16 EHS	A1	T1b	21	3.39	16
		9/16 EHS	A1	T1b	21	3.46	16
(1.2 + 0.2Sds) * DL + E 210° M2	96.99	9/16 EHS	A1	T1	21	3.41	16
		9/16 EHS	A1	T1	21	3.34	16
		9/16 EHS	A1b	T1	21	2.96	14
		9/16 EHS	A1b	T1	21	2.98	14
		9/16 EHS	A1a	T1a	21	2.52	12
		9/16 EHS	A1a	T1a	21	2.46	12
		9/16 EHS	A1b	T1a	21	2.9	14
		9/16 EHS	A1b	T1a	21	2.88	14
		9/16 EHS	A1	T1b	21	3.31	16

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1a	T1b	21	2.55	12
		9/16 EHS	A1	T1b	21	3.36	16
		9/16 EHS	A1a	T1b	21	2.5	12
(1.2 + 0.2Sds) * DL + E 240° M2	96.99	9/16 EHS	A1b	T1	21	3.24	15
		9/16 EHS	A1b	T1	21	3.18	15
		9/16 EHS	A1	T1	21	3.18	15
		9/16 EHS	A1	T1	21	3.24	15
		9/16 EHS	A1b	T1a	21	3.13	15
		9/16 EHS	A1a	T1a	21	2.48	12
		9/16 EHS	A1b	T1a	21	3.15	15
		9/16 EHS	A1a	T1a	21	2.41	11
		9/16 EHS	A1	T1b	21	3.13	15
		9/16 EHS	A1a	T1b	21	2.41	11
		9/16 EHS	A1	T1b	21	3.15	15
		9/16 EHS	A1a	T1b	21	2.48	12
(1.2 + 0.2Sds) * DL + E 300° M1	96.99	9/16 EHS	A1b	T1	21	3.39	16
		9/16 EHS	A1	T1	21	2.71	13
		9/16 EHS	A1	T1	21	2.73	13
		9/16 EHS	A1b	T1	21	3.46	16
		9/16 EHS	A1a	T1a	21	2.73	13
		9/16 EHS	A1b	T1a	21	3.46	16
		9/16 EHS	A1a	T1a	21	2.71	13
		9/16 EHS	A1b	T1a	21	3.39	16
		9/16 EHS	A1a	T1b	21	2.68	13
		9/16 EHS	A1	T1b	21	2.68	13
		9/16 EHS	A1a	T1b	21	2.63	13
		9/16 EHS	A1	T1b	21	2.63	13
(1.2 + 0.2Sds) * DL + E 330° M2	96.99	9/16 EHS	A1	T1	21	2.5	12
		9/16 EHS	A1b	T1	21	3.36	16
		9/16 EHS	A1b	T1	21	3.31	16
		9/16 EHS	A1	T1	21	2.55	12
		9/16 EHS	A1a	T1a	21	2.98	14
		9/16 EHS	A1b	T1a	21	3.41	16
		9/16 EHS	A1a	T1a	21	2.96	14
		9/16 EHS	A1b	T1a	21	3.34	16
		9/16 EHS	A1a	T1b	21	2.9	14
		9/16 EHS	A1a	T1b	21	2.88	14
		9/16 EHS	A1	T1b	21	2.53	12
		9/16 EHS	A1	T1b	21	2.46	12
1.0D + 1.0W Service Normal	96.99	9/16 EHS	A1b	T1	21	3.99	19
		9/16 EHS	A1	T1	21	1.16	6
		9/16 EHS	A1b	T1a	21	4.04	19
		9/16 EHS	A1a	T1a	21	4.04	19
		9/16 EHS	A1a	T1b	21	3.99	19
		9/16 EHS	A1	T1b	21	1.16	6
1.0D + 1.0W Service 60°	96.99	9/16 EHS	A1	T1	21	2.06	10
		9/16 EHS	A1b	T1	21	2.06	10
		9/16 EHS	A1b	T1a	21	2.09	10
		9/16 EHS	A1a	T1a	21	4.94	24
		9/16 EHS	A1	T1b	21	2.09	10
		9/16 EHS	A1a	T1b	21	4.94	24
1.0D + 1.0W Service 90°	96.99	9/16 EHS	A1b	T1	21	1.38	7
		9/16 EHS	A1	T1	21	3.02	14
		9/16 EHS	A1b	T1a	21	1.39	7
		9/16 EHS	A1a	T1a	21	4.67	22
		9/16 EHS	A1a	T1b	21	4.71	22
		9/16 EHS	A1	T1b	21	3.05	15
1.0D + 1.0W Service 120°	96.99	9/16 EHS	A1b	T1	21	1.16	6
		9/16 EHS	A1	T1	21	3.99	19

DETAILED CABLE FORCES

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
		9/16 EHS	A1b	T1a	21	1.16	6
		9/16 EHS	A1a	T1a	21	3.99	19
		9/16 EHS	A1a	T1b	21	4.04	19
		9/16 EHS	A1	T1b	21	4.04	19
1.0D + 1.0W Service 180°	96.99	9/16 EHS	A1	T1	21	4.94	24
		9/16 EHS	A1b	T1	21	2.09	10
		9/16 EHS	A1b	T1a	21	2.06	10
		9/16 EHS	A1a	T1a	21	2.06	10
		9/16 EHS	A1	T1b	21	4.94	24
		9/16 EHS	A1a	T1b	21	2.09	10
1.0D + 1.0W Service 210°	96.99	9/16 EHS	A1b	T1	21	3.05	15
		9/16 EHS	A1	T1	21	4.71	22
		9/16 EHS	A1b	T1a	21	3.02	14
		9/16 EHS	A1a	T1a	21	1.38	7
		9/16 EHS	A1a	T1b	21	1.39	7
		9/16 EHS	A1	T1b	21	4.67	22
1.0D + 1.0W Service 240°	96.99	9/16 EHS	A1b	T1	21	4.04	19
		9/16 EHS	A1	T1	21	4.04	19
		9/16 EHS	A1b	T1a	21	3.99	19
		9/16 EHS	A1a	T1a	21	1.16	6
		9/16 EHS	A1	T1b	21	3.99	19
		9/16 EHS	A1a	T1b	21	1.16	6
1.0D + 1.0W Service 300°	96.99	9/16 EHS	A1b	T1	21	4.94	24
		9/16 EHS	A1	T1	21	2.09	10
		9/16 EHS	A1a	T1a	21	2.09	10
		9/16 EHS	A1b	T1a	21	4.94	24
		9/16 EHS	A1	T1b	21	2.06	10
		9/16 EHS	A1a	T1b	21	2.06	10
1.0D + 1.0W Service 330°	96.99	9/16 EHS	A1	T1	21	1.39	7
		9/16 EHS	A1b	T1	21	4.67	22
		9/16 EHS	A1b	T1a	21	4.71	22
		9/16 EHS	A1a	T1a	21	3.05	15
		9/16 EHS	A1a	T1b	21	3.02	14
		9/16 EHS	A1	T1b	21	1.38	7

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Available Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.6W 90°	96.99	9/16 EHS	A1a	T1b	21.00	13.04	62

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression (%)	Tension (%)
1.2D + 1.6W 210°	97.00	C12 x 20.7	Torque Arm	0	3.9

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	96.99	0.0904	0.0035	0.3484	0.3484
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	125.03	0.2352	0.0037	0.3469	0.3469
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	136.99	0.3095	0.0020	0.3629	0.3629
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	140.00	0.328	0.0019	0.3556	0.3556
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	96.99	0.0895	0.0006	0.3125	0.3125
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	125.03	0.2341	-0.0011	0.3539	0.3539
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	136.99	0.3082	-0.0027	0.3531	0.3531
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	140.00	0.3269	-0.0028	0.3592	0.3592
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	96.99	0.0941	0.0006	0.3640	0.364
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	125.03	0.2393	0.0014	0.3557	0.3557
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	136.99	0.3138	0.0030	0.3551	0.3551
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	140.00	0.3325	0.0030	0.3607	0.3607
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	96.99	0.0904	0.0035	0.3484	0.3484
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	125.03	0.2352	0.0041	0.3474	0.3474
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	136.99	0.3095	0.0056	0.3629	0.3629
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	140.00	0.328	0.0057	0.3558	0.3558
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	96.99	0.0896	0.0006	0.3128	0.3128
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	125.03	0.2345	0.0010	0.3444	0.3444
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	136.99	0.3089	0.0011	0.3674	0.3674
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	140.00	0.3276	0.0010	0.3563	0.3563
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	96.99	0.0941	0.0006	0.3640	0.364
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	125.03	0.2393	-0.0013	0.3557	0.3557
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	136.99	0.3138	-0.0028	0.3551	0.3551
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	140.00	0.3325	-0.0029	0.3607	0.3607
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	96.99	0.0904	0.0035	0.3483	0.3483
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	125.03	0.2351	0.0039	0.3573	0.3573
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	136.99	0.3092	0.0038	0.3485	0.3485
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	140.00	0.3277	0.0038	0.3592	0.3593
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	96.99	0.0895	0.0006	0.3124	0.3124
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	125.03	0.2341	0.0013	0.3539	0.3539
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	136.99	0.3082	0.0029	0.3531	0.3531
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	140.00	0.3269	0.0029	0.3592	0.3592
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	96.99	0.0942	0.0006	0.3646	0.3646
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	125.03	0.2398	0.0011	0.3454	0.3454
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	136.99	0.3147	0.0011	0.3696	0.3696
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	140.00	0.3334	0.0011	0.3580	0.358
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	96.99	0.0215	0.0002	0.2518	0.2518
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	125.03	0.0688	0.0004	0.1127	0.1127
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	136.99	0.0925	0.0004	0.1140	0.114
(1.2 + 0.2Sds) * DL + E 330° Seismic M1	140.00	0.0986	0.0004	0.1167	0.1167
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	96.99	0.0243	0.0003	0.2790	0.279
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	125.03	0.092	0.0005	0.1607	0.1607
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	136.99	0.1258	0.0005	0.1627	0.1627
(1.2 + 0.2Sds) * DL + E 330° Seismic M2	140.00	0.1344	0.0005	0.1665	0.1665
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	96.99	0.0237	0.0001	0.2548	0.2548
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	125.03	0.0915	0.0004	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	136.99	0.1253	0.0004	0.1625	0.1625
(1.2 + 0.2Sds) * DL + E 300° Seismic M2	140.00	0.1339	0.0004	0.1661	0.1661
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	96.99	0.0211	0.0001	0.2344	0.2344
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	125.03	0.0689	0.0003	0.1135	0.1135
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	136.99	0.0928	0.0003	0.1147	0.1147
(1.2 + 0.2Sds) * DL + E 300° Seismic M1	140.00	0.0988	0.0003	0.1174	0.1174
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	96.99	0.0218	0.0002	0.2581	0.2581
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	125.03	0.0692	0.0004	0.1126	0.1126
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	136.99	0.0929	0.0004	0.1141	0.1141
(1.2 + 0.2Sds) * DL + E 240° Seismic M1	140.00	0.0989	0.0004	0.1169	0.1169
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	96.99	0.0247	0.0001	0.2875	0.2875
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	125.03	0.0925	0.0004	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	136.99	0.1264	0.0004	0.1628	0.1628

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
(1.2 + 0.2Sds) * DL + E 240° Seismic M2	140.00	0.135	0.0004	0.1667	0.1667
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	96.99	0.0243	0.0003	0.2790	0.279
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	125.03	0.092	0.0006	0.1607	0.1607
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	136.99	0.1258	0.0005	0.1627	0.1627
(1.2 + 0.2Sds) * DL + E 210° Seismic M2	140.00	0.1344	0.0005	0.1665	0.1665
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	96.99	0.0215	0.0002	0.2523	0.2523
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	125.03	0.0693	0.0004	0.1135	0.1135
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	136.99	0.0932	0.0004	0.1149	0.1149
(1.2 + 0.2Sds) * DL + E 210° Seismic M1	140.00	0.0992	0.0004	0.1176	0.1176
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	96.99	0.0238	0.0001	0.2551	0.2551
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	125.03	0.0918	0.0003	0.1613	0.1613
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	136.99	0.1259	0.0004	0.1632	0.1632
(1.2 + 0.2Sds) * DL + E 180° Seismic M2	140.00	0.1345	0.0004	0.1669	0.1669
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	96.99	0.0211	0.0001	0.2344	0.2344
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	125.03	0.0689	0.0003	0.1135	0.1135
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	136.99	0.0928	0.0003	0.1147	0.1147
(1.2 + 0.2Sds) * DL + E 180° Seismic M1	140.00	0.0988	0.0003	0.1174	0.1174
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	96.99	0.0218	0.0002	0.2581	0.2581
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	125.03	0.0692	0.0004	0.1126	0.1126
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	136.99	0.0929	0.0004	0.1141	0.1141
(1.2 + 0.2Sds) * DL + E 120° Seismic M1	140.00	0.0989	0.0004	0.1169	0.1169
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	96.99	0.0247	0.0001	0.2875	0.2875
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	125.03	0.0925	0.0004	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	136.99	0.1264	0.0004	0.1628	0.1628
(1.2 + 0.2Sds) * DL + E 120° Seismic M2	140.00	0.135	0.0004	0.1667	0.1667
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	96.99	0.0243	0.0003	0.2790	0.279
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	125.03	0.092	0.0005	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	136.99	0.1258	0.0005	0.1627	0.1627
(1.2 + 0.2Sds) * DL + E 90° Seismic M2	140.00	0.1344	0.0005	0.1665	0.1665
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	96.99	0.0215	0.0002	0.2518	0.2518
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	125.03	0.0688	0.0004	0.1127	0.1127
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	136.99	0.0925	0.0004	0.1140	0.114
(1.2 + 0.2Sds) * DL + E 90° Seismic M1	140.00	0.0986	0.0004	0.1167	0.1167
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	96.99	0.0237	0.0001	0.2548	0.2548
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	125.03	0.0915	0.0004	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	136.99	0.1253	0.0004	0.1625	0.1625
(1.2 + 0.2Sds) * DL + E 60° Seismic M2	140.00	0.1339	0.0004	0.1661	0.1661
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	96.99	0.0211	0.0001	0.2344	0.2344
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	125.03	0.0689	0.0003	0.1135	0.1135
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	136.99	0.0928	0.0003	0.1147	0.1147
(1.2 + 0.2Sds) * DL + E 60° Seismic M1	140.00	0.0988	0.0003	0.1174	0.1174
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	96.99	0.0218	0.0002	0.2581	0.2581
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	125.03	0.0692	0.0004	0.1126	0.1126
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	136.99	0.0929	0.0004	0.1141	0.1141
(1.2 + 0.2Sds) * DL + E Normal Seismic M1	140.00	0.0989	0.0004	0.1169	0.1169
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	96.99	0.0247	0.0001	0.2875	0.2875
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	125.03	0.0925	0.0004	0.1606	0.1606
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	136.99	0.1263	0.0004	0.1628	0.1628
(1.2 + 0.2Sds) * DL + E Normal Seismic M2	140.00	0.135	0.0004	0.1667	0.1667
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	96.99	0.0582	0.0021	0.4717	0.4717
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	125.03	0.1248	0.0026	0.1597	0.1597
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	136.99	0.1585	0.0024	0.1643	0.1643
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0.75" Radial Ice	140.00	0.167	0.0024	0.1620	0.162
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	96.99	0.0581	0.0004	0.4455	0.4455
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	125.03	0.1249	0.0009	0.1621	0.1621
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	136.99	0.1586	-0.0007	0.1613	0.1613
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0.75" Radial Ice	140.00	0.1671	-0.0007	0.1635	0.1635
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	96.99	0.0597	0.0004	0.4836	0.4836
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	125.03	0.1265	0.0010	0.1620	0.162

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	136.99	0.1604	0.0013	0.1621	0.1621
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0.75" Radial Ice	140.00	0.1689	0.0013	0.1633	0.1633
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	96.99	0.0582	0.0021	0.4717	0.4717
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	125.03	0.1248	0.0028	0.1598	0.1598
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	136.99	0.1585	0.0030	0.1642	0.1642
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0.75" Radial Ice	140.00	0.167	0.0030	0.1621	0.1621
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	96.99	0.0581	0.0004	0.4456	0.4456
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	125.03	0.125	0.0009	0.1593	0.1593
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	136.99	0.1588	0.0010	0.1659	0.1659
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0.75" Radial Ice	140.00	0.1673	0.0010	0.1625	0.1625
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	96.99	0.0595	0.0004	0.4833	0.4833
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	125.03	0.1262	0.0009	0.1616	0.1616
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	136.99	0.16	-0.0008	0.1617	0.1617
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0.75" Radial Ice	140.00	0.1684	-0.0008	0.1629	0.1629
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	96.99	0.0582	0.0021	0.4716	0.4716
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	125.03	0.1246	0.0027	0.1626	0.1626
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	136.99	0.1583	0.0027	0.1594	0.1594
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0.75" Radial Ice	140.00	0.1667	0.0027	0.1631	0.1631
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	96.99	0.0581	0.0004	0.4455	0.4455
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	125.03	0.1249	0.0010	0.1621	0.1621
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	136.99	0.1586	0.0013	0.1613	0.1613
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0.75" Radial Ice	140.00	0.1671	0.0013	0.1635	0.1635
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	96.99	0.0597	0.0003	0.4837	0.4837
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	125.03	0.1266	0.0009	0.1590	0.159
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	136.99	0.1606	0.0009	0.1669	0.1669
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0.75" Radial Ice	140.00	0.1691	0.0009	0.1623	0.1623
1.2D + 1.6W 330° 92 mph Wind with No Ice	96.99	0.6681	0.0335	1.2128	1.2133
1.2D + 1.6W 330° 92 mph Wind with No Ice	125.03	1.305	0.0343	1.5035	1.5037
1.2D + 1.6W 330° 92 mph Wind with No Ice	136.99	1.6251	0.0090	1.5681	1.5682
1.2D + 1.6W 330° 92 mph Wind with No Ice	140.00	1.7051	0.0081	1.5393	1.5393
1.2D + 1.6W 300° 92 mph Wind with No Ice	96.99	0.4286	-0.0012	0.8778	0.8778
1.2D + 1.6W 300° 92 mph Wind with No Ice	125.03	1.0057	-0.0078	1.3989	1.399
1.2D + 1.6W 300° 92 mph Wind with No Ice	136.99	1.2989	-0.0318	1.3979	1.3981
1.2D + 1.6W 300° 92 mph Wind with No Ice	140.00	1.3728	-0.0326	1.4205	1.4208
1.2D + 1.6W 240° 92 mph Wind with No Ice	96.99	0.7623	0.0003	1.3384	1.3384
1.2D + 1.6W 240° 92 mph Wind with No Ice	125.03	1.4364	0.0116	1.5991	1.5991
1.2D + 1.6W 240° 92 mph Wind with No Ice	136.99	1.7715	0.0390	1.5977	1.5982
1.2D + 1.6W 240° 92 mph Wind with No Ice	140.00	1.8553	0.0404	1.6197	1.6201
1.2D + 1.6W 210° 92 mph Wind with No Ice	96.99	0.668	0.0340	1.2126	1.2131
1.2D + 1.6W 210° 92 mph Wind with No Ice	125.03	1.3049	0.0432	1.5081	1.5085
1.2D + 1.6W 210° 92 mph Wind with No Ice	136.99	1.6249	0.0705	1.5645	1.566
1.2D + 1.6W 210° 92 mph Wind with No Ice	140.00	1.7048	0.0716	1.5396	1.5409
1.2D + 1.6W 180° 92 mph Wind with No Ice	96.99	0.4286	-0.0009	0.8783	0.8783
1.2D + 1.6W 180° 92 mph Wind with No Ice	125.03	1.0061	-0.0038	1.3611	1.3611
1.2D + 1.6W 180° 92 mph Wind with No Ice	136.99	1.3	-0.0040	1.4498	1.4498
1.2D + 1.6W 180° 92 mph Wind with No Ice	140.00	1.3741	-0.0037	1.4077	1.4077
1.2D + 1.6W 120° 92 mph Wind with No Ice	96.99	0.7623	-0.0005	1.3384	1.3384
1.2D + 1.6W 120° 92 mph Wind with No Ice	125.03	1.4364	-0.0118	1.5991	1.5991
1.2D + 1.6W 120° 92 mph Wind with No Ice	136.99	1.7715	-0.0392	1.5977	1.5982
1.2D + 1.6W 120° 92 mph Wind with No Ice	140.00	1.8553	-0.0406	1.6197	1.6201
1.2D + 1.6W 90° 92 mph Wind with No Ice	96.99	0.668	0.0337	1.2121	1.2125
1.2D + 1.6W 90° 92 mph Wind with No Ice	125.03	1.3045	0.0383	1.5444	1.5448
1.2D + 1.6W 90° 92 mph Wind with No Ice	136.99	1.6238	0.0361	1.5124	1.5128
1.2D + 1.6W 90° 92 mph Wind with No Ice	140.00	1.7036	0.0360	1.5527	1.553
1.2D + 1.6W 60° 92 mph Wind with No Ice	96.99	0.4286	0.0011	0.8777	0.8777
1.2D + 1.6W 60° 92 mph Wind with No Ice	125.03	1.0057	0.0077	1.3990	1.399
1.2D + 1.6W 60° 92 mph Wind with No Ice	136.99	1.2989	0.0317	1.3979	1.3981
1.2D + 1.6W 60° 92 mph Wind with No Ice	140.00	1.3728	0.0325	1.4205	1.4208
1.2D + 1.6W Normal 92 mph Wind with No Ice	96.99	0.7624	-0.0002	1.3392	1.3392

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.6W Normal 92 mph Wind with No Ice	125.03	1.4368	-0.0071	1.5593	1.5593
1.2D + 1.6W Normal 92 mph Wind with No Ice	136.99	1.7727	-0.0069	1.6497	1.6497
1.2D + 1.6W Normal 92 mph Wind with No Ice	140.00	1.8567	-0.0073	1.6070	1.607

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
1.2D + 1.6W Normal	0.00	0.00		1	0.00	40.86	-0.65
	140.00	0.00	0	A1	0.00	-0.01	0.01
	140.00	0.00	240	A1a	-15.29	-12.32	-9.17
	140.00	0.00	120	A1b	15.29	-12.32	-9.17
1.2D + 1.6W 60°	0.00	0.00		1	-0.69	33.39	-0.40
	140.00	0.00	0	A1	-0.23	-1.69	2.42
	140.00	0.00	240	A1a	-17.50	-13.97	-10.11
	140.00	0.00	120	A1b	1.99	-1.69	-1.41
1.2D + 1.6W 90°	0.00	0.00		1	-0.70	38.66	-0.06
	140.00	0.00	0	A1	-0.32	-7.52	10.85
	140.00	0.00	240	A1a	-18.39	-14.60	-10.43
	140.00	0.00	120	A1b	0.44	-0.41	-0.37
1.2D + 1.6W 120°	0.00	0.00		1	-0.56	40.86	0.32
	140.00	0.00	0	A1	-0.30	-12.32	17.83
	140.00	0.00	240	A1a	-15.59	-12.32	-8.66
	140.00	0.00	120	A1b	0.01	-0.01	0.00
1.2D + 1.6W 180°	0.00	0.00		1	0.00	33.39	0.79
	140.00	0.00	0	A1	0.00	-13.97	20.21
	140.00	0.00	240	A1a	-2.21	-1.69	-1.02
	140.00	0.00	120	A1b	2.21	-1.69	-1.02
1.2D + 1.6W 210°	0.00	0.00		1	0.29	38.66	0.63
	140.00	0.00	0	A1	0.16	-14.60	21.14
	140.00	0.00	240	A1a	-0.54	-0.41	-0.20
	140.00	0.00	120	A1b	9.56	-7.52	-5.15
1.2D + 1.6W 240°	0.00	0.00		1	0.56	40.86	0.32
	140.00	0.00	0	A1	0.30	-12.32	17.83
	140.00	0.00	240	A1a	-0.01	-0.01	0.00
	140.00	0.00	120	A1b	15.59	-12.32	-8.66
1.2D + 1.6W 300°	0.00	0.00		1	0.69	33.39	-0.40
	140.00	0.00	0	A1	0.23	-1.69	2.42
	140.00	0.00	240	A1a	-1.99	-1.69	-1.41
	140.00	0.00	120	A1b	17.50	-13.97	-10.11
1.2D + 1.6W 330°	0.00	0.00		1	0.40	38.66	-0.57
	140.00	0.00	0	A1	0.10	-0.41	0.56
	140.00	0.00	240	A1a	-9.24	-7.52	-5.71
	140.00	0.00	120	A1b	18.22	-14.60	-10.71
1.2D + 1.0Di + 1.0Wi Normal	0.00	0.00		1	0.00	65.78	-0.09
	140.00	0.00	0	A1	0.00	-4.55	7.50
	140.00	0.00	240	A1a	-8.34	-6.00	-4.93
	140.00	0.00	120	A1b	8.34	-6.00	-4.93
1.2D + 1.0Di + 1.0Wi 60°	0.00	0.00		1	-0.08	65.54	-0.05
	140.00	0.00	0	A1	-0.10	-4.98	8.12
	140.00	0.00	240	A1a	-8.93	-6.43	-5.16
	140.00	0.00	120	A1b	6.99	-4.98	-4.15
1.2D + 1.0Di + 1.0Wi 90°	0.00	0.00		1	-0.09	65.66	0.00
	140.00	0.00	0	A1	-0.12	-5.49	8.90
	140.00	0.00	240	A1a	-8.83	-6.32	-5.04
	140.00	0.00	120	A1b	6.59	-4.65	-3.86
1.2D + 1.0Di + 1.0Wi 120°	0.00	0.00		1	-0.08	65.78	0.05
	140.00	0.00	0	A1	-0.10	-6.00	9.68
	140.00	0.00	240	A1a	-8.44	-6.00	-4.76
	140.00	0.00	120	A1b	6.49	-4.55	-3.75
1.2D + 1.0Di + 1.0Wi 180°	0.00	0.00		1	0.00	65.54	0.09
	140.00	0.00	0	A1	0.00	-6.43	10.31
	140.00	0.00	240	A1a	-7.08	-4.98	-3.98
	140.00	0.00	120	A1b	7.08	-4.98	-3.98
1.2D + 1.0Di + 1.0Wi 210°	0.00	0.00		1	0.05	65.66	0.08
	140.00	0.00	0	A1	0.04	-6.32	10.17
	140.00	0.00	240	A1a	-6.64	-4.65	-3.78

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
1.2D + 1.0Di + 1.0Wi 240°	140.00	0.00	120	A1b	7.77	-5.49	-4.34
	0.00	0.00		1	0.08	65.78	0.05
	140.00	0.00	0	A1	0.10	-6.00	9.69
	140.00	0.00	240	A1a	-6.49	-4.55	-3.75
	140.00	0.00	120	A1b	8.44	-6.00	-4.76
1.2D + 1.0Di + 1.0Wi 300°	0.00	0.00		1	0.08	65.54	-0.05
	140.00	0.00	0	A1	0.10	-4.98	8.12
	140.00	0.00	240	A1a	-6.99	-4.98	-4.15
	140.00	0.00	120	A1b	8.93	-6.43	-5.16
1.2D + 1.0Di + 1.0Wi 330°	0.00	0.00		1	0.05	65.66	-0.08
	140.00	0.00	0	A1	0.04	-4.65	7.64
	140.00	0.00	240	A1a	-7.65	-5.49	-4.56
	140.00	0.00	120	A1b	8.78	-6.32	-5.12
(1.2 + 0.2Sds) * DL + E Normal M1	0.00	0.00		1	0.00	26.34	0.12
	140.00	0.00	0	A1	0.00	-2.71	4.00
	140.00	0.00	240	A1a	-4.43	-3.49	-2.56
	140.00	0.00	120	A1b	4.43	-3.49	-2.56
	0.00	0.00		1	0.00	26.35	0.21
	140.00	0.00	0	A1	0.00	-2.63	3.89
	140.00	0.00	240	A1a	-4.48	-3.54	-2.59
	140.00	0.00	120	A1b	4.48	-3.54	-2.59
(1.2 + 0.2Sds) * DL + E 60° M1	0.00	0.00		1	0.11	26.34	0.06
	140.00	0.00	0	A1	0.00	-2.97	4.37
	140.00	0.00	240	A1a	-4.75	-3.75	-2.74
	140.00	0.00	120	A1b	3.78	-2.97	-2.18
	0.00	0.00		1	0.18	26.34	0.11
	140.00	0.00	0	A1	0.00	-2.93	4.32
	140.00	0.00	240	A1a	-4.85	-3.83	-2.80
	140.00	0.00	120	A1b	3.74	-2.93	-2.16
(1.2 + 0.2Sds) * DL + E 90° M1	0.00	0.00		1	0.12	26.34	0.00
	140.00	0.00	0	A1	0.00	-3.23	4.74
	140.00	0.00	240	A1a	-4.66	-3.68	-2.69
	140.00	0.00	120	A1b	3.55	-2.78	-2.05
	0.00	0.00		1	0.21	26.35	0.00
	140.00	0.00	0	A1	0.00	-3.23	4.74
	140.00	0.00	240	A1a	-4.75	-3.76	-2.74
	140.00	0.00	120	A1b	3.47	-2.71	-2.00
(1.2 + 0.2Sds) * DL + E 120° M1	0.00	0.00		1	0.10	26.34	-0.06
	140.00	0.00	0	A1	0.00	-3.49	5.11
	140.00	0.00	240	A1a	-4.43	-3.49	-2.56
	140.00	0.00	120	A1b	3.47	-2.71	-2.00
	0.00	0.00		1	0.18	26.35	-0.11
	140.00	0.00	0	A1	0.00	-3.54	5.17
	140.00	0.00	240	A1a	-4.48	-3.54	-2.59
	140.00	0.00	120	A1b	3.37	-2.63	-1.95
(1.2 + 0.2Sds) * DL + E 180° M1	0.00	0.00		1	0.00	26.34	-0.12
	140.00	0.00	0	A1	0.00	-3.75	5.49
	140.00	0.00	240	A1a	-3.78	-2.97	-2.18
	140.00	0.00	120	A1b	3.78	-2.97	-2.18
	0.00	0.00		1	0.00	26.34	-0.21
	140.00	0.00	0	A1	0.00	-3.84	5.60
	140.00	0.00	240	A1a	-3.74	-2.93	-2.16
	140.00	0.00	120	A1b	3.74	-2.93	-2.16
(1.2 + 0.2Sds) * DL + E 210° M1	0.00	0.00		1	-0.06	26.34	-0.11
	140.00	0.00	0	A1	0.00	-3.69	5.39
	140.00	0.00	240	A1a	-3.55	-2.78	-2.05
	140.00	0.00	120	A1b	4.11	-3.23	-2.37
	0.00	0.00		1	-0.11	26.35	-0.18
	140.00	0.00	0	A1	0.00	-3.76	5.49

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					*(-) Uplift and (+) Down		
(1.2 + 0.2Sds) * DL + E 240° M1	140.00	0.00	240	A1a	-3.47	-2.71	-2.00
	140.00	0.00	120	A1b	4.11	-3.23	-2.37
	0.00	0.00		1	-0.10	26.34	-0.06
	140.00	0.00	0	A1	0.00	-3.49	5.11
	140.00	0.00	240	A1a	-3.47	-2.71	-2.00
	140.00	0.00	120	A1b	4.43	-3.49	-2.56
	0.00	0.00		1	-0.18	26.35	-0.11
	140.00	0.00	0	A1	0.00	-3.54	5.17
	140.00	0.00	240	A1a	-3.37	-2.63	-1.95
	140.00	0.00	120	A1b	4.48	-3.54	-2.59
(1.2 + 0.2Sds) * DL + E 300° M1	0.00	0.00		1	-0.11	26.34	0.06
	140.00	0.00	0	A1	0.00	-2.97	4.37
	140.00	0.00	240	A1a	-3.78	-2.97	-2.18
	140.00	0.00	120	A1b	4.75	-3.75	-2.74
	0.00	0.00		1	-0.18	26.34	0.11
	140.00	0.00	0	A1	0.00	-2.93	4.32
	140.00	0.00	240	A1a	-3.74	-2.93	-2.16
	140.00	0.00	120	A1b	4.85	-3.83	-2.80
(1.2 + 0.2Sds) * DL + E 330° M1	0.00	0.00		1	-0.06	26.34	0.10
	140.00	0.00	0	A1	0.00	-2.78	4.10
	140.00	0.00	240	A1a	-4.11	-3.23	-2.37
	140.00	0.00	120	A1b	4.66	-3.68	-2.69
	0.00	0.00		1	-0.11	26.35	0.18
	140.00	0.00	0	A1	0.00	-2.71	4.00
	140.00	0.00	240	A1a	-4.11	-3.23	-2.37
	140.00	0.00	120	A1b	4.75	-3.76	-2.74
1.0D + 1.0W Service Normal	0.00	0.00		1	0.00	23.70	-0.24
	140.00	0.00	0	A1	0.00	-1.21	1.82
	140.00	0.00	240	A1a	-5.62	-4.46	-3.32
	140.00	0.00	120	A1b	5.62	-4.46	-3.32
1.0D + 1.0W Service 60°	0.00	0.00		1	-0.20	23.56	-0.12
	140.00	0.00	0	A1	-0.06	-2.26	3.33
	140.00	0.00	240	A1a	-6.96	-5.52	-4.02
	140.00	0.00	120	A1b	2.85	-2.26	-1.72
1.0D + 1.0W Service 90°	0.00	0.00		1	-0.24	23.60	0.00
	140.00	0.00	0	A1	-0.08	-3.35	4.91
	140.00	0.00	240	A1a	-6.62	-5.23	-3.79
	140.00	0.00	120	A1b	1.89	-1.47	-1.12
1.0D + 1.0W Service 120°	0.00	0.00		1	-0.21	23.70	0.12
	140.00	0.00	0	A1	-0.06	-4.46	6.52
	140.00	0.00	240	A1a	-5.68	-4.46	-3.21
	140.00	0.00	120	A1b	1.58	-1.21	-0.91
1.0D + 1.0W Service 180°	0.00	0.00		1	0.00	23.56	0.23
	140.00	0.00	0	A1	0.00	-5.52	8.04
	140.00	0.00	240	A1a	-2.91	-2.26	-1.61
	140.00	0.00	120	A1b	2.91	-2.26	-1.61
1.0D + 1.0W Service 210°	0.00	0.00		1	0.12	23.60	0.20
	140.00	0.00	0	A1	0.03	-5.23	7.63
	140.00	0.00	240	A1a	-1.92	-1.47	-1.08
	140.00	0.00	120	A1b	4.29	-3.35	-2.39
1.0D + 1.0W Service 240°	0.00	0.00		1	0.21	23.70	0.12
	140.00	0.00	0	A1	0.06	-4.46	6.52
	140.00	0.00	240	A1a	-1.58	-1.21	-0.91
	140.00	0.00	120	A1b	5.68	-4.46	-3.21
1.0D + 1.0W Service 300°	0.00	0.00		1	0.20	23.56	-0.12
	140.00	0.00	0	A1	0.06	-2.26	3.33
	140.00	0.00	240	A1a	-2.85	-2.26	-1.72
	140.00	0.00	120	A1b	6.96	-5.52	-4.02
1.0D + 1.0W Service 330°	0.00	0.00		1	0.12	23.60	-0.20

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
	140.00	0.00	0	A1	0.03	-1.47	2.20
	140.00	0.00	240	A1a	-4.21	-3.35	-2.52
	140.00	0.00	120	A1b	6.59	-5.23	-3.84

MAXIMUM GUY ANCHOR REACTIONS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
140.00	0.00	0	14.60	21.14
140.00	0.00	120	14.60	21.14
140.00	0.00	240	14.60	21.14

MAXIMUM REACTIONS SUMMARY

Base / Anchor Group	Vertical Load *(Compression for Base; Uplift for Anchor)*	Horizontal Shear
Guyed – Pivot Base	65.78 (kip)	0.79 (kip)
Guyed Anchor - A1	14.60 (kip)	21.14 (kip)