



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 480 ft Guyed Tower
ATC Site Name : LEE S SUMMIT #1B,MO
ATC Site Number : 36075
Engineering Number : OAA769626_C3_02
Proposed Carrier : WISPER ISP, LLC
Carrier Site Name : N/A
Carrier Site Number : N/A
Site Location : 2200 LOWENSTEIN
Lees Summit, MO 64081-1905
38.9332, -94.4176
County : Jackson
Date : December 15, 2021
Max Usage : 70%
Result : Pass

Prepared By:

Tanner Putman
Structural Engineer

Reviewed By:



COA : 2006031326

Table of Contents

Introduction	3
Supporting Documents.....	3
Analysis.....	3
Conclusion	3
Existing and Reserved Equipment	4
Equipment to be Removed.....	5
Proposed Equipment.....	5
Structure Usages	6
Foundations.....	6
Deflection, Twist and Sway*	6
Standard Conditions.....	7
Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 480 ft Guyed tower to reflect the change in loading by WISPER ISP, LLC.

Supporting Documents

Tower Drawings	Allied Tower, Drawing #B-21081 dated August 8, 2000
Foundation Drawing	Allied Tower, Drawing #B-21136 dated August 31, 2000
Geotechnical Report	GeoSystems Engineering, Inc., Job #1995328 dated September 9, 1999

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:	109 mph (3-second gust)
Basic Wind Speed w/ Ice:	40 mph (3-second gust) w/ 1.50" radial ice concurrent
Code:	ANSI/TIA-222-H / 2018 IBC
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	$S_s = 0.10$, $S_i = 0.07$
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 contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
485.0	1	Decibel DB264	Sector Frame	(1) 7/8" Coax	US DEPT OF JUSTICE
464.0	1	Generic 14' Omni	Side Arm	(2) 1 5/8" Coax	UNKNOWN
457.0	1	Generic 15' Omni			
432.5	1	Generic 11' Omni	Side Arm	(1) 1 5/8" Coax	SPOK HOLDINGS, INC.
430.0	1	Decibel DB408	Leg	(1) 3" Coax	JADE ALARM CO.
421.0	1	Panasonic VIC100 (3.9")	Stand-Off	(1) 0.19" (4.9mm) RG-58/U	PIXIUS COMMUNICATIONS
419.0	1	Andrew Microwaves VHLP6-6W		(2) 0.24" (6mm) Cat 5	
417.0	1	Generic 30" x 23" BOB		(1) 0.24" (6mm) Fiber	
	1	Andrew VHLP4-11W		(1) 0.63" (15.9mm) Cable	
	4	Cambium Networks PMP 430 Access Point	Leg	(1) 1" conduit	WISPER ISP, LLC
	1	Generic 30" x 23" BOB		(4) 0.27" (6.7mm) Cat 5e	
				(1) 3/8" (0.38"- 9.5mm) RET Control Cable	
407.0	4	Motorola 5780AP	Leg	(2) 0.24" (6mm) Cat 5	PIXIUS COMMUNICATIONS
404.0	2	Generic 13' Omni	Side Arm	(3) 1 5/8" Coax	UNKNOWN
387.0	1	Generic 8' Omni	Side Arm	(1) 1 5/8" Coax	
365.0	1	Decibel DB224-A	Side Arm	(1) 1/2" Coax	MOBILEFONE
339.0	1	Andrew DB420D-B	Side Arm	(1) 7/8" Coax	
336.0	2	Generic 13' Omni		(2) 1 1/4" Coax	
200.0	1	Decibel DB224-FAA	Side Arm	(1) 1/2" Coax	
180.0	3	Ericsson RRUS-11 800 MHz	Sector Frame	(1) 0.24" (6mm) Cat 5 (3) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	1	Fastback Networks Intelligent Backhaul Radio 1300 Series			
	3	Ericsson RRUS 31			
	3	Ericsson RRUS82 w/ Solarshield			
	3	RFS APXVSP18-C-A20 (62 lbs)			
	3	Commscope TTTT90AP-1XR			
92.0	1	Generic 13' Omni	Side Arm	(1) 1/2" Coax	UNKNOWN
91.0	1	Andrew DB437	Leg	(1) 1/2" Coax	MOBILEFONE
81.0	1	Decibel DB230E	Leg	(1) 1/2" Coax	
66.0	1	PCTEL MYA4503	Leg	(1) 1/2" Coax	JADE ALARM CO.
4.0	1	Generic 4' Std. Dish	Leg	(1) 3/8" Coax	SPOK HOLDINGS, INC.

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
417.0	2	Cambium Networks PTP 820S	-	(4) 0.27" (6.7mm) Cat 5e	WISPER ISP, LLC
	1	Radio Waves SHPD6-6.4			
	1	Radio Waves SPD4-1011 w/ Radome			
	4	Cambium Networks PMP 430 AP			

Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
417.0	2	Aviat Networks WTM 4200 ANSI	Leg	(2) 0.22" (5.7mm) Fiber	WISPER ISP, LLC
	2	RFS SC3-W100BGT1X		(2) 0.32" (8.1mm) Cable	

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines alongside existing WISPER ISP, LLC lines.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	59%	Pass
Diagonals	58%	Pass
Horizontals	68%	Pass
Guys	54%	Pass
Leg Bolts	35%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Base Axial (kips)	490.8	662.5	465.1	70%
Anchor 1 Uplift (kips)	55.1	74.3	34.5	46%
Anchor 1 Shear (kips)	53.4	72.0	33.0	46%
Anchor 2 Uplift (kips)	111.3	150.2	71.0	47%
Anchor 2 Shear (kips)	95.1	128.4	59.6	46%
* The design reactions are factored by 1.35 per ANSI/TIA-222-H, Sec. 15.6.2				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
419.0	Andrew Microwaves VHLP6-6W	PIXIUS COMMUNICATIONS	0.228	0.001	0.058
417.0	Andrew VHLP4-11W		0.228	0.002	0.023
	RFS SC3-W100BGT1X	WISPER ISP, LLC	0.228	0.002	0.023
4.0	Generic 4' Std. Dish	SPOK HOLDINGS, INC.	0.005	0.021	0.077

*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H

Standard Conditions

All engineering services performed by ATC Tower Services 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 ATC Tower Services

It is the responsibility of the client to ensure that the information provided to ATC Tower Services and used in the performance of our engineering services is correct and complete.

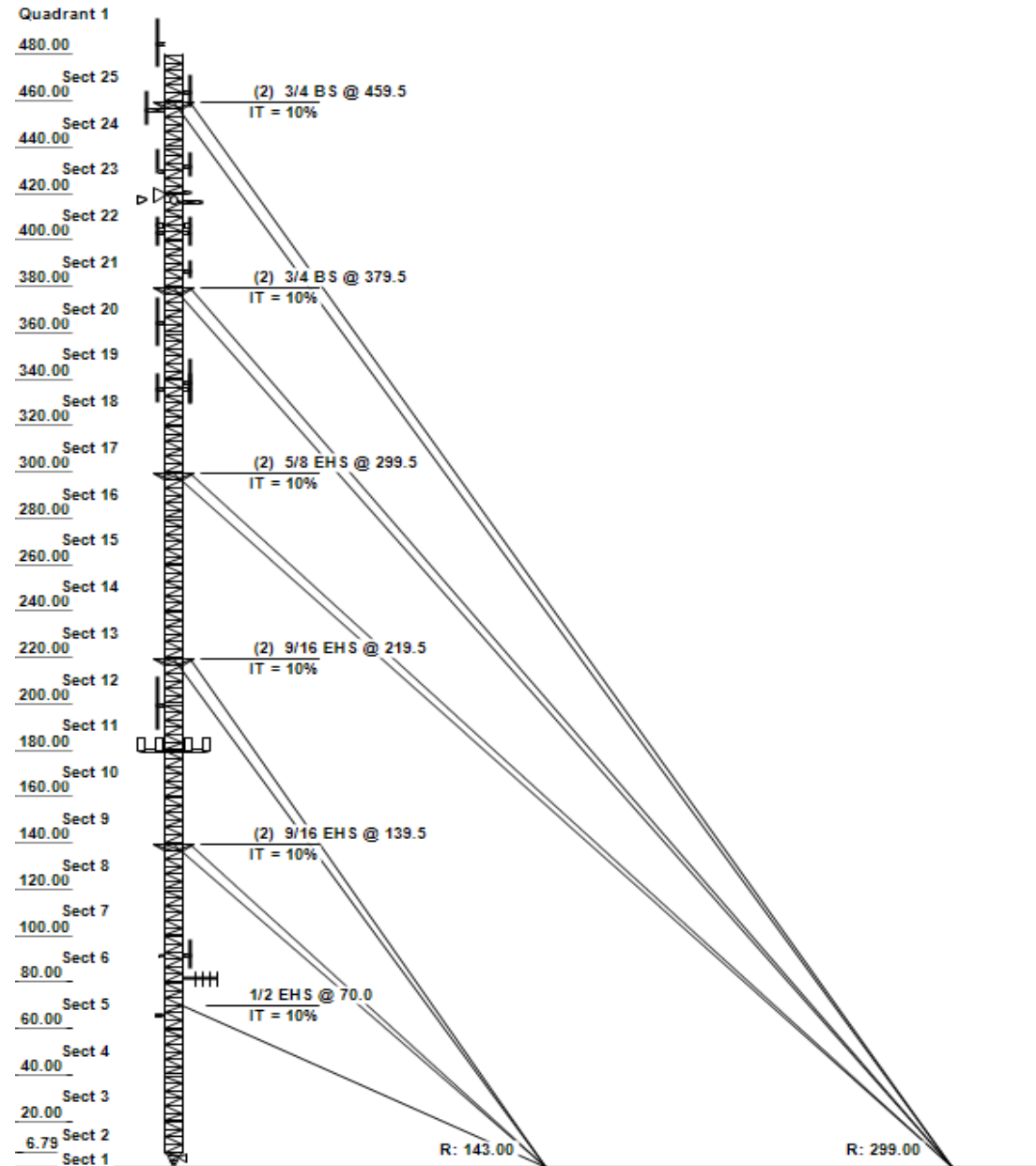
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

Unless explicitly agreed by both the client and ATC Tower Services, 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. ATC Tower Services is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Asset: 36075, LEE S SUMMIT #1B
 Client: WISPER ISP, LLC
 Code: ANSI/TIA-222-H

Height : 480 ft
 Base Width : 3.5 ft
 Shape : Triangle



SITE PARAMETERS

Nominal Wind : 109 mph wind with no ice Exposure : C Site Class : D
 Ice Wind: 40 mph wind with 1.5" radi Topo Method: Method 1 Risk Cat : II
 Service Wind : 60 mph Serviceability Topo Feature : S_g : 0.099 S₁ : 0.068

SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1 - 8	SOL 50 ksi 3" SOLID	SOL 36 ksi 1 1/8" SOLID	SOL 36 ksi 7/8" SOLID
9 - 12	SOL 50 ksi 3" SOLID	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID
13 - 16	SOL 50 ksi 2 3/4" SOL	SOL 36 ksi 1 1/8" SOLID	SOL 36 ksi 7/8" SOLID
17 - 20	SOL 50 ksi 2 1/2" SOL	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID
21 - 25	SOL 50 ksi 2 1/4" SOL	SOL 36 ksi 1 1/4" SOLID	SOL 36 ksi 7/8" SOLID

REDUNDANT SECONDARY BRACING

Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 25	-	-	-	-	-	-

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
485.00	DIPOLE	1	Decibel DB264
475.00	Sector Frame	3	Generic Flat Light Sector Fram
464.00	OMNI	1	Generic 14' Omni
460.00	Torque Arm	1	Generic Torque Arm
457.00	OMNI	1	Generic 15' Omni
457.00	Side Arm	1	Generic Round Side Arm
432.50	OMNI	1	Generic 11' Omni
430.00	DIPOLE	1	Decibel DB408
427.00	Side Arm	2	Generic Round Side Arm
421.00	GPS	1	Panasonic VIC100 (3.9")
420.50	Stand-Off	1	Generic Flat Stand-Off
419.00	DISH-HP	1	Andrew Microwaves VHLP6-6W
417.00	BOB/SSB	1	Generic 30" x 23" BOB
417.00	BOB/SSB	1	Generic 30" x 23" BOB
417.00	DISH-HP	1	Andrew VHLP4-11W
417.00	DISH-HP	2	RFS SC3-W100BGT1X
417.00	Radio/ODU	2	Aviat Networks WTM 4200 ANSI
417.00	Radio/ODU	4	Cambium Networks PMP 430 Acces
417.00	Side Arm	1	Generic Round Side Arm
407.00	PANEL	4	Motorola 5780AP
404.00	OMNI	2	Generic 13' Omni
397.00	Side Arm	2	Generic Round Side Arm
387.00	OMNI	1	Generic 8' Omni
383.00	Side Arm	1	Generic Flat Side Arm
380.00	Torque Arm	1	Generic Torque Arm
365.00	DIPOLE	1	Decibel DB224-A
355.00	Side Arm	1	Generic Round Side Arm
339.00	DIPOLE	1	Andrew DB420D-B
336.00	OMNI	2	Generic 13' Omni
330.00	Side Arm	1	Generic Round Side Arm
320.00	Side Arm	1	Generic Round Side Arm
300.00	Torque Arm	1	Generic Torque Arm
220.00	Torque Arm	1	Generic Torque Arm

JOB INFORMATION

Asset: 36075, LEE S SUMMIT #1B
 Client: WISPER ISP, LLC
 Code: ANSI/TIA-222-H

Height : 480 ft
 Base Width : 3.5 ft
 Shape : Triangle

DISCRETE APPURTENANCE

Elev (ft)	Type	Qty	Description
200.00	DIPOLE	1	Decibel DB224-FAA
189.00	Side Arm	1	Generic Round Side Arm
180.00	PANEL	3	RFS APXVSP18-C-A20 (62 lbs)
180.00	PANEL	3	Commscope TTTT90AP-1XR
180.00	RRU/RRH	3	Ericsson RRUS82 w/ Solarshield
180.00	RRU/RRH	3	Ericsson RRUS-11 800 MHz
180.00	RRU/RRH	3	Ericsson RRUS 31
180.00	Radio/ODU	1	Fastback Networks Intelligent
180.00	Sector Frame	3	Generic Round Sector Frame
171.00	Sector Frame	3	Generic Flat Light Sector Fram
140.00	Torque Arm	1	Generic Torque Arm
130.00	Sector Frame	3	Generic Flat Light Sector Fram
92.00	OMNI	1	Generic 13' Omni
91.00	YAGI	1	Andrew DB437
86.00	Side Arm	1	Generic Flat Side Arm
81.00	YAGI	1	Decibel DB230E
66.00	YAGI	1	PCTEL MYA4503
4.00	DISH-STANDARD	1	Generic 4' Std. Dish

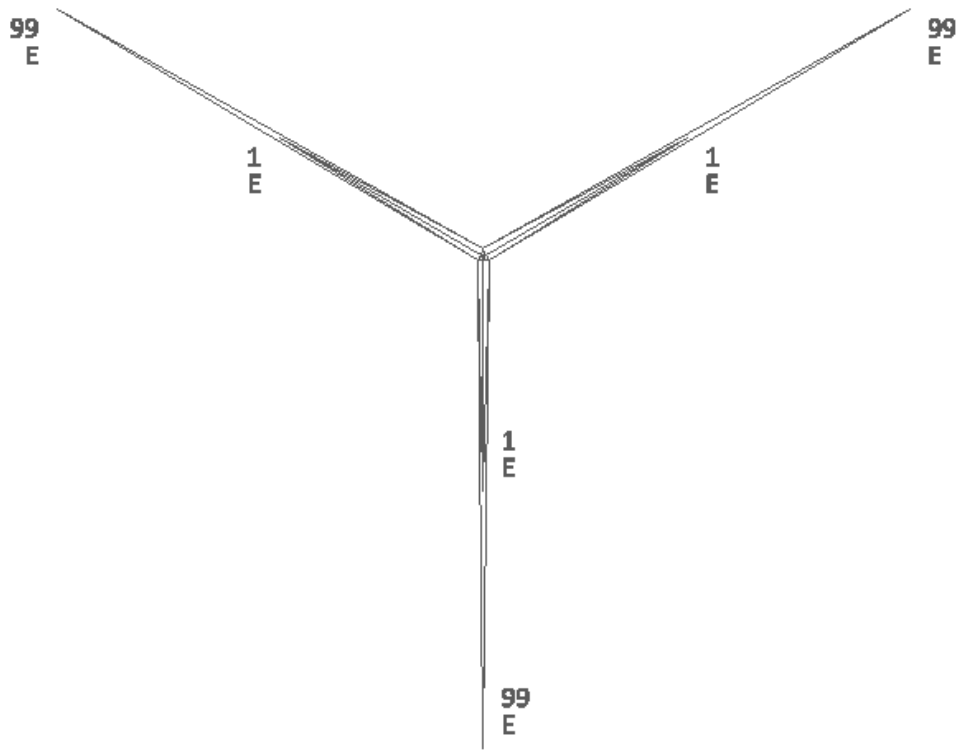
LINEAR APPURTENANCE

Elev (ft)			Qty	Description
From	To			
0.00	485.00	1	7/8" Coax	
0.00	464.00	1	1 5/8" Coax	
0.00	457.00	1	1 5/8" Coax	
0.00	432.50	1	1 5/8" Coax	
0.00	430.00	1	3" Coax	
0.00	421.00	1	0.19" (4.9mm) RG-58/U	
0.00	419.00	1	0.24" (6mm) Cat 5	
0.00	417.00	1	3/8" (0.38"- 9.5mm) RET Control Cable	
0.00	417.00	1	1" conduit	
0.00	417.00	1	0.63" (15.9mm) Cable	
0.00	417.00	2	0.32" (8.1mm) Cable	
0.00	417.00	4	0.27" (6.7mm) Cat 5e	
0.00	417.00	1	0.24" (6mm) Fiber	
0.00	417.00	1	0.24" (6mm) Cat 5	
0.00	417.00	2	0.22" (5.7mm) Fiber	
0.00	407.00	2	0.24" (6mm) Cat 5	
0.00	404.00	3	1 5/8" Coax	
0.00	387.00	1	1 5/8" Coax	
0.00	365.00	1	1/2" Coax	
0.00	339.00	1	7/8" Coax	
0.00	336.00	2	1 1/4" Coax	
0.00	200.00	1	1/2" Coax	
0.00	180.00	3	1 1/4" Hybriflex Cable	
0.00	180.00	1	0.24" (6mm) Cat 5	
0.00	92.00	1	1/2" Coax	
0.00	91.00	1	1/2" Coax	
0.00	81.00	1	1/2" Coax	
0.00	66.00	1	1/2" Coax	
0.00	4.00	1	3/8" Coax	

Asset: 36075, LEE S SUMMIT #1B
Client: WISPER ISP, LLC
Code: ANSI/TIA-222-H

JOB INFORMATION

Height : 480 ft
Base Width : 3.5 ft
Shape : Triangle



GUY ANCHOR DESIGN LOADS				
Radius (ft)	Drop (ft)	Azimuth (o)	Uplift (kip)	Shear (kip)
143.00	0.00	0	34.53	32.97
143.00	0.00	120	34.53	32.97
143.00	0.00	240	34.53	32.97
299.00	0.00	0	71.03	59.54
299.00	0.00	120	71.02	59.55
299.00	0.00	240	71.02	59.55

GLOBAL BASE FOUNDATION DESIGN LOADS	
Vertical (kip)	Horizontal (kip)
465.07	1.27

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

ANALYSIS PARAMETERS

Location: Jackson County, MO
Type and Shape: Guyed, Triangle
Manufacturer: Allied
Kd 0.85
Ke: 0.97

Height: 480 ft
Base Elevation: 0.00 ft
Bottom Face Width: 3.50 ft
Top Face Width: 3.50 ft

ICE & WIND PARAMETERS

Exposure Category: C
Risk Category: II
Topographic Factor Procedure: Method 1
Topographic Category: Flat
Crest Height: 0 ft

Design Wind Speed Without Ice: 109 mph
Design Wind Speed with Ice: 40 mph
Operational Windspeed: 60 mph
Design Ice Thickness: 1.50 in
HMSL: 981 ft

SEISMIC PARAMETERS

Analysis Method: Equivalent Lateral Force Method**Site Class:** D - Stiff Soil**Period Based on Rayleigh Method (sec):** 1.05**T_L (sec):** 12**P:** 1.3**C_s:** 0.034**S_s:** 0.099**S₁:** 0.068**C_{s, Max}:** 0.034**F_a:** 1.600**F_v:** 2.400**C_{s, Min}:** 0.030**S_{ds}:** 0.106**S_{d1}:** 0.109

LOAD CASES

1.2D + 1.0W Normal	109 mph wind with no ice
1.2D + 1.0W 60°	109 mph wind with no ice
1.2D + 1.0W 90°	109 mph wind with no ice
1.2D + 1.0W 120°	109 mph wind with no ice
1.2D + 1.0W 180°	109 mph wind with no ice
1.2D + 1.0W 210°	109 mph wind with no ice
1.2D + 1.0W 240°	109 mph wind with no ice
1.2D + 1.0W 300°	109 mph wind with no ice
1.2D + 1.0W 330°	109 mph wind with no ice
1.2D + 1.0Di + 1.0Wi Normal	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 60°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 90°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 120°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 180°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 210°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 240°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 300°	40 mph wind with 1.5" radial ice
1.2D + 1.0Di + 1.0Wi 330°	40 mph wind with 1.5" radial ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic
1.2D + 1.0Ev + 1.0Eh 60°	Seismic
1.2D + 1.0Ev + 1.0Eh 90°	Seismic
1.2D + 1.0Ev + 1.0Eh 120°	Seismic
1.2D + 1.0Ev + 1.0Eh 180°	Seismic
1.2D + 1.0Ev + 1.0Eh 210°	Seismic
1.2D + 1.0Ev + 1.0Eh 240°	Seismic
1.2D + 1.0Ev + 1.0Eh 300°	Seismic
1.2D + 1.0Ev + 1.0Eh 330°	Seismic
1.0D + 1.0W Service Normal	60 mph Wind with No Ice
1.0D + 1.0W Service 60°	60 mph Wind with No Ice
1.0D + 1.0W Service 90°	60 mph Wind with No Ice
1.0D + 1.0W Service 120°	60 mph Wind with No Ice
1.0D + 1.0W Service 180°	60 mph Wind with No Ice
1.0D + 1.0W Service 210°	60 mph Wind with No Ice
1.0D + 1.0W Service 240°	60 mph Wind with No Ice

LOAD CASES	
1.0D + 1.0W Service 300°	60 mph Wind with No Ice
1.0D + 1.0W Service 330°	60 mph Wind with No Ice

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

TOWER LOADING

Discrete Appurtenance Properties 1.2D + 1.0W

Elev (ft)	Description	Qty	Wt. (lb)	EPA Length (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)
485.0	Decibel DB264	1	36	5.6	21.5	0.0	0.0	1.00	1.00	0.0	0.00	44.03	211	43
475.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	43.84	1126	1440
464.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	43.62	156	48
460.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.54	555	600
457.0	Generic 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	0.0	0.00	43.48	166	48
457.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	43.48	192	225
432.5	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	42.98	121	48
430.0	Decibel DB408	1	17	2.9	9.4	0.0	0.0	1.00	1.00	1.0	105.87	42.95	106	20
427.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	42.87	341	450
421.0	Panasonic VIC100 (3.9")	1	1	0.1	0.3	3.5	3.5	1.00	1.00	0.5	1.45	42.75	3	1
420.5	Generic Flat Stand-Off	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	42.73	229	225
419.0	Andrew Microwaves VHLP6-6W	1	185	40.1	6.4	76.3	33.7	1.00	1.00	1.0	1,454.56	42.72	1455	222
417.0	Cambium Networks PMP 430 Acces	4	14	1.0	1.1	8.3	4.2	1.00	0.50	0.0	0.00	42.65	69	65
417.0	Aviat Networks WTM 4200 ANSI	2	14	1.0	1.0	10.5	4.0	1.00	0.50	0.0	0.00	42.65	36	34
417.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	42.65	189	225
417.0	Generic 30" x 23" BOB	1	100	5.8	2.5	23.0	8.0	1.00	1.00	2.0	417.35	42.70	209	120
417.0	Generic 30" x 23" BOB	1	100	5.8	2.5	23.0	8.0	1.00	1.00	0.0	0.00	42.65	208	120
417.0	RFS SC3-W100BGT1X	2	40	10.6	3.3	39.3	15.0	1.00	1.00	0.0	0.00	42.65	771	96
417.0	Andrew VHLP4-11W	1	88	16.7	4.1	49.3	27.4	1.00	1.00	1.0	606.49	42.67	606	106
407.0	Motorola 5780AP	4	14	2.7	2.4	8.3	11.0	1.00	0.67	-1.5	384.25	42.40	256	65
404.0	Generic 13' Omni	2	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	42.37	281	96
397.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	42.21	336	450
387.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	41.99	86	30
383.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	41.90	224	225
380.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	41.83	533	600
365.0	Decibel DB224-A	1	35	5.6	21.3	0.0	0.0	1.00	1.00	0.0	0.00	41.47	199	42
355.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	41.23	182	225
339.0	Andrew DB420D-B	1	35	4.5	19.7	0.0	0.0	1.00	1.00	0.0	0.00	40.83	157	42
336.0	Generic 13' Omni	2	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	40.76	270	96
330.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	40.60	179	225
320.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	40.34	178	225
300.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	39.80	507	600
220.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	37.28	475	600
200.0	Decibel DB224-FAA	1	38	4.9	23.3	0.0	0.0	1.00	1.00	0.0	0.00	36.54	152	46
189.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	36.11	160	225
180.0	Fastback Networks Intelligent	1	9	0.7	0.9	7.9	3.5	0.80	1.00	0.0	0.00	35.74	16	11
180.0	Ericsson RRUS 31	3	56	1.6	1.4	11.8	9.3	0.80	0.50	1.0	59.23	35.78	59	202
180.0	Ericsson RRUS-11 800 MHz	3	54	2.5	1.4	17.8	9.2	0.80	0.67	1.0	123.34	35.78	123	194
180.0	Ericsson RRUS82 w/ Solarshield	3	62	3.0	2.0	15.0	7.0	0.80	0.67	1.0	145.49	35.78	145	224
180.0	Commscope TTTT90AP-1XR	3	33	7.0	5.3	12.0	5.0	0.80	0.65	1.0	330.59	35.78	331	119
180.0	RFS APXVSP18-C-A20 (62 lbs)	3	62	8.0	6.0	11.8	7.9	0.80	0.71	1.0	415.83	35.78	416	223
180.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	35.74	738	1080
171.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	35.35	908	1440
140.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	33.90	432	600
130.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	33.37	857	1440
92.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	31.03	103	48
91.0	Andrew DB437	1	7	0.8	1.2	35.0	0.0	1.00	1.00	0.0	0.00	30.96	21	8
86.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	30.59	164	225
81.0	Decibel DB230E	1	27	3.7	6.5	79.2	2.0	1.00	1.00	0.0	0.00	30.21	94	32
66.0	PCTEL MYA4503	1	2	0.3	1.9	1.0	1.0	1.00	1.00	0.0	0.00	28.93	7	2
4.0	Generic 4' Std. Dish	1	188	20.9	4.0	48.0	0.0	1.00	1.00	0.0	0.00	21.21	377	226
Totals		81	11,667	606.4									15,716	14,000

TOWER LOADING

Discrete Appurtenance Properties 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)
485.0	Decibel DB264	1	231	25.0	21.5	0.0	0.0	1.00	1.00	0.0	0.00	5.93	126	238
475.0	Generic Flat Light Sector Fram	3	738	34.8	0.0	0.0	0.0	0.75	0.75	0.0	0.00	5.90	295	2454
464.0	Generic 14' Omni	1	159	9.8	14.0	3.0	3.0	1.00	1.00	0.0	0.00	5.87	49	167
460.0	Generic Torque Arm	1	890	26.7	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.86	133	990

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

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)
457.0	Generic 15' Omni	1	167	10.5	15.0	3.0	3.0	1.00	1.00	0.0	0.00	5.86	52	175
457.0	Generic Round Side Arm	1	290	8.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.86	41	327
432.5	Generic 11' Omni	1	133	7.7	11.0	3.0	3.0	1.00	1.00	0.0	0.00	5.79	38	141
430.0	Decibel DB408	1	155	13.2	9.4	0.0	0.0	1.00	1.00	1.0	64.75	5.78	65	159
427.0	Generic Round Side Arm	2	289	8.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	5.77	73	654
421.0	Panasonic VIC100 (3.9")	1	5	0.3	0.3	3.5	3.5	1.00	1.00	0.5	0.66	5.76	1	6
420.5	Generic Flat Stand-Off	1	336	9.8	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.75	48	373
419.0	Andrew Microwaves VHLP6-6W	1	1066	44.1	6.4	76.3	33.7	1.00	1.00	1.0	215.84	5.75	216	1103
417.0	Cambium Networks PMP 430 Acces	4	43	1.7	1.1	8.3	4.2	1.00	0.50	0.0	0.00	5.74	17	182
417.0	Aviat Networks WTM 4200 ANSI	2	43	1.7	1.0	10.5	4.0	1.00	0.50	0.0	0.00	5.74	9	93
417.0	Generic Round Side Arm	1	289	8.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.74	40	326
417.0	Generic 30" x 23" BOB	1	247	7.5	2.5	23.0	8.0	1.00	1.00	2.0	73.17	5.75	37	267
417.0	Generic 30" x 23" BOB	1	247	7.5	2.5	23.0	8.0	1.00	1.00	0.0	0.00	5.74	37	267
417.0	RFS SC3-W100BGT1X	2	268	12.7	3.3	39.3	15.0	1.00	1.00	0.0	0.00	5.74	124	552
417.0	Andrew VHLP4-11W	1	461	19.4	4.1	49.3	27.4	1.00	1.00	1.0	94.60	5.75	95	478
407.0	Motorola 5780AP	4	101	4.0	2.4	8.3	11.0	1.00	0.67	-1.5	77.47	5.71	52	413
404.0	Generic 13' Omni	2	149	9.0	13.0	3.0	3.0	1.00	1.00	0.0	0.00	5.71	88	314
397.0	Generic Round Side Arm	2	288	8.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	5.68	71	652
387.0	Generic 8' Omni	1	92	5.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	5.65	26	97
383.0	Generic Flat Side Arm	1	334	9.7	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.64	47	372
380.0	Generic Torque Arm	1	882	26.5	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.63	127	982
365.0	Decibel DB224-A	1	227	24.9	21.3	0.0	0.0	1.00	1.00	0.0	0.00	5.59	118	234
355.0	Generic Round Side Arm	1	287	8.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.55	39	325
339.0	Andrew DB420D-B	1	184	16.2	19.7	0.0	0.0	1.00	1.00	0.0	0.00	5.50	76	192
336.0	Generic 13' Omni	2	147	8.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	5.49	83	309
330.0	Generic Round Side Arm	1	287	8.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.47	38	324
320.0	Generic Round Side Arm	1	286	8.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.43	38	324
300.0	Generic Torque Arm	1	873	26.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.36	119	973
220.0	Generic Torque Arm	1	861	25.8	0.0	0.0	0.0	1.00	1.00	0.0	0.00	5.02	110	961
200.0	Decibel DB224-FAA	1	203	23.6	23.3	0.0	0.0	1.00	1.00	0.0	0.00	4.92	99	210
189.0	Generic Round Side Arm	1	281	8.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	4.86	33	319
180.0	Fastback Networks Intelligent	1	28	1.2	0.9	7.9	3.5	0.80	1.00	0.0	0.00	4.81	4	30
180.0	Ericsson RRUS 31	3	113	2.5	1.4	11.8	9.3	0.80	0.50	1.0	12.22	4.82	12	373
180.0	Ericsson RRUS-11 800 MHz	3	130	3.6	1.4	17.8	9.2	0.80	0.67	1.0	23.56	4.82	24	424
180.0	Ericsson RRUS82 w/ Solarshield	3	139	4.1	2.0	15.0	7.0	0.80	0.67	1.0	27.31	4.82	27	455
180.0	Commscope TTTT90AP-1XR	3	172	9.4	5.3	12.0	5.0	0.80	0.65	1.0	60.32	4.82	60	537
180.0	RFS APXVSP18-C-A20 (62 lbs)	3	246	10.9	6.0	11.8	7.9	0.80	0.71	1.0	75.75	4.82	76	774
180.0	Generic Round Sector Frame	3	673	31.2	0.0	0.0	0.0	0.75	0.75	0.0	0.00	4.81	215	2200
171.0	Generic Flat Light Sector Fram	3	705	33.2	0.0	0.0	0.0	0.75	0.75	0.0	0.00	4.76	227	2356
140.0	Generic Torque Arm	1	844	25.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	4.56	98	944
130.0	Generic Flat Light Sector Fram	3	697	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.00	4.49	211	2332
92.0	Generic 13' Omni	1	134	8.3	13.0	3.0	3.0	1.00	1.00	0.0	0.00	4.18	30	142
91.0	Andrew DB437	1	21	3.3	1.2	35.0	0.0	1.00	1.00	0.0	0.00	4.17	12	22
86.0	Generic Flat Side Arm	1	314	9.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	4.12	32	352
81.0	Decibel DB230E	1	121	14.1	6.5	79.2	2.0	1.00	1.00	0.0	0.00	4.07	49	126
66.0	PCTEL MYA4503	1	13	1.3	1.9	1.0	1.0	1.00	1.00	0.0	0.00	3.90	4	13
4.0	Generic 4' Std. Dish	1	334	23.0	4.0	48.0	0.0	1.00	1.00	0.0	0.00	2.86	56	372
Totals		81	25,067	1082.5									3794	27,401

TOWER LOADING

Discrete Appurtenance Properties 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)
485.0	Decibel DB264	1	36	5.6	21.5	0.0	0.0	1.00	1.00	0.0	0.00	13.34	64	36
475.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	13.28	341	1200
464.0	Generic 14' Omni	1	40	4.2	14.0	3.0	3.0	1.00	1.00	0.0	0.00	13.22	47	40
460.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	13.19	168	500
457.0	Generic 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	0.0	0.00	13.18	50	40
457.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	13.18	58	188
432.5	Generic 11' Omni	1	40	3.3	11.0	3.0	3.0	1.00	1.00	0.0	0.00	13.02	37	40
430.0	Decibel DB408	1	17	2.9	9.4	0.0	0.0	1.00	1.00	1.0	32.08	13.01	32	17
427.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	12.99	103	375
421.0	Panasonic VIC100 (3.9")	1	1	0.1	0.3	3.5	3.5	1.00	1.00	0.5	0.44	12.95	1	1
420.5	Generic Flat Stand-Off	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.95	69	188
419.0	Andrew Microwaves VHLP6-6W	1	185	40.1	6.4	76.3	33.7	1.00	1.00	1.0	440.74	12.94	441	185

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

Elev (ft)	Description	Qty	Wt. (lb)	EPA Length (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)
417.0	Cambium Networks PMP 430 Acces	4	14	1.0	1.1	8.3	4.2	1.00	0.50	0.0	0.00	12.92	21	54
417.0	Aviat Networks WTM 4200 ANSI	2	14	1.0	1.0	10.5	4.0	1.00	0.50	0.0	0.00	12.92	11	28
417.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.92	57	188
417.0	Generic 30" x 23" BOB	1	100	5.8	2.5	23.0	8.0	1.00	1.00	2.0	126.46	12.94	63	100
417.0	Generic 30" x 23" BOB	1	100	5.8	2.5	23.0	8.0	1.00	1.00	0.0	0.00	12.92	63	100
417.0	RFS SC3-W100BGT1X	2	40	10.6	3.3	39.3	15.0	1.00	1.00	0.0	0.00	12.92	234	80
417.0	Andrew VHLP4-11W	1	88	16.7	4.1	49.3	27.4	1.00	1.00	1.0	183.77	12.93	184	88
407.0	Motorola 5780AP	4	14	2.7	2.4	8.3	11.0	1.00	0.67	-1.5	116.43	12.85	78	54
404.0	Generic 13' Omni	2	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	12.84	85	80
397.0	Generic Round Side Arm	2	188	5.2	0.0	0.0	0.0	1.00	0.90	0.0	0.00	12.79	102	375
387.0	Generic 8' Omni	1	25	2.4	8.0	3.0	3.0	1.00	1.00	0.0	0.00	12.72	26	25
383.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.69	68	188
380.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.67	162	500
365.0	Decibel DB224-A	1	35	5.6	21.3	0.0	0.0	1.00	1.00	0.0	0.00	12.57	60	35
355.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.49	55	188
339.0	Andrew DB420D-B	1	35	4.5	19.7	0.0	0.0	1.00	1.00	0.0	0.00	12.37	48	35
336.0	Generic 13' Omni	2	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	12.35	82	80
330.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.30	54	188
320.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.22	54	188
300.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	12.06	154	500
220.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.30	144	500
200.0	Decibel DB224-FAA	1	38	4.9	23.3	0.0	0.0	1.00	1.00	0.0	0.00	11.07	46	38
189.0	Generic Round Side Arm	1	188	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.94	48	188
180.0	Fastback Networks Intelligent	1	9	0.7	0.9	7.9	3.5	0.80	1.00	0.0	0.00	10.83	5	9
180.0	Ericsson RRUS 31	3	56	1.6	1.4	11.8	9.3	0.80	0.50	1.0	17.95	10.84	18	168
180.0	Ericsson RRUS-11 800 MHz	3	54	2.5	1.4	17.8	9.2	0.80	0.67	1.0	37.37	10.84	37	162
180.0	Ericsson RRUS82 w/ Solarshield	3	62	3.0	2.0	15.0	7.0	0.80	0.67	1.0	44.08	10.84	44	186
180.0	Commscope TTTT90AP-1XR	3	33	7.0	5.3	12.0	5.0	0.80	0.65	1.0	100.17	10.84	100	99
180.0	RFS APXVSP18-C-A20 (62 lbs)	3	62	8.0	6.0	11.8	7.9	0.80	0.71	1.0	126.00	10.84	126	186
180.0	Generic Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.00	10.83	224	900
171.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	10.71	275	1200
140.0	Generic Torque Arm	1	500	15.0	0.0	0.0	0.0	1.00	1.00	0.0	0.00	10.27	131	500
130.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.00	10.11	260	1200
92.0	Generic 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	0.0	0.00	9.40	31	40
91.0	Andrew DB437	1	7	0.8	1.2	35.0	0.0	1.00	1.00	0.0	0.00	9.38	6	7
86.0	Generic Flat Side Arm	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.00	9.27	50	188
81.0	Decibel DB230E	1	27	3.7	6.5	79.2	2.0	1.00	1.00	0.0	0.00	9.15	28	27
66.0	PCTEL MYA4503	1	2	0.3	1.9	1.0	1.0	1.00	1.00	0.0	0.00	8.77	2	2
4.0	Generic 4' Std. Dish	1	188	20.9	4.0	48.0	0.0	1.00	1.00	0.0	0.00	6.43	114	188
Totals		81	11,667	606.4									4,762	11,667

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

TOWER LOADING

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
0.0	485.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.01
0.0	464.0	1 5/8" Coax	1	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	457.0	1 5/8" Coax	1	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	432.5	1 5/8" Coax	1	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.01
0.0	430.0	3" Coax	1	3.02	1.78	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	421.0	0.19" (4.9mm) RG-58/U	1	0.19	0.25	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	419.0	0.24" (6mm) Cat 5	1	0.24	0.04	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.32" (8.1mm) Cable	2	0.32	0.06	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	3/8" (0.38"- 9.5mm) RET Contro	1	0.38	0.23	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.27" (6.7mm) Cat 5e	4	0.27	0.03	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.63" (15.9mm) Cable	1	0.63	0.31	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.24" (6mm) Fiber	1	0.24	0.03	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.24" (6mm) Cat 5	1	0.24	0.04	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	1" conduit	1	1.32	1.68	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	417.0	0.22" (5.7mm) Fiber	2	0.22	0.02	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	407.0	0.24" (6mm) Cat 5	2	0.24	0.04	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	404.0	1 5/8" Coax	3	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	387.0	1 5/8" Coax	1	1.98	0.82	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	365.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	339.0	7/8" Coax	1	1.09	0.33	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	336.0	1 1/4" Coax	2	1.55	0.63	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	200.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	180.0	0.24" (6mm) Cat 5	1	0.24	0.04	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	180.0	1 1/4" Hybriflex Cable	3	1.54	1.00	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	92.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	91.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	81.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	66.0	1/2" Coax	1	0.63	0.15	100	None	Individual	0.00	N	1.00	1.00	0.00
0.0	4.0	3/8" Coax	1	0.44	0.08	100	None	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal
109 mph wind with no ice

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

Sect #	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)	
25	470	43.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724	
24	450	43.34	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862	
23	430	42.93	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979	
22	410	42.50	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338	
21	390	42.06	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603	
20	370	41.59	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685	
19	350	41.11	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685	
18	330	40.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810	
17	310	40.07	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814	
16	290	39.51	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812	
15	270	38.92	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785	
14	250	38.30	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756	
13	230	37.63	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725	
12	210	36.92	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737	
11	190	36.15	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724	
10	170	35.31	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787	
9	150	34.39	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740	
8	130	33.37	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678	
7	110	32.22	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620	
6	90	30.89	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577	
5	70	29.29	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2670	0	585	993	1578	
4	50	27.29	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443	
3	30	24.51	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295	
2	13	21.21	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743	
1	3	21.21	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	914	0	120	264	384	
														55,254	0				36,884

1.2D + 1.0W 60°
109 mph wind with no ice

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

Sect #	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2670	0	574	993	1567
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369
														55,254	0			36,858

1.2D + 1.0W 90°

Gust Response Factor (G_h):

0.85

109 mph wind with no ice

Wind Importance Factor (I_w):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2670	0	577	993	1569
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369
														55,254	0			36,861

1.2D + 1.0W 120°

Gust Response Factor (G_h):

0.85

109 mph wind with no ice

Wind Importance Factor (I_w):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603
20	370	41.59	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812
15	270	38.92	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785
14	250	38.30	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756
13	230	37.63	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725
12	210	36.92	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737
11	190	36.15	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
10	170	35.31	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787
9	150	34.39	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740
8	130	33.37	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678
7	110	32.22	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620
6	90	30.89	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577
5	70	29.29	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2670	0	585	993	1578
4	50	27.29	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443
3	30	24.51	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295
2	13	21.21	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743
1	3	21.21	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369
														55,254	0			36,869

1.2D + 1.0W 180°

Gust Response Factor (G_h):

0.85

109 mph wind with no ice

Wind Importance Factor (I_w):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2670	0	574	993	1567
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369
														55,254	0			36,858

1.2D + 1.0W 210°

Gust Response Factor (G_h):

0.85

109 mph wind with no ice

Wind Importance Factor (I_w):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812

SECTION FORCES

Sect #	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)	
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785	
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756	
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725	
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737	
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724	
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787	
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740	
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678	
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620	
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577	
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2670	0	577	993	1569	
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443	
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295	
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743	
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369	
														55,254	0				36,861

1.2D + 1.0W 240°

Gust Response Factor (Gh):

0.85

109 mph wind with no ice

Wind Importance Factor (Iw):

1.00

Sect #	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)	
25	470	43.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724	
24	450	43.34	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862	
23	430	42.93	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979	
22	410	42.50	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338	
21	390	42.06	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603	
20	370	41.59	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685	
19	350	41.11	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685	
18	330	40.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810	
17	310	40.07	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814	
16	290	39.51	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812	
15	270	38.92	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785	
14	250	38.30	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756	
13	230	37.63	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725	
12	210	36.92	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737	
11	190	36.15	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724	
10	170	35.31	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787	
9	150	34.39	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740	
8	130	33.37	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678	
7	110	32.22	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620	
6	90	30.89	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577	
5	70	29.29	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2670	0	585	993	1578	
4	50	27.29	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443	
3	30	24.51	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295	
2	13	21.21	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743	
1	3	21.21	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369	
														55,254	0				36,869

1.2D + 1.0W 300°

Gust Response Factor (Gh):

0.85

109 mph wind with no ice

Wind Importance Factor (Iw):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

SECTION FORCES

Sect #	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)
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2670	0	574	993	1567
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369
														55,254	0			36,858

1.2D + 1.0W 330°

Gust Response Factor (G_h):

0.85

109 mph wind with no ice

Wind Importance Factor (I_w):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _t	D _t	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)	
25	470	43.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1595	0	706	18	724	
24	450	43.34	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1627	0	699	163	862	
23	430	42.93	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1664	0	693	286	979	
22	410	42.50	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1764	0	686	652	1338	
21	390	42.06	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1829	0	679	925	1603	
20	370	41.59	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2071	0	709	976	1685	
19	350	41.11	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2074	0	701	984	1685	
18	330	40.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2106	0	692	1118	1810	
17	310	40.07	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	2112	0	683	1131	1814	
16	290	39.51	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	697	1115	1812	
15	270	38.92	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	686	1098	1785	
14	250	38.30	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	675	1081	1756	
13	230	37.63	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	2283	0	664	1062	1725	
12	210	36.92	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2641	0	695	1042	1737	
11	190	36.15	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2645	0	681	1043	1724	
10	170	35.31	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	665	1122	1787	
9	150	34.39	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2717	0	648	1092	1740	
8	130	33.37	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	618	1060	1678	
7	110	32.22	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2636	0	597	1023	1620	
6	90	30.89	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2640	0	572	1005	1577	
5	70	29.29	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2670	0	577	993	1569	
4	50	27.29	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	506	937	1443	
3	30	24.51	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2650	0	454	841	1295	
2	13	21.21	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1762	0	262	481	743	
1	3	21.21	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	914	0	120	249	369	
														55,254	0				36,861

1.2D + 1.0Di + 1.0Wi Normal

Gust Response Factor (G_h):

0.85

40 mph wind with 1.5" radial ice

Wind Importance Factor (I_w):

1.00

Ice Importance Factor:

1.00

Ice Dead Load Factor:

1.00

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (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)
25	470	5.89	0.000	42.356	30.32	0.528	1.87	1.00	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285
24	450	5.84	0.000	42.224	30.18	0.526	1.87	1.00	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327
23	430	5.78	0.000	42.088	30.05	0.525	1.87	1.00	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344
22	410	5.72	0.000	41.945	29.90	0.523	1.87	1.00	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639
21	390	5.66	0.000	41.796	29.76	0.522	1.87	1.00	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768
20	370	5.60	0.000	42.449	29.60	0.527	1.87	1.00	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778
19	350	5.54	0.000	42.285	29.44	0.525	1.87	1.00	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782
18	330	5.47	0.000	42.112	29.26	0.524	1.87	1.00	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785 **
17	310	5.40	0.000	41.930	29.08	0.522	1.87	1.00	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774 **
16	290	5.32	0.000	42.264	28.89	0.523	1.87	1.00	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767 **
15	270	5.24	0.000	42.058	28.68	0.521	1.87	1.00	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755 **
14	250	5.16	0.000	41.838	28.46	0.518	1.88	1.00	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743 **
13	230	5.07	0.000	41.602	28.23	0.516	1.88	1.00	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729 **
12	210	4.97	0.000	42.439	27.97	0.524	1.87	1.00	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719 **
11	190	4.87	0.000	42.160	27.69	0.521	1.87	1.00	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703 **
10	170	4.76	0.000	41.854	27.38	0.518	1.88	1.00	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686 **
9	150	4.63	0.000	41.513	27.04	0.514	1.88	1.00	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668 **
8	130	4.49	0.000	40.848	26.66	0.506	1.89	1.00	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647 **
7	110	4.34	0.000	40.406	26.22	0.501	1.90	1.00	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624 **
6	90	4.16	0.000	39.885	25.70	0.495	1.91	1.00	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598 **
5	70	3.94	0.875	39.011	25.06	0.496	1.90	1.00	1.00	1.6	27.69	52.75	25.06	7870	5200	177	509	566 **
4	50	3.68	0.000	38.418	24.23	0.479	1.93	1.00	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526 **
3	30	3.30	0.000	37.212	23.02	0.466	1.95	1.00	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471 **
2	13	2.86	0.000	23.825	14.36	0.453	1.97	1.00	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268 **
1	3	2.86	0.000	11.075	6.25	0.742	1.78	1.00	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76 **
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030

1.2D + 1.0Di + 1.0Wi 60°

40 mph wind with 1.5" radial ice

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (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)
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.80	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.80	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.80	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.80	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.80	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.80	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.80	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.80	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785 **
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.80	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774 **
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.80	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767 **
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.80	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755 **
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.80	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743 **
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.80	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729 **
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.80	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719 **
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.80	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703 **
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.80	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686 **
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.80	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668 **
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.80	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647 **
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.80	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624 **
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.80	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598 **
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.80	1.00	1.6	27.51	52.41	25.06	7870	5200	176	509	566 **
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.80	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526 **
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.80	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471 **
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.80	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268 **
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.80	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76 **
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 90°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	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)
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.85	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.85	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.85	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.85	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.85	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.85	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.85	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.85	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785 **
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.85	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774 **
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.85	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767 **
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.85	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755 **
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.85	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743 **
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.85	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729 **
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.85	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719 **
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.85	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703 **
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.85	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686 **
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.85	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668 **
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.85	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647 **
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.85	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624 **
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.85	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598 **
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.85	1.00	1.6	27.56	52.50	25.06	7870	5200	176	509	566 **
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.85	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526 **
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.85	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471 **
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.85	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268 **
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.85	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76 **
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030

1.2D + 1.0Di + 1.0Wi 120°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	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)
25	470	5.89	0.000	42.356	30.32	0.528	1.87	1.00	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285
24	450	5.84	0.000	42.224	30.18	0.526	1.87	1.00	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327
23	430	5.78	0.000	42.088	30.05	0.525	1.87	1.00	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344
22	410	5.72	0.000	41.945	29.90	0.523	1.87	1.00	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639
21	390	5.66	0.000	41.796	29.76	0.522	1.87	1.00	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768
20	370	5.60	0.000	42.449	29.60	0.527	1.87	1.00	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778
19	350	5.54	0.000	42.285	29.44	0.525	1.87	1.00	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782
18	330	5.47	0.000	42.112	29.26	0.524	1.87	1.00	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785 **
17	310	5.40	0.000	41.930	29.08	0.522	1.87	1.00	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774 **
16	290	5.32	0.000	42.264	28.89	0.523	1.87	1.00	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767 **
15	270	5.24	0.000	42.058	28.68	0.521	1.87	1.00	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755 **
14	250	5.16	0.000	41.838	28.46	0.518	1.88	1.00	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743 **
13	230	5.07	0.000	41.602	28.23	0.516	1.88	1.00	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729 **
12	210	4.97	0.000	42.439	27.97	0.524	1.87	1.00	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719 **
11	190	4.87	0.000	42.160	27.69	0.521	1.87	1.00	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703 **
10	170	4.76	0.000	41.854	27.38	0.518	1.88	1.00	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686 **
9	150	4.63	0.000	41.513	27.04	0.514	1.88	1.00	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668 **
8	130	4.49	0.000	40.848	26.66	0.506	1.89	1.00	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647 **
7	110	4.34	0.000	40.406	26.22	0.501	1.90	1.00	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624 **
6	90	4.16	0.000	39.885	25.70	0.495	1.91	1.00	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598 **
5	70	3.94	0.875	39.011	25.06	0.496	1.90	1.00	1.00	1.6	27.69	52.75	25.06	7870	5200	177	509	566 **
4	50	3.68	0.000	38.418	24.23	0.479	1.93	1.00	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526 **
3	30	3.30	0.000	37.212	23.02	0.466	1.95	1.00	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471 **

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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	13	2.86	0.000	23.825	14.36	0.453	1.97	1.00	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	1.00	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030	

1.2D + 1.0Di + 1.0Wi 180°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.80	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285	
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.80	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327	
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.80	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344	
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.80	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639	
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.80	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768	
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.80	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778	
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.80	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782	
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.80	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785	**
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.80	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774	**
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.80	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767	**
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.80	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755	**
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.80	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743	**
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.80	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729	**
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.80	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719	**
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.80	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703	**
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.80	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686	**
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.80	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668	**
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.80	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647	**
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.80	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624	**
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.80	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598	**
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.80	1.00	1.6	27.51	52.41	25.06	7870	5200	176	509	566	**
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.80	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526	**
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.80	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471	**
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.80	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.80	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030	

1.2D + 1.0Di + 1.0Wi 210°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.85	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285	
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.85	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327	
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.85	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344	
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.85	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639	
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.85	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768	
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.85	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778	
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.85	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782	
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.85	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785	**
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.85	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774	**
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.85	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767	**
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.85	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755	**
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.85	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743	**
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.85	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729	**
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.85	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719	**
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.85	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703	**
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.85	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686	**
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.85	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668	**
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.85	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647	**

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.85	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624	**
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.85	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598	**
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.85	1.00	1.6	27.56	52.50	25.06	7870	5200	176	509	566	**
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.85	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526	**
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.85	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471	**
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.85	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.85	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030	

1.2D + 1.0Di + 1.0Wi 240°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	5.89	0.000	42.356	30.32	0.528	1.87	1.00	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285	
24	450	5.84	0.000	42.224	30.18	0.526	1.87	1.00	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327	
23	430	5.78	0.000	42.088	30.05	0.525	1.87	1.00	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344	
22	410	5.72	0.000	41.945	29.90	0.523	1.87	1.00	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639	
21	390	5.66	0.000	41.796	29.76	0.522	1.87	1.00	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768	
20	370	5.60	0.000	42.449	29.60	0.527	1.87	1.00	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778	
19	350	5.54	0.000	42.285	29.44	0.525	1.87	1.00	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782	
18	330	5.47	0.000	42.112	29.26	0.524	1.87	1.00	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785	**
17	310	5.40	0.000	41.930	29.08	0.522	1.87	1.00	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774	**
16	290	5.32	0.000	42.264	28.89	0.523	1.87	1.00	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767	**
15	270	5.24	0.000	42.058	28.68	0.521	1.87	1.00	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755	**
14	250	5.16	0.000	41.838	28.46	0.518	1.88	1.00	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743	**
13	230	5.07	0.000	41.602	28.23	0.516	1.88	1.00	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729	**
12	210	4.97	0.000	42.439	27.97	0.524	1.87	1.00	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719	**
11	190	4.87	0.000	42.160	27.69	0.521	1.87	1.00	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703	**
10	170	4.76	0.000	41.854	27.38	0.518	1.88	1.00	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686	**
9	150	4.63	0.000	41.513	27.04	0.514	1.88	1.00	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668	**
8	130	4.49	0.000	40.848	26.66	0.506	1.89	1.00	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647	**
7	110	4.34	0.000	40.406	26.22	0.501	1.90	1.00	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624	**
6	90	4.16	0.000	39.885	25.70	0.495	1.91	1.00	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598	**
5	70	3.94	0.875	39.011	25.06	0.496	1.90	1.00	1.00	1.6	27.69	52.75	25.06	7870	5200	177	509	566	**
4	50	3.68	0.000	38.418	24.23	0.479	1.93	1.00	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526	**
3	30	3.30	0.000	37.212	23.02	0.466	1.95	1.00	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471	**
2	13	2.86	0.000	23.825	14.36	0.453	1.97	1.00	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	1.00	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**
** = Section Force Exceeds Solidity Ratio Criteria														171,218	115,964			15,030	

1.2D + 1.0Di + 1.0Wi 300°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.80	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285	
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.80	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327	
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.80	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344	
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.80	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639	
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.80	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768	
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.80	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778	
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.80	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782	
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.80	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785	**
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.80	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774	**
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.80	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767	**
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.80	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755	**
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.80	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743	**
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.80	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729	**

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.80	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719	**
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.80	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703	**
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.80	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686	**
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.80	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668	**
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.80	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647	**
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.80	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624	**
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.80	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598	**
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.80	1.00	1.6	27.51	52.41	25.06	7870	5200	176	509	566	**
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.80	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526	**
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.80	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471	**
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.80	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.80	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**

** = Section Force Exceeds Solidity Ratio Criteria

171,218 115,964

15,030

1.2D + 1.0Di + 1.0Wi 330°

Gust Response Factor (Gh):

0.85

Ice Importance Factor:

1.00

40 mph wind with 1.5" radial ice

Wind Importance Factor (Iw):

1.00

Ice Dead Load Factor:

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	5.89	0.000	42.356	30.32	0.528	1.87	0.85	1.00	2.0	29.81	55.65	30.32	3533	1939	279	6	285	
24	450	5.84	0.000	42.224	30.18	0.526	1.87	0.85	1.00	1.9	29.69	55.46	30.18	3861	2234	275	52	327	
23	430	5.78	0.000	42.088	30.05	0.525	1.87	0.85	1.00	1.9	29.56	55.26	30.05	4148	2484	272	73	344	
22	410	5.72	0.000	41.945	29.90	0.523	1.87	0.85	1.00	1.9	29.42	55.06	29.90	5995	4231	268	371	639	
21	390	5.66	0.000	41.796	29.76	0.522	1.87	0.85	1.00	1.9	29.28	54.85	29.76	6876	5047	264	504	768	
20	370	5.60	0.000	42.449	29.60	0.527	1.87	0.85	1.00	1.9	29.88	55.80	29.60	7257	5186	266	512	778	
19	350	5.54	0.000	42.285	29.44	0.525	1.87	0.85	1.00	1.9	29.72	55.56	29.44	7301	5227	261	521	782	
18	330	5.47	0.000	42.112	29.26	0.524	1.87	0.85	1.00	1.9	29.56	55.31	29.26	7667	5561	257	572	785	**
17	310	5.40	0.000	41.930	29.08	0.522	1.87	0.85	1.00	1.9	29.38	55.05	29.08	7686	5574	253	575	774	**
16	290	5.32	0.000	42.264	28.89	0.523	1.87	0.85	1.00	1.9	29.66	55.52	28.89	7807	5524	251	562	767	**
15	270	5.24	0.000	42.058	28.68	0.521	1.87	0.85	1.00	1.9	29.47	55.23	28.68	7743	5460	246	553	755	**
14	250	5.16	0.000	41.838	28.46	0.518	1.88	0.85	1.00	1.8	29.26	54.92	28.46	7675	5392	241	543	743	**
13	230	5.07	0.000	41.602	28.23	0.516	1.88	0.85	1.00	1.8	29.03	54.58	28.23	7603	5319	235	533	729	**
12	210	4.97	0.000	42.439	27.97	0.524	1.87	0.85	1.00	1.8	29.83	55.81	27.97	7939	5298	236	511	719	**
11	190	4.87	0.000	42.160	27.69	0.521	1.87	0.85	1.00	1.8	29.56	55.41	27.69	7963	5319	229	516	703	**
10	170	4.76	0.000	41.854	27.38	0.518	1.88	0.85	1.00	1.8	29.27	54.98	27.38	8457	5739	222	577	686	**
9	150	4.63	0.000	41.513	27.04	0.514	1.88	0.85	1.00	1.7	28.95	54.50	27.04	8342	5625	215	561	668	**
8	130	4.49	0.000	40.848	26.66	0.506	1.89	0.85	1.00	1.7	28.30	53.55	26.66	8111	5475	205	547	647	**
7	110	4.34	0.000	40.406	26.22	0.501	1.90	0.85	1.00	1.7	27.89	52.94	26.22	7966	5330	195	526	624	**
6	90	4.16	0.000	39.885	25.70	0.495	1.91	0.85	1.00	1.7	27.41	52.24	25.70	7913	5272	185	519	598	**
5	70	3.94	0.875	39.011	25.06	0.496	1.90	0.85	1.00	1.6	27.56	52.50	25.06	7870	5200	176	509	566	**
4	50	3.68	0.000	38.418	24.23	0.479	1.93	0.85	1.00	1.6	26.07	50.28	24.23	7686	5036	157	487	526	**
3	30	3.30	0.000	37.212	23.02	0.466	1.95	0.85	1.00	1.5	25.00	48.72	23.02	7294	4644	137	431	471	**
2	13	2.86	0.000	23.825	14.36	0.453	1.97	0.85	1.00	1.4	15.87	31.23	14.36	4480	2719	76	237	268	**
1	3	2.86	0.000	11.075	6.25	0.742	1.78	0.85	1.00	1.2	9.44	16.85	6.25	2044	1130	41	53	76	**

** = Section Force Exceeds Solidity Ratio Criteria

171,218 115,964

15,030

1.0D + 1.0W Service Normal

Gust Response Factor (Gh):

0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)	
25	470	13.25	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219	
24	450	13.13	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261	
23	430	13.01	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283	
22	410	12.88	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379	
21	390	12.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460	
20	370	12.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485	
19	350	12.46	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485	
18	330	12.30	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523	

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
17	310	12.14	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2225	0	177	301	478
4	50	8.27	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,862

1.0D + 1.0W Service 60°

Gust Response Factor (Gh):

0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2225	0	174	301	475
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,859

1.0D + 1.0W Service 90°

Gust Response Factor (Gh):

0.85

60 mph Wind with No Ice

Wind Importance Factor (Iw):

1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283

SECTION FORCES

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2225	0	175	301	476
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,860

1.0D + 1.0W Service 120°
60 mph Wind with No Ice

Gust Response Factor (G_h): 0.85
Wind Importance Factor (I_w): 1.00

Sect #	Elev (ft)	Q _Z (psf)	A _r (sf)	A _r (sf)	Ice A _r (sf)	e	C _r	D _r	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2225	0	177	301	478
4	50	8.27	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,862

1.0D + 1.0W Service 180°
60 mph Wind with No Ice

Gust Response Factor (G_h): 0.85
Wind Importance Factor (I_w): 1.00

SECTION FORCES

Sect #	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2225	0	174	301	475
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,859

1.0D + 1.0W Service 210°
60 mph Wind with No Ice

Gust Response Factor (G_h): 0.85
Wind Importance Factor (I_w): 1.00

Sect #	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2225	0	175	301	476
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,860

SECTION FORCES

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

Sect #	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	1.00	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	1.00	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	1.00	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	1.00	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	1.00	1.00	0.0	9.03	23.50	0.00	2225	0	177	301	478
4	50	8.27	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	1.00	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	1.00	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	1.00	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria															46,045	0		10,862

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

Sect #	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.80	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.80	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.80	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.80	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.80	1.00	0.0	8.85	23.05	0.00	2225	0	174	301	475
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.80	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393

SECTION FORCES

Sect #	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	13	6.43	0.000	9.470	0.00	0.191	2.63	0.80	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.80	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,859

1.0D + 1.0W Service 330°

Gust Response Factor (G_h): 0.85

60 mph Wind with No Ice

Wind Importance Factor (I_w): 1.00

Sect #	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)
25	470	13.25	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1329	0	214	6	219
24	450	13.13	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1356	0	212	49	261
23	430	13.01	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1387	0	210	73	283
22	410	12.88	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1470	0	208	171	379
21	390	12.74	0.000	12.040	0.00	0.163	2.72	0.85	1.00	0.0	6.97	18.99	0.00	1524	0	206	254	460
20	370	12.60	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1726	0	215	270	485
19	350	12.46	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1728	0	212	273	485
18	330	12.30	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1755	0	210	313	523
17	310	12.14	0.000	12.850	0.00	0.173	2.69	0.85	1.00	0.0	7.46	20.06	0.00	1760	0	207	318	525
16	290	11.97	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	211	313	524
15	270	11.79	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	208	309	517
14	250	11.60	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	205	304	508
13	230	11.40	0.000	13.377	0.00	0.179	2.67	0.85	1.00	0.0	7.78	20.75	0.00	1903	0	201	298	499
12	210	11.19	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2201	0	211	293	503
11	190	10.95	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2204	0	206	294	500
10	170	10.70	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	201	340	541
9	150	10.42	0.000	14.469	0.00	0.193	2.62	0.85	1.00	0.0	8.46	22.16	0.00	2265	0	196	331	527
8	130	10.11	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	187	321	509
7	110	9.76	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2197	0	181	310	491
6	90	9.36	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2200	0	173	304	478
5	70	8.88	0.875	13.951	0.00	0.198	2.60	0.85	1.00	0.0	8.90	23.16	0.00	2225	0	175	301	476
4	50	8.27	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	153	284	437
3	30	7.43	0.000	14.188	0.00	0.189	2.63	0.85	1.00	0.0	8.28	21.79	0.00	2209	0	138	255	393
2	13	6.43	0.000	9.470	0.00	0.191	2.63	0.85	1.00	0.0	5.53	14.53	0.00	1468	0	79	146	225
1	3	6.43	0.000	4.829	0.00	0.356	2.16	0.85	1.00	0.0	3.07	6.63	0.00	762	0	36	75	112
** = Section Force Exceeds Solidity Ratio Criteria														46,045	0			10,860

EQUIVALENT LATERAL FORCE METHOD

Spectral Response Acceleration for Short Period (S_S):	0.10
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Long-Period Transition Period (T_L – Seconds):	12
Importance Factor (I_e):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.11
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s :	0.03
Lower Limit C_s :	0.03
Period based on Rayleigh Method (sec):	1.05
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	1.28
Total Unfactored Dead Load:	57.71 k
Seismic Base Shear (E):	2.58 k

SEISMIC

Load Case: 1.2D + 1.0Ev + 1.0Eh

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
25	470.00	1,329	3,427,747	0.053	138	1,623
24	450.00	1,356	3,308,661	0.051	133	1,656
23	430.00	1,387	3,192,911	0.050	128	1,693
22	410.00	1,470	3,185,571	0.050	128	1,795
21	390.00	1,524	3,098,074	0.048	124	1,861
20	370.00	1,726	3,280,206	0.051	132	2,108
19	350.00	1,728	3,059,532	0.048	123	2,110
18	330.00	1,755	2,881,517	0.045	116	2,143
17	310.00	1,760	2,668,593	0.041	107	2,149
16	290.00	1,903	2,649,395	0.041	106	2,323
15	270.00	1,903	2,418,380	0.038	97	2,323
14	250.00	1,903	2,192,056	0.034	88	2,323
13	230.00	1,903	1,970,692	0.031	79	2,323
12	210.00	2,201	2,029,590	0.032	81	2,687
11	190.00	2,204	1,788,571	0.028	72	2,691
10	170.00	2,265	1,594,608	0.025	64	2,765
9	150.00	2,265	1,359,109	0.021	55	2,765
8	130.00	2,197	1,098,242	0.017	44	2,682
7	110.00	2,197	887,301	0.014	36	2,682
6	90.00	2,200	687,884	0.011	28	2,687
5	70.00	2,225	504,754	0.008	20	2,717
4	50.00	2,209	326,030	0.005	13	2,697
3	30.00	2,209	169,831	0.003	7	2,697
2	13.40	1,468	40,322	0.001	2	1,793
1	3.40	762	3,627	0.000	0	930
Decibel DB264	480.00	36	95,391	0.002	4	44
Generic Flat Light Sector Frame	475.00	1,200	3,137,465	0.049	126	1,465
Generic 14' Omni	464.00	40	101,500	0.002	4	49
Generic Torque Arm	460.00	500	1,254,803	0.020	50	611
Generic 15' Omni	457.00	40	99,549	0.002	4	49
Generic Round Side Arm	457.00	188	466,637	0.007	19	229

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

Generic 11' Omni	432.50	40	92,787	0.001	4	49
Decibel DB408	430.00	17	39,144	0.001	2	21
Generic Round Side Arm	427.00	375	855,776	0.013	34	458
Panasonic VIC100 (3.9")	421.00	1	1,345	0.000	0	1
Generic Flat Stand-Off	420.50	188	419,590	0.006	17	229
Andrew Microwaves VHLP6-6W	419.00	185	412,111	0.006	17	226
Cambium Networks PMP 430 Access Point	417.00	54	119,559	0.002	5	66
Aviat Networks WTM 4200 ANSI	417.00	28	61,994	0.001	2	34
Generic Round Side Arm	417.00	188	415,136	0.006	17	229
Generic 30" x 23" BOB	417.00	100	221,406	0.003	9	122
Generic 30" x 23" BOB	417.00	100	221,406	0.003	9	122
RFS SC3-W100BGT1X	417.00	80	177,125	0.003	7	98
Andrew VHLP4-11W	417.00	88	194,837	0.003	8	107
Motorola 5780AP	407.00	54	115,911	0.002	5	66
Generic 13' Omni	404.00	80	170,105	0.003	7	98
Generic Round Side Arm	397.00	375	779,773	0.012	31	458
Generic 8' Omni	387.00	25	50,319	0.001	2	31
Generic Flat Side Arm	383.00	188	372,419	0.006	15	229
Generic Torque Arm	380.00	500	983,197	0.015	39	611
Decibel DB224-A	365.00	35	65,374	0.001	3	43
Generic Round Side Arm	355.00	188	338,016	0.005	14	229
Andrew DB420D-B	339.00	35	59,489	0.001	2	43
Generic 13' Omni	336.00	80	134,439	0.002	5	98
Generic Round Side Arm	330.00	188	307,927	0.005	12	229
Generic Round Side Arm	320.00	188	296,064	0.005	12	229
Generic Torque Arm	300.00	500	727,058	0.011	29	611
Generic Torque Arm	220.00	500	489,324	0.008	20	611
Decibel DB224-FAA	200.00	38	32,928	0.000	1	46
Generic Round Side Arm	189.00	188	151,152	0.002	6	229
Fastback Networks Intelligent Backhaul Radio 1300 Series	180.00	9	6,666	0.000	0	11
Ericsson RRUS 31	180.00	168	127,480	0.002	5	206
Ericsson RRUS-11 800 MHz	180.00	162	122,708	0.002	5	198
Ericsson RRUS82 w/ Solarshield	180.00	186	141,115	0.002	6	227
Commscope TTTT90AP-1XR	180.00	99	74,988	0.001	3	121
RFS APXVSPP18-C-A20 (62 lbs)	180.00	186	140,887	0.002	6	227
Generic Round Sector Frame	180.00	900	681,714	0.011	27	1,099
Generic Flat Light Sector Frame	171.00	1,200	851,334	0.013	34	1,465
Generic Torque Arm	140.00	500	274,778	0.004	11	611
Generic Flat Light Sector Frame	130.00	1,200	599,933	0.009	24	1,465
Generic 13' Omni	92.00	40	12,861	0.000	1	49
Andrew DB437	91.00	7	2,219	0.000	0	9
Generic Flat Side Arm	86.00	188	55,312	0.001	2	229
Decibel DB230E	81.00	27	7,379	0.000	0	33
PCTEL MYA4503	66.00	2	316	0.000	0	2
Generic 4' Std. Dish	4.00	188	1,104	0.000	0	230
Totals		57,712	64,385,049	1.000	2,583	70,473

FORCE/STRESS SUMMARY

Section 1 – Base 0.0 (ft) and Height 6.79 (ft)

								Shear			Bear					
	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls	
Max Compression																
L SOL - 3" SOLID	-162.88	1.2D + 1.0Di + 1.0Wi N	1.771	100	100	100	28.34	50.0	299.97	0.00	0.00	0	0	54	Member X	
D SOL - 1 1/8" SOLID	-6.41	1.2D + 1.0Di + 1.0Wi N	2.16	100	100	100	64.51	36.0	25.87	0.00	0.00	0	0	24	Member X	
								Shear		Bear		Blk Shear				
	Pu (kip)	Load Case		F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls			
Max Tension Member																
H SOL - 7/8" SOLID	13.41	1.2D + 1.0Di + 1.0Wi N		36.0	58	19.48	0.00	0.00	0.00	0	0	68	Member			
	Pu (kip)	Load Case		ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type									
Max Splice Forces																

Section 2 – Base 6.8 (ft) and Height 13.21 (ft)

									Shear			Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls	
Max Compression																
L SOL - 3" SOLID	-155.67	1.2D + 1.0Di + 1.0Wi 60	3.184	100	100	100	50.94	50.0	263.13	0.00	0.00	0	0	59	Member X	
D SOL - 1 1/8" SOLID	-2.39	1.2D + 1.0Di + 1.0Wi N	4.731	100	100	100	141.27	36.0	11.25	0.00	0.00	0	0	21	Member X	
	Pu (kip)	Load Case		F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)		Shear ΦR _{nv} (kip)	Bear ΦR _n (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls		
Max Tension Member																
H SOL - 7/8" SOLID	12.84	1.2D + 1.0Di + 1.0Wi N		36.0	58	19.48		0.00	0.00	0.00	0	0	65	Member		
D SOL - 1 1/8" SOLID	0.68	1.2D + 1.0W N		36.0	58	32.21		0.00	0.00	0.00	0	0	2	Member		
	Pu (kip)	Load Case		ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type									
Max Splice Forces																

Section 3 – Base 20.0 (ft) and Height 20.00 (ft)

								Shear			Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Φc Pn (kip)	ΦRnv (kip)	ΦRn (kip)	# Bolt	# Hole	Use %	Controls	
Max Compression															
L SOL - 3" SOLID	-155.39	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	59	Member X
D SOL - 1 1/8" SOLID	-2.17	1.2D + 1.0Di + 1.0Wi N	4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	19	Member X
						Shear			Bear	Blk Shear					
	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	ΦRnv (kip)	ΦRn (kip)	Φt Pn (kip)	# Bolt	# Hole	Use %	Controls			
Max Tension Member															
H SOL - 7/8" SOLID	1.40	1.2D + 1.0Di + 1.0Wi N	36.0	58	19.48	0.00	0.00	0.00	0	0	7	Member			
	Pu (kip)	Load Case			ΦRnt (kip)	Use %	Num Bolts	Bolt Type							
Max Splice Forces															

Section 4 – Base 40.0 (ft) and Height 20.00 (ft)

								Shear			Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %				F _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls
Max Compression															
L SOL - 3" SOLID	-152.57	1.2D + 1.0Di + 1.0Wi N	3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	58	Member X
H SOL - 7/8" SOLID	-0.07	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	0	Member X
D SOL - 1 1/8" SOLID	-2.68	1.2D + 1.0W 60°	4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	24	Member X
								Shear			Bear				
	Pu (kip)	Load Case		F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls		
Max Tension Member															

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

FORCE/STRESS SUMMARY

H SOL - 7/8" SOLID	1.38	1.2D + 1.0Di + 1.0Wi N	36.0	58	19.48	0.00	0.00	0.00	0	0	7	Member
D SOL - 1 1/8" SOLID	1.05	1.2D + 1.0W 90°	36.0	58	32.21	0.00	0.00	0.00	0	0	3	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
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Section 5 – Base 60.0 (ft) and Height 20.00 (ft)

	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
Max Compression													
L SOL - 3" SOLID	-148.26	1.2D + 1.0Di + 1.0Wi N	3.208	100 100 100	51.33	50.0	262.36	0.00	0.00	0	0	56	Member X
H SOL - 7/8" SOLID	-0.27	1.2D + 1.0W N	3.499	100 100 100	134.39	36.0	7.52	0.00	0.00	0	0	3	Member X
D SOL - 1 1/8" SOLID	-3.50	1.2D + 1.0W 90°	4.747	100 100 100	141.76	36.0	11.17	0.00	0.00	0	0	31	Member X

	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
Max Tension Member												
H SOL - 7/8" SOLID	1.24	1.2D + 1.0Di + 1.0Wi N	36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member
D SOL - 1 1/8" SOLID	1.31	1.2D + 1.0W 90°	36.0	58	32.21	0.00	0.00	0.00	0	0	4	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
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Section 6 – Base 80.0 (ft) and Height 20.00 (ft)

	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
Max Compression													
L SOL - 3" SOLID	-143.19	1.2D + 1.0Di + 1.0Wi N	3.208	100 100 100	51.33	50.0	262.36	0.00	0.00	0	0	54	Member X
D SOL - 1 1/8" SOLID	-2.36	1.2D + 1.0W N	4.747	100 100 100	141.76	36.0	11.17	0.00	0.00	0	0	21	Member X

	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
Max Tension Member												
H SOL - 7/8" SOLID	1.24	1.2D + 1.0Di + 1.0Wi N	36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member
D SOL - 1 1/8" SOLID	0.50	1.2D + 1.0W N	36.0	58	32.21	0.00	0.00	0.00	0	0	1	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
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Section 7 – Base 100.0 (ft) and Height 20.00 (ft)

	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
Max Compression													
L SOL - 3" SOLID	-140.45	1.2D + 1.0Di + 1.0Wi N	3.208	100 100 100	51.33	50.0	262.36	0.00	0.00	0	0	53	Member X
H SOL - 7/8" SOLID	-0.05	1.2D + 1.0W 60°	3.499	100 100 100	134.39	36.0	7.52	0.00	0.00	0	0	0	Member X
D SOL - 1 1/8" SOLID	-2.53	1.2D + 1.0W 60°	4.747	100 100 100	141.76	36.0	11.17	0.00	0.00	0	0	22	Member X

	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
Max Tension Member												
H SOL - 7/8" SOLID	1.20	1.2D + 1.0Di + 1.0Wi N	36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member
D SOL - 1 1/8" SOLID	0.76	1.2D + 1.0W 60°	36.0	58	32.21	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
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Section 8 – Base 120.0 (ft) and Height 20.00 (ft)

FORCE/STRESS SUMMARY

										Shear	Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %				F'y (ksi)	Φc Pn (kip)	ΦRnv (kip)	ΦRn (kip)	# Bolt	# Hole	Use %	Controls
Max Compression				X	Y	Z	KL/R								
L SOL - 3" SOLID	-139.23	1.2D + 1.0Di + 1.0Wi N	3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	53	Member X
H SOL - 7/8" SOLID	-2.18	1.2D + 1.0W N	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	28	Member X
D SOL - 1 1/8" SOLID	-6.57	1.2D + 1.0Di + 1.0Wi N	4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	58	Member X

						Shear	Bear	Blk Shear				
	P _u (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
Max Tension Member												
H SOL - 7/8" SOLID	4.71	1.2D + 1.0W 60°	36.0	58	19.48	0.00	0.00	0.00	0	0	24	Member
D SOL - 1 1/8" SOLID	2.32	1.2D + 1.0W N	36.0	58	32.21	0.00	0.00	0.00	0	0	7	Member

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

Section 9 – Base 140.0 (ft) and Height 20.00 (ft)

								Shear			Bear				
	Pu		Len	Bracing %				F'y	Φc Pn	ΦRnv	ΦRn	#	#	Use	
Max Compression	(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	(kip)	(kip)	Bolt	Hole	%	Controls
L SOL - 3" SOLID	-132.51	1.2D + 1.0Di + 1.0Wi N	3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	50	Member X
H SOL - 7/8" SOLID	-2.38	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	31	Member X
D SOL - 1 1/4" SOLID	-6.43	1.2D + 1.0W N	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	38	Member X

						Shear	Bear	Blk Shear				
Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	ΦRnv (kip)	ΦRn (kip)	Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
H SOL - 7/8" SOLID	3.60	1.2D + 1.0W 90°	36.0	58	19.48	0.00	0.00	0.00	0	0	18	Member
D SOL - 1 1/4" SOLID	5.48	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	13	Member

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

Section 10 – Base 160.0 (ft) and Height 20.00 (ft)

										Shear	Bear					
	Pu			Len	Bracing %			F'y	Φc Pn	ΦRnv	ΦRn	#	#	Use		
Max Compression	(kip)	Load Case		(ft)	X	Y	Z	KL/R	(ksi)	(kip)	(kip)	(kip)	Bolt	Hole	%	Controls
L SOL - 3" SOLID	-126.23	1.2D + 1.0Di + 1.0Wi 60		3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	48	Member X
H SOL - 7/8" SOLID	-0.76	1.2D + 1.0W 60°		3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	10	Member X
D SOL - 1 1/4" SOLID	-5.53	1.2D + 1.0W N		4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	32	Member X

						Shear	Bear	Blk Shear				
	Pu		Fy	Fu	ΦcPn	ΦRnv	ΦRn	Φt Pn	#	#	Use	
Max Tension Member	(kip)	Load Case	(ksi)	(ksi)	(kip)	(kip)	(kip)	(kip)	Bolt	Hole	%	Controls
H SOL - 7/8" SOLID	1.49	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	7	Member
D SOL - 1 1/4" SOLID	4.16	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	10	Member

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

Section 11 – Base 180.0 (ft) and Height 20.00 (ft)

			Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
	Pu (kip)	Load Case		Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)										
Max Compression				X	Y	Z	KL/R								
L SOL - 3" SOLID	-124.16	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	47	Member X
H SOL - 7/8" SOLID	-0.02	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	0	Member X
D SOL - 1 1/4" SOLID	-2.06	1.2D + 1.0W 60°	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	12	Member X

FORCE/STRESS SUMMARY

Max Tension Member	Pu		Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	1.18	1.2D + 1.0Di + 1.0Wi N		36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member
D SOL - 1 1/4" SOLID	0.96	1.2D + 1.0W 90°		36.0	58	39.76	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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Section 12 – Base 200.0 (ft) and Height 20.00 (ft)

Max Compression	Pu		Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 3" SOLID	-120.89	1.2D + 1.0Di + 1.0Wi 60		3.208	100	100	100	51.33	50.0	262.36	0.00	0.00	0	0	46	Member X
H SOL - 7/8" SOLID	-0.79	1.2D + 1.0W 60°		3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	10	Member X
D SOL - 1 1/4" SOLID	-6.29	1.2D + 1.0Di + 1.0Wi N		4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	37	Member X

Max Tension Member	Pu		Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	3.52	1.2D + 1.0W 90°		36.0	58	19.48	0.00	0.00	0.00	0	0	18	Member
D SOL - 1 1/4" SOLID	2.09	1.2D + 1.0W 90°		36.0	58	39.76	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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Section 13 – Base 220.0 (ft) and Height 20.00 (ft)

Max Compression	Pu		Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 2 3/4" SOLID	-102.66	1.2D + 1.0Di + 1.0Wi 60		3.208	100	100	100	56.00	50.0	212.52	0.00	0.00	0	0	48	Member X
H SOL - 7/8" SOLID	-1.03	1.2D + 1.0W 60°		3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	13	Member X
D SOL - 1 1/8" SOLID	-2.71	1.2D + 1.0W 60°		4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	24	Member X

Max Tension Member	Pu		Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	1.80	1.2D + 1.0W 90°		36.0	58	19.48	0.00	0.00	0.00	0	0	9	Member
D SOL - 1 1/8" SOLID	1.45	1.2D + 1.0W 60°		36.0	58	32.21	0.00	0.00	0.00	0	0	4	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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Section 14 – Base 240.0 (ft) and Height 20.00 (ft)

Max Compression	Pu		Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
	(kip)				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 2 3/4" SOLID	-102.30	1.2D + 1.0Di + 1.0Wi 60		3.208	100	100	100	56.00	50.0	212.52	0.00	0.00	0	0	48	Member X
D SOL - 1 1/8" SOLID	-1.75	1.2D + 1.0Di + 1.0Wi N		4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	15	Member X

Max Tension Member	Pu		Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
	(kip)						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	0.82	1.2D + 1.0Di + 1.0Wi N		36.0	58	19.48	0.00	0.00	0.00	0	0	4	Member
D SOL - 1 1/8" SOLID	0.71	1.2D + 1.0W N		36.0	58	32.21	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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ASSET: # 36075, LEE S SUMMIT #1B

STANDARD ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.: OAA769626_C3_02

FORCE/STRESS SUMMARY

Section 15 – Base 260.0 (ft) and Height 20.00 (ft)

									Shear			Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Φc Pn (kip)	ΦRnv (kip)	ΦRn (kip)	# Bolt	# Hole	Use %	Controls		
Max Compression																
L SOL - 2 3/4" SOLID	-100.94	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	56.00	50.0	212.52	0.00	0.00	0	0	47	Member X	
H SOL - 7/8" SOLID	-0.41	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	5	Member X	
D SOL - 1 1/8" SOLID	-3.25	1.2D + 1.0W N	4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	29	Member X	
									Shear		Bear		Blk Shear			
	Pu (kip)	Load Case		Fy (ksi)	Fu (ksi)	ΦcPn (kip)	ΦRnv (kip)	ΦRn (kip)	Φt Pn (kip)	# Bolt	# Hole	Use %	Controls			
Max Tension Member																
H SOL - 7/8" SOLID	0.98	1.2D + 1.0W N		36.0	58	19.48	0.00	0.00	0.00	0	0	5	Member			
D SOL - 1 1/8" SOLID	2.37	1.2D + 1.0W N		36.0	58	32.21	0.00	0.00	0.00	0	0	7	Member			
	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type										
Max Splice Forces																

Section 16 – Base 280.0 (ft) and Height 20.00 (ft)

									Shear			Bear				
	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls	
Max Compression				X	Y	Z	KL/R									
L SOL - 2 3/4" SOLID	-93.70	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	56.00	50.0	212.52	0.00	0.00	0	0	44	Member X	
H SOL - 7/8" SOLID	-2.22	1.2D + 1.0W N	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	29	Member X	
D SOL - 1 1/8" SOLID	-5.47	1.2D + 1.0W N	4.747	100	100	100	141.76	36.0	11.17	0.00	0.00	0	0	48	Member X	
							Shear			Bear		Blk Shear				
	Pu (kip)	Load Case		F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls			
Max Tension Member																
H SOL - 7/8" SOLID	4.30	1.2D + 1.0W 90°		36.0	58	19.48	0.00	0.00	0.00	0	0	22	Member			
D SOL - 1 1/8" SOLID	3.07	1.2D + 1.0W N		36.0	58	32.21	0.00	0.00	0.00	0	0	9	Member			
	Pu (kip)	Load Case		ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type									

Section 17 – Base 300.0 (ft) and Height 20.00 (ft)

								Shear			Bear			
	Pu (kip)	Load Case	Len (ft)	Bracing %			F' _y (ksi)	Φ _c P _n (kip)	ΦR _{nv} (kip)	ΦR _n (kip)	# Bolt	# Hole	Use %	Controls
Max Compression				X	Y	Z	KL/R							
L SOL - 2 1/2" SOLID	-76.08	1.2D + 1.0W N	3.208	100	100	100	61.60	50.0	167.42	0.00	0.00	0	0	45 Member X
H SOL - 7/8" SOLID	-1.77	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	23 Member X
D SOL - 1 1/4" SOLID	-4.08	1.2D + 1.0W N	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	24 Member X
	Pu (kip)	Load Case		F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)		Shear ΦR _{nv} (kip)	Bear ΦR _n (kip)	Blk Shear Φ _t P _n (kip)	# Bolt	# Hole	Use %	Controls
Max Tension Member														
H SOL - 7/8" SOLID	2.61	1.2D + 1.0W 90°		36.0	58	19.48		0.00	0.00	0.00	0	0	13	Member
D SOL - 1 1/4" SOLID	3.69	1.2D + 1.0W 90°		36.0	58	39.76		0.00	0.00	0.00	0	0	9	Member
Max Splice Forces	Pu (kip)	Load Case		ΦR _{nt} (kip)	Use %	Num Bolts	Bolt Type							

Section 18 – Base 320.0 (ft) and Height 20.00 (ft)

	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
Max Compression															
L SOL - 2 1/2" SOLID	-73.68	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	61.60	50.0	167.42	0.00	0.00	0	0	44	Member X
H SOL - 7/8" SOLID	-0.55	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	7	Member X
D SOL - 1 1/4" SOLID	-2.94	1.2D + 1.0W N	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	17	Member X

FORCE/STRESS SUMMARY

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	0.98	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	5	Member
D SOL - 1 1/4" SOLID	2.18	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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Section 19 – Base 340.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 2 1/2" SOLID	-73.62	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	61.60	50.0	167.42	0.00	0.00	0	0	43	Member X
H SOL - 7/8" SOLID	-0.26	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	3	Member X
D SOL - 1 1/4" SOLID	-1.45	1.2D + 1.0W 60°	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	8	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
H SOL - 7/8" SOLID	0.40	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	2	Member
D SOL - 1 1/4" SOLID	0.88	1.2D + 1.0W 60°	36.0	58	39.76	0.00	0.00	0.00	0	0	2	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
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Section 20 – Base 360.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 2 1/2" SOLID	-69.28	1.2D + 1.0Di + 1.0Wi 60	3.208	100	100	100	61.60	50.0	167.42	0.00	0.00	0	0	41	Member X
H SOL - 7/8" SOLID	-3.67	1.2D + 1.0W N	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	48	Member X
D SOL - 1 1/4" SOLID	-4.30	1.2D + 1.0W 60°	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	25	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
L SOL - 2 1/2" SOLID	2.74	1.2D + 1.0W 60°	50.0	65	220.95	0.00	0.00	0.00	0	0	1	Member
H SOL - 7/8" SOLID	6.02	1.2D + 1.0W 60°	36.0	58	19.48	0.00	0.00	0.00	0	0	30	Member
D SOL - 1 1/4" SOLID	2.17	1.2D + 1.0W 60°	36.0	58	39.76	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	Φ _{R_{nt}} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	3.79	1.2D + 1.0W 180°	0.00	0	0	

Section 21 – Base 380.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	Φ _c P _n (kip)	Shear	Bear	# Bolt	# Hole	Use %	Controls
				X	Y	Z	KL/R			Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)				
L SOL - 2 1/4" SOLID	-45.34	1.2D + 1.0W N	3.208	100	100	100	68.44	50.0	127.03	0.00	0.00	0	0	35	Member X
H SOL - 7/8" SOLID	-2.83	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	37	Member X
D SOL - 1 1/4" SOLID	-6.09	1.2D + 1.0W N	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	36	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	Φ _c P _n (kip)	Shear	Bear	Blk Shear	# Bolt	# Hole	Use %	Controls
						Φ _{R_{nv}} (kip)	Φ _{R_n} (kip)	Φ _t P _n (kip)				
L SOL - 2 1/4" SOLID	3.81	1.2D + 1.0W 60°	50.0	65	178.92	0.00	0.00	0.00	0	0	2	Member
H SOL - 7/8" SOLID	3.16	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	16	Member
D SOL - 1 1/4" SOLID	6.59	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	16	Member

FORCE/STRESS SUMMARY

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	3.79	1.2D + 1.0W 180°	38.31	10	3	1/2 A325

Section 22 – Base 400.0 (ft) and Height 20.00 (ft)

Max 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 SOL - 2 1/4" SOLID	-55.53	1.2D + 1.0W 60°	3.208	100 100 100	68.44	50.0	127.03	0.00	0.00	0	0	43	Member X
H SOL - 7/8" SOLID	-1.50	1.2D + 1.0W 60°	3.499	100 100 100	134.39	36.0	7.52	0.00	0.00	0	0	19	Member X
D SOL - 1 1/4" SOLID	-4.43	1.2D + 1.0W 60°	4.747	100 100 100	127.61	36.0	16.87	0.00	0.00	0	0	26	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	12.55	1.2D + 1.0W N	50.0	65	178.92	0.00	0.00		0	0	7	Member
H SOL - 7/8" SOLID	1.63	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	8	Member
D SOL - 1 1/4" SOLID	4.52	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	11	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	13.41	1.2D + 1.0W 240°	0.00	0	0	

Section 23 – Base 420.0 (ft) and Height 20.00 (ft)

Max 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 SOL - 2 1/4" SOLID	-54.80	1.2D + 1.0W 180°	3.208	100 100 100	68.44	50.0	127.03	0.00	0.00	0	0	43	Member X
H SOL - 7/8" SOLID	-0.83	1.2D + 1.0W 60°	3.499	100 100 100	134.39	36.0	7.52	0.00	0.00	0	0	11	Member X
D SOL - 1 1/4" SOLID	-2.39	1.2D + 1.0W N	4.747	100 100 100	127.61	36.0	16.87	0.00	0.00	0	0	14	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	13.46	1.2D + 1.0W N	50.0	65	178.92	0.00	0.00		0	0	7	Member
H SOL - 7/8" SOLID	0.89	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	4	Member
D SOL - 1 1/4" SOLID	2.56	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	6	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	1.72	1.2D + 1.0W N	0.00	0	0	
Bot Tension	13.41	1.2D + 1.0W 240°	38.31	35	3	1/2 A325

Section 24 – Base 440.0 (ft) and Height 20.00 (ft)

Max 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 SOL - 2 1/4" SOLID	-40.29	1.2D + 1.0W 60°	3.208	100 100 100	68.44	50.0	127.03	0.00	0.00	0	0	31	Member X
H SOL - 7/8" SOLID	-2.55	1.2D + 1.0W N	3.499	100 100 100	134.39	36.0	7.52	0.00	0.00	0	0	33	Member X
D SOL - 1 1/4" SOLID	-3.40	1.2D + 1.0W 210°	4.747	100 100 100	127.61	36.0	16.87	0.00	0.00	0	0	20	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	9.01	1.2D + 1.0W 60°	50.0	65	178.92	0.00	0.00		0	0	5	Member
H SOL - 7/8" SOLID	3.96	1.2D + 1.0W 90°	36.0	58	19.48	0.00	0.00	0.00	0	0	20	Member
D SOL - 1 1/4" SOLID	3.66	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	9	Member

FORCE/STRESS SUMMARY

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Top Tension	9.01	1.2D + 1.0W 300°	0.00	0	0	
Bot Tension	1.72	1.2D + 1.0W N	38.31	5	3	1/2 A325

Section 25 – Base 460.0 (ft) and Height 20.00 (ft)

Max Compression	Pu (kip)	Load Case	Len (ft)	Bracing %				F' _y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	-9.97	1.2D + 1.0W N	3.208	100	100	100	68.44	50.0	127.03	0.00	0.00	0	0	7	Member X
H SOL - 7/8" SOLID	-1.09	1.2D + 1.0W 60°	3.499	100	100	100	134.39	36.0	7.52	0.00	0.00	0	0	14	Member X
D SOL - 1 1/4" SOLID	-1.90	1.2D + 1.0W N	4.747	100	100	100	127.61	36.0	16.87	0.00	0.00	0	0	11	Member X

Max Tension Member	Pu (kip)	Load Case	F _y (ksi)	F _u (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/4" SOLID	9.28	1.2D + 1.0W 60°	50.0	65	178.92	0.00	0.00		0	0	5	Member
H SOL - 7/8" SOLID	1.20	1.2D + 1.0W N	36.0	58	19.48	0.00	0.00	0.00	0	0	6	Member
D SOL - 1 1/4" SOLID	2.16	1.2D + 1.0W 90°	36.0	58	39.76	0.00	0.00	0.00	0	0	5	Member

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	9.01	1.2D + 1.0W 300°	38.31	24	3	1/2 A325

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					*Fx (kip)	*Fy (kip)	*Fz (kip)
1.2D + 1.0W Normal	0.00	0.00		1	0.00	261.93	-0.78
	143.00	0.00	0	A1	0.00	-2.25	1.33
	143.00	0.00	240	A1a	-23.45	-28.51	-14.50
	143.00	0.00	120	A1b	23.45	-28.51	-14.49
	299.00	0.00	0	A2	0.00	-12.08	7.20
	299.00	0.00	240	A2a	-37.87	-54.67	-25.42
1.2D + 1.0W 60°	299.00	0.00	120	A2b	37.87	-54.67	-25.42
	0.00	0.00		1	-1.10	257.99	-0.64
	143.00	0.00	0	A1	-0.72	-7.65	6.64
	143.00	0.00	240	A1a	-28.55	-34.53	-16.49
	143.00	0.00	120	A1b	5.38	-7.64	-3.94
	299.00	0.00	0	A2	-3.00	-28.66	21.42
1.2D + 1.0W 90°	299.00	0.00	240	A2a	-51.57	-71.02	-29.77
	299.00	0.00	120	A2b	17.05	-28.67	-13.31
	0.00	0.00		1	-0.95	262.11	-0.31
	143.00	0.00	0	A1	-0.94	-18.46	17.61
	143.00	0.00	240	A1a	-28.66	-34.14	-16.03
	143.00	0.00	120	A1b	1.91	-3.40	-1.51
1.2D + 1.0W 120°	299.00	0.00	0	A2	-3.69	-41.96	33.73
	299.00	0.00	240	A2a	-49.03	-66.33	-26.44
	299.00	0.00	120	A2b	9.20	-17.29	-7.07
	0.00	0.00		1	-0.66	262.08	0.38
	143.00	0.00	0	A1	-0.83	-28.54	27.58
	143.00	0.00	240	A1a	-24.30	-28.53	-13.07
1.2D + 1.0W 180°	143.00	0.00	120	A1b	1.15	-2.25	-0.66
	299.00	0.00	0	A2	-3.08	-54.73	45.56
	299.00	0.00	240	A2a	-41.00	-54.72	-20.11
	299.00	0.00	120	A2b	6.22	-12.07	-3.59
	0.00	0.00		1	0.00	257.99	1.27
	143.00	0.00	0	A1	0.00	-34.53	32.97
1.2D + 1.0W 210°	143.00	0.00	240	A1a	-6.11	-7.64	-2.69
	143.00	0.00	120	A1b	6.11	-7.64	-2.69
	299.00	0.00	0	A2	0.00	-71.03	59.54
	299.00	0.00	240	A2a	-20.05	-28.66	-8.11
	299.00	0.00	120	A2b	20.05	-28.66	-8.11
	0.00	0.00		1	0.20	262.11	0.98
1.2D + 1.0W 240°	143.00	0.00	0	A1	0.45	-34.14	32.83
	143.00	0.00	240	A1a	-2.26	-3.40	-0.90
	143.00	0.00	120	A1b	15.72	-18.46	-7.99
	299.00	0.00	0	A2	1.61	-66.35	55.68
	299.00	0.00	240	A2a	-10.72	-17.28	-4.43
	299.00	0.00	120	A2b	31.06	-41.95	-13.67
1.2D + 1.0W 300°	0.00	0.00		1	0.66	262.10	0.38
	143.00	0.00	0	A1	0.83	-28.54	27.58
	143.00	0.00	240	A1a	-1.15	-2.25	-0.66
	143.00	0.00	120	A1b	24.30	-28.54	-13.07
	299.00	0.00	0	A2	3.08	-54.73	45.57
	299.00	0.00	240	A2a	-6.22	-12.07	-3.59
1.2D + 1.0W 330°	299.00	0.00	120	A2b	41.00	-54.73	-20.11
	0.00	0.00		1	1.10	257.99	-0.64
	143.00	0.00	0	A1	0.72	-7.65	6.64
	143.00	0.00	240	A1a	-5.38	-7.64	-3.94
	143.00	0.00	120	A1b	28.55	-34.53	-16.48
	299.00	0.00	0	A2	3.00	-28.66	21.42
1.2D + 1.0Di + 1.0Wi Normal	299.00	0.00	240	A2a	-17.05	-28.67	-13.31
	299.00	0.00	120	A2b	51.57	-71.02	-29.78
	0.00	0.00		1	0.75	262.10	-0.67
	143.00	0.00	0	A1	0.35	-3.40	2.41
	143.00	0.00	240	A1a	-14.78	-18.46	-9.62
	143.00	0.00	120	A1b	28.20	-34.13	-16.81
1.2D + 1.0Di + 1.0Wi Normal	299.00	0.00	0	A2	1.52	-17.28	11.49
	299.00	0.00	240	A2a	-27.37	-41.96	-20.06
	299.00	0.00	120	A2b	47.41	-66.34	-29.24
	0.00	0.00		1	0.00	465.06	0.01
1.2D + 1.0Di + 1.0Wi Normal	143.00	0.00	0	A1	0.00	-9.37	11.17
	143.00	0.00	240	A1a	-19.43	-21.19	-11.99
	143.00	0.00	120	A1b	19.43	-21.19	-11.99
	299.00	0.00	0	A2	0.00	-34.79	32.09

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					*F _x (kip)	*F _y (kip)	*F _z (kip)
1.2D + 1.0Di + 1.0Wi 60°	299.00	0.00	240	A2a	-42.40	-53.22	-27.16
	299.00	0.00	120	A2b	42.40	-53.22	-27.16
	0.00	0.00	1	1	-0.02	463.05	-0.01
	143.00	0.00	0	A1	-0.66	-13.37	14.90
	143.00	0.00	240	A1a	-22.73	-24.81	-13.12
	143.00	0.00	120	A1b	12.58	-13.37	-8.02
1.2D + 1.0Di + 1.0Wi 90°	299.00	0.00	0	A2	-2.33	-40.64	37.57
	299.00	0.00	240	A2a	-48.56	-59.34	-28.03
	299.00	0.00	120	A2b	31.38	-40.65	-20.80
	0.00	0.00	1	1	-0.01	463.96	0.00
	143.00	0.00	0	A1	-0.81	-17.31	18.90
	143.00	0.00	240	A1a	-22.16	-23.87	-12.41
1.2D + 1.0Di + 1.0Wi 120°	143.00	0.00	120	A1b	10.32	-10.42	-6.33
	299.00	0.00	0	A2	-2.82	-46.86	43.87
	299.00	0.00	240	A2a	-47.92	-57.74	-26.30
	299.00	0.00	120	A2b	28.32	-36.27	-17.73
	0.00	0.00	1	1	0.01	465.07	0.00
	143.00	0.00	0	A1	-0.67	-21.19	22.83
1.2D + 1.0Di + 1.0Wi 180°	143.00	0.00	240	A1a	-20.10	-21.19	-10.83
	143.00	0.00	120	A1b	9.67	-9.37	-5.58
	299.00	0.00	0	A2	-2.32	-53.22	50.30
	299.00	0.00	240	A2a	-44.73	-53.22	-23.14
	299.00	0.00	120	A2b	27.79	-34.80	-16.05
	0.00	0.00	1	1	0.00	463.05	0.02
1.2D + 1.0Di + 1.0Wi 210°	143.00	0.00	0	A1	0.00	-24.81	26.25
	143.00	0.00	240	A1a	-13.23	-13.37	-6.88
	143.00	0.00	120	A1b	13.23	-13.37	-6.88
	299.00	0.00	0	A2	0.00	-59.34	56.07
	299.00	0.00	240	A2a	-33.70	-40.64	-16.77
	299.00	0.00	120	A2b	33.70	-40.64	-16.77
1.2D + 1.0Di + 1.0Wi 240°	0.00	0.00	1	1	0.00	463.96	0.01
	143.00	0.00	0	A1	0.34	-23.87	25.40
	143.00	0.00	240	A1a	-10.64	-10.42	-5.77
	143.00	0.00	120	A1b	16.77	-17.31	-8.75
	299.00	0.00	0	A2	1.18	-57.75	54.65
	299.00	0.00	240	A2a	-29.52	-36.27	-15.66
1.2D + 1.0Di + 1.0Wi 300°	299.00	0.00	120	A2b	39.40	-46.85	-19.49
	0.00	0.00	1	1	-0.01	465.07	0.00
	143.00	0.00	0	A1	0.67	-21.19	22.82
	143.00	0.00	240	A1a	-9.67	-9.37	-5.59
	143.00	0.00	120	A1b	20.10	-21.19	-10.83
	299.00	0.00	0	A2	2.32	-53.22	50.30
1.2D + 1.0Di + 1.0Wi 330°	299.00	0.00	240	A2a	-27.79	-34.80	-16.04
	299.00	0.00	120	A2b	44.73	-53.22	-23.14
	0.00	0.00	1	1	0.02	463.05	-0.01
	143.00	0.00	0	A1	0.65	-13.37	14.90
	143.00	0.00	240	A1a	-12.58	-13.37	-8.02
	143.00	0.00	120	A1b	22.73	-24.81	-13.12
1.2D + 1.0Ev + 1.0Eh Normal	299.00	0.00	0	A2	2.33	-40.64	37.57
	299.00	0.00	240	A2a	-31.38	-40.65	-20.80
	299.00	0.00	120	A2b	48.56	-59.34	-28.03
	0.00	0.00	1	1	0.01	463.96	-0.01
	143.00	0.00	0	A1	0.32	-10.42	12.10
	143.00	0.00	240	A1a	-15.96	-17.31	-10.15
1.2D + 1.0Ev + 1.0Eh 60°	143.00	0.00	120	A1b	21.83	-23.87	-12.99
	299.00	0.00	0	A2	1.20	-36.27	33.39
	299.00	0.00	240	A2a	-36.58	-46.86	-24.38
	299.00	0.00	120	A2b	46.74	-57.74	-28.35
	0.00	0.00	1	1	0.00	199.32	0.02
	143.00	0.00	0	A1	0.00	-11.61	11.80
1.2D + 1.0Ev + 1.0Eh 60°	143.00	0.00	240	A1a	-10.82	-12.44	-6.25
	143.00	0.00	120	A1b	10.83	-12.44	-6.25
	299.00	0.00	0	A2	0.00	-25.59	21.09
	299.00	0.00	240	A2a	-19.72	-27.77	-11.39
	299.00	0.00	120	A2b	19.72	-27.77	-11.39
	0.00	0.00	1	1	0.02	199.32	0.01
1.2D + 1.0Ev + 1.0Eh 60°	143.00	0.00	0	A1	0.00	-11.88	12.04
	143.00	0.00	240	A1a	-11.03	-12.71	-6.37

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					*F _x (kip)	*F _y (kip)	*F _z (kip)
1.2D + 1.0Ev + 1.0Eh 90°	143.00	0.00	120	A1b	10.42	-11.88	-6.02
	299.00	0.00	0	A2	0.00	-26.31	21.65
	299.00	0.00	240	A2a	-20.22	-28.50	-11.67
	299.00	0.00	120	A2b	18.75	-26.31	-10.83
	0.00	0.00	1		0.02	199.32	0.00
	143.00	0.00	0	A1	0.00	-12.16	12.27
	143.00	0.00	240	A1a	-10.97	-12.64	-6.33
	143.00	0.00	120	A1b	10.28	-11.68	-5.93
	299.00	0.00	0	A2	0.00	-27.04	22.21
	299.00	0.00	240	A2a	-20.08	-28.30	-11.59
1.2D + 1.0Ev + 1.0Eh 120°	299.00	0.00	120	A2b	18.39	-25.78	-10.62
	0.00	0.00	1		0.02	199.32	-0.01
	143.00	0.00	0	A1	0.00	-12.44	12.50
	143.00	0.00	240	A1a	-10.83	-12.44	-6.25
	143.00	0.00	120	A1b	10.22	-11.61	-5.90
	299.00	0.00	0	A2	0.00	-27.77	22.78
	299.00	0.00	240	A2a	-19.73	-27.77	-11.39
	299.00	0.00	120	A2b	18.26	-25.59	-10.54
	0.00	0.00	1		0.00	199.32	-0.02
	143.00	0.00	0	A1	0.00	-12.71	12.73
1.2D + 1.0Ev + 1.0Eh 180°	143.00	0.00	240	A1a	-10.42	-11.88	-6.02
	143.00	0.00	120	A1b	10.42	-11.88	-6.02
	299.00	0.00	0	A2	0.00	-28.50	23.34
	299.00	0.00	240	A2a	-18.75	-26.31	-10.82
	299.00	0.00	120	A2b	18.75	-26.31	-10.82
	0.00	0.00	1		-0.01	199.32	-0.02
	143.00	0.00	0	A1	0.00	-12.64	12.67
	143.00	0.00	240	A1a	-10.28	-11.68	-5.93
	143.00	0.00	120	A1b	10.62	-12.16	-6.13
	299.00	0.00	0	A2	0.00	-28.30	23.19
1.2D + 1.0Ev + 1.0Eh 210°	299.00	0.00	240	A2a	-18.39	-25.78	-10.62
	299.00	0.00	120	A2b	19.24	-27.04	-11.10
	0.00	0.00	1		-0.02	199.32	-0.01
	143.00	0.00	0	A1	0.00	-12.44	12.50
	143.00	0.00	240	A1a	-10.22	-11.61	-5.90
	143.00	0.00	120	A1b	10.83	-12.44	-6.25
	299.00	0.00	0	A2	0.00	-27.77	22.78
	299.00	0.00	240	A2a	-18.26	-25.59	-10.54
	299.00	0.00	120	A2b	19.73	-27.77	-11.39
	0.00	0.00	1		-0.02	199.32	0.01
1.2D + 1.0Ev + 1.0Eh 240°	143.00	0.00	0	A1	0.00	-11.88	12.04
	143.00	0.00	240	A1a	-10.42	-11.88	-6.02
	143.00	0.00	120	A1b	11.03	-12.71	-6.37
	299.00	0.00	0	A2	0.00	-26.31	21.65
	299.00	0.00	240	A2a	-18.75	-26.31	-10.83
	299.00	0.00	120	A2b	20.22	-28.50	-11.67
	0.00	0.00	1		-0.01	199.32	0.02
	143.00	0.00	0	A1	0.00	-11.68	11.87
	143.00	0.00	240	A1a	-10.62	-12.16	-6.13
	143.00	0.00	120	A1b	10.97	-12.64	-6.33
1.2D + 1.0Ev + 1.0Eh 300°	299.00	0.00	0	A2	0.00	-25.78	21.24
	299.00	0.00	240	A2a	-19.23	-27.04	-11.11
	299.00	0.00	120	A2b	20.08	-28.30	-11.60
	0.00	0.00	1		0.00	192.73	-0.55
	143.00	0.00	0	A1	0.00	-7.20	7.35
	143.00	0.00	240	A1a	-12.99	-15.11	-7.75
	143.00	0.00	120	A1b	12.99	-15.11	-7.75
	299.00	0.00	0	A2	0.00	-20.46	16.12
	299.00	0.00	240	A2a	-23.12	-32.82	-14.38
	299.00	0.00	120	A2b	23.12	-32.82	-14.38
1.0D + 1.0W Service Normal	0.00	0.00	1		-0.45	193.98	-0.26
	143.00	0.00	0	A1	-0.22	-9.99	10.02
	143.00	0.00	240	A1a	-15.45	-17.98	-8.92
	143.00	0.00	120	A1b	8.56	-9.99	-5.20
	299.00	0.00	0	A2	-0.90	-24.98	20.01
	299.00	0.00	240	A2a	-26.93	-37.31	-15.55
	299.00	0.00	120	A2b	16.88	-24.98	-10.78
	0.00	0.00	1		-0.53	193.32	0.01
1.0D + 1.0W Service 60°							
1.0D + 1.0W Service 90°							

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	*(-) Uplift and (+) Down		
					*Fx (kip)	*Fy (kip)	*Fz (kip)
1.0D + 1.0W Service 120°	143.00	0.00	0	A1	-0.27	-12.54	12.56
	143.00	0.00	240	A1a	-14.87	-17.18	-8.46
	143.00	0.00	120	A1b	6.93	-7.98	-4.13
	299.00	0.00	0	A2	-1.09	-28.92	23.63
	299.00	0.00	240	A2a	-26.25	-36.05	-14.62
	299.00	0.00	120	A2b	14.60	-21.66	-8.96
	0.00	0.00	1	1	-0.48	192.73	0.28
	143.00	0.00	0	A1	-0.22	-15.11	15.12
	143.00	0.00	240	A1a	-13.21	-15.11	-7.37
	143.00	0.00	120	A1b	6.36	-7.20	-3.67
1.0D + 1.0W Service 180°	299.00	0.00	0	A2	-0.89	-32.82	27.22
	299.00	0.00	240	A2a	-24.02	-32.82	-12.83
	299.00	0.00	120	A2b	13.96	-20.46	-8.06
	0.00	0.00	1	1	0.00	193.98	0.52
	143.00	0.00	0	A1	0.00	-17.98	17.84
	143.00	0.00	240	A1a	-8.78	-9.99	-4.82
	143.00	0.00	120	A1b	8.78	-9.99	-4.82
	299.00	0.00	0	A2	0.00	-37.31	31.09
	299.00	0.00	240	A2a	-17.78	-24.98	-9.23
	299.00	0.00	120	A2b	17.78	-24.98	-9.23
1.0D + 1.0W Service 210°	0.00	0.00	1	1	0.28	193.32	0.46
	143.00	0.00	0	A1	0.11	-17.18	17.10
	143.00	0.00	240	A1a	-7.05	-7.99	-3.94
	143.00	0.00	120	A1b	11.02	-12.54	-6.05
	299.00	0.00	0	A2	0.46	-36.01	30.01
	299.00	0.00	240	A2a	-15.07	-21.69	-8.17
	299.00	0.00	120	A2b	21.02	-28.94	-10.88
	0.00	0.00	1	1	0.48	192.73	0.28
	143.00	0.00	0	A1	0.22	-15.11	15.12
	143.00	0.00	240	A1a	-6.36	-7.20	-3.68
1.0D + 1.0W Service 240°	143.00	0.00	120	A1b	13.21	-15.11	-7.37
	299.00	0.00	0	A2	0.89	-32.82	27.22
	299.00	0.00	240	A2a	-13.96	-20.46	-8.06
	299.00	0.00	120	A2b	24.02	-32.82	-12.83
	0.00	0.00	1	1	0.45	193.98	-0.26
	143.00	0.00	0	A1	0.22	-9.99	10.02
	143.00	0.00	240	A1a	-8.56	-9.99	-5.20
	143.00	0.00	120	A1b	15.45	-17.98	-8.92
	299.00	0.00	0	A2	0.90	-24.98	20.01
	299.00	0.00	240	A2a	-16.88	-24.98	-10.78
1.0D + 1.0W Service 300°	299.00	0.00	120	A2b	26.93	-37.31	-15.55
	0.00	0.00	1	1	0.26	193.32	-0.47
	143.00	0.00	0	A1	0.11	-7.98	8.07
	143.00	0.00	240	A1a	-10.75	-12.54	-6.51
	143.00	0.00	120	A1b	14.76	-17.19	-8.65
	299.00	0.00	0	A2	0.46	-21.66	17.12
	299.00	0.00	240	A2a	-19.92	-28.92	-12.76
	299.00	0.00	120	A2b	25.79	-36.05	-15.42
	0.00	0.00	1	1	0.26	193.32	-0.47
	143.00	0.00	0	A1	0.11	-7.98	8.07
1.0D + 1.0W Service 330°	143.00	0.00	240	A1a	-10.75	-12.54	-6.51
	143.00	0.00	120	A1b	14.76	-17.19	-8.65
	299.00	0.00	0	A2	0.46	-21.66	17.12
	299.00	0.00	240	A2a	-19.92	-28.92	-12.76
	299.00	0.00	120	A2b	25.79	-36.05	-15.42
	0.00	0.00	1	1	0.26	193.32	-0.47
	143.00	0.00	0	A1	0.11	-7.98	8.07
	143.00	0.00	240	A1a	-10.75	-12.54	-6.51
	143.00	0.00	120	A1b	14.76	-17.19	-8.65
	299.00	0.00	0	A2	0.46	-21.66	17.12

GUY ANCHOR DESIGN LOADS

Radius (ft)	Drop (ft)	Azimuth (deg)	Uplift (kip)	Shear (kip)
143.00	0.00	0	34.53	32.97
143.00	0.00	120	34.53	32.97
143.00	0.00	240	34.53	32.97
299.00	0.00	0	71.03	59.54
299.00	0.00	120	71.02	59.55
299.00	0.00	240	71.02	59.55

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W Normal	70.00	1/2 EHS	A1	31	16.14	0.19	1
		1/2 EHS	A1b	31a	16.14	6.56	41
		1/2 EHS	A1a	31b	16.14	6.56	41
	139.63	9/16 EHS	A1b	T2	21	9.02	43
		9/16 EHS	A1	T2	21	0.34	2
		9/16 EHS	A1a	T2a	21	9	43
		9/16 EHS	A1b	T2a	21	9.03	43
		9/16 EHS	A1	T2b	21	0.34	2
		9/16 EHS	A1a	T2b	21	9.06	43
	219.63	9/16 EHS	A1b	T3	21	8.26	39
		9/16 EHS	A1	T3	21	1.15	5
		9/16 EHS	A1b	T3a	21	7.94	38
		9/16 EHS	A1a	T3a	21	7.94	38
		9/16 EHS	A1a	T3b	21	8.26	39
		9/16 EHS	A1	T3b	21	1.15	5
	299.63	5/8 EHS	A2b	T4	25.44	9.74	38
		5/8 EHS	A2	T4	25.44	1.18	5
		5/8 EHS	A2b	T4a	25.44	9.57	38
		5/8 EHS	A2a	T4a	25.44	9.57	38
		5/8 EHS	A2	T4b	25.44	1.18	5
		5/8 EHS	A2a	T4b	25.44	9.73	38
	379.63	3/4 BS	A2b	T5	40.8	13.64	33
		3/4 BS	A2	T5	40.8	2.7	7
		3/4 BS	A2a	T5a	40.8	13.58	33
		3/4 BS	A2b	T5a	40.8	13.57	33
		3/4 BS	A2a	T5b	40.8	13.62	33
		3/4 BS	A2	T5b	40.8	2.7	7
	459.63	3/4 BS	A2	T6	40.8	4.4	11
		3/4 BS	A2b	T6	40.8	13.82	34
		3/4 BS	A2a	T6a	40.8	13.57	33
		3/4 BS	A2b	T6a	40.8	13.55	33
		3/4 BS	A2	T6b	40.8	4.41	11
		3/4 BS	A2a	T6b	40.8	13.81	34
1.2D + 1.0W 60°	70.00	1/2 EHS	A1	31	16.14	1.48	9
		1/2 EHS	A1b	31a	16.14	1.47	9
		1/2 EHS	A1a	31b	16.14	7.4	46
	139.63	9/16 EHS	A1	T2	21	2.01	10
		9/16 EHS	A1b	T2	21	2	10
		9/16 EHS	A1b	T2a	21	1.95	9
		9/16 EHS	A1a	T2a	21	10.51	50
		9/16 EHS	A1a	T2b	21	10.55	50
		9/16 EHS	A1	T2b	21	1.95	9
	219.63	9/16 EHS	A1	T3	21	2.75	13
		9/16 EHS	A1b	T3	21	2.75	13
		9/16 EHS	A1a	T3a	21	10.27	49
		9/16 EHS	A1b	T3a	21	2.66	13
		9/16 EHS	A1a	T3b	21	10.28	49
		9/16 EHS	A1	T3b	21	2.66	13
	299.63	5/8 EHS	A2	T4	25.44	4.53	18
		5/8 EHS	A2b	T4	25.44	4.52	18
		5/8 EHS	A2b	T4a	25.44	4.44	17
		5/8 EHS	A2a	T4a	25.44	12.38	49
		5/8 EHS	A2a	T4b	25.44	12.38	49
		5/8 EHS	A2	T4b	25.44	4.44	17
	379.63	3/4 BS	A2	T5	40.8	6.81	17
		3/4 BS	A2b	T5	40.8	6.81	17
		3/4 BS	A2a	T5a	40.8	18.02	44
		3/4 BS	A2b	T5a	40.8	6.73	16
		3/4 BS	A2	T5b	40.8	6.74	17
		3/4 BS	A2a	T5b	40.8	18	44
	459.63	3/4 BS	A2	T6	40.8	8.08	20
		3/4 BS	A2b	T6	40.8	8.1	20
		3/4 BS	A2b	T6a	40.8	7.91	19
		3/4 BS	A2a	T6a	40.8	17.33	42
		3/4 BS	A2a	T6b	40.8	17.3	42
		3/4 BS	A2	T6b	40.8	7.9	19

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W 90°	70.00	1/2 EHS	A1	31	16.14	4.29	27
		1/2 EHS	A1b	31a	16.14	0.39	2
		1/2 EHS	A1a	31b	16.14	7.57	47
		1/2 EHS	A1	T2	21	5.79	28
	139.63	9/16 EHS	A1b	T2	21	0.73	3
		9/16 EHS	A1b	T2a	21	0.68	3
		9/16 EHS	A1a	T2a	21	10.57	50
		9/16 EHS	A1a	T2b	21	10.69	51
	219.63	9/16 EHS	A1	T2b	21	5.66	27
		9/16 EHS	A1	T3	21	5.51	26
		9/16 EHS	A1b	T3	21	1.5	7
		9/16 EHS	A1a	T3a	21	9.99	48
	299.63	9/16 EHS	A1b	T3a	21	1.46	7
		9/16 EHS	A1	T3b	21	5.23	25
		9/16 EHS	A1a	T3b	21	9.82	47
		5/8 EHS	A2b	T4	25.44	2.24	9
	379.63	5/8 EHS	A2	T4	25.44	7.36	29
		5/8 EHS	A2b	T4a	25.44	2.18	9
		5/8 EHS	A2a	T4a	25.44	11.71	46
		5/8 EHS	A2a	T4b	25.44	11.65	46
	459.63	5/8 EHS	A2	T4b	25.44	7.17	28
		3/4 BS	A2b	T5	40.8	3.98	10
		3/4 BS	A2	T5	40.8	10.26	25
		3/4 BS	A2b	T5a	40.8	3.92	10
1.2D + 1.0W 120°	70.00	3/4 BS	A2a	T5a	40.8	16.74	41
		3/4 BS	A2a	T5b	40.8	16.77	41
		3/4 BS	A2	T5b	40.8	10.13	25
		3/4 BS	A2b	T6	40.8	5.56	14
	139.63	3/4 BS	A2	T6	40.8	10.98	27
		3/4 BS	A2a	T6a	40.8	16.3	40
		3/4 BS	A2b	T6a	40.8	5.47	13
		3/4 BS	A2	T6b	40.8	10.7	26
	219.63	3/4 BS	A2a	T6b	40.8	16.16	40
		1/2 EHS	A1	31	16.14	6.56	41
		1/2 EHS	A1b	31a	16.14	0.19	1
		1/2 EHS	A1a	31b	16.14	6.56	41
	299.63	9/16 EHS	A1	T2	21	9.06	43
		9/16 EHS	A1b	T2	21	0.34	2
		9/16 EHS	A1b	T2a	21	0.34	2
		9/16 EHS	A1a	T2a	21	9.04	43
	379.63	9/16 EHS	A1a	T2b	21	9.04	43
		9/16 EHS	A1	T2b	21	9	43
		9/16 EHS	A1	T3	21	8.27	39
		9/16 EHS	A1b	T3	21	1.14	5
	459.63	9/16 EHS	A1a	T3a	21	8.27	39
		9/16 EHS	A1b	T3a	21	1.15	5
		9/16 EHS	A1a	T3b	21	7.94	38
		9/16 EHS	A1	T3b	21	7.95	38
1.2D + 1.0W 180°	70.00	5/8 EHS	A2	T4	25.44	9.75	38
		5/8 EHS	A2b	T4	25.44	1.18	5
		5/8 EHS	A2a	T4a	25.44	9.76	38
		5/8 EHS	A2b	T4a	25.44	1.18	5
	139.63	5/8 EHS	A2	T4b	25.44	9.59	38
		5/8 EHS	A2a	T4b	25.44	9.59	38
		3/4 BS	A2	T5	40.8	13.64	33
		3/4 BS	A2b	T5	40.8	2.69	7
	219.63	3/4 BS	A2a	T5a	40.8	13.67	34
		3/4 BS	A2b	T5a	40.8	2.69	7
		3/4 BS	A2a	T5b	40.8	13.6	33
		3/4 BS	A2	T5b	40.8	13.59	33
	299.63	3/4 BS	A2	T6	40.8	13.81	34
		3/4 BS	A2b	T6	40.8	4.41	11
		3/4 BS	A2b	T6a	40.8	4.4	11
		3/4 BS	A2a	T6a	40.8	13.81	34
	379.63	3/4 BS	A2a	T6b	40.8	13.53	33
		3/4 BS	A2	T6b	40.8	13.57	33
	459.63	1/2 EHS	A1	31	16.14	7.39	46
		1/2 EHS	A1b	31a	16.14	1.48	9

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W 210°	139.63	1/2 EHS	A1a	31b	16.14	1.47	9
		9/16 EHS	A1	T2	21	10.55	50
		9/16 EHS	A1b	T2	21	1.95	9
		9/16 EHS	A1a	T2a	21	2	10
		9/16 EHS	A1b	T2a	21	2.01	10
	219.63	9/16 EHS	A1a	T2b	21	1.96	9
		9/16 EHS	A1	T2b	21	10.5	50
		9/16 EHS	A1b	T3	21	2.66	13
		9/16 EHS	A1	T3	21	10.28	49
		9/16 EHS	A1a	T3a	21	2.75	13
		9/16 EHS	A1b	T3a	21	2.75	13
		9/16 EHS	A1	T3b	21	10.28	49
		9/16 EHS	A1a	T3b	21	2.66	13
		5/8 EHS	A2	T4	25.44	12.37	49
		5/8 EHS	A2b	T4	25.44	4.44	17
	299.63	5/8 EHS	A2a	T4a	25.44	4.53	18
		5/8 EHS	A2b	T4a	25.44	4.52	18
		5/8 EHS	A2a	T4b	25.44	4.44	17
		5/8 EHS	A2	T4b	25.44	12.37	49
		3/4 BS	A2b	T5	40.8	6.74	17
	379.63	3/4 BS	A2	T5	40.8	17.98	44
		3/4 BS	A2a	T5a	40.8	6.82	17
		3/4 BS	A2b	T5a	40.8	6.81	17
		3/4 BS	A2a	T5b	40.8	6.74	17
		3/4 BS	A2	T5b	40.8	18	44
	459.63	3/4 BS	A2	T6	40.8	17.33	42
		3/4 BS	A2b	T6	40.8	7.91	19
		3/4 BS	A2b	T6a	40.8	8.08	20
		3/4 BS	A2a	T6a	40.8	8.09	20
		3/4 BS	A2	T6b	40.8	17.35	43
1.2D + 1.0W 240°	70.00	3/4 BS	A2a	T6b	40.8	7.89	19
		1/2 EHS	A1	31	16.14	7.57	47
		1/2 EHS	A1b	31a	16.14	4.29	27
		1/2 EHS	A1a	31b	16.14	0.39	2
	139.63	9/16 EHS	A1	T2	21	10.68	51
		9/16 EHS	A1b	T2	21	5.66	27
		9/16 EHS	A1b	T2a	21	5.79	28
		9/16 EHS	A1a	T2a	21	0.73	3
		9/16 EHS	A1a	T2b	21	0.68	3
	219.63	9/16 EHS	A1	T2b	21	10.56	50
		9/16 EHS	A1	T3	21	9.83	47
		9/16 EHS	A1b	T3	21	5.22	25
		9/16 EHS	A1a	T3a	21	1.5	7
		9/16 EHS	A1b	T3a	21	5.51	26
	299.63	9/16 EHS	A1a	T3b	21	1.46	7
		9/16 EHS	A1	T3b	21	10	48
		5/8 EHS	A2b	T4	25.44	7.17	28
		5/8 EHS	A2	T4	25.44	11.65	46
		5/8 EHS	A2b	T4a	25.44	7.36	29
	379.63	5/8 EHS	A2a	T4a	25.44	2.24	9
		5/8 EHS	A2	T4b	25.44	11.7	46
		5/8 EHS	A2a	T4b	25.44	2.19	9
		3/4 BS	A2	T5	40.8	16.75	41
		3/4 BS	A2b	T5	40.8	10.14	25
	459.63	3/4 BS	A2a	T5a	40.8	3.98	10
		3/4 BS	A2b	T5a	40.8	10.26	25
		3/4 BS	A2a	T5b	40.8	3.92	10
		3/4 BS	A2	T5b	40.8	16.73	41
		3/4 BS	A2	T6	40.8	16.19	40
1.2D + 1.0W 240°	70.00	3/4 BS	A2b	T6	40.8	10.7	26
		3/4 BS	A2b	T6a	40.8	10.98	27
		3/4 BS	A2a	T6a	40.8	5.56	14
		3/4 BS	A2a	T6b	40.8	5.46	13
		3/4 BS	A2	T6b	40.8	16.33	40
	139.63	1/2 EHS	A1	31	16.14	6.56	41
		1/2 EHS	A1b	31a	16.14	6.57	41
		1/2 EHS	A1a	31b	16.14	0.19	1
		9/16 EHS	A1	T2	21	9.04	43

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0W 300°	219.63	9/16 EHS	A1b	T2	21	9.01	43
		9/16 EHS	A1b	T2a	21	9.07	43
		9/16 EHS	A1a	T2a	21	0.34	2
		9/16 EHS	A1	T2b	21	9.03	43
		9/16 EHS	A1a	T2b	21	0.34	2
		9/16 EHS	A1	T3	21	7.95	38
		9/16 EHS	A1b	T3	21	7.94	38
		9/16 EHS	A1b	T3a	21	8.27	39
		9/16 EHS	A1a	T3a	21	1.14	5
		9/16 EHS	A1	T3b	21	8.27	39
		9/16 EHS	A1a	T3b	21	1.14	5
	299.63	5/8 EHS	A2	T4	25.44	9.59	38
		5/8 EHS	A2b	T4	25.44	9.59	38
		5/8 EHS	A2a	T4a	25.44	1.18	5
		5/8 EHS	A2b	T4a	25.44	9.76	38
		5/8 EHS	A2a	T4b	25.44	1.18	5
		5/8 EHS	A2	T4b	25.44	9.76	38
	379.63	3/4 BS	A2b	T5	40.8	13.61	33
		3/4 BS	A2	T5	40.8	13.59	33
		3/4 BS	A2a	T5a	40.8	2.69	7
		3/4 BS	A2b	T5a	40.8	13.66	33
		3/4 BS	A2a	T5b	40.8	2.69	7
		3/4 BS	A2	T5b	40.8	13.66	33
	459.63	3/4 BS	A2	T6	40.8	13.55	33
		3/4 BS	A2b	T6	40.8	13.55	33
		3/4 BS	A2a	T6a	40.8	4.41	11
		3/4 BS	A2b	T6a	40.8	13.79	34
		3/4 BS	A2	T6b	40.8	13.83	34
		3/4 BS	A2a	T6b	40.8	4.4	11
1.2D + 1.0W 330°	70.00	1/2 EHS	A1	31	16.14	1.47	9
		1/2 EHS	A1b	31a	16.14	7.4	46
		1/2 EHS	A1a	31b	16.14	1.47	9
	139.63	9/16 EHS	A1	T2	21	1.96	9
		9/16 EHS	A1b	T2	21	10.51	50
		9/16 EHS	A1a	T2a	21	1.94	9
		9/16 EHS	A1b	T2a	21	10.55	50
		9/16 EHS	A1a	T2b	21	2.01	10
		9/16 EHS	A1	T2b	21	2	10
	219.63	9/16 EHS	A1b	T3	21	10.27	49
		9/16 EHS	A1	T3	21	2.66	13
		9/16 EHS	A1a	T3a	21	2.66	13
		9/16 EHS	A1b	T3a	21	10.28	49
		9/16 EHS	A1	T3b	21	2.75	13
		9/16 EHS	A1a	T3b	21	2.75	13
	299.63	5/8 EHS	A2	T4	25.44	4.44	17
		5/8 EHS	A2b	T4	25.44	12.38	49
		5/8 EHS	A2b	T4a	25.44	12.38	49
		5/8 EHS	A2a	T4a	25.44	4.44	17
		5/8 EHS	A2a	T4b	25.44	4.52	18
		5/8 EHS	A2	T4b	25.44	4.53	18
	379.63	3/4 BS	A2	T5	40.8	6.74	17
		3/4 BS	A2b	T5	40.8	18.02	44
		3/4 BS	A2a	T5a	40.8	6.73	17
		3/4 BS	A2b	T5a	40.8	18	44
		3/4 BS	A2	T5b	40.8	6.82	17
		3/4 BS	A2a	T5b	40.8	6.81	17
	459.63	3/4 BS	A2	T6	40.8	7.89	19
		3/4 BS	A2b	T6	40.8	17.33	42
		3/4 BS	A2a	T6a	40.8	7.92	19
		3/4 BS	A2b	T6a	40.8	17.31	42
		3/4 BS	A2a	T6b	40.8	8.1	20
		3/4 BS	A2	T6b	40.8	8.08	20
1.2D + 1.0W 330°	70.00	1/2 EHS	A1	31	16.14	0.39	2
		1/2 EHS	A1b	31a	16.14	7.57	47
		1/2 EHS	A1a	31b	16.14	4.29	27
	139.63	9/16 EHS	A1	T2	21	0.68	3
		9/16 EHS	A1b	T2	21	10.57	50
		9/16 EHS	A1a	T2a	21	5.66	27

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Di + 1.0Wi Normal	219.63	9/16 EHS	A1b	T2a	21	10.68	51
		9/16 EHS	A1a	T2b	21	5.78	28
		9/16 EHS	A1	T2b	21	0.73	3
		9/16 EHS	A1b	T3	21	9.99	48
		9/16 EHS	A1	T3	21	1.46	7
		9/16 EHS	A1a	T3a	21	5.23	25
		9/16 EHS	A1b	T3a	21	9.82	47
		9/16 EHS	A1	T3b	21	1.5	7
	299.63	9/16 EHS	A1a	T3b	21	5.51	26
		5/8 EHS	A2	T4	25.44	2.19	9
		5/8 EHS	A2b	T4	25.44	11.71	46
		5/8 EHS	A2b	T4a	25.44	11.65	46
		5/8 EHS	A2a	T4a	25.44	7.17	28
		5/8 EHS	A2a	T4b	25.44	7.35	29
		5/8 EHS	A2	T4b	25.44	2.25	9
		3/4 BS	A2	T5	40.8	3.93	10
	379.63	3/4 BS	A2b	T5	40.8	16.73	41
		3/4 BS	A2b	T5a	40.8	16.76	41
		3/4 BS	A2a	T5a	40.8	10.13	25
		3/4 BS	A2a	T5b	40.8	10.25	25
		3/4 BS	A2	T5b	40.8	3.99	10
		3/4 BS	A2b	T6	40.8	16.31	40
		3/4 BS	A2	T6	40.8	5.45	13
		3/4 BS	A2a	T6a	40.8	10.72	26
	459.63	3/4 BS	A2b	T6a	40.8	16.18	40
		3/4 BS	A2a	T6b	40.8	11	27
		3/4 BS	A2	T6b	40.8	5.55	14
	70.00	1/2 EHS	A1	31	16.14	3.76	23
		1/2 EHS	A1b	31a	16.14	6.1	38
		1/2 EHS	A1a	31b	16.14	6.1	38
	139.63	9/16 EHS	A1	T2	21	3.92	19
		9/16 EHS	A1b	T2	21	7.26	35
		9/16 EHS	A1b	T2a	21	7.25	35
		9/16 EHS	A1a	T2a	21	7.21	34
		9/16 EHS	A1a	T2b	21	7.3	35
		9/16 EHS	A1	T2b	21	3.9	19
		9/16 EHS	A1	T3	21	3.64	17
		9/16 EHS	A1b	T3	21	7.59	36
	219.63	9/16 EHS	A1a	T3a	21	7.49	36
		9/16 EHS	A1b	T3a	21	7.5	36
		9/16 EHS	A1a	T3b	21	7.59	36
		9/16 EHS	A1	T3b	21	3.64	17
	299.63	5/8 EHS	A2	T4	25.44	8.58	34
		5/8 EHS	A2b	T4	25.44	12.52	49
		5/8 EHS	A2b	T4a	25.44	12.45	49
		5/8 EHS	A2a	T4a	25.44	12.45	49
		5/8 EHS	A2a	T4b	25.44	12.52	49
		5/8 EHS	A2	T4b	25.44	8.58	34
		3/4 BS	A2	T5	40.8	10.93	27
		3/4 BS	A2b	T5	40.8	15.75	39
	379.63	3/4 BS	A2a	T5a	40.8	15.61	38
		3/4 BS	A2b	T5a	40.8	15.59	38
		3/4 BS	A2	T5b	40.8	10.94	27
		3/4 BS	A2a	T5b	40.8	15.73	39
	459.63	3/4 BS	A2	T6	40.8	11.71	29
		3/4 BS	A2b	T6	40.8	16.17	40
		3/4 BS	A2b	T6a	40.8	15.96	39
		3/4 BS	A2a	T6a	40.8	15.98	39
		3/4 BS	A2a	T6b	40.8	16.15	40
		3/4 BS	A2	T6b	40.8	11.74	29
	70.00	1/2 EHS	A1	31	16.14	4.47	28
		1/2 EHS	A1b	31a	16.14	4.46	28
		1/2 EHS	A1a	31b	16.14	6.65	41
	139.63	9/16 EHS	A1	T2	21	4.95	24
		9/16 EHS	A1b	T2	21	4.92	23
		9/16 EHS	A1a	T2a	21	8.26	39
		9/16 EHS	A1b	T2a	21	4.91	23
		9/16 EHS	A1a	T2b	21	8.31	40
		9/16 EHS	A1a	T2b	21	8.31	40

DETAILED CABLE FORCES

	Elev		Anchor	Tower	Allow	Applied	
Load Case	(ft)	Cable	Node	Node	Tension	Tension	Use%
					(kip)	(kip)	
1.2D + 1.0Di + 1.0Wi 90°	219.63	9/16 EHS	A1	T2b	21	4.88	23
		9/16 EHS	A1	T3	21	5.12	24
		9/16 EHS	A1b	T3	21	5.12	24
		9/16 EHS	A1b	T3a	21	5.01	24
		9/16 EHS	A1a	T3a	21	8.75	42
		9/16 EHS	A1a	T3b	21	8.75	42
		9/16 EHS	A1	T3b	21	5.01	24
	299.63	5/8 EHS	A2b	T4	25.44	9.77	38
		5/8 EHS	A2	T4	25.44	9.77	38
		5/8 EHS	A2b	T4a	25.44	9.69	38
		5/8 EHS	A2a	T4a	25.44	13.66	54
		5/8 EHS	A2a	T4b	25.44	13.65	54
	379.63	5/8 EHS	A2	T4b	25.44	9.69	38
		3/4 BS	A2	T5	40.8	12.45	31
		3/4 BS	A2b	T5	40.8	12.47	31
		3/4 BS	A2a	T5a	40.8	17.27	42
		3/4 BS	A2b	T5a	40.8	12.31	30
		3/4 BS	A2	T5b	40.8	12.32	30
		3/4 BS	A2a	T5b	40.8	17.25	42
	459.63	3/4 BS	A2b	T6	40.8	13.27	33
		3/4 BS	A2	T6	40.8	13.25	32
		3/4 BS	A2b	T6a	40.8	13.04	32
		3/4 BS	A2a	T6a	40.8	17.5	43
		3/4 BS	A2a	T6b	40.8	17.48	43
		3/4 BS	A2	T6b	40.8	13.06	32
		70.00	1/2 EHS	A1	31	16.14	5.31
		1/2 EHS	A1b	31a	16.14	3.92	24
		1/2 EHS	A1a	31b	16.14	6.53	40
	139.63	9/16 EHS	A1	T2	21	6.14	29
		9/16 EHS	A1b	T2	21	4.13	20
		9/16 EHS	A1b	T2a	21	4.16	20
		9/16 EHS	A1a	T2a	21	8	38
		9/16 EHS	A1a	T2b	21	8.06	38
	219.63	9/16 EHS	A1	T2b	21	6.03	29
		9/16 EHS	A1	T3	21	6.38	30
		9/16 EHS	A1b	T3	21	4.07	19
		9/16 EHS	A1a	T3a	21	8.45	40
		9/16 EHS	A1b	T3a	21	4.02	19
	299.63	9/16 EHS	A1a	T3b	21	8.42	40
		9/16 EHS	A1	T3b	21	6.25	30
5/8 EHS		A2	T4	25.44	11.17	44	
5/8 EHS		A2b	T4	25.44	8.83	35	
5/8 EHS		A2b	T4a	25.44	8.82	35	
379.63	5/8 EHS	A2a	T4a	25.44	13.38	53	
	5/8 EHS	A2a	T4b	25.44	13.37	53	
	5/8 EHS	A2	T4b	25.44	11.05	43	
	3/4 BS	A2	T5	40.8	14.08	35	
	3/4 BS	A2b	T5	40.8	11.32	28	
	3/4 BS	A2b	T5a	40.8	11.27	28	
	3/4 BS	A2a	T5a	40.8	16.89	41	
459.63	3/4 BS	A2a	T5b	40.8	16.83	41	
	3/4 BS	A2	T5b	40.8	13.9	34	
	3/4 BS	A2	T6	40.8	14.72	36	
	3/4 BS	A2b	T6	40.8	12.17	30	
	3/4 BS	A2b	T6a	40.8	12.05	30	
	3/4 BS	A2a	T6a	40.8	17.16	42	
	3/4 BS	A2a	T6b	40.8	17.06	42	
1.2D + 1.0Di + 1.0Wi 120°	70.00	3/4 BS	A2	T6b	40.8	14.48	36
		1/2 EHS	A1	31	16.14	6.1	38
		1/2 EHS	A1b	31a	16.14	3.76	23
		1/2 EHS	A1a	31b	16.14	6.1	38
139.63	9/16 EHS	A1	T2	21	7.3	35	
	9/16 EHS	A1b	T2	21	3.9	19	
	9/16 EHS	A1a	T2a	21	7.26	35	
	9/16 EHS	A1b	T2a	21	3.92	19	
	9/16 EHS	A1a	T2b	21	7.25	35	
	9/16 EHS	A1	T2b	21	7.21	34	
	219.63	9/16 EHS	A1b	T3	21	3.64	17

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Di + 1.0Wi 180°	299.63	9/16 EHS	A1	T3	21	7.59	36
		9/16 EHS	A1a	T3a	21	7.59	36
		9/16 EHS	A1b	T3a	21	3.64	17
		9/16 EHS	A1	T3b	21	7.49	36
		9/16 EHS	A1a	T3b	21	7.5	36
		5/8 EHS	A2	T4	25.44	12.52	49
		5/8 EHS	A2b	T4	25.44	8.58	34
		5/8 EHS	A2b	T4a	25.44	8.58	34
		5/8 EHS	A2a	T4a	25.44	12.52	49
		5/8 EHS	A2a	T4b	25.44	12.45	49
	379.63	5/8 EHS	A2	T4b	25.44	12.45	49
		3/4 BS	A2	T5	40.8	15.73	39
		3/4 BS	A2b	T5	40.8	10.94	27
		3/4 BS	A2a	T5a	40.8	15.75	39
		3/4 BS	A2b	T5a	40.8	10.92	27
		3/4 BS	A2	T5b	40.8	15.61	38
		3/4 BS	A2a	T5b	40.8	15.59	38
		3/4 BS	A2	T6	40.8	16.15	40
		3/4 BS	A2b	T6	40.8	11.74	29
		3/4 BS	A2a	T6a	40.8	16.16	40
	459.63	3/4 BS	A2b	T6a	40.8	11.72	29
		3/4 BS	A2a	T6b	40.8	15.96	39
		3/4 BS	A2	T6b	40.8	15.98	39
		1/2 EHS	A1	31	16.14	6.65	41
		1/2 EHS	A1b	31a	16.14	4.47	28
		1/2 EHS	A1a	31b	16.14	4.46	28
		9/16 EHS	A1	T2	21	8.31	40
		9/16 EHS	A1b	T2	21	4.88	23
		9/16 EHS	A1a	T2a	21	4.92	23
		9/16 EHS	A1b	T2a	21	4.95	24
	219.63	9/16 EHS	A1a	T2b	21	4.91	23
		9/16 EHS	A1	T2b	21	8.26	39
		9/16 EHS	A1b	T3	21	5.01	24
		9/16 EHS	A1	T3	21	8.76	42
		9/16 EHS	A1a	T3a	21	5.12	24
		9/16 EHS	A1b	T3a	21	5.12	24
		9/16 EHS	A1	T3b	21	8.75	42
		9/16 EHS	A1a	T3b	21	5.01	24
		5/8 EHS	A2	T4	25.44	13.65	54
		5/8 EHS	A2b	T4	25.44	9.69	38
	299.63	5/8 EHS	A2b	T4a	25.44	9.77	38
		5/8 EHS	A2a	T4a	25.44	9.77	38
		5/8 EHS	A2a	T4b	25.44	9.69	38
		5/8 EHS	A2	T4b	25.44	13.66	54
		3/4 BS	A2	T5	40.8	17.25	42
		3/4 BS	A2b	T5	40.8	12.32	30
		3/4 BS	A2b	T5a	40.8	12.45	31
		3/4 BS	A2a	T5a	40.8	12.47	31
		3/4 BS	A2a	T5b	40.8	12.31	30
		3/4 BS	A2	T5b	40.8	17.27	42
	459.63	3/4 BS	A2	T6	40.8	17.48	43
		3/4 BS	A2b	T6	40.8	13.06	32
		3/4 BS	A2a	T6a	40.8	13.27	33
		3/4 BS	A2b	T6a	40.8	13.25	32
		3/4 BS	A2	T6b	40.8	17.5	43
		3/4 BS	A2a	T6b	40.8	13.04	32
		1/2 EHS	A1	31	16.14	6.53	40
		1/2 EHS	A1b	31a	16.14	5.31	33
		1/2 EHS	A1a	31b	16.14	3.92	24
		9/16 EHS	A1	T2	21	8.06	38
1.2D + 1.0Di + 1.0Wi 210°	139.63	9/16 EHS	A1b	T2	21	6.03	29
		9/16 EHS	A1a	T2a	21	4.13	20
		9/16 EHS	A1b	T2a	21	6.14	29
		9/16 EHS	A1a	T2b	21	4.16	20
		9/16 EHS	A1	T2b	21	8	38
		9/16 EHS	A1	T3	21	8.42	40
		9/16 EHS	A1b	T3	21	6.25	30
		9/16 EHS	A1a	T3a	21	4.07	19
	219.63	9/16 EHS	A1a	T3a	21	4.07	19

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Di + 1.0Wi 240°	299.63	9/16 EHS	A1b	T3a	21	6.38	30
		9/16 EHS	A1a	T3b	21	4.02	19
		9/16 EHS	A1	T3b	21	8.45	40
		5/8 EHS	A2	T4	25.44	13.37	53
		5/8 EHS	A2b	T4	25.44	11.05	43
		5/8 EHS	A2a	T4a	25.44	8.83	35
		5/8 EHS	A2b	T4a	25.44	11.17	44
		5/8 EHS	A2	T4b	25.44	13.38	53
		5/8 EHS	A2a	T4b	25.44	8.82	35
		3/4 BS	A2b	T5	40.8	13.9	34
		3/4 BS	A2	T5	40.8	16.82	41
		3/4 BS	A2a	T5a	40.8	11.32	28
	379.63	3/4 BS	A2b	T5a	40.8	14.08	35
		3/4 BS	A2	T5b	40.8	16.88	41
		3/4 BS	A2a	T5b	40.8	11.27	28
		3/4 BS	A2	T6	40.8	17.06	42
		3/4 BS	A2b	T6	40.8	14.48	35
		3/4 BS	A2a	T6a	40.8	12.17	30
		3/4 BS	A2b	T6a	40.8	14.71	36
		3/4 BS	A2a	T6b	40.8	12.05	30
		3/4 BS	A2	T6b	40.8	17.16	42
		1/2 EHS	A1	31	16.14	6.1	38
		1/2 EHS	A1b	31a	16.14	6.1	38
		1/2 EHS	A1a	31b	16.14	3.76	23
	139.63	9/16 EHS	A1b	T2	21	7.21	34
		9/16 EHS	A1	T2	21	7.25	35
		9/16 EHS	A1a	T2a	21	3.9	19
		9/16 EHS	A1b	T2a	21	7.3	35
		9/16 EHS	A1	T2b	21	7.26	35
		9/16 EHS	A1a	T2b	21	3.92	19
		9/16 EHS	A1	T3	21	7.5	36
		9/16 EHS	A1b	T3	21	7.49	36
		9/16 EHS	A1b	T3a	21	7.59	36
		9/16 EHS	A1a	T3a	21	3.64	17
		9/16 EHS	A1	T3b	21	7.59	36
		9/16 EHS	A1a	T3b	21	3.64	17
	299.63	5/8 EHS	A2b	T4	25.44	12.45	49
		5/8 EHS	A2	T4	25.44	12.45	49
		5/8 EHS	A2a	T4a	25.44	8.58	34
		5/8 EHS	A2b	T4a	25.44	12.52	49
		5/8 EHS	A2	T4b	25.44	12.52	49
		5/8 EHS	A2a	T4b	25.44	8.58	34
		3/4 BS	A2	T5	40.8	15.59	38
		3/4 BS	A2b	T5	40.8	15.61	38
		3/4 BS	A2b	T5a	40.8	15.73	39
		3/4 BS	A2a	T5a	40.8	10.94	27
		3/4 BS	A2	T5b	40.8	15.75	39
		3/4 BS	A2a	T5b	40.8	10.92	27
	459.63	3/4 BS	A2b	T6	40.8	15.97	39
		3/4 BS	A2	T6	40.8	15.96	39
		3/4 BS	A2a	T6a	40.8	11.74	29
		3/4 BS	A2b	T6a	40.8	16.15	40
		3/4 BS	A2	T6b	40.8	16.17	40
		3/4 BS	A2a	T6b	40.8	11.72	29
		1/2 EHS	A1	31	16.14	4.46	28
		1/2 EHS	A1b	31a	16.14	6.65	41
		1/2 EHS	A1a	31b	16.14	4.46	28
		9/16 EHS	A1	T2	21	4.91	23
		9/16 EHS	A1b	T2	21	8.26	39
		9/16 EHS	A1a	T2a	21	4.88	23
	219.63	9/16 EHS	A1b	T2a	21	8.31	40
		9/16 EHS	A1a	T2b	21	4.95	24
		9/16 EHS	A1	T2b	21	4.92	23
		9/16 EHS	A1	T3	21	5.01	24
		9/16 EHS	A1b	T3	21	8.75	42
		9/16 EHS	A1b	T3a	21	8.75	42
		9/16 EHS	A1a	T3a	21	5.01	24
		9/16 EHS	A1	T3b	21	5.12	24

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Di + 1.0Wi 330°	299.63	9/16 EHS	A1a	T3b	21	5.12	24
		5/8 EHS	A2b	T4	25.44	13.66	54
		5/8 EHS	A2	T4	25.44	9.69	38
		5/8 EHS	A2a	T4a	25.44	9.69	38
		5/8 EHS	A2b	T4a	25.44	13.65	54
		5/8 EHS	A2a	T4b	25.44	9.77	38
	379.63	5/8 EHS	A2	T4b	25.44	9.77	38
		3/4 BS	A2b	T5	40.8	17.27	42
		3/4 BS	A2	T5	40.8	12.31	30
		3/4 BS	A2a	T5a	40.8	12.32	30
		3/4 BS	A2b	T5a	40.8	17.25	42
		3/4 BS	A2	T5b	40.8	12.47	31
	459.63	3/4 BS	A2a	T5b	40.8	12.45	31
		3/4 BS	A2	T6	40.8	13.04	32
		3/4 BS	A2b	T6	40.8	17.5	43
		3/4 BS	A2b	T6a	40.8	17.48	43
		3/4 BS	A2a	T6a	40.8	13.06	32
		3/4 BS	A2a	T6b	40.8	13.25	32
	70.00	3/4 BS	A2	T6b	40.8	13.27	33
		1/2 EHS	A1	31	16.14	3.92	24
		1/2 EHS	A1b	31a	16.14	6.53	40
		1/2 EHS	A1a	31b	16.14	5.31	33
	139.63	9/16 EHS	A1	T2	21	4.16	20
		9/16 EHS	A1b	T2	21	8	38
		9/16 EHS	A1a	T2a	21	6.03	29
		9/16 EHS	A1b	T2a	21	8.06	38
		9/16 EHS	A1	T2b	21	4.13	20
		9/16 EHS	A1a	T2b	21	6.14	29
	219.63	9/16 EHS	A1	T3	21	4.02	19
		9/16 EHS	A1b	T3	21	8.45	40
		9/16 EHS	A1b	T3a	21	8.42	40
		9/16 EHS	A1a	T3a	21	6.25	30
		9/16 EHS	A1	T3b	21	4.07	19
		9/16 EHS	A1a	T3b	21	6.39	30
1.2D + 1.0Ev + 1.0Eh Normal	299.63	5/8 EHS	A2	T4	25.44	8.82	35
		5/8 EHS	A2b	T4	25.44	13.38	53
		5/8 EHS	A2b	T4a	25.44	13.37	53
		5/8 EHS	A2a	T4a	25.44	11.05	43
		5/8 EHS	A2	T4b	25.44	8.83	35
		5/8 EHS	A2a	T4b	25.44	11.17	44
	379.63	3/4 BS	A2	T5	40.8	11.27	28
		3/4 BS	A2b	T5	40.8	16.88	41
		3/4 BS	A2a	T5a	40.8	13.9	34
		3/4 BS	A2b	T5a	40.8	16.82	41
		3/4 BS	A2a	T5b	40.8	14.08	35
		3/4 BS	A2	T5b	40.8	11.33	28
	459.63	3/4 BS	A2b	T6	40.8	17.16	42
		3/4 BS	A2	T6	40.8	12.04	30
		3/4 BS	A2b	T6a	40.8	17.06	42
		3/4 BS	A2a	T6a	40.8	14.49	36
		3/4 BS	A2	T6b	40.8	12.17	30
		3/4 BS	A2a	T6b	40.8	14.72	36
	70.00	1/2 EHS	A1	31	16.14	3.68	23
		1/2 EHS	A1b	31a	16.14	3.76	23
		1/2 EHS	A1a	31b	16.14	3.76	23
	139.63	9/16 EHS	A1	T2	21	3.74	18
		9/16 EHS	A1b	T2	21	3.95	19
		9/16 EHS	A1b	T2a	21	3.97	19
		9/16 EHS	A1a	T2a	21	3.95	19
		9/16 EHS	A1a	T2b	21	3.97	19
		9/16 EHS	A1	T2b	21	3.72	18
	219.63	9/16 EHS	A1	T3	21	3.11	15
		9/16 EHS	A1b	T3	21	3.39	16
		9/16 EHS	A1a	T3a	21	3.39	16
		9/16 EHS	A1b	T3a	21	3.4	16
		9/16 EHS	A1a	T3b	21	3.4	16
		9/16 EHS	A1	T3b	21	3.11	15
	299.63	5/8 EHS	A2	T4	25.44	4.52	18

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%	
1.2D + 1.0Ev + 1.0Eh 60°	379.63	5/8 EHS	A2b	T4	25.44	4.85	19	
		5/8 EHS	A2b	T4a	25.44	4.85	19	
		5/8 EHS	A2a	T4a	25.44	4.86	19	
		5/8 EHS	A2a	T4b	25.44	4.85	19	
		5/8 EHS	A2	T4b	25.44	4.52	18	
		3/4 BS	A2	T5	40.8	6.77	17	
		3/4 BS	A2b	T5	40.8	7.3	18	
		3/4 BS	A2a	T5a	40.8	7.31	18	
		3/4 BS	A2b	T5a	40.8	7.3	18	
		3/4 BS	A2	T5b	40.8	6.78	17	
		3/4 BS	A2a	T5b	40.8	7.29	18	
		459.63	3/4 BS	A2	T6	40.8	6.56	16
			3/4 BS	A2b	T6	40.8	7.1	17
			3/4 BS	A2b	T6a	40.8	7.08	17
			3/4 BS	A2a	T6a	40.8	7.1	17
			3/4 BS	A2a	T6b	40.8	7.09	17
			3/4 BS	A2	T6b	40.8	6.58	16
	70.00		1/2 EHS	A1	31	16.14	3.7	23
			1/2 EHS	A1b	31a	16.14	3.7	23
			1/2 EHS	A1a	31b	16.14	3.78	23
	139.63		9/16 EHS	A1	T2	21	3.81	18
		9/16 EHS	A1b	T2	21	3.8	18	
		9/16 EHS	A1a	T2a	21	4.03	19	
		9/16 EHS	A1b	T2a	21	3.82	18	
		9/16 EHS	A1	T2b	21	3.8	18	
		9/16 EHS	A1a	T2b	21	4.04	19	
	219.63	9/16 EHS	A1	T3	21	3.21	15	
		9/16 EHS	A1b	T3	21	3.21	15	
		9/16 EHS	A1a	T3a	21	3.49	17	
		9/16 EHS	A1b	T3a	21	3.21	15	
		9/16 EHS	A1a	T3b	21	3.49	17	
		9/16 EHS	A1	T3b	21	3.21	15	
	299.63	5/8 EHS	A2b	T4	25.44	4.63	18	
		5/8 EHS	A2	T4	25.44	4.63	18	
		5/8 EHS	A2b	T4a	25.44	4.63	18	
		5/8 EHS	A2a	T4a	25.44	4.97	20	
		5/8 EHS	A2	T4b	25.44	4.63	18	
		5/8 EHS	A2a	T4b	25.44	4.96	20	
	379.63	3/4 BS	A2	T5	40.8	6.94	17	
		3/4 BS	A2b	T5	40.8	6.95	17	
		3/4 BS	A2b	T5a	40.8	6.94	17	
		3/4 BS	A2a	T5a	40.8	7.48	18	
		3/4 BS	A2	T5b	40.8	6.95	17	
		3/4 BS	A2a	T5b	40.8	7.47	18	
	459.63	3/4 BS	A2b	T6	40.8	6.75	17	
		3/4 BS	A2	T6	40.8	6.74	17	
		3/4 BS	A2a	T6a	40.8	7.28	18	
		3/4 BS	A2b	T6a	40.8	6.73	17	
		3/4 BS	A2a	T6b	40.8	7.26	18	
		3/4 BS	A2	T6b	40.8	6.75	17	
1.2D + 1.0Ev + 1.0Eh 90°	70.00	1/2 EHS	A1	31	16.14	3.73	23	
		1/2 EHS	A1b	31a	16.14	3.68	23	
		1/2 EHS	A1a	31b	16.14	3.77	23	
	139.63	9/16 EHS	A1	T2	21	3.89	19	
		9/16 EHS	A1b	T2	21	3.74	18	
		9/16 EHS	A1b	T2a	21	3.76	18	
		9/16 EHS	A1a	T2a	21	4	19	
		9/16 EHS	A1a	T2b	21	4.03	19	
		9/16 EHS	A1	T2b	21	3.88	18	
	219.63	9/16 EHS	A1	T3	21	3.3	16	
		9/16 EHS	A1b	T3	21	3.14	15	
		9/16 EHS	A1a	T3a	21	3.46	16	
		9/16 EHS	A1b	T3a	21	3.14	15	
		9/16 EHS	A1a	T3b	21	3.46	16	
		9/16 EHS	A1	T3b	21	3.3	16	
	299.63	5/8 EHS	A2	T4	25.44	4.74	19	
		5/8 EHS	A2b	T4	25.44	4.55	18	
		5/8 EHS	A2b	T4a	25.44	4.55	18	

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Ev + 1.0Eh 120°	379.63	5/8 EHS	A2a	T4a	25.44	4.94	19
		5/8 EHS	A2a	T4b	25.44	4.94	19
		5/8 EHS	A2	T4b	25.44	4.74	19
		3/4 BS	A2	T5	40.8	7.12	17
		3/4 BS	A2b	T5	40.8	6.82	17
		3/4 BS	A2a	T5a	40.8	7.43	18
		3/4 BS	A2b	T5a	40.8	6.81	17
		3/4 BS	A2	T5b	40.8	7.13	17
		3/4 BS	A2a	T5b	40.8	7.43	18
		3/4 BS	A2	T6	40.8	6.92	17
	459.63	3/4 BS	A2b	T6	40.8	6.63	16
		3/4 BS	A2b	T6a	40.8	6.61	16
		3/4 BS	A2a	T6a	40.8	7.23	18
		3/4 BS	A2a	T6b	40.8	7.21	18
		3/4 BS	A2	T6b	40.8	6.92	17
		1/2 EHS	A1	31	16.14	3.76	23
		1/2 EHS	A1b	31a	16.14	3.68	23
		1/2 EHS	A1a	31b	16.14	3.76	23
	139.63	9/16 EHS	A1	T2	21	3.97	19
		9/16 EHS	A1b	T2	21	3.72	18
		9/16 EHS	A1a	T2a	21	3.95	19
		9/16 EHS	A1b	T2a	21	3.74	18
		9/16 EHS	A1a	T2b	21	3.97	19
		9/16 EHS	A1	T2b	21	3.95	19
		9/16 EHS	A1b	T3	21	3.11	15
		9/16 EHS	A1	T3	21	3.4	16
		9/16 EHS	A1a	T3a	21	3.39	16
		9/16 EHS	A1b	T3a	21	3.11	15
1.2D + 1.0Ev + 1.0Eh 180°	299.63	9/16 EHS	A1	T3b	21	3.39	16
		9/16 EHS	A1a	T3b	21	3.4	16
		5/8 EHS	A2	T4	25.44	4.85	19
		5/8 EHS	A2b	T4	25.44	4.52	18
		5/8 EHS	A2b	T4a	25.44	4.52	18
		5/8 EHS	A2a	T4a	25.44	4.85	19
		5/8 EHS	A2a	T4b	25.44	4.85	19
		5/8 EHS	A2	T4b	25.44	4.86	19
	379.63	3/4 BS	A2	T5	40.8	7.29	18
		3/4 BS	A2b	T5	40.8	6.78	17
		3/4 BS	A2a	T5a	40.8	7.3	18
		3/4 BS	A2b	T5a	40.8	6.77	17
		3/4 BS	A2	T5b	40.8	7.31	18
		3/4 BS	A2a	T5b	40.8	7.3	18
	459.63	3/4 BS	A2	T6	40.8	7.09	17
		3/4 BS	A2b	T6	40.8	6.58	16
		3/4 BS	A2b	T6a	40.8	6.56	16
		3/4 BS	A2a	T6a	40.8	7.1	17
		3/4 BS	A2	T6b	40.8	7.1	17
		3/4 BS	A2a	T6b	40.8	7.08	17
	70.00	1/2 EHS	A1	31	16.14	3.78	23
		1/2 EHS	A1b	31a	16.14	3.7	23
		1/2 EHS	A1a	31b	16.14	3.7	23
	139.63	9/16 EHS	A1b	T2	21	3.8	18
		9/16 EHS	A1	T2	21	4.04	19
		9/16 EHS	A1a	T2a	21	3.8	18
		9/16 EHS	A1b	T2a	21	3.81	18
		9/16 EHS	A1a	T2b	21	3.82	18
		9/16 EHS	A1	T2b	21	4.03	19
	219.63	9/16 EHS	A1b	T3	21	3.21	15
		9/16 EHS	A1	T3	21	3.49	17
		9/16 EHS	A1a	T3a	21	3.21	15
		9/16 EHS	A1b	T3a	21	3.21	15
		9/16 EHS	A1a	T3b	21	3.21	15
		9/16 EHS	A1	T3b	21	3.49	17
	299.63	5/8 EHS	A2	T4	25.44	4.96	20
		5/8 EHS	A2b	T4	25.44	4.63	18
		5/8 EHS	A2a	T4a	25.44	4.63	18
		5/8 EHS	A2b	T4a	25.44	4.63	18
		5/8 EHS	A2a	T4b	25.44	4.63	18
		5/8 EHS	A2a	T4b	25.44	4.63	18

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Ev + 1.0Eh 210°	379.63	5/8 EHS	A2	T4b	25.44	4.97	20
		3/4 BS	A2b	T5	40.8	6.95	17
		3/4 BS	A2	T5	40.8	7.47	18
		3/4 BS	A2b	T5a	40.8	6.94	17
		3/4 BS	A2a	T5a	40.8	6.95	17
		3/4 BS	A2a	T5b	40.8	6.94	17
	459.63	3/4 BS	A2	T5b	40.8	7.48	18
		3/4 BS	A2	T6	40.8	7.26	18
		3/4 BS	A2b	T6	40.8	6.75	17
		3/4 BS	A2b	T6a	40.8	6.74	17
		3/4 BS	A2a	T6a	40.8	6.75	17
		3/4 BS	A2	T6b	40.8	7.28	18
	70.00	3/4 BS	A2a	T6b	40.8	6.73	17
		1/2 EHS	A1	31	16.14	3.77	23
		1/2 EHS	A1b	31a	16.14	3.73	23
		1/2 EHS	A1a	31b	16.14	3.68	23
	139.63	9/16 EHS	A1	T2	21	4.03	19
		9/16 EHS	A1b	T2	21	3.88	18
		9/16 EHS	A1a	T2a	21	3.74	18
		9/16 EHS	A1b	T2a	21	3.89	19
		9/16 EHS	A1a	T2b	21	3.76	18
		9/16 EHS	A1	T2b	21	4	19
	219.63	9/16 EHS	A1	T3	21	3.46	16
		9/16 EHS	A1b	T3	21	3.3	16
		9/16 EHS	A1b	T3a	21	3.3	16
		9/16 EHS	A1a	T3a	21	3.14	15
		9/16 EHS	A1a	T3b	21	3.14	15
		9/16 EHS	A1	T3b	21	3.46	16
1.2D + 1.0Ev + 1.0Eh 240°	299.63	5/8 EHS	A2	T4	25.44	4.94	19
		5/8 EHS	A2b	T4	25.44	4.74	19
		5/8 EHS	A2a	T4a	25.44	4.55	18
		5/8 EHS	A2b	T4a	25.44	4.74	19
		5/8 EHS	A2a	T4b	25.44	4.55	18
		5/8 EHS	A2	T4b	25.44	4.94	19
	379.63	3/4 BS	A2b	T5	40.8	7.13	17
		3/4 BS	A2	T5	40.8	7.43	18
		3/4 BS	A2b	T5a	40.8	7.12	17
		3/4 BS	A2a	T5a	40.8	6.82	17
		3/4 BS	A2	T5b	40.8	7.43	18
		3/4 BS	A2a	T5b	40.8	6.81	17
	459.63	3/4 BS	A2	T6	40.8	7.21	18
		3/4 BS	A2b	T6	40.8	6.92	17
		3/4 BS	A2a	T6a	40.8	6.63	16
		3/4 BS	A2b	T6a	40.8	6.92	17
		3/4 BS	A2	T6b	40.8	7.23	18
		3/4 BS	A2a	T6b	40.8	6.61	16
	70.00	1/2 EHS	A1	31	16.14	3.76	23
		1/2 EHS	A1b	31a	16.14	3.76	23
		1/2 EHS	A1a	31b	16.14	3.68	23
	139.63	9/16 EHS	A1	T2	21	3.97	19
		9/16 EHS	A1b	T2	21	3.95	19
		9/16 EHS	A1b	T2a	21	3.97	19
		9/16 EHS	A1a	T2a	21	3.72	18
		9/16 EHS	A1a	T2b	21	3.74	18
		9/16 EHS	A1	T2b	21	3.95	19
	219.63	9/16 EHS	A1b	T3	21	3.39	16
		9/16 EHS	A1	T3	21	3.4	16
		9/16 EHS	A1b	T3a	21	3.4	16
		9/16 EHS	A1a	T3a	21	3.11	15
		9/16 EHS	A1	T3b	21	3.39	16
		9/16 EHS	A1a	T3b	21	3.11	15
	299.63	5/8 EHS	A2	T4	25.44	4.85	19
		5/8 EHS	A2b	T4	25.44	4.86	19
		5/8 EHS	A2a	T4a	25.44	4.52	18
		5/8 EHS	A2b	T4a	25.44	4.85	19
		5/8 EHS	A2a	T4b	25.44	4.52	18
		5/8 EHS	A2	T4b	25.44	4.85	19
	379.63	3/4 BS	A2b	T5	40.8	7.31	18

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.2D + 1.0Ev + 1.0Eh 300°	459.63	3/4 BS	A2	T5	40.8	7.3	18
		3/4 BS	A2a	T5a	40.8	6.78	17
		3/4 BS	A2b	T5a	40.8	7.29	18
		3/4 BS	A2a	T5b	40.8	6.77	17
		3/4 BS	A2	T5b	40.8	7.3	18
		3/4 BS	A2	T6	40.8	7.08	17
		3/4 BS	A2b	T6	40.8	7.1	17
		3/4 BS	A2a	T6a	40.8	6.58	16
		3/4 BS	A2b	T6a	40.8	7.09	17
		3/4 BS	A2	T6b	40.8	7.1	17
		3/4 BS	A2a	T6b	40.8	6.56	16
	70.00	1/2 EHS	A1	31	16.14	3.7	23
		1/2 EHS	A1b	31a	16.14	3.78	23
		1/2 EHS	A1a	31b	16.14	3.7	23
	139.63	9/16 EHS	A1b	T2	21	4.03	19
		9/16 EHS	A1	T2	21	3.82	18
		9/16 EHS	A1a	T2a	21	3.8	18
		9/16 EHS	A1b	T2a	21	4.04	19
		9/16 EHS	A1	T2b	21	3.8	18
		9/16 EHS	A1a	T2b	21	3.81	18
	219.63	9/16 EHS	A1	T3	21	3.21	15
		9/16 EHS	A1b	T3	21	3.49	17
		9/16 EHS	A1a	T3a	21	3.21	15
		9/16 EHS	A1b	T3a	21	3.49	17
		9/16 EHS	A1	T3b	21	3.21	15
		9/16 EHS	A1a	T3b	21	3.21	15
	299.63	5/8 EHS	A2	T4	25.44	4.63	18
		5/8 EHS	A2b	T4	25.44	4.97	20
		5/8 EHS	A2a	T4a	25.44	4.63	18
		5/8 EHS	A2b	T4a	25.44	4.96	20
		5/8 EHS	A2a	T4b	25.44	4.63	18
		5/8 EHS	A2	T4b	25.44	4.63	18
1.2D + 1.0Ev + 1.0Eh 330°	459.63	3/4 BS	A2b	T5	40.8	7.48	18
		3/4 BS	A2	T5	40.8	6.94	17
		3/4 BS	A2b	T5a	40.8	7.47	18
		3/4 BS	A2a	T5a	40.8	6.95	17
		3/4 BS	A2	T5b	40.8	6.95	17
		3/4 BS	A2a	T5b	40.8	6.94	17
		3/4 BS	A2	T6	40.8	6.73	17
		3/4 BS	A2b	T6	40.8	7.28	18
		3/4 BS	A2a	T6a	40.8	6.75	17
		3/4 BS	A2b	T6a	40.8	7.26	18
		3/4 BS	A2a	T6b	40.8	6.74	17
		3/4 BS	A2	T6b	40.8	6.75	17
	70.00	1/2 EHS	A1	31	16.14	3.68	23
		1/2 EHS	A1b	31a	16.14	3.77	23
		1/2 EHS	A1a	31b	16.14	3.73	23
	139.63	9/16 EHS	A1	T2	21	3.76	18
		9/16 EHS	A1b	T2	21	4	19
		9/16 EHS	A1a	T2a	21	3.88	18
		9/16 EHS	A1b	T2a	21	4.03	19
		9/16 EHS	A1	T2b	21	3.74	18
		9/16 EHS	A1a	T2b	21	3.89	19
	219.63	9/16 EHS	A1b	T3	21	3.46	16
		9/16 EHS	A1	T3	21	3.14	15
		9/16 EHS	A1b	T3a	21	3.46	16
		9/16 EHS	A1a	T3a	21	3.3	16
		9/16 EHS	A1a	T3b	21	3.3	16
		9/16 EHS	A1	T3b	21	3.14	15
	299.63	5/8 EHS	A2b	T4	25.44	4.94	19
		5/8 EHS	A2	T4	25.44	4.55	18
		5/8 EHS	A2a	T4a	25.44	4.74	19
		5/8 EHS	A2b	T4a	25.44	4.94	19
		5/8 EHS	A2a	T4b	25.44	4.74	19
		5/8 EHS	A2	T4b	25.44	4.55	18
	379.63	3/4 BS	A2b	T5	40.8	7.43	18
		3/4 BS	A2	T5	40.8	6.82	17
		3/4 BS	A2a	T5a	40.8	7.13	17

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.0D + 1.0W Service Normal	459.63	3/4 BS	A2b	T5a	40.8	7.43	18
		3/4 BS	A2	T5b	40.8	6.82	17
		3/4 BS	A2a	T5b	40.8	7.12	17
		3/4 BS	A2	T6	40.8	6.61	16
		3/4 BS	A2b	T6	40.8	7.23	18
		3/4 BS	A2a	T6a	40.8	6.92	17
		3/4 BS	A2b	T6a	40.8	7.21	18
		3/4 BS	A2a	T6b	40.8	6.92	17
	70.00	3/4 BS	A2	T6b	40.8	6.63	16
		1/2 EHS	A1	31	16.14	2.54	16
		1/2 EHS	A1b	31a	16.14	4.36	27
		1/2 EHS	A1a	31b	16.14	4.37	27
	139.63	9/16 EHS	A1	T2	21	2.28	11
		9/16 EHS	A1b	T2	21	4.78	23
		9/16 EHS	A1b	T2a	21	4.77	23
		9/16 EHS	A1a	T2a	21	4.75	23
		9/16 EHS	A1a	T2b	21	4.8	23
		9/16 EHS	A1	T2b	21	2.26	11
	219.63	9/16 EHS	A1	T3	21	1.96	9
		9/16 EHS	A1b	T3	21	4.22	20
		9/16 EHS	A1a	T3a	21	4.14	20
		9/16 EHS	A1b	T3a	21	4.14	20
		9/16 EHS	A1a	T3b	21	4.22	20
		9/16 EHS	A1	T3b	21	1.96	9
	299.63	5/8 EHS	A2	T4	25.44	3.41	13
		5/8 EHS	A2b	T4	25.44	5.77	23
		5/8 EHS	A2b	T4a	25.44	5.73	23
		5/8 EHS	A2a	T4a	25.44	5.74	23
		5/8 EHS	A2a	T4b	25.44	5.77	23
		5/8 EHS	A2	T4b	25.44	3.41	13
	379.63	3/4 BS	A2	T5	40.8	5.34	13
		3/4 BS	A2b	T5	40.8	8.51	21
		3/4 BS	A2a	T5a	40.8	8.48	21
		3/4 BS	A2b	T5a	40.8	8.47	21
		3/4 BS	A2	T5b	40.8	5.35	13
		3/4 BS	A2a	T5b	40.8	8.5	21
1.0D + 1.0W Service 60°	459.63	3/4 BS	A2	T6	40.8	5.54	14
		3/4 BS	A2b	T6	40.8	8.44	21
		3/4 BS	A2b	T6a	40.8	8.32	20
		3/4 BS	A2a	T6a	40.8	8.33	20
		3/4 BS	A2a	T6b	40.8	8.43	21
		3/4 BS	A2	T6b	40.8	5.55	14
	70.00	1/2 EHS	A1	31	16.14	3.15	20
		1/2 EHS	A1b	31a	16.14	3.15	20
		1/2 EHS	A1a	31b	16.14	4.95	31
	139.63	9/16 EHS	A1	T2	21	3.14	15
		9/16 EHS	A1b	T2	21	3.12	15
		9/16 EHS	A1b	T2a	21	3.11	15
		9/16 EHS	A1a	T2a	21	5.64	27
		9/16 EHS	A1	T2b	21	3.1	15
		9/16 EHS	A1a	T2b	21	5.66	27
	219.63	9/16 EHS	A1	T3	21	2.81	13
		9/16 EHS	A1b	T3	21	2.81	13
		9/16 EHS	A1a	T3a	21	5.01	24
		9/16 EHS	A1b	T3a	21	2.74	13
		9/16 EHS	A1	T3b	21	2.73	13
		9/16 EHS	A1a	T3b	21	5.01	24
	299.63	5/8 EHS	A2b	T4	25.44	4.29	17
		5/8 EHS	A2	T4	25.44	4.29	17
		5/8 EHS	A2b	T4a	25.44	4.24	17
		5/8 EHS	A2a	T4a	25.44	6.54	26
		5/8 EHS	A2	T4b	25.44	4.24	17
		5/8 EHS	A2a	T4b	25.44	6.54	26
	379.63	3/4 BS	A2	T5	40.8	6.46	16
		3/4 BS	A2b	T5	40.8	6.46	16
		3/4 BS	A2b	T5a	40.8	6.41	16
		3/4 BS	A2a	T5a	40.8	9.67	24
		3/4 BS	A2	T5b	40.8	6.42	16

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.0D + 1.0W Service 90°	459.63	3/4 BS	A2a	T5b	40.8	9.66	24
		3/4 BS	A2b	T6	40.8	6.67	16
		3/4 BS	A2	T6	40.8	6.65	16
		3/4 BS	A2b	T6a	40.8	6.53	16
		3/4 BS	A2a	T6a	40.8	9.39	23
		3/4 BS	A2	T6b	40.8	6.54	16
	70.00	3/4 BS	A2a	T6b	40.8	9.38	23
		1/2 EHS	A1	31	16.14	3.77	23
		1/2 EHS	A1b	31a	16.14	2.7	17
		1/2 EHS	A1a	31b	16.14	4.79	30
	139.63	9/16 EHS	A1	T2	21	3.97	19
		9/16 EHS	A1b	T2	21	2.48	12
		9/16 EHS	A1b	T2a	21	2.5	12
		9/16 EHS	A1a	T2a	21	5.4	26
		9/16 EHS	A1a	T2b	21	5.42	26
		9/16 EHS	A1	T2b	21	3.92	19
	219.63	9/16 EHS	A1	T3	21	3.51	17
		9/16 EHS	A1b	T3	21	2.22	11
		9/16 EHS	A1a	T3a	21	4.8	23
		9/16 EHS	A1b	T3a	21	2.18	10
		9/16 EHS	A1a	T3b	21	4.76	23
		9/16 EHS	A1	T3b	21	3.42	16
	299.63	5/8 EHS	A2	T4	25.44	5.06	20
		5/8 EHS	A2b	T4	25.44	3.63	14
		5/8 EHS	A2b	T4a	25.44	3.61	14
		5/8 EHS	A2a	T4a	25.44	6.33	25
		5/8 EHS	A2a	T4b	25.44	6.32	25
		5/8 EHS	A2	T4b	25.44	5	20
	379.63	3/4 BS	A2	T5	40.8	7.48	18
		3/4 BS	A2b	T5	40.8	5.64	14
		3/4 BS	A2a	T5a	40.8	9.34	23
		3/4 BS	A2b	T5a	40.8	5.62	14
		3/4 BS	A2	T5b	40.8	7.43	18
		3/4 BS	A2a	T5b	40.8	9.34	23
1.0D + 1.0W Service 120°	459.63	3/4 BS	A2	T6	40.8	7.56	19
		3/4 BS	A2b	T6	40.8	5.89	14
		3/4 BS	A2b	T6a	40.8	5.8	14
		3/4 BS	A2a	T6a	40.8	9.13	22
		3/4 BS	A2a	T6b	40.8	9.07	22
		3/4 BS	A2	T6b	40.8	7.43	18
	70.00	1/2 EHS	A1	31	16.14	4.37	27
		1/2 EHS	A1b	31a	16.14	2.54	16
		1/2 EHS	A1a	31b	16.14	4.37	27
	139.63	9/16 EHS	A1b	T2	21	2.26	11
		9/16 EHS	A1	T2	21	4.8	23
		9/16 EHS	A1a	T2a	21	4.78	23
		9/16 EHS	A1b	T2a	21	2.28	11
		9/16 EHS	A1a	T2b	21	4.78	23
		9/16 EHS	A1	T2b	21	4.75	23
	219.63	9/16 EHS	A1b	T3	21	1.96	9
		9/16 EHS	A1	T3	21	4.22	20
		9/16 EHS	A1a	T3a	21	4.21	20
		9/16 EHS	A1b	T3a	21	1.96	9
		9/16 EHS	A1a	T3b	21	4.14	20
		9/16 EHS	A1	T3b	21	4.14	20
	299.63	5/8 EHS	A2	T4	25.44	5.77	23
		5/8 EHS	A2b	T4	25.44	3.41	13
		5/8 EHS	A2a	T4a	25.44	5.77	23
		5/8 EHS	A2b	T4a	25.44	3.41	13
		5/8 EHS	A2a	T4b	25.44	5.74	23
		5/8 EHS	A2	T4b	25.44	5.74	23
	379.63	3/4 BS	A2b	T5	40.8	5.35	13
		3/4 BS	A2	T5	40.8	8.5	21
		3/4 BS	A2a	T5a	40.8	8.51	21
		3/4 BS	A2b	T5a	40.8	5.34	13
		3/4 BS	A2a	T5b	40.8	8.48	21
		3/4 BS	A2	T5b	40.8	8.48	21
	459.63	3/4 BS	A2	T6	40.8	8.43	21

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.0D + 1.0W Service 180°	70.00	3/4 BS	A2b	T6	40.8	5.56	14
		3/4 BS	A2a	T6a	40.8	8.43	21
		3/4 BS	A2b	T6a	40.8	5.54	14
		3/4 BS	A2a	T6b	40.8	8.32	20
		3/4 BS	A2	T6b	40.8	8.33	20
	139.63	1/2 EHS	A1	31	16.14	4.95	31
		1/2 EHS	A1b	31a	16.14	3.15	20
		1/2 EHS	A1a	31b	16.14	3.15	20
		9/16 EHS	A1	T2	21	5.66	27
		9/16 EHS	A1b	T2	21	3.1	15
	219.63	9/16 EHS	A1a	T2a	21	3.12	15
		9/16 EHS	A1b	T2a	21	3.14	15
		9/16 EHS	A1	T2b	21	5.64	27
		9/16 EHS	A1a	T2b	21	3.12	15
		9/16 EHS	A1b	T3	21	2.73	13
	299.63	9/16 EHS	A1	T3	21	5.02	24
		9/16 EHS	A1a	T3a	21	2.81	13
		9/16 EHS	A1b	T3a	21	2.81	13
		9/16 EHS	A1	T3b	21	5.02	24
		9/16 EHS	A1a	T3b	21	2.73	13
	379.63	5/8 EHS	A2b	T4	25.44	4.24	17
		5/8 EHS	A2	T4	25.44	6.54	26
		5/8 EHS	A2a	T4a	25.44	4.29	17
		5/8 EHS	A2b	T4a	25.44	4.29	17
		5/8 EHS	A2	T4b	25.44	6.54	26
1.0D + 1.0W Service 210°	70.00	3/4 BS	A2a	T4b	25.44	4.24	17
		3/4 BS	A2	T5	40.8	9.65	24
		3/4 BS	A2b	T5	40.8	6.42	16
		3/4 BS	A2a	T5a	40.8	6.47	16
		3/4 BS	A2b	T5a	40.8	6.46	16
	139.63	3/4 BS	A2	T5b	40.8	9.66	24
		3/4 BS	A2a	T5b	40.8	6.41	16
		3/4 BS	A2	T6	40.8	9.38	23
		3/4 BS	A2b	T6	40.8	6.54	16
		3/4 BS	A2b	T6a	40.8	6.65	16
	219.63	3/4 BS	A2a	T6a	40.8	6.66	16
		3/4 BS	A2	T6b	40.8	9.4	23
		3/4 BS	A2a	T6b	40.8	6.52	16
		1/2 EHS	A1	31	16.14	4.79	30
		1/2 EHS	A1b	31a	16.14	3.77	23
	299.63	1/2 EHS	A1a	31b	16.14	2.7	17
		9/16 EHS	A1	T2	21	5.42	26
		9/16 EHS	A1b	T2	21	3.92	19
		9/16 EHS	A1b	T2a	21	3.97	19
		9/16 EHS	A1a	T2a	21	2.48	12
	379.63	9/16 EHS	A1a	T2b	21	2.5	12
		9/16 EHS	A1	T2b	21	5.4	26
		9/16 EHS	A1	T3	21	4.76	23
		9/16 EHS	A1b	T3	21	3.42	16
		9/16 EHS	A1a	T3a	21	2.22	11
	459.63	9/16 EHS	A1b	T3a	21	3.51	17
		9/16 EHS	A1a	T3b	21	2.18	10
		9/16 EHS	A1	T3b	21	4.8	23
		5/8 EHS	A2	T4	25.44	6.31	25
		5/8 EHS	A2b	T4	25.44	5	20
	379.63	5/8 EHS	A2b	T4a	25.44	5.06	20
		5/8 EHS	A2a	T4a	25.44	3.63	14
		5/8 EHS	A2a	T4b	25.44	3.62	14
		5/8 EHS	A2	T4b	25.44	6.32	25
		3/4 BS	A2	T5	40.8	9.33	23
	459.63	3/4 BS	A2b	T5	40.8	7.44	18
		3/4 BS	A2a	T5a	40.8	5.65	14
		3/4 BS	A2b	T5a	40.8	7.48	18
		3/4 BS	A2	T5b	40.8	9.33	23
		3/4 BS	A2a	T5b	40.8	5.62	14
		3/4 BS	A2	T6	40.8	9.07	22
		3/4 BS	A2b	T6	40.8	7.43	18
		3/4 BS	A2b	T6a	40.8	7.56	19

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.0D + 1.0W Service 240°	70.00	3/4 BS	A2a	T6a	40.8	5.89	14
		3/4 BS	A2a	T6b	40.8	5.8	14
		3/4 BS	A2	T6b	40.8	9.13	22
		1/2 EHS	A1	31	16.14	4.37	27
		1/2 EHS	A1b	31a	16.14	4.37	27
		1/2 EHS	A1a	31b	16.14	2.54	16
	139.63	9/16 EHS	A1	T2	21	4.77	23
		9/16 EHS	A1b	T2	21	4.76	23
		9/16 EHS	A1a	T2a	21	2.26	11
		9/16 EHS	A1b	T2a	21	4.8	23
		9/16 EHS	A1	T2b	21	4.78	23
		9/16 EHS	A1a	T2b	21	2.28	11
	219.63	9/16 EHS	A1	T3	21	4.14	20
		9/16 EHS	A1b	T3	21	4.14	20
		9/16 EHS	A1a	T3a	21	1.96	9
		9/16 EHS	A1b	T3a	21	4.22	20
		9/16 EHS	A1a	T3b	21	1.96	9
		9/16 EHS	A1	T3b	21	4.22	20
	299.63	5/8 EHS	A2	T4	25.44	5.74	23
		5/8 EHS	A2b	T4	25.44	5.74	23
		5/8 EHS	A2b	T4a	25.44	5.77	23
		5/8 EHS	A2a	T4a	25.44	3.41	13
		5/8 EHS	A2a	T4b	25.44	3.41	13
		5/8 EHS	A2	T4b	25.44	5.77	23
	379.63	3/4 BS	A2b	T5	40.8	8.48	21
		3/4 BS	A2	T5	40.8	8.47	21
		3/4 BS	A2b	T5a	40.8	8.5	21
		3/4 BS	A2a	T5a	40.8	5.35	13
		3/4 BS	A2	T5b	40.8	8.51	21
		3/4 BS	A2a	T5b	40.8	5.34	13
	459.63	3/4 BS	A2	T6	40.8	8.32	20
		3/4 BS	A2b	T6	40.8	8.33	20
		3/4 BS	A2b	T6a	40.8	8.42	21
		3/4 BS	A2a	T6a	40.8	5.56	14
		3/4 BS	A2	T6b	40.8	8.44	21
		3/4 BS	A2a	T6b	40.8	5.54	14
1.0D + 1.0W Service 300°	70.00	1/2 EHS	A1	31	16.14	3.15	20
		1/2 EHS	A1b	31a	16.14	4.95	31
		1/2 EHS	A1a	31b	16.14	3.15	20
	139.63	9/16 EHS	A1b	T2	21	5.64	27
		9/16 EHS	A1	T2	21	3.12	15
		9/16 EHS	A1a	T2a	21	3.1	15
		9/16 EHS	A1b	T2a	21	5.66	27
		9/16 EHS	A1	T2b	21	3.12	15
		9/16 EHS	A1a	T2b	21	3.13	15
	219.63	9/16 EHS	A1	T3	21	2.73	13
		9/16 EHS	A1b	T3	21	5.01	24
		9/16 EHS	A1b	T3a	21	5.01	24
		9/16 EHS	A1a	T3a	21	2.74	13
		9/16 EHS	A1a	T3b	21	2.81	13
		9/16 EHS	A1	T3b	21	2.81	13
	299.63	5/8 EHS	A2	T4	25.44	4.24	17
		5/8 EHS	A2b	T4	25.44	6.54	26
		5/8 EHS	A2a	T4a	25.44	4.24	17
		5/8 EHS	A2b	T4a	25.44	6.54	26
		5/8 EHS	A2	T4b	25.44	4.29	17
		5/8 EHS	A2a	T4b	25.44	4.29	17
	379.63	3/4 BS	A2b	T5	40.8	9.67	24
		3/4 BS	A2	T5	40.8	6.41	16
		3/4 BS	A2b	T5a	40.8	9.66	24
		3/4 BS	A2a	T5a	40.8	6.41	16
		3/4 BS	A2	T5b	40.8	6.47	16
		3/4 BS	A2a	T5b	40.8	6.45	16
	459.63	3/4 BS	A2	T6	40.8	6.52	16
		3/4 BS	A2b	T6	40.8	9.39	23
		3/4 BS	A2b	T6a	40.8	9.38	23
		3/4 BS	A2a	T6a	40.8	6.54	16
		3/4 BS	A2a	T6b	40.8	6.66	16

DETAILED CABLE FORCES

Load Case	Elev (ft)	Cable	Anchor Node	Tower Node	Allow Tension (kip)	Applied Tension (kip)	Use%
1.0D + 1.0W Service 330°	70.00	3/4 BS	A2	T6b	40.8	6.66	16
		1/2 EHS	A1	31	16.14	2.7	17
		1/2 EHS	A1b	31a	16.14	4.79	30
	139.63	1/2 EHS	A1a	31b	16.14	3.77	23
		9/16 EHS	A1b	T2	21	5.4	26
		9/16 EHS	A1	T2	21	2.5	12
		9/16 EHS	A1a	T2a	21	3.92	19
		9/16 EHS	A1b	T2a	21	5.42	26
		9/16 EHS	A1a	T2b	21	3.97	19
	219.63	9/16 EHS	A1	T2b	21	2.48	12
		9/16 EHS	A1b	T3	21	4.8	23
		9/16 EHS	A1	T3	21	2.18	10
		9/16 EHS	A1a	T3a	21	3.42	16
		9/16 EHS	A1b	T3a	21	4.76	23
		9/16 EHS	A1a	T3b	21	3.51	17
	299.63	9/16 EHS	A1	T3b	21	2.22	11
		5/8 EHS	A2	T4	25.44	3.61	14
		5/8 EHS	A2b	T4	25.44	6.33	25
		5/8 EHS	A2a	T4a	25.44	5	20
		5/8 EHS	A2b	T4a	25.44	6.32	25
		5/8 EHS	A2a	T4b	25.44	5.06	20
	379.63	5/8 EHS	A2	T4b	25.44	3.63	14
		3/4 BS	A2b	T5	40.8	9.34	23
		3/4 BS	A2	T5	40.8	5.62	14
		3/4 BS	A2a	T5a	40.8	7.43	18
		3/4 BS	A2b	T5a	40.8	9.34	23
		3/4 BS	A2a	T5b	40.8	7.47	18
	459.63	3/4 BS	A2	T5b	40.8	5.64	14
		3/4 BS	A2	T6	40.8	5.79	14
		3/4 BS	A2b	T6	40.8	9.13	22
		3/4 BS	A2a	T6a	40.8	7.43	18
		3/4 BS	A2b	T6a	40.8	9.08	22
		3/4 BS	A2	T6b	40.8	5.88	14
		3/4 BS	A2a	T6b	40.8	7.57	19

MAXIMUM CABLE FORCES SUMMARY

Load Case	Elevation (ft)	Cable	Anchor Node	Tower Node	Allowed Tension (kip)	Applied Tension (kip)	Use (%)
1.2D + 1.0W 90°	70.00	1/2 EHS	A1a	31b	16.14	7.57	47
1.2D + 1.0W 90°	139.63	9/16 EHS	A1a	T2b	21.00	10.69	51
1.2D + 1.0W 60°	219.63	9/16 EHS	A1a	T3a	21.00	10.27	49
1.2D + 1.0Di + 1.0Wi 60°	299.63	5/8 EHS	A2a	T4a	25.44	13.66	54
1.2D + 1.0W 60°	379.63	3/4 BS	A2a	T5a	40.80	18.02	44
1.2D + 1.0W 180°	459.63	3/4 BS	A2	T6b	40.80	17.35	43

MAXIMUM TORQUE ARM STRESS SUMMARY

Load Case	Elevation (ft)	Member	Type	Compression %	Tension %
1.2D + 1.0W 60°	70.00	PL 3 x 0.375	Horiz	0	12
1.2D + 1.0W 60°	139.50	4X4X0.375	Kicker	22	0
1.2D + 1.0W 90°	139.50	5X5X0.5	Horiz	0	20
1.2D + 1.0W 60°	219.50	4X4X0.375	Kicker	25	0
1.2D + 1.0W Normal	219.50	5X5X0.5	Horiz	0	19
1.2D + 1.0Di + 1.0Wi 60°	299.50	4X4X0.375	Kicker	30	0
1.2D + 1.0Di + 1.0Wi Normal	299.50	5X5X0.5	Horiz	0	28
1.2D + 1.0Di + 1.0Wi 60°	379.50	4X4X0.375	Kicker	41	0
1.2D + 1.0Di + 1.0Wi Normal	379.50	5X5X0.5	Horiz	0	37
1.2D + 1.0Di + 1.0Wi 60°	459.50	4X4X0.375	Kicker	42	0
1.2D + 1.0Di + 1.0Wi Normal	459.50	5X5X0.5	Horiz	0	37

ASSET: # 36075, LEE S SUMMIT #1B
CUSTOMER WISPER ISP, LLC

STANDARD ANSI/TIA-222-H
ENG NO.: OAA769626_C3_02

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W Normal 109 mph wind with no ice	3.40	0.0221	0.0252	0.3677	0.3681
1.2D + 1.0W Normal 109 mph wind with no ice	66.79	0.3593	0.0197	0.2674	0.2681
1.2D + 1.0W Normal 109 mph wind with no ice	80.38	0.4277	0.0202	0.3280	0.3284
1.2D + 1.0W Normal 109 mph wind with no ice	86.79	0.4602	0.0202	0.2897	0.2901
1.2D + 1.0W Normal 109 mph wind with no ice	90.00	0.4749	0.0203	0.2862	0.2869
1.2D + 1.0W Normal 109 mph wind with no ice	93.21	0.4922	0.0203	0.2837	0.2844
1.2D + 1.0W Normal 109 mph wind with no ice	130.00	0.6634	0.0207	0.2667	0.267
1.2D + 1.0W Normal 109 mph wind with no ice	140.00	0.7112	0.0208	0.3777	0.3779
1.2D + 1.0W Normal 109 mph wind with no ice	170.00	0.8882	0.0152	0.3042	0.3046
1.2D + 1.0W Normal 109 mph wind with no ice	180.00	0.9375	0.0133	0.2896	0.2898
1.2D + 1.0W Normal 109 mph wind with no ice	190.00	0.9751	0.0114	0.1888	0.1892
1.2D + 1.0W Normal 109 mph wind with no ice	200.00	1.0036	0.0095	0.1210	0.1214
1.2D + 1.0W Normal 109 mph wind with no ice	220.00	1.0333	0.0058	0.0954	0.0954
1.2D + 1.0W Normal 109 mph wind with no ice	300.00	1.0027	-0.0058	0.0508	0.0511
1.2D + 1.0W Normal 109 mph wind with no ice	320.00	1.0254	-0.0051	0.1810	0.1811
1.2D + 1.0W Normal 109 mph wind with no ice	330.00	1.0453	-0.0047	0.1101	0.1102
1.2D + 1.0W Normal 109 mph wind with no ice	336.42	1.0576	-0.0045	0.1094	0.1095
1.2D + 1.0W Normal 109 mph wind with no ice	339.63	1.0631	-0.0044	0.1301	0.1301
1.2D + 1.0W Normal 109 mph wind with no ice	356.42	1.0939	-0.0040	0.1078	0.1079
1.2D + 1.0W Normal 109 mph wind with no ice	363.58	1.1053	-0.0039	0.1039	0.1039
1.2D + 1.0W Normal 109 mph wind with no ice	380.00	1.1365	-0.0033	0.3556	0.3557
1.2D + 1.0W Normal 109 mph wind with no ice	383.58	1.1497	-0.0031	0.1510	0.151
1.2D + 1.0W Normal 109 mph wind with no ice	386.79	1.159	-0.0030	0.2000	0.2
1.2D + 1.0W Normal 109 mph wind with no ice	396.42	1.1928	-0.0027	0.1705	0.1705
1.2D + 1.0W Normal 109 mph wind with no ice	403.58	1.2188	-0.0022	0.1534	0.1534
1.2D + 1.0W Normal 109 mph wind with no ice	406.79	1.2269	-0.0022	0.1497	0.1497
1.2D + 1.0W Normal 109 mph wind with no ice	416.42	1.2486	-0.0020	0.1134	0.1134
1.2D + 1.0W Normal 109 mph wind with no ice	419.63	1.2515	-0.0020	0.0958	0.0958
1.2D + 1.0W Normal 109 mph wind with no ice	420.38	1.2524	-0.0020	0.0592	0.0593
1.2D + 1.0W Normal 109 mph wind with no ice	426.79	1.2542	-0.0018	0.0107	0.0109
1.2D + 1.0W Normal 109 mph wind with no ice	430.00	1.2537	-0.0017	0.0309	0.0309
1.2D + 1.0W Normal 109 mph wind with no ice	433.21	1.2502	-0.0017	0.0649	0.0649
1.2D + 1.0W Normal 109 mph wind with no ice	456.42	1.2015	-0.0016	0.2017	0.2017
1.2D + 1.0W Normal 109 mph wind with no ice	460.00	1.1919	-0.0015	0.0906	0.0906
1.2D + 1.0W Normal 109 mph wind with no ice	463.58	1.1845	-0.0015	0.1411	0.1411
1.2D + 1.0W Normal 109 mph wind with no ice	476.42	1.1582	-0.0014	0.1179	0.1179
1.2D + 1.0W Normal 109 mph wind with no ice	480.00	1.1508	-0.0014	0.1115	0.1115
1.2D + 1.0W 60° 109 mph wind with no ice	3.40	0.0151	0.0290	0.2486	0.2496
1.2D + 1.0W 60° 109 mph wind with no ice	66.79	0.2211	0.0229	0.1500	0.1511
1.2D + 1.0W 60° 109 mph wind with no ice	80.38	0.262	0.0229	0.2008	0.2016
1.2D + 1.0W 60° 109 mph wind with no ice	86.79	0.2819	0.0228	0.1779	0.1793
1.2D + 1.0W 60° 109 mph wind with no ice	90.00	0.2905	0.0228	0.1760	0.1773
1.2D + 1.0W 60° 109 mph wind with no ice	93.21	0.3016	0.0227	0.1749	0.1763
1.2D + 1.0W 60° 109 mph wind with no ice	130.00	0.4117	0.0235	0.1880	0.1891
1.2D + 1.0W 60° 109 mph wind with no ice	140.00	0.4468	0.0240	0.2911	0.2916
1.2D + 1.0W 60° 109 mph wind with no ice	170.00	0.5984	0.0198	0.2780	0.2788
1.2D + 1.0W 60° 109 mph wind with no ice	180.00	0.6445	0.0184	0.2529	0.2536
1.2D + 1.0W 60° 109 mph wind with no ice	190.00	0.6818	0.0158	0.1981	0.1987
1.2D + 1.0W 60° 109 mph wind with no ice	200.00	0.7137	0.0133	0.1450	0.1452
1.2D + 1.0W 60° 109 mph wind with no ice	220.00	0.7596	0.0082	0.1623	0.1623
1.2D + 1.0W 60° 109 mph wind with no ice	300.00	0.9041	-0.0056	0.1765	0.1766
1.2D + 1.0W 60° 109 mph wind with no ice	320.00	0.9691	0.0067	0.2888	0.2889
1.2D + 1.0W 60° 109 mph wind with no ice	330.00	1.0073	0.0088	0.2104	0.2106
1.2D + 1.0W 60° 109 mph wind with no ice	336.42	1.0306	0.0101	0.2068	0.2068
1.2D + 1.0W 60° 109 mph wind with no ice	339.63	1.0414	0.0108	0.2232	0.2235
1.2D + 1.0W 60° 109 mph wind with no ice	356.42	1.0977	0.0144	0.1903	0.1907
1.2D + 1.0W 60° 109 mph wind with no ice	363.58	1.1192	0.0161	0.1870	0.1877
1.2D + 1.0W 60° 109 mph wind with no ice	380.00	1.1725	0.0197	0.4223	0.4228
1.2D + 1.0W 60° 109 mph wind with no ice	383.58	1.1906	0.0207	0.2245	0.2254
1.2D + 1.0W 60° 109 mph wind with no ice	386.79	1.2043	0.0218	0.2770	0.2779
1.2D + 1.0W 60° 109 mph wind with no ice	396.42	1.2512	0.0249	0.2501	0.2506
1.2D + 1.0W 60° 109 mph wind with no ice	403.58	1.2866	0.0272	0.2205	0.2212
1.2D + 1.0W 60° 109 mph wind with no ice	406.79	1.2991	0.0285	0.2468	0.2484
1.2D + 1.0W 60° 109 mph wind with no ice	416.42	1.3331	0.0331	0.1577	0.1602
1.2D + 1.0W 60° 109 mph wind with no ice	419.63	1.3401	0.0337	0.1015	0.1069
1.2D + 1.0W 60° 109 mph wind with no ice	420.38	1.341	0.0337	0.0908	0.0939

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 60° 109 mph wind with no ice	426.79	1.3509	0.0336	0.0619	0.0703
1.2D + 1.0W 60° 109 mph wind with no ice	430.00	1.3545	0.0336	0.0383	0.051
1.2D + 1.0W 60° 109 mph wind with no ice	433.21	1.3551	0.0335	0.0118	0.0354
1.2D + 1.0W 60° 109 mph wind with no ice	456.42	1.3359	0.0333	0.1239	0.1283
1.2D + 1.0W 60° 109 mph wind with no ice	460.00	1.3308	0.0332	0.0318	0.0431
1.2D + 1.0W 60° 109 mph wind with no ice	463.58	1.3282	0.0332	0.0678	0.0755
1.2D + 1.0W 60° 109 mph wind with no ice	476.42	1.3182	0.0332	0.0446	0.0556
1.2D + 1.0W 60° 109 mph wind with no ice	480.00	1.3155	0.0332	0.0376	0.0502
1.2D + 1.0W 90° 109 mph wind with no ice	3.40	0.0206	0.0739	0.3279	0.3348
1.2D + 1.0W 90° 109 mph wind with no ice	66.79	0.3135	0.0688	0.2304	0.2404
1.2D + 1.0W 90° 109 mph wind with no ice	80.38	0.3732	0.0682	0.2914	0.299
1.2D + 1.0W 90° 109 mph wind with no ice	86.79	0.4017	0.0678	0.2552	0.2637
1.2D + 1.0W 90° 109 mph wind with no ice	90.00	0.4144	0.0676	0.2523	0.261
1.2D + 1.0W 90° 109 mph wind with no ice	93.21	0.4299	0.0674	0.2504	0.2592
1.2D + 1.0W 90° 109 mph wind with no ice	130.00	0.5824	0.0650	0.2430	0.2502
1.2D + 1.0W 90° 109 mph wind with no ice	140.00	0.6258	0.0643	0.3450	0.3499
1.2D + 1.0W 90° 109 mph wind with no ice	170.00	0.7928	0.0668	0.2965	0.3039
1.2D + 1.0W 90° 109 mph wind with no ice	180.00	0.8418	0.0677	0.2472	0.2551
1.2D + 1.0W 90° 109 mph wind with no ice	190.00	0.8784	0.0686	0.1953	0.207
1.2D + 1.0W 90° 109 mph wind with no ice	200.00	0.9091	0.0696	0.1326	0.1497
1.2D + 1.0W 90° 109 mph wind with no ice	220.00	0.9448	0.0716	0.1219	0.1394
1.2D + 1.0W 90° 109 mph wind with no ice	300.00	0.9885	0.1008	0.1264	0.1601
1.2D + 1.0W 90° 109 mph wind with no ice	320.00	1.0303	0.1028	0.2410	0.2599
1.2D + 1.0W 90° 109 mph wind with no ice	330.00	1.0559	0.1038	0.1656	0.1955
1.2D + 1.0W 90° 109 mph wind with no ice	336.42	1.0731	0.1045	0.1624	0.1899
1.2D + 1.0W 90° 109 mph wind with no ice	339.63	1.083	0.1048	0.1816	0.2097
1.2D + 1.0W 90° 109 mph wind with no ice	356.42	1.123	0.1066	0.1520	0.183
1.2D + 1.0W 90° 109 mph wind with no ice	363.58	1.1389	0.1073	0.1468	0.1819
1.2D + 1.0W 90° 109 mph wind with no ice	380.00	1.179	0.1093	0.3874	0.4025
1.2D + 1.0W 90° 109 mph wind with no ice	383.58	1.1926	0.1098	0.1880	0.2132
1.2D + 1.0W 90° 109 mph wind with no ice	386.79	1.2057	0.1103	0.2352	0.2595
1.2D + 1.0W 90° 109 mph wind with no ice	396.42	1.2429	0.1119	0.2063	0.2302
1.2D + 1.0W 90° 109 mph wind with no ice	403.58	1.2727	0.1131	0.1766	0.2082
1.2D + 1.0W 90° 109 mph wind with no ice	406.79	1.2844	0.1137	0.2118	0.2393
1.2D + 1.0W 90° 109 mph wind with no ice	416.42	1.3089	0.1156	0.1089	0.1574
1.2D + 1.0W 90° 109 mph wind with no ice	419.63	1.315	0.1159	0.0667	0.132
1.2D + 1.0W 90° 109 mph wind with no ice	420.38	1.3151	0.1159	0.0556	0.1248
1.2D + 1.0W 90° 109 mph wind with no ice	426.79	1.3198	0.1158	0.0520	0.127
1.2D + 1.0W 90° 109 mph wind with no ice	430.00	1.319	0.1158	0.0514	0.1267
1.2D + 1.0W 90° 109 mph wind with no ice	433.21	1.3188	0.1158	0.0646	0.1308
1.2D + 1.0W 90° 109 mph wind with no ice	456.42	1.2798	0.1155	0.1874	0.2201
1.2D + 1.0W 90° 109 mph wind with no ice	460.00	1.2719	0.1156	0.0900	0.1389
1.2D + 1.0W 90° 109 mph wind with no ice	463.58	1.2665	0.1155	0.1271	0.1717
1.2D + 1.0W 90° 109 mph wind with no ice	476.42	1.2465	0.1155	0.1046	0.1558
1.2D + 1.0W 90° 109 mph wind with no ice	480.00	1.241	0.1155	0.0989	0.1503
1.2D + 1.0W 120° 109 mph wind with no ice	3.40	0.0221	0.0249	0.3678	0.3682
1.2D + 1.0W 120° 109 mph wind with no ice	66.79	0.3596	0.0195	0.2678	0.2685
1.2D + 1.0W 120° 109 mph wind with no ice	80.38	0.4281	0.0199	0.3286	0.329
1.2D + 1.0W 120° 109 mph wind with no ice	86.79	0.4606	0.0200	0.2903	0.2906
1.2D + 1.0W 120° 109 mph wind with no ice	90.00	0.4754	0.0200	0.2868	0.2875
1.2D + 1.0W 120° 109 mph wind with no ice	93.21	0.4927	0.0201	0.2843	0.285
1.2D + 1.0W 120° 109 mph wind with no ice	130.00	0.6644	0.0205	0.2674	0.2677
1.2D + 1.0W 120° 109 mph wind with no ice	140.00	0.7123	0.0205	0.3786	0.3788
1.2D + 1.0W 120° 109 mph wind with no ice	170.00	0.8897	0.0130	0.3048	0.305
1.2D + 1.0W 120° 109 mph wind with no ice	180.00	0.9388	0.0105	0.2635	0.2635
1.2D + 1.0W 120° 109 mph wind with no ice	190.00	0.9763	0.0092	0.1896	0.1899
1.2D + 1.0W 120° 109 mph wind with no ice	200.00	1.005	0.0079	0.1223	0.1226
1.2D + 1.0W 120° 109 mph wind with no ice	220.00	1.0352	0.0055	0.0976	0.0976
1.2D + 1.0W 120° 109 mph wind with no ice	300.00	1.0086	-0.0060	0.0541	0.0544
1.2D + 1.0W 120° 109 mph wind with no ice	320.00	1.0323	-0.0057	0.1841	0.1841
1.2D + 1.0W 120° 109 mph wind with no ice	330.00	1.0526	-0.0056	0.1121	0.1121
1.2D + 1.0W 120° 109 mph wind with no ice	336.42	1.0651	-0.0055	0.1109	0.111
1.2D + 1.0W 120° 109 mph wind with no ice	339.63	1.0707	-0.0055	0.1317	0.1317
1.2D + 1.0W 120° 109 mph wind with no ice	356.42	1.1016	-0.0054	0.1077	0.1078
1.2D + 1.0W 120° 109 mph wind with no ice	363.58	1.113	-0.0055	0.1031	0.1032
1.2D + 1.0W 120° 109 mph wind with no ice	380.00	1.1438	-0.0053	0.3548	0.3548
1.2D + 1.0W 120° 109 mph wind with no ice	383.58	1.1569	-0.0055	0.1483	0.1483
1.2D + 1.0W 120° 109 mph wind with no ice	386.79	1.1661	-0.0057	0.1972	0.1972

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 120° 109 mph wind with no ice	396.42	1.1993	-0.0061	0.1658	0.1658
1.2D + 1.0W 120° 109 mph wind with no ice	403.58	1.2246	-0.0068	0.1422	0.1423
1.2D + 1.0W 120° 109 mph wind with no ice	406.79	1.2325	-0.0070	0.1649	0.165
1.2D + 1.0W 120° 109 mph wind with no ice	416.42	1.253	-0.0083	0.0789	0.0791
1.2D + 1.0W 120° 109 mph wind with no ice	419.63	1.2553	-0.0083	0.0562	0.0568
1.2D + 1.0W 120° 109 mph wind with no ice	420.38	1.2551	-0.0083	0.0406	0.0409
1.2D + 1.0W 120° 109 mph wind with no ice	426.79	1.2559	-0.0080	0.0210	0.0224
1.2D + 1.0W 120° 109 mph wind with no ice	430.00	1.2549	-0.0079	0.0449	0.0452
1.2D + 1.0W 120° 109 mph wind with no ice	433.21	1.251	-0.0077	0.0718	0.072
1.2D + 1.0W 120° 109 mph wind with no ice	456.42	1.1991	-0.0070	0.2094	0.2094
1.2D + 1.0W 120° 109 mph wind with no ice	460.00	1.1891	-0.0070	0.0979	0.0982
1.2D + 1.0W 120° 109 mph wind with no ice	463.58	1.1812	-0.0069	0.1488	0.1489
1.2D + 1.0W 120° 109 mph wind with no ice	476.42	1.1532	-0.0068	0.1255	0.1256
1.2D + 1.0W 120° 109 mph wind with no ice	480.00	1.1453	-0.0068	0.1191	0.1192
1.2D + 1.0W 180° 109 mph wind with no ice	3.40	0.015	0.0287	0.2484	0.2494
1.2D + 1.0W 180° 109 mph wind with no ice	66.79	0.2208	0.0227	0.1498	0.1508
1.2D + 1.0W 180° 109 mph wind with no ice	80.38	0.2618	0.0226	0.2006	0.2013
1.2D + 1.0W 180° 109 mph wind with no ice	86.79	0.2816	0.0225	0.1777	0.1791
1.2D + 1.0W 180° 109 mph wind with no ice	90.00	0.2901	0.0225	0.1758	0.1771
1.2D + 1.0W 180° 109 mph wind with no ice	93.21	0.3012	0.0225	0.1747	0.1761
1.2D + 1.0W 180° 109 mph wind with no ice	130.00	0.4113	0.0233	0.1881	0.1892
1.2D + 1.0W 180° 109 mph wind with no ice	140.00	0.4464	0.0236	0.2913	0.2917
1.2D + 1.0W 180° 109 mph wind with no ice	170.00	0.5984	0.0175	0.2789	0.2794
1.2D + 1.0W 180° 109 mph wind with no ice	180.00	0.6449	0.0155	0.2813	0.2817
1.2D + 1.0W 180° 109 mph wind with no ice	190.00	0.6826	0.0135	0.1988	0.1992
1.2D + 1.0W 180° 109 mph wind with no ice	200.00	0.7146	0.0117	0.1453	0.1454
1.2D + 1.0W 180° 109 mph wind with no ice	220.00	0.7605	0.0079	0.1621	0.1621
1.2D + 1.0W 180° 109 mph wind with no ice	300.00	0.9035	-0.0059	0.1749	0.175
1.2D + 1.0W 180° 109 mph wind with no ice	320.00	0.9679	-0.0050	0.2869	0.2869
1.2D + 1.0W 180° 109 mph wind with no ice	330.00	1.0059	-0.0046	0.2089	0.2089
1.2D + 1.0W 180° 109 mph wind with no ice	336.42	1.029	-0.0044	0.2055	0.2056
1.2D + 1.0W 180° 109 mph wind with no ice	339.63	1.0397	-0.0042	0.2217	0.2217
1.2D + 1.0W 180° 109 mph wind with no ice	356.42	1.0957	-0.0036	0.1897	0.1897
1.2D + 1.0W 180° 109 mph wind with no ice	363.58	1.1171	-0.0032	0.1867	0.1867
1.2D + 1.0W 180° 109 mph wind with no ice	380.00	1.1704	-0.0030	0.4218	0.4218
1.2D + 1.0W 180° 109 mph wind with no ice	383.58	1.1886	-0.0026	0.2254	0.2254
1.2D + 1.0W 180° 109 mph wind with no ice	386.79	1.2024	-0.0026	0.2780	0.278
1.2D + 1.0W 180° 109 mph wind with no ice	396.42	1.2495	-0.0022	0.2524	0.2524
1.2D + 1.0W 180° 109 mph wind with no ice	403.58	1.2851	-0.0020	0.2288	0.2288
1.2D + 1.0W 180° 109 mph wind with no ice	406.79	1.2978	-0.0019	0.2284	0.2284
1.2D + 1.0W 180° 109 mph wind with no ice	416.42	1.3325	-0.0015	0.1930	0.193
1.2D + 1.0W 180° 109 mph wind with no ice	419.63	1.34	-0.0014	0.1739	0.1739
1.2D + 1.0W 180° 109 mph wind with no ice	420.38	1.3419	-0.0013	0.1365	0.1365
1.2D + 1.0W 180° 109 mph wind with no ice	426.79	1.3524	-0.0012	0.0678	0.0678
1.2D + 1.0W 180° 109 mph wind with no ice	430.00	1.3562	-0.0011	0.0475	0.0475
1.2D + 1.0W 180° 109 mph wind with no ice	433.21	1.3571	-0.0011	0.0145	0.0145
1.2D + 1.0W 180° 109 mph wind with no ice	456.42	1.3394	-0.0009	0.1201	0.1201
1.2D + 1.0W 180° 109 mph wind with no ice	460.00	1.3345	-0.0008	0.0327	0.0327
1.2D + 1.0W 180° 109 mph wind with no ice	463.58	1.3321	-0.0008	0.0642	0.0642
1.2D + 1.0W 180° 109 mph wind with no ice	476.42	1.3228	-0.0008	0.0412	0.0412
1.2D + 1.0W 180° 109 mph wind with no ice	480.00	1.3203	-0.0008	0.0344	0.0344
1.2D + 1.0W 210° 109 mph wind with no ice	3.40	0.0206	0.0742	0.3276	0.3347
1.2D + 1.0W 210° 109 mph wind with no ice	66.79	0.3133	0.0692	0.2301	0.2403
1.2D + 1.0W 210° 109 mph wind with no ice	80.38	0.3728	0.0686	0.2911	0.2988
1.2D + 1.0W 210° 109 mph wind with no ice	86.79	0.4013	0.0681	0.2551	0.2636
1.2D + 1.0W 210° 109 mph wind with no ice	90.00	0.414	0.0679	0.2521	0.2609
1.2D + 1.0W 210° 109 mph wind with no ice	93.21	0.4295	0.0677	0.2502	0.2591
1.2D + 1.0W 210° 109 mph wind with no ice	130.00	0.582	0.0653	0.2432	0.2505
1.2D + 1.0W 210° 109 mph wind with no ice	140.00	0.6255	0.0647	0.3452	0.3502
1.2D + 1.0W 210° 109 mph wind with no ice	170.00	0.7927	0.0694	0.2973	0.3053
1.2D + 1.0W 210° 109 mph wind with no ice	180.00	0.8421	0.0708	0.2771	0.2849
1.2D + 1.0W 210° 109 mph wind with no ice	190.00	0.879	0.0711	0.1960	0.2085
1.2D + 1.0W 210° 109 mph wind with no ice	200.00	0.9098	0.0714	0.1328	0.1508
1.2D + 1.0W 210° 109 mph wind with no ice	220.00	0.9456	0.0720	0.1217	0.1394
1.2D + 1.0W 210° 109 mph wind with no ice	300.00	0.9878	0.1008	0.1245	0.1586
1.2D + 1.0W 210° 109 mph wind with no ice	320.00	1.029	0.1021	0.2388	0.257
1.2D + 1.0W 210° 109 mph wind with no ice	330.00	1.0544	0.1027	0.1641	0.1935
1.2D + 1.0W 210° 109 mph wind with no ice	336.42	1.0714	0.1031	0.1610	0.1881

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 210° 109 mph wind with no ice	339.63	1.0813	0.1033	0.1801	0.2076
1.2D + 1.0W 210° 109 mph wind with no ice	356.42	1.121	0.1044	0.1515	0.1795
1.2D + 1.0W 210° 109 mph wind with no ice	363.58	1.1369	0.1049	0.1467	0.1803
1.2D + 1.0W 210° 109 mph wind with no ice	380.00	1.1771	0.1062	0.3873	0.4016
1.2D + 1.0W 210° 109 mph wind with no ice	383.58	1.1907	0.1064	0.1893	0.2122
1.2D + 1.0W 210° 109 mph wind with no ice	386.79	1.2038	0.1068	0.2365	0.2593
1.2D + 1.0W 210° 109 mph wind with no ice	396.42	1.2414	0.1078	0.2092	0.2305
1.2D + 1.0W 210° 109 mph wind with no ice	403.58	1.2715	0.1086	0.1865	0.2142
1.2D + 1.0W 210° 109 mph wind with no ice	406.79	1.2834	0.1090	0.1923	0.2186
1.2D + 1.0W 210° 109 mph wind with no ice	416.42	1.3087	0.1109	0.1521	0.1836
1.2D + 1.0W 210° 109 mph wind with no ice	419.63	1.3153	0.1110	0.1468	0.184
1.2D + 1.0W 210° 109 mph wind with no ice	420.38	1.3164	0.1110	0.1060	0.1507
1.2D + 1.0W 210° 109 mph wind with no ice	426.79	1.3217	0.1108	0.0571	0.1247
1.2D + 1.0W 210° 109 mph wind with no ice	430.00	1.3213	0.1108	0.0551	0.1236
1.2D + 1.0W 210° 109 mph wind with no ice	433.21	1.3214	0.1107	0.0636	0.1259
1.2D + 1.0W 210° 109 mph wind with no ice	456.42	1.2841	0.1104	0.1841	0.2147
1.2D + 1.0W 210° 109 mph wind with no ice	460.00	1.2764	0.1105	0.0892	0.1331
1.2D + 1.0W 210° 109 mph wind with no ice	463.58	1.2713	0.1104	0.1240	0.1661
1.2D + 1.0W 210° 109 mph wind with no ice	476.42	1.2522	0.1104	0.1019	0.1502
1.2D + 1.0W 210° 109 mph wind with no ice	480.00	1.247	0.1104	0.0963	0.1447
1.2D + 1.0W 240° 109 mph wind with no ice	3.40	0.0221	0.0255	0.3678	0.3682
1.2D + 1.0W 240° 109 mph wind with no ice	66.79	0.3596	0.0200	0.2678	0.2686
1.2D + 1.0W 240° 109 mph wind with no ice	80.38	0.4281	0.0204	0.3286	0.3291
1.2D + 1.0W 240° 109 mph wind with no ice	86.79	0.4606	0.0205	0.2903	0.2907
1.2D + 1.0W 240° 109 mph wind with no ice	90.00	0.4754	0.0205	0.2868	0.2876
1.2D + 1.0W 240° 109 mph wind with no ice	93.21	0.4928	0.0206	0.2843	0.2851
1.2D + 1.0W 240° 109 mph wind with no ice	130.00	0.6644	0.0210	0.2675	0.2678
1.2D + 1.0W 240° 109 mph wind with no ice	140.00	0.7124	0.0211	0.3787	0.3789
1.2D + 1.0W 240° 109 mph wind with no ice	170.00	0.8898	0.0176	0.3050	0.3055
1.2D + 1.0W 240° 109 mph wind with no ice	180.00	0.939	0.0162	0.2613	0.2615
1.2D + 1.0W 240° 109 mph wind with no ice	190.00	0.9765	0.0137	0.1899	0.1904
1.2D + 1.0W 240° 109 mph wind with no ice	200.00	1.0052	0.0111	0.1225	0.123
1.2D + 1.0W 240° 109 mph wind with no ice	220.00	1.0355	0.0061	0.0978	0.0978
1.2D + 1.0W 240° 109 mph wind with no ice	300.00	1.0091	-0.0057	0.0543	0.0546
1.2D + 1.0W 240° 109 mph wind with no ice	320.00	1.0329	-0.0047	0.1845	0.1846
1.2D + 1.0W 240° 109 mph wind with no ice	330.00	1.0532	0.0043	0.1122	0.1123
1.2D + 1.0W 240° 109 mph wind with no ice	336.42	1.0657	0.0045	0.1110	0.1111
1.2D + 1.0W 240° 109 mph wind with no ice	339.63	1.0714	0.0046	0.1317	0.1318
1.2D + 1.0W 240° 109 mph wind with no ice	356.42	1.1023	0.0053	0.1077	0.1078
1.2D + 1.0W 240° 109 mph wind with no ice	363.58	1.1137	0.0056	0.1031	0.1031
1.2D + 1.0W 240° 109 mph wind with no ice	380.00	1.1444	0.0063	0.3547	0.3547
1.2D + 1.0W 240° 109 mph wind with no ice	383.58	1.1575	0.0067	0.1483	0.1484
1.2D + 1.0W 240° 109 mph wind with no ice	386.79	1.1667	0.0069	0.1971	0.1971
1.2D + 1.0W 240° 109 mph wind with no ice	396.42	1.1999	0.0077	0.1657	0.1659
1.2D + 1.0W 240° 109 mph wind with no ice	403.58	1.2252	0.0084	0.1424	0.1427
1.2D + 1.0W 240° 109 mph wind with no ice	406.79	1.2331	0.0088	0.1655	0.1655
1.2D + 1.0W 240° 109 mph wind with no ice	416.42	1.2536	0.0104	0.0769	0.077
1.2D + 1.0W 240° 109 mph wind with no ice	419.63	1.2558	0.0105	0.0617	0.0626
1.2D + 1.0W 240° 109 mph wind with no ice	420.38	1.2557	0.0104	0.0323	0.0324
1.2D + 1.0W 240° 109 mph wind with no ice	426.79	1.2565	0.0101	0.0209	0.0227
1.2D + 1.0W 240° 109 mph wind with no ice	430.00	1.2555	0.0100	0.0447	0.0458
1.2D + 1.0W 240° 109 mph wind with no ice	433.21	1.2516	0.0099	0.0719	0.0719
1.2D + 1.0W 240° 109 mph wind with no ice	456.42	1.1996	0.0093	0.2093	0.2095
1.2D + 1.0W 240° 109 mph wind with no ice	460.00	1.1895	0.0094	0.0982	0.0982
1.2D + 1.0W 240° 109 mph wind with no ice	463.58	1.1817	0.0093	0.1488	0.1491
1.2D + 1.0W 240° 109 mph wind with no ice	476.42	1.1536	0.0092	0.1256	0.1259
1.2D + 1.0W 240° 109 mph wind with no ice	480.00	1.1457	0.0092	0.1192	0.1192
1.2D + 1.0W 300° 109 mph wind with no ice	3.40	0.015	0.0285	0.2486	0.2495
1.2D + 1.0W 300° 109 mph wind with no ice	66.79	0.221	0.0224	0.1500	0.151
1.2D + 1.0W 300° 109 mph wind with no ice	80.38	0.262	0.0224	0.2008	0.2015
1.2D + 1.0W 300° 109 mph wind with no ice	86.79	0.2818	0.0223	0.1779	0.1793
1.2D + 1.0W 300° 109 mph wind with no ice	90.00	0.2904	0.0223	0.1760	0.1773
1.2D + 1.0W 300° 109 mph wind with no ice	93.21	0.3015	0.0222	0.1749	0.1762
1.2D + 1.0W 300° 109 mph wind with no ice	130.00	0.4117	0.0230	0.1880	0.1891
1.2D + 1.0W 300° 109 mph wind with no ice	140.00	0.4467	0.0233	0.2911	0.2915
1.2D + 1.0W 300° 109 mph wind with no ice	170.00	0.5984	0.0153	0.2781	0.2785
1.2D + 1.0W 300° 109 mph wind with no ice	180.00	0.6445	0.0127	0.2512	0.2515
1.2D + 1.0W 300° 109 mph wind with no ice	190.00	0.6818	0.0114	0.1982	0.1985

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0W 300° 109 mph wind with no ice	200.00	0.7137	0.0101	0.1450	0.145
1.2D + 1.0W 300° 109 mph wind with no ice	220.00	0.7596	0.0076	0.1624	0.1624
1.2D + 1.0W 300° 109 mph wind with no ice	300.00	0.9042	-0.0063	0.1769	0.177
1.2D + 1.0W 300° 109 mph wind with no ice	320.00	0.9691	-0.0104	0.2889	0.289
1.2D + 1.0W 300° 109 mph wind with no ice	330.00	1.0074	-0.0125	0.2104	0.2104
1.2D + 1.0W 300° 109 mph wind with no ice	336.42	1.0307	-0.0138	0.2068	0.2073
1.2D + 1.0W 300° 109 mph wind with no ice	339.63	1.0414	-0.0145	0.2232	0.2233
1.2D + 1.0W 300° 109 mph wind with no ice	356.42	1.0977	-0.0180	0.1903	0.1907
1.2D + 1.0W 300° 109 mph wind with no ice	363.58	1.1192	-0.0194	0.1869	0.1873
1.2D + 1.0W 300° 109 mph wind with no ice	380.00	1.1725	-0.0231	0.4224	0.4227
1.2D + 1.0W 300° 109 mph wind with no ice	383.58	1.1906	-0.0241	0.2245	0.2258
1.2D + 1.0W 300° 109 mph wind with no ice	386.79	1.2044	-0.0252	0.2771	0.2777
1.2D + 1.0W 300° 109 mph wind with no ice	396.42	1.2512	-0.0284	0.2500	0.2516
1.2D + 1.0W 300° 109 mph wind with no ice	403.58	1.2866	-0.0308	0.2204	0.2225
1.2D + 1.0W 300° 109 mph wind with no ice	406.79	1.2991	-0.0319	0.2463	0.2475
1.2D + 1.0W 300° 109 mph wind with no ice	416.42	1.3332	-0.0362	0.1576	0.1617
1.2D + 1.0W 300° 109 mph wind with no ice	419.63	1.3401	-0.0369	0.0993	0.1041
1.2D + 1.0W 300° 109 mph wind with no ice	420.38	1.3411	-0.0369	0.0934	0.1005
1.2D + 1.0W 300° 109 mph wind with no ice	426.79	1.351	-0.0370	0.0618	0.0719
1.2D + 1.0W 300° 109 mph wind with no ice	430.00	1.3546	-0.0369	0.0390	0.0528
1.2D + 1.0W 300° 109 mph wind with no ice	433.21	1.3552	-0.0369	0.0127	0.0388
1.2D + 1.0W 300° 109 mph wind with no ice	456.42	1.336	-0.0365	0.1228	0.1267
1.2D + 1.0W 300° 109 mph wind with no ice	460.00	1.3309	-0.0365	0.0340	0.046
1.2D + 1.0W 300° 109 mph wind with no ice	463.58	1.3283	-0.0365	0.0676	0.0763
1.2D + 1.0W 300° 109 mph wind with no ice	476.42	1.3183	-0.0365	0.0448	0.0573
1.2D + 1.0W 300° 109 mph wind with no ice	480.00	1.3156	-0.0365	0.0382	0.0514
1.2D + 1.0W 330° 109 mph wind with no ice	3.40	0.0206	0.0738	0.3274	0.3343
1.2D + 1.0W 330° 109 mph wind with no ice	66.79	0.3131	0.0687	0.2300	0.2401
1.2D + 1.0W 330° 109 mph wind with no ice	80.38	0.3726	0.0681	0.2910	0.2986
1.2D + 1.0W 330° 109 mph wind with no ice	86.79	0.4011	0.0677	0.2550	0.2634
1.2D + 1.0W 330° 109 mph wind with no ice	90.00	0.4137	0.0675	0.2521	0.2607
1.2D + 1.0W 330° 109 mph wind with no ice	93.21	0.4293	0.0673	0.2502	0.259
1.2D + 1.0W 330° 109 mph wind with no ice	130.00	0.5818	0.0649	0.2433	0.2505
1.2D + 1.0W 330° 109 mph wind with no ice	140.00	0.6252	0.0642	0.3453	0.3502
1.2D + 1.0W 330° 109 mph wind with no ice	170.00	0.7927	0.0648	0.2974	0.3044
1.2D + 1.0W 330° 109 mph wind with no ice	180.00	0.8421	0.0651	0.2791	0.2856
1.2D + 1.0W 330° 109 mph wind with no ice	190.00	0.8791	0.0667	0.1961	0.2071
1.2D + 1.0W 330° 109 mph wind with no ice	200.00	0.9099	0.0682	0.1329	0.1494
1.2D + 1.0W 330° 109 mph wind with no ice	220.00	0.9456	0.0714	0.1216	0.139
1.2D + 1.0W 330° 109 mph wind with no ice	300.00	0.987	0.1003	0.1260	0.1591
1.2D + 1.0W 330° 109 mph wind with no ice	320.00	1.0281	0.0958	0.2391	0.2554
1.2D + 1.0W 330° 109 mph wind with no ice	330.00	1.0535	0.0935	0.1644	0.1891
1.2D + 1.0W 330° 109 mph wind with no ice	336.42	1.0705	0.0921	0.1614	0.1825
1.2D + 1.0W 330° 109 mph wind with no ice	339.63	1.0804	0.0914	0.1804	0.2023
1.2D + 1.0W 330° 109 mph wind with no ice	356.42	1.1202	0.0876	0.1518	0.1727
1.2D + 1.0W 330° 109 mph wind with no ice	363.58	1.1361	0.0860	0.1469	0.1702
1.2D + 1.0W 330° 109 mph wind with no ice	380.00	1.1765	0.0826	0.3880	0.3967
1.2D + 1.0W 330° 109 mph wind with no ice	383.58	1.1903	0.0812	0.1896	0.2036
1.2D + 1.0W 330° 109 mph wind with no ice	386.79	1.2034	0.0802	0.2370	0.2499
1.2D + 1.0W 330° 109 mph wind with no ice	396.42	1.2412	0.0770	0.2091	0.2205
1.2D + 1.0W 330° 109 mph wind with no ice	403.58	1.2715	0.0745	0.1841	0.1977
1.2D + 1.0W 330° 109 mph wind with no ice	406.79	1.2834	0.0734	0.1980	0.2101
1.2D + 1.0W 330° 109 mph wind with no ice	416.42	1.309	0.0690	0.1373	0.1516
1.2D + 1.0W 330° 109 mph wind with no ice	419.63	1.3156	0.0682	0.0999	0.121
1.2D + 1.0W 330° 109 mph wind with no ice	420.38	1.3166	0.0682	0.0758	0.098
1.2D + 1.0W 330° 109 mph wind with no ice	426.79	1.3222	0.0680	0.0491	0.0839
1.2D + 1.0W 330° 109 mph wind with no ice	430.00	1.3218	0.0680	0.0419	0.0798
1.2D + 1.0W 330° 109 mph wind with no ice	433.21	1.322	0.0679	0.0580	0.087
1.2D + 1.0W 330° 109 mph wind with no ice	456.42	1.2853	0.0676	0.1805	0.1928
1.2D + 1.0W 330° 109 mph wind with no ice	460.00	1.2777	0.0678	0.0831	0.1036
1.2D + 1.0W 330° 109 mph wind with no ice	463.58	1.2727	0.0677	0.1199	0.1377
1.2D + 1.0W 330° 109 mph wind with no ice	476.42	1.2539	0.0676	0.0973	0.1185
1.2D + 1.0W 330° 109 mph wind with no ice	480.00	1.2487	0.0676	0.0915	0.1118
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0420	0.1695	0.1738
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	66.79	0.1273	0.0314	0.0770	0.0832
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	80.38	0.1464	0.0320	0.1076	0.1119
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	86.79	0.1545	0.0325	0.0729	0.0798
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	90.00	0.1561	0.0327	0.0703	0.0773

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	93.21	0.1624	0.0329	0.0680	0.0756
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	130.00	0.1958	0.0356	0.0529	0.0621
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	140.00	0.2052	0.0363	0.1121	0.1168
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	170.00	0.2475	0.0263	0.0725	0.0771
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	180.00	0.2595	0.0229	0.0682	0.0712
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	190.00	0.2665	0.0196	0.0387	0.0434
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	200.00	0.2731	0.0163	0.0190	0.025
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	220.00	0.2741	0.0097	0.0389	0.0394
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	300.00	0.2362	-0.0071	0.0516	0.0519
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	320.00	0.2219	-0.0059	0.0158	0.0168
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	330.00	0.2147	-0.0053	0.0620	0.0622
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	336.42	0.2071	-0.0050	0.0780	0.078
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	339.63	0.2014	-0.0049	0.0988	0.099
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	356.42	0.1726	-0.0041	0.1223	0.1223
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	363.58	0.156	-0.0039	0.1366	0.1367
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	380.00	0.1133	-0.0033	0.1163	0.1164
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	383.58	0.1064	-0.0030	0.1605	0.1605
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	386.79	0.0969	-0.0028	0.1421	0.1421
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	396.42	0.0734	-0.0024	0.1645	0.1645
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	403.58	0.0537	-0.0020	0.1813	0.1813
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	406.79	0.0425	-0.0019	0.1802	0.1802
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	416.42	0.0115	-0.0016	0.2053	0.2053
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	419.63	0.003	-0.0015	0.2337	0.2337
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	420.38	0.0059	-0.0015	0.2309	0.2309
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	426.79	0.0318	-0.0013	0.2428	0.2428
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	430.00	0.0466	-0.0012	0.2485	0.2485
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	433.21	0.0599	-0.0012	0.2636	0.2636
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	456.42	0.1763	-0.0009	0.3331	0.3331
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	460.00	0.1952	-0.0008	0.2885	0.2885
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	463.58	0.2133	-0.0008	0.2975	0.2975
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	476.42	0.2779	-0.0007	0.2897	0.2897
1.2D + 1.0Di + 1.0Wi Normal 40 mph wind with 1.5" radial ice	480.00	0.2959	-0.0007	0.2848	0.2848
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	3.40	0.0087	0.0413	0.1485	0.1534
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	66.79	0.1051	0.0311	0.0682	0.0746
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	80.38	0.1226	0.0313	0.1003	0.1044
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	86.79	0.1306	0.0317	0.0727	0.0793
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	90.00	0.1323	0.0319	0.0717	0.0783
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	93.21	0.1386	0.0321	0.0710	0.0778
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	130.00	0.1808	0.0349	0.0765	0.0833
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	140.00	0.195	0.0356	0.1288	0.1327
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	170.00	0.2564	0.0256	0.1153	0.1181
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	180.00	0.2761	0.0223	0.1151	0.1172
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	190.00	0.2915	0.0189	0.0867	0.0887
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	200.00	0.3065	0.0155	0.0672	0.069
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	220.00	0.3251	0.0089	0.0774	0.0776
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	300.00	0.352	-0.0078	0.0330	0.0339
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	320.00	0.3569	-0.0066	0.0559	0.056
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	330.00	0.3599	-0.0061	0.0027	0.0064
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	336.42	0.3596	-0.0058	0.0126	0.0129
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	339.63	0.3578	-0.0056	0.0344	0.0348
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	356.42	0.3502	-0.0049	0.0438	0.0439
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	363.58	0.3435	-0.0046	0.0567	0.0568
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	380.00	0.3254	-0.0040	0.0265	0.0268
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	383.58	0.3244	-0.0039	0.0620	0.0621
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	386.79	0.3202	-0.0038	0.0455	0.0456
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	396.42	0.3133	-0.0036	0.0662	0.0662
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	403.58	0.3067	-0.0035	0.0752	0.0753
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	406.79	0.3016	-0.0035	0.0685	0.0686
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	416.42	0.2889	-0.0035	0.0999	0.1
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	419.63	0.282	-0.0035	0.1277	0.1278
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	420.38	0.2805	-0.0034	0.1208	0.1209
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	426.79	0.2674	-0.0031	0.1261	0.1261
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	430.00	0.2612	-0.0030	0.1352	0.1352
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	433.21	0.2524	-0.0029	0.1439	0.144
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	456.42	0.1863	-0.0019	0.2068	0.2068
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	460.00	0.175	-0.0018	0.1533	0.1534
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	463.58	0.1647	-0.0018	0.1744	0.1744
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	476.42	0.1272	-0.0017	0.1681	0.1681

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 60° 40 mph wind with 1.5" radial ice	480.00	0.1168	-0.0017	0.1623	0.1623
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0741	0.1621	0.1771
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	66.79	0.1167	0.0638	0.0725	0.0966
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	80.38	0.1348	0.0633	0.0985	0.1167
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	86.79	0.1427	0.0631	0.0726	0.0959
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	90.00	0.144	0.0630	0.0708	0.0944
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	93.21	0.1505	0.0629	0.0692	0.0936
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	130.00	0.1877	0.0622	0.0661	0.0892
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	140.00	0.1994	0.0619	0.1197	0.1336
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	170.00	0.2499	0.0562	0.0973	0.1123
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	180.00	0.268	0.0542	0.0925	0.1072
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	190.00	0.2782	0.0523	0.0683	0.086
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	200.00	0.2906	0.0504	0.0528	0.073
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	220.00	0.3007	0.0466	0.0630	0.0763
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	300.00	0.3002	0.0489	0.0550	0.0706
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	320.00	0.2986	0.0477	0.0442	0.065
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	330.00	0.2953	0.0470	0.0470	0.0652
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	336.42	0.2927	0.0466	0.0576	0.0741
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	339.63	0.2929	0.0464	0.0810	0.0919
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	356.42	0.2772	0.0454	0.0932	0.1036
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	363.58	0.269	0.0450	0.1044	0.1126
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	380.00	0.2481	0.0443	0.0916	0.0999
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	383.58	0.2443	0.0441	0.1232	0.13
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	386.79	0.2416	0.0439	0.1058	0.1129
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	396.42	0.2321	0.0433	0.1249	0.1322
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	403.58	0.2259	0.0428	0.1421	0.1478
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	406.79	0.2233	0.0427	0.1319	0.1382
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	416.42	0.2126	0.0423	0.1676	0.1729
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	419.63	0.2098	0.0422	0.2015	0.2055
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	420.38	0.2089	0.0421	0.1906	0.1952
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	426.79	0.2024	0.0417	0.1937	0.1978
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	430.00	0.1988	0.0415	0.2036	0.2074
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	433.21	0.1971	0.0413	0.2125	0.2161
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	456.42	0.1983	0.0403	0.2819	0.2848
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	460.00	0.2028	0.0402	0.2338	0.2365
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	463.58	0.208	0.0401	0.2450	0.2482
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	476.42	0.2338	0.0399	0.2372	0.2405
1.2D + 1.0Di + 1.0Wi 90° 40 mph wind with 1.5" radial ice	480.00	0.2425	0.0399	0.2322	0.2353
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0419	0.1697	0.174
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	66.79	0.1274	0.0314	0.0771	0.0832
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	80.38	0.1465	0.0319	0.1077	0.1119
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	86.79	0.1547	0.0324	0.0729	0.0798
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	90.00	0.1563	0.0326	0.0703	0.0773
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	93.21	0.1625	0.0329	0.0680	0.0755
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	130.00	0.1959	0.0356	0.0528	0.062
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	140.00	0.2053	0.0362	0.1119	0.1166
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	170.00	0.2474	0.0262	0.0722	0.0768
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	180.00	0.2594	0.0228	0.0631	0.0662
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	190.00	0.2663	0.0195	0.0384	0.0431
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	200.00	0.2729	0.0162	0.0189	0.0249
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	220.00	0.2738	0.0097	0.0389	0.0394
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	300.00	0.2363	-0.0071	0.0512	0.0515
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	320.00	0.2222	-0.0056	0.0155	0.0165
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	330.00	0.2151	-0.0049	0.0617	0.0619
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	336.42	0.2075	-0.0044	0.0777	0.0777
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	339.63	0.2019	-0.0042	0.0985	0.0986
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	356.42	0.1731	-0.0031	0.1222	0.1222
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	363.58	0.1565	-0.0027	0.1366	0.1366
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	380.00	0.1138	-0.0016	0.1164	0.1164
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	383.58	0.1069	-0.0012	0.1608	0.1608
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	386.79	0.0974	-0.0009	0.1424	0.1424
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	396.42	0.0737	0.0013	0.1651	0.1651
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	403.58	0.054	0.0019	0.1832	0.1832
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	406.79	0.0428	0.0021	0.1767	0.1767
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	416.42	0.0116	0.0030	0.2121	0.2122
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	419.63	0.003	0.0032	0.2475	0.2475
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	420.38	0.006	0.0031	0.2390	0.239
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	426.79	0.032	0.0031	0.2436	0.2436

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	430.00	0.047	0.0030	0.2531	0.2531
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	433.21	0.0603	0.0029	0.2639	0.2639
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	456.42	0.1771	0.0022	0.3341	0.3341
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	460.00	0.1961	0.0022	0.2895	0.2895
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	463.58	0.2142	0.0021	0.2985	0.2985
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	476.42	0.2791	0.0020	0.2907	0.2907
1.2D + 1.0Di + 1.0Wi 120° 40 mph wind with 1.5" radial ice	480.00	0.2971	0.0020	0.2858	0.2858
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	3.40	0.0087	0.0414	0.1485	0.1534
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	66.79	0.1051	0.0311	0.0682	0.0746
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	80.38	0.1225	0.0313	0.1002	0.1044
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	86.79	0.1305	0.0317	0.0727	0.0793
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	90.00	0.1322	0.0319	0.0716	0.0783
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	93.21	0.1385	0.0321	0.0710	0.0778
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	130.00	0.1807	0.0349	0.0766	0.0834
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	140.00	0.1949	0.0356	0.1288	0.1328
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	170.00	0.2565	0.0255	0.1155	0.1183
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	180.00	0.2762	0.0221	0.1206	0.1226
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	190.00	0.2917	0.0187	0.0868	0.0888
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	200.00	0.3067	0.0154	0.0673	0.069
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	220.00	0.3254	0.0090	0.0774	0.0776
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	300.00	0.3519	-0.0077	0.0329	0.0338
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	320.00	0.3566	-0.0064	0.0554	0.0555
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	330.00	0.3596	-0.0059	0.0024	0.0061
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	336.42	0.3592	-0.0055	0.0129	0.0131
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	339.63	0.3574	-0.0053	0.0346	0.035
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	356.42	0.3498	-0.0044	0.0439	0.0439
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	363.58	0.3431	-0.0040	0.0566	0.0568
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	380.00	0.325	-0.0033	0.0264	0.0266
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	383.58	0.324	-0.0031	0.0617	0.0618
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	386.79	0.3198	-0.0029	0.0451	0.0452
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	396.42	0.313	-0.0024	0.0655	0.0656
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	403.58	0.3064	-0.0021	0.0733	0.0733
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	406.79	0.3014	-0.0020	0.0719	0.0719
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	416.42	0.2889	-0.0016	0.0932	0.0932
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	419.63	0.282	-0.0015	0.1148	0.1148
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	420.38	0.2807	-0.0014	0.1123	0.1123
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	426.79	0.2677	-0.0013	0.1253	0.1254
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	430.00	0.2616	-0.0012	0.1306	0.1306
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	433.21	0.2529	-0.0011	0.1437	0.1437
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	456.42	0.1873	-0.0006	0.2058	0.2058
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	460.00	0.176	-0.0006	0.1523	0.1523
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	463.58	0.1657	-0.0006	0.1733	0.1733
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	476.42	0.1284	-0.0005	0.1671	0.1671
1.2D + 1.0Di + 1.0Wi 180° 40 mph wind with 1.5" radial ice	480.00	0.1181	-0.0005	0.1613	0.1613
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0741	0.1621	0.1771
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	66.79	0.1166	0.0638	0.0724	0.0965
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	80.38	0.1347	0.0633	0.0984	0.1167
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	86.79	0.1426	0.0631	0.0726	0.0959
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	90.00	0.1439	0.0631	0.0708	0.0944
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	93.21	0.1505	0.0630	0.0692	0.0936
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	130.00	0.1876	0.0622	0.0662	0.0893
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	140.00	0.1994	0.0620	0.1198	0.1337
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	170.00	0.2499	0.0562	0.0976	0.1126
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	180.00	0.2681	0.0543	0.0990	0.1129
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	190.00	0.2784	0.0524	0.0685	0.0862
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	200.00	0.2908	0.0504	0.0529	0.0731
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	220.00	0.3009	0.0467	0.0629	0.0763
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	300.00	0.3	0.0488	0.0549	0.0705
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	320.00	0.2983	0.0454	0.0437	0.063
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	330.00	0.2948	0.0436	0.0470	0.0628
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	336.42	0.2922	0.0425	0.0577	0.0717
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	339.63	0.2924	0.0420	0.0811	0.0899
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	356.42	0.2767	0.0392	0.0932	0.1011
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	363.58	0.2684	0.0380	0.1043	0.11
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	380.00	0.2476	0.0356	0.0916	0.0969
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	383.58	0.2438	0.0348	0.1229	0.127
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	386.79	0.2412	0.0341	0.1055	0.1097
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	396.42	0.2317	0.0319	0.1245	0.1285

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	403.58	0.2256	0.0304	0.1407	0.1434
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	406.79	0.2231	0.0297	0.1343	0.1371
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	416.42	0.2125	0.0276	0.1627	0.165
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	419.63	0.2098	0.0271	0.1917	0.1932
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	420.38	0.2091	0.0270	0.1843	0.1863
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	426.79	0.2028	0.0263	0.1931	0.1946
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	430.00	0.1992	0.0260	0.2000	0.2014
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	433.21	0.1976	0.0258	0.2122	0.2135
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	456.42	0.1989	0.0246	0.2811	0.2822
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	460.00	0.2033	0.0245	0.2330	0.2339
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	463.58	0.2085	0.0244	0.2441	0.2454
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	476.42	0.2341	0.0242	0.2364	0.2376
1.2D + 1.0Di + 1.0Wi 210° 40 mph wind with 1.5" radial ice	480.00	0.2428	0.0242	0.2314	0.2324
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0420	0.1697	0.174
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	66.79	0.1274	0.0315	0.0771	0.0833
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	80.38	0.1465	0.0320	0.1077	0.1119
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	86.79	0.1547	0.0325	0.0729	0.0798
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	90.00	0.1563	0.0327	0.0703	0.0774
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	93.21	0.1625	0.0330	0.0680	0.0756
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	130.00	0.1959	0.0357	0.0528	0.062
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	140.00	0.2053	0.0363	0.1119	0.1167
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	170.00	0.2474	0.0264	0.0722	0.0769
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	180.00	0.2594	0.0231	0.0621	0.0662
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	190.00	0.2663	0.0198	0.0385	0.0432
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	200.00	0.2729	0.0164	0.0189	0.025
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	220.00	0.2738	0.0098	0.0389	0.0394
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	300.00	0.2363	-0.0071	0.0510	0.0513
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	320.00	0.2222	-0.0062	0.0156	0.0164
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	330.00	0.2151	-0.0058	0.0617	0.0619
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	336.42	0.2075	-0.0056	0.0777	0.0777
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	339.63	0.2019	-0.0055	0.0985	0.0986
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	356.42	0.1731	-0.0051	0.1222	0.1222
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	363.58	0.1565	-0.0051	0.1366	0.1367
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	380.00	0.1138	-0.0048	0.1164	0.1164
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	383.58	0.1069	-0.0047	0.1608	0.1608
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	386.79	0.0974	-0.0047	0.1424	0.1425
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	396.42	0.0738	-0.0047	0.1652	0.1652
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	403.58	0.054	-0.0049	0.1831	0.1832
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	406.79	0.0428	-0.0050	0.1767	0.1767
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	416.42	0.0116	-0.0055	0.2121	0.2121
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	419.63	0.003	-0.0056	0.2477	0.2478
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	420.38	0.006	-0.0055	0.2387	0.2387
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	426.79	0.032	-0.0051	0.2435	0.2436
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	430.00	0.0469	-0.0050	0.2531	0.2532
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	433.21	0.0603	-0.0048	0.2639	0.2639
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	456.42	0.1771	-0.0036	0.3340	0.3341
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	460.00	0.1961	-0.0034	0.2895	0.2895
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	463.58	0.2142	-0.0033	0.2985	0.2985
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	476.42	0.2791	-0.0031	0.2907	0.2907
1.2D + 1.0Di + 1.0Wi 240° 40 mph wind with 1.5" radial ice	480.00	0.2971	-0.0031	0.2858	0.2858
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	3.40	0.0087	0.0414	0.1484	0.1534
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	66.79	0.1051	0.0311	0.0682	0.0746
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	80.38	0.1226	0.0314	0.1003	0.1044
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	86.79	0.1306	0.0317	0.0727	0.0793
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	90.00	0.1323	0.0319	0.0717	0.0783
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	93.21	0.1386	0.0321	0.0710	0.0778
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	130.00	0.1808	0.0349	0.0765	0.0833
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	140.00	0.195	0.0356	0.1287	0.1327
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	170.00	0.2564	0.0253	0.1153	0.118
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	180.00	0.2761	0.0219	0.1148	0.1169
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	190.00	0.2915	0.0186	0.0867	0.0886
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	200.00	0.3065	0.0154	0.0672	0.0689
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	220.00	0.3251	0.0090	0.0774	0.0776
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	300.00	0.352	-0.0077	0.0334	0.0343
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	320.00	0.3569	-0.0063	0.0559	0.056
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	330.00	0.3599	-0.0056	0.0027	0.0059
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	336.42	0.3596	-0.0052	0.0127	0.0129
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	339.63	0.3578	-0.0050	0.0342	0.0346

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	356.42	0.3502	-0.0040	0.0438	0.0438
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	363.58	0.3435	-0.0035	0.0567	0.0568
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	380.00	0.3254	-0.0026	0.0264	0.0265
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	383.58	0.3244	-0.0023	0.0620	0.0621
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	386.79	0.3202	-0.0021	0.0455	0.0455
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	396.42	0.3133	-0.0013	0.0662	0.0662
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	403.58	0.3067	-0.0009	0.0751	0.0751
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	406.79	0.3016	-0.0006	0.0684	0.0684
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	416.42	0.2889	0.0011	0.0996	0.0996
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	419.63	0.282	0.0012	0.1288	0.1288
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	420.38	0.2805	0.0011	0.1211	0.1211
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	426.79	0.2674	0.0011	0.1261	0.1261
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	430.00	0.2612	0.0012	0.1352	0.1352
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	433.21	0.2524	0.0011	0.1439	0.1439
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	456.42	0.1863	0.0007	0.2067	0.2067
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	460.00	0.175	0.0008	0.1533	0.1533
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	463.58	0.1647	0.0008	0.1743	0.1743
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	476.42	0.1272	0.0008	0.1681	0.1681
1.2D + 1.0Di + 1.0Wi 300° 40 mph wind with 1.5" radial ice	480.00	0.1168	0.0008	0.1623	0.1623
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	3.40	0.0102	0.0741	0.1619	0.1769
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	66.79	0.1165	0.0638	0.0724	0.0965
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	80.38	0.1346	0.0633	0.0984	0.1167
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	86.79	0.1426	0.0631	0.0726	0.0959
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	90.00	0.1438	0.0630	0.0708	0.0944
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	93.21	0.1504	0.0630	0.0692	0.0936
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	130.00	0.1876	0.0622	0.0662	0.0893
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	140.00	0.1994	0.0619	0.1198	0.1337
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	170.00	0.2499	0.0560	0.0975	0.1124
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	180.00	0.2681	0.0540	0.0967	0.1108
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	190.00	0.2784	0.0521	0.0684	0.086
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	200.00	0.2908	0.0503	0.0529	0.073
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	220.00	0.3009	0.0467	0.0630	0.0763
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	300.00	0.3001	0.0489	0.0554	0.071
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	320.00	0.2984	0.0471	0.0442	0.0646
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	330.00	0.295	0.0462	0.0473	0.0649
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	336.42	0.2924	0.0456	0.0579	0.0738
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	339.63	0.2926	0.0454	0.0814	0.0918
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	356.42	0.2769	0.0440	0.0933	0.1031
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	363.58	0.2687	0.0435	0.1044	0.1121
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	380.00	0.2479	0.0425	0.0916	0.0995
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	383.58	0.2441	0.0421	0.1228	0.1291
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	386.79	0.2414	0.0419	0.1054	0.1122
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	396.42	0.2319	0.0411	0.1242	0.1308
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	403.58	0.2258	0.0405	0.1399	0.1452
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	406.79	0.2232	0.0404	0.1359	0.1413
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	416.42	0.2125	0.0399	0.1599	0.1648
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	419.63	0.2097	0.0397	0.1856	0.1894
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	420.38	0.2089	0.0396	0.1817	0.186
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	426.79	0.2024	0.0390	0.1929	0.1965
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	430.00	0.1988	0.0388	0.1985	0.2019
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	433.21	0.197	0.0385	0.2121	0.2153
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	456.42	0.1978	0.0368	0.2808	0.2832
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	460.00	0.2021	0.0367	0.2326	0.2351
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	463.58	0.2073	0.0366	0.2438	0.2465
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	476.42	0.2326	0.0363	0.2360	0.2388
1.2D + 1.0Di + 1.0Wi 330° 40 mph wind with 1.5" radial ice	480.00	0.2413	0.0363	0.2311	0.2337
1.2D + 1.0Ev + 1.0Eh Normal Seismic	3.40	0.0011	0.0104	0.0207	0.0231
1.2D + 1.0Ev + 1.0Eh Normal Seismic	66.79	0.0037	0.0083	0.0046	0.0094
1.2D + 1.0Ev + 1.0Eh Normal Seismic	80.38	0.0046	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh Normal Seismic	86.79	0.005	0.0078	0.0044	0.009
1.2D + 1.0Ev + 1.0Eh Normal Seismic	90.00	0.0043	0.0077	0.0046	0.0089
1.2D + 1.0Ev + 1.0Eh Normal Seismic	93.21	0.0055	0.0077	0.0048	0.0091
1.2D + 1.0Ev + 1.0Eh Normal Seismic	130.00	0.0082	0.0082	0.0072	0.0107
1.2D + 1.0Ev + 1.0Eh Normal Seismic	140.00	0.0094	0.0085	0.0203	0.0219
1.2D + 1.0Ev + 1.0Eh Normal Seismic	170.00	0.0148	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh Normal Seismic	180.00	0.0164	0.0041	0.0100	0.0108
1.2D + 1.0Ev + 1.0Eh Normal Seismic	190.00	0.0175	0.0032	0.0076	0.0082
1.2D + 1.0Ev + 1.0Eh Normal Seismic	200.00	0.0191	0.0024	0.0072	0.0076

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh Normal Seismic	220.00	0.0203	0.0009	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh Normal Seismic	300.00	0.0288	-0.0014	0.0175	0.0175
1.2D + 1.0Ev + 1.0Eh Normal Seismic	320.00	0.0324	-0.0009	0.0157	0.0158
1.2D + 1.0Ev + 1.0Eh Normal Seismic	330.00	0.035	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh Normal Seismic	336.42	0.0362	-0.0006	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh Normal Seismic	339.63	0.0363	-0.0005	0.0214	0.0214
1.2D + 1.0Ev + 1.0Eh Normal Seismic	356.42	0.0394	-0.0003	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh Normal Seismic	363.58	0.0404	-0.0002	0.0107	0.0107
1.2D + 1.0Ev + 1.0Eh Normal Seismic	380.00	0.0431	-0.0001	0.0285	0.0285
1.2D + 1.0Ev + 1.0Eh Normal Seismic	383.58	0.0447	-0.0001	0.0142	0.0142
1.2D + 1.0Ev + 1.0Eh Normal Seismic	386.79	0.0448	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh Normal Seismic	396.42	0.048	0.0000	0.0155	0.0155
1.2D + 1.0Ev + 1.0Eh Normal Seismic	403.58	0.05	0.0000	0.0148	0.0148
1.2D + 1.0Ev + 1.0Eh Normal Seismic	406.79	0.0503	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh Normal Seismic	416.42	0.053	0.0000	0.0127	0.0127
1.2D + 1.0Ev + 1.0Eh Normal Seismic	419.63	0.053	0.0000	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh Normal Seismic	420.38	0.0532	0.0000	0.0150	0.015
1.2D + 1.0Ev + 1.0Eh Normal Seismic	426.79	0.0542	0.0000	0.0083	0.0083
1.2D + 1.0Ev + 1.0Eh Normal Seismic	430.00	0.0551	0.0000	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh Normal Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh Normal Seismic	456.42	0.0565	0.0000	0.0115	0.0115
1.2D + 1.0Ev + 1.0Eh Normal Seismic	460.00	0.0566	0.0000	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh Normal Seismic	463.58	0.0569	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh Normal Seismic	476.42	0.0579	0.0000	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh Normal Seismic	480.00	0.0582	0.0000	0.0061	0.0061
1.2D + 1.0Ev + 1.0Eh 60° Seismic	3.40	0.0011	0.0104	0.0208	0.0233
1.2D + 1.0Ev + 1.0Eh 60° Seismic	66.79	0.0033	0.0083	0.0052	0.0097
1.2D + 1.0Ev + 1.0Eh 60° Seismic	80.38	0.0041	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh 60° Seismic	86.79	0.0045	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 60° Seismic	90.00	0.0045	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 60° Seismic	93.21	0.005	0.0076	0.0049	0.009
1.2D + 1.0Ev + 1.0Eh 60° Seismic	130.00	0.0083	0.0082	0.0070	0.0106
1.2D + 1.0Ev + 1.0Eh 60° Seismic	140.00	0.0095	0.0085	0.0173	0.0192
1.2D + 1.0Ev + 1.0Eh 60° Seismic	170.00	0.0146	0.0051	0.0096	0.0109
1.2D + 1.0Ev + 1.0Eh 60° Seismic	180.00	0.0162	0.0041	0.0104	0.0111
1.2D + 1.0Ev + 1.0Eh 60° Seismic	190.00	0.0175	0.0032	0.0075	0.0081
1.2D + 1.0Ev + 1.0Eh 60° Seismic	200.00	0.0187	0.0023	0.0070	0.0074
1.2D + 1.0Ev + 1.0Eh 60° Seismic	220.00	0.0206	0.0008	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 60° Seismic	300.00	0.0288	-0.0014	0.0151	0.0152
1.2D + 1.0Ev + 1.0Eh 60° Seismic	320.00	0.0324	-0.0009	0.0173	0.0173
1.2D + 1.0Ev + 1.0Eh 60° Seismic	330.00	0.0343	-0.0007	0.0111	0.0111
1.2D + 1.0Ev + 1.0Eh 60° Seismic	336.42	0.0355	-0.0006	0.0117	0.0117
1.2D + 1.0Ev + 1.0Eh 60° Seismic	339.63	0.0361	-0.0005	0.0215	0.0215
1.2D + 1.0Ev + 1.0Eh 60° Seismic	356.42	0.0389	-0.0003	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 60° Seismic	363.58	0.04	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 60° Seismic	380.00	0.0427	-0.0001	0.0265	0.0265
1.2D + 1.0Ev + 1.0Eh 60° Seismic	383.58	0.0437	-0.0001	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 60° Seismic	386.79	0.0445	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 60° Seismic	396.42	0.0471	0.0000	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 60° Seismic	403.58	0.0492	0.0000	0.0141	0.0141
1.2D + 1.0Ev + 1.0Eh 60° Seismic	406.79	0.05	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 60° Seismic	416.42	0.0522	0.0000	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 60° Seismic	419.63	0.0528	0.0000	0.0191	0.0191
1.2D + 1.0Ev + 1.0Eh 60° Seismic	420.38	0.0529	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 60° Seismic	426.79	0.0539	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 60° Seismic	430.00	0.0543	0.0000	0.0069	0.0069
1.2D + 1.0Ev + 1.0Eh 60° Seismic	433.21	0.0547	0.0000	0.0062	0.0062
1.2D + 1.0Ev + 1.0Eh 60° Seismic	456.42	0.0557	0.0000	0.0115	0.0115
1.2D + 1.0Ev + 1.0Eh 60° Seismic	460.00	0.0558	0.0000	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh 60° Seismic	463.58	0.0561	0.0000	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 60° Seismic	476.42	0.0571	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 60° Seismic	480.00	0.0574	0.0000	0.0058	0.0058
1.2D + 1.0Ev + 1.0Eh 90° Seismic	3.40	0.0011	0.0104	0.0209	0.0234
1.2D + 1.0Ev + 1.0Eh 90° Seismic	66.79	0.0036	0.0083	0.0051	0.0097
1.2D + 1.0Ev + 1.0Eh 90° Seismic	80.38	0.0045	0.0079	0.0133	0.0155
1.2D + 1.0Ev + 1.0Eh 90° Seismic	86.79	0.0049	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 90° Seismic	90.00	0.0043	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 90° Seismic	93.21	0.0054	0.0076	0.0049	0.0091

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 90° Seismic	130.00	0.0081	0.0082	0.0071	0.0107
1.2D + 1.0Ev + 1.0Eh 90° Seismic	140.00	0.0093	0.0085	0.0195	0.0212
1.2D + 1.0Ev + 1.0Eh 90° Seismic	170.00	0.0149	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh 90° Seismic	180.00	0.0161	0.0041	0.0104	0.0112
1.2D + 1.0Ev + 1.0Eh 90° Seismic	190.00	0.0176	0.0032	0.0076	0.0083
1.2D + 1.0Ev + 1.0Eh 90° Seismic	200.00	0.0188	0.0024	0.0074	0.0077
1.2D + 1.0Ev + 1.0Eh 90° Seismic	220.00	0.0205	0.0008	0.0146	0.0147
1.2D + 1.0Ev + 1.0Eh 90° Seismic	300.00	0.0289	-0.0014	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 90° Seismic	320.00	0.0324	-0.0009	0.0167	0.0167
1.2D + 1.0Ev + 1.0Eh 90° Seismic	330.00	0.0348	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 90° Seismic	336.42	0.036	-0.0006	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 90° Seismic	339.63	0.036	-0.0005	0.0222	0.0222
1.2D + 1.0Ev + 1.0Eh 90° Seismic	356.42	0.0393	-0.0003	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 90° Seismic	363.58	0.0403	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 90° Seismic	380.00	0.043	-0.0001	0.0280	0.028
1.2D + 1.0Ev + 1.0Eh 90° Seismic	383.58	0.0443	-0.0001	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 90° Seismic	386.79	0.0448	-0.0001	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 90° Seismic	396.42	0.0477	0.0000	0.0151	0.0151
1.2D + 1.0Ev + 1.0Eh 90° Seismic	403.58	0.0498	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 90° Seismic	406.79	0.0502	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 90° Seismic	416.42	0.0527	0.0000	0.0122	0.0122
1.2D + 1.0Ev + 1.0Eh 90° Seismic	419.63	0.053	0.0000	0.0196	0.0196
1.2D + 1.0Ev + 1.0Eh 90° Seismic	420.38	0.0531	0.0000	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 90° Seismic	426.79	0.0541	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 90° Seismic	430.00	0.0549	0.0000	0.0070	0.007
1.2D + 1.0Ev + 1.0Eh 90° Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 90° Seismic	456.42	0.0562	0.0000	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 90° Seismic	460.00	0.0563	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 90° Seismic	463.58	0.0566	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 90° Seismic	476.42	0.0576	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 90° Seismic	480.00	0.0579	0.0000	0.0060	0.006
1.2D + 1.0Ev + 1.0Eh 120° Seismic	3.40	0.0011	0.0104	0.0207	0.0231
1.2D + 1.0Ev + 1.0Eh 120° Seismic	66.79	0.0037	0.0083	0.0046	0.0094
1.2D + 1.0Ev + 1.0Eh 120° Seismic	80.38	0.0047	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh 120° Seismic	86.79	0.005	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 120° Seismic	90.00	0.0043	0.0077	0.0046	0.0089
1.2D + 1.0Ev + 1.0Eh 120° Seismic	93.21	0.0055	0.0077	0.0048	0.0091
1.2D + 1.0Ev + 1.0Eh 120° Seismic	130.00	0.0082	0.0082	0.0072	0.0107
1.2D + 1.0Ev + 1.0Eh 120° Seismic	140.00	0.0094	0.0085	0.0203	0.0219
1.2D + 1.0Ev + 1.0Eh 120° Seismic	170.00	0.0148	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh 120° Seismic	180.00	0.0164	0.0041	0.0100	0.0108
1.2D + 1.0Ev + 1.0Eh 120° Seismic	190.00	0.0175	0.0032	0.0076	0.0082
1.2D + 1.0Ev + 1.0Eh 120° Seismic	200.00	0.0191	0.0024	0.0072	0.0076
1.2D + 1.0Ev + 1.0Eh 120° Seismic	220.00	0.0203	0.0008	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh 120° Seismic	300.00	0.0288	-0.0014	0.0175	0.0175
1.2D + 1.0Ev + 1.0Eh 120° Seismic	320.00	0.0324	-0.0009	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 120° Seismic	330.00	0.035	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 120° Seismic	336.42	0.0362	-0.0006	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh 120° Seismic	339.63	0.0363	-0.0005	0.0214	0.0214
1.2D + 1.0Ev + 1.0Eh 120° Seismic	356.42	0.0394	-0.0003	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 120° Seismic	363.58	0.0404	-0.0002	0.0107	0.0107
1.2D + 1.0Ev + 1.0Eh 120° Seismic	380.00	0.0431	-0.0001	0.0285	0.0285
1.2D + 1.0Ev + 1.0Eh 120° Seismic	383.58	0.0447	-0.0001	0.0142	0.0142
1.2D + 1.0Ev + 1.0Eh 120° Seismic	386.79	0.0448	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 120° Seismic	396.42	0.048	0.0000	0.0154	0.0154
1.2D + 1.0Ev + 1.0Eh 120° Seismic	403.58	0.05	0.0000	0.0148	0.0148
1.2D + 1.0Ev + 1.0Eh 120° Seismic	406.79	0.0503	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 120° Seismic	416.42	0.053	0.0000	0.0127	0.0127
1.2D + 1.0Ev + 1.0Eh 120° Seismic	419.63	0.053	0.0000	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 120° Seismic	420.38	0.0532	0.0000	0.0150	0.015
1.2D + 1.0Ev + 1.0Eh 120° Seismic	426.79	0.0542	0.0000	0.0083	0.0083
1.2D + 1.0Ev + 1.0Eh 120° Seismic	430.00	0.0551	0.0000	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh 120° Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 120° Seismic	456.42	0.0565	0.0000	0.0115	0.0115
1.2D + 1.0Ev + 1.0Eh 120° Seismic	460.00	0.0566	0.0000	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh 120° Seismic	463.58	0.0569	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 120° Seismic	476.42	0.0579	0.0000	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh 120° Seismic	480.00	0.0582	0.0000	0.0061	0.0061

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 180° Seismic	3.40	0.0011	0.0104	0.0208	0.0233
1.2D + 1.0Ev + 1.0Eh 180° Seismic	66.79	0.0033	0.0083	0.0052	0.0097
1.2D + 1.0Ev + 1.0Eh 180° Seismic	80.38	0.0041	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh 180° Seismic	86.79	0.0045	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 180° Seismic	90.00	0.0045	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 180° Seismic	93.21	0.005	0.0076	0.0049	0.009
1.2D + 1.0Ev + 1.0Eh 180° Seismic	130.00	0.0083	0.0082	0.0070	0.0106
1.2D + 1.0Ev + 1.0Eh 180° Seismic	140.00	0.0095	0.0085	0.0173	0.0192
1.2D + 1.0Ev + 1.0Eh 180° Seismic	170.00	0.0146	0.0051	0.0096	0.0109
1.2D + 1.0Ev + 1.0Eh 180° Seismic	180.00	0.0162	0.0041	0.0104	0.0111
1.2D + 1.0Ev + 1.0Eh 180° Seismic	190.00	0.0175	0.0032	0.0075	0.0081
1.2D + 1.0Ev + 1.0Eh 180° Seismic	200.00	0.0187	0.0023	0.0070	0.0074
1.2D + 1.0Ev + 1.0Eh 180° Seismic	220.00	0.0206	0.0008	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 180° Seismic	300.00	0.0288	-0.0014	0.0151	0.0152
1.2D + 1.0Ev + 1.0Eh 180° Seismic	320.00	0.0324	-0.0009	0.0173	0.0173
1.2D + 1.0Ev + 1.0Eh 180° Seismic	330.00	0.0343	-0.0007	0.0111	0.0111
1.2D + 1.0Ev + 1.0Eh 180° Seismic	336.42	0.0355	-0.0006	0.0117	0.0118
1.2D + 1.0Ev + 1.0Eh 180° Seismic	339.63	0.0361	-0.0005	0.0215	0.0215
1.2D + 1.0Ev + 1.0Eh 180° Seismic	356.42	0.0389	-0.0003	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 180° Seismic	363.58	0.04	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 180° Seismic	380.00	0.0427	-0.0001	0.0265	0.0265
1.2D + 1.0Ev + 1.0Eh 180° Seismic	383.58	0.0437	-0.0001	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 180° Seismic	386.79	0.0445	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 180° Seismic	396.42	0.0471	0.0000	0.0158	0.0159
1.2D + 1.0Ev + 1.0Eh 180° Seismic	403.58	0.0492	0.0000	0.0141	0.0141
1.2D + 1.0Ev + 1.0Eh 180° Seismic	406.79	0.05	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 180° Seismic	416.42	0.0522	0.0000	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 180° Seismic	419.63	0.0528	0.0000	0.0191	0.0191
1.2D + 1.0Ev + 1.0Eh 180° Seismic	420.38	0.0529	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 180° Seismic	426.79	0.0539	0.0000	0.0081	0.0081
1.2D + 1.0Ev + 1.0Eh 180° Seismic	430.00	0.0543	0.0000	0.0069	0.0069
1.2D + 1.0Ev + 1.0Eh 180° Seismic	433.21	0.0547	0.0000	0.0061	0.0061
1.2D + 1.0Ev + 1.0Eh 180° Seismic	456.42	0.0557	0.0000	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 180° Seismic	460.00	0.0558	0.0000	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh 180° Seismic	463.58	0.0561	0.0000	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 180° Seismic	476.42	0.0571	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 180° Seismic	480.00	0.0574	0.0000	0.0058	0.0058
1.2D + 1.0Ev + 1.0Eh 210° Seismic	3.40	0.0011	0.0104	0.0210	0.0234
1.2D + 1.0Ev + 1.0Eh 210° Seismic	66.79	0.0036	0.0083	0.0051	0.0097
1.2D + 1.0Ev + 1.0Eh 210° Seismic	80.38	0.0045	0.0079	0.0133	0.0155
1.2D + 1.0Ev + 1.0Eh 210° Seismic	86.79	0.0049	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 210° Seismic	90.00	0.0043	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 210° Seismic	93.21	0.0054	0.0076	0.0049	0.0091
1.2D + 1.0Ev + 1.0Eh 210° Seismic	130.00	0.0081	0.0082	0.0071	0.0107
1.2D + 1.0Ev + 1.0Eh 210° Seismic	140.00	0.0093	0.0085	0.0195	0.0212
1.2D + 1.0Ev + 1.0Eh 210° Seismic	170.00	0.0149	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh 210° Seismic	180.00	0.0161	0.0041	0.0104	0.0112
1.2D + 1.0Ev + 1.0Eh 210° Seismic	190.00	0.0176	0.0032	0.0076	0.0083
1.2D + 1.0Ev + 1.0Eh 210° Seismic	200.00	0.0188	0.0024	0.0074	0.0077
1.2D + 1.0Ev + 1.0Eh 210° Seismic	220.00	0.0205	0.0009	0.0146	0.0147
1.2D + 1.0Ev + 1.0Eh 210° Seismic	300.00	0.0289	-0.0014	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 210° Seismic	320.00	0.0324	-0.0009	0.0167	0.0167
1.2D + 1.0Ev + 1.0Eh 210° Seismic	330.00	0.0348	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 210° Seismic	336.42	0.036	-0.0006	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 210° Seismic	339.63	0.036	-0.0005	0.0222	0.0222
1.2D + 1.0Ev + 1.0Eh 210° Seismic	356.42	0.0393	-0.0003	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 210° Seismic	363.58	0.0403	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 210° Seismic	380.00	0.043	-0.0001	0.0280	0.028
1.2D + 1.0Ev + 1.0Eh 210° Seismic	383.58	0.0443	-0.0001	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 210° Seismic	386.79	0.0448	-0.0001	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 210° Seismic	396.42	0.0477	0.0000	0.0151	0.0151
1.2D + 1.0Ev + 1.0Eh 210° Seismic	403.58	0.0498	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 210° Seismic	406.79	0.0502	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 210° Seismic	416.42	0.0527	0.0000	0.0122	0.0122
1.2D + 1.0Ev + 1.0Eh 210° Seismic	419.63	0.053	0.0000	0.0196	0.0196
1.2D + 1.0Ev + 1.0Eh 210° Seismic	420.38	0.0531	0.0000	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 210° Seismic	426.79	0.0541	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 210° Seismic	430.00	0.0549	0.0000	0.0070	0.007

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 210° Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 210° Seismic	456.42	0.0562	0.0000	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 210° Seismic	460.00	0.0563	0.0000	0.0148	0.0148
1.2D + 1.0Ev + 1.0Eh 210° Seismic	463.58	0.0566	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 210° Seismic	476.42	0.0576	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 210° Seismic	480.00	0.0579	0.0000	0.0060	0.006
1.2D + 1.0Ev + 1.0Eh 240° Seismic	3.40	0.0011	0.0104	0.0207	0.0232
1.2D + 1.0Ev + 1.0Eh 240° Seismic	66.79	0.0037	0.0083	0.0046	0.0094
1.2D + 1.0Ev + 1.0Eh 240° Seismic	80.38	0.0047	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh 240° Seismic	86.79	0.005	0.0078	0.0044	0.009
1.2D + 1.0Ev + 1.0Eh 240° Seismic	90.00	0.0043	0.0077	0.0046	0.0089
1.2D + 1.0Ev + 1.0Eh 240° Seismic	93.21	0.0055	0.0077	0.0048	0.0091
1.2D + 1.0Ev + 1.0Eh 240° Seismic	130.00	0.0082	0.0082	0.0072	0.0107
1.2D + 1.0Ev + 1.0Eh 240° Seismic	140.00	0.0094	0.0085	0.0203	0.0219
1.2D + 1.0Ev + 1.0Eh 240° Seismic	170.00	0.0148	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh 240° Seismic	180.00	0.0164	0.0041	0.0100	0.0108
1.2D + 1.0Ev + 1.0Eh 240° Seismic	190.00	0.0175	0.0032	0.0076	0.0082
1.2D + 1.0Ev + 1.0Eh 240° Seismic	200.00	0.0191	0.0024	0.0072	0.0076
1.2D + 1.0Ev + 1.0Eh 240° Seismic	220.00	0.0203	0.0009	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh 240° Seismic	300.00	0.0288	-0.0014	0.0175	0.0175
1.2D + 1.0Ev + 1.0Eh 240° Seismic	320.00	0.0324	-0.0009	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 240° Seismic	330.00	0.035	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 240° Seismic	336.42	0.0362	-0.0006	0.0121	0.0121
1.2D + 1.0Ev + 1.0Eh 240° Seismic	339.63	0.0363	-0.0005	0.0214	0.0214
1.2D + 1.0Ev + 1.0Eh 240° Seismic	356.42	0.0394	-0.0003	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 240° Seismic	363.58	0.0404	-0.0002	0.0107	0.0107
1.2D + 1.0Ev + 1.0Eh 240° Seismic	380.00	0.0431	-0.0001	0.0285	0.0285
1.2D + 1.0Ev + 1.0Eh 240° Seismic	383.58	0.0447	-0.0001	0.0142	0.0142
1.2D + 1.0Ev + 1.0Eh 240° Seismic	386.79	0.0448	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 240° Seismic	396.42	0.048	0.0000	0.0154	0.0154
1.2D + 1.0Ev + 1.0Eh 240° Seismic	403.58	0.05	0.0000	0.0148	0.0148
1.2D + 1.0Ev + 1.0Eh 240° Seismic	406.79	0.0503	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 240° Seismic	416.42	0.053	0.0000	0.0127	0.0127
1.2D + 1.0Ev + 1.0Eh 240° Seismic	419.63	0.053	0.0000	0.0189	0.0189
1.2D + 1.0Ev + 1.0Eh 240° Seismic	420.38	0.0532	0.0000	0.0150	0.015
1.2D + 1.0Ev + 1.0Eh 240° Seismic	426.79	0.0542	0.0000	0.0083	0.0083
1.2D + 1.0Ev + 1.0Eh 240° Seismic	430.00	0.0551	0.0000	0.0071	0.0071
1.2D + 1.0Ev + 1.0Eh 240° Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 240° Seismic	456.42	0.0565	0.0000	0.0115	0.0115
1.2D + 1.0Ev + 1.0Eh 240° Seismic	460.00	0.0566	0.0000	0.0152	0.0152
1.2D + 1.0Ev + 1.0Eh 240° Seismic	463.58	0.0569	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 240° Seismic	476.42	0.0579	0.0000	0.0046	0.0046
1.2D + 1.0Ev + 1.0Eh 240° Seismic	480.00	0.0582	0.0000	0.0061	0.0061
1.2D + 1.0Ev + 1.0Eh 300° Seismic	3.40	0.0011	0.0104	0.0208	0.0232
1.2D + 1.0Ev + 1.0Eh 300° Seismic	66.79	0.0033	0.0083	0.0052	0.0097
1.2D + 1.0Ev + 1.0Eh 300° Seismic	80.38	0.0041	0.0079	0.0145	0.0165
1.2D + 1.0Ev + 1.0Eh 300° Seismic	86.79	0.0045	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 300° Seismic	90.00	0.0045	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 300° Seismic	93.21	0.005	0.0076	0.0049	0.009
1.2D + 1.0Ev + 1.0Eh 300° Seismic	130.00	0.0083	0.0082	0.0070	0.0106
1.2D + 1.0Ev + 1.0Eh 300° Seismic	140.00	0.0095	0.0085	0.0173	0.0192
1.2D + 1.0Ev + 1.0Eh 300° Seismic	170.00	0.0146	0.0051	0.0096	0.0109
1.2D + 1.0Ev + 1.0Eh 300° Seismic	180.00	0.0162	0.0041	0.0104	0.0111
1.2D + 1.0Ev + 1.0Eh 300° Seismic	190.00	0.0175	0.0032	0.0075	0.0081
1.2D + 1.0Ev + 1.0Eh 300° Seismic	200.00	0.0187	0.0023	0.0070	0.0074
1.2D + 1.0Ev + 1.0Eh 300° Seismic	220.00	0.0206	0.0008	0.0132	0.0132
1.2D + 1.0Ev + 1.0Eh 300° Seismic	300.00	0.0288	-0.0014	0.0151	0.0152
1.2D + 1.0Ev + 1.0Eh 300° Seismic	320.00	0.0324	-0.0009	0.0173	0.0173
1.2D + 1.0Ev + 1.0Eh 300° Seismic	330.00	0.0343	-0.0007	0.0111	0.0111
1.2D + 1.0Ev + 1.0Eh 300° Seismic	336.42	0.0355	-0.0006	0.0117	0.0117
1.2D + 1.0Ev + 1.0Eh 300° Seismic	339.63	0.0361	-0.0005	0.0215	0.0215
1.2D + 1.0Ev + 1.0Eh 300° Seismic	356.42	0.0389	-0.0003	0.0106	0.0106
1.2D + 1.0Ev + 1.0Eh 300° Seismic	363.58	0.04	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 300° Seismic	380.00	0.0427	-0.0001	0.0265	0.0265
1.2D + 1.0Ev + 1.0Eh 300° Seismic	383.58	0.0437	-0.0001	0.0146	0.0146
1.2D + 1.0Ev + 1.0Eh 300° Seismic	386.79	0.0445	-0.0001	0.0157	0.0157
1.2D + 1.0Ev + 1.0Eh 300° Seismic	396.42	0.0471	0.0000	0.0159	0.0159
1.2D + 1.0Ev + 1.0Eh 300° Seismic	403.58	0.0492	0.0000	0.0141	0.0141

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Ev + 1.0Eh 300° Seismic	406.79	0.05	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 300° Seismic	416.42	0.0522	0.0000	0.0125	0.0125
1.2D + 1.0Ev + 1.0Eh 300° Seismic	419.63	0.0528	0.0000	0.0191	0.0191
1.2D + 1.0Ev + 1.0Eh 300° Seismic	420.38	0.0529	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 300° Seismic	426.79	0.0539	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 300° Seismic	430.00	0.0543	0.0000	0.0069	0.0069
1.2D + 1.0Ev + 1.0Eh 300° Seismic	433.21	0.0547	0.0000	0.0062	0.0062
1.2D + 1.0Ev + 1.0Eh 300° Seismic	456.42	0.0557	0.0000	0.0115	0.0115
1.2D + 1.0Ev + 1.0Eh 300° Seismic	460.00	0.0558	0.0000	0.0128	0.0128
1.2D + 1.0Ev + 1.0Eh 300° Seismic	463.58	0.0561	0.0000	0.0031	0.0031
1.2D + 1.0Ev + 1.0Eh 300° Seismic	476.42	0.0571	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 300° Seismic	480.00	0.0574	0.0000	0.0058	0.0058
1.2D + 1.0Ev + 1.0Eh 330° Seismic	3.40	0.0011	0.0104	0.0209	0.0233
1.2D + 1.0Ev + 1.0Eh 330° Seismic	66.79	0.0036	0.0083	0.0051	0.0097
1.2D + 1.0Ev + 1.0Eh 330° Seismic	80.38	0.0045	0.0079	0.0133	0.0155
1.2D + 1.0Ev + 1.0Eh 330° Seismic	86.79	0.0049	0.0078	0.0044	0.0089
1.2D + 1.0Ev + 1.0Eh 330° Seismic	90.00	0.0043	0.0077	0.0045	0.0089
1.2D + 1.0Ev + 1.0Eh 330° Seismic	93.21	0.0054	0.0076	0.0049	0.0091
1.2D + 1.0Ev + 1.0Eh 330° Seismic	130.00	0.0081	0.0082	0.0071	0.0107
1.2D + 1.0Ev + 1.0Eh 330° Seismic	140.00	0.0093	0.0085	0.0195	0.0212
1.2D + 1.0Ev + 1.0Eh 330° Seismic	170.00	0.0149	0.0051	0.0097	0.011
1.2D + 1.0Ev + 1.0Eh 330° Seismic	180.00	0.0161	0.0041	0.0104	0.0112
1.2D + 1.0Ev + 1.0Eh 330° Seismic	190.00	0.0176	0.0032	0.0076	0.0083
1.2D + 1.0Ev + 1.0Eh 330° Seismic	200.00	0.0188	0.0024	0.0074	0.0077
1.2D + 1.0Ev + 1.0Eh 330° Seismic	220.00	0.0205	0.0009	0.0146	0.0147
1.2D + 1.0Ev + 1.0Eh 330° Seismic	300.00	0.0289	-0.0014	0.0169	0.0169
1.2D + 1.0Ev + 1.0Eh 330° Seismic	320.00	0.0324	-0.0009	0.0167	0.0167
1.2D + 1.0Ev + 1.0Eh 330° Seismic	330.00	0.0348	-0.0007	0.0113	0.0113
1.2D + 1.0Ev + 1.0Eh 330° Seismic	336.42	0.036	-0.0006	0.0116	0.0116
1.2D + 1.0Ev + 1.0Eh 330° Seismic	339.63	0.036	-0.0005	0.0222	0.0222
1.2D + 1.0Ev + 1.0Eh 330° Seismic	356.42	0.0393	-0.0003	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 330° Seismic	363.58	0.0403	-0.0002	0.0110	0.011
1.2D + 1.0Ev + 1.0Eh 330° Seismic	380.00	0.043	-0.0001	0.0280	0.028
1.2D + 1.0Ev + 1.0Eh 330° Seismic	383.58	0.0443	-0.0001	0.0145	0.0145
1.2D + 1.0Ev + 1.0Eh 330° Seismic	386.79	0.0448	-0.0001	0.0158	0.0158
1.2D + 1.0Ev + 1.0Eh 330° Seismic	396.42	0.0477	0.0000	0.0151	0.0151
1.2D + 1.0Ev + 1.0Eh 330° Seismic	403.58	0.0498	0.0000	0.0147	0.0147
1.2D + 1.0Ev + 1.0Eh 330° Seismic	406.79	0.0502	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 330° Seismic	416.42	0.0527	0.0000	0.0122	0.0122
1.2D + 1.0Ev + 1.0Eh 330° Seismic	419.63	0.053	0.0000	0.0196	0.0196
1.2D + 1.0Ev + 1.0Eh 330° Seismic	420.38	0.0531	0.0000	0.0139	0.0139
1.2D + 1.0Ev + 1.0Eh 330° Seismic	426.79	0.0541	0.0000	0.0082	0.0082
1.2D + 1.0Ev + 1.0Eh 330° Seismic	430.00	0.0549	0.0000	0.0070	0.007
1.2D + 1.0Ev + 1.0Eh 330° Seismic	433.21	0.0549	0.0000	0.0064	0.0064
1.2D + 1.0Ev + 1.0Eh 330° Seismic	456.42	0.0562	0.0000	0.0118	0.0118
1.2D + 1.0Ev + 1.0Eh 330° Seismic	460.00	0.0563	0.0000	0.0149	0.0149
1.2D + 1.0Ev + 1.0Eh 330° Seismic	463.58	0.0566	0.0000	0.0035	0.0035
1.2D + 1.0Ev + 1.0Eh 330° Seismic	476.42	0.0576	0.0000	0.0044	0.0044
1.2D + 1.0Ev + 1.0Eh 330° Seismic	480.00	0.0579	0.0000	0.0060	0.006
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	3.40	0.0046	0.0129	0.0751	0.0758
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	66.79	0.0547	0.0103	0.0313	0.033
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	80.38	0.0632	0.0102	0.0509	0.0517
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	86.79	0.067	0.0100	0.0337	0.0351
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	90.00	0.0678	0.0100	0.0323	0.0338
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	93.21	0.0706	0.0099	0.0312	0.0328
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	130.00	0.0857	0.0100	0.0236	0.0248
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	140.00	0.09	0.0101	0.0604	0.0608
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	170.00	0.1138	0.0068	0.0378	0.0384
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	180.00	0.1195	0.0058	0.0344	0.0347
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	190.00	0.1222	0.0048	0.0106	0.0116
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	200.00	0.1233	0.0039	0.0125	0.0126
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	220.00	0.119	0.0021	0.0158	0.0158
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	300.00	0.093	-0.0022	0.0124	0.0126
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	320.00	0.096	-0.0016	0.0397	0.0397
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	330.00	0.0996	-0.0013	0.0159	0.0159
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	336.42	0.1012	-0.0011	0.0146	0.0146
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	339.63	0.1015	-0.0010	0.0255	0.0255
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	356.42	0.1042	-0.0007	0.0081	0.0081

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	363.58	0.1043	-0.0006	0.0045	0.0045
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	380.00	0.105	-0.0004	0.0731	0.0731
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	383.58	0.1072	-0.0003	0.0119	0.0119
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	386.79	0.1077	-0.0003	0.0238	0.0238
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	396.42	0.1118	-0.0002	0.0115	0.0115
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	403.58	0.1144	-0.0001	0.0059	0.0059
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	406.79	0.1141	-0.0001	0.0026	0.0026
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	416.42	0.1137	0.0000	0.0111	0.0111
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	419.63	0.1118	0.0000	0.0285	0.0285
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	420.38	0.1114	0.0000	0.0342	0.0342
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	426.79	0.1069	0.0000	0.0489	0.0489
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	430.00	0.1045	0.0000	0.0549	0.0549
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	433.21	0.1006	0.0000	0.0658	0.0658
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	456.42	0.0674	0.0000	0.1130	0.113
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	460.00	0.0616	0.0000	0.0760	0.076
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	463.58	0.0565	0.0000	0.0894	0.0894
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	476.42	0.0381	0.0000	0.0823	0.0823
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	480.00	0.033	0.0000	0.0803	0.0803
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	3.40	0.0043	0.0136	0.0754	0.0763
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	66.79	0.054	0.0110	0.0334	0.035
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	80.38	0.063	0.0107	0.0513	0.0521
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	86.79	0.0672	0.0105	0.0377	0.0392
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	90.00	0.0692	0.0104	0.0366	0.0381
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	93.21	0.0713	0.0103	0.0360	0.0373
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	130.00	0.092	0.0101	0.0338	0.0349
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	140.00	0.0985	0.0101	0.0659	0.0663
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	170.00	0.1298	0.0070	0.0552	0.0556
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	180.00	0.1385	0.0060	0.0472	0.0476
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	190.00	0.1449	0.0049	0.0310	0.0313
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	200.00	0.1492	0.0039	0.0141	0.0142
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	220.00	0.1536	0.0020	0.0243	0.0243
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	300.00	0.1617	-0.0027	0.0296	0.0298
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	320.00	0.1719	-0.0020	0.0596	0.0596
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	330.00	0.1782	-0.0017	0.0353	0.0353
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	336.42	0.182	-0.0015	0.0344	0.0344
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	339.63	0.1839	-0.0014	0.0447	0.0447
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	356.42	0.1921	-0.0010	0.0277	0.0277
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	363.58	0.1949	-0.0009	0.0268	0.0268
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	380.00	0.2022	-0.0006	0.0884	0.0884
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	383.58	0.2052	-0.0006	0.0350	0.035
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	386.79	0.2077	-0.0005	0.0492	0.0492
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	396.42	0.2157	-0.0005	0.0413	0.0413
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	403.58	0.2219	-0.0004	0.0306	0.0306
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	406.79	0.2239	-0.0004	0.0385	0.0385
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	416.42	0.228	-0.0004	0.0139	0.0139
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	419.63	0.2283	-0.0003	0.0294	0.0294
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	420.38	0.2281	-0.0003	0.0185	0.0185
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	426.79	0.2272	-0.0003	0.0170	0.017
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	430.00	0.226	-0.0003	0.0241	0.0241
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	433.21	0.2245	-0.0002	0.0317	0.0317
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	456.42	0.2048	-0.0001	0.0754	0.0754
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	460.00	0.2013	-0.0001	0.0342	0.0342
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	463.58	0.1983	-0.0001	0.0539	0.0539
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	476.42	0.1877	-0.0001	0.0473	0.0473
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	480.00	0.1848	-0.0001	0.0448	0.0448
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	3.40	0.0047	0.0214	0.0770	0.0794
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	66.79	0.0546	0.0189	0.0329	0.0379
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	80.38	0.0634	0.0184	0.0500	0.0532
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	86.79	0.0674	0.0181	0.0361	0.0401
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	90.00	0.0682	0.0180	0.0348	0.0391
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	93.21	0.0713	0.0178	0.0339	0.0383
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	130.00	0.0889	0.0165	0.0296	0.0331
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	140.00	0.0944	0.0163	0.0632	0.0648
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	170.00	0.1227	0.0147	0.0482	0.0503
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	180.00	0.1301	0.0142	0.0358	0.0385
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	190.00	0.1347	0.0137	0.0237	0.0274
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	200.00	0.1379	0.0133	0.0127	0.0173
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	220.00	0.1383	0.0126	0.0237	0.0259

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	300.00	0.1331	0.0161	0.0247	0.028
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	320.00	0.1406	0.0121	0.0504	0.0515
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	330.00	0.1459	0.0103	0.0282	0.03
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	336.42	0.1489	0.0092	0.0269	0.028
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	339.63	0.1502	0.0087	0.0382	0.0392
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	356.42	0.1564	0.0064	0.0208	0.0215
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	363.58	0.1582	0.0055	0.0195	0.0203
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	380.00	0.1632	0.0040	0.0813	0.0814
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	383.58	0.1657	0.0037	0.0262	0.0265
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	386.79	0.1675	0.0033	0.0389	0.039
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	396.42	0.1738	0.0025	0.0310	0.031
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	403.58	0.1786	0.0020	0.0214	0.0215
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	406.79	0.1798	0.0019	0.0293	0.0294
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	416.42	0.1821	0.0016	0.0172	0.0172
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	419.63	0.1818	0.0014	0.0509	0.0509
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	420.38	0.1814	0.0014	0.0393	0.0393
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	426.79	0.1793	0.0011	0.0374	0.0374
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	430.00	0.1778	0.0010	0.0439	0.0439
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	433.21	0.1757	0.0009	0.0520	0.052
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	456.42	0.154	0.0004	0.0989	0.0989
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	460.00	0.1504	0.0004	0.0600	0.06
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	463.58	0.1473	0.0003	0.0746	0.0746
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	476.42	0.1369	0.0003	0.0672	0.0672
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	480.00	0.1341	0.0003	0.0652	0.0652
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	3.40	0.0046	0.0128	0.0752	0.0759
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	66.79	0.0548	0.0103	0.0314	0.033
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	80.38	0.0632	0.0102	0.0510	0.0518
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	86.79	0.067	0.0100	0.0338	0.0351
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	90.00	0.0679	0.0100	0.0324	0.0338
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	93.21	0.0707	0.0099	0.0313	0.0328
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	130.00	0.0858	0.0100	0.0236	0.0248
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	140.00	0.0901	0.0101	0.0603	0.0608
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	170.00	0.1139	0.0067	0.0376	0.0382
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	180.00	0.1194	0.0057	0.0269	0.0272
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	190.00	0.122	0.0047	0.0104	0.0114
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	200.00	0.1231	0.0038	0.0126	0.0127
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	220.00	0.1187	0.0021	0.0157	0.0158
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	300.00	0.0931	-0.0023	0.0129	0.0131
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	320.00	0.0963	-0.0016	0.0401	0.0401
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	330.00	0.0999	-0.0012	0.0162	0.0162
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	336.42	0.1015	-0.0011	0.0149	0.0149
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	339.63	0.1019	-0.0010	0.0259	0.0259
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	356.42	0.1046	-0.0006	0.0083	0.0083
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	363.58	0.1048	-0.0005	0.0046	0.0046
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	380.00	0.1055	0.0002	0.0734	0.0734
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	383.58	0.1077	0.0002	0.0117	0.0117
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	386.79	0.1082	0.0002	0.0236	0.0236
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	396.42	0.1122	0.0003	0.0110	0.011
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	403.58	0.1148	0.0004	0.0038	0.0038
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	406.79	0.1145	0.0005	0.0083	0.0084
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	416.42	0.1139	0.0007	0.0231	0.0231
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	419.63	0.1118	0.0007	0.0567	0.0568
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	420.38	0.1111	0.0007	0.0507	0.0507
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	426.79	0.1065	0.0006	0.0505	0.0505
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	430.00	0.104	0.0005	0.0575	0.0575
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	433.21	0.1	0.0005	0.0664	0.0664
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	456.42	0.0666	0.0002	0.1136	0.1136
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	460.00	0.0607	0.0002	0.0767	0.0767
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	463.58	0.0556	0.0002	0.0901	0.0901
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	476.42	0.037	0.0001	0.0830	0.083
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	480.00	0.0319	0.0001	0.0810	0.081
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	3.40	0.0043	0.0136	0.0754	0.0763
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	66.79	0.054	0.0110	0.0334	0.0349
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	80.38	0.063	0.0107	0.0512	0.052
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	86.79	0.0672	0.0105	0.0377	0.0391
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	90.00	0.0691	0.0104	0.0366	0.038
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	93.21	0.0713	0.0103	0.0359	0.0373
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	130.00	0.0919	0.0101	0.0338	0.0349

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	140.00	0.0984	0.0101	0.0659	0.0663
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	170.00	0.1298	0.0069	0.0554	0.0558
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	180.00	0.1386	0.0058	0.0556	0.0559
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	190.00	0.1451	0.0048	0.0311	0.0315
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	200.00	0.1494	0.0038	0.0141	0.0142
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	220.00	0.1538	0.0020	0.0243	0.0243
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	300.00	0.1615	-0.0027	0.0293	0.0295
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	320.00	0.1716	-0.0019	0.0592	0.0592
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	330.00	0.1778	-0.0016	0.0349	0.0349
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	336.42	0.1816	-0.0014	0.0340	0.0341
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	339.63	0.1835	-0.0013	0.0443	0.0443
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	356.42	0.1917	-0.0009	0.0275	0.0275
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	363.58	0.1944	-0.0008	0.0267	0.0267
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	380.00	0.2017	-0.0005	0.0883	0.0883
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	383.58	0.2047	-0.0005	0.0352	0.0352
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	386.79	0.2072	-0.0004	0.0494	0.0494
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	396.42	0.2153	-0.0003	0.0419	0.0419
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	403.58	0.2216	-0.0002	0.0331	0.0331
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	406.79	0.2236	-0.0002	0.0327	0.0327
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	416.42	0.2278	-0.0001	0.0233	0.0233
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	419.63	0.2283	-0.0001	0.0199	0.0199
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	420.38	0.2284	-0.0001	0.0066	0.0066
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	426.79	0.2276	-0.0001	0.0152	0.0152
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	430.00	0.2266	-0.0001	0.0212	0.0212
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	433.21	0.2251	-0.0001	0.0310	0.0310
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	456.42	0.2058	-0.0001	0.0745	0.0745
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	460.00	0.2023	-0.0001	0.0333	0.0333
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	463.58	0.1994	-0.0001	0.0530	0.0530
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	476.42	0.189	0.0000	0.0464	0.0464
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	480.00	0.1861	0.0000	0.0440	0.0440
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	3.40	0.0047	0.0210	0.0770	0.0794
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	66.79	0.0546	0.0186	0.0328	0.0377
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	80.38	0.0633	0.0181	0.0499	0.0530
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	86.79	0.0673	0.0178	0.0360	0.0399
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	90.00	0.0682	0.0176	0.0347	0.0388
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	93.21	0.0712	0.0175	0.0338	0.0380
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	130.00	0.0887	0.0164	0.0294	0.0329
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	140.00	0.0943	0.0162	0.0629	0.0646
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	170.00	0.1225	0.0145	0.0481	0.0502
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	180.00	0.1299	0.0140	0.0454	0.0476
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	190.00	0.1346	0.0136	0.0236	0.0272
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	200.00	0.1377	0.0132	0.0127	0.0172
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	220.00	0.138	0.0125	0.0235	0.0257
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	300.00	0.1321	0.0160	0.0239	0.0273
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	320.00	0.1392	0.0117	0.0494	0.0504
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	330.00	0.1443	0.0098	0.0274	0.0291
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	336.42	0.1473	0.0086	0.0262	0.0272
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	339.63	0.1485	0.0081	0.0375	0.0384
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	356.42	0.1546	0.0056	0.0204	0.0209
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	363.58	0.1564	0.0048	0.0192	0.0198
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	380.00	0.1613	0.0032	0.0807	0.0807
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	383.58	0.1638	0.0028	0.0263	0.0264
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	386.79	0.1656	0.0025	0.0389	0.0389
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	396.42	0.172	0.0017	0.0314	0.0314
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	403.58	0.1767	0.0011	0.0239	0.0239
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	406.79	0.178	0.0009	0.0226	0.0226
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	416.42	0.1805	0.0005	0.0222	0.0222
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	419.63	0.1803	0.0003	0.0427	0.0427
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	420.38	0.1802	0.0003	0.0317	0.0317
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	426.79	0.1783	0.0002	0.0362	0.0362
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	430.00	0.1768	0.0001	0.0419	0.0419
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	433.21	0.1749	0.0001	0.0514	0.0514
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	456.42	0.1536	-0.0002	0.0980	0.0980
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	460.00	0.1501	-0.0001	0.0594	0.0594
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	463.58	0.147	-0.0002	0.0737	0.0737
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	476.42	0.1368	-0.0001	0.0664	0.0664
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	480.00	0.1341	-0.0001	0.0644	0.0644
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	3.40	0.0046	0.0129	0.0752	0.0759

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	66.79	0.0548	0.0103	0.0314	0.033
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	80.38	0.0632	0.0102	0.0510	0.0518
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	86.79	0.067	0.0100	0.0338	0.0351
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	90.00	0.0679	0.0100	0.0324	0.0339
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	93.21	0.0707	0.0099	0.0313	0.0328
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	130.00	0.0858	0.0100	0.0236	0.0248
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	140.00	0.0901	0.0101	0.0603	0.0608
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	170.00	0.1139	0.0069	0.0376	0.0382
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	180.00	0.1194	0.0059	0.0258	0.0265
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	190.00	0.122	0.0049	0.0104	0.0115
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	200.00	0.1231	0.0039	0.0126	0.0127
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	220.00	0.1187	0.0021	0.0157	0.0157
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	300.00	0.0931	-0.0022	0.0129	0.013
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	320.00	0.0963	-0.0016	0.0402	0.0402
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	330.00	0.0999	-0.0013	0.0162	0.0162
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	336.42	0.1015	-0.0011	0.0149	0.0149
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	339.63	0.1019	-0.0010	0.0258	0.0258
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	356.42	0.1046	-0.0007	0.0083	0.0083
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	363.58	0.1048	-0.0007	0.0046	0.0046
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	380.00	0.1055	-0.0005	0.0734	0.0734
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	383.58	0.1077	-0.0005	0.0117	0.0117
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	386.79	0.1082	-0.0004	0.0236	0.0236
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	396.42	0.1122	-0.0005	0.0110	0.011
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	403.58	0.1148	-0.0006	0.0042	0.0043
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	406.79	0.1145	-0.0006	0.0092	0.0092
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	416.42	0.1139	-0.0007	0.0225	0.0225
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	419.63	0.1118	-0.0007	0.0583	0.0583
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	420.38	0.1111	-0.0007	0.0493	0.0493
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	426.79	0.1065	-0.0006	0.0504	0.0504
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	430.00	0.104	-0.0005	0.0575	0.0575
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	433.21	0.1001	-0.0005	0.0664	0.0664
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	456.42	0.0666	-0.0002	0.1136	0.1136
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	460.00	0.0607	-0.0002	0.0767	0.0767
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	463.58	0.0556	-0.0002	0.0901	0.0901
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	476.42	0.037	-0.0001	0.0830	0.083
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	480.00	0.0319	-0.0001	0.0810	0.081
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	3.40	0.0043	0.0137	0.0754	0.0763
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	66.79	0.054	0.0110	0.0334	0.035
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	80.38	0.063	0.0107	0.0513	0.0521
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	86.79	0.0672	0.0105	0.0377	0.0392
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	90.00	0.0692	0.0104	0.0366	0.0381
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	93.21	0.0713	0.0103	0.0360	0.0373
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	130.00	0.092	0.0101	0.0338	0.0349
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	140.00	0.0985	0.0101	0.0658	0.0663
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	170.00	0.1298	0.0068	0.0552	0.0556
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	180.00	0.1385	0.0057	0.0468	0.0471
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	190.00	0.1449	0.0047	0.0310	0.0313
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	200.00	0.1492	0.0038	0.0141	0.0142
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	220.00	0.1536	0.0020	0.0243	0.0243
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	300.00	0.1617	-0.0026	0.0299	0.03
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	320.00	0.1719	-0.0019	0.0597	0.0597
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	330.00	0.1782	-0.0016	0.0353	0.0353
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	336.42	0.182	-0.0014	0.0344	0.0344
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	339.63	0.1839	-0.0013	0.0446	0.0446
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	356.42	0.1921	-0.0009	0.0277	0.0277
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	363.58	0.1949	-0.0007	0.0268	0.0268
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	380.00	0.2022	-0.0005	0.0885	0.0885
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	383.58	0.2052	-0.0004	0.0350	0.035
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	386.79	0.2077	-0.0003	0.0492	0.0492
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	396.42	0.2157	-0.0002	0.0412	0.0412
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	403.58	0.2219	0.0002	0.0306	0.0306
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	406.79	0.2239	0.0002	0.0383	0.0383
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	416.42	0.2279	0.0002	0.0139	0.0139
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	419.63	0.2283	0.0002	0.0279	0.0279
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	420.38	0.2281	0.0002	0.0189	0.0189
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	426.79	0.2272	0.0002	0.0169	0.0169
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	430.00	0.226	0.0002	0.0241	0.0241
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	433.21	0.2245	0.0002	0.0317	0.0317

ASSET: # 36075, LEE S SUMMIT #1B

STANDARD

ANSI/TIA-222-H

CUSTOMER WISPER ISP, LLC

ENG NO.:

OAA769626_C3_02

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	456.42	0.2048	0.0001	0.0753	0.0753
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	460.00	0.2013	0.0001	0.0340	0.034
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	463.58	0.1983	0.0001	0.0538	0.0538
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	476.42	0.1877	0.0001	0.0473	0.0473
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	480.00	0.1848	0.0001	0.0448	0.0448
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	3.40	0.0047	0.0214	0.0769	0.0794
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	66.79	0.0546	0.0189	0.0329	0.0379
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	80.38	0.0633	0.0184	0.0499	0.0531
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	86.79	0.0673	0.0181	0.0360	0.0401
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	90.00	0.0682	0.0180	0.0347	0.039
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	93.21	0.0712	0.0178	0.0338	0.0382
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	130.00	0.0888	0.0166	0.0296	0.0332
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	140.00	0.0944	0.0163	0.0632	0.0648
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	170.00	0.1227	0.0146	0.0483	0.0505
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	180.00	0.1302	0.0140	0.0429	0.0452
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	190.00	0.1349	0.0136	0.0238	0.0274
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	200.00	0.1381	0.0133	0.0127	0.0172
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	220.00	0.1385	0.0126	0.0237	0.026
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	300.00	0.1331	0.0161	0.0247	0.0281
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	320.00	0.1404	0.0121	0.0500	0.0511
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	330.00	0.1456	0.0103	0.0279	0.0298
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	336.42	0.1486	0.0093	0.0267	0.0278
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	339.63	0.1499	0.0087	0.0379	0.0389
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	356.42	0.156	0.0064	0.0207	0.0214
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	363.58	0.1578	0.0056	0.0194	0.0202
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	380.00	0.1628	0.0040	0.0812	0.0813
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	383.58	0.1653	0.0036	0.0263	0.0266
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	386.79	0.1671	0.0033	0.0390	0.0392
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	396.42	0.1735	0.0025	0.0313	0.0313
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	403.58	0.1783	0.0020	0.0222	0.0223
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	406.79	0.1796	0.0018	0.0264	0.0265
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	416.42	0.182	0.0013	0.0104	0.0105
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	419.63	0.1818	0.0012	0.0194	0.0194
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	420.38	0.1815	0.0012	0.0225	0.0225
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	426.79	0.1796	0.0010	0.0355	0.0355
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	430.00	0.1781	0.0009	0.0408	0.0409
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	433.21	0.1761	0.0008	0.0513	0.0513
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	456.42	0.1546	0.0004	0.0981	0.0981
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	460.00	0.151	0.0003	0.0592	0.0592
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	463.58	0.1479	0.0003	0.0737	0.0737
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	476.42	0.1374	0.0003	0.0664	0.0664
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	480.00	0.1347	0.0003	0.0643	0.0643

MAXIMUM REACTIONS SUMMARY

Anchor Group	Uplift	Shear
BASE	465.07	1.27
A1	34.53	32.97
A2	71.03	59.54