Dish Wireless

Structural Analysis Report

Structure	**:** 200 Foot Guyed Tower
VB Site Name	**:** Quinnipiac 2
VB Site Number	**:** US-CT-5015
VB Deal Number	**:** P-026384
Proposed Carrier	**:** Dish Wireless LLC
Carrier Site Name	**:** BOHVN00194B
Carrier Site Number	**:** BOHVN00194B
Site Location	**:** 473 Denslow Hill Road Hamden, CT 06514 (New Haven County) 41.37713056, -72.92914444
Date	**:** March 17, 2023
Max Member Stress Level	**:** 82.5%
Result	**: PASS**

Prepared by:

03/17/2023

VERTICAL BRIDGE ENGINEERING, LLC

750 Park of Commerce Drive Suite 200 | Boca Raton, FL 33487 | 561-948-6367
VerticalBridge.com

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Introduction

We have completed our structural analysis of the proposed equipment installation on the foregoing tower to determine its ability to support the new loads proposed by **Dish Wireless**. The objective of the analysis was to determine if the tower meets the current structural codes and standards with the proposed equipment installation.

Existing Structural Information

The following documents for the existing structure were made available for our structural analysis.

Tower Information	PiRod Tower Drawings Job No. A-118262-1, dated April 12, 2002.
Foundation Information	PiRod Foundation Drawings Job No. A-118262-1, dated April 12, 2002.
Geotechnical Information	Geotechnical information was not available at the time of this analysis.
Equipment Information	Vertical Bridge Collocation Application Version 1.
Tower Reinforcement Information	This tower has not been previously modified.

Final Proposed Equipment Loading for Dish Wireless

The following proposed loading was obtained from the Vertical Bridge Collocation Application:

Antenna/Equipment					Coax	
Mount (Ft.)	RAD (Ft.)	Qty.	Antenna	Type	Qty.	Size/Type
185.0	-	**3**	**Commscope P/N: MTC3975083**	Mount	**1**	**1.75" Hybrid**
	185.0	**3**	**JMA MX08FRO665-21**	Panel		
		3	**Fujitsu TA08025-B604**	RRU		
		3	**Fujitsu TA08025-B605**	RRU		
		1	**Raycap RDIDC-9181-PF-48**	OVP		

Note: Proposed equipment shown in bold.
Note: Other existing loading can be found on the tower profile attached.
Note: The remainder of Dish's reserve rights have been considered.

Design Criteria

The tower was analyzed using tnxTower (Version 8.0.9.0) tower analysis software using the following design criteria.

State	Connecticut
City/County Building Code	New Haven County 2022 Connecticut State Building Code (2021 IBC)
TIA/EIA Standard Code	TIA-222-H
Basic Wind Speed	119 MPH (V_{ult})
Basic Wind Speed w/ Ice	50 MPH w/ 1" Ice
Steel Grade	50 ksi Legs and Horizontals / 36 ksi Diagonals / A325 Bolts
Exposure Category	C
Topographic Category (height)	1 (0.0 Ft.)
Risk Category	II
Ground Elevation	170.42 Ft.
S_s	0.201
Seismic Design Category	B

Analysis Results

Based on the foregoing information, our structural analysis determined that **the existing tower is structurally capable of supporting the proposed equipment loads without modification.** The tower base and anchor foundations have also been evaluated. The foundation reactions as a result of the proposed installation are less than the original design foundation reactions and as such **the existing foundation is considered to be structurally capable of supporting the proposed equipment loads.** A **seismic analysis** has been performed on this structure and **does not control.**

Assumptions

The below assumptions are true, complete, and accurate.

1. The existing tower has been maintained to manufacturer's specifications and is in good condition.
2. Foundations are considered to have been properly designed for the original design loads.
3. All member connections are considered to have been designed to meet the load carrying capacity of the connected member.
4. Antenna mount loads have been estimated based on generally accepted industry standards.
5. The mounts for the proposed antennas have been analyzed and designed by others.
6. See additional assumptions contained in the report attached.
7. Due to the utilization of Annex-S reliability factors, the structure is within acceptable engineering tolerances at 100%.

Conclusions

The existing tower described above **does have sufficient capacity** to support the proposed loading based on the governing Building Code. The existing base and anchor foundations have also been evaluated and are acceptable. A **seismic analysis** has been performed on this structure and **does not control.**

We appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance please call us anytime at 561-948-6367.

Sincerely,

Analysis by:

Nelson Figueroa, EI
Design Engineer III

Reviewed by:

Michael T. De Boer, PE
Engineer

03/17/2023

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but not necessarily limited, to:

- Information supplied by the client regarding the structure itself, the antenna and transmission line loading on the structure and it components, or relevant information.

- Information from drawings in possession of Vertical Bridge Engineering, LLC, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to Vertical Bridge Engineering, LLC and used in the performance of our engineering services is correct and complete. In the absence of information contrary, we consider that all structures were constructed in accordance with the drawings and specifications and are in a un-corroded condition and have not deteriorated; and we, therefore consider that their capacity has not significantly changed from the original design condition.

All services will be performed to the codes and standards specified by the client, and we do not imply to meet any other code and standard requirements unless explicitly agreed to in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes and standards, the client shall specify the exact requirements. In the absence of information to the contrary, all work will be performed in accordance with the revision of ANSI/TIA/EIA-222-H requested.

All services are performed, results obtained and recommendations made in accordance with the generally accepted engineering principles and practices. Vertical Bridge Engineering LLC and its affiliates are not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

Disclaimer of Warranties

The engineering services by Vertical Bridge Engineering, LLC in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. Vertical Bridge Engineering, LLC does not analyze the fabrication, including welding, except as may be expressly included in this report.

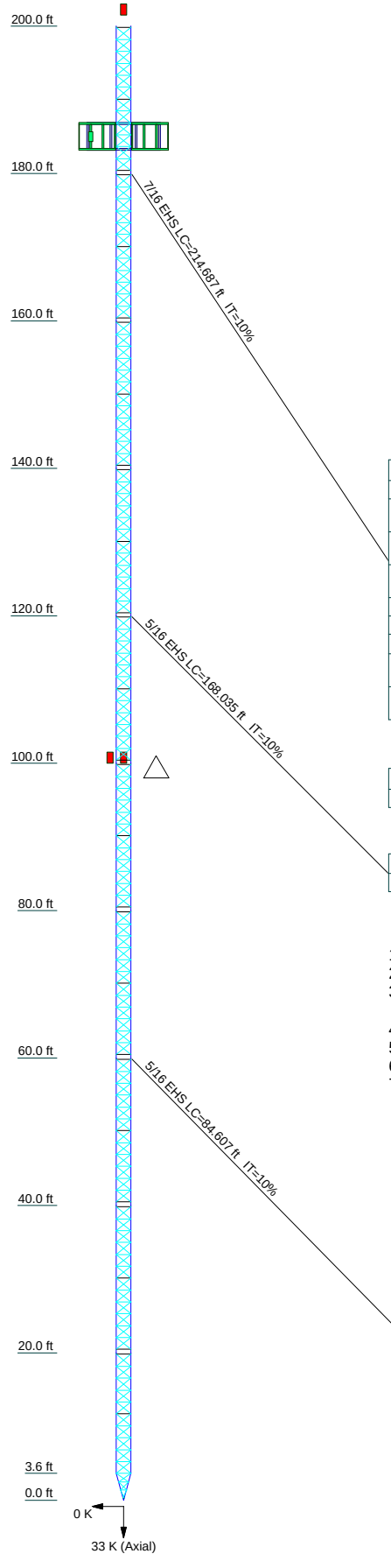
The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines. Any mention of structural modifications are reasonable estimates and should not be used a precise construction document. Precise modification drawings are obtainable from Vertical Bridge Engineering, LLC but are beyond the scope of this report.

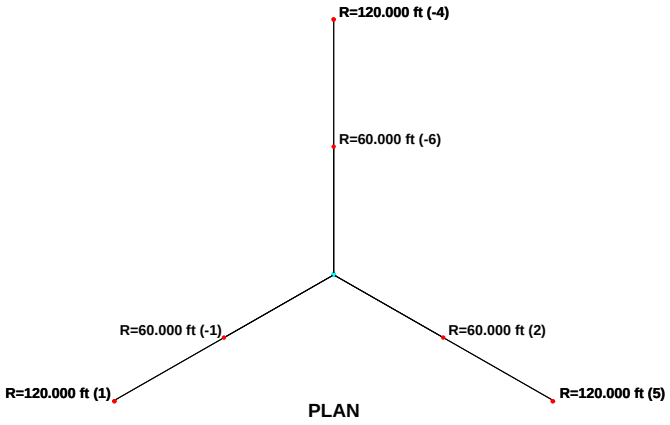
Vertical Bridge Engineering, LLC makes no warranties, express or implied, in connection with this report and disclaims any liability arising from material, fabrication and erection of this tower, or installation and compliance with legal and permitting requirements of the proposed equipment. Vertical Bridge Engineering, LLC will not be responsible whatsoever for or on account of, punitive, special, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of Vertical Bridge Engineering, LLC pursuant to this report will be limited to the total fee received for preparation of this report.

Attachment 1:
Calculations

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
Legs			SR 1					SR 1 1/4			
Leg Grade						A572-50					
Diagonals						SR 1/2					
Diagonal Grade						A36					
Top Girts					SR 3/4						N.A.
Mid Girts					SR 3/4						N.A.
Bottom Girts					SR 3/4					N.A.	A
Horizontals						SR 3/4					
Face Width (ft)						2					
# Panels @ (ft)						60 @ 1.61632		48 @ 1.60938		10 @ 1.61458	B
Weight (K)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1

4.0





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Beacon	200	TA08025-B604 (15.75x14.96x7.87) (Dish)	185
Commscope P/N: MTC3975083 (Dish)	185	TA08025-B605 (15.75x14.96x9.06) (Dish)	185
Commscope P/N: MTC3975083 (Dish)	185	TA08025-B605 (15.75x14.96x9.06) (Dish)	185
Commscope P/N: MTC3975083 (Dish)	185	TA08025-B605 (15.75x14.96x9.06) (Dish)	185
JMA MX08FRO665-21 (EPA) (Dish)	185	RAYCAP RDIDC-9181-PF-48 (Dish)	185
JMA MX08FRO665-21 (EPA) (Dish)	185	1/3 Remaining Reserve Right (Dish)	185
JMA MX08FRO665-21 (EPA) (Dish)	185	1/3 Remaining Reserve Right (Dish)	185
TA08025-B604 (15.75x14.96x7.87) (Dish)	185	1/3 Remaining Reserve Right (Dish)	185
TA08025-B604 (15.75x14.96x7.87) (Dish)	185	Side Light	100
		Side Light	100

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 3/4	B	3 @ 1.10417

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 119 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.000 ft
7. TOWER RATING: 78.7%

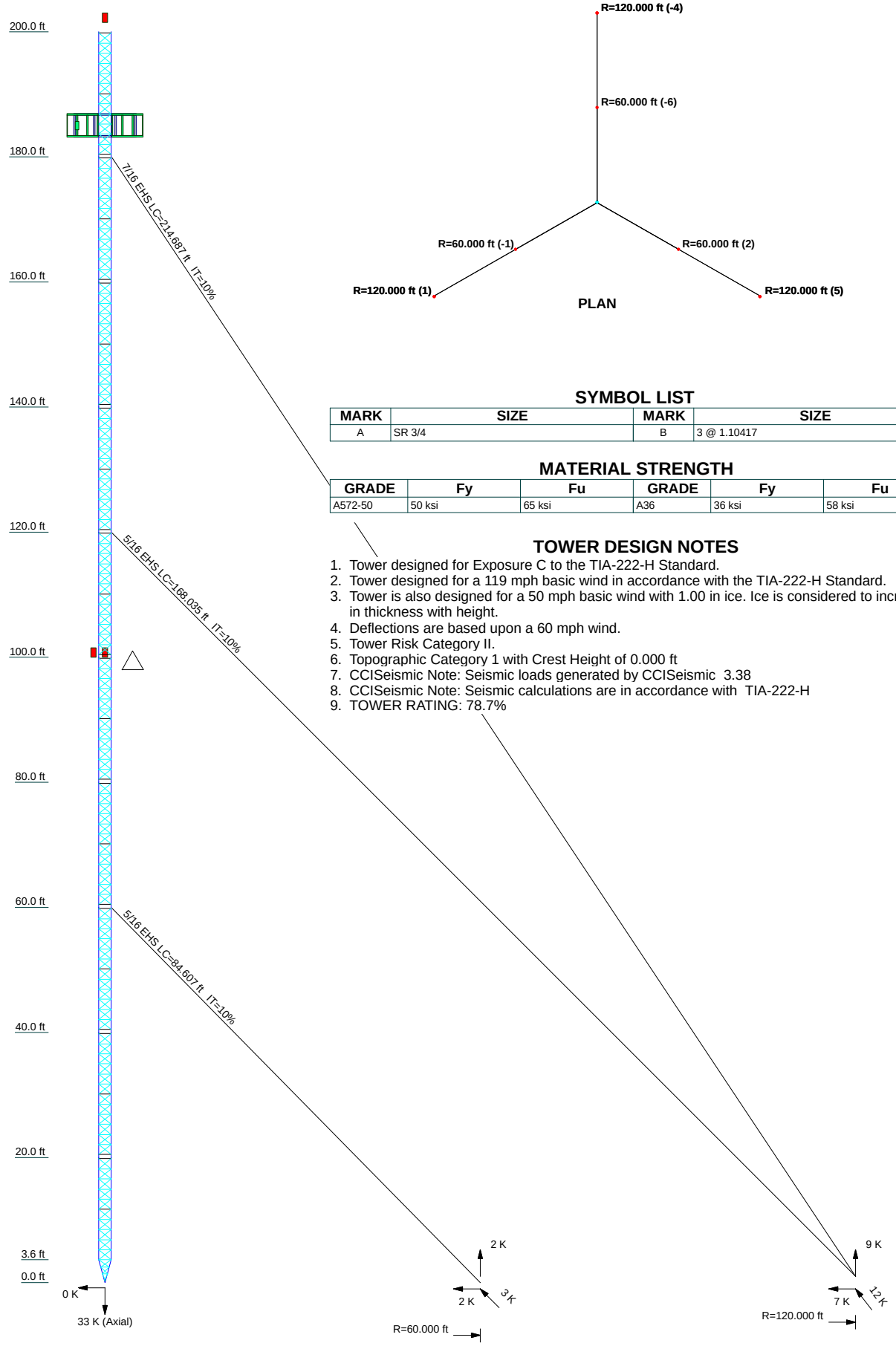
ALL REACTIONS ARE FACTORED

Vertical Bridge
750 Park of Commerce Drive, Suite 200
Boca Raton, FL 33487
Phone:
FAX:

Job: ***US-CT-5015***		
Project: ***Guyed Tower Structural Analysis***		
Client: DISH	Drawn by: Nelson.Figueroa	App'd:
Code: TIA-222-H	Date: 02/28/23	Scale: NTS
Path:		Dwg No. E-1

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
Legs			SR 1					SR 1 1/4			
Leg Grade						A572-50					
Diagonals							SR 1/2				
Diagonal Grade							A36				
Top Girts							SR 3/4				N.A.
Mid Girts							SR 3/4				N.A.
Bottom Girts							SR 3/4			N.A.	A
Horizontals							SR 3/4				
Face Width (ft)							2				
# Panels @ (ft)							60 @ 1.61632	48 @ 1.60938		10 @ 1.61458	B
Weight (K)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1

4.0



PLAN

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	SR 3/4	B	3 @ 1.10417

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 119 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.000 ft
7. CCISeismic Note: Seismic loads generated by CCISeismic 3.38
8. CCISeismic Note: Seismic calculations are in accordance with TIA-222-H
9. TOWER RATING: 78.7%

ALL REACTIONS ARE FACTORED

Vertical Bridge
750 Park of Commerce Drive, Suite 200
Boca Raton, FL 33487
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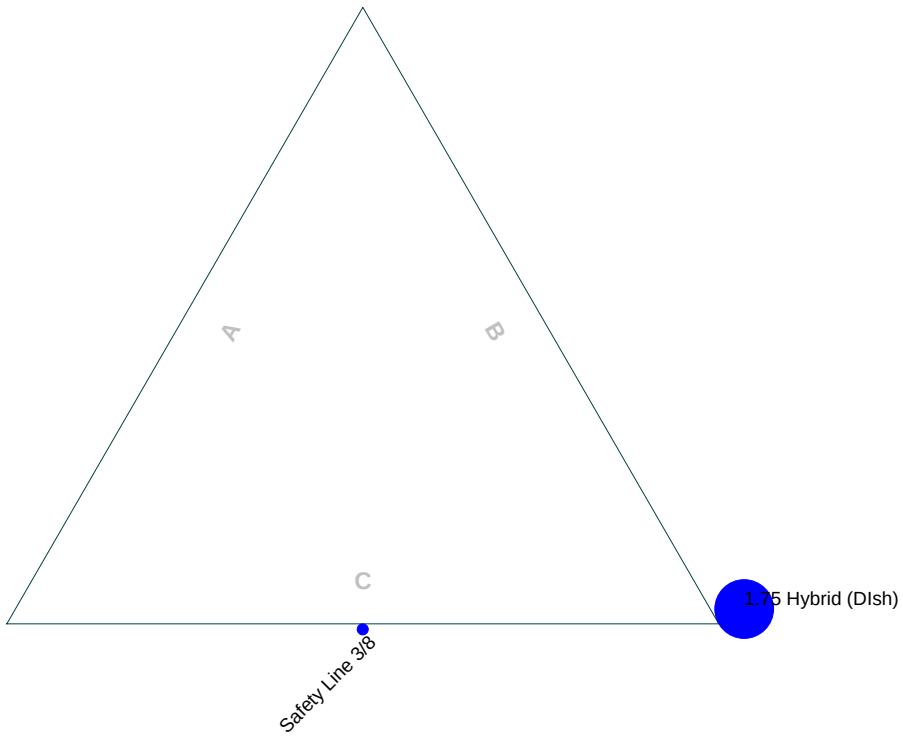
Job: ***US-CT-5015***			
Project: ***Guyed Tower Structural Analysis***			
Client: DISH	Drawn by: Nelson.Figueroa	App'd:	
Code: TIA-222-H	Date: 02/28/23	Scale: NTS	
Path:		Dwg No. E-1	

Feed Line Plan
20'

Round Flat App In Face App Out Face

Section @ 20'



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Boca Raton, FL 33487
Phone:
FAX:

Job: ***US-CT-5015***		
Project: ***Guyed Tower Structural Analysis***		
Client: DISH	Drawn by: Nelson.Figueroa	App'd:
Code: TIA-222-H	Date: 02/28/23	Scale: NTS
Path:		Dwg No. E-7

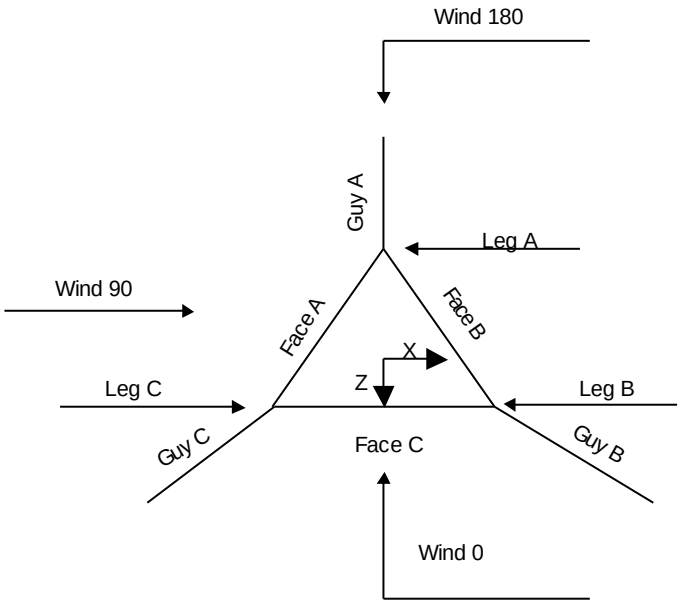
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 200.000 ft above the ground line.
The base of the tower is set at an elevation of 0.000 ft above the ground line.
The face width of the tower is 2.000 ft at the top and tapered at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 170.420 ft.
Basic wind speed of 119 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Safety factor used in guy design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Corner & Starmount Guyed Tower

Tower Section Geometry

Tower Section	*Tower Elevation* *ft*	*Assembly Database*	*Description*	*Section Width* *ft*	*Number of Sections*	*Section Length* *ft*
T1	200.000-180.000			2.000	1	20.000
T2	180.000-160.000			2.000	1	20.000
T3	160.000-140.000			2.000	1	20.000
T4	140.000-120.000			2.000	1	20.000
T5	120.000-100.000			2.000	1	20.000
T6	100.000-80.000			2.000	1	20.000
T7	80.000-60.000			2.000	1	20.000
T8	60.000-40.000			2.000	1	20.000
T9	40.000-20.000			2.000	1	20.000
T10	20.000-3.646			2.000	1	16.354
T11	3.646-0.000			2.000	1	3.646

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T1	200.000-180.000	1.616	X Brace	No	Steps	2.5000	4.7500
T2	180.000-160.000	1.616	X Brace	No	Steps	2.5000	4.7500
T3	160.000-140.000	1.616	X Brace	No	Steps	2.5000	4.7500
T4	140.000-120.000	1.616	X Brace	No	Steps	2.5000	4.7500
T5	120.000-100.000	1.616	X Brace	No	Steps	2.5000	4.7500
T6	100.000-80.000	1.609	X Brace	No	Steps	2.5000	5.7500
T7	80.000-60.000	1.609	X Brace	No	Steps	2.5000	5.7500
T8	60.000-40.000	1.609	X Brace	No	Steps	2.5000	5.7500
T9	40.000-20.000	1.609	X Brace	No	Steps	2.5000	5.7500
T10	20.000-3.646	1.615	X Brace	No	Steps	2.5000	0.0000
T11	3.646-0.000	1.104	X Brace	No	Yes	0.0000	4.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 200.000-180.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T2 180.000-160.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T3 160.000-140.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T4 140.000-120.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T5 120.000-100.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T6 100.000-80.000	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T7 80.000-60.000	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T8 60.000-40.000	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T9 40.000-20.000	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T10 20.000-3.646	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)
T11 3.646-0.000	Solid Round	1 1/4	A572-50 (50 ksi)	Solid Round	1/2	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 200.000-180.000	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 180.000-160.000	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T3 160.000-140.000	Solid Round	3/4	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T4	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
140.000-120.000			(50 ksi)			(50 ksi)
T5	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
120.000-100.000			(50 ksi)			(50 ksi)
T6	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
100.000-80.000			(50 ksi)			(50 ksi)
T7 80.000-60.000	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
			(50 ksi)			(50 ksi)
T8 60.000-40.000	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
			(50 ksi)			(50 ksi)
T9 40.000-20.000	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
			(50 ksi)			(50 ksi)
T10 20.000-3.646	Solid Round	3/4	A572-50	Solid Round		A572-50
			(50 ksi)			(50 ksi)
T11 3.646-0.000	Solid Round		A572-50	Solid Round	3/4	A572-50
			(50 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
200.000-180.000				(50 ksi)			(50 ksi)
T2	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
180.000-160.000				(50 ksi)			(50 ksi)
T3	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
160.000-140.000				(50 ksi)			(50 ksi)
T4	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
140.000-120.000				(50 ksi)			(50 ksi)
T5	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
120.000-100.000				(50 ksi)			(50 ksi)
T6	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
100.000-80.000				(50 ksi)			(50 ksi)
T7 80.000-60.000	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
				(50 ksi)			(50 ksi)
T8 60.000-40.000	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
				(50 ksi)			(50 ksi)
T9 40.000-20.000	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
				(50 ksi)			(50 ksi)
T10 20.000-3.646	1	Solid Round	3/4	A572-50	Solid Round	3/4	A572-50
				(50 ksi)			(50 ksi)
T11 3.646-0.000	None	Flat Bar		A572-50	Solid Round	3/4	A572-50
				(50 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 200.000-180.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T2 180.000-160.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T3 160.000-140.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T4 140.000-120.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T5 120.000-100.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T6 100.000-80.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T7 80.000-60.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T8 60.000-40.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T9 40.000-20.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T10 20.000-3.646	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000
T11 3.646-0.000	0.000	0.0000	A36 (36 ksi)	1	1.03	1.03	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 200.000-180.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 180.000-160.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 160.000-140.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 140.000-120.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 120.000-100.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 100.000-80.000	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T7	Yes	Yes	1	1	1	1	1	1	1	1
80.000-60.000				1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1
60.000-40.000				1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1
40.000-20.000				1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1
20.000-3.646				1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1
3.646-0.000				1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
200.000-180.000														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
180.000-160.000														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
160.000-140.000														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
140.000-120.000														
T5	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
120.000-100.000														
T6	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
100.000-80.000														
T7	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
80.000-60.000														
T8	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
60.000-40.000														
T9	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
40.000-20.000														
T10	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
20.000-3.646														
T11	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
3.646-0.000														

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 200.000-180.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 180.000-160.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 160.000-140.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 140.000-120.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 120.000-100.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 100.000-80.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 80.000-60.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 60.000-40.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 40.000-20.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 20.000-3.646	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 3.646-0.000	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 200.000-180.000	Flange	0.3750 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 180.000-160.000	Flange	0.3750 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 160.000-140.000	Flange	0.3750 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 140.000-120.000	Flange	0.3750 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 120.000-100.000	Flange	0.3750 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T6 100.000-80.000	Flange	0.5000 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 80.000-60.000	Flange	0.5000 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 60.000-40.000	Flange	0.5000 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 40.000-20.000	Flange	0.5000 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 20.000-3.646	Flange	0.7500 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 3.646-0.000	Flange	0.7500 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
179.792	EHS	A	7/16	2.080	10%	21000.000	0.399	218.683	120.000	0.0000	-4.000	100%
		B	7/16	2.080	10%	21000.000	0.399	211.188	120.000	0.0000	5.000	100%
		C	7/16	2.080	10%	21000.000	0.399	214.505	120.000	0.0000	1.000	100%
119.792	EHS	A	5/16	1.120	10%	21000.000	0.205	171.454	120.000	0.0000	-4.000	100%
		B	5/16	1.120	10%	21000.000	0.205	165.085	120.000	0.0000	5.000	100%
		C	5/16	1.120	10%	21000.000	0.205	167.886	120.000	0.0000	1.000	100%
59.7917	EHS	A	5/16	1.120	10%	21000.000	0.205	88.189	60.000	0.0000	-6.000	100%
		B	5/16	1.120	10%	21000.000	0.205	82.404	60.000	0.0000	2.000	100%
		C	5/16	1.120	10%	21000.000	0.205	84.532	60.000	0.0000	-1.000	100%

Guy Data *(cont'd)*

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
179.792	Corner						
119.792	Corner						
59.7917	Corner						

Guy Data *(cont'd)*

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
179.792	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
119.792	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
59.792	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	

Guy Data *(cont'd)*

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
179.792	0.087	0.084	0.086		4.512 3.7 sec/pulse	4.211 3.5 sec/pulse	4.343 3.6 sec/pulse	
119.792	0.035	0.034	0.034		2.663 2.8 sec/pulse	2.471 2.7 sec/pulse	2.554 2.8 sec/pulse	
59.7917	0.018	0.017	0.017		0.708 1.5 sec/pulse	0.619 1.4 sec/pulse	0.651 1.4 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
179.792	No	No			1	1	1	1
119.792	No	No			1	1	1	1
59.7917	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
179.792	0.0000 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
119.792	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
59.7917	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z ksf	q_z Ice ksf	Ice Thickness in
179.792	A	87.896	0.036	0.006	0.9375
	B	92.396	0.036	0.006	0.9422
	C	90.396	0.036	0.006	0.9401
119.792	A	57.896	0.033	0.006	0.8992
	B	62.396	0.033	0.006	0.9059
	C	60.396	0.033	0.006	0.9030
59.7917	A	26.896	0.028	0.005	0.8328
	B	30.896	0.029	0.005	0.8444
	C	29.396	0.028	0.005	0.8402

Guy-Tensioning Information

				Temperature At Time Of Tensioning													
				0 F		20 F		40 F		60 F		80 F		100 F		120 F	
Guy Elevation ft		H ft	V ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft	Initial Tension K	Intercept ft
179.792	A	118.85	183.79	2.349	4.00	2.259	4.16	2.169	4.33	2.080	4.51	1.991	4.71	1.903	4.92	1.816	5.16
	B	118.85	174.79	2.368	3.70	2.272	3.86	2.176	4.03	2.080	4.21	1.985	4.41	1.891	4.63	1.797	4.86
	C	118.85	178.79	2.359	3.83	2.266	3.99	2.173	4.16	2.080	4.34	1.988	4.54	1.897	4.76	1.806	4.99
119.792	A	118.85	123.79	1.347	2.22	1.271	2.35	1.195	2.50	1.120	2.66	1.046	2.85	0.972	3.06	0.899	3.31
	B	118.85	114.79	1.365	2.03	1.283	2.16	1.201	2.31	1.120	2.47	1.040	2.66	0.960	2.88	0.882	3.13
	C	118.85	118.79	1.356	2.11	1.277	2.24	1.198	2.39	1.120	2.55	1.042	2.74	0.966	2.96	0.890	3.21
59.7917	A	58.85	65.79	1.335	0.59	1.263	0.63	1.192	0.67	1.120	0.71	1.049	0.76	0.977	0.81	0.906	0.87
	B	58.85	57.79	1.366	0.51	1.284	0.54	1.202	0.58	1.120	0.62	1.038	0.67	0.957	0.72	0.876	0.79
	C	58.85	60.79	1.354	0.54	1.276	0.57	1.198	0.61	1.120	0.65	1.042	0.70	0.965	0.76	0.888	0.82

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
Safety Line 3/8 *185 Dish 1.75 Hybrid (DIsh) ***	C	No	No	Ar (CaAa)	200.000 - 8.000	0.0000	0	1	1	0.3750	0.3750		0.000
	B	No	No	Ar (CaAa)	185.000 - 8.000	0.0000	0.5	1	1	1.9800	1.9800		0.001

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight klf
***								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	200.000-180.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.990	0.000	0.006
		C	0.000	0.000	0.750	0.000	0.004
T2	180.000-160.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T3	160.000-140.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T4	140.000-120.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T5	120.000-100.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T6	100.000-80.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T7	80.000-60.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T8	60.000-40.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T9	40.000-20.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	3.960	0.000	0.026
		C	0.000	0.000	0.750	0.000	0.004
T10	20.000-3.646	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	2.376	0.000	0.016
		C	0.000	0.000	0.450	0.000	0.003
T11	3.646-0.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.000

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	200.000-180.000	A	1.013	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	2.003	0.000	0.025
		C		0.000	0.000	4.800	0.000	0.039
T2	180.000-160.000	A	1.001	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.966	0.000	0.099
		C		0.000	0.000	4.756	0.000	0.038
T3	160.000-140.000	A	0.989	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.916	0.000	0.098
		C		0.000	0.000	4.706	0.000	0.037
T4	140.000-120.000	A	0.975	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.860	0.000	0.096
		C		0.000	0.000	4.650	0.000	0.037
T5	120.000-100.000	A	0.959	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.795	0.000	0.095
		C		0.000	0.000	4.585	0.000	0.036

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T6	100.000-80.000	A	0.940	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.719	0.000	0.093
		C		0.000	0.000	4.509	0.000	0.035
T7	80.000-60.000	A	0.916	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.626	0.000	0.091
		C		0.000	0.000	4.416	0.000	0.033
T8	60.000-40.000	A	0.886	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.504	0.000	0.088
		C		0.000	0.000	4.294	0.000	0.032
T9	40.000-20.000	A	0.842	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.328	0.000	0.084
		C		0.000	0.000	4.118	0.000	0.029
T10	20.000-3.646	A	0.767	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	4.217	0.000	0.046
		C		0.000	0.000	2.291	0.000	0.015
T11	3.646-0.000	A	0.636	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.000

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	200.000-180.000	0.6085	0.5596	0.2701	0.4935
T2	180.000-160.000	2.1313	1.2898	1.0297	0.8554
T3	160.000-140.000	2.1313	1.2898	1.0446	0.8663
T4	140.000-120.000	2.1313	1.2898	1.0615	0.8786
T5	120.000-100.000	2.1313	1.2898	1.0809	0.8927
T6	100.000-80.000	1.9915	1.2052	1.0569	0.8705
T7	80.000-60.000	1.9915	1.2052	1.0841	0.8898
T8	60.000-40.000	1.9915	1.2052	1.1197	0.9149
T9	40.000-20.000	1.9915	1.2052	1.1721	0.9510
T10	20.000-3.646	1.5421	0.9332	0.9684	0.7757
T11	3.646-0.000	0.0000	0.0000	0.0000	0.0000

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	Safety Line 3/8	180.00 - 200.00	0.6000	0.4544
T1	3	1.75 Hybrid	180.00 - 185.00	0.6000	0.4544
T2	1	Safety Line 3/8	160.00 - 180.00	0.6000	0.4584
T2	3	1.75 Hybrid	160.00 - 180.00	0.6000	0.4584
T3	1	Safety Line 3/8	140.00 - 160.00	0.6000	0.4629
T3	3	1.75 Hybrid	140.00 -	0.6000	0.4629

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			160.00		
T4	1	Safety Line 3/8	120.00 - 140.00	0.6000	0.4680
T4	3	1.75 Hybrid	120.00 - 140.00	0.6000	0.4680
T5	1	Safety Line 3/8	100.00 - 120.00	0.6000	0.4738
T5	3	1.75 Hybrid	100.00 - 120.00	0.6000	0.4738
T6	1	Safety Line 3/8	80.00 - 100.00	0.6000	0.4702
T6	3	1.75 Hybrid	80.00 - 100.00	0.6000	0.4702
T7	1	Safety Line 3/8	60.00 - 80.00	0.6000	0.4785
T7	3	1.75 Hybrid	60.00 - 80.00	0.6000	0.4785
T8	1	Safety Line 3/8	40.00 - 60.00	0.6000	0.4894
T8	3	1.75 Hybrid	40.00 - 60.00	0.6000	0.4894
T9	1	Safety Line 3/8	20.00 - 40.00	0.6000	0.5053
T9	3	1.75 Hybrid	20.00 - 40.00	0.6000	0.5053
T10	1	Safety Line 3/8	8.00 - 20.00	0.6000	0.5324
T10	3	1.75 Hybrid	8.00 - 20.00	0.6000	0.5324

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Beacon	C	From Centroid-Leg	0.000	0.000	0.0000	200.000	No Ice	3.667	0.883	0.010
			0.000	1.500			1/2" Ice	3.927	1.103	0.029
							1" Ice	4.194	1.331	0.051
Side Light	A	From Leg	1.000	0.000	0.0000	100.000	No Ice	0.400	0.400	0.010
			0.000				1/2" Ice	0.510	0.510	0.010
			0.000				1" Ice	0.620	0.620	0.010
Side Light	C	From Leg	1.000	0.000	0.0000	100.000	No Ice	0.400	0.400	0.010
			0.000				1/2" Ice	0.510	0.510	0.010
			0.000				1" Ice	0.620	0.620	0.010
*185										
Commscope P/N: MTC3975083	A	From Leg	3.000	0.000	0.0000	185.000	No Ice	11.600	9.200	0.610
			0.000				1/2" Ice	16.900	14.600	0.741
(Dish)			0.000				1" Ice	20.900	19.500	0.930
Commscope P/N: MTC3975083	B	From Leg	3.000	0.000	0.0000	185.000	No Ice	11.600	9.200	0.610
			0.000				1/2" Ice	16.900	14.600	0.741
(Dish)			0.000				1" Ice	20.900	19.500	0.930
Commscope P/N: MTC3975083	C	From Leg	3.000	0.000	0.0000	185.000	No Ice	11.600	9.200	0.610
			0.000				1/2" Ice	16.900	14.600	0.741
(Dish)			0.000				1" Ice	20.900	19.500	0.930
JMA MX08FRO665-21	A	From Leg	4.000	0.000	0.0000	185.000	No Ice	4.900	4.900	0.065
(EPA)			0.000				1/2" Ice	14.601	6.325	0.138
(Dish)			0.000				1" Ice	15.210	6.790	0.219
JMA MX08FRO665-21	B	From Leg	4.000	0.000	0.0000	185.000	No Ice	4.900	4.900	0.065
(EPA)			0.000				1/2" Ice	14.601	6.325	0.138
(Dish)			0.000				1" Ice	15.210	6.790	0.219
JMA MX08FRO665-21	C	From Leg	4.000	0.000	0.0000	185.000	No Ice	4.900	4.900	0.065

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(EPA)			0.000			1/2" Ice	14.601	6.325	0.138
(Dish)			0.000			1" Ice	15.210	6.790	0.219
TA08025-B604	A	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.033	0.063
(15.75x14.96x7.87)			0.000			1/2" Ice	2.138	1.168	0.080
(Dish)			0.000			1" Ice	2.320	1.310	0.099
TA08025-B604	B	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.033	0.063
(15.75x14.96x7.87)			0.000			1/2" Ice	2.138	1.168	0.080
(Dish)			0.000			1" Ice	2.320	1.310	0.099
TA08025-B604	C	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.033	0.063
(15.75x14.96x7.87)			0.000			1/2" Ice	2.138	1.168	0.080
(Dish)			0.000			1" Ice	2.320	1.310	0.099
TA08025-B605	A	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.189	0.075
(15.75x14.96x9.06)			0.000			1/2" Ice	2.138	1.331	0.093
(Dish)			0.000			1" Ice	2.320	1.480	0.114
TA08025-B605	B	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.189	0.075
(15.75x14.96x9.06)			0.000			1/2" Ice	2.138	1.331	0.093
(Dish)			0.000			1" Ice	2.320	1.480	0.114
TA08025-B605	C	From Leg	4.000	0.0000	185.000	No Ice	1.964	1.189	0.075
(15.75x14.96x9.06)			0.000			1/2" Ice	2.138	1.331	0.093
(Dish)			0.000			1" Ice	2.320	1.480	0.114
RAYCAP	C	From Leg	4.000	0.0000	185.000	No Ice	2.012	1.168	0.022
RDIDC-9181-PF-48			0.000			1/2" Ice	2.189	1.311	0.040
(Dish)			0.000			1" Ice	2.373	1.461	0.060
1/3 Remaining Reserve Right	A	From Leg	4.000	0.0000	185.000	No Ice	5.774	5.774	0.062
(Dish)			0.000			1/2" Ice	6.755	6.755	0.092
			0.000			1" Ice	7.736	7.736	0.122
1/3 Remaining Reserve Right	B	From Leg	4.000	0.0000	185.000	No Ice	5.774	5.774	0.062
(Dish)			0.000			1/2" Ice	6.755	6.755	0.092
			0.000			1" Ice	7.736	7.736	0.122
1/3 Remaining Reserve Right	C	From Leg	4.000	0.0000	185.000	No Ice	5.774	5.774	0.062
(Dish)			0.000			1/2" Ice	6.755	6.755	0.092
			0.000			1" Ice	7.736	7.736	0.122
***									

Tower Pressures - No Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg % 	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
T1	190.000	1.449	0.042	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
200.000-180.0					B	0.000	6.342		52.56	0.990	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T2	170.000	1.415	0.041	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
180.000-160.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T3	150.000	1.378	0.040	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
160.000-140.0					B	0.000	6.342		52.56	3.960	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
00					C	0.000	7.576		44.00	0.750	0.000
T4	130.000	1.337	0.039	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
140.000-120.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T5	110.000	1.291	0.038	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
120.000-100.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T6	90.000	1.238	0.036	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
100.000-80.00					B	0.000	7.164		58.16	3.960	0.000
0					C	0.000	8.385		49.69	0.750	0.000
T7	70.000	1.174	0.034	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
80.000-60.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T8	50.000	1.094	0.032	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
60.000-40.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T9	30.000	0.982	0.029	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
40.000-20.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T10	11.823	0.85	0.025	34.412	A	0.000	5.845	3.407	58.29	0.000	0.000
20.000-3.646					B	0.000	5.845		58.29	2.376	0.000
					C	0.000	6.821		49.95	0.450	0.000
T11	1.823	0.85	0.025	4.040	A	0.000	1.444	0.797	55.19	0.000	0.000
3.646-0.000					B	0.000	1.444		55.19	0.000	0.000
					C	0.000	1.444		55.19	0.000	0.000

Tower Pressure - With Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	190.000	1.449	0.007	1.0126	45.042	A	0.000	24.576	10.084	41.03	0.000	0.000
200.000-180.000						B	0.000	24.576		41.03	2.003	0.000
						C	0.000	29.141		34.60	4.800	0.000
T2	170.000	1.415	0.007	1.0014	45.005	A	0.000	24.374	10.009	41.07	0.000	0.000
180.000-160.000						B	0.000	24.374		41.07	7.966	0.000
						C	0.000	28.903		34.63	4.756	0.000
T3	150.000	1.378	0.007	0.9890	44.963	A	0.000	24.150	9.926	41.10	0.000	0.000
160.000-140.000						B	0.000	24.150		41.10	7.916	0.000
						C	0.000	28.637		34.66	4.706	0.000
T4	130.000	1.337	0.007	0.9749	44.916	A	0.000	23.897	9.833	41.15	0.000	0.000
140.000-120.000						B	0.000	23.897		41.15	7.860	0.000
						C	0.000	28.338		34.70	4.650	0.000
T5	110.000	1.291	0.007	0.9588	44.863	A	0.000	23.606	9.725	41.20	0.000	0.000
120.000-100.000						B	0.000	23.606		41.20	7.795	0.000
						C	0.000	27.994		34.74	4.585	0.000
T6	90.000	1.238	0.006	0.9397	45.216	A	0.000	23.956	10.431	43.54	0.000	0.000
100.000-80.000						B	0.000	23.956		43.54	7.719	0.000
						C	0.000	28.234		36.95	4.509	0.000
T7	70.000	1.174	0.006	0.9164	45.138	A	0.000	23.539	10.276	43.66	0.000	0.000
80.000-60.000						B	0.000	23.539		43.66	7.626	0.000
						C	0.000	27.742		37.04	4.416	0.000
T8	50.000	1.094	0.006	0.8861	45.037	A	0.000	22.997	10.074	43.80	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
60.000-40.000						B	0.000	22.997		43.80	7.504	0.000
						C	0.000	27.101		37.17	4.294	0.000
T9	30.000	0.982	0.005	0.8419	44.890	A	0.000	22.209	9.780	44.04	0.000	0.000
40.000-20.000						B	0.000	22.209		44.04	7.328	0.000
						C	0.000	26.169		37.37	4.118	0.000
T10	11.823	0.85	0.004	0.7671	36.503	A	0.000	17.068	7.589	44.46	0.000	0.000
20.000-3.646						B	0.000	17.068		44.46	4.217	0.000
						C	0.000	20.042		37.87	2.291	0.000
T11 3.646-0.000	1.823	0.85	0.004	0.6363	4.441	A	0.000	3.649	1.608	44.06	0.000	0.000
						B	0.000	3.649		44.06	0.000	0.000
						C	0.000	3.649		44.06	0.000	0.000

Tower Pressure - Service

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	190.000	1.449	0.011	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
200.000-180.0					B	0.000	6.342		52.56	0.990	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T2	170.000	1.415	0.011	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
180.000-160.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T3	150.000	1.378	0.011	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
160.000-140.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T4	130.000	1.337	0.010	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
140.000-120.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T5	110.000	1.291	0.010	41.667	A	0.000	6.342	3.333	52.56	0.000	0.000
120.000-100.0					B	0.000	6.342		52.56	3.960	0.000
00					C	0.000	7.576		44.00	0.750	0.000
T6	90.000	1.238	0.010	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
100.000-80.00					B	0.000	7.164		58.16	3.960	0.000
0					C	0.000	8.385		49.69	0.750	0.000
T7	70.000	1.174	0.009	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
80.000-60.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T8	50.000	1.094	0.009	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
60.000-40.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T9	30.000	0.982	0.008	42.083	A	0.000	7.164	4.167	58.16	0.000	0.000
40.000-20.000					B	0.000	7.164		58.16	3.960	0.000
					C	0.000	8.385		49.69	0.750	0.000
T10	11.823	0.85	0.007	34.412	A	0.000	5.845	3.407	58.29	0.000	0.000
20.000-3.646					B	0.000	5.845		58.29	2.376	0.000
					C	0.000	6.821		49.95	0.450	0.000
T11	1.823	0.85	0.007	4.040	A	0.000	1.444	0.797	55.19	0.000	0.000
3.646-0.000					B	0.000	1.444		55.19	0.000	0.000
					C	0.000	1.444		55.19	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.042	1	1	3.601	0.450	0.022	C
200.000-180.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.041	1	1	3.601	0.502	0.025	C
180.000-160.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.040	1	1	3.601	0.489	0.024	C
160.000-140.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T4	0.030	0.351	A	0.152	2.763	0.039	1	1	3.601	0.474	0.024	C
140.000-120.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.038	1	1	3.601	0.458	0.023	C
120.000-100.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.036	1	1	4.083	0.470	0.023	C
100.000-80.00			B	0.17	2.698		1	1	4.083			
0			C	0.199	2.599		1	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.034	1	1	4.083	0.445	0.022	C
80.000-60.000			B	0.17	2.698		1	1	4.083			
			C	0.199	2.599		1	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.032	1	1	4.083	0.415	0.021	C
60.000-40.000			B	0.17	2.698		1	1	4.083			
			C	0.199	2.599		1	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.029	1	1	4.083	0.373	0.019	C
40.000-20.000			B	0.17	2.698		1	1	4.083			
			C	0.199	2.599		1	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.025	1	1	3.331	0.250	0.015	C
20.000-3.646			B	0.17	2.7		1	1	3.331			
			C	0.198	2.602		1	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.025	1	1	0.893	0.040	0.011	C
3.646-0.000			B	0.357	2.155		1	1	0.893			
			C	0.357	2.155		1	1	0.893			
Sum Weight:	0.272	3.984								4.365		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.042	0.8	1	3.601	0.450	0.022	C
200.000-180.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.041	0.8	1	3.601	0.502	0.025	C
180.000-160.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.040	0.8	1	3.601	0.489	0.024	C
160.000-140.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T4	0.030	0.351	A	0.152	2.763	0.039	0.8	1	3.601	0.474	0.024	C
140.000-120.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.038	0.8	1	3.601	0.458	0.023	C
120.000-100.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.036	0.8	1	4.083	0.470	0.023	C
100.000-80.00			B	0.17	2.698		0.8	1	4.083			
0			C	0.199	2.599		0.8	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.034	0.8	1	4.083	0.445	0.022	C
80.000-60.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.032	0.8	1	4.083	0.415	0.021	C
60.000-40.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.029	0.8	1	4.083	0.373	0.019	C
40.000-20.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.025	0.8	1	3.331	0.250	0.015	C
20.000-3.646			B	0.17	2.7		0.8	1	3.331			
			C	0.198	2.602		0.8	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.025	0.8	1	0.893	0.040	0.011	C
3.646-0.000			B	0.357	2.155		0.8	1	0.893			
			C	0.357	2.155		0.8	1	0.893			
Sum Weight:	0.272	3.984								4.365		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.042	0.85	1	3.601	0.450	0.022	C
200.000-180.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.041	0.85	1	3.601	0.502	0.025	C
180.000-160.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.040	0.85	1	3.601	0.489	0.024	C
160.000-140.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T4	0.030	0.351	A	0.152	2.763	0.039	0.85	1	3.601	0.474	0.024	C
140.000-120.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.038	0.85	1	3.601	0.458	0.023	C
120.000-100.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.036	0.85	1	4.083	0.470	0.023	C
100.000-80.00			B	0.17	2.698		0.85	1	4.083			
0			C	0.199	2.599		0.85	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.034	0.85	1	4.083	0.445	0.022	C
80.000-60.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.032	0.85	1	4.083	0.415	0.021	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
60.000-40.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.029	0.85	1	4.083	0.373	0.019	C
40.000-20.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.025	0.85	1	3.331	0.250	0.015	C
20.000-3.646			B	0.17	2.7		0.85	1	3.331			
			C	0.198	2.602		0.85	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.025	0.85	1	0.893	0.040	0.011	C
3.646-0.000			B	0.357	2.155		0.85	1	0.893			
			C	0.357	2.155		0.85	1	0.893			
Sum Weight:	0.272	3.984								4.365		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1	0.064	0.930	A	0.546	1.848	0.007	1	1	17.465	0.274	0.014	C
200.000-180.0			B	0.546	1.848		1	1	17.465			
00			C	0.647	1.782		1	1	22.567			
T2	0.137	0.920	A	0.542	1.852	0.007	1	1	17.264	0.282	0.014	C
180.000-160.0			B	0.542	1.852		1	1	17.264			
00			C	0.642	1.784		1	1	22.290			
T3	0.135	0.909	A	0.537	1.856	0.007	1	1	17.043	0.271	0.014	C
160.000-140.0			B	0.537	1.856		1	1	17.043			
00			C	0.637	1.786		1	1	21.985			
T4	0.133	0.896	A	0.532	1.862	0.007	1	1	16.795	0.260	0.013	C
140.000-120.0			B	0.532	1.862		1	1	16.795			
00			C	0.631	1.788		1	1	21.643			
T5	0.130	0.881	A	0.526	1.868	0.007	1	1	16.512	0.248	0.012	C
120.000-100.0			B	0.526	1.868		1	1	16.512			
00			C	0.624	1.791		1	1	21.253			
T6	0.128	0.974	A	0.53	1.864	0.006	1	1	16.806	0.239	0.012	C
100.000-80.00			B	0.53	1.864		1	1	16.806			
0			C	0.624	1.791		1	1	21.443			
T7	0.124	0.954	A	0.521	1.874	0.006	1	1	16.403	0.222	0.011	C
80.000-60.000			B	0.521	1.874		1	1	16.403			
			C	0.615	1.796		1	1	20.892			
T8	0.120	0.927	A	0.511	1.887	0.006	1	1	15.886	0.201	0.010	C
60.000-40.000			B	0.511	1.887		1	1	15.886			
			C	0.602	1.803		1	1	20.187			
T9	0.113	0.891	A	0.495	1.907	0.005	1	1	15.150	0.174	0.009	C
40.000-20.000			B	0.495	1.907		1	1	15.150			
			C	0.583	1.816		1	1	19.185			
T10	0.062	0.676	A	0.468	1.946	0.004	1	1	11.402	0.111	0.007	C
20.000-3.646			B	0.468	1.946		1	1	11.402			
			C	0.549	1.844		1	1	14.283			
T11	0.000	0.146	A	0.822	1.834	0.004	1	1	3.293	0.022	0.006	C
3.646-0.000			B	0.822	1.834		1	1	3.293			
			C	0.822	1.834		1	1	3.293			
Sum Weight:	1.146	9.104								2.304		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.064	0.930	A	0.546	1.848	0.007	0.8	1	17.465	0.274	0.014	C
200.000-180.0			B	0.546	1.848		0.8	1	17.465			
00			C	0.647	1.782		0.8	1	22.567			
T2	0.137	0.920	A	0.542	1.852	0.007	0.8	1	17.264	0.282	0.014	C
180.000-160.0			B	0.542	1.852		0.8	1	17.264			
00			C	0.642	1.784		0.8	1	22.290			
T3	0.135	0.909	A	0.537	1.856	0.007	0.8	1	17.043	0.271	0.014	C
160.000-140.0			B	0.537	1.856		0.8	1	17.043			
00			C	0.637	1.786		0.8	1	21.985			
T4	0.133	0.896	A	0.532	1.862	0.007	0.8	1	16.795	0.260	0.013	C
140.000-120.0			B	0.532	1.862		0.8	1	16.795			
00			C	0.631	1.788		0.8	1	21.643			
T5	0.130	0.881	A	0.526	1.868	0.007	0.8	1	16.512	0.248	0.012	C
120.000-100.0			B	0.526	1.868		0.8	1	16.512			
00			C	0.624	1.791		0.8	1	21.253			
T6	0.128	0.974	A	0.53	1.864	0.006	0.8	1	16.806	0.239	0.012	C
100.000-80.00			B	0.53	1.864		0.8	1	16.806			
0			C	0.624	1.791		0.8	1	21.443			
T7	0.124	0.954	A	0.521	1.874	0.006	0.8	1	16.403	0.222	0.011	C
80.000-60.000			B	0.521	1.874		0.8	1	16.403			
			C	0.615	1.796		0.8	1	20.892			
T8	0.120	0.927	A	0.511	1.887	0.006	0.8	1	15.886	0.201	0.010	C
60.000-40.000			B	0.511	1.887		0.8	1	15.886			
			C	0.602	1.803		0.8	1	20.187			
T9	0.113	0.891	A	0.495	1.907	0.005	0.8	1	15.150	0.174	0.009	C
40.000-20.000			B	0.495	1.907		0.8	1	15.150			
			C	0.583	1.816		0.8	1	19.185			
T10	0.062	0.676	A	0.468	1.946	0.004	0.8	1	11.402	0.111	0.007	C
20.000-3.646			B	0.468	1.946		0.8	1	11.402			
			C	0.549	1.844		0.8	1	14.283			
T11	0.000	0.146	A	0.822	1.834	0.004	0.8	1	3.293	0.022	0.006	C
3.646-0.000			B	0.822	1.834		0.8	1	3.293			
			C	0.822	1.834		0.8	1	3.293			
Sum Weight:	1.146	9.104								2.304		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.064	0.930	A	0.546	1.848	0.007	0.85	1	17.465	0.274	0.014	C
200.000-180.0			B	0.546	1.848		0.85	1	17.465			
00			C	0.647	1.782		0.85	1	22.567			
T2	0.137	0.920	A	0.542	1.852	0.007	0.85	1	17.264	0.282	0.014	C
180.000-160.0			B	0.542	1.852		0.85	1	17.264			
00			C	0.642	1.784		0.85	1	22.290			
T3	0.135	0.909	A	0.537	1.856	0.007	0.85	1	17.043	0.271	0.014	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
160.000-140.0			B	0.537	1.856		0.85	1	17.043			
00			C	0.637	1.786		0.85	1	21.985			
T4	0.133	0.896	A	0.532	1.862	0.007	0.85	1	16.795	0.260	0.013	C
140.000-120.0			B	0.532	1.862		0.85	1	16.795			
00			C	0.631	1.788		0.85	1	21.643			
T5	0.130	0.881	A	0.526	1.868	0.007	0.85	1	16.512	0.248	0.012	C
120.000-100.0			B	0.526	1.868		0.85	1	16.512			
00			C	0.624	1.791		0.85	1	21.253			
T6	0.128	0.974	A	0.53	1.864	0.006	0.85	1	16.806	0.239	0.012	C
100.000-80.00			B	0.53	1.864		0.85	1	16.806			
0			C	0.624	1.791		0.85	1	21.443			
T7	0.124	0.954	A	0.521	1.874	0.006	0.85	1	16.403	0.222	0.011	C
80.000-60.000			B	0.521	1.874		0.85	1	16.403			
			C	0.615	1.796		0.85	1	20.892			
T8	0.120	0.927	A	0.511	1.887	0.006	0.85	1	15.886	0.201	0.010	C
60.000-40.000			B	0.511	1.887		0.85	1	15.886			
			C	0.602	1.803		0.85	1	20.187			
T9	0.113	0.891	A	0.495	1.907	0.005	0.85	1	15.150	0.174	0.009	C
40.000-20.000			B	0.495	1.907		0.85	1	15.150			
			C	0.583	1.816		0.85	1	19.185			
T10	0.062	0.676	A	0.468	1.946	0.004	0.85	1	11.402	0.111	0.007	C
20.000-3.646			B	0.468	1.946		0.85	1	11.402			
			C	0.549	1.844		0.85	1	14.283			
T11	0.000	0.146	A	0.822	1.834	0.004	0.85	1	3.293	0.022	0.006	C
3.646-0.000			B	0.822	1.834		0.85	1	3.293			
			C	0.822	1.834		0.85	1	3.293			
Sum Weight:	1.146	9.104								2.304		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.011	1	1	3.601	0.120	0.006	C
200.000-180.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.011	1	1	3.601	0.134	0.007	C
180.000-160.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.011	1	1	3.601	0.131	0.007	C
160.000-140.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T4	0.030	0.351	A	0.152	2.763	0.010	1	1	3.601	0.127	0.006	C
140.000-120.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.010	1	1	3.601	0.122	0.006	C
120.000-100.0			B	0.152	2.763		1	1	3.601			
00			C	0.182	2.658		1	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.010	1	1	4.083	0.126	0.006	C
100.000-80.00			B	0.17	2.698		1	1	4.083			
0			C	0.199	2.599		1	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.009	1	1	4.083	0.119	0.006	C
80.000-60.000			B	0.17	2.698		1	1	4.083			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
			C	0.199	2.599		1	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.009	1	1	4.083	0.111	0.006	C
60.000-40.000			B	0.17	2.698		1	1	4.083			
			C	0.199	2.599		1	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.008	1	1	4.083	0.100	0.005	C
40.000-20.000			B	0.17	2.698		1	1	4.083			
			C	0.199	2.599		1	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.007	1	1	3.331	0.067	0.004	C
20.000-3.646			B	0.17	2.7		1	1	3.331			
			C	0.198	2.602		1	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.007	1	1	0.893	0.011	0.003	C
3.646-0.000			B	0.357	2.155		1	1	0.893			
			C	0.357	2.155		1	1	0.893			
Sum Weight:	0.272	3.984								1.168		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.011	0.8	1	3.601	0.120	0.006	C
200.000-180.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.011	0.8	1	3.601	0.134	0.007	C
180.000-160.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.011	0.8	1	3.601	0.131	0.007	C
160.000-140.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T4	0.030	0.351	A	0.152	2.763	0.010	0.8	1	3.601	0.127	0.006	C
140.000-120.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.010	0.8	1	3.601	0.122	0.006	C
120.000-100.0			B	0.152	2.763		0.8	1	3.601			
00			C	0.182	2.658		0.8	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.010	0.8	1	4.083	0.126	0.006	C
100.000-80.00			B	0.17	2.698		0.8	1	4.083			
0			C	0.199	2.599		0.8	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.009	0.8	1	4.083	0.119	0.006	C
80.000-60.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.009	0.8	1	4.083	0.111	0.006	C
60.000-40.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.008	0.8	1	4.083	0.100	0.005	C
40.000-20.000			B	0.17	2.698		0.8	1	4.083			
			C	0.199	2.599		0.8	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.007	0.8	1	3.331	0.067	0.004	C
20.000-3.646			B	0.17	2.7		0.8	1	3.331			
			C	0.198	2.602		0.8	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.007	0.8	1	0.893	0.011	0.003	C
3.646-0.000			B	0.357	2.155		0.8	1	0.893			
			C	0.357	2.155		0.8	1	0.893			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
Sum Weight:	0.272	3.984								1.168		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
T1	0.011	0.351	A	0.152	2.763	0.011	0.85	1	3.601	0.120	0.006	C
200.000-180.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T2	0.030	0.351	A	0.152	2.763	0.011	0.85	1	3.601	0.134	0.007	C
180.000-160.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T3	0.030	0.351	A	0.152	2.763	0.011	0.85	1	3.601	0.131	0.007	C
160.000-140.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T4	0.030	0.351	A	0.152	2.763	0.010	0.85	1	3.601	0.127	0.006	C
140.000-120.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T5	0.030	0.351	A	0.152	2.763	0.010	0.85	1	3.601	0.122	0.006	C
120.000-100.0			B	0.152	2.763		0.85	1	3.601			
00			C	0.182	2.658		0.85	1	4.330			
T6	0.030	0.444	A	0.17	2.698	0.010	0.85	1	4.083	0.126	0.006	C
100.000-80.00			B	0.17	2.698		0.85	1	4.083			
0			C	0.199	2.599		0.85	1	4.816			
T7	0.030	0.444	A	0.17	2.698	0.009	0.85	1	4.083	0.119	0.006	C
80.000-60.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T8	0.030	0.444	A	0.17	2.698	0.009	0.85	1	4.083	0.111	0.006	C
60.000-40.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T9	0.030	0.444	A	0.17	2.698	0.008	0.85	1	4.083	0.100	0.005	C
40.000-20.000			B	0.17	2.698		0.85	1	4.083			
			C	0.199	2.599		0.85	1	4.816			
T10	0.018	0.361	A	0.17	2.7	0.007	0.85	1	3.331	0.067	0.004	C
20.000-3.646			B	0.17	2.7		0.85	1	3.331			
			C	0.198	2.602		0.85	1	3.916			
T11	0.000	0.090	A	0.357	2.155	0.007	0.85	1	0.893	0.011	0.003	C
3.646-0.000			B	0.357	2.155		0.85	1	0.893			
			C	0.357	2.155		0.85	1	0.893			
Sum Weight:	0.272	3.984								1.168		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Torques kip-ft

Load Case	*Vertical Forces* K	*Sum of Forces X* K	*Sum of Forces Z* K	*Sum of Torques* kip-ft
Leg Weight	2.118			
Bracing Weight	1.865			
Total Member Self-Weight	3.984			
Guy Weight	0.413			
Total Weight	7.346			
Wind 0 deg - No Ice		0.054	-6.619	0.507
Wind 30 deg - No Ice		3.388	-5.759	0.684
Wind 60 deg - No Ice		5.813	-3.356	0.678
Wind 90 deg - No Ice		6.681	-0.054	0.490
Wind 120 deg - No Ice		5.364	3.035	0.171
Wind 150 deg - No Ice		3.066	5.310	-0.194
Wind 180 deg - No Ice		-0.054	6.163	-0.507
Wind 210 deg - No Ice		-3.160	5.364	-0.684
Wind 240 deg - No Ice		-5.418	3.128	-0.678
Wind 270 deg - No Ice		-6.225	0.054	-0.490
Wind 300 deg - No Ice		-5.364	-3.035	-0.171
Wind 330 deg - No Ice		-3.066	-5.310	0.194
Member Ice	5.120			
Guy Ice	1.996			
Total Weight Ice	17.264			
Wind 0 deg - Ice		0.010	-2.988	0.146
Wind 30 deg - Ice		1.508	-2.593	0.213
Wind 60 deg - Ice		2.603	-1.503	0.224
Wind 90 deg - Ice		3.000	-0.010	0.174
Wind 120 deg - Ice		2.270	1.299	0.078
Wind 150 deg - Ice		1.305	2.260	-0.039
Wind 180 deg - Ice		-0.010	2.615	-0.146
Wind 210 deg - Ice		-1.322	2.270	-0.213
Wind 240 deg - Ice		-2.280	1.316	-0.224
Wind 270 deg - Ice		-2.627	0.010	-0.174
Wind 300 deg - Ice		-2.270	-1.299	-0.078
Wind 330 deg - Ice		-1.305	-2.260	0.039
Total Weight	7.346			
Wind 0 deg - Service		0.014	-1.771	0.136
Wind 30 deg - Service		0.906	-1.541	0.183
Wind 60 deg - Service		1.556	-0.898	0.181
Wind 90 deg - Service		1.788	-0.014	0.131
Wind 120 deg - Service		1.435	0.812	0.046
Wind 150 deg - Service		0.820	1.421	-0.052
Wind 180 deg - Service		-0.014	1.649	-0.136
Wind 210 deg - Service		-0.845	1.435	-0.183
Wind 240 deg - Service		-1.450	0.837	-0.181
Wind 270 deg - Service		-1.666	0.014	-0.131
Wind 300 deg - Service		-1.435	-0.812	-0.046
Wind 330 deg - Service		-0.820	-1.421	0.052

Load Combinations

Comb. No.	*Description*
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy

Comb. No.	Description
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	200 - 180	Leg	Max Tension	4	9.364	0.255	-0.146
			Max. Compression	10	-11.646	0.088	-0.053
			Max. Mx	5	6.354	0.294	-0.006
			Max. My	2	-10.806	0.018	-0.284
			Max. Vy	5	1.002	-0.102	0.003
			Max. Vx	2	-0.976	-0.005	0.102
		Diagonal	Max Tension	3	1.489	0.000	0.000
			Max. Compression	11	-1.596	0.000	0.000
			Max. Mx	6	0.213	-0.001	-0.000
			Max. My	11	-1.162	-0.000	-0.001
			Max. Vy	22	0.002	-0.001	0.000
			Max. Vx	11	0.001	-0.000	-0.001
		Horizontal	Max Tension	8	0.330	0.000	0.000
			Max. Compression	8	-0.168	0.000	0.000
			Max. Mx	15	0.155	0.002	0.000
			Max. My	10	0.010	0.000	0.000
			Max. Vy	15	-0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	10	0.032	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	4	-0.036	0.000	0.000
			Max. Mx	23	0.004	0.002	0.000
			Max. My	10	-0.015	0.000	-0.000
			Max. Vy	23	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Bottom Girt	Max Tension	4	0.850	0.000	0.000
			Max. Compression	10	-0.881	0.000	0.000
			Max. Mx	23	-0.260	0.002	0.000
			Max. My	10	0.526	0.000	-0.000
			Max. Vy	23	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Mid Girt	Max Tension	4	0.152	0.000	0.000
			Max. Compression	10	-0.160	0.000	0.000
			Max. Mx	23	-0.055	0.002	0.000
			Max. My	10	0.061	0.000	-0.000
			Max. Vy	23	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
T2	180 - 160	Leg	Max Tension	4	9.361	-0.089	0.050
			Max. Compression	10	-11.951	-0.066	0.045
			Max. Mx	5	0.640	-0.313	0.007
			Max. My	2	-10.809	-0.017	0.303
			Max. Vy	5	1.012	-0.313	0.007
			Max. Vx	2	-0.963	-0.017	0.303
		Diagonal	Max Tension	2	0.332	0.000	0.000
			Max. Compression	10	-0.730	0.000	0.000
			Max. Mx	3	-0.145	-0.001	-0.000
			Max. My	5	-0.651	-0.000	-0.000
			Max. Vy	16	0.002	-0.001	-0.000
			Max. Vx	5	-0.000	0.000	0.000
		Horizontal	Max Tension	9	0.919	0.000	0.000
			Max. Compression	2	-0.072	0.000	0.000
			Max. Mx	15	0.270	0.002	0.000
			Max. My	10	0.716	0.000	0.000
			Max. Vy	15	0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	10	3.196	0.000	0.000
			Max. Compression	4	-0.272	0.000	0.000
			Max. Mx	23	1.555	0.002	0.000
			Max. My	10	0.670	0.000	-0.000
			Max. Vy	23	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Bottom Girt	Max Tension	10	0.380	0.000	0.000
			Max. Compression	4	-0.022	0.000	0.000
			Max. Mx	14	0.035	0.002	0.000
			Max. My	10	0.039	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Mid Girt	Max Tension	10	0.706	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.073	0.002	0.000
			Max. My	10	0.096	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Guy A	Bottom Tension	9	8.602		
			Top Tension	9	8.674		
			Top Cable Vert	9	7.327		
			Top Cable Norm	9	4.642		
			Top Cable Tan	9	0.025		
			Bot Cable Vert	9	-7.139		
			Bot Cable Norm	9	4.799		
			Bot Cable Tan	9	0.104		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Guy B	Bottom Tension	11	8.345		
			Top Tension	11	8.413		
			Top Cable Vert	11	7.002		
			Top Cable Norm	11	4.664		
			Top Cable Tan	11	0.021		
			Bot Cable Vert	11	-6.818		
			Bot Cable Norm	11	4.811		
			Bot Cable Tan	11	0.103		
		Guy C	Bottom Tension	3	8.763		
			Top Tension	3	8.833		
			Top Cable Vert	3	7.399		
			Top Cable Norm	3	4.825		
			Top Cable Tan	3	0.023		
			Bot Cable Vert	3	-7.213		
			Bot Cable Norm	3	4.976		
			Bot Cable Tan	3	0.103		
T3	160 - 140	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	10	-12.341	0.014	-0.013
			Max. Mx	5	-2.538	0.041	0.011
			Max. My	2	-2.986	-0.004	-0.052
			Max. Vy	5	0.142	-0.016	-0.007
			Max. Vx	2	-0.161	0.001	0.012
		Diagonal	Max Tension	2	0.165	0.000	0.000
			Max. Compression	6	-0.712	0.000	0.000
			Max. Mx	10	0.093	-0.001	0.000
			Max. My	2	-0.093	0.001	-0.000
			Max. Vy	17	0.002	-0.001	0.000
			Max. Vx	2	-0.000	0.000	0.000
		Horizontal	Max Tension	10	0.794	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.556	0.002	0.000
			Max. My	10	0.744	0.000	0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	10	0.381	0.000	0.000
			Max. Compression	4	-0.006	0.000	0.000
			Max. Mx	14	0.028	0.002	0.000
			Max. My	10	0.049	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Bottom Girt	Max Tension	10	0.470	0.000	0.000
			Max. Compression	6	-0.096	0.000	0.000
			Max. Mx	14	0.037	0.002	0.000
			Max. My	10	0.101	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Mid Girt	Max Tension	10	0.724	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.069	0.002	0.000
			Max. My	10	0.099	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
T4	140 - 120	Leg	Max Tension	8	3.070	0.003	0.073
			Max. Compression	10	-18.430	0.028	-0.019
			Max. Mx	5	2.104	0.086	0.012
			Max. My	2	-0.533	-0.005	-0.087
			Max. Vy	5	0.305	-0.034	-0.006
			Max. Vx	2	-0.293	0.001	0.041
		Diagonal	Max Tension	8	0.317	0.000	0.000
			Max. Compression	10	-1.008	0.000	0.000
			Max. Mx	10	0.173	-0.001	-0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	3	-0.410	-0.000	0.000
			Max. Vy	16	0.002	-0.001	-0.000
			Max. Vx	3	-0.000	-0.000	0.000
		Horizontal	Max Tension	9	0.979	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	21	0.663	0.002	0.000
			Max. My	10	0.847	0.000	0.000
			Max. Vy	21	0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	10	0.374	0.000	0.000
			Max. Compression	4	-0.037	0.000	0.000
			Max. Mx	14	0.030	0.002	0.000
			Max. My	10	-0.005	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Bottom Girt	Max Tension	9	0.669	0.000	0.000
			Max. Compression	6	-0.212	0.000	0.000
			Max. Mx	14	0.043	0.002	0.000
			Max. My	10	0.176	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
		Mid Girt	Max Tension	10	0.857	0.000	0.000
			Max. Compression	10	-0.007	0.000	0.000
			Max. Mx	14	0.074	0.002	0.000
			Max. My	10	0.119	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	10	0.000	0.000	0.000
T5	120 - 100	Leg	Max Tension	8	3.068	-0.001	-0.026
			Max. Compression	10	-18.431	0.075	-0.038
			Max. Mx	5	0.073	-0.098	-0.015
			Max. My	2	-17.540	0.004	0.100
			Max. Vy	5	0.307	-0.098	-0.015
			Max. Vx	2	-0.287	0.005	0.086
		Diagonal	Max Tension	7	0.334	0.000	0.000
			Max. Compression	10	-0.920	0.000	0.000
			Max. Mx	10	-0.231	-0.002	-0.000
			Max. My	10	-0.860	-0.001	-0.000
			Max. Vy	16	0.002	-0.001	-0.000
			Max. Vx	10	0.000	-0.001	-0.000
		Horizontal	Max Tension	9	1.123	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.864	0.002	0.000
			Max. My	10	1.082	0.000	0.000
			Max. Vy	22	0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	15	1.369	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.744	0.002	0.000
			Max. My	9	0.650	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	9	0.000	0.000	0.000
		Bottom Girt	Max Tension	15	0.466	0.000	0.000
			Max. Compression	4	-0.032	0.000	0.000
			Max. Mx	14	0.048	0.002	0.000
			Max. My	3	0.034	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	10	0.971	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.099	0.002	0.000
			Max. My	3	0.103	0.000	-0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Guy A	Bottom Tension	8	3.054		
			Top Tension	8	3.079		
			Top Cable Vert	8	2.253		
			Top Cable Norm	8	2.099		
			Top Cable Tan	8	0.000		
			Bot Cable Vert	8	-2.164		
			Bot Cable Norm	8	2.155		
			Bot Cable Tan	8	0.000		
		Guy B	Bottom Tension	12	2.941		
			Top Tension	12	2.965		
			Top Cable Vert	12	2.090		
			Top Cable Norm	12	2.102		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-2.006		
			Bot Cable Norm	12	2.151		
			Bot Cable Tan	12	0.000		
		Guy C	Bottom Tension	4	3.145		
			Top Tension	4	3.169		
			Top Cable Vert	4	2.271		
			Top Cable Norm	4	2.210		
			Top Cable Tan	4	0.000		
			Bot Cable Vert	4	-2.184		
			Bot Cable Norm	4	2.262		
			Bot Cable Tan	4	0.000		
T6	100 - 80	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	10	-12.611	-0.041	0.034
			Max. Mx	5	-4.982	0.059	0.012
			Max. My	2	-5.070	0.002	-0.061
			Max. Vy	5	-0.153	0.030	0.008
			Max. Vx	2	0.146	0.003	-0.019
		Diagonal	Max Tension	10	0.188	0.000	0.000
			Max. Compression	10	-0.547	0.000	0.000
			Max. Mx	22	0.004	-0.001	-0.000
			Max. My	9	-0.153	-0.001	-0.000
			Max. Vy	22	0.002	-0.001	-0.000
			Max. Vx	9	0.000	-0.001	-0.000
		Horizontal	Max Tension	15	0.608	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.552	0.002	0.000
			Max. My	10	0.596	0.000	0.000
			Max. Vy	22	0.004	0.000	0.000
			Max. Vx	10	-0.000	0.000	0.000
		Top Girt	Max Tension	10	0.366	0.000	0.000
			Max. Compression	10	-0.081	0.000	0.000
			Max. Mx	14	0.053	0.002	0.000
			Max. My	3	0.074	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Bottom Girt	Max Tension	21	0.325	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.064	0.002	0.000
			Max. My	3	0.045	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	10	0.549	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.126	0.002	0.000
			Max. My	3	0.130	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	3	0.000	0.000	0.000
T7	80 - 60	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	2	-13.414	0.008	0.039
			Max. Mx	4	-1.573	0.079	-0.020
			Max. My	2	-4.956	0.001	-0.075
			Max. Vy	4	0.248	-0.039	0.005
			Max. Vx	8	0.224	0.003	-0.041
		Diagonal	Max Tension	8	0.301	0.000	0.000
			Max. Compression	5	-0.725	0.000	0.000
			Max. Mx	16	0.037	-0.001	-0.000
			Max. My	9	-0.280	-0.001	-0.000
			Max. Vy	16	0.002	-0.001	-0.000
			Max. Vx	9	0.000	-0.001	-0.000
		Horizontal	Max Tension	21	0.679	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.659	0.002	0.000
			Max. My	4	0.446	0.000	0.000
			Max. Vy	22	0.004	0.000	0.000
			Max. Vx	4	-0.000	0.000	0.000
		Top Girt	Max Tension	15	0.325	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.057	0.002	0.000
			Max. My	3	0.073	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Bottom Girt	Max Tension	8	0.429	0.000	0.000
			Max. Compression	5	-0.059	0.000	0.000
			Max. Mx	14	0.075	0.002	0.000
			Max. My	3	0.052	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	21	0.595	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.132	0.002	0.000
			Max. My	3	0.124	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
T8	60 - 40	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	2	-13.415	0.019	0.074
			Max. Mx	4	-3.426	-0.091	0.016
			Max. My	8	-9.162	0.007	-0.087
			Max. Vy	4	0.248	-0.091	0.016
			Max. Vx	8	0.222	0.007	-0.087
		Diagonal	Max Tension	3	0.395	0.000	0.000
			Max. Compression	5	-0.640	0.000	0.000
			Max. Mx	16	-0.096	-0.001	-0.000
			Max. My	3	-0.383	-0.001	0.000
			Max. Vy	16	0.002	-0.001	-0.000
			Max. Vx	3	-0.000	-0.001	0.000
		Horizontal	Max Tension	21	0.756	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	22	0.731	0.002	0.000
			Max. My	4	0.413	0.000	0.000
			Max. Vy	22	-0.004	0.000	0.000
			Max. Vx	4	-0.000	0.000	0.000
		Top Girt	Max Tension	2	1.084	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.605	0.002	0.000
			Max. My	3	0.595	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Bottom Girt	Max Tension	2	0.412	0.000	0.000
			Max. Compression	4	-0.032	0.000	0.000
			Max. Mx	25	0.042	0.002	0.000
			Max. My	3	0.067	0.000	-0.000
			Max. Vy	25	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	21	0.674	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.158	0.002	0.000
			Max. My	3	0.141	0.000	-0.000
			Max. Vy	14	-0.004	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Guy A	Bottom Tension	8	2.544		
			Top Tension	8	2.558		
			Top Cable Vert	8	1.920		
			Top Cable Norm	8	1.690		
			Top Cable Tan	8	0.001		
			Bot Cable Vert	8	-1.878		
			Bot Cable Norm	8	1.717		
			Bot Cable Tan	8	0.001		
		Guy B	Bottom Tension	12	2.469		
			Top Tension	12	2.480		
			Top Cable Vert	12	1.751		
			Top Cable Norm	12	1.757		
			Top Cable Tan	12	0.000		
			Bot Cable Vert	12	-1.712		
			Bot Cable Norm	12	1.778		
			Bot Cable Tan	12	0.000		
		Guy C	Bottom Tension	4	2.654		
			Top Tension	4	2.667		
			Top Cable Vert	4	1.929		
			Top Cable Norm	4	1.841		
			Top Cable Tan	4	0.001		
			Bot Cable Vert	4	-1.889		
			Bot Cable Norm	4	1.865		
			Bot Cable Tan	4	0.001		
T9	40 - 20	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-11.795	-0.002	-0.013
			Max. Mx	4	-7.012	0.061	-0.013
			Max. My	3	-9.703	0.007	-0.069
			Max. Vy	4	-0.178	0.024	-0.001
			Max. Vx	3	0.174	0.004	-0.033
		Diagonal	Max Tension	3	0.248	0.000	0.000
			Max. Compression	3	-0.646	0.000	0.000
			Max. Mx	22	-0.143	-0.001	-0.000
			Max. My	9	-0.353	-0.000	-0.000
			Max. Vy	22	0.002	-0.001	-0.000
			Max. Vx	9	0.000	-0.000	-0.000
		Horizontal	Max Tension	16	0.794	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	21	0.710	0.002	0.000
			Max. My	4	0.622	0.000	0.000
			Max. Vy	21	-0.003	0.000	0.000
			Max. Vx	4	-0.000	0.000	0.000
		Top Girt	Max Tension	21	0.385	0.000	0.000
			Max. Compression	6	-0.009	0.000	0.000
			Max. Mx	25	0.107	0.002	0.000
			Max. My	3	0.067	0.000	-0.000
			Max. Vy	25	0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Bottom Girt	Max Tension	16	0.387	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	21	0.359	0.002	0.000
			Max. My	3	0.070	0.000	-0.000
			Max. Vy	21	-0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	16	0.715	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	25	0.158	0.002	0.000
			Max. My	3	0.147	0.000	-0.000
			Max. Vy	25	0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
T10	20 - 3.64583	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-11.796	-0.007	-0.016
			Max. Mx	3	-8.065	-0.071	-0.005
			Max. My	3	-9.565	0.026	0.065
			Max. Vy	9	0.097	-0.013	0.006
			Max. Vx	3	-0.116	-0.024	0.032
		Diagonal	Max Tension	9	0.272	0.000	0.000
			Max. Compression	3	-0.656	0.000	0.000
			Max. Mx	22	-0.193	-0.001	-0.000
			Max. My	9	-0.311	-0.001	-0.000
			Max. Vy	22	0.002	-0.001	-0.000
			Max. Vx	9	0.000	-0.001	-0.000
		Horizontal	Max Tension	16	0.785	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.581	0.002	0.000
			Max. My	4	0.474	0.000	0.000
			Max. Vy	14	0.003	0.000	0.000
			Max. Vx	4	-0.000	0.000	0.000
		Top Girt	Max Tension	16	0.411	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	21	0.355	0.002	0.000
			Max. My	3	0.090	0.000	-0.000
			Max. Vy	21	0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Mid Girt	Max Tension	16	0.729	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	0.671	0.002	0.000
			Max. My	3	0.182	0.000	-0.000
			Max. Vy	14	0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
T11	3.64583 - 0	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	17	-11.786	-0.027	0.111
			Max. Mx	21	-11.709	-0.027	-0.077
			Max. My	3	-9.322	-0.020	0.349
			Max. Vy	16	0.094	-0.026	0.132
			Max. Vx	3	-0.766	-0.020	0.349
		Diagonal	Max Tension	4	0.065	0.001	0.003
			Max. Compression	3	-2.084	0.000	0.000
			Max. Mx	18	-1.068	0.001	0.000
			Max. My	3	-1.992	0.001	0.005
			Max. Vy	18	0.004	0.000	0.000
			Max. Vx	3	0.020	0.001	0.005
		Horizontal	Max Tension	17	2.323	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000
			Max. Mx	14	2.200	0.001	0.000
			Max. My	3	1.750	0.000	-0.000
			Max. Vy	14	-0.003	0.000	0.000
			Max. Vx	3	0.000	0.000	0.000
		Bottom Girt	Max Tension	17	0.773	0.000	0.000
			Max. Compression	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	14	0.734	0.000	0.000
			Max. Vy	14	0.000	0.000	0.000

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Mast	Max. Vert	17	32.849	-0.091	0.068
	Max. H_x	11	26.314	0.271	0.013
	Max. H_z	2	27.999	0.001	0.277
	Max. M_x	1	0.000	0.001	0.003
	Max. M_z	1	0.000	0.001	0.003
	Max. Torsion	9	0.374	0.129	-0.225
	Min. Vert	1	17.262	0.001	0.003
	Min. H_x	5	26.878	-0.281	0.023
	Min. H_z	8	24.211	0.004	-0.269
	Min. M_x	1	0.000	0.001	0.003
	Min. M_z	1	0.000	0.001	0.003
	Min. Torsion	3	-0.375	-0.152	0.244
Guy C @ 120 ft Elev 1 ft Azimuth 240 deg	Max. Vert	10	-0.630	-0.311	0.179
	Max. H_x	10	-0.630	-0.311	0.179
	Max. H_z	3	-9.348	-6.156	3.713
	Min. Vert	3	-9.348	-6.156	3.713
	Min. H_x	5	-9.286	-6.252	3.446
	Min. H_z	10	-0.630	-0.311	0.179
Guy B @ 120 ft Elev 5 ft Azimuth 120 deg	Max. Vert	6	-0.589	0.295	0.170
	Max. H_x	11	-8.734	6.015	3.315
	Max. H_z	13	-8.596	5.807	3.504
	Min. Vert	11	-8.734	6.015	3.315
	Min. H_x	6	-0.589	0.295	0.170
	Min. H_z	6	-0.589	0.295	0.170
Guy A @ 120 ft Elev -4 ft Azimuth 0 deg	Max. Vert	2	-0.671	-0.000	-0.366
	Max. H_x	11	-5.221	0.253	-3.831
	Max. H_z	2	-0.671	-0.000	-0.366
	Min. Vert	9	-9.230	0.138	-6.881
	Min. H_x	5	-5.159	-0.255	-3.808
	Min. H_z	9	-9.230	0.138	-6.881
Guy C @ 60 ft Elev -1 ft Azimuth 240 deg	Max. Vert	10	-0.153	-0.115	0.067
	Max. H_x	10	-0.153	-0.115	0.067
	Max. H_z	4	-1.889	-1.615	0.932
	Min. Vert	4	-1.889	-1.615	0.932
	Min. H_x	4	-1.889	-1.615	0.932
	Min. H_z	10	-0.153	-0.115	0.067
Guy B @ 60 ft Elev 2 ft Azimuth 120 deg	Max. Vert	6	-0.122	0.096	0.055
	Max. H_x	12	-1.712	1.540	0.889
	Max. H_z	12	-1.712	1.540	0.889

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy A @ 60 ft Elev -6 ft Azimuth 0 deg	Min. Vert	12	-1.712	1.540	0.889
	Min. H_x	6	-0.122	0.096	0.055
	Min. H_z	6	-0.122	0.096	0.055
	Max. Vert	2	-0.154	0.000	-0.122
	Max. H_x	24	-1.061	0.037	-1.003
	Max. H_z	2	-0.154	0.000	-0.122
	Min. Vert	8	-1.878	-0.001	-1.717
	Min. H_x	18	-1.056	-0.037	-0.999
	Min. H_z	8	-1.878	-0.001	-1.717

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	17.262	-0.001	-0.003	0.000	0.000	-0.000
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	27.999	-0.001	-0.277	0.000	0.000	0.278
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	26.824	0.152	-0.244	0.000	0.000	0.375
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	24.547	0.261	-0.156	0.000	0.000	0.370
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	26.878	0.281	-0.023	0.000	0.000	0.235
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	27.387	0.220	0.118	0.000	0.000	0.065
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	26.194	0.121	0.223	0.000	0.000	-0.120
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	24.211	-0.004	0.269	0.000	0.000	-0.294
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	26.494	-0.129	0.225	0.000	0.000	-0.374
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	27.587	-0.229	0.122	0.000	0.000	-0.347
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	26.314	-0.271	-0.013	0.000	0.000	-0.239
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	24.122	-0.244	-0.142	0.000	0.000	-0.080
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	25.995	-0.142	-0.231	0.000	0.000	0.114
1.2 Dead+1.0 Ice+1.0 Temp+Guy	31.370	-0.006	-0.012	0.000	0.000	0.003
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	31.926	-0.006	-0.152	0.000	0.000	0.084
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	32.490	0.044	-0.130	0.000	0.000	0.143
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	32.849	0.091	-0.068	0.000	0.000	0.120
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	32.542	0.120	0.003	0.000	0.000	0.067
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	32.017	0.107	0.052	0.000	0.000	0.038
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	32.442	0.067	0.080	0.000	0.000	-0.002
1.2 Dead+1.0 Wind 180	32.740	-0.006	0.088	0.000	0.000	-0.083

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 210	32.429	-0.080	0.080	0.000	0.000	-0.143
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 240	31.966	-0.120	0.053	0.000	0.000	-0.123
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 270	32.420	-0.124	0.005	0.000	0.000	-0.067
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 300	32.715	-0.094	-0.063	0.000	0.000	-0.038
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 330	32.394	-0.050	-0.122	0.000	0.000	0.001
deg+1.0 Ice+1.0 Temp+1.0 Guy Dead+Wind 0 deg - Service+Guy	17.468	-0.001	-0.099	0.000	0.000	0.091
Dead+Wind 30 deg - Service+Guy	17.527	0.044	-0.086	0.000	0.000	0.127
Dead+Wind 60 deg - Service+Guy	17.567	0.078	-0.050	0.000	0.000	0.116
Dead+Wind 90 deg - Service+Guy	17.474	0.093	-0.002	0.000	0.000	0.074
Dead+Wind 120 deg - Service+Guy	17.379	0.075	0.040	0.000	0.000	0.027
Dead+Wind 150 deg - Service+Guy	17.439	0.044	0.070	0.000	0.000	-0.030
Dead+Wind 180 deg - Service+Guy	17.504	-0.001	0.081	0.000	0.000	-0.091
Dead+Wind 210 deg - Service+Guy	17.461	-0.046	0.070	0.000	0.000	-0.127
Dead+Wind 240 deg - Service+Guy	17.413	-0.077	0.041	0.000	0.000	-0.117
Dead+Wind 270 deg - Service+Guy	17.511	-0.087	-0.001	0.000	0.000	-0.074
Dead+Wind 300 deg - Service+Guy	17.588	-0.074	-0.045	0.000	0.000	-0.026
Dead+Wind 330 deg - Service+Guy	17.540	-0.042	-0.079	0.000	0.000	0.030

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-7.346	0.000	0.002	7.346	0.004	0.056%
2	0.056	-8.768	-7.725	-0.056	8.767	7.707	0.151%
3	3.939	-8.729	-6.717	-3.940	8.729	6.702	0.135%
4	6.765	-8.691	-3.910	-6.770	8.691	3.922	0.107%
5	7.777	-8.735	-0.055	-7.764	8.734	0.065	0.138%
6	6.314	-8.778	3.586	-6.300	8.777	-3.577	0.150%
7	3.614	-8.738	6.265	-3.601	8.737	-6.259	0.129%
8	-0.056	-8.696	7.269	0.047	8.696	-7.269	0.075%
9	-3.711	-8.735	6.323	3.698	8.735	-6.316	0.131%
10	-6.370	-8.773	3.682	6.356	8.773	-3.673	0.149%
11	-7.321	-8.730	0.055	7.310	8.729	-0.047	0.125%
12	-6.314	-8.687	-3.586	6.311	8.687	3.593	0.075%
13	-3.614	-8.727	-6.265	3.616	8.727	6.252	0.121%
14	0.000	-18.650	0.000	0.003	18.650	0.005	0.029%
15	0.012	-18.690	-4.125	-0.012	18.690	4.121	0.020%
16	2.075	-18.648	-3.578	-2.075	18.648	3.574	0.024%
17	3.580	-18.607	-2.073	-3.575	18.606	2.072	0.028%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
18	4.125	-18.653	-0.011	-4.121	18.653	0.014	0.024%
19	3.245	-18.699	1.865	-3.242	18.699	-1.863	0.018%
20	1.868	-18.655	3.241	-1.864	18.655	-3.239	0.022%
21	-0.012	-18.611	3.752	0.012	18.611	-3.747	0.028%
22	-1.889	-18.653	3.255	1.885	18.653	-3.253	0.022%
23	-3.257	-18.694	1.886	3.254	18.694	-1.884	0.018%
24	-3.752	-18.648	0.011	3.749	18.648	-0.009	0.020%
25	-3.245	-18.602	-1.865	3.240	18.602	1.864	0.023%
26	-1.868	-18.646	-3.241	1.868	18.646	3.238	0.018%
27	0.015	-7.355	-2.067	-0.015	7.355	2.067	0.006%
28	1.054	-7.345	-1.798	-1.055	7.345	1.796	0.027%
29	1.810	-7.335	-1.046	-1.810	7.335	1.047	0.010%
30	2.081	-7.346	-0.015	-2.080	7.346	0.017	0.032%
31	1.690	-7.358	0.960	-1.689	7.358	-0.959	0.005%
32	0.967	-7.347	1.677	-0.965	7.347	-1.677	0.030%
33	-0.015	-7.336	1.945	0.015	7.336	-1.944	0.012%
34	-0.993	-7.346	1.692	0.991	7.346	-1.692	0.023%
35	-1.705	-7.357	0.985	1.705	7.357	-0.986	0.003%
36	-1.959	-7.345	0.015	1.958	7.345	-0.013	0.026%
37	-1.690	-7.334	-0.960	1.689	7.333	0.960	0.011%
38	-0.967	-7.344	-1.677	0.968	7.344	1.675	0.025%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	14	0.00000001	0.00006261
2	Yes	105	0.00019815	0.00012034
3	Yes	103	0.00019982	0.00011156
4	Yes	38	0.00018788	0.00012903
5	Yes	111	0.00019913	0.00010848
6	Yes	112	0.00019674	0.00011583
7	Yes	110	0.00019233	0.00010361
8	Yes	56	0.00019482	0.00009445
9	Yes	107	0.00019204	0.00010698
10	Yes	109	0.00019812	0.00011830
11	Yes	107	0.00019536	0.00010301
12	Yes	61	0.00019402	0.00007474
13	Yes	102	0.00019736	0.00010242
14	Yes	22	0.00020000	0.00006500
15	Yes	53	0.00019678	0.00003893
16	Yes	62	0.00019669	0.00003088
17	Yes	49	0.00019014	0.00004522
18	Yes	67	0.00019570	0.00003071
19	Yes	54	0.00000001	0.00003432
20	Yes	61	0.00019191	0.00002984
21	Yes	51	0.00019560	0.00004374
22	Yes	60	0.00019718	0.00003032
23	Yes	51	0.00000001	0.00003261
24	Yes	61	0.00019619	0.00002623
25	Yes	48	0.00019196	0.00003772
26	Yes	58	0.00018577	0.00002540
27	Yes	22	0.00000001	0.00010737
28	Yes	26	0.00000001	0.00008036
29	Yes	24	0.00000001	0.00009275
30	Yes	27	0.00000001	0.00006272

31	Yes	20	0.00000001	0.00012156
32	Yes	25	0.00000001	0.00007400
33	Yes	24	0.00000001	0.00008612
34	Yes	27	0.00000001	0.00007248
35	Yes	23	0.00000001	0.00011090
36	Yes	27	0.00000001	0.00006425
37	Yes	21	0.00000001	0.00011395
38	Yes	25	0.00000001	0.00007269

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	200 - 180	3.332	29	0.2022	0.4155
T2	180 - 160	2.483	29	0.1734	0.4176
T3	160 - 140	1.875	33	0.1288	0.4271
T4	140 - 120	1.368	33	0.1161	0.4262
T5	120 - 100	0.952	33	0.0704	0.4138
T6	100 - 80	0.758	33	0.0369	0.3982
T7	80 - 60	0.604	33	0.0402	0.3776
T8	60 - 40	0.455	33	0.0262	0.3488
T9	40 - 20	0.372	33	0.0235	0.3167
T10	20 - 3.64583	0.231	33	0.0455	0.2775
T11	3.64583 - 0	0.046	33	0.0593	0.2465

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
200.000	Beacon	29	3.332	0.2022	0.4155	56682
185.000	Commscope P/N: MTC3975083	29	2.677	0.1829	0.4162	18894
179.792	Guy	29	2.475	0.1729	0.4176	15269
119.792	Guy	33	0.949	0.0698	0.4136	15523
100.000	Side Light	33	0.758	0.0369	0.3982	331315
59.792	Guy	33	0.454	0.0261	0.3487	36541

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	200 - 180	27.162	10	1.6458	1.2236
T2	180 - 160	20.256	10	1.5380	1.2165
T3	160 - 140	14.555	2	1.3014	1.2424
T4	140 - 120	9.932	2	1.0776	1.2384
T5	120 - 100	6.260	2	0.6792	1.1957
T6	100 - 80	4.242	2	0.3525	1.1552
T7	80 - 60	2.963	2	0.2698	1.1006
T8	60 - 40	2.002	2	0.1649	1.0272

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T9	40 - 20	1.489	2	0.1194	0.9407
T10	20 - 3.64583	0.881	2	0.1807	0.8278
T11	3.64583 - 0	0.173	2	0.2218	0.7359

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
200.000	Beacon	10	27.162	1.6458	1.2236	14928
185.000	Commscope P/N: MTC3975083	10	21.914	1.5777	1.2149	4976
179.792	Guy	10	20.189	1.5361	1.2167	4025
119.792	Guy	2	6.231	0.6747	1.1952	2205
100.000	Side Light	2	4.242	0.3525	1.1552	6691
59.792	Guy	2	1.995	0.1640	1.0270	7709

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	200	Leg	A325N	0.3750	3	3.121	6.974	0.448 ✔	1	Bolt Tension
T2	180	Leg	A325N	0.3750	3	1.140	6.974	0.163 ✔	1	Bolt Tension
T3	160	Leg	A325N	0.3750	3	1.371	6.974	0.197 ✔	1	Bolt Tension
T4	140	Leg	A325N	0.3750	3	2.048	6.974	0.294 ✔	1	Bolt Tension
T5	120	Leg	A325N	0.3750	3	1.399	6.974	0.201 ✔	1	Bolt Tension
T6	100	Leg	A325N	0.5000	3	1.171	12.771	0.092 ✔	1	Bolt Tension
T7	80	Leg	A325N	0.5000	3	1.490	12.771	0.117 ✔	1	Bolt Tension
T8	60	Leg	A325N	0.5000	3	1.181	12.771	0.092 ✔	1	Bolt Tension
T9	40	Leg	A325N	0.5000	3	1.311	12.771	0.103 ✔	1	Bolt Tension

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T2	179.792 (A) (959)	7/16 EHS	2.080	20.800	8.674	12.480	1.000	1.439 ✔
	179.792 (B) (958)	7/16 EHS	2.080	20.800	8.413	12.480	1.000	1.483 ✔
	179.792 (C) (957)	7/16 EHS	2.080	20.800	8.833	12.480	1.000	1.413 ✔

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T_u K	Allowable ϕT_n K	Required S.F.	Actual S.F.
T5	119.792 (A) (962)	5/16 EHS	1.120	11.200	3.079	6.720	1.000	2.183 ✔
	119.792 (B) (961)	5/16 EHS	1.120	11.200	2.965	6.720	1.000	2.267 ✔
	119.792 (C) (960)	5/16 EHS	1.120	11.200	3.169	6.720	1.000	2.121 ✔
T8	59.792 (A) (965)	5/16 EHS	1.120	11.200	2.558	6.720	1.000	2.627 ✔
	59.792 (B) (964)	5/16 EHS	1.120	11.200	2.480	6.720	1.000	2.709 ✔
	59.792 (C) (963)	5/16 EHS	1.120	11.200	2.667	6.720	1.000	2.520 ✔

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	Mast Stability Index	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	1	20.000	1.616	77.6 K=1.00	0.7854	1.00	-9.803	22.760	0.431 [1] ✔
T2	180 - 160	1	20.000	1.616	77.6 K=1.00	0.7854	1.00	-11.951	22.760	0.525 [1] ✔
T3	160 - 140	1	20.000	1.616	77.6 K=1.00	0.7854	1.00	-11.751	22.760	0.516 [1] ✔
T4	140 - 120	1	20.000	1.616	77.6 K=1.00	0.7854	1.00	-17.563	22.760	0.772 [1] ✔
T5	120 - 100	1	20.000	1.616	77.6 K=1.00	0.7854	1.00	-17.919	22.760	0.787 [1] ✔
T6	100 - 80	1 1/4	20.000	1.609	61.8 K=1.00	1.2272	0.94	-12.083	39.452	0.306 [1] ✔
T7	80 - 60	1 1/4	20.000	1.609	61.8 K=1.00	1.2272	0.95	-13.005	39.472	0.329 [1] ✔
T8	60 - 40	1 1/4	20.000	1.609	61.8 K=1.00	1.2272	0.94	-13.237	39.120	0.338 [1] ✔
T9	40 - 20	1 1/4	20.000	1.609	61.8 K=1.00	1.2272	0.89	-11.648	37.176	0.313 [1] ✔
T10	20 - 3.64583	1 1/4	16.354	1.615	62.0 K=1.00	1.2272	0.89	-11.749	37.134	0.316 [1] ✔
T11	3.64583 - 0	1 1/4	3.824	0.350	13.4 K=1.00	1.2272	0.69	-11.786	37.449	0.315 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	1/2	2.571	1.232	107.5 K=0.91	0.1963	-1.596	3.463	0.461 [1] ✔
T2	180 - 160	1/2	2.571	1.232	107.5 K=0.91	0.1963	-0.730	3.463	0.211 [1] ✔
T3	160 - 140	1/2	2.571	1.232	107.5 K=0.91	0.1963	-0.712	3.463	0.206 [1] ✔
T4	140 - 120	1/2	2.571	1.232	107.5 K=0.91	0.1963	-1.008	3.463	0.291 [1] ✔
T5	120 - 100	1/2	2.571	1.232	107.5 K=0.91	0.1963	-0.920	3.463	0.266 [1] ✔
T6	100 - 80	1/2	2.567	1.217	107.0 K=0.92	0.1963	-0.547	3.482	0.157 [1] ✔
T7	80 - 60	1/2	2.567	1.217	107.0 K=0.92	0.1963	-0.725	3.482	0.208 [1] ✔
T8	60 - 40	1/2	2.567	1.217	107.0 K=0.92	0.1963	-0.640	3.482	0.184 [1] ✔
T9	40 - 20	1/2	2.567	1.217	107.0 K=0.92	0.1963	-0.646	3.482	0.186 [1] ✔
T10	20 - 3.64583	1/2	2.570	1.218	107.0 K=0.92	0.1963	-0.656	3.480	0.188 [1] ✔
T11	3.64583 - 0	1/2	1.219	0.866	90.2 K=1.08	0.1963	-2.084	4.146	0.503 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.182	11.596	0.016 [1] ✔
T2	180 - 160	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.188	11.596	0.016 [1] ✔
T3	160 - 140	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.199	11.596	0.017 [1] ✔
T4	140 - 120	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.310	11.596	0.027 [1] ✔
T5	120 - 100	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.310	11.596	0.027 [1] ✔
T6	100 - 80	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.212	11.732	0.018 [1] ✔
T7	80 - 60	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.225	11.732	0.019 [1] ✔
T8	60 - 40	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.225	11.732	0.019 [1] ✔
T9	40 - 20	3/4	2.000	1.896	84.9	0.4418	-0.202	11.732	0.017 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T10	20 - 3.64583	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.202	11.732	0.017 [1] ✔
T11	3.64583 - 0	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.211	11.732	0.018 [1] ✔

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.036	11.596	0.003 [1] ✔
T2	180 - 160	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.272	11.596	0.023 [1] ✔
T3	160 - 140	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.214	11.596	0.018 [1] ✔
T4	140 - 120	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.319	11.596	0.028 [1] ✔
T5	120 - 100	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.319	11.596	0.028 [1] ✔
T6	100 - 80	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.218	11.732	0.019 [1] ✔
T7	80 - 60	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.232	11.732	0.020 [1] ✔
T8	60 - 40	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.232	11.732	0.020 [1] ✔
T9	40 - 20	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.204	11.732	0.017 [1] ✔
T10	20 - 3.64583	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.204	11.732	0.017 [1] ✔

[1] $P_u / \phi P_n$ controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.881	11.596	0.076 [1] ✔
T2	180 - 160	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.207	11.596	0.018 [1] ✔
T3	160 - 140	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.214	11.596	0.018 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T4	140 - 120	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.319	11.596	0.028 [1]
T5	120 - 100	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.319	11.596	0.028 [1]
T6	100 - 80	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.218	11.732	0.019 [1]
T7	80 - 60	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.232	11.732	0.020 [1]
T8	60 - 40	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.232	11.732	0.020 [1]
T9	40 - 20	3/4	2.000	1.896	84.9 K=0.70	0.4418	-0.204	11.732	0.017 [1]

[1] $P_u / \phi P_n$ controls

Mid Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.160	11.596	0.014 [1]
T4	140 - 120	3/4	2.000	1.917	85.9 K=0.70	0.4418	-0.007	11.596	0.001 [1]

[1] $P_u / \phi P_n$ controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	1	20.000	0.396	19.0	0.7854	9.364	35.343	0.265 [1]
T2	180 - 160	1	20.000	0.208	10.0	0.7854	9.361	35.343	0.265 [1]
T4	140 - 120	1	20.000	0.396	19.0	0.7854	3.070	35.343	0.087 [1]
T5	120 - 100	1	20.000	0.208	10.0	0.7854	3.068	35.343	0.087 [1]

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	1/2	2.571	1.232	118.3	0.1963	1.489	6.362	0.234 [1] ✔
T2	180 - 160	1/2	2.571	1.232	118.3	0.1963	0.332	6.362	0.052 [1] ✔
T3	160 - 140	1/2	2.571	1.232	118.3	0.1963	0.165	6.362	0.026 [1] ✔
T4	140 - 120	1/2	2.571	1.232	118.3	0.1963	0.317	6.362	0.050 [1] ✔
T5	120 - 100	1/2	2.571	1.232	118.3	0.1963	0.334	6.362	0.053 [1] ✔
T6	100 - 80	1/2	2.567	1.217	116.8	0.1963	0.188	6.362	0.030 [1] ✔
T7	80 - 60	1/2	2.567	1.217	116.8	0.1963	0.301	6.362	0.047 [1] ✔
T8	60 - 40	1/2	2.567	1.217	116.8	0.1963	0.395	6.362	0.062 [1] ✔
T9	40 - 20	1/2	2.567	1.217	116.8	0.1963	0.248	6.362	0.039 [1] ✔
T10	20 - 3.64583	1/2	2.570	1.218	117.0	0.1963	0.272	6.362	0.043 [1] ✔
T11	3.64583 - 0	1/2	1.219	0.866	83.2	0.1963	0.065	6.362	0.010 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	122.7	0.4418	0.330	19.880	0.017 [1] ✔
T2	180 - 160	3/4	2.000	1.917	122.7	0.4418	0.919	19.880	0.046 [1] ✔
T3	160 - 140	3/4	2.000	1.917	122.7	0.4418	0.794	19.880	0.040 [1] ✔
T4	140 - 120	3/4	2.000	1.917	122.7	0.4418	0.979	19.880	0.049 [1] ✔
T5	120 - 100	3/4	2.000	1.917	122.7	0.4418	1.123	19.880	0.056 [1] ✔
T6	100 - 80	3/4	2.000	1.896	121.3	0.4418	0.608	19.880	0.031 [1] ✔
T7	80 - 60	3/4	2.000	1.896	121.3	0.4418	0.679	19.880	0.034 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T8	60 - 40	3/4	2.000	1.896	121.3	0.4418	0.756	19.880	0.038 [1] ✔
T9	40 - 20	3/4	2.000	1.896	121.3	0.4418	0.794	19.880	0.040 [1] ✔
T10	20 - 3.64583	3/4	2.000	1.896	121.3	0.4418	0.785	19.880	0.039 [1] ✔
T11	3.64583 - 0	3/4	2.000	1.896	121.3	0.4418	2.323	19.880	0.117 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	122.7	0.4418	0.032	19.880	0.002 [1] ✔
T2	180 - 160	3/4	2.000	1.917	122.7	0.4418	3.196	19.880	0.161 [1] ✔
T3	160 - 140	3/4	2.000	1.917	122.7	0.4418	0.381	19.880	0.019 [1] ✔
T4	140 - 120	3/4	2.000	1.917	122.7	0.4418	0.374	19.880	0.019 [1] ✔
T5	120 - 100	3/4	2.000	1.917	122.7	0.4418	1.369	19.880	0.069 [1] ✔
T6	100 - 80	3/4	2.000	1.896	121.3	0.4418	0.366	19.880	0.018 [1] ✔
T7	80 - 60	3/4	2.000	1.896	121.3	0.4418	0.325	19.880	0.016 [1] ✔
T8	60 - 40	3/4	2.000	1.896	121.3	0.4418	1.084	19.880	0.055 [1] ✔
T9	40 - 20	3/4	2.000	1.896	121.3	0.4418	0.385	19.880	0.019 [1] ✔
T10	20 - 3.64583	3/4	2.000	1.896	121.3	0.4418	0.411	19.880	0.021 [1] ✔

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	122.7	0.4418	0.850	19.880	0.043 [1] ✔
T2	180 - 160	3/4	2.000	1.917	122.7	0.4418	0.380	19.880	0.019 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T3	160 - 140	3/4	2.000	1.917	122.7	0.4418	0.470	19.880	0.024 [1]
T4	140 - 120	3/4	2.000	1.917	122.7	0.4418	0.669	19.880	0.034 [1]
T5	120 - 100	3/4	2.000	1.917	122.7	0.4418	0.466	19.880	0.023 [1]
T6	100 - 80	3/4	2.000	1.896	121.3	0.4418	0.325	19.880	0.016 [1]
T7	80 - 60	3/4	2.000	1.896	121.3	0.4418	0.429	19.880	0.022 [1]
T8	60 - 40	3/4	2.000	1.896	121.3	0.4418	0.412	19.880	0.021 [1]
T9	40 - 20	3/4	2.000	1.896	121.3	0.4418	0.387	19.880	0.019 [1]
T11	3.64583 - 0	3/4	0.183	0.079	5.0	0.4418	0.773	19.880	0.039 [1]

[1] P_u / ϕP_n controls

Mid Girt Design Data (Tension)

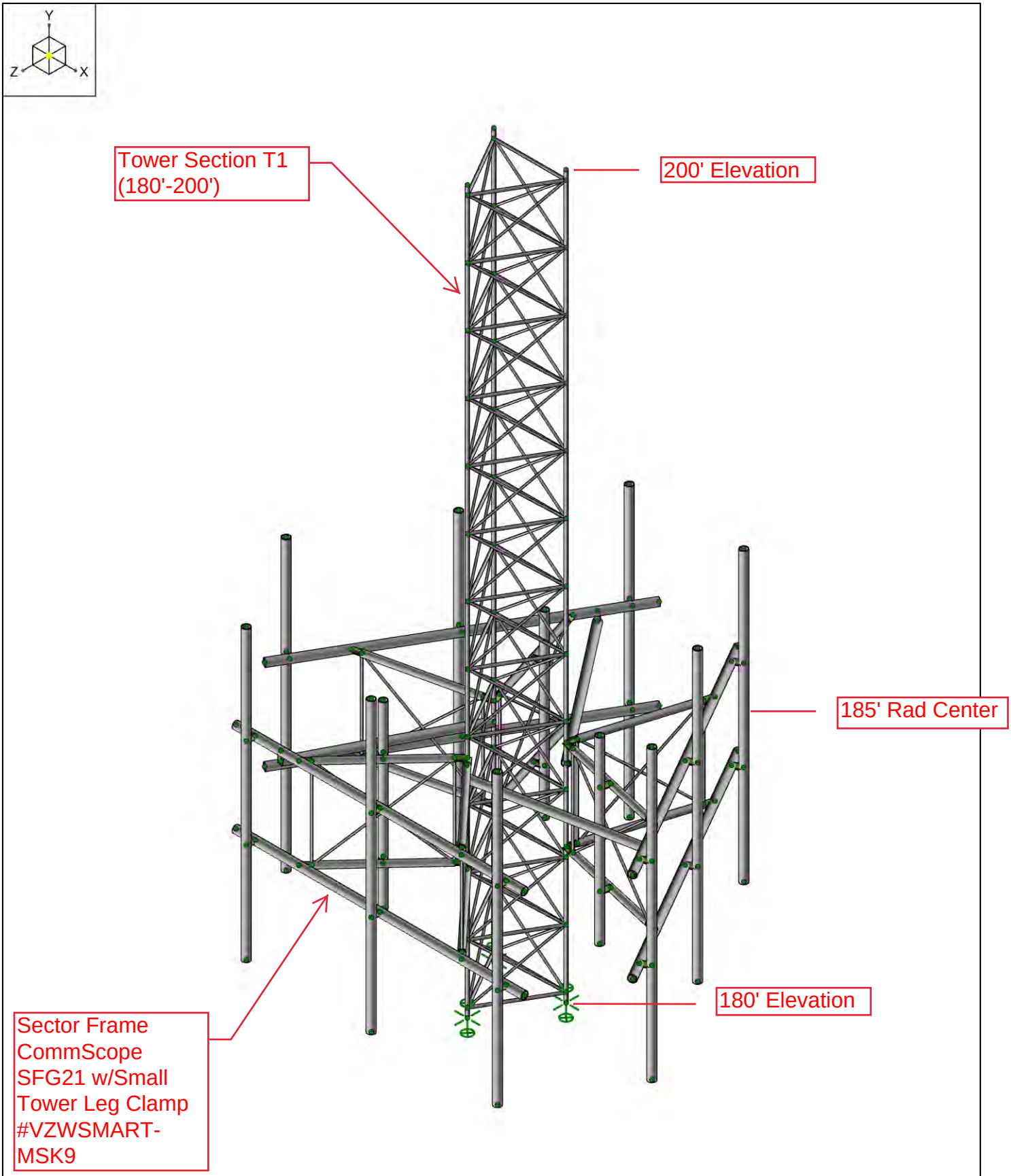
Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	200 - 180	3/4	2.000	1.917	122.7	0.4418	0.152	19.880	0.008 [1]
T2	180 - 160	3/4	2.000	1.917	122.7	0.4418	0.706	19.880	0.036 [1]
T3	160 - 140	3/4	2.000	1.917	122.7	0.4418	0.724	19.880	0.036 [1]
T4	140 - 120	3/4	2.000	1.917	122.7	0.4418	0.857	19.880	0.043 [1]
T5	120 - 100	3/4	2.000	1.917	122.7	0.4418	0.971	19.880	0.049 [1]
T6	100 - 80	3/4	2.000	1.896	121.3	0.4418	0.549	19.880	0.028 [1]
T7	80 - 60	3/4	2.000	1.896	121.3	0.4418	0.595	19.880	0.030 [1]
T8	60 - 40	3/4	2.000	1.896	121.3	0.4418	0.674	19.880	0.034 [1]
T9	40 - 20	3/4	2.000	1.896	121.3	0.4418	0.715	19.880	0.036 [1]
T10	20 - 3.64583	3/4	2.000	1.896	121.3	0.4418	0.729	19.880	0.037 [1]

[1] P_u / ϕP_n controls

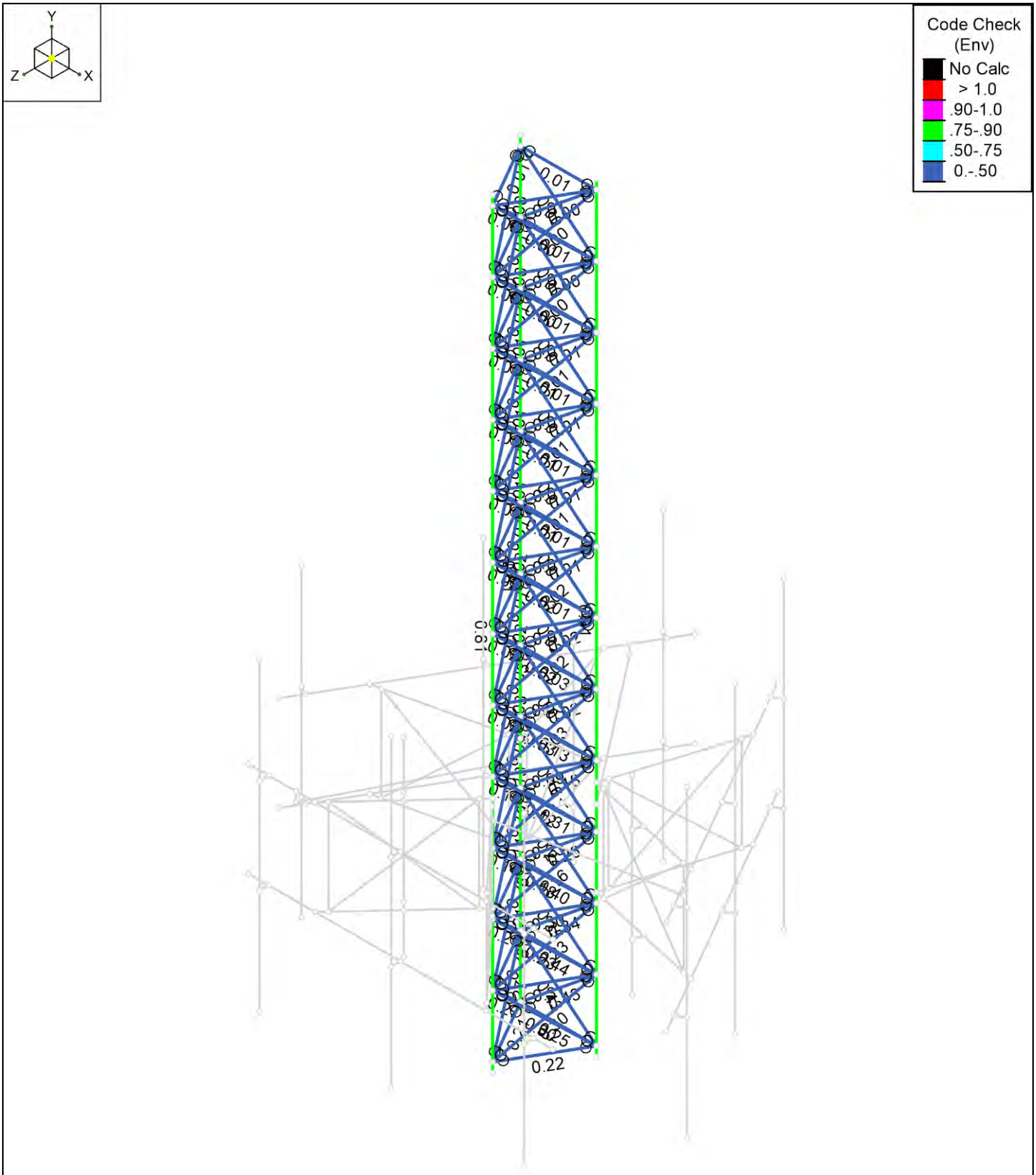
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	200 - 180	Leg	1	1	-9.803	22.760	43.1 44.8 (b)	Pass
T2	180 - 160	Leg	1	95	-11.951	22.760	52.5	Pass
T3	160 - 140	Leg	1	189	-11.751	22.760	51.6	Pass
T4	140 - 120	Leg	1	283	-17.563	22.760	77.2	Pass
T5	120 - 100	Leg	1	377	-17.919	22.760	78.7	Pass
T6	100 - 80	Leg	1 1/4	471	-12.083	39.452	30.6	Pass
T7	80 - 60	Leg	1 1/4	567	-13.005	39.472	32.9	Pass
T8	60 - 40	Leg	1 1/4	661	-13.237	39.120	33.8	Pass
T9	40 - 20	Leg	1 1/4	755	-11.648	37.176	31.3	Pass
T10	20 - 3.64583	Leg	1 1/4	849	-11.749	37.134	31.6	Pass
T11	3.64583 - 0	Leg	1 1/4	924	-11.786	37.449	31.5	Pass
T1	200 - 180	Diagonal	1/2	13	-1.596	3.463	46.1	Pass
T2	180 - 160	Diagonal	1/2	177	-0.730	3.463	21.1	Pass
T3	160 - 140	Diagonal	1/2	202	-0.712	3.463	20.6	Pass
T4	140 - 120	Diagonal	1/2	295	-1.008	3.463	29.1	Pass
T5	120 - 100	Diagonal	1/2	459	-0.920	3.463	26.6	Pass
T6	100 - 80	Diagonal	1/2	560	-0.547	3.482	15.7	Pass
T7	80 - 60	Diagonal	1/2	578	-0.725	3.482	20.8	Pass
T8	60 - 40	Diagonal	1/2	740	-0.640	3.482	18.4	Pass
T9	40 - 20	Diagonal	1/2	766	-0.646	3.482	18.6	Pass
T10	20 - 3.64583	Diagonal	1/2	919	-0.656	3.480	18.8	Pass
T11	3.64583 - 0	Diagonal	1/2	934	-2.084	4.146	50.3	Pass
T1	200 - 180	Horizontal	3/4	19	0.330	19.880	1.7	Pass
T2	180 - 160	Horizontal	3/4	182	0.919	19.880	4.6	Pass
T3	160 - 140	Horizontal	3/4	207	0.794	19.880	4.0	Pass
T4	140 - 120	Horizontal	3/4	301	0.979	19.880	4.9	Pass
T5	120 - 100	Horizontal	3/4	464	1.123	19.880	5.6	Pass
T6	100 - 80	Horizontal	3/4	489	0.608	19.880	3.1	Pass
T7	80 - 60	Horizontal	3/4	583	0.679	19.880	3.4	Pass
T8	60 - 40	Horizontal	3/4	746	0.756	19.880	3.8	Pass
T9	40 - 20	Horizontal	3/4	771	0.794	19.880	4.0	Pass
T10	20 - 3.64583	Horizontal	3/4	917	0.785	19.880	3.9	Pass
T11	3.64583 - 0	Horizontal	3/4	927	2.323	19.880	11.7	Pass
T1	200 - 180	Top Girt	3/4	5	-0.036	11.596	0.3	Pass
T2	180 - 160	Top Girt	3/4	99	3.196	19.880	16.1	Pass
T3	160 - 140	Top Girt	3/4	192	0.381	19.880	1.9	Pass
T4	140 - 120	Top Girt	3/4	288	-0.319	11.596	2.8	Pass
T5	120 - 100	Top Girt	3/4	380	1.369	19.880	6.9	Pass
T6	100 - 80	Top Girt	3/4	476	-0.218	11.732	1.9	Pass
T7	80 - 60	Top Girt	3/4	569	-0.232	11.732	2.0	Pass
T8	60 - 40	Top Girt	3/4	662	1.084	19.880	5.5	Pass
T9	40 - 20	Top Girt	3/4	756	0.385	19.880	1.9	Pass
T10	20 - 3.64583	Top Girt	3/4	850	0.411	19.880	2.1	Pass
T1	200 - 180	Bottom Girt	3/4	8	-0.881	11.596	7.6	Pass
T2	180 - 160	Bottom Girt	3/4	101	0.380	19.880	1.9	Pass
T3	160 - 140	Bottom Girt	3/4	195	0.470	19.880	2.4	Pass
T4	140 - 120	Bottom Girt	3/4	289	0.669	19.880	3.4	Pass
T5	120 - 100	Bottom Girt	3/4	385	-0.319	11.596	2.8	Pass
T6	100 - 80	Bottom Girt	3/4	479	-0.218	11.732	1.9	Pass
T7	80 - 60	Bottom Girt	3/4	571	0.429	19.880	2.2	Pass
T8	60 - 40	Bottom Girt	3/4	665	0.412	19.880	2.1	Pass
T9	40 - 20	Bottom Girt	3/4	759	0.387	19.880	1.9	Pass
T11	3.64583 - 0	Bottom Girt	3/4	930	0.773	19.880	3.9	Pass
T1	200 - 180	Mid Girt	3/4	11	-0.160	11.596	1.4	Pass
T2	180 - 160	Mid Girt	3/4	104	0.706	19.880	3.6	Pass
T3	160 - 140	Mid Girt	3/4	198	0.724	19.880	3.6	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T4	140 - 120	Mid Girt	3/4	292	0.857	19.880	4.3	Pass
T5	120 - 100	Mid Girt	3/4	386	0.971	19.880	4.9	Pass
T6	100 - 80	Mid Girt	3/4	480	0.549	19.880	2.8	Pass
T7	80 - 60	Mid Girt	3/4	574	0.595	19.880	3.0	Pass
T8	60 - 40	Mid Girt	3/4	668	0.674	19.880	3.4	Pass
T9	40 - 20	Mid Girt	3/4	762	0.715	19.880	3.6	Pass
T10	20 - 3.64583	Mid Girt	3/4	853	0.729	19.880	3.7	Pass
T2	180 - 160	Guy A@179.792	7/16	959	8.674	12.480	69.5	Pass
T5	120 - 100	Guy A@119.792	5/16	962	3.079	6.720	45.8	Pass
T8	60 - 40	Guy A@59.7917	5/16	965	2.558	6.720	38.1	Pass
T2	180 - 160	Guy B@179.792	7/16	958	8.413	12.480	67.4	Pass
T5	120 - 100	Guy B@119.792	5/16	961	2.965	6.720	44.1	Pass
T8	60 - 40	Guy B@59.7917	5/16	964	2.480	6.720	36.9	Pass
T2	180 - 160	Guy C@179.792	7/16	957	8.833	12.480	70.8	Pass
T5	120 - 100	Guy C@119.792	5/16	960	3.169	6.720	47.2	Pass
T8	60 - 40	Guy C@59.7917	5/16	963	2.667	6.720	39.7	Pass
							Summary	
						Leg (T5)	78.7	Pass
						Diagonal (T11)	50.3	Pass
						Horizontal (T11)	11.7	Pass
						Top Girt (T2)	16.1	Pass
						Bottom Girt (T1)	7.6	Pass
						Mid Girt (T5)	4.9	Pass
						Guy A (T2)	69.5	Pass
						Guy B (T2)	67.4	Pass
						Guy C (T2)	70.8	Pass
						Bolt Checks	44.8	Pass
						RATING =	**78.7**	**Pass**

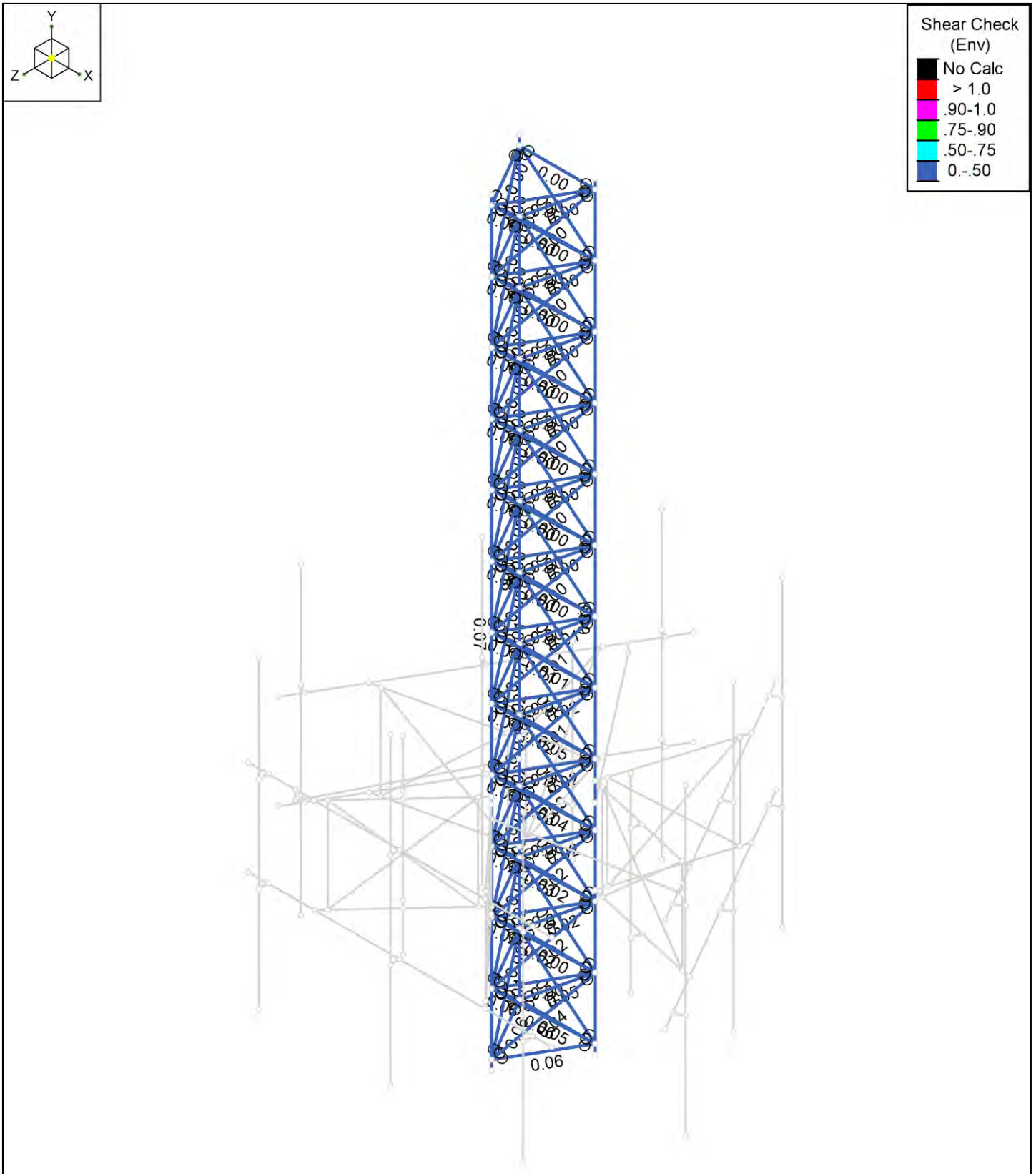


Vertical Bridge		SK-1
Nicole.Hoffman		Feb 07, 2023
		Tower & Mount - Final.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Vertical Bridge		SK-4
Nicole.Hoffman		Feb 07, 2023
		Tower & Mount - Final.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Vertical Bridge		SK-5
Nicole.Hoffman		Feb 07, 2023
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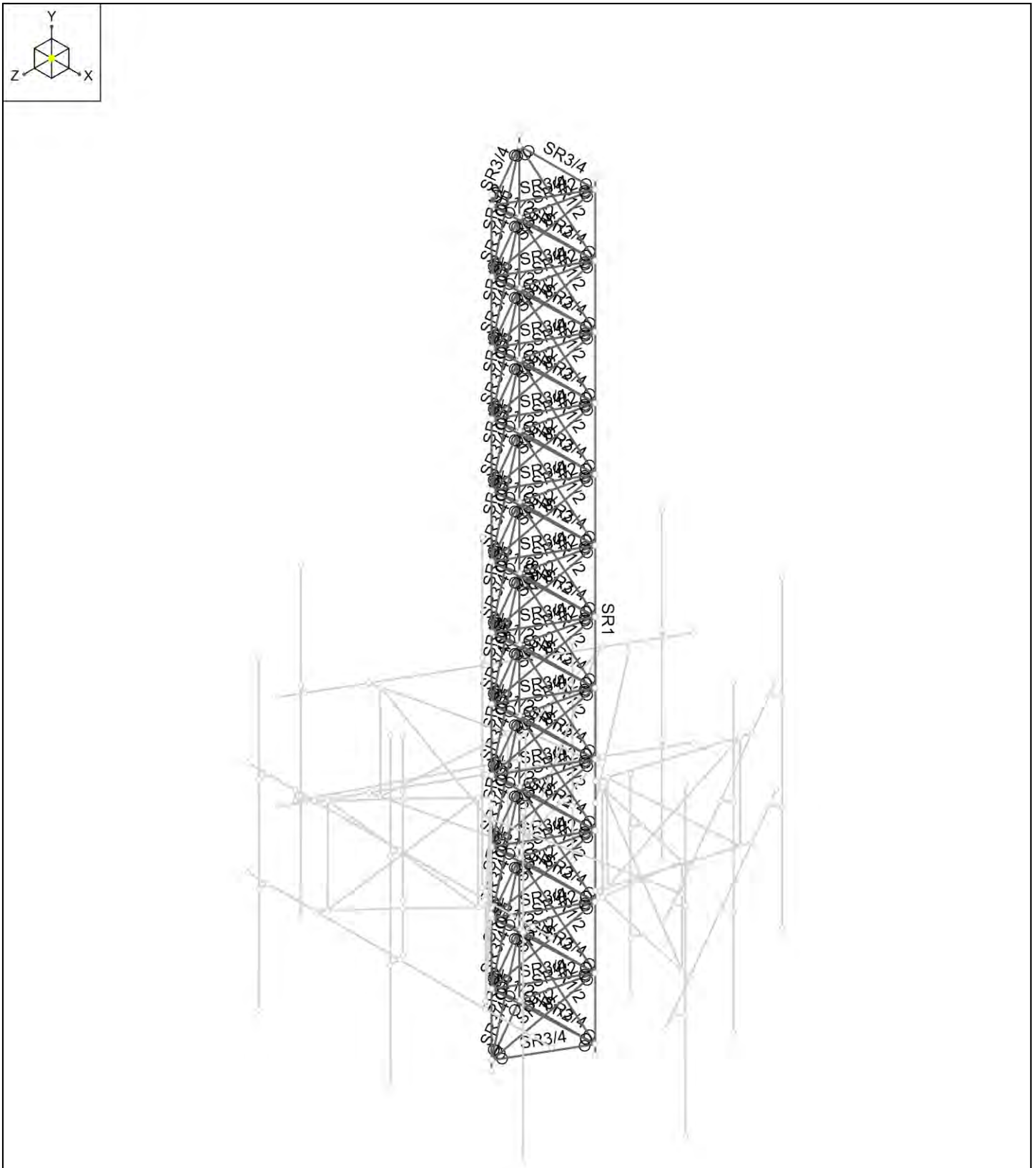
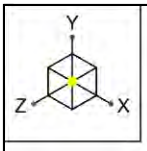
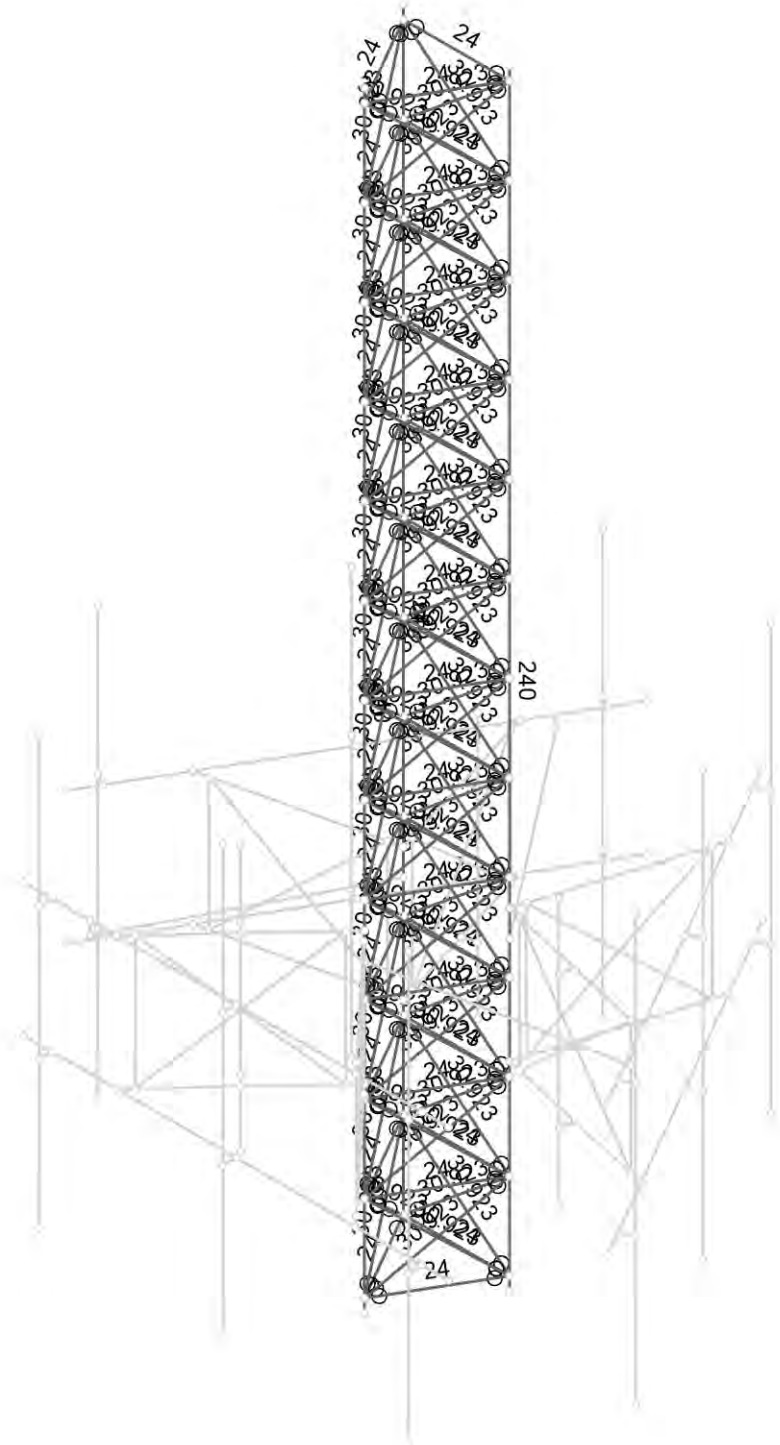


Envelope Only Solution

Vertical Bridge		SK-6
Nicole.Hoffman		Feb 07, 2023
		Tower & Mount - Final.r3d





Member Length (in) Displayed
Envelope Only Solution

Vertical Bridge		SK-7
Nicole.Hoffman		Feb 07, 2023
		Tower & Mount - Final.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	0.3	0.65	0.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	0.3	0.65	0.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
9	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	0.3	0.65	0.49	65	1.1	80	1.1

Node Coordinates

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
1	N1	0	0	13.8564	
2	N2	0	240	13.8564	
3	N3	11.999994	240	-6.9282	
4	N4	11.999994	0	-6.9282	
5	N5	-11.999994	240	-6.9282	
6	N6	-11.999994	0	-6.9282	
7	N7	0	237	13.8564	
8	N8	11.999994	237	-6.9282	
9	N9	-11.999994	237	-6.9282	
10	N10	0	3	13.8564	
11	N11	11.999994	3	-6.9282	
12	N12	-11.999994	3	-6.9282	
13	N13	0	217.5	13.8564	
14	N14	11.999994	217.5	-6.9282	
15	N15	-11.999994	217.5	-6.9282	
16	N16	0	198	13.8564	
17	N17	11.999994	198	-6.9282	
18	N18	-11.999994	198	-6.9282	
19	N19	0	178.5	13.8564	
20	N20	11.999994	178.5	-6.9282	
21	N21	-11.999994	178.5	-6.9282	
22	N22	11.999994	159	-6.9282	
23	N23	0	159	13.8564	
24	N24	-11.999994	159	-6.9282	
25	N25	11.999994	139.5	-6.9282	
26	N26	0	139.5	13.8564	
27	N27	-11.999994	139.5	-6.9282	
28	N28	-11.999994	120	-6.9282	
29	N29	11.999994	120	-6.9282	
30	N30	0	120	13.8564	
31	N31	11.999994	100.5	-6.9282	
32	N32	-11.999994	100.5	-6.9282	
33	N33	0	100.5	13.8564	
34	N34	0	81	13.8564	
35	N35	11.999994	81	-6.9282	
36	N36	-11.999994	81	-6.9282	
37	N37	11.999994	61.5	-6.9282	
38	N38	-11.999994	61.5	-6.9282	
39	N39	0	61.5	13.8564	
40	N40	11.999994	42	-6.9282	
41	N41	-11.999994	42	-6.9282	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
42	N42	0	42	13.8564	
43	N43	0	22.5	13.8564	
44	N44	11.999994	22.5	-6.9282	
45	N45	-11.999994	22.5	-6.9282	
46	N46	-48	45.002004	42.8564	
47	N47	48	45.002004	42.8564	
48	N48	0	75.00202	42.8564	
49	N49	0	75.00202	45.8564	
50	N50	-41.52	75.00202	42.8564	
51	N51	-41.52	75.00202	45.8564	
52	N52	41.98	75.00202	42.8564	
53	N53	41.98	75.00202	45.8564	
54	N54	-48	75.002016	42.8564	
55	N55	48	75.002016	42.8564	
56	N56	0	45.002004	42.8564	
57	N57	0	45.002004	45.8564	
58	N58	-41.52	45.002004	42.8564	
59	N59	-41.52	45.002004	45.8564	
60	N60	41.98	45.002004	42.8564	
61	N61	41.98	45.002004	45.8564	
62	N62	-41.52	108	45.8564	
63	N63	-41.52	12	45.8564	
64	N64	41.98	108	45.8564	
65	N65	41.98	12	45.8564	
66	N66	0	12	45.8564	
67	N67	0	108	45.8564	
68	N68	-13.500049	45.002001	28.356453	
69	N69	-13.500049	75.00202	28.356453	
70	N70	-15.621016	45.002001	26.235486	
71	N71	-15.621016	75.00202	26.235486	
72	N72	-15.621016	90.00002	26.235486	
73	N73	-15.621016	30.00002	26.235486	
74	N74	-11.999994	69.004013	-6.9282	
75	N75	-27	75.002016	42.8564	
76	N76	0	75.00202	13.8564	
77	N78	-24.955744	75.00202	40.660718	
78	N79	-2.044409	75.00202	16.052247	
79	N80	-27	45.002004	42.8564	
80	N81	0	45.00202	13.8564	
81	N83	-24.955744	45.00202	40.660718	
82	N84	-2.044409	45.00202	16.052247	
83	N86	24.955744	45.00202	40.660718	
84	N87	27	75.002016	42.8564	
85	N88	24.955744	75.00202	40.660718	
86	N89	2.044409	75.00202	16.052247	
87	N90	27	45.002004	42.8564	
88	N91	2.044409	45.00202	16.052247	
89	N92	-33	75.002016	42.8564	
90	N93	-33	72.00202	42.8564	
91	N95	61.114731	45.002004	20.141019	
92	N96	13.114731	45.002004	-62.997419	
93	N97	53.614731	75.002016	7.150638	
94	N98	37.114731	75.00202	-21.4282	
95	N99	39.712807	75.00202	-22.9282	
96	N100	57.874731	75.00202	14.529175	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
97	N101	60.472807	75.00202	13.029175	
98	N102	16.124731	75.00202	-57.783946	
99	N103	18.722807	75.00202	-59.283946	
100	N104	61.114731	75.002016	20.141019	
101	N105	13.114731	75.002016	-62.997419	
102	N106	37.114731	45.002004	-21.4282	
103	N107	39.712807	45.002004	-22.9282	
104	N108	57.874731	45.002004	14.529175	
105	N109	60.472807	45.002004	13.029175	
106	N110	16.124731	45.002004	-57.783946	
107	N111	18.722807	45.002004	-59.283946	
108	N112	60.472807	108	13.029175	
109	N113	60.472807	12	13.029175	
110	N114	18.722807	108	-59.283946	
111	N115	18.722807	12	-59.283946	
112	N116	39.712807	12	-22.9282	
113	N117	39.712807	108	-22.9282	
114	N119	22.735343	45.00202	-41.942668	
115	N120	23.614731	75.002016	-44.810886	
116	N121	50.614731	45.002004	1.954486	
117	N122	22.735343	75.00202	-41.942668	
118	N123	12.879449	75.00202	-9.796634	
119	N124	11.999994	45.00202	-6.9282	
120	N125	14.923858	45.00202	-6.255613	
121	N126	53.614731	72.00202	7.150638	
122	N128	31.307433	45.00202	-2.486841	
123	N129	31.307433	75.00202	-2.486841	
124	N130	30.531105	45.002001	0.410454	
125	N131	30.531105	75.00202	0.410454	
126	N132	30.531105	90.00002	0.410454	
127	N133	30.531105	30.00002	0.410454	
128	N135	14.923858	75.00202	-6.255613	
129	N136	47.691087	75.00202	1.28195	
130	N137	47.691087	45.00202	1.28195	
131	N138	11.999994	75.00202	-6.9282	
132	N140	23.614731	45.002004	-44.810886	
133	N141	12.879449	45.00202	-9.796634	
134	N142	50.614731	75.002016	1.954486	
135	N143	0	69.004013	13.8564	
136	N144	-13.114731	45.002004	-62.997419	
137	N145	-61.114731	45.002004	20.141019	
138	N146	-20.614731	75.002016	-50.007038	
139	N147	-37.114731	75.00202	-21.4282	
140	N148	-39.712807	75.00202	-22.9282	
141	N149	-16.354731	75.00202	-57.385575	
142	N150	-18.952807	75.00202	-58.885575	
143	N151	-58.104731	75.00202	14.927546	
144	N152	-60.702807	75.00202	13.427546	
145	N153	-13.114731	75.002016	-62.997419	
146	N154	-61.114731	75.002016	20.141019	
147	N155	-37.114731	45.002004	-21.4282	
148	N156	-39.712807	45.002004	-22.9282	
149	N157	-16.354731	45.002004	-57.385575	
150	N158	-18.952807	45.002004	-58.885575	
151	N159	-58.104731	45.002004	14.927546	

Node Coordinates (Continued)

	Label	X [in]	Y [in]	Z [in]	Detach From Diaphragm
152	N160	-60.702807	45.002004	13.427546	
153	N161	-18.952807	108	-58.885575	
154	N162	-18.952807	12	-58.885575	
155	N163	-60.702807	108	13.427546	
156	N164	-60.702807	12	13.427546	
157	N165	-39.712807	12	-22.9282	
158	N166	-39.712807	108	-22.9282	
159	N168	-47.691087	45.00202	1.28195	
160	N169	-50.614731	75.002016	1.954486	
161	N170	-23.614731	45.002004	-44.810886	
162	N171	-47.691087	75.00202	1.28195	
163	N172	-14.923858	75.00202	-6.255613	
164	N173	-11.999994	45.00202	-6.9282	
165	N174	-12.879449	45.00202	-9.796634	
166	N175	-20.614731	72.00202	-50.007038	
167	N177	-17.807384	45.00202	-25.869612	
168	N178	-17.807384	75.00202	-25.869612	
169	N179	-14.910089	45.002001	-26.645939	
170	N180	-14.910089	75.00202	-26.645939	
171	N181	-14.910089	90.00002	-26.645939	
172	N182	-14.910089	30.00002	-26.645939	
173	N184	-12.879449	75.00202	-9.796634	
174	N185	-22.735343	75.00202	-41.942668	
175	N186	-22.735343	45.00202	-41.942668	
176	N187	-11.999994	75.00202	-6.9282	
177	N189	-50.614731	45.002004	1.954486	
178	N190	-14.923858	45.00202	-6.255613	
179	N191	-23.614731	75.002016	-44.810886	
180	N192	11.999994	69.004013	-6.9282	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Tower Leg	SR1	None	None	A572 Gr.50	Typical	0.785	0.049	0.049	0.098
2	Tower Top Girt	SR3/4	VBrace	BAR	A572 Gr.50	Typical	0.442	0.016	0.016	0.031
3	Tower Bottom Girt	SR3/4	None	None	A572 Gr.50	Typical	0.442	0.016	0.016	0.031
4	Tower Horizontal	SR3/4	None	None	A572 Gr.50	Typical	0.442	0.016	0.016	0.031
5	Tower Diagonal	SR1/2	VBrace	BAR	A572 Gr.50	Typical	0.196	0.003	0.003	0.006
6	Face Horizontal	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	Standoff	PIPE_1.5	None	None	A53 Gr.B	Typical	0.749	0.293	0.293	0.586
8	Standoff Diagonals	SR_0.5	None	None	A36 Gr.36	Typical	0.196	0.003	0.003	0.006
9	Standoff Verticals	SR_0.625	None	None	A36 Gr.36	Typical	0.307	0.007	0.007	0.015
10	Mount Pipe	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
11	Tie-back	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N2	N1		Tower Leg	None	None	A572 Gr.50	Typical
2	M2	N3	N4		Tower Leg	None	None	A572 Gr.50	Typical
3	M3	N5	N6		Tower Leg	None	None	A572 Gr.50	Typical
4	M4	N7	N8		Tower Top Girt	VBrace	BAR	A572 Gr.50	Typical
5	M5	N8	N9		Tower Top Girt	VBrace	BAR	A572 Gr.50	Typical
6	M6	N9	N7		Tower Top Girt	VBrace	BAR	A572 Gr.50	Typical
7	M7	N10	N11		Tower Bottom Girt	None	None	A572 Gr.50	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
8	M8	N11	N12		Tower Bottom Girt	None	None	A572 Gr.50	Typical
9	M9	N12	N10		Tower Bottom Girt	None	None	A572 Gr.50	Typical
10	M10	N13	N14		Tower Horizontal	None	None	A572 Gr.50	Typical
11	M11	N14	N15		Tower Horizontal	None	None	A572 Gr.50	Typical
12	M12	N15	N13		Tower Horizontal	None	None	A572 Gr.50	Typical
13	M13	N7	N14		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
14	M14	N8	N13		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
15	M15	N8	N15		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
16	M16	N9	N14		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
17	M17	N9	N13		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
18	M18	N7	N15		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
19	M19	N15	N17		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
20	M20	N13	N17		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
21	M21	N16	N17		Tower Horizontal	None	None	A572 Gr.50	Typical
22	M22	N17	N18		Tower Horizontal	None	None	A572 Gr.50	Typical
23	M23	N18	N16		Tower Horizontal	None	None	A572 Gr.50	Typical
24	M24	N14	N16		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
25	M25	N14	N18		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
26	M26	N15	N16		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
27	M27	N13	N18		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
28	M28	N16	N21		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
29	M29	N18	N20		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
30	M30	N16	N20		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
31	M31	N19	N20		Tower Horizontal	None	None	A572 Gr.50	Typical
32	M32	N20	N21		Tower Horizontal	None	None	A572 Gr.50	Typical
33	M33	N21	N19		Tower Horizontal	None	None	A572 Gr.50	Typical
34	M34	N17	N19		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
35	M35	N17	N21		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
36	M36	N18	N19		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
37	M37	N19	N24		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
38	M38	N20	N24		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
39	M39	N20	N23		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
40	M40	N21	N22		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
41	M41	N24	N23		Tower Horizontal	None	None	A572 Gr.50	Typical
42	M42	N19	N22		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
43	M43	N23	N22		Tower Horizontal	None	None	A572 Gr.50	Typical
44	M44	N22	N24		Tower Horizontal	None	None	A572 Gr.50	Typical
45	M45	N21	N23		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
46	M46	N26	N25		Tower Horizontal	None	None	A572 Gr.50	Typical
47	M47	N23	N25		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
48	M48	N24	N25		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
49	M49	N25	N27		Tower Horizontal	None	None	A572 Gr.50	Typical
50	M50	N22	N26		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
51	M51	N23	N27		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
52	M52	N22	N27		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
53	M53	N27	N26		Tower Horizontal	None	None	A572 Gr.50	Typical
54	M54	N24	N26		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
55	M55	N25	N30		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
56	M56	N30	N29		Tower Horizontal	None	None	A572 Gr.50	Typical
57	M57	N27	N29		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
58	M58	N25	N28		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
59	M59	N26	N28		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
60	M60	N27	N30		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
61	M61	N26	N29		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
62	M62	N28	N30		Tower Horizontal	None	None	A572 Gr.50	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
63	M63	N29	N28		Tower Horizontal	None	None	A572 Gr.50	Typical
64	M64	N33	N31		Tower Horizontal	None	None	A572 Gr.50	Typical
65	M65	N29	N33		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
66	M66	N28	N31		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
67	M67	N29	N32		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
68	M68	N30	N32		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
69	M69	N28	N33		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
70	M70	N30	N31		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
71	M71	N32	N33		Tower Horizontal	None	None	A572 Gr.50	Typical
72	M72	N31	N32		Tower Horizontal	None	None	A572 Gr.50	Typical
73	M73	N34	N35		Tower Horizontal	None	None	A572 Gr.50	Typical
74	M74	N31	N34		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
75	M75	N32	N35		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
76	M76	N31	N36		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
77	M77	N33	N36		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
78	M78	N32	N34		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
79	M79	N33	N35		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
80	M80	N36	N34		Tower Horizontal	None	None	A572 Gr.50	Typical
81	M81	N35	N36		Tower Horizontal	None	None	A572 Gr.50	Typical
82	M82	N35	N38		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
83	M83	N39	N37		Tower Horizontal	None	None	A572 Gr.50	Typical
84	M84	N35	N39		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
85	M85	N36	N37		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
86	M86	N34	N38		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
87	M87	N36	N39		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
88	M88	N34	N37		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
89	M89	N38	N39		Tower Horizontal	None	None	A572 Gr.50	Typical
90	M90	N37	N38		Tower Horizontal	None	None	A572 Gr.50	Typical
91	M91	N42	N40		Tower Horizontal	None	None	A572 Gr.50	Typical
92	M92	N37	N41		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
93	M93	N37	N42		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
94	M94	N38	N40		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
95	M95	N39	N41		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
96	M96	N38	N42		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
97	M97	N39	N40		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
98	M98	N41	N42		Tower Horizontal	None	None	A572 Gr.50	Typical
99	M99	N40	N41		Tower Horizontal	None	None	A572 Gr.50	Typical
100	M100	N43	N44		Tower Horizontal	None	None	A572 Gr.50	Typical
101	M101	N44	N45		Tower Horizontal	None	None	A572 Gr.50	Typical
102	M102	N42	N44		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
103	M103	N40	N45		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
104	M104	N40	N43		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
105	M105	N41	N44		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
106	M106	N42	N45		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
107	M107	N41	N43		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
108	M108	N45	N43		Tower Horizontal	None	None	A572 Gr.50	Typical
109	M109	N44	N10		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
110	M110	N44	N12		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
111	M111	N43	N11		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
112	M112	N45	N11		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
113	M113	N43	N12		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
114	M114	N45	N10		Tower Diagonal	VBrace	BAR	A572 Gr.50	Typical
115	M115	N46	N47		Face Horizontal	None	None	A53 Gr.B	Typical
116	M117	N48	N49		RIGID	None	None	RIGID	Typical
117	M118	N50	N51		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
118	M119	N52	N53		RIGID	None	None	RIGID	Typical
119	M120	N54	N55		Face Horizontal	None	None	A53 Gr.B	Typical
120	M121	N56	N57		RIGID	None	None	RIGID	Typical
121	M122	N58	N59		RIGID	None	None	RIGID	Typical
122	M123	N60	N61		RIGID	None	None	RIGID	Typical
123	A3	N62	N63		Mount Pipe	None	None	A53 Gr.B	Typical
124	A1	N64	N65		Mount Pipe	None	None	A53 Gr.B	Typical
125	A2	N66	N67		Mount Pipe	None	None	A53 Gr.B	Typical
126	M127	N75	N78	90	RIGID	None	None	RIGID	Typical
127	M128	N78	N83		Standoff Verticals	None	None	A36 Gr.36	Typical
128	M129	N79	N84		Standoff Verticals	None	None	A36 Gr.36	Typical
129	M130	N78	N84		Standoff Diagonals	None	None	A36 Gr.36	Typical
130	M132	N78	N79		Standoff	None	None	A53 Gr.B	Typical
131	M133	N79	N76		RIGID	None	None	RIGID	Typical
132	M134	N79	N83		Standoff Diagonals	None	None	A36 Gr.36	Typical
133	M135	N71	N69		RIGID	None	None	RIGID	Typical
134	M136	N70	N68		RIGID	None	None	RIGID	Typical
135	M137	N72	N73		Mount Pipe	None	None	A53 Gr.B	Typical
136	M138	N93	N92		RIGID	None	None	RIGID	Typical
137	M139	N93	N74		Tie-back	None	None	A53 Gr.B	Typical
138	M141	N83	N84		Standoff	None	None	A53 Gr.B	Typical
139	M142	N80	N83	90	RIGID	None	None	RIGID	Typical
140	M143	N84	N81		RIGID	None	None	RIGID	Typical
141	M144	N88	N89		Standoff	None	None	A53 Gr.B	Typical
142	M145	N87	N88	90	RIGID	None	None	RIGID	Typical
143	M146	N89	N76		RIGID	None	None	RIGID	Typical
144	M147	N86	N91		Standoff	None	None	A53 Gr.B	Typical
145	M148	N90	N86	90	RIGID	None	None	RIGID	Typical
146	M149	N91	N81		RIGID	None	None	RIGID	Typical
147	M150	N88	N86		Standoff Verticals	None	None	A36 Gr.36	Typical
148	M151	N88	N91		Standoff Diagonals	None	None	A36 Gr.36	Typical
149	M152	N89	N91		Standoff Verticals	None	None	A36 Gr.36	Typical
150	M153	N89	N86		Standoff Diagonals	None	None	A36 Gr.36	Typical
151	M155	N95	N96		Face Horizontal	None	None	A53 Gr.B	Typical
152	M157	N98	N99		RIGID	None	None	RIGID	Typical
153	M158	N100	N101		RIGID	None	None	RIGID	Typical
154	M159	N102	N103		RIGID	None	None	RIGID	Typical
155	M160	N104	N105		Face Horizontal	None	None	A53 Gr.B	Typical
156	M161	N106	N107		RIGID	None	None	RIGID	Typical
157	M162	N108	N109		RIGID	None	None	RIGID	Typical
158	M163	N110	N111		RIGID	None	None	RIGID	Typical
159	G3	N112	N113		Mount Pipe	None	None	A53 Gr.B	Typical
160	G1	N114	N115		Mount Pipe	None	None	A53 Gr.B	Typical
161	G2	N116	N117		Mount Pipe	None	None	A53 Gr.B	Typical
162	M167	N141	N124		RIGID	None	None	RIGID	Typical
163	M168	N140	N119	90	RIGID	None	None	RIGID	Typical
164	M169	N122	N123		Standoff	None	None	A53 Gr.B	Typical
165	M170	N123	N138		RIGID	None	None	RIGID	Typical
166	M171	N142	N136	90	RIGID	None	None	RIGID	Typical
167	M172	N119	N141		Standoff	None	None	A53 Gr.B	Typical
168	M173	N136	N137		Standoff Verticals	None	None	A36 Gr.36	Typical
169	M174	N135	N125		Standoff Verticals	None	None	A36 Gr.36	Typical
170	M175	N121	N137	90	RIGID	None	None	RIGID	Typical
171	M176	N122	N141		Standoff Diagonals	None	None	A36 Gr.36	Typical
172	M177	N136	N125		Standoff Diagonals	None	None	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
173	M179	N125	N124		RIGID	None	None	RIGID	Typical
174	M180	N120	N122	90	RIGID	None	None	RIGID	Typical
175	M181	N136	N135		Standoff	None	None	A53 Gr.B	Typical
176	M182	N122	N119		Standoff Verticals	None	None	A36 Gr.36	Typical
177	M184	N135	N138		RIGID	None	None	RIGID	Typical
178	M186	N135	N137		Standoff Diagonals	None	None	A36 Gr.36	Typical
179	M187	N123	N141		Standoff Verticals	None	None	A36 Gr.36	Typical
180	M188	N137	N125		Standoff	None	None	A53 Gr.B	Typical
181	M189	N131	N129		RIGID	None	None	RIGID	Typical
182	M190	N130	N128		RIGID	None	None	RIGID	Typical
183	M191	N132	N133		Mount Pipe	None	None	A53 Gr.B	Typical
184	M192	N123	N119		Standoff Diagonals	None	None	A36 Gr.36	Typical
185	M193	N126	N97		RIGID	None	None	RIGID	Typical
186	M194	N126	N143		Tie-back	None	None	A53 Gr.B	Typical
187	M195	N144	N145		Face Horizontal	None	None	A53 Gr.B	Typical
188	M197	N147	N148		RIGID	None	None	RIGID	Typical
189	M198	N149	N150		RIGID	None	None	RIGID	Typical
190	M199	N151	N152		RIGID	None	None	RIGID	Typical
191	M200	N153	N154		Face Horizontal	None	None	A53 Gr.B	Typical
192	M201	N155	N156		RIGID	None	None	RIGID	Typical
193	M202	N157	N158		RIGID	None	None	RIGID	Typical
194	M203	N159	N160		RIGID	None	None	RIGID	Typical
195	B3	N161	N162		Mount Pipe	None	None	A53 Gr.B	Typical
196	B1	N163	N164		Mount Pipe	None	None	A53 Gr.B	Typical
197	B2	N165	N166		Mount Pipe	None	None	A53 Gr.B	Typical
198	M207	N190	N173		RIGID	None	None	RIGID	Typical
199	M208	N189	N168	90	RIGID	None	None	RIGID	Typical
200	M209	N171	N172		Standoff	None	None	A53 Gr.B	Typical
201	M210	N172	N187		RIGID	None	None	RIGID	Typical
202	M211	N191	N185	90	RIGID	None	None	RIGID	Typical
203	M212	N168	N190		Standoff	None	None	A53 Gr.B	Typical
204	M213	N185	N186		Standoff Verticals	None	None	A36 Gr.36	Typical
205	M214	N184	N174		Standoff Verticals	None	None	A36 Gr.36	Typical
206	M215	N170	N186	90	RIGID	None	None	RIGID	Typical
207	M216	N171	N190		Standoff Diagonals	None	None	A36 Gr.36	Typical
208	M217	N185	N174		Standoff Diagonals	None	None	A36 Gr.36	Typical
209	M219	N174	N173		RIGID	None	None	RIGID	Typical
210	M220	N169	N171	90	RIGID	None	None	RIGID	Typical
211	M221	N185	N184		Standoff	None	None	A53 Gr.B	Typical
212	M222	N171	N168		Standoff Verticals	None	None	A36 Gr.36	Typical
213	M224	N184	N187		RIGID	None	None	RIGID	Typical
214	M226	N184	N186		Standoff Diagonals	None	None	A36 Gr.36	Typical
215	M227	N172	N190		Standoff Verticals	None	None	A36 Gr.36	Typical
216	M228	N186	N174		Standoff	None	None	A53 Gr.B	Typical
217	M229	N180	N178		RIGID	None	None	RIGID	Typical
218	M230	N179	N177		RIGID	None	None	RIGID	Typical
219	M231	N181	N182		Mount Pipe	None	None	A53 Gr.B	Typical
220	M232	N172	N168		Standoff Diagonals	None	None	A36 Gr.36	Typical
221	M233	N175	N146		RIGID	None	None	RIGID	Typical
222	M234	N175	N192		Tie-back	None	None	A53 Gr.B	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
1	M1	Tower Leg	240	Segment	Segment	Lbyy			N/A	N/A	Lateral
2	M2	Tower Leg	240	Segment	Segment	Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
3	M3	Tower Leg	240	Segment	Segment	Lbyy			N/A	N/A	Lateral
4	M4	Tower Top Girt	24			Lbyy			N/A	N/A	Lateral
5	M5	Tower Top Girt	24			Lbyy			N/A	N/A	Lateral
6	M6	Tower Top Girt	24			Lbyy			N/A	N/A	Lateral
7	M7	Tower Bottom Girt	24			Lbyy			N/A	N/A	Lateral
8	M8	Tower Bottom Girt	24			Lbyy			N/A	N/A	Lateral
9	M9	Tower Bottom Girt	24			Lbyy			N/A	N/A	Lateral
10	M10	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
11	M11	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
12	M12	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
13	M13	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
14	M14	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
15	M15	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
16	M16	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
17	M17	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
18	M18	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
19	M19	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
20	M20	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
21	M21	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
22	M22	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
23	M23	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
24	M24	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
25	M25	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
26	M26	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
27	M27	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
28	M28	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
29	M29	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
30	M30	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
31	M31	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
32	M32	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
33	M33	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
34	M34	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
35	M35	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
36	M36	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
37	M37	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
38	M38	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
39	M39	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
40	M40	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
41	M41	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
42	M42	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
43	M43	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
44	M44	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
45	M45	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
46	M46	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
47	M47	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
48	M48	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
49	M49	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
50	M50	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
51	M51	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
52	M52	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
53	M53	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
54	M54	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
55	M55	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
56	M56	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
57	M57	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
58	M58	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
59	M59	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
60	M60	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
61	M61	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
62	M62	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
63	M63	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
64	M64	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
65	M65	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
66	M66	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
67	M67	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
68	M68	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
69	M69	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
70	M70	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
71	M71	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
72	M72	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
73	M73	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
74	M74	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
75	M75	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
76	M76	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
77	M77	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
78	M78	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
79	M79	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
80	M80	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
81	M81	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
82	M82	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
83	M83	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
84	M84	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
85	M85	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
86	M86	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
87	M87	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
88	M88	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
89	M89	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
90	M90	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
91	M91	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
92	M92	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
93	M93	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
94	M94	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
95	M95	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
96	M96	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
97	M97	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
98	M98	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
99	M99	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
100	M100	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
101	M101	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
102	M102	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
103	M103	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
104	M104	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
105	M105	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
106	M106	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
107	M107	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
108	M108	Tower Horizontal	24			Lbyy			N/A	N/A	Lateral
109	M109	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
110	M110	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
111	M111	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
112	M112	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
113	M113	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
114	M114	Tower Diagonal	30.923			Lbyy			N/A	N/A	Lateral
115	M115	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
116	M120	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
117	A3	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
118	A1	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
119	A2	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
120	M128	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
121	M129	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
122	M130	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
123	M132	Standoff	33.623			Lbyy			N/A	N/A	Lateral
124	M134	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
125	M137	Mount Pipe	60						N/A	N/A	Lateral
126	M139	Tie-back	54.116						N/A	N/A	Lateral
127	M141	Standoff	33.623			Lbyy			N/A	N/A	Lateral
128	M144	Standoff	33.623			Lbyy			N/A	N/A	Lateral
129	M147	Standoff	33.623			Lbyy			N/A	N/A	Lateral
130	M150	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
131	M151	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
132	M152	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
133	M153	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
134	M155	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
135	M160	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
136	G3	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
137	G1	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
138	G2	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
139	M169	Standoff	33.623			Lbyy			N/A	N/A	Lateral
140	M172	Standoff	33.623			Lbyy			N/A	N/A	Lateral
141	M173	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
142	M174	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
143	M176	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
144	M177	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
145	M181	Standoff	33.623			Lbyy			N/A	N/A	Lateral
146	M182	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
147	M186	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
148	M187	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
149	M188	Standoff	33.623			Lbyy			N/A	N/A	Lateral
150	M191	Mount Pipe	60						N/A	N/A	Lateral
151	M192	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
152	M194	Tie-back	54.116						N/A	N/A	Lateral
153	M195	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
154	M200	Face Horizontal	96			Lbyy			N/A	N/A	Lateral
155	B3	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
156	B1	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
157	B2	Mount Pipe	96			Lbyy			N/A	N/A	Lateral
158	M209	Standoff	33.623			Lbyy			N/A	N/A	Lateral
159	M212	Standoff	33.623			Lbyy			N/A	N/A	Lateral
160	M213	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
161	M214	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
162	M216	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
163	M217	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
164	M221	Standoff	33.623			Lbyy			N/A	N/A	Lateral
165	M222	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral
166	M226	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
167	M227	Standoff Verticals	30			Lbyy	0.7	0.7	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp top [in]	K y-y	K z-z	Channel Conn.	a [in]	Function
168	M228	Standoff	33.623			Lbyy			N/A	N/A	Lateral
169	M231	Mount Pipe	60						N/A	N/A	Lateral
170	M232	Standoff Diagonals	45.061			Lbyy	0.7	0.7	N/A	N/A	Lateral
171	M234	Tie-back	54.116						N/A	N/A	Lateral

Member Point Loads (BLC 1 : DEAD LOAD)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	Y	-0.051	%20
2	B2	Y	-0.051	%20
3	G2	Y	-0.051	%20
4	A2	Y	-0.051	%80
5	B2	Y	-0.051	%80
6	G2	Y	-0.051	%80
7	A2	Y	-0.084	%50
8	B2	Y	-0.095	%50
9	G2	Y	-0.084	%50
10	A2	Y	-0.095	%50
11	B2	Y	-0.084	%50
12	G2	Y	-0.095	%50

Member Point Loads (BLC 3 : WIND FRONT)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	Z	-0.248	%20
2	B2	Z	-0.149	%20
3	G2	Z	-0.149	%20
4	A2	Z	-0.248	%80
5	B2	Z	-0.149	%80
6	G2	Z	-0.149	%80
7	A2	Z	-0.039	%50
8	B2	Z	-0.045	%50
9	G2	Z	-0.068	%50
10	A2	Z	-0.07	%50
11	B2	Z	-0.068	%50
12	G2	Z	-0.07	%50
13	G2	Z	-0.067	%50

Member Point Loads (BLC 4 : WIND SIDE)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	X	-0.117	%20
2	B2	X	-0.215	%20
3	G2	X	-0.215	%20
4	A2	X	-0.117	%80
5	B2	X	-0.215	%80
6	G2	X	-0.215	%80
7	A2	X	-0.078	%50
8	B2	X	-0.078	%50
9	G2	X	-0.049	%50
10	A2	X	-0.053	%50
11	B2	X	-0.049	%50
12	G2	X	-0.053	%50
13	G2	X	-0.046	%50

Member Point Loads (BLC 9 : DEAD LOAD (ICE))

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	Y	-0.093	%20
2	B2	Y	-0.093	%20
3	G2	Y	-0.093	%20
4	A2	Y	-0.093	%80
5	B2	Y	-0.093	%80
6	G2	Y	-0.093	%80
7	A2	Y	-0.044	%50
8	B2	Y	-0.047	%50
9	G2	Y	-0.044	%50
10	A2	Y	-0.047	%50
11	B2	Y	-0.044	%50
12	G2	Y	-0.047	%50
13	G2	Y	-0.047	%50

Member Point Loads (BLC 10 : WIND FRONT (ICE))

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	Z	-0.05	%20
2	B2	Z	-0.033	%20
3	G2	Z	-0.033	%20
4	A2	Z	-0.05	%80
5	B2	Z	-0.033	%80
6	G2	Z	-0.033	%80
7	A2	Z	-0.01	%50
8	B2	Z	-0.012	%50
9	G2	Z	-0.016	%50
10	A2	Z	-0.017	%50
11	B2	Z	-0.016	%50
12	G2	Z	-0.017	%50
13	G2	Z	-0.014	%50

Member Point Loads (BLC 11 : WIND SIDE (ICE))

	Member Label	Direction	Magnitude [k, k-ft]	Location [(in, %)]
1	A2	X	-0.026	%20
2	B2	X	-0.044	%20
3	G2	X	-0.044	%20
4	A2	X	-0.026	%80
5	B2	X	-0.044	%80
6	G2	X	-0.044	%80
7	A2	X	-0.018	%50
8	B2	X	-0.018	%50
9	G2	X	-0.012	%50
10	A2	X	-0.013	%50
11	B2	X	-0.012	%50
12	G2	X	-0.013	%50
13	G2	X	-0.011	%50

Member Distributed Loads (BLC 3 : WIND FRONT)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M234	PZ	-0.009	-0.009	0	%100
2	M194	PZ	-0.009	-0.009	0	%100
3	M160	PZ	-0.009	-0.009	0	%100

Member Distributed Loads (BLC 3 : WIND FRONT) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
4	M139	PZ	-0.009	-0.009	0	%100
5	M200	PZ	-0.009	-0.009	0	%100
6	M120	PZ	-0.009	-0.009	0	%100
7	M115	PZ	-0.009	-0.009	0	%100
8	M155	PZ	-0.009	-0.009	0	%100
9	M195	PZ	-0.009	-0.009	0	%100
10	M221	PZ	-0.008	-0.008	0	%100
11	M209	PZ	-0.008	-0.008	0	%100
12	M228	PZ	-0.008	-0.008	0	%100
13	M181	PZ	-0.008	-0.008	0	%100
14	M169	PZ	-0.008	-0.008	0	%100
15	M147	PZ	-0.008	-0.008	0	%100
16	M144	PZ	-0.008	-0.008	0	%100
17	M141	PZ	-0.008	-0.008	0	%100
18	M132	PZ	-0.008	-0.008	0	%100
19	M172	PZ	-0.008	-0.008	0	%100
20	M188	PZ	-0.008	-0.008	0	%100
21	M212	PZ	-0.008	-0.008	0	%100
22	M232	PZ	-0.002	-0.002	0	%100
23	M227	PZ	-0.002	-0.002	0	%100
24	M226	PZ	-0.002	-0.002	0	%100
25	M222	PZ	-0.002	-0.002	0	%100
26	M216	PZ	-0.002	-0.002	0	%100
27	M213	PZ	-0.002	-0.002	0	%100
28	M192	PZ	-0.002	-0.002	0	%100
29	M187	PZ	-0.002	-0.002	0	%100
30	M186	PZ	-0.002	-0.002	0	%100
31	M177	PZ	-0.002	-0.002	0	%100
32	M176	PZ	-0.002	-0.002	0	%100
33	M174	PZ	-0.002	-0.002	0	%100
34	M173	PZ	-0.002	-0.002	0	%100
35	M151	PZ	-0.002	-0.002	0	%100
36	M150	PZ	-0.002	-0.002	0	%100
37	M217	PZ	-0.002	-0.002	0	%100
38	M214	PZ	-0.002	-0.002	0	%100
39	M134	PZ	-0.002	-0.002	0	%100
40	M130	PZ	-0.002	-0.002	0	%100
41	M129	PZ	-0.002	-0.002	0	%100
42	M128	PZ	-0.002	-0.002	0	%100
43	M153	PZ	-0.002	-0.002	0	%100
44	M182	PZ	-0.002	-0.002	0	%100
45	M152	PZ	-0.002	-0.002	0	%100
46	M3	PZ	-0.005	-0.005	0	%100
47	M2	PZ	-0.005	-0.005	0	%100
48	M1	PZ	-0.005	-0.005	0	%100
49	M108	PZ	-0.002	-0.002	0	%100
50	M101	PZ	-0.002	-0.002	0	%100
51	M99	PZ	-0.002	-0.002	0	%100
52	M98	PZ	-0.002	-0.002	0	%100
53	M91	PZ	-0.002	-0.002	0	%100
54	M90	PZ	-0.002	-0.002	0	%100
55	M89	PZ	-0.002	-0.002	0	%100
56	M83	PZ	-0.002	-0.002	0	%100
57	M100	PZ	-0.002	-0.002	0	%100
58	M81	PZ	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 3 : WIND FRONT) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
59	M80	PZ	-0.002	-0.002	0	%100
60	M73	PZ	-0.002	-0.002	0	%100
61	M71	PZ	-0.002	-0.002	0	%100
62	M63	PZ	-0.002	-0.002	0	%100
63	M53	PZ	-0.002	-0.002	0	%100
64	M49	PZ	-0.002	-0.002	0	%100
65	M46	PZ	-0.002	-0.002	0	%100
66	M43	PZ	-0.002	-0.002	0	%100
67	M41	PZ	-0.002	-0.002	0	%100
68	M44	PZ	-0.002	-0.002	0	%100
69	M33	PZ	-0.002	-0.002	0	%100
70	M31	PZ	-0.002	-0.002	0	%100
71	M72	PZ	-0.002	-0.002	0	%100
72	M23	PZ	-0.002	-0.002	0	%100
73	M22	PZ	-0.002	-0.002	0	%100
74	M21	PZ	-0.002	-0.002	0	%100
75	M64	PZ	-0.002	-0.002	0	%100
76	M12	PZ	-0.002	-0.002	0	%100
77	M32	PZ	-0.002	-0.002	0	%100
78	M11	PZ	-0.002	-0.002	0	%100
79	M10	PZ	-0.002	-0.002	0	%100
80	M9	PZ	-0.002	-0.002	0	%100
81	M7	PZ	-0.002	-0.002	0	%100
82	M8	PZ	-0.002	-0.002	0	%100
83	M6	PZ	-0.002	-0.002	0	%100
84	M5	PZ	-0.002	-0.002	0	%100
85	M4	PZ	-0.002	-0.002	0	%100
86	M56	PZ	-0.002	-0.002	0	%100
87	M62	PZ	-0.002	-0.002	0	%100
88	M112	PZ	-0.002	-0.002	0	%100
89	M110	PZ	-0.002	-0.002	0	%100
90	M109	PZ	-0.002	-0.002	0	%100
91	M107	PZ	-0.002	-0.002	0	%100
92	M106	PZ	-0.002	-0.002	0	%100
93	M105	PZ	-0.002	-0.002	0	%100
94	M104	PZ	-0.002	-0.002	0	%100
95	M103	PZ	-0.002	-0.002	0	%100
96	M102	PZ	-0.002	-0.002	0	%100
97	M97	PZ	-0.002	-0.002	0	%100
98	M96	PZ	-0.002	-0.002	0	%100
99	M94	PZ	-0.002	-0.002	0	%100
100	M93	PZ	-0.002	-0.002	0	%100
101	M92	PZ	-0.002	-0.002	0	%100
102	M111	PZ	-0.002	-0.002	0	%100
103	M88	PZ	-0.002	-0.002	0	%100
104	M87	PZ	-0.002	-0.002	0	%100
105	M86	PZ	-0.002	-0.002	0	%100
106	M95	PZ	-0.002	-0.002	0	%100
107	M85	PZ	-0.002	-0.002	0	%100
108	M84	PZ	-0.002	-0.002	0	%100
109	M82	PZ	-0.002	-0.002	0	%100
110	M113	PZ	-0.002	-0.002	0	%100
111	M79	PZ	-0.002	-0.002	0	%100
112	M78	PZ	-0.002	-0.002	0	%100
113	M77	PZ	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 3 : WIND FRONT) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
114	M76	PZ	-0.002	-0.002	0	%100
115	M75	PZ	-0.002	-0.002	0	%100
116	M74	PZ	-0.002	-0.002	0	%100
117	M70	PZ	-0.002	-0.002	0	%100
118	M69	PZ	-0.002	-0.002	0	%100
119	M68	PZ	-0.002	-0.002	0	%100
120	M67	PZ	-0.002	-0.002	0	%100
121	M66	PZ	-0.002	-0.002	0	%100
122	M65	PZ	-0.002	-0.002	0	%100
123	M58	PZ	-0.002	-0.002	0	%100
124	M60	PZ	-0.002	-0.002	0	%100
125	M57	PZ	-0.002	-0.002	0	%100
126	M50	PZ	-0.002	-0.002	0	%100
127	M45	PZ	-0.002	-0.002	0	%100
128	M59	PZ	-0.002	-0.002	0	%100
129	M40	PZ	-0.002	-0.002	0	%100
130	M42	PZ	-0.002	-0.002	0	%100
131	M34	PZ	-0.002	-0.002	0	%100
132	M36	PZ	-0.002	-0.002	0	%100
133	M48	PZ	-0.002	-0.002	0	%100
134	M52	PZ	-0.002	-0.002	0	%100
135	M37	PZ	-0.002	-0.002	0	%100
136	M30	PZ	-0.002	-0.002	0	%100
137	M114	PZ	-0.002	-0.002	0	%100
138	M28	PZ	-0.002	-0.002	0	%100
139	M26	PZ	-0.002	-0.002	0	%100
140	M25	PZ	-0.002	-0.002	0	%100
141	M47	PZ	-0.002	-0.002	0	%100
142	M24	PZ	-0.002	-0.002	0	%100
143	M27	PZ	-0.002	-0.002	0	%100
144	M61	PZ	-0.002	-0.002	0	%100
145	M20	PZ	-0.002	-0.002	0	%100
146	M19	PZ	-0.002	-0.002	0	%100
147	M55	PZ	-0.002	-0.002	0	%100
148	M51	PZ	-0.002	-0.002	0	%100
149	M18	PZ	-0.002	-0.002	0	%100
150	M16	PZ	-0.002	-0.002	0	%100
151	M15	PZ	-0.002	-0.002	0	%100
152	M39	PZ	-0.002	-0.002	0	%100
153	M13	PZ	-0.002	-0.002	0	%100
154	M35	PZ	-0.002	-0.002	0	%100
155	M54	PZ	-0.002	-0.002	0	%100
156	M38	PZ	-0.002	-0.002	0	%100
157	M14	PZ	-0.002	-0.002	0	%100
158	M29	PZ	-0.002	-0.002	0	%100
159	M17	PZ	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 4 : WIND SIDE)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M234	PX	-0.009	-0.009	0	%100
2	M194	PX	-0.009	-0.009	0	%100
3	M160	PX	-0.009	-0.009	0	%100
4	M139	PX	-0.009	-0.009	0	%100
5	M200	PX	-0.009	-0.009	0	%100
6	M120	PX	-0.009	-0.009	0	%100

Member Distributed Loads (BLC 4 : WIND SIDE) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
7	M115	PX	-0.009	-0.009	0	%100
8	M155	PX	-0.009	-0.009	0	%100
9	M195	PX	-0.009	-0.009	0	%100
10	M221	PX	-0.008	-0.008	0	%100
11	M209	PX	-0.008	-0.008	0	%100
12	M228	PX	-0.008	-0.008	0	%100
13	M181	PX	-0.008	-0.008	0	%100
14	M169	PX	-0.008	-0.008	0	%100
15	M147	PX	-0.008	-0.008	0	%100
16	M144	PX	-0.008	-0.008	0	%100
17	M141	PX	-0.008	-0.008	0	%100
18	M132	PX	-0.008	-0.008	0	%100
19	M172	PX	-0.008	-0.008	0	%100
20	M188	PX	-0.008	-0.008	0	%100
21	M212	PX	-0.008	-0.008	0	%100
22	M232	PX	-0.002	-0.002	0	%100
23	M227	PX	-0.002	-0.002	0	%100
24	M226	PX	-0.002	-0.002	0	%100
25	M222	PX	-0.002	-0.002	0	%100
26	M216	PX	-0.002	-0.002	0	%100
27	M213	PX	-0.002	-0.002	0	%100
28	M192	PX	-0.002	-0.002	0	%100
29	M187	PX	-0.002	-0.002	0	%100
30	M186	PX	-0.002	-0.002	0	%100
31	M177	PX	-0.002	-0.002	0	%100
32	M176	PX	-0.002	-0.002	0	%100
33	M174	PX	-0.002	-0.002	0	%100
34	M173	PX	-0.002	-0.002	0	%100
35	M151	PX	-0.002	-0.002	0	%100
36	M150	PX	-0.002	-0.002	0	%100
37	M217	PX	-0.002	-0.002	0	%100
38	M214	PX	-0.002	-0.002	0	%100
39	M134	PX	-0.002	-0.002	0	%100
40	M130	PX	-0.002	-0.002	0	%100
41	M129	PX	-0.002	-0.002	0	%100
42	M128	PX	-0.002	-0.002	0	%100
43	M153	PX	-0.002	-0.002	0	%100
44	M182	PX	-0.002	-0.002	0	%100
45	M152	PX	-0.002	-0.002	0	%100
46	M3	PX	-0.005	-0.005	0	%100
47	M2	PX	-0.005	-0.005	0	%100
48	M1	PX	-0.005	-0.005	0	%100
49	M108	PX	-0.002	-0.002	0	%100
50	M101	PX	-0.002	-0.002	0	%100
51	M99	PX	-0.002	-0.002	0	%100
52	M98	PX	-0.002	-0.002	0	%100
53	M91	PX	-0.002	-0.002	0	%100
54	M90	PX	-0.002	-0.002	0	%100
55	M89	PX	-0.002	-0.002	0	%100
56	M83	PX	-0.002	-0.002	0	%100
57	M100	PX	-0.002	-0.002	0	%100
58	M81	PX	-0.002	-0.002	0	%100
59	M80	PX	-0.002	-0.002	0	%100
60	M73	PX	-0.002	-0.002	0	%100
61	M71	PX	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 4 : WIND SIDE) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
62	M63	PX	-0.002	-0.002	0	%100
63	M53	PX	-0.002	-0.002	0	%100
64	M49	PX	-0.002	-0.002	0	%100
65	M46	PX	-0.002	-0.002	0	%100
66	M43	PX	-0.002	-0.002	0	%100
67	M41	PX	-0.002	-0.002	0	%100
68	M44	PX	-0.002	-0.002	0	%100
69	M33	PX	-0.002	-0.002	0	%100
70	M31	PX	-0.002	-0.002	0	%100
71	M72	PX	-0.002	-0.002	0	%100
72	M23	PX	-0.002	-0.002	0	%100
73	M22	PX	-0.002	-0.002	0	%100
74	M21	PX	-0.002	-0.002	0	%100
75	M64	PX	-0.002	-0.002	0	%100
76	M12	PX	-0.002	-0.002	0	%100
77	M32	PX	-0.002	-0.002	0	%100
78	M11	PX	-0.002	-0.002	0	%100
79	M10	PX	-0.002	-0.002	0	%100
80	M9	PX	-0.002	-0.002	0	%100
81	M7	PX	-0.002	-0.002	0	%100
82	M8	PX	-0.002	-0.002	0	%100
83	M6	PX	-0.002	-0.002	0	%100
84	M5	PX	-0.002	-0.002	0	%100
85	M4	PX	-0.002	-0.002	0	%100
86	M56	PX	-0.002	-0.002	0	%100
87	M62	PX	-0.002	-0.002	0	%100
88	M112	PX	-0.002	-0.002	0	%100
89	M110	PX	-0.002	-0.002	0	%100
90	M109	PX	-0.002	-0.002	0	%100
91	M107	PX	-0.002	-0.002	0	%100
92	M106	PX	-0.002	-0.002	0	%100
93	M105	PX	-0.002	-0.002	0	%100
94	M104	PX	-0.002	-0.002	0	%100
95	M103	PX	-0.002	-0.002	0	%100
96	M102	PX	-0.002	-0.002	0	%100
97	M97	PX	-0.002	-0.002	0	%100
98	M96	PX	-0.002	-0.002	0	%100
99	M94	PX	-0.002	-0.002	0	%100
100	M93	PX	-0.002	-0.002	0	%100
101	M92	PX	-0.002	-0.002	0	%100
102	M111	PX	-0.002	-0.002	0	%100
103	M88	PX	-0.002	-0.002	0	%100
104	M87	PX	-0.002	-0.002	0	%100
105	M86	PX	-0.002	-0.002	0	%100
106	M95	PX	-0.002	-0.002	0	%100
107	M85	PX	-0.002	-0.002	0	%100
108	M84	PX	-0.002	-0.002	0	%100
109	M82	PX	-0.002	-0.002	0	%100
110	M113	PX	-0.002	-0.002	0	%100
111	M79	PX	-0.002	-0.002	0	%100
112	M78	PX	-0.002	-0.002	0	%100
113	M77	PX	-0.002	-0.002	0	%100
114	M76	PX	-0.002	-0.002	0	%100
115	M75	PX	-0.002	-0.002	0	%100
116	M74	PX	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 4 : WIND SIDE) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
117	M70	PX	-0.002	-0.002	0	%100
118	M69	PX	-0.002	-0.002	0	%100
119	M68	PX	-0.002	-0.002	0	%100
120	M67	PX	-0.002	-0.002	0	%100
121	M66	PX	-0.002	-0.002	0	%100
122	M65	PX	-0.002	-0.002	0	%100
123	M58	PX	-0.002	-0.002	0	%100
124	M60	PX	-0.002	-0.002	0	%100
125	M57	PX	-0.002	-0.002	0	%100
126	M50	PX	-0.002	-0.002	0	%100
127	M45	PX	-0.002	-0.002	0	%100
128	M59	PX	-0.002	-0.002	0	%100
129	M40	PX	-0.002	-0.002	0	%100
130	M42	PX	-0.002	-0.002	0	%100
131	M34	PX	-0.002	-0.002	0	%100
132	M36	PX	-0.002	-0.002	0	%100
133	M48	PX	-0.002	-0.002	0	%100
134	M52	PX	-0.002	-0.002	0	%100
135	M37	PX	-0.002	-0.002	0	%100
136	M30	PX	-0.002	-0.002	0	%100
137	M114	PX	-0.002	-0.002	0	%100
138	M28	PX	-0.002	-0.002	0	%100
139	M26	PX	-0.002	-0.002	0	%100
140	M25	PX	-0.002	-0.002	0	%100
141	M47	PX	-0.002	-0.002	0	%100
142	M24	PX	-0.002	-0.002	0	%100
143	M27	PX	-0.002	-0.002	0	%100
144	M61	PX	-0.002	-0.002	0	%100
145	M20	PX	-0.002	-0.002	0	%100
146	M19	PX	-0.002	-0.002	0	%100
147	M55	PX	-0.002	-0.002	0	%100
148	M51	PX	-0.002	-0.002	0	%100
149	M18	PX	-0.002	-0.002	0	%100
150	M16	PX	-0.002	-0.002	0	%100
151	M15	PX	-0.002	-0.002	0	%100
152	M39	PX	-0.002	-0.002	0	%100
153	M13	PX	-0.002	-0.002	0	%100
154	M35	PX	-0.002	-0.002	0	%100
155	M54	PX	-0.002	-0.002	0	%100
156	M38	PX	-0.002	-0.002	0	%100
157	M14	PX	-0.002	-0.002	0	%100
158	M29	PX	-0.002	-0.002	0	%100
159	M17	PX	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 9 : DEAD LOAD (ICE))

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M234	Y	-0.005	-0.005	0	%100
2	M194	Y	-0.005	-0.005	0	%100
3	M160	Y	-0.005	-0.005	0	%100
4	M139	Y	-0.005	-0.005	0	%100
5	M200	Y	-0.005	-0.005	0	%100
6	M120	Y	-0.005	-0.005	0	%100
7	M115	Y	-0.005	-0.005	0	%100
8	M155	Y	-0.005	-0.005	0	%100
9	M195	Y	-0.005	-0.005	0	%100

Member Distributed Loads (BLC 9 : DEAD LOAD (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
10	M221	Y	-0.004	-0.004	0	%100
11	M209	Y	-0.004	-0.004	0	%100
12	M228	Y	-0.004	-0.004	0	%100
13	M181	Y	-0.004	-0.004	0	%100
14	M169	Y	-0.004	-0.004	0	%100
15	M147	Y	-0.004	-0.004	0	%100
16	M144	Y	-0.004	-0.004	0	%100
17	M141	Y	-0.004	-0.004	0	%100
18	M132	Y	-0.004	-0.004	0	%100
19	M172	Y	-0.004	-0.004	0	%100
20	M188	Y	-0.004	-0.004	0	%100
21	M212	Y	-0.004	-0.004	0	%100
22	M232	Y	-0.003	-0.003	0	%100
23	M227	Y	-0.003	-0.003	0	%100
24	M226	Y	-0.003	-0.003	0	%100
25	M222	Y	-0.003	-0.003	0	%100
26	M216	Y	-0.003	-0.003	0	%100
27	M213	Y	-0.003	-0.003	0	%100
28	M192	Y	-0.003	-0.003	0	%100
29	M187	Y	-0.003	-0.003	0	%100
30	M186	Y	-0.003	-0.003	0	%100
31	M177	Y	-0.003	-0.003	0	%100
32	M176	Y	-0.003	-0.003	0	%100
33	M174	Y	-0.003	-0.003	0	%100
34	M173	Y	-0.003	-0.003	0	%100
35	M151	Y	-0.003	-0.003	0	%100
36	M150	Y	-0.003	-0.003	0	%100
37	M217	Y	-0.003	-0.003	0	%100
38	M214	Y	-0.003	-0.003	0	%100
39	M134	Y	-0.003	-0.003	0	%100
40	M130	Y	-0.003	-0.003	0	%100
41	M129	Y	-0.003	-0.003	0	%100
42	M128	Y	-0.003	-0.003	0	%100
43	M153	Y	-0.003	-0.003	0	%100
44	M182	Y	-0.003	-0.003	0	%100
45	M152	Y	-0.003	-0.003	0	%100
46	M3	Y	-0.003	-0.003	0	%100
47	M2	Y	-0.003	-0.003	0	%100
48	M1	Y	-0.003	-0.003	0	%100
49	M108	Y	-0.003	-0.003	0	%100
50	M101	Y	-0.003	-0.003	0	%100
51	M99	Y	-0.003	-0.003	0	%100
52	M98	Y	-0.003	-0.003	0	%100
53	M91	Y	-0.003	-0.003	0	%100
54	M90	Y	-0.003	-0.003	0	%100
55	M89	Y	-0.003	-0.003	0	%100
56	M83	Y	-0.003	-0.003	0	%100
57	M100	Y	-0.003	-0.003	0	%100
58	M81	Y	-0.003	-0.003	0	%100
59	M80	Y	-0.003	-0.003	0	%100
60	M73	Y	-0.003	-0.003	0	%100
61	M71	Y	-0.003	-0.003	0	%100
62	M63	Y	-0.003	-0.003	0	%100
63	M53	Y	-0.003	-0.003	0	%100
64	M49	Y	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 9 : DEAD LOAD (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
65	M46	Y	-0.003	-0.003	0	%100
66	M43	Y	-0.003	-0.003	0	%100
67	M41	Y	-0.003	-0.003	0	%100
68	M44	Y	-0.003	-0.003	0	%100
69	M33	Y	-0.003	-0.003	0	%100
70	M31	Y	-0.003	-0.003	0	%100
71	M72	Y	-0.003	-0.003	0	%100
72	M23	Y	-0.003	-0.003	0	%100
73	M22	Y	-0.003	-0.003	0	%100
74	M21	Y	-0.003	-0.003	0	%100
75	M64	Y	-0.003	-0.003	0	%100
76	M12	Y	-0.003	-0.003	0	%100
77	M32	Y	-0.003	-0.003	0	%100
78	M11	Y	-0.003	-0.003	0	%100
79	M10	Y	-0.003	-0.003	0	%100
80	M9	Y	-0.003	-0.003	0	%100
81	M7	Y	-0.003	-0.003	0	%100
82	M8	Y	-0.003	-0.003	0	%100
83	M6	Y	-0.003	-0.003	0	%100
84	M5	Y	-0.003	-0.003	0	%100
85	M4	Y	-0.003	-0.003	0	%100
86	M56	Y	-0.003	-0.003	0	%100
87	M62	Y	-0.003	-0.003	0	%100
88	M112	Y	-0.002	-0.002	0	%100
89	M110	Y	-0.002	-0.002	0	%100
90	M109	Y	-0.002	-0.002	0	%100
91	M107	Y	-0.002	-0.002	0	%100
92	M106	Y	-0.002	-0.002	0	%100
93	M105	Y	-0.002	-0.002	0	%100
94	M104	Y	-0.002	-0.002	0	%100
95	M103	Y	-0.002	-0.002	0	%100
96	M102	Y	-0.002	-0.002	0	%100
97	M97	Y	-0.002	-0.002	0	%100
98	M96	Y	-0.002	-0.002	0	%100
99	M94	Y	-0.002	-0.002	0	%100
100	M93	Y	-0.002	-0.002	0	%100
101	M92	Y	-0.002	-0.002	0	%100
102	M111	Y	-0.002	-0.002	0	%100
103	M88	Y	-0.002	-0.002	0	%100
104	M87	Y	-0.002	-0.002	0	%100
105	M86	Y	-0.002	-0.002	0	%100
106	M95	Y	-0.002	-0.002	0	%100
107	M85	Y	-0.002	-0.002	0	%100
108	M84	Y	-0.002	-0.002	0	%100
109	M82	Y	-0.002	-0.002	0	%100
110	M113	Y	-0.002	-0.002	0	%100
111	M79	Y	-0.002	-0.002	0	%100
112	M78	Y	-0.002	-0.002	0	%100
113	M77	Y	-0.002	-0.002	0	%100
114	M76	Y	-0.002	-0.002	0	%100
115	M75	Y	-0.002	-0.002	0	%100
116	M74	Y	-0.002	-0.002	0	%100
117	M70	Y	-0.002	-0.002	0	%100
118	M69	Y	-0.002	-0.002	0	%100
119	M68	Y	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 9 : DEAD LOAD (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
120	M67	Y	-0.002	-0.002	0	%100
121	M66	Y	-0.002	-0.002	0	%100
122	M65	Y	-0.002	-0.002	0	%100
123	M58	Y	-0.002	-0.002	0	%100
124	M60	Y	-0.002	-0.002	0	%100
125	M57	Y	-0.002	-0.002	0	%100
126	M50	Y	-0.002	-0.002	0	%100
127	M45	Y	-0.002	-0.002	0	%100
128	M59	Y	-0.002	-0.002	0	%100
129	M40	Y	-0.002	-0.002	0	%100
130	M42	Y	-0.002	-0.002	0	%100
131	M34	Y	-0.002	-0.002	0	%100
132	M36	Y	-0.002	-0.002	0	%100
133	M48	Y	-0.002	-0.002	0	%100
134	M52	Y	-0.002	-0.002	0	%100
135	M37	Y	-0.002	-0.002	0	%100
136	M30	Y	-0.002	-0.002	0	%100
137	M114	Y	-0.002	-0.002	0	%100
138	M28	Y	-0.002	-0.002	0	%100
139	M26	Y	-0.002	-0.002	0	%100
140	M25	Y	-0.002	-0.002	0	%100
141	M47	Y	-0.002	-0.002	0	%100
142	M24	Y	-0.002	-0.002	0	%100
143	M27	Y	-0.002	-0.002	0	%100
144	M61	Y	-0.002	-0.002	0	%100
145	M20	Y	-0.002	-0.002	0	%100
146	M19	Y	-0.002	-0.002	0	%100
147	M55	Y	-0.002	-0.002	0	%100
148	M51	Y	-0.002	-0.002	0	%100
149	M18	Y	-0.002	-0.002	0	%100
150	M16	Y	-0.002	-0.002	0	%100
151	M15	Y	-0.002	-0.002	0	%100
152	M39	Y	-0.002	-0.002	0	%100
153	M13	Y	-0.002	-0.002	0	%100
154	M35	Y	-0.002	-0.002	0	%100
155	M54	Y	-0.002	-0.002	0	%100
156	M38	Y	-0.002	-0.002	0	%100
157	M14	Y	-0.002	-0.002	0	%100
158	M29	Y	-0.002	-0.002	0	%100
159	M17	Y	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 10 : WIND FRONT (ICE))

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M234	PZ	-0.003	-0.003	0	%100
2	M194	PZ	-0.003	-0.003	0	%100
3	M160	PZ	-0.003	-0.003	0	%100
4	M139	PZ	-0.003	-0.003	0	%100
5	M200	PZ	-0.003	-0.003	0	%100
6	M120	PZ	-0.003	-0.003	0	%100
7	M115	PZ	-0.003	-0.003	0	%100
8	M155	PZ	-0.003	-0.003	0	%100
9	M195	PZ	-0.003	-0.003	0	%100
10	M221	PZ	-0.003	-0.003	0	%100
11	M209	PZ	-0.003	-0.003	0	%100
12	M228	PZ	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 10 : WIND FRONT (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
13	M181	PZ	-0.003	-0.003	0	%100
14	M169	PZ	-0.003	-0.003	0	%100
15	M147	PZ	-0.003	-0.003	0	%100
16	M144	PZ	-0.003	-0.003	0	%100
17	M141	PZ	-0.003	-0.003	0	%100
18	M132	PZ	-0.003	-0.003	0	%100
19	M172	PZ	-0.003	-0.003	0	%100
20	M188	PZ	-0.003	-0.003	0	%100
21	M212	PZ	-0.003	-0.003	0	%100
22	M232	PZ	-0.002	-0.002	0	%100
23	M227	PZ	-0.002	-0.002	0	%100
24	M226	PZ	-0.002	-0.002	0	%100
25	M222	PZ	-0.002	-0.002	0	%100
26	M216	PZ	-0.002	-0.002	0	%100
27	M213	PZ	-0.002	-0.002	0	%100
28	M192	PZ	-0.002	-0.002	0	%100
29	M187	PZ	-0.002	-0.002	0	%100
30	M186	PZ	-0.002	-0.002	0	%100
31	M177	PZ	-0.002	-0.002	0	%100
32	M176	PZ	-0.002	-0.002	0	%100
33	M174	PZ	-0.002	-0.002	0	%100
34	M173	PZ	-0.002	-0.002	0	%100
35	M151	PZ	-0.002	-0.002	0	%100
36	M150	PZ	-0.002	-0.002	0	%100
37	M217	PZ	-0.002	-0.002	0	%100
38	M214	PZ	-0.002	-0.002	0	%100
39	M134	PZ	-0.002	-0.002	0	%100
40	M130	PZ	-0.002	-0.002	0	%100
41	M129	PZ	-0.002	-0.002	0	%100
42	M128	PZ	-0.002	-0.002	0	%100
43	M153	PZ	-0.002	-0.002	0	%100
44	M182	PZ	-0.002	-0.002	0	%100
45	M152	PZ	-0.002	-0.002	0	%100
46	M3	PZ	-0.003	-0.003	0	%100
47	M2	PZ	-0.003	-0.003	0	%100
48	M1	PZ	-0.003	-0.003	0	%100
49	M108	PZ	-0.003	-0.003	0	%100
50	M101	PZ	-0.003	-0.003	0	%100
51	M99	PZ	-0.003	-0.003	0	%100
52	M98	PZ	-0.003	-0.003	0	%100
53	M91	PZ	-0.003	-0.003	0	%100
54	M90	PZ	-0.003	-0.003	0	%100
55	M89	PZ	-0.003	-0.003	0	%100
56	M83	PZ	-0.003	-0.003	0	%100
57	M100	PZ	-0.003	-0.003	0	%100
58	M81	PZ	-0.003	-0.003	0	%100
59	M80	PZ	-0.003	-0.003	0	%100
60	M73	PZ	-0.003	-0.003	0	%100
61	M71	PZ	-0.003	-0.003	0	%100
62	M63	PZ	-0.003	-0.003	0	%100
63	M53	PZ	-0.003	-0.003	0	%100
64	M49	PZ	-0.003	-0.003	0	%100
65	M46	PZ	-0.003	-0.003	0	%100
66	M43	PZ	-0.003	-0.003	0	%100
67	M41	PZ	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 10 : WIND FRONT (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
68	M44	PZ	-0.003	-0.003	0	%100
69	M33	PZ	-0.003	-0.003	0	%100
70	M31	PZ	-0.003	-0.003	0	%100
71	M72	PZ	-0.003	-0.003	0	%100
72	M23	PZ	-0.003	-0.003	0	%100
73	M22	PZ	-0.003	-0.003	0	%100
74	M21	PZ	-0.003	-0.003	0	%100
75	M64	PZ	-0.003	-0.003	0	%100
76	M12	PZ	-0.003	-0.003	0	%100
77	M32	PZ	-0.003	-0.003	0	%100
78	M11	PZ	-0.003	-0.003	0	%100
79	M10	PZ	-0.003	-0.003	0	%100
80	M9	PZ	-0.003	-0.003	0	%100
81	M7	PZ	-0.003	-0.003	0	%100
82	M8	PZ	-0.003	-0.003	0	%100
83	M6	PZ	-0.003	-0.003	0	%100
84	M5	PZ	-0.003	-0.003	0	%100
85	M4	PZ	-0.003	-0.003	0	%100
86	M56	PZ	-0.003	-0.003	0	%100
87	M62	PZ	-0.003	-0.003	0	%100
88	M112	PZ	-0.003	-0.003	0	%100
89	M110	PZ	-0.003	-0.003	0	%100
90	M109	PZ	-0.003	-0.003	0	%100
91	M107	PZ	-0.003	-0.003	0	%100
92	M106	PZ	-0.003	-0.003	0	%100
93	M105	PZ	-0.003	-0.003	0	%100
94	M104	PZ	-0.003	-0.003	0	%100
95	M103	PZ	-0.003	-0.003	0	%100
96	M102	PZ	-0.003	-0.003	0	%100
97	M97	PZ	-0.003	-0.003	0	%100
98	M96	PZ	-0.003	-0.003	0	%100
99	M94	PZ	-0.003	-0.003	0	%100
100	M93	PZ	-0.003	-0.003	0	%100
101	M92	PZ	-0.003	-0.003	0	%100
102	M111	PZ	-0.003	-0.003	0	%100
103	M88	PZ	-0.003	-0.003	0	%100
104	M87	PZ	-0.003	-0.003	0	%100
105	M86	PZ	-0.003	-0.003	0	%100
106	M95	PZ	-0.003	-0.003	0	%100
107	M85	PZ	-0.003	-0.003	0	%100
108	M84	PZ	-0.003	-0.003	0	%100
109	M82	PZ	-0.003	-0.003	0	%100
110	M113	PZ	-0.003	-0.003	0	%100
111	M79	PZ	-0.003	-0.003	0	%100
112	M78	PZ	-0.003	-0.003	0	%100
113	M77	PZ	-0.003	-0.003	0	%100
114	M76	PZ	-0.003	-0.003	0	%100
115	M75	PZ	-0.003	-0.003	0	%100
116	M74	PZ	-0.003	-0.003	0	%100
117	M70	PZ	-0.003	-0.003	0	%100
118	M69	PZ	-0.003	-0.003	0	%100
119	M68	PZ	-0.003	-0.003	0	%100
120	M67	PZ	-0.003	-0.003	0	%100
121	M66	PZ	-0.003	-0.003	0	%100
122	M65	PZ	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 10 : WIND FRONT (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
123	M58	PZ	-0.003	-0.003	0	%100
124	M60	PZ	-0.003	-0.003	0	%100
125	M57	PZ	-0.003	-0.003	0	%100
126	M50	PZ	-0.003	-0.003	0	%100
127	M45	PZ	-0.003	-0.003	0	%100
128	M59	PZ	-0.003	-0.003	0	%100
129	M40	PZ	-0.003	-0.003	0	%100
130	M42	PZ	-0.003	-0.003	0	%100
131	M34	PZ	-0.003	-0.003	0	%100
132	M36	PZ	-0.003	-0.003	0	%100
133	M48	PZ	-0.003	-0.003	0	%100
134	M52	PZ	-0.003	-0.003	0	%100
135	M37	PZ	-0.003	-0.003	0	%100
136	M30	PZ	-0.003	-0.003	0	%100
137	M114	PZ	-0.003	-0.003	0	%100
138	M28	PZ	-0.003	-0.003	0	%100
139	M26	PZ	-0.003	-0.003	0	%100
140	M25	PZ	-0.003	-0.003	0	%100
141	M47	PZ	-0.003	-0.003	0	%100
142	M24	PZ	-0.003	-0.003	0	%100
143	M27	PZ	-0.003	-0.003	0	%100
144	M61	PZ	-0.003	-0.003	0	%100
145	M20	PZ	-0.003	-0.003	0	%100
146	M19	PZ	-0.003	-0.003	0	%100
147	M55	PZ	-0.003	-0.003	0	%100
148	M51	PZ	-0.003	-0.003	0	%100
149	M18	PZ	-0.003	-0.003	0	%100
150	M16	PZ	-0.003	-0.003	0	%100
151	M15	PZ	-0.003	-0.003	0	%100
152	M39	PZ	-0.003	-0.003	0	%100
153	M13	PZ	-0.003	-0.003	0	%100
154	M35	PZ	-0.003	-0.003	0	%100
155	M54	PZ	-0.003	-0.003	0	%100
156	M38	PZ	-0.003	-0.003	0	%100
157	M14	PZ	-0.003	-0.003	0	%100
158	M29	PZ	-0.003	-0.003	0	%100
159	M17	PZ	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 11 : WIND SIDE (ICE))

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
1	M234	PX	-0.003	-0.003	0	%100
2	M194	PX	-0.003	-0.003	0	%100
3	M160	PX	-0.003	-0.003	0	%100
4	M139	PX	-0.003	-0.003	0	%100
5	M200	PX	-0.003	-0.003	0	%100
6	M120	PX	-0.003	-0.003	0	%100
7	M115	PX	-0.003	-0.003	0	%100
8	M155	PX	-0.003	-0.003	0	%100
9	M195	PX	-0.003	-0.003	0	%100
10	M221	PX	-0.003	-0.003	0	%100
11	M209	PX	-0.003	-0.003	0	%100
12	M228	PX	-0.003	-0.003	0	%100
13	M181	PX	-0.003	-0.003	0	%100
14	M169	PX	-0.003	-0.003	0	%100
15	M147	PX	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 11 : WIND SIDE (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
16	M144	PX	-0.003	-0.003	0	%100
17	M141	PX	-0.003	-0.003	0	%100
18	M132	PX	-0.003	-0.003	0	%100
19	M172	PX	-0.003	-0.003	0	%100
20	M188	PX	-0.003	-0.003	0	%100
21	M212	PX	-0.003	-0.003	0	%100
22	M232	PX	-0.002	-0.002	0	%100
23	M227	PX	-0.002	-0.002	0	%100
24	M226	PX	-0.002	-0.002	0	%100
25	M222	PX	-0.002	-0.002	0	%100
26	M216	PX	-0.002	-0.002	0	%100
27	M213	PX	-0.002	-0.002	0	%100
28	M192	PX	-0.002	-0.002	0	%100
29	M187	PX	-0.002	-0.002	0	%100
30	M186	PX	-0.002	-0.002	0	%100
31	M177	PX	-0.002	-0.002	0	%100
32	M176	PX	-0.002	-0.002	0	%100
33	M174	PX	-0.002	-0.002	0	%100
34	M173	PX	-0.002	-0.002	0	%100
35	M151	PX	-0.002	-0.002	0	%100
36	M150	PX	-0.002	-0.002	0	%100
37	M217	PX	-0.002	-0.002	0	%100
38	M214	PX	-0.002	-0.002	0	%100
39	M134	PX	-0.002	-0.002	0	%100
40	M130	PX	-0.002	-0.002	0	%100
41	M129	PX	-0.002	-0.002	0	%100
42	M128	PX	-0.002	-0.002	0	%100
43	M153	PX	-0.002	-0.002	0	%100
44	M182	PX	-0.002	-0.002	0	%100
45	M152	PX	-0.002	-0.002	0	%100
46	M3	PX	-0.003	-0.003	0	%100
47	M2	PX	-0.003	-0.003	0	%100
48	M1	PX	-0.003	-0.003	0	%100
49	M108	PX	-0.003	-0.003	0	%100
50	M101	PX	-0.003	-0.003	0	%100
51	M99	PX	-0.003	-0.003	0	%100
52	M98	PX	-0.003	-0.003	0	%100
53	M91	PX	-0.003	-0.003	0	%100
54	M90	PX	-0.003	-0.003	0	%100
55	M89	PX	-0.003	-0.003	0	%100
56	M83	PX	-0.003	-0.003	0	%100
57	M100	PX	-0.003	-0.003	0	%100
58	M81	PX	-0.003	-0.003	0	%100
59	M80	PX	-0.003	-0.003	0	%100
60	M73	PX	-0.003	-0.003	0	%100
61	M71	PX	-0.003	-0.003	0	%100
62	M63	PX	-0.003	-0.003	0	%100
63	M53	PX	-0.003	-0.003	0	%100
64	M49	PX	-0.003	-0.003	0	%100
65	M46	PX	-0.003	-0.003	0	%100
66	M43	PX	-0.003	-0.003	0	%100
67	M41	PX	-0.003	-0.003	0	%100
68	M44	PX	-0.003	-0.003	0	%100
69	M33	PX	-0.003	-0.003	0	%100
70	M31	PX	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 11 : WIND SIDE (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
71	M72	PX	-0.003	-0.003	0	%100
72	M23	PX	-0.003	-0.003	0	%100
73	M22	PX	-0.003	-0.003	0	%100
74	M21	PX	-0.003	-0.003	0	%100
75	M64	PX	-0.003	-0.003	0	%100
76	M12	PX	-0.003	-0.003	0	%100
77	M32	PX	-0.003	-0.003	0	%100
78	M11	PX	-0.003	-0.003	0	%100
79	M10	PX	-0.003	-0.003	0	%100
80	M9	PX	-0.003	-0.003	0	%100
81	M7	PX	-0.003	-0.003	0	%100
82	M8	PX	-0.003	-0.003	0	%100
83	M6	PX	-0.003	-0.003	0	%100
84	M5	PX	-0.003	-0.003	0	%100
85	M4	PX	-0.003	-0.003	0	%100
86	M56	PX	-0.003	-0.003	0	%100
87	M62	PX	-0.003	-0.003	0	%100
88	M112	PX	-0.003	-0.003	0	%100
89	M110	PX	-0.003	-0.003	0	%100
90	M109	PX	-0.003	-0.003	0	%100
91	M107	PX	-0.003	-0.003	0	%100
92	M106	PX	-0.003	-0.003	0	%100
93	M105	PX	-0.003	-0.003	0	%100
94	M104	PX	-0.003	-0.003	0	%100
95	M103	PX	-0.003	-0.003	0	%100
96	M102	PX	-0.003	-0.003	0	%100
97	M97	PX	-0.003	-0.003	0	%100
98	M96	PX	-0.003	-0.003	0	%100
99	M94	PX	-0.003	-0.003	0	%100
100	M93	PX	-0.003	-0.003	0	%100
101	M92	PX	-0.003	-0.003	0	%100
102	M111	PX	-0.003	-0.003	0	%100
103	M88	PX	-0.003	-0.003	0	%100
104	M87	PX	-0.003	-0.003	0	%100
105	M86	PX	-0.003	-0.003	0	%100
106	M95	PX	-0.003	-0.003	0	%100
107	M85	PX	-0.003	-0.003	0	%100
108	M84	PX	-0.003	-0.003	0	%100
109	M82	PX	-0.003	-0.003	0	%100
110	M113	PX	-0.003	-0.003	0	%100
111	M79	PX	-0.003	-0.003	0	%100
112	M78	PX	-0.003	-0.003	0	%100
113	M77	PX	-0.003	-0.003	0	%100
114	M76	PX	-0.003	-0.003	0	%100
115	M75	PX	-0.003	-0.003	0	%100
116	M74	PX	-0.003	-0.003	0	%100
117	M70	PX	-0.003	-0.003	0	%100
118	M69	PX	-0.003	-0.003	0	%100
119	M68	PX	-0.003	-0.003	0	%100
120	M67	PX	-0.003	-0.003	0	%100
121	M66	PX	-0.003	-0.003	0	%100
122	M65	PX	-0.003	-0.003	0	%100
123	M58	PX	-0.003	-0.003	0	%100
124	M60	PX	-0.003	-0.003	0	%100
125	M57	PX	-0.003	-0.003	0	%100

Member Distributed Loads (BLC 11 : WIND SIDE (ICE)) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/in]	End Magnitude [k/ft, F, ksf, k-ft/in]	Start Location [(in, %)]	End Location [(in, %)]
126	M50	PX	-0.003	-0.003	0	%100
127	M45	PX	-0.003	-0.003	0	%100
128	M59	PX	-0.003	-0.003	0	%100
129	M40	PX	-0.003	-0.003	0	%100
130	M42	PX	-0.003	-0.003	0	%100
131	M34	PX	-0.003	-0.003	0	%100
132	M36	PX	-0.003	-0.003	0	%100
133	M48	PX	-0.003	-0.003	0	%100
134	M52	PX	-0.003	-0.003	0	%100
135	M37	PX	-0.003	-0.003	0	%100
136	M30	PX	-0.003	-0.003	0	%100
137	M114	PX	-0.003	-0.003	0	%100
138	M28	PX	-0.003	-0.003	0	%100
139	M26	PX	-0.003	-0.003	0	%100
140	M25	PX	-0.003	-0.003	0	%100
141	M47	PX	-0.003	-0.003	0	%100
142	M24	PX	-0.003	-0.003	0	%100
143	M27	PX	-0.003	-0.003	0	%100
144	M61	PX	-0.003	-0.003	0	%100
145	M20	PX	-0.003	-0.003	0	%100
146	M19	PX	-0.003	-0.003	0	%100
147	M55	PX	-0.003	-0.003	0	%100
148	M51	PX	-0.003	-0.003	0	%100
149	M18	PX	-0.003	-0.003	0	%100
150	M16	PX	-0.003	-0.003	0	%100
151	M15	PX	-0.003	-0.003	0	%100
152	M39	PX	-0.003	-0.003	0	%100
153	M13	PX	-0.003	-0.003	0	%100
154	M35	PX	-0.003	-0.003	0	%100
155	M54	PX	-0.003	-0.003	0	%100
156	M38	PX	-0.003	-0.003	0	%100
157	M14	PX	-0.003	-0.003	0	%100
158	M29	PX	-0.003	-0.003	0	%100
159	M17	PX	-0.003	-0.003	0	%100

Member Area Loads

No Data to Print...

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DEAD LOAD	Yes	Y	1	1														
2	1.4 DEAD LOAD	Yes	Y	1	1.4														
3	DEAD LOAD + Lv	Yes	Y	1	1	2	1												
4	1.2 DEAD LOAD + 1.5 Lv	Yes	Y	1	1.2	2	1.5												
5	DEAD LOAD + UDL	Yes	Y	1	1											7	1		
6	1.2 DEAD LOAD + 1.5 UDL	Yes	Y	1	1.2											7	1.5		
7	1.2 DEAD LOAD + 1.0 WIND 0	Yes	Y	1	1.2			3	1										
8	1.2 DEAD LOAD + 1.0 WIND 30	Yes	Y	1	1.2			3	0.869	4	0.5								
9	1.2 DEAD LOAD + 1.0 WIND 60	Yes	Y	1	1.2			3	0.5	4	0.869								
10	1.2 DEAD LOAD + 1.0 WIND 90	Yes	Y	1	1.2					4	1								
11	1.2 DEAD LOAD + 1.0 WIND 120	Yes	Y	1	1.2			3	-0.5	4	0.869								
12	1.2 DEAD LOAD + 1.0 WIND 150	Yes	Y	1	1.2			3	-0.869	4	0.5								
13	1.2 DEAD LOAD + 1.0 WIND 180	Yes	Y	1	1.2			3	-1										
14	1.2 DEAD LOAD + 1.0 WIND 210	Yes	Y	1	1.2			3	-0.869	4	-0.5								

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
15	1.2 DEAD LOAD + 1.0 WIND 240	Yes	Y	1	1.2			3	-0.5	4	-0.869								
16	1.2 DEAD LOAD + 1.0 WIND 270	Yes	Y	1	1.2					4	-1								
17	1.2 DEAD LOAD + 1.0 WIND 300	Yes	Y	1	1.2			3	0.5	4	-0.869								
18	1.2 DEAD LOAD + 1.0 WIND 330	Yes	Y	1	1.2			3	0.869	4	-0.5								
19	0.9 DEAD LOAD + 1.0 WIND 0	Yes	Y	1	0.9			3	1										
20	0.9 DEAD LOAD + 1.0 WIND 30	Yes	Y	1	0.9			3	0.869	4	0.5								
21	0.9 DEAD LOAD + 1.0 WIND 60	Yes	Y	1	0.9			3	0.5	4	0.869								
22	0.9 DEAD LOAD + 1.0 WIND 90	Yes	Y	1	0.9					4	1								
23	0.9 DEAD LOAD + 1.0 WIND 120	Yes	Y	1	0.9			3	-0.5	4	0.869								
24	0.9 DEAD LOAD + 1.0 WIND 150	Yes	Y	1	0.9			3	-0.869	4	0.5								
25	0.9 DEAD LOAD + 1.0 WIND 180	Yes	Y	1	0.9			3	-1										
26	0.9 DEAD LOAD + 1.0 WIND 210	Yes	Y	1	0.9			3	-0.869	4	-0.5								
27	0.9 DEAD LOAD + 1.0 WIND 240	Yes	Y	1	0.9			3	-0.5	4	-0.869								
28	0.9 DEAD LOAD + 1.0 WIND 270	Yes	Y	1	0.9					4	-1								
29	0.9 DEAD LOAD + 1.0 WIND 300	Yes	Y	1	0.9			3	0.5	4	-0.869								
30	0.9 DEAD LOAD + 1.0 WIND 330	Yes	Y	1	0.9			3	0.869	4	-0.5								
31	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 0	Yes	Y	1	1.2							5	1					8	1.5
32	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 30	Yes	Y	1	1.2							5	0.869	6	0.5			8	1.5
33	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 60	Yes	Y	1	1.2							5	0.5	6	0.869			8	1.5
34	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 90	Yes	Y	1	1.2									6	1			8	1.5
35	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 120	Yes	Y	1	1.2							5	-0.5	6	0.869			8	1.5
36	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 150	Yes	Y	1	1.2							5	-0.869	6	0.5			8	1.5
37	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 180	Yes	Y	1	1.2							5	-1					8	1.5
38	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 210	Yes	Y	1	1.2							5	-0.869	6	-0.5			8	1.5
39	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 240	Yes	Y	1	1.2							5	-0.5	6	-0.869			8	1.5
40	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 270	Yes	Y	1	1.2									6	-1			8	1.5
41	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 300	Yes	Y	1	1.2							5	0.5	6	-0.869			8	1.5
42	1.2 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 330	Yes	Y	1	1.2							5	0.869	6	-0.5			8	1.5
43	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 0	Yes	Y	1	0.9							5	1					8	1.5
44	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 30	Yes	Y	1	0.9							5	0.869	6	0.5			8	1.5
45	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 60	Yes	Y	1	0.9							5	0.5	6	0.869			8	1.5
46	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 90	Yes	Y	1	0.9									6	1			8	1.5
47	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 120	Yes	Y	1	0.9							5	-0.5	6	0.869			8	1.5
48	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 150	Yes	Y	1	0.9							5	-0.869	6	0.5			8	1.5
49	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 180	Yes	Y	1	0.9							5	-1					8	1.5
50	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 210	Yes	Y	1	0.9							5	-0.869	6	-0.5			8	1.5
51	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 240	Yes	Y	1	0.9							5	-0.5	6	-0.869			8	1.5
52	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 270	Yes	Y	1	0.9									6	-1			8	1.5
53	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 300	Yes	Y	1	0.9							5	0.5	6	-0.869			8	1.5
54	0.9 DEAD LOAD + 1.5 LIVE LOAD + 1.0 (WIND @ 30 mph) 330	Yes	Y	1	0.9							5	0.869	6	-0.5			8	1.5
55	1.0 DEAD LOAD + 1.0 DEAD LOAD (ICE)	Yes	Y	1	1									9	1				
56	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 0	Yes	Y	1	1.2									9	1	10	1		
57	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 30	Yes	Y	1	1.2									9	1	10	0.869		0.5
58	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 60	Yes	Y	1	1.2									9	1	10	0.5		0.869
59	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 90	Yes	Y	1	1.2									9	1				1
60	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 120	Yes	Y	1	1.2									9	1	10	-0.5		0.869
61	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 150	Yes	Y	1	1.2									9	1	10	-0.869		-0.5
62	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 180	Yes	Y	1	1.2									9	1	10	-1		
63	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 210	Yes	Y	1	1.2									9	1	10	-0.869		-0.5
64	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 240	Yes	Y	1	1.2									9	1	10	-0.5		-0.869
65	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 270	Yes	Y	1	1.2									9	1				-1
66	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 300	Yes	Y	1	1.2									9	1	10	0.5		-0.869
67	1.2 DEAD LOAD + 1.0 DEAD LOAD (ICE) + 1.0 WIND 330	Yes	Y	1	1.2									9	1	10	0.869		-0.5

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	0.564	22	11.285	13	1.206	19	0	67	0.006	4	0	67
2		min	-0.625	17	-9.945	19	-0.777	13	0	1	-0.001	21	0	1
3	N6	max	0.925	10	11.095	9	0.899	18	0	67	0.006	4	0	67
4		min	-1.341	28	-9.755	27	-0.97	25	0	1	-0.001	29	0	1
5	N4	max	1.341	22	11.095	17	1.045	8	0	67	0.006	4	0	67
6		min	-0.923	16	-9.754	23	-1.167	25	0	1	-0.001	25	0	1
7	Totals:	max	2.827	22	4.623	56	2.911	19						
8		min	-2.827	28	1.718	26	-2.911	13						

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M1	SR1	0.825	235	13	0.075	197.5	4	22.652	35.343	0.589	0.589	1	H1-1a
2	M2	SR1	0.817	235	17	0.091	240	9	22.652	35.343	0.589	0.589	1	H1-1a
3	M3	SR1	0.825	235	9	0.083	240	11	22.652	35.343	0.589	0.589	1	H1-1a
4	M4	SR3/4	0.01	12	62	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
5	M5	SR3/4	0.012	12	56	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
6	M6	SR3/4	0.01	12	62	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
7	M7	SR3/4	0.238	12	8	0.064	24	10	6.092	19.88	0.249	0.249	1	H1-1a
8	M8	SR3/4	0.261	12	15	0.059	24	15	6.092	19.88	0.249	0.249	1	H1-1a
9	M9	SR3/4	0.206	12	18	0.066	24	15	6.092	19.88	0.249	0.249	1	H1-1a
10	M10	SR3/4	0.01	12	56	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
11	M11	SR3/4	0.012	12	62	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
12	M12	SR3/4	0.01	12	56	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
13	M13	SR1/2	0.002	30.923	24	0.001	30.923	10	0.725	8.836	0.074	0.074	1	H1-1b*
14	M14	SR1/2	0.002	30.923	30	0.001	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
15	M15	SR1/2	0.002	30.923	28	0.001	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
16	M16	SR1/2	0.002	30.923	22	0.001	30.923	56	0.725	8.836	0.074	0.074	1	H1-1b*
17	M17	SR1/2	0.002	30.923	20	0.001	30.923	56	0.725	8.836	0.074	0.074	1	H1-1b*
18	M18	SR1/2	0.002	30.923	26	0.001	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
19	M19	SR1/2	0.004	30.923	22	0.001	30.923	56	0.725	8.836	0.074	0.074	1	H1-1b*
20	M20	SR1/2	0.005	30.923	24	0.001	30.923	62	0.725	8.836	0.074	0.074	1	H1-1b*
21	M21	SR3/4	0.01	12	56	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
22	M22	SR3/4	0.012	12	62	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
23	M23	SR3/4	0.01	12	56	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
24	M24	SR1/2	0.005	30.923	30	0.001	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
25	M25	SR1/2	0.004	30.923	28	0.001	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
26	M26	SR1/2	0.005	30.923	20	0.001	30.923	56	0.725	8.836	0.074	0.074	1	H1-1b*
27	M27	SR1/2	0.005	30.923	26	0.001	30.923	62	0.725	8.836	0.074	0.074	1	H1-1b*
28	M28	SR1/2	0.008	30.923	26	0.001	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
29	M29	SR1/2	0.007	30.923	22	0.001	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
30	M30	SR1/2	0.008	30.923	24	0.001	30.923	10	0.725	8.836	0.074	0.074	1	H1-1b*
31	M31	SR3/4	0.01	12	62	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
32	M32	SR3/4	0.012	12	56	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
33	M33	SR3/4	0.01	12	62	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
34	M34	SR1/2	0.008	30.923	30	0.001	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
35	M35	SR1/2	0.007	30.923	28	0.002	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
36	M36	SR1/2	0.008	30.923	20	0.001	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
37	M37	SR1/2	0.01	30.923	26	0.002	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
38	M38	SR1/2	0.009	30.923	28	0.002	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
39	M39	SR1/2	0.01	30.923	30	0.002	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
40	M40	SR1/2	0.009	30.923	22	0.002	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
41	M41	SR3/4	0.01	12	62	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b
42	M42	SR1/2	0.01	30.923	24	0.001	30.923	10	0.725	8.836	0.074	0.074	1	H1-1b*
43	M43	SR3/4	0.01	12	62	0.001	24	62	6.092	19.88	0.249	0.249	1	H1-1b

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
44	M44	SR3/4	0.012	12	56	0.001	24	56	6.092	19.88	0.249	0.249	1	H1-1b
45	M45	SR1/2	0.01	30.923	20	0.001	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
46	M46	SR3/4	0.01	12	62	0.001	24	15	6.092	19.88	0.249	0.249	1	H1-1b
47	M47	SR1/2	0.013	30.923	24	0.002	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
48	M48	SR1/2	0.012	30.923	22	0.002	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
49	M49	SR3/4	0.013	12	62	0.001	24	7	6.092	19.88	0.249	0.249	1	H1-1b
50	M50	SR1/2	0.013	30.923	30	0.002	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
51	M51	SR1/2	0.013	30.923	26	0.002	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
52	M52	SR1/2	0.012	30.923	28	0.002	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
53	M53	SR3/4	0.011	12	62	0.001	24	12	6.092	19.88	0.249	0.249	1	H1-1b
54	M54	SR1/2	0.013	30.923	20	0.002	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
55	M55	SR1/2	0.016	0	56	0.002	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
56	M56	SR3/4	0.012	12	62	0.004	24	15	6.092	19.88	0.249	0.249	1	H1-1b
57	M57	SR1/2	0.014	30.923	23	0.003	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
58	M58	SR1/2	0.014	30.923	28	0.002	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
59	M59	SR1/2	0.016	30.923	27	0.002	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
60	M60	SR1/2	0.016	0	56	0.002	30.923	67	0.725	8.836	0.074	0.074	1	H1-1b*
61	M61	SR1/2	0.016	30.923	24	0.002	30.923	62	0.725	8.836	0.074	0.074	1	H1-1b*
62	M62	SR3/4	0.011	12	62	0.003	24	12	6.092	19.88	0.249	0.249	1	H1-1b
63	M63	SR3/4	0.014	12	56	0.003	24	7	6.092	19.88	0.249	0.249	1	H1-1b
64	M64	SR3/4	0.025	0	11	0.017	24	15	6.092	19.88	0.249	0.249	1	H1-1b*
65	M65	SR1/2	0.021	30.923	30	0.005	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
66	M66	SR1/2	0.02	30.923	22	0.005	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
67	M67	SR1/2	0.018	30.923	27	0.008	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
68	M68	SR1/2	0.02	30.923	26	0.006	30.923	14	0.725	8.836	0.074	0.074	1	H1-1b*
69	M69	SR1/2	0.019	0	56	0.008	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
70	M70	SR1/2	0.019	30.923	24	0.009	30.923	16	0.725	8.836	0.074	0.074	1	H1-1b*
71	M71	SR3/4	0.028	0	18	0.011	24	12	6.092	19.88	0.249	0.249	1	H1-1b*
72	M72	SR3/4	0.026	24	14	0.012	24	7	6.092	19.88	0.249	0.249	1	H1-1b*
73	M73	SR3/4	0.096	24	30	0.067	24	15	6.092	19.88	0.249	0.249	1	H1-1b*
74	M74	SR1/2	0.026	0	56	0.015	30.923	42	0.725	8.836	0.074	0.074	1	H1-1b*
75	M75	SR1/2	0.015	0	12	0.015	30.923	42	0.725	8.836	0.074	0.074	1	H1-1b*
76	M76	SR1/2	0.013	30.923	15	0.02	30.923	7	0.725	8.836	0.074	0.074	1	H1-1b*
77	M77	SR1/2	0.022	30.923	15	0.015	30.923	42	0.725	8.836	0.074	0.074	1	H1-1b*
78	M78	SR1/2	0.026	0	56	0.02	30.923	12	0.725	8.836	0.074	0.074	1	H1-1b*
79	M79	SR1/2	0.025	30.923	11	0.025	30.923	16	0.725	8.836	0.074	0.074	1	H1-1b*
80	M80	SR3/4	0.094	24	25	0.041	24	12	6.092	19.88	0.249	0.249	1	H1-1b*
81	M81	SR3/4	0.137	24	21	0.048	24	7	6.092	19.88	0.249	0.249	1	H1-1b*
82	M82	SR1/2	0.182	30.923	16	0.018	30.923	56	0.725	8.836	0.074	0.074	1	H1-1b*
83	M83	SR3/4	0.247	12.25	19	0.066	24	16	6.092	19.88	0.249	0.249	1	H1-1a
84	M84	SR1/2	0.115	0	4	0.028	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
85	M85	SR1/2	0.165	30.923	22	0.025	30.923	8	0.725	8.836	0.074	0.074	1	H1-1b*
86	M86	SR1/2	0.115	0	4	0.028	30.923	13	0.725	8.836	0.074	0.074	1	H1-1b*
87	M87	SR1/2	0.073	30.923	7	0.025	30.923	15	0.725	8.836	0.074	0.074	1	H1-1b*
88	M88	SR1/2	0.13	30.923	12	0.026	30.923	16	0.725	8.836	0.074	0.074	1	H1-1b*
89	M89	SR3/4	0.183	24	26	0.042	24	13	6.092	19.88	0.249	0.249	1	H1-1b*
90	M90	SR3/4	0.318	12	22	0.036	24	7	6.092	19.88	0.249	0.249	1	H1-1a
91	M91	SR3/4	0.327	11.75	13	0.016	24	10	6.092	19.88	0.249	0.249	1	H1-1a
92	M92	SR1/2	0.269	30.923	16	0.023	30.923	13	0.725	8.836	0.074	0.074	1	H1-1a*
93	M93	SR1/2	0.181	30.923	19	0.02	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
94	M94	SR1/2	0.252	30.923	22	0.014	30.923	63	0.725	8.836	0.074	0.074	1	H1-1a*
95	M95	SR1/2	0.141	0	4	0.023	30.923	15	0.725	8.836	0.074	0.074	1	H1-1b*
96	M96	SR1/2	0.123	30.923	7	0.019	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
97	M97	SR1/2	0.197	30.923	13	0.03	30.923	9	0.725	8.836	0.074	0.074	1	H1-1b*
98	M98	SR3/4	0.241	12.25	13	0.016	24	10	6.092	19.88	0.249	0.249	1	H1-1a

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
99	M99	SR3/4	0.405	12	16	0.018	24	10	6.092	19.88	0.249	0.249	1	H1-1a
100	M100	SR3/4	0.337	11.75	25	0.004	24	9	6.092	19.88	0.249	0.249	1	H1-1a
101	M101	SR3/4	0.452	12	10	0.003	24	64	6.092	19.88	0.249	0.249	1	H1-1a
102	M102	SR1/2	0.255	30.923	25	0.019	30.923	9	0.725	8.836	0.074	0.074	1	H1-1a*
103	M103	SR1/2	0.356	30.923	16	0.021	30.923	13	0.725	8.836	0.074	0.074	1	H1-1a*
104	M104	SR1/2	0.258	30.923	7	0.024	30.923	9	0.725	8.836	0.074	0.074	1	H1-1a*
105	M105	SR1/2	0.358	30.923	10	0.022	30.923	13	0.725	8.836	0.074	0.074	1	H1-1a*
106	M106	SR1/2	0.202	30.923	13	0.021	30.923	17	0.725	8.836	0.074	0.074	1	H1-1a*
107	M107	SR1/2	0.2	30.923	19	0.021	30.923	17	0.725	8.836	0.074	0.074	1	H1-1b*
108	M108	SR3/4	0.27	12.25	13	0.004	24	9	6.092	19.88	0.249	0.249	1	H1-1a
109	M109	SR1/2	0.326	30.923	7	0.037	30.923	9	0.725	8.836	0.074	0.074	1	H1-1a*
110	M110	SR1/2	0.446	30.923	16	0.048	30.923	13	0.725	8.836	0.074	0.074	1	H1-1a*
111	M111	SR1/2	0.326	30.923	13	0.061	30.923	9	0.725	8.836	0.074	0.074	1	H1-1a*
112	M112	SR1/2	0.447	30.923	10	0.052	30.923	13	0.725	8.836	0.074	0.074	1	H1-1a*
113	M113	SR1/2	0.256	30.923	13	0.056	30.923	17	0.725	8.836	0.074	0.074	1	H1-1a*
114	M114	SR1/2	0.256	30.923	7	0.042	30.923	17	0.725	8.836	0.074	0.074	1	H1-1a*
115	M115	PIPE_2.0	0.216	48	13	0.066	21	18	14.916	32.13	1.872	1.872	1	H1-1b
116	M120	PIPE_2.0	0.217	48	8	0.16	15	10	14.916	32.13	1.872	1.872	1	H1-1b
117	A3	PIPE_2.0	0.081	33	10	0.026	62	16	14.916	32.13	1.872	1.872	1	H1-1b
118	A1	PIPE_2.0	0.121	62	4	0.032	62	4	14.916	32.13	1.872	1.872	1	H1-1b
119	A2	PIPE_2.0	0.159	33	13	0.03	63	7	14.916	32.13	1.872	1.872	1	H1-1b
120	M128	SR_0.625	0.074	30	56	0.014	30	4	3.837	9.94	0.104	0.104	1	H1-1b*
121	M129	SR_0.625	0.144	30	62	0.009	30	8	3.837	9.94	0.104	0.104	1	H1-1b*
122	M130	SR_0.5	0	45.061	67	0.011	45.061	4	0.697	6.362	0.053	0.053	1	H1-1a
123	M132	PIPE_1.5	0.116	33.623	56	0.12	16.812	4	20.35	23.593	1.105	1.105	1	H1-1b
124	M134	SR_0.5	0.143	0	56	0.015	0	8	0.697	6.362	0.053	0.053	1	H1-1b*
125	M137	PIPE_2.0	0.047	15	9	0.015	44.375	4	23.809	32.13	1.872	1.872	1	H1-1b
126	M139	PIPE_2.0	0.029	0	22	0.062	54.116	4	25.178	32.13	1.872	1.872	1	H1-1b*
127	M141	PIPE_1.5	0.131	33.623	62	0.135	16.812	4	20.35	23.593	1.105	1.105	1	H1-1b
128	M144	PIPE_1.5	0.083	33.623	56	0.137	0	13	20.35	23.593	1.105	1.105	1	H1-1b
129	M147	PIPE_1.5	0.11	33.623	62	0.09	0	62	20.35	23.593	1.105	1.105	1	H1-1b
130	M150	SR_0.625	0.114	30	4	0.004	30	17	3.837	9.94	0.104	0.104	1	H1-1b*
131	M151	SR_0.5	0	45.061	67	0.014	45.061	62	0.697	6.362	0.053	0.053	1	H1-1a
132	M152	SR_0.625	0.106	30	4	0.004	30	17	3.837	9.94	0.104	0.104	1	H1-1b*
133	M153	SR_0.5	0.193	0	4	0.019	45.061	13	0.697	6.362	0.053	0.053	1	H1-1b*
134	M155	PIPE_2.0	0.202	48	17	0.077	21	9	14.916	32.13	1.872	1.872	1	H1-1b
135	M160	PIPE_2.0	0.208	48	18	0.242	15	14	14.916	32.13	1.872	1.872	1	H1-1b
136	G3	PIPE_2.0	0.12	33	14	0.042	62	8	14.916	32.13	1.872	1.872	1	H1-1b
137	G1	PIPE_2.0	0.121	62	4	0.032	62	4	14.916	32.13	1.872	1.872	1	H1-1b
138	G2	PIPE_2.0	0.149	33	10	0.034	63	9	14.916	32.13	1.872	1.872	1	H1-1b
139	M169	PIPE_1.5	0.083	0	4	0.149	0	16	20.35	23.593	1.105	1.105	1	H1-1b
140	M172	PIPE_1.5	0.104	33.623	4	0.098	0	56	20.35	23.593	1.105	1.105	1	H1-1b
141	M173	SR_0.625	0.074	30	64	0.014	30	4	3.837	9.94	0.104	0.104	1	H1-1b*
142	M174	SR_0.625	0.116	30	56	0.01	30	11	3.837	9.94	0.104	0.104	1	H1-1b*
143	M176	SR_0.5	0	45.061	67	0.015	45.061	56	0.697	6.362	0.053	0.053	1	H1-1a
144	M177	SR_0.5	0.003	45.061	26	0.012	45.061	62	0.697	6.362	0.053	0.053	1	H1-1b*
145	M181	PIPE_1.5	0.111	33.623	9	0.12	16.812	4	20.35	23.593	1.105	1.105	1	H1-1b
146	M182	SR_0.625	0.114	30	4	0.007	30	9	3.837	9.94	0.104	0.104	1	H1-1b*
147	M186	SR_0.5	0.154	0	56	0.014	0	12	0.697	6.362	0.053	0.053	1	H1-1b*
148	M187	SR_0.625	0.106	30	4	0.007	30	9	3.837	9.94	0.104	0.104	1	H1-1b*
149	M188	PIPE_1.5	0.115	33.623	56	0.135	16.812	4	20.35	23.593	1.105	1.105	1	H1-1b
150	M191	PIPE_2.0	0.046	15	4	0.018	44.375	9	23.809	32.13	1.872	1.872	1	H1-1b
151	M192	SR_0.5	0.193	0	4	0.023	0	16	0.697	6.362	0.053	0.053	1	H1-1b*
152	M194	PIPE_2.0	0.045	54.116	14	0.062	54.116	4	25.178	32.13	1.872	1.872	1	H1-1b*
153	M195	PIPE_2.0	0.222	48	10	0.058	21	13	14.916	32.13	1.872	1.872	1	H1-1b

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[in]	LC	Shear Check	Loc[in]	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
154	M200	PIPE_2.0	0.229	48	16	0.22	15	18	14.916	32.13	1.872	1.872	1	H1-1b
155	B3	PIPE_2.0	0.114	33	17	0.037	62	12	14.916	32.13	1.872	1.872	1	H1-1b
156	B1	PIPE_2.0	0.121	62	4	0.032	62	4	14.916	32.13	1.872	1.872	1	H1-1b
157	B2	PIPE_2.0	0.144	33	10	0.027	63	11	14.916	32.13	1.872	1.872	1	H1-1b
158	M209	PIPE_1.5	0.083	0	4	0.106	0	8	20.35	23.593	1.105	1.105	1	H1-1b
159	M212	PIPE_1.5	0.104	33.623	4	0.09	0	62	20.35	23.593	1.105	1.105	1	H1-1b
160	M213	SR_0.625	0.07	30	65	0.014	30	4	3.837	9.94	0.104	0.104	1	H1-1b*
161	M214	SR_0.625	0.097	30	9	0.009	30	42	3.837	9.94	0.104	0.104	1	H1-1b*
162	M216	SR_0.5	0	45.061	67	0.014	45.061	62	0.697	6.362	0.053	0.053	1	H1-1a
163	M217	SR_0.5	0	45.061	67	0.011	45.061	56	0.697	6.362	0.053	0.053	1	H1-1a
164	M221	PIPE_1.5	0.104	33.623	62	0.12	16.811	4	20.35	23.593	1.105	1.105	1	H1-1b
165	M222	SR_0.625	0.114	30	4	0.005	30	12	3.837	9.94	0.104	0.104	1	H1-1b*
166	M226	SR_0.5	0.15	0	62	0.012	0	16	0.697	6.362	0.053	0.053	1	H1-1b*
167	M227	SR_0.625	0.106	30	4	0.005	30	12	3.837	9.94	0.104	0.104	1	H1-1b*
168	M228	PIPE_1.5	0.11	33.623	10	0.135	16.811	4	20.35	23.593	1.105	1.105	1	H1-1b
169	M231	PIPE_2.0	0.046	15	4	0.015	44.375	18	23.809	32.13	1.872	1.872	1	H1-1b
170	M232	SR_0.5	0.193	0	4	0.016	0	7	0.697	6.362	0.053	0.053	1	H1-1b*
171	M234	PIPE_2.0	0.04	0	30	0.062	54.116	4	25.178	32.13	1.872	1.872	1	H1-1b*

Guyed Tower Foundation Reaction Comparison

Site#	US-CT-5015	Date	2/28/2023
Carrier	Dish	Engineer	JB

TIA Rev	TIA-222-H
Conversion Factor	1.35

*Use (1) if tower was designed in Rev G or H

Original Design Reactions					Current Analysis Reactions				
	Base	Inner Anchor	Middle Anchor	Outer Anchor		Base	Inner Anchor	Middle Anchor	Outer Anchor
Horizontal (kip)	1.1	3.2	0.0	9.4	Horizontal (kip)	0.3	2.0	0.0	7.0
Vertical (kip)	32.4	3.4	0.0	11.4	Vertical (kip)	33.0	2.0	0.0	9.0

Foundation Reactions	Factored Original Design		Current Analysis		Percentage		
	Horizontal (kips)	Vertical (kips)	Horizontal (kips)	Vertical (kips)	Horizontal (kips)	Vertical (kips)	Controlling (kips)
Base	1.5	43.7	0.3	33.0	0.0%	75.4%	75.4%
Inner Anchor	4.3	4.6	2.0	2.0	46.3%	43.6%	
Outer Anchor	12.7	15.4	7.0	9.0	55.2%	58.5%	

Notes:

1. Original design reactions increased by 1.35 for conversion to Rev H

Structure: A

Rev:

Location

	Decimal Degrees		Deg	Min	Sec
Lat:		+			
Long:		-			

Code and Site Parameters

Seismic Design Code:	TIA-222-H	
Site Soil:	D (Default)	Default
Risk Category:	II	

USGS Seismic Reference		
S_S:	0.2010	g
S_1:	0.0540	g
T_L:	6	s

Seismic Design Category Determination

Importance Factor, I_e:	1	
Acceleration-based site coefficient, F_a:	1.6000	
Velocity-based site coefficient, F_v:	2.4000	
Design spectral response acceleration short period, S_{DS}:	0.2144	g
Design spectral response acceleration 1 s period, S_{D1}:	0.0864	g
Seismic Design Category Based on S_{DS}:	B	
Seismic Design Category Based on S_{D1}:	B	
Seismic Design Category Based on S_1:	N/A	
Controlling Seismic Design Category:	B	

Structure: A

Rev:

Tower Details

Tower Type:	Guyed Tower		
Height, h:	200	ft	
Effective Seismic Weight, W:	7.14	kips	
Amplification Factor, A_s:	1.0		2.7.8.1

Seismic Base Shear

Response Modification Factor, R:	3		
C_g:	176.5		
K_g:	0.0017		
F_a:	2.6797	hz	
Approximate Fundamental Period Guyed Towers, T_a:	0.3732	s	2.7.7.1.3.4
Seismic Response Coefficient, C_s	0.0715		2.7.7.1.1
Seismic Response Coefficient Max 1, C_{smax}	0.0772		2.7.7.1.1
Seismic Response Coefficient Max 2, C_{smax}	N/A		2.7.7.1.1
Seismic Response Coefficient Min 1, C_{smin}	0.0300		2.7.7.1.1
Seismic Response Coefficient Min 2, C_{smin}	N/A		2.7.7.1.1
Controlling Seismic Response Coefficient, C_{sc}	0.0715		
Seismic Base Shear, V	0.510	kips	2.7.7.1.1

Vertical Distribution Factors

Period Related Exponent, k:	1.000	2.7.7.1.2
Sum of $w_i h_i^k$	925.74	2.7.7.1.2

Tower Section Loads								
Section Number	**Length**	**Top Height**	**Mid Height, h_x**	**Section Weight, w_x**	**$w_x h_x^k$**	**C_{vx}**	**F_{xh}**	**F_{xv}**
1	20.00	200.00	190.00	0.3514	66.77	0.0721	0.0368	0.0151
2	20.00	180.00	170.00	0.3514	59.74	0.0645	0.0329	0.0151
3	20.00	160.00	150.00	0.3514	52.71	0.0569	0.0291	0.0151
4	20.00	140.00	130.00	0.3514	45.68	0.0493	0.0252	0.0151
5	20.00	120.00	110.00	0.3514	38.66	0.0418	0.0213	0.0151
6	20.00	100.00	90.00	0.4441	39.97	0.0432	0.0220	0.0190
7	20.00	80.00	70.00	0.4441	31.09	0.0336	0.0171	0.0190
8	20.00	60.00	50.00	0.4441	22.21	0.0240	0.0122	0.0190
9	20.00	40.00	30.00	0.4441	13.32	0.0144	0.0073	0.0190
10	16.35	20.00	11.82	0.3605	4.26	0.0046	0.0023	0.0155
11	3.65	3.65	1.82	0.0895	0.16	0.0002	0.0001	0.0038
			Sum	3.9835	374.57			

Guy Loads						
Guy Attachment Elevation, h_x	Total Guy Weight	Effective Guy Weight, w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
179.79	0.2571	0.1286	23.11	0.0250	0.0127	0.0055
119.79	0.1034	0.0517	6.19	0.0067	0.0034	0.0022
59.79	0.0523	0.0262	1.56	0.0017	0.0009	0.0011
Sum	0.4128	0.2064	30.87			

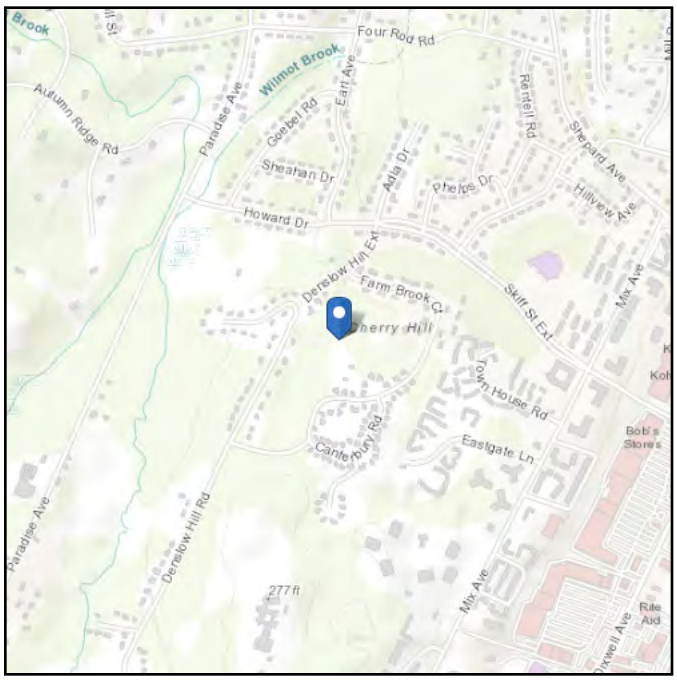
Discrete Loads						
Name	h_x	w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
b&p database_siouxcity3-pc_2 Beacon	200.00	0.0100	2.00	0.0022	0.0011	0.0004
b&p database_siouxcity3-pc_2 Side Light	100.00	0.0100	1.00	0.0011	0.0006	0.0004
b&p database_siouxcity3-pc_2 Side Light	100.00	0.0100	1.00	0.0011	0.0006	0.0004
Commscope P/N: MTC3975083	185.00	0.6100	112.85	0.1219	0.0622	0.0262
Commscope P/N: MTC3975083	185.00	0.6100	112.85	0.1219	0.0622	0.0262
Commscope P/N: MTC3975083	185.00	0.6100	112.85	0.1219	0.0622	0.0262
miscl JMA MX08FRO665-21 (EPA)	185.00	0.0650	12.03	0.0130	0.0066	0.0028
miscl JMA MX08FRO665-21 (EPA)	185.00	0.0650	12.03	0.0130	0.0066	0.0028
miscl JMA MX08FRO665-21 (EPA)	185.00	0.0650	12.03	0.0130	0.0066	0.0028
fujitsu TA08025-B604 (15.75x14.96x7.87)	185.00	0.0630	11.66	0.0126	0.0064	0.0027
fujitsu TA08025-B604 (15.75x14.96x7.87)	185.00	0.0630	11.66	0.0126	0.0064	0.0027
fujitsu TA08025-B604 (15.75x14.96x7.87)	185.00	0.0630	11.66	0.0126	0.0064	0.0027
fujitsu TA08025-B605 (15.75x14.96x9.06)	185.00	0.0750	13.88	0.0150	0.0076	0.0032
fujitsu TA08025-B605 (15.75x14.96x9.06)	185.00	0.0750	13.88	0.0150	0.0076	0.0032
fujitsu TA08025-B605 (15.75x14.96x9.06)	185.00	0.0750	13.88	0.0150	0.0076	0.0032
raycap tme (vb) RAYCAP RDIDC-9181-PF-48	185.00	0.0220	4.07	0.0044	0.0022	0.0009
1/3 Remaining Reserve Right	185.00	0.0620	11.47	0.0124	0.0063	0.0027
1/3 Remaining Reserve Right	185.00	0.0620	11.47	0.0124	0.0063	0.0027
1/3 Remaining Reserve Right	185.00	0.0620	11.47	0.0124	0.0063	0.0027
Sum		2.6770	493.70			

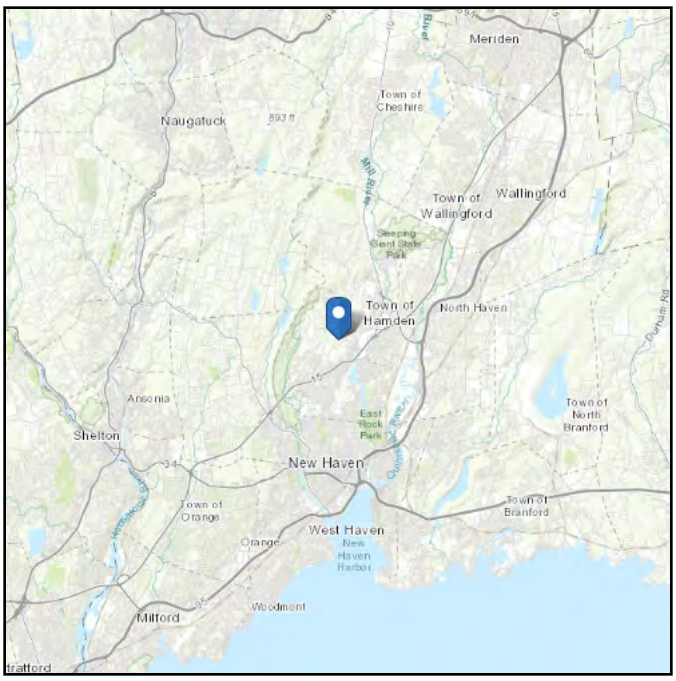
Linear Loads								
Name	Start Height	End Height	h_x	w_x	$w_x h_x^k$	C_{vx}	F_{xh}	F_{xv}
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	180.00	200.00	190.00	0.0044	0.84	0.0009	0.0005	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	160.00	180.00	170.00	0.0044	0.75	0.0008	0.0004	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	140.00	160.00	150.00	0.0044	0.66	0.0007	0.0004	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	120.00	140.00	130.00	0.0044	0.57	0.0006	0.0003	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	100.00	120.00	110.00	0.0044	0.48	0.0005	0.0003	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	80.00	100.00	90.00	0.0044	0.40	0.0004	0.0002	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	60.00	80.00	70.00	0.0044	0.31	0.0003	0.0002	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	40.00	60.00	50.00	0.0044	0.22	0.0002	0.0001	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	20.00	40.00	30.00	0.0044	0.13	0.0001	0.0001	0.0002
b&p database_mike-laptop_1 Safety Line 3/8 From 8 to 200	8.00	20.00	14.00	0.0026	0.04	0.0000	0.0000	0.0001
1.75 Hybrid From 8 to 185	180.00	185.00	182.50	0.0065	1.19	0.0013	0.0007	0.0003
1.75 Hybrid From 8 to 185	160.00	180.00	170.00	0.0260	4.42	0.0048	0.0024	0.0011
1.75 Hybrid From 8 to 185	140.00	160.00	150.00	0.0260	3.90	0.0042	0.0021	0.0011
1.75 Hybrid From 8 to 185	120.00	140.00	130.00	0.0260	3.38	0.0037	0.0019	0.0011
1.75 Hybrid From 8 to 185	100.00	120.00	110.00	0.0260	2.86	0.0031	0.0016	0.0011
1.75 Hybrid From 8 to 185	80.00	100.00	90.00	0.0260	2.34	0.0025	0.0013	0.0011
1.75 Hybrid From 8 to 185	60.00	80.00	70.00	0.0260	1.82	0.0020	0.0010	0.0011
1.75 Hybrid From 8 to 185	40.00	60.00	50.00	0.0260	1.30	0.0014	0.0007	0.0011
1.75 Hybrid From 8 to 185	20.00	40.00	30.00	0.0260	0.78	0.0008	0.0004	0.0011
1.75 Hybrid From 8 to 185	8.00	20.00	14.00	0.0156	0.22	0.0002	0.0001	0.0007
			Sum	0.2723	26.60			

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.377131
Risk Category:	II	**Longitude:**	-72.929144
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	170.42 ft (NAVD 88)





Wind

Results:

Wind Speed	119 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Wed Dec 14 2022

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Seismic

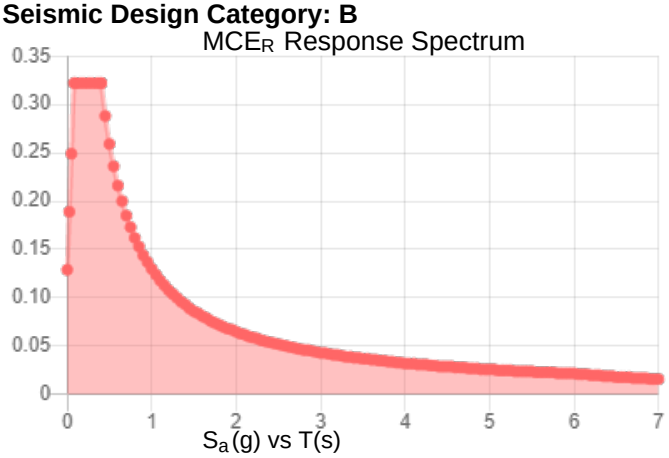
D - Default (see Section 11.4.3)

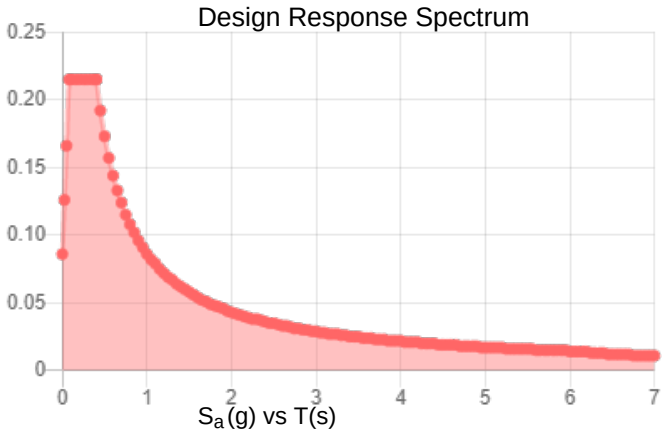
Site Soil Class:

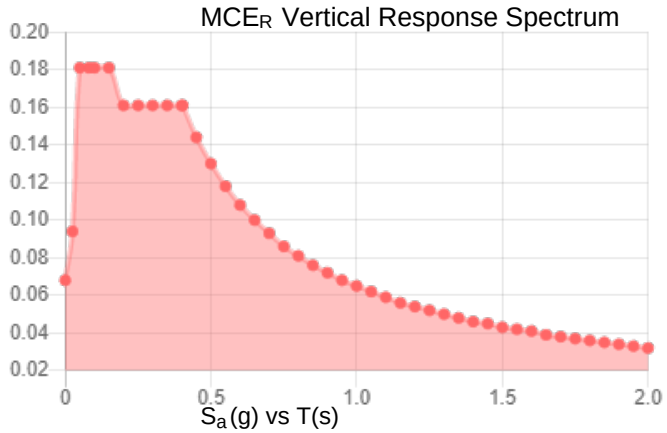
Results:

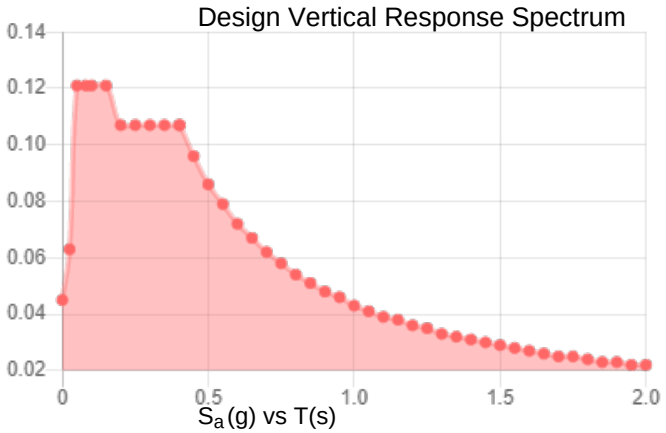
S_S :	0.201	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.112
F_v :	2.4	PGA_M :	0.177
S_{MS} :	0.322	F_{PGA} :	1.575
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.215	C_v :	0.703

Seismic Design Category: B









Data Accessed: **Wed Dec 14 2022**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Wed Dec 14 2022

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Attachment 2:
Collocation Application

COLOCATION APPLICATION - P-026384
US-CT-5015
Version 1
DISH Wireless L.L.C.

Vertical Bridge REIT, LLC.
750 Park of Commerce Dr, ste 200
Boca Raton, FL 33487

SUMMARY

PRIMARY INFO

Application #:	P-026384
Application Version:	1 (Submitted: 11/17/2022 10:23:00 PM)
Application Type:	Broadband
Application Name:	BOHVN00194B
Lease Type:	New Lease
ASR Number:	
Description:	Dish proposes to place 3 antennas, 6 RRUs, 1 junction box(s), and 1 cable(s) at the 185 foot RAD. Dish will require a 5x7 lease area for ground equipment.

VERTICAL BRIDGE SITE INFO

VB Site #:	US-CT-5015
VB Site Name:	Quinnipiac 2
Latitude:	41.37713056
Longitude:	-72.92914444
Structure Type:	Guyed Tower
Structure Height:	204.0000
Site Address:	473 Denslow Hill Road - Hamden, CT 06514

VERTICAL BRIDGE DEAL TEAM

RLM:	Floyd Jenkins FJenkins@verticalbridge.com (301) 667-0069	**LPM:**	Sam Bowden SBowden@verticalbridge.com	**ROM:**	Joe Bascelli Joe.Bascelli@verticalbridge.com (484) 288-9586

TENANT LEGAL INFO

Tenant Legal Name:	DISH Wireless L.L.C.
State of Registration:	Colorado
Type of Entity:	LLC
Carrier NOC #:	2039274317
Tenant Site #:	BOHVN00194B
Tenant Site Name:	BOHVN00194B

APPLICANT

Name:	PhillipSipe
Address:	420 Main Street Sturbridge, MA 01566
Phone Number:	(860) 305-3084
Email Address:	phillip@northeastsitesolutions.com

FINAL LEASED RIGHTS CONFIGURATION TOTALS

This is a summary of your remaining existing equipment plus the new equipment.

FINAL EQUIPMENT

QTY	Equipment Type
3	Panel
6	RRU

FINAL LINES

QTY	Line Type
1	Hybrid

FREQUENCY & TECHNOLOGY INFO

Type of Tehnology:	Broadband Wireless
Is TX Frequency Licensed:	Yes
TX Frequency:	127.9558044
Is RX Frequency Licensed:	Yes
RX Frequency:	15633.92644

MOUNT & STRUCTURAL ANALYSIS

MOUNT ANALYSIS

Provided by Tenant:	No
To Be Run by VB:	Yes
Include Mount Mapping:	No

STRUCTURAL HARD COPIES

Required:	No
Number of Hard Copies:	

CONTACTS

INVOICE CONTACT

Attention To	Name	Address	Phone Number 1	Phone Number 2	Email 1	Email 2
Real Estate	Jeanne Cottrell	5701 South Sante Fe Blvd Littleton, CO 80120	(203) 927-4317		Jean.cottrell@dish.com	

PO CONTACT

Name	Phone	Email
Jeanne Cottrell	(203) 927-4317	Jean.cottrell@dish.com

LEASING CONTACT

Name	Phone	Email
Jeanne Cottrell	(203) 927-4317	Jean.cottrell@dish.com

NOTICE CONTACT

Notice To	Attention To	Name	Address
	Real Estate	Jeanne Cottrell	5701 South Sante Fe Blvd Littleton, CO 80120

RF CONTACT

Name	Phone	Email
Jared Robinson	(978) 855-5870	jared.robinson@dish.com

TENANT CONSTRUCTION MANAGER CONTACT		
Name	**Phone**	**Email**
Chad Wilcox	(860) 634-9600	Chad.Wilcox@Dish.com

LINE & EQUIPMENT

NEW LINE(S)

Qty	Line Type	Line Diameter(In.)	Line Location	Comments
1	Hybrid	1.75	Interior	

NEW EQUIPMENT

Qty	Equipment Type	Mount RAD Height	Equipment RAD Height (H')	Mount Type	Manfacturer	Model Number	Dimensions (H"xW"xD")	Weight (Lbs.)	Azimuth	Comments
3	Panel	185.00	185.00	Platform	JMA	MX08FRO665-21	72.00 x 20.00 x 8.00	64.50	0/120/240	
3	RRU	185.00	185.00	Platform	Fujitsu	TA08025-B605	15.75 x 14.96 x 9.06	74.95	0/120/240	
3	RRU	185.00	185.00	Platform	Fujitsu	TA08025-B604	15.75 x 14.96 x 7.87	63.93	0/120/240	
1	OVP	185	185	Plaftfom	Raycap	RDIDC-9181-PF-48	18.96x14.39 x8.15	21.82	0	

Qty of Cabinets	Cabinet Dimensions (H x W x D)	Manufacturer	Comments
1	16.00 x 14.00 x 8.00	Raycap	

ADDITIONAL SITE REQUIREMENTS

GROUND & INTERIOR SPACE REQUIREMENTS

Requirement Type	Total Lease Area (L x W)	Cabinet Required	Cabinet Area (L x W)	Shelter Required	Shelter Pad (L x W)	Comments
New	5.00 x 7.00	Yes	32.00 x 74.00		x	

GENERATOR REQUIREMENTS

Requirement Type	Fuel Type	Kilowatt Size	Pad Dimensions (L x D)	Generator Manufacturer	Fuel Tank Manufacturer	Comments
No Changes			x			

AC POWER REQUIREMENTS

Meter Type	Additional Details	Comments
New Tenant Meter		

BACKHAUL REQUIREMENTS

Requirement Type	Cable Type	Number of Points of Entry	Riser Size (Inches)	Comments
New	Fiber	1	1.00	