Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

January 3, 2019

Melanie A. Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **Notice of Exempt Modification for Verizon Wireless: 806363**
Verizon Site ID: 1941
48 Cow Hill Road, Clinton, CT 06413
Latitude: 41° 17' 20.20"/ Longitude: -72° 32' 18.50"

Dear Ms. Bachman:

Verizon currently maintains Fifteen (15) antennas at the 209-foot level of the existing 212-foot self-support tower at 48 Cow Hill Road, Clinton, CT. The tower is owned by Crown Castle. The property is owned by Raymond Heser Trustee. Verizon now intends to replace six (6) antennas with six (6) new antennas. These antennas would be installed at the 209-foot of the tower. Verizon also intends to replace nine (9) RRUs with six (6) new RRU's. Verizon will also add three (3) diplexers.

This facility was constructed about 1992 time frame, an email was sent to the Town Planning & Zoning office on 01/02/19 to ascertain the original zoning approval documents and date.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.S.C.A. § 16-50j-73, a copy of this letter is being sent to Town of Clinton First Selectman Christine Goupil, Town of Clinton Zoning Enforcement Officer David Leiper, property owner Raymond Heser Trustee and Crown Castle is the tower owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Verizon respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,

Jeffrey Barbadora
Real Estate Specialist
12 Gill Street, Suite 5800, Woburn, MA 01801
781-729-0053
Jeff.Barbadora@crowncastle.com

Attachments:

Tab 1: Exhibit-1: Compound plan and elevation depicting the planned changes
Tab 2: Exhibit-2: Structural Modification Report
Tab 3: Exhibit-3: General Power Density Table Report (RF Emissions Analysis Report)

cc: First Selectman, Christine Goupil
Town of Clinton
54 East Main Street
Clinton, CT 06413

Zoning Enforcement Officer, David Leiper
Town of Clinton
54 East Main Street
Clinton, CT 06413

Property Owner, Raymond Heser Trustee
110 Killingworth TPKE
Clinton, CT 06413

49B COW HILL RD

Location	49B COW HILL RD	**Mblu**	32/ 6/ 48-B/ /
Acct#	H0265710	**Owner**	HESER RAYMOND E TRUSTEE
Assessment	$140,000	**Appraisal**	$200,000
PID	100004	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$100,400	$99,600	$200,000
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$70,300	$69,700	$140,000

Owner of Record

Owner	HESER RAYMOND E TRUSTEE	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	110 KILLINGWORTH TPKE CLINTON, CT 06413	**Book & Page**	496/ 599
		Sale Date	10/17/2016
		Instrument	4

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
HESER RAYMOND E TRUSTEE	$0		496/ 599	4	10/17/2016
HESER RAYMOND	$0		88/ 61		
HESER RAYMOND	$0				

Building Information

Building 1 : Section 1

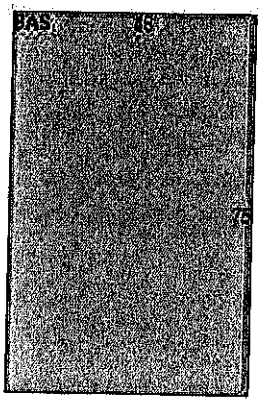
Year Built:	2004
Living Area:	3,600
Replacement Cost:	$135,432
Building Percent Good:	86
Replacement Cost Less Depreciation:	$116,500

Building Attributes	
Field	**Description**
STYLE	Pre-Eng Gar
MODEL	Ind/Comm
Grade	Below Average
Stories:	1
Occupancy	1
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Coal or Wood
Heating Type	None
AC Type	None
Bldg Use	IND LD DV MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	4400
Heat/AC	NONE
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/ClintonCTPhotos//\00\01\35/35.

Building Layout



(http://images.vgsi.com/photos/ClintonCTPhotos//Sketches/100

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	3,600	3,600
		3,600	3,600

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 4400
Description IND LD DV MDL-96

Land Line Valuation

Size (Acres) 4.39
Frontage

Zone	I-P	**Depth**	
Neighborhood	1100	**Assessed Value**	$69,700
Alt Land Appr	No	**Appraised Value**	$99,600
Category			

Outbuildings

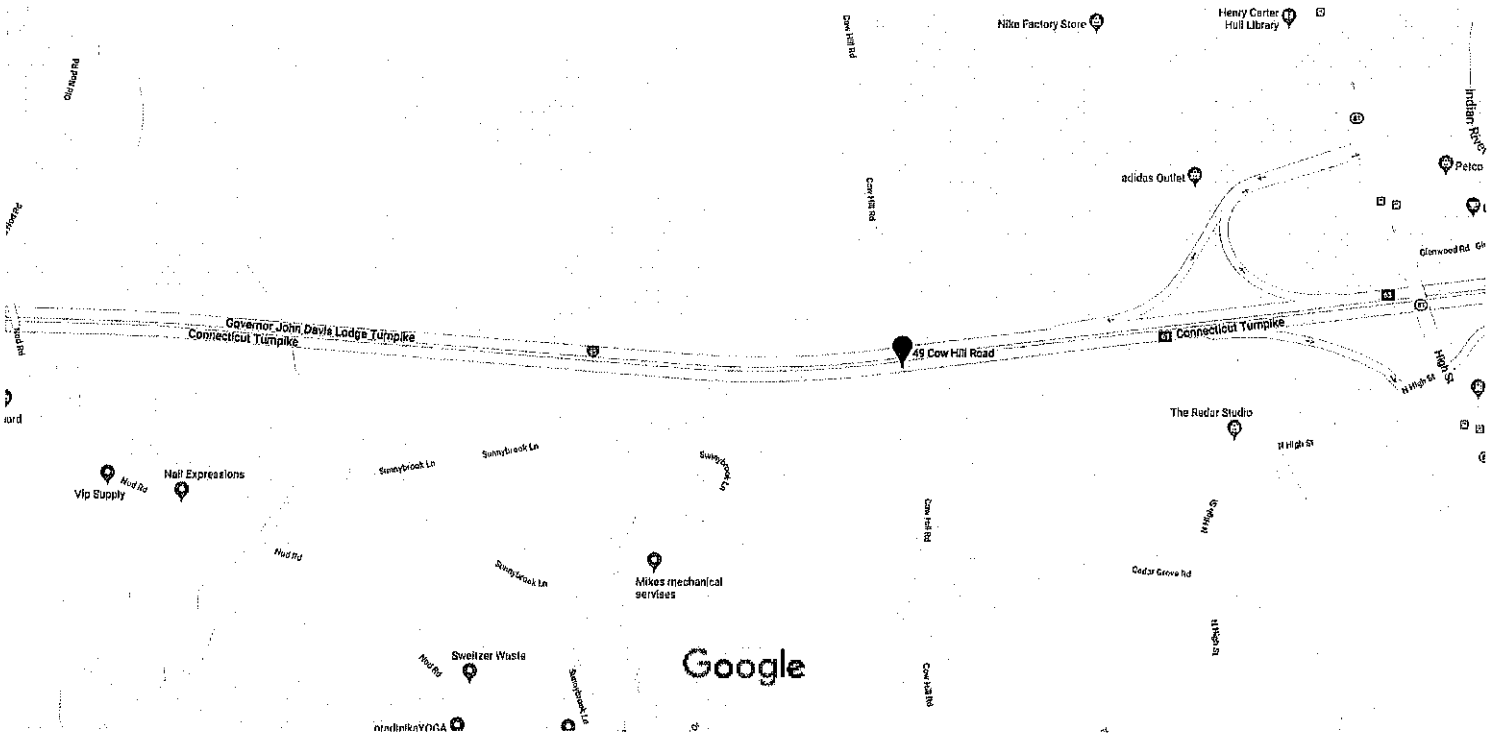
Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2010	$119,700	$83,100	$202,800
2009	$72,400	$138,400	$210,800
2005	$72,400	$138,400	$210,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2010	$83,800	$58,200	$142,000
2009	$50,700	$96,900	$147,600
2005	$50,700	$96,900	$147,600

49 Cow Hill Rd

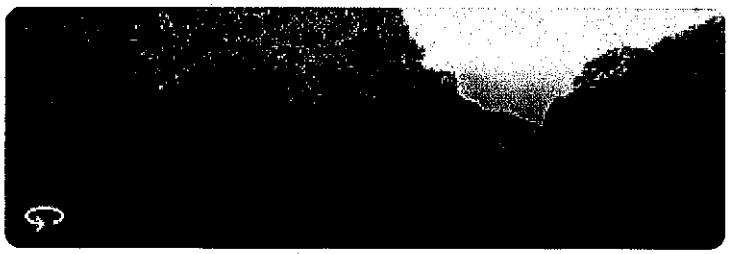


Map data ©2019 Google 200 ft

49 Cow Hill Rd

Clinton, CT 06413

7FP7+XJ Clinton, Connecticut



Barbadora, Jeff

From: Barbadora, Jeff
Sent: Wednesday, January 2, 2019 4:32 PM
To: zeo@clintonct.org
Subject: 48 Cow Hill Road-Mblu 32/6/48/H026570

Good Afternoon,

I have an inquiry regarding original zoning documents for a tower and I am hoping you can provide more information.

We are applying for CSC Zoning Approval for tower modifications and new requirements ask that we procure original zoning documents from the jurisdiction, if possible. However, if these documents are not available, please let me know.

The tower is located 48 Cow Hill Road and according to lease documents this was approved around 1992 time frame– Raymond Heser (tower property)/ Robert Aronson own the property and Raymond Heser signed the Lease at that time.

If you have any questions, please don't hesitate to call or e-mail me.

Thanks,

Jeffrey Barbadora
781-970-0053
12 Gill Street, Suite 5800, Woburn, MA 01801
CrownCastle.com

Barbadora, Jeff

From: Barbadora, Jeff
Sent: Thursday, January 3, 2019 1:46 PM
To: zeo@clintonct.org
Subject: RE: 48 Cow Hill Road-Mblu 32/6/48/H026570

Good afternoon,

I wanted to make a correction to the Mblu as the above is incorrect. The correct Mblu is 32/6/48-B, owner is Raymond Heser E Trustee.

Thanks for your time on this matter,

Jeffrey Barbadora
781-970-0053
12 Gill Street, Suite 5800, Woburn, MA 01801
CrownCastle.com

From: Barbadora, Jeff
Sent: Wednesday, January 2, 2019 4:32 PM
To: zeo@clintonct.org
Subject: 48 Cow Hill Road-Mblu 32/6/48/H026570

Good Afternoon,

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If you have any questions, please don't hesitate to call or e-mail me.

Thanks,

Jeffrey Barbadora
781-970-0053
12 Gill Street, Suite 5800, Woburn, MA 01801
CrownCastle.com

Site Name: *CLINTON CT*
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissable Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	746	1	1260	1260	210	0.0103	0.4973	2.07%
VZW Cellular	876	3	315	944	210	0.0077	0.5840	1.32%
VZW 850 LTE	869	1	1451	1451	210	0.0118	0.5793	2.04%
VZW PCS	1970	1	2766	2766	210	0.0226	1.0000	2.26%
VZW AWS	2145	1	2911	2911	210	0.0237	1.0000	2.37%
Total Percentage of Maximum Permissible Exposure								10.06%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used.

Date: **October 03, 2018**

Amanda D Brown
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

JACOBS
Jacobs Engineering Group, Inc.
5449 Bells Ferry Road
Acworth, GA 30102
(770)701-2500

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Carrier Site Number:	1941
	Carrier Site Name:	CLINTON CT
Crown Castle Designation:	**Crown Castle BU Number:**	806363
	Crown Castle Site Name:	HRT 105 943201
	Crown Castle JDE Job Number:	534509
	Crown Castle Work Order Number:	1641946
	Crown Castle Order Number:	461185 Rev. 2
Engineering Firm Designation:	**Jacobs Engineering Group, Inc. Project Number:**	1641946
Site Data:	**48 COW HILL ROAD, CLINTON, Middlesex County, CT** **Latitude *41°17' 20.2"*, Longitude *-72°32' 18.5"*** **212.625 Foot - Self Support Tower**	

Dear Amanda D Brown,

Jacobs Engineering Group, Inc. is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

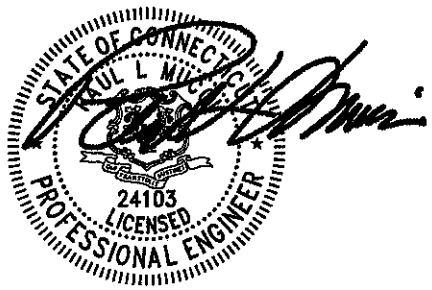
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity**

The analysis has been performed in accordance with the TIA-222-H Standard. This analysis utilizes an ultimate 3-second gust wind speed of 130 mph as required by the 2016 Connecticut State Building Code. Exposure Category B with a maximum topographic factor, Kzt, of 1.000 and Risk Category II were used in this analysis.

Structural analysis prepared by:

Nikhil Sharma
Structural Engineer



Engineer of Record:
2018-10-03
T20:32:50-04:00

Paul L. Mucci, P.E.
Senior Project Engineer
CT P.E. No. 24103

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 212.625 ft Self Support tower designed by ROHN.

The tower has been modified per reinforcement drawings prepared by Vertical Structures in June of 2007. Reinforcement consists of replacement of redundant diagonals at 0' to 20' and 20' to 40'.

2) ANALYSIS CRITERIA

Building Code:	2012 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	130 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
208.0	209.0	3	andrew	SBNHH-1D65B w/ Mount Pipe	2	1-5/8
		3	commscope	CBC1923T-DS-43		
		6	commscope	JAHH-65B-R3B w/ Mount Pipe		
		2	rfs celwave	DB-B1-6C-12AB-0Z		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
		6	antel	LPA-80080/6CF w/ Mount Pipe		
	208.0	1	tower mounts	Sector Mount [SM 510-3]		

Table 2 – Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
199.0	199.0	1	tower mounts	Sector Mount [SM 505-3]	4	1-1/4
	198.0	3	alcatel lucent	1900MHz RRH (65MHz)		
		3	alcatel lucent	800MHz 2X50W RRH W/FILTER		
		3	alcatel lucent	TD-RRH8x20-25		
		3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe		
189.0	190.0	3	ericsson	RRUS 32	2 2 4 12	13/16 3/8 3/4 1-5/8
		3	ericsson	RRUS 32 B2		
		3	ericsson	RRUS 32 B66		
		6	adc	DUAL BAND 800/1900 FULL BAND MASTHEAD		
		9	andrew	SBNHH-1D65A w/ Mount Pipe		
		3	ericsson	RRUS 11		
		3	powerwave technologies	7020.00		
		3	powerwave technologies	7770.00 w/ Mount Pipe		
		2	raycap	DC6-48-60-18-8F		
	189.0	1	tower mounts	Sector Mount [SM 510-3]		
183.0	183.0	3	rfs celwave	APXV18-206517LS w/ Mount Pipe	-	-
		1	tower mounts	Pipe Mount [PM 601-3]		
175.0	179.0	2	radiowaves	HPD2-23	4 12	1/4 1-1/4
	176.0	12	decibel	DB844H90E-XY w/ Mount Pipe		
	175.0	1	tower mounts	Sector Mount [SM 510-3]		
167.0	173.0	1	rfs celwave	1151-3	1	7/8
	167.0	1	tower mounts	Side Arm Mount [SO 308-1]		
164.0	173.0	1	rfs celwave	1151-3	1	7/8
	164.0	1	tower mounts	Side Arm Mount [SO 308-1]		
162.0	162.0	1	tower mounts	Side Arm Mount [SO 308-1]	1	3/8
	160.0	1	sinclair	SD310-HL		
147.0	153.0	1	rfs celwave	1151-3	1	7/8
	147.0	1	tower mounts	Side Arm Mount [SO 308-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
145.0	148.0	1	sinclair	SD310-HL	1	7/8
	145.0	1	tower mounts	Side Arm Mount [SO 308-1]		
139.0	140.0	3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	3 5 7	7/8 1-1/4 1-5/8
		3	ericsson	ERICSSON AIR 21 B4A B2P w/ Mount Pipe		
		3	ericsson	KRY 112 144/1		
	139.0	1	tower mounts	Side Arm Mount [SO 201-3]		
128.0	132.0	1	rfs celwave	1142-2C	1	7/8
	128.0	1	tower mounts	Side Arm Mount [SO 308-1]		
51.0	51.0	1	gps	GPS_A	1	1/2
		1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Clarence Welti Assoc., Inc.	262276	CCISITES
4-POST-MODIFICATION INSPECTION	Vertical Structures, Inc.	2146143	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Rohn	262273	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Rohn	262274	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Vertical Structures, Inc.	2169576	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Jacobs Engineering Group, Inc. should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	212.625 - 202.458	Leg	ROHN 2.5 STD	2	-4.675	59.463	7.9	Pass
T2	202.458 - 182.292	Leg	ROHN 3 EH	28	-28.088	98.582	28.5	Pass
T3	182.292 - 162.104	Leg	ROHN 4 EH	67	-69.816	167.222	41.8	Pass
T4	162.104 - 141.896	Leg	ROHN 5 EH	107	-119.347	250.620	47.6	Pass
T5	141.896 - 121.688	Leg	ROHN 6 EHS	146	-149.722	255.080	58.7	Pass
T6	121.688 - 101.479	Leg	ROHN 6 EH	173	-183.255	317.349	57.7	Pass
T7	101.479 - 81.2708	Leg	ROHN 6 EH	200	-214.208	317.349	67.5	Pass
T8	81.2708 - 61	Leg	ROHN 8 EHS	227	-243.844	404.230	60.3	Pass
T9	61 - 40.6667	Leg	ROHN 8 EHS	254	-272.921	403.942	67.6	Pass
T10	40.6667 - 20.3333	Leg	ROHN 8 EH	281	-285.924	528.398	54.1	Pass
T11	20.3333 - 0	Leg	ROHN 8 EH	314	-313.157	528.520	59.3	Pass
T1	212.625 - 202.458	Diagonal	ROHN 2 STD	12	-3.272	25.020	13.1	Pass
T2	202.458 - 182.292	Diagonal	ROHN 2 STD	39	-9.672	18.418	52.5	Pass
T3	182.292 - 162.104	Diagonal	ROHN 2 STD	72	-9.974	15.917	62.7	Pass
T4	162.104 - 141.896	Diagonal	ROHN 2 STD	110	-9.978	13.677	73.0	Pass
T5	141.896 - 121.688	Diagonal	ROHN 2.5 STD	149	-13.220	17.101	77.3	Pass
T6	121.688 - 101.479	Diagonal	ROHN 2.5 STD	176	-12.290	14.992	82.0	Pass
T7	101.479 - 81.2708	Diagonal	ROHN 3 STD	203	-12.578	25.935	48.5	Pass
T8	81.2708 - 61	Diagonal	ROHN 3 STD	230	-12.519	22.903	54.7	Pass
T9	61 - 40.6667	Diagonal	ROHN 3 STD	257	-13.578	20.104	67.5	Pass
T10	40.6667 - 20.3333	Diagonal	ROHN 3 STD	284	-19.102	32.714	58.4	Pass
T11	20.3333 - 0	Diagonal	ROHN 3 STD	317	-21.863	31.089	70.3	Pass
T1	212.625 - 202.458	Horizontal	ROHN 1.5 STD	10	-2.309	23.711	9.7	Pass
T2	202.458 - 182.292	Horizontal	ROHN 1.5 STD	37	-5.177	23.646	21.9	Pass
T3	182.292 - 162.104	Horizontal	ROHN 1.5 STD	70	-6.162	20.100	30.7	Pass
T4	162.104 - 141.896	Horizontal	ROHN 2 STD	109	-6.888	28.570	24.1	Pass
T5	141.896 - 121.688	Horizontal	ROHN 2 STD	148	-7.786	23.772	32.8	Pass
T6	121.688 - 101.479	Horizontal	ROHN 2 STD	175	-7.926	17.707	44.8	Pass
T7	101.479 - 81.2708	Horizontal	ROHN 2.5 STD	202	-8.615	30.294	28.4 30.2 (b)	Pass
T8	81.2708 - 61	Horizontal	ROHN 2.5 STD	229	-9.004	23.656	38.1	Pass
T9	61 - 40.6667	Horizontal	ROHN 2.5 STD	256	-10.131	18.711	54.1	Pass
T10	40.6667 - 20.3333	Horizontal	ROHN 3 STD	283	-10.160	33.233	30.6	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T11	20.3333 - 0	Horizontal	ROHN 3 STD	316	-12.176	27.041	45.0	Pass
T1	212.625 - 202.458	Top Girt	ROHN 1.5 STD	5	-0.254	23.767	1.1	Pass
T10	40.6667 - 20.3333	Redund Horz 1 Bracing	ROHN 1.5 STD	288	-4.966	13.657	36.4	Pass
T11	20.3333 - 0	Redund Horz 1 Bracing	ROHN 1.5 STD	321	-5.434	11.606	46.8	Pass
T10	40.6667 - 20.3333	Redund Diag 1 Bracing	ROHN 2 STD	289	-4.587	9.252	49.6	Pass
T11	20.3333 - 0	Redund Diag 1 Bracing	ROHN 2 STD	322	-4.694	8.517	55.1	Pass
T10	40.6667 - 20.3333	Redund Hip 1 Bracing	ROHN 1.5 STD	297	-0.021	12.533	0.3	Pass
T11	20.3333 - 0	Redund Hip 1 Bracing	ROHN 1.5 STD	341	-0.025	10.543	0.3	Pass
T10	40.6667 - 20.3333	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	309	-0.084	10.900	0.8	Pass
T11	20.3333 - 0	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	342	-0.078	9.815	0.8	Pass
T1	212.625 - 202.458	Inner Bracing	L2x2x1/8	16	-0.003	8.802	0.4	Pass
T2	202.458 - 182.292	Inner Bracing	L2x2x1/8	41	-0.006	8.646	0.4	Pass
T3	182.292 - 162.104	Inner Bracing	L2x2x1/8	79	-0.006	6.373	0.5	Pass
T4	162.104 - 141.896	Inner Bracing	L2x2x1/8	120	-0.007	4.367	0.6	Pass
T5	141.896 - 121.688	Inner Bracing	L2x2x1/8	157	-0.008	3.300	0.7	Pass
T6	121.688 - 101.479	Inner Bracing	L2 1/2x2 1/2x3/16	184	-0.010	6.951	0.5	Pass
T7	101.479 - 81.2708	Inner Bracing	L3x3x3/16	212	-0.013	9.153	0.6	Pass
T8	81.2708 - 61	Inner Bracing	L3 1/2x3 1/2x1/4	239	-0.015	14.894	0.4	Pass
T9	61 - 40.6667	Inner Bracing	L3 1/2x3 1/2x1/4	266	-0.014	11.304	0.4	Pass
T10	40.6667 - 20.3333	Inner Bracing	ROHN 3 STD	311	-0.018	31.363	0.4	Pass
T11	20.3333 - 0	Inner Bracing	ROHN 3 STD	344	-0.016	25.662	0.4	Pass
							Summary	
						Leg (T9)	67.6	Pass
						Diagonal (T6)	82.0	Pass
						Horizontal (T9)	54.1	Pass
						Top Girt (T1)	1.1	Pass
						Redund Horz 1 Bracing (T11)	46.8	Pass
						Redund Diag 1 Bracing (T11)	55.1	Pass
						Redund Hip 1 Bracing (T11)	0.3	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
						Redund Hip Diagonal 1 Bracing (T11)	0.8	Pass
						Inner Bracing (T5)	0.7	Pass
						Bolt Checks	51.0	Pass
						Rating =	82.0	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	81.4	Pass
1	Base Foundation Structural	0	22.5	Pass
1	Base Foundation Soil Interaction	0	48.5	Pass

Structure Rating (max from all components) =	82.0%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

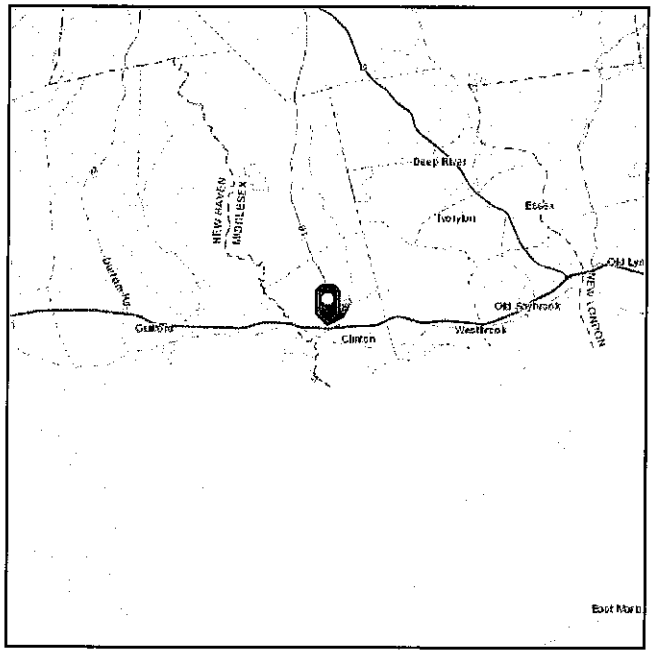
TNXTOWER OUTPUT

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 18.95 ft (NAVD 88)
Latitude: 41.288944
Longitude: -72.538472



Wind

Results:

Wind Speed:	130 Vmph
10-year MRI	78 Vmph
25-year MRI	88 Vmph
50-year MRI	97 Vmph
100-year MRI	106 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Wed Oct 03 2018

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 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

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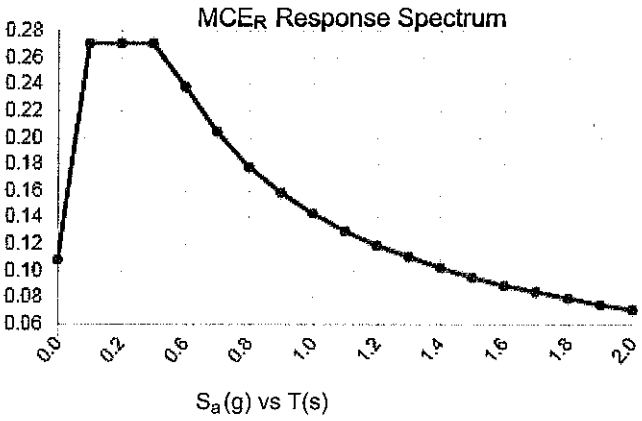
Seismic

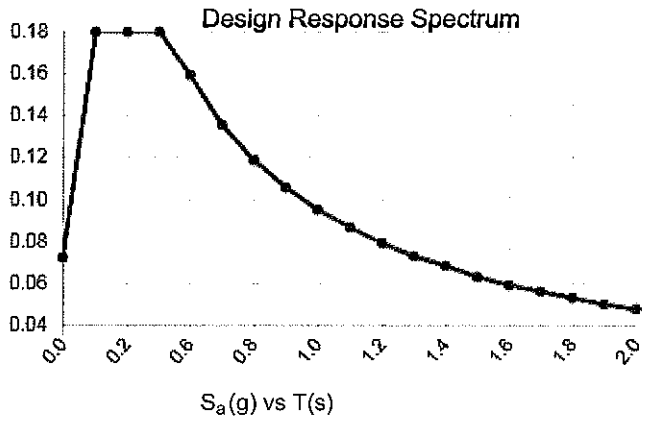
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.169	S_{DS} :	0.180
S_1 :	0.059	S_{D1} :	0.095
F_a :	1.600	T_L :	6.000
F_v :	2.400	PGA :	0.085
S_{MS} :	0.270	PGA_M :	0.137
S_{M1} :	0.143	F_{PGA} :	1.600
		I_e :	1

Seismic Design Category B





Data Accessed: Wed Oct 03 2018

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

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Ice

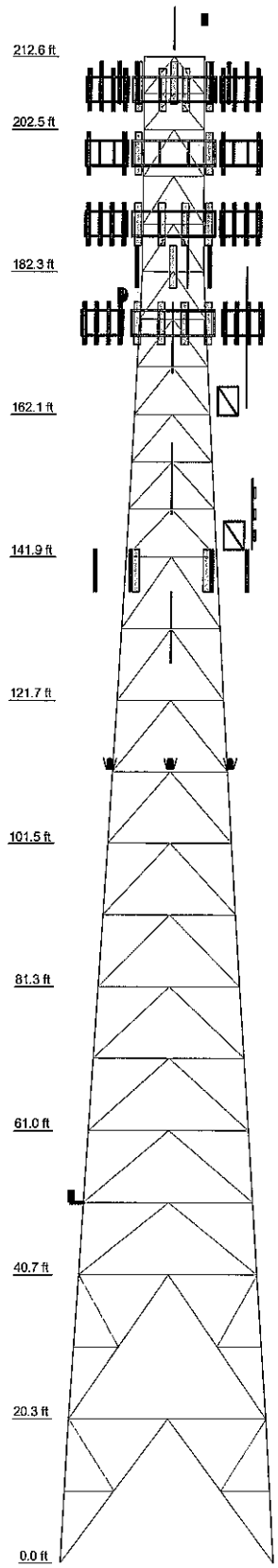
Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Wed Oct 03 2018

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 50-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.

Section	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	ROHN 8 EH		ROHN 8 EHS		ROHN 6 EH		ROHN 6 EHS	ROHN 5 EH	ROHN 4 EH	ROHN 3 EH	A
Leg Grade					A572-50						
Diagonals			ROHN 3 STD			ROHN 2.5 STD					
Diagonal Grade						A572-50					
Top Girts					N.A.						B
Horizontals	ROHN 3 STD			ROHN 2.5 STD			ROHN 2 STD		ROHN 1.5 STD		
Red. Horizontals	ROHN 1.5 STD					N.A.					
Red. Diagonals	ROHN 2 STD					N.A.					
Red. Hips	ROHN 1.5 STD					N.A.					
Inner Bracing	ROHN 3 STD		L3 1/2x3 1/2x1/4		L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x1/8				
Face Width (ft)	30.0417	25.1771	22.6771	20.0417	17.5417	15.0417	12.7917	10.7083	8.625	8.54167	8.5
# Panels @ (ft)		2 @ 20.3333	2 @ 10.1667	2 @ 10.1354	6 @ 10.1042			3 @ 6.73611	3 @ 6.72917	3 @ 6.72222	2 @ 5.08333
Weight (K)	37.5	5.7	4.9	4.7	4.0	3.3	2.7	2.4	1.8	1.5	0.7



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Flash Beacon Lighting	216.625	DC6-48-60-18-8F	189
Lightning Rod 5/8" x 6'	213.625	SBNHH-1D65A w/ Mount Pipe	189
Climb Leg Extension	212.625	SBNHH-1D65A w/ Mount Pipe	189
4' x 2" Pipe Mount	212.625	SBNHH-1D65A w/ Mount Pipe	189
(2) LPA-80080/6CF w/ Mount Pipe	208	RRUS 32	189
(2) LPA-80080/6CF w/ Mount Pipe	208	RRUS 32	189
(2) LPA-80080/6CF w/ Mount Pipe	208	RRUS 32	189
(2) JAHH-65B-R3B w/ Mount Pipe	208	RRUS 32 B66	189
(2) JAHH-65B-R3B w/ Mount Pipe	208	RRUS 32 B66	189
(2) JAHH-65B-R3B w/ Mount Pipe	208	RRUS 32 B66	189
SBNHH-1D65B w/ Mount Pipe	208	RRUS 32 B2	189
SBNHH-1D65B w/ Mount Pipe	208	RRUS 32 B2	189
SBNHH-1D65B w/ Mount Pipe	208	RRUS 32 B2	189
RFV01U-D2A	208	6' x 2" Mount Pipe	189
RFV01U-D2A	208	6' x 2" Mount Pipe	189
RFV01U-D2A	208	6' x 2" Mount Pipe	189
CBC1923T-DS-43	208	Sector Mount [SM 510-3]	189
CBC1923T-DS-43	208	APXV18-206517LS w/ Mount Pipe	183
CBC1923T-DS-43	208	APXV18-206517LS w/ Mount Pipe	183
DB-B1-6C-12AB-0Z	208	APXV18-206517LS w/ Mount Pipe	183
DB-B1-6C-12AB-0Z	208	Pipe Mount [PM 601-3]	183
RFV01U-D1A	208	(4) DB844H90E-XY w/ Mount Pipe	175
RFV01U-D1A	208	(4) DB844H90E-XY w/ Mount Pipe	175
RFV01U-D1A	208	(4) DB844H90E-XY w/ Mount Pipe	175
Sector Mount [SM 510-3]	208	6' x 2" Mount Pipe	175
APXVSPP18-C-A20 w/ Mount Pipe	199	6' x 2" Mount Pipe	175
APXVSPP18-C-A20 w/ Mount Pipe	199	Sector Mount [SM 510-3]	175
APXVSPP18-C-A20 w/ Mount Pipe	199	HPD2-23	175
APXVTM14-C-120 w/ Mount Pipe	199	HPD2-23	175
APXVTM14-C-120 w/ Mount Pipe	199	1151-3	167
APXVTM14-C-120 w/ Mount Pipe	199	Side Arm Mount [SO 308-1]	167
800MHz 2X50W RRH W/FILTER	199	1151-3	164
800MHz 2X50W RRH W/FILTER	199	Side Arm Mount [SO 308-1]	164
800MHz 2X50W RRH W/FILTER	199	SD310-HL	162
1900MHz RRH (65MHz)	199	Side Arm Mount [SO 308-1]	162
1900MHz RRH (65MHz)	199	1151-3	147
1900MHz RRH (65MHz)	199	Side Arm Mount [SO 308-1]	147
TD-RRH8x20-25	199	SD310-HL	145
TD-RRH8x20-25	199	Side Arm Mount [SO 308-1]	145
TD-RRH8x20-25	199	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	139
(3) 4' x 2" Pipe Mount	199		
(3) 4' x 2" Pipe Mount	199	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	139
(3) 4' x 2" Pipe Mount	199		
Sector Mount [SM 505-3]	199	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	139
7770.00 w/ Mount Pipe	189		
7770.00 w/ Mount Pipe	189	ERICSSON AIR 21 B4A B2P w/ Mount Pipe	139
7770.00 w/ Mount Pipe	189		
(2) SBNHH-1D65A w/ Mount Pipe	189	ERICSSON AIR 21 B4A B2P w/ Mount Pipe	139
(2) SBNHH-1D65A w/ Mount Pipe	189		
(2) SBNHH-1D65A w/ Mount Pipe	189	ERICSSON AIR 21 B4A B2P w/ Mount Pipe	139
7020.00	189	KRY 112 144/1	139
7020.00	189	KRY 112 144/1	139
7020.00	189	KRY 112 144/1	139
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	189	Side Arm Mount [SO 201-3]	139
		1142-2C	128
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	189	Side Arm Mount [SO 308-1]	128
		Side Lighting	112
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	189	Side Lighting	112
		Side Lighting	112
RRUS 11	189	GPS_A	51
RRUS 11	189	Side Arm Mount [SO 701-1]	51
RRUS 11	189		
DC6-48-60-18-8F	189		

ALL R
ARE I
MAX.
DC
SH
UP
SH
SHEAR
18 K
TORQ
50 mph WI

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	ROHN 2.5 STD	B	ROHN 1.5 STD

SHEAR
67 K

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TORQ
REACTIONS

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.27 in ice. Ice is considered to increase in thickness with height.
5.

Jacobs Engineering Group, Inc.
5449 Bells Ferry Rd
Acworth, GA 30102
Phone: (770) 701-2500
FAX: (770) 701-2501

Job: *HRT 105 943201*		
Project: *BU806363_WO1641946*		
Client: Crown Castle	Drawn by: Vincent Jiang	App'd:
Code: TIA-222-H	Date: 10/03/18	Scale: NTS
Path: C:\Users\vjiang\Desktop\Projects\806363 HRT 105 943201\WO 1641946\Report\Issued Documents\BU 806363_WO1641946_LGT_20181003.eri		Dwg No. E-1

Section	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	ROHN 8 EH		ROHN 8 EHS		ROHN 6 EH		ROHN 6 EHS	ROHN 5 EH	ROHN 4 EH	ROHN 3 EH	A
Leg Grade					A572-50						
Diagonals			ROHN 3 STD			ROHN 2.5 STD			ROHN 2 STD		
Diagonal Grade						A572-50					
Top Girts						N.A.					B
Horizontals	ROHN 3 STD			ROHN 2.5 STD			ROHN 2 STD		ROHN 1.5 STD		
Red. Horizontals	ROHN 1.5 STD						N.A.				
Red. Diagonals	ROHN 2 STD						N.A.				
Red. Hips	ROHN 1.5 STD						N.A.				
Inner Bracing	ROHN 3 STD		L3 1/2x3 1/2x1/4		L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x1/8				
Face Width (ft)	30.0417	25.1771	22.6771	20.0417	17.5417	15.0417	12.7917	10.7083	8.625	8.54167	8.5
# Panels @ (ft)	2 @ 20.3333		2 @ 10.1667	2 @ 10.1354		6 @ 10.1042		3 @ 6.73611	3 @ 6.72917	3 @ 6.72222	2 @ 5.08333
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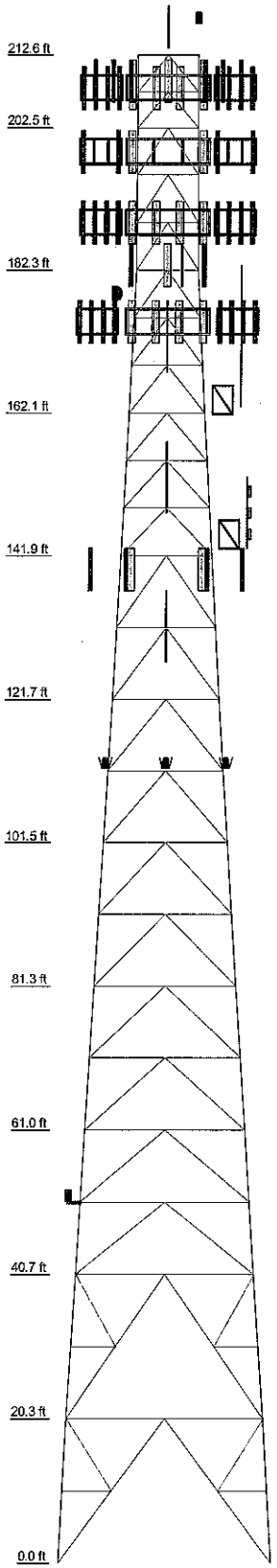

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	ROHN 2.5 STD	B	ROHN 1.5 STD

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.27 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 82%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 344 K
SHEAR: 40 K

UPLIFT: -283 K
SHEAR: 35 K

AXIAL 208 K
SHEAR 18 K
MOMENT 2230 kip-ft
TORQUE 27 kip-ft
50 mph WIND - 1.275 in ICE

AXIAL 100 K
SHEAR 67 K
MOMENT 8197 kip-ft
TORQUE 93 kip-ft
REACTIONS - 130 mph WIND

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Job: *HRT 105 943201*		
Project: *BU806363_WO1641946*		
Client: Crown Castle	Drawn by: Vincent Jiang	App'd:
Code: TIA-222-H	Date: 10/03/18	Scale: NTS
Path: C:\Users\jliang\...\HRT 105 943201\WO 1641946\Report\Issued Drawing\[BU806363_WO1641946_LC7_20181003.e		Dwg No. E-1

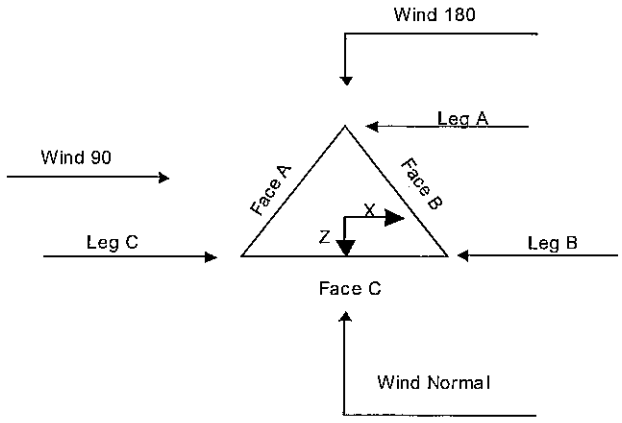
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 212.625 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 8.500 ft at the top and 30.042 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

5) Tower is located in Middlesex County, Connecticut.
6) Tower base elevation above sea level: 18.950 ft.
7) Basic wind speed of 130 mph.
8) Risk Category II.
9) Exposure Category B.
10) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
11) Topographic Category: 1.
12) Crest Height 0.000 ft.
13) Nominal ice thickness of 1.275 in.
14) Ice thickness is considered to increase with height.
15) Ice density of 56.000 pcf.
16) A wind speed of 50 mph is used in combination with ice.
17) Temperature drop of 50.000 °F.
18) Deflections calculated using a wind speed of 60 mph.
19) TIA-222-H Annex S.
20) Pressures are calculated at each section.
21) Stress ratio used in tower member design is 1.05.
22) 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



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation ft	Assembly Database	Description	Section Width ft	Number of Sections	Section Length ft
T1	212.625-202.458			8.500	1	10.167
T2	202.458-182.292			8.542	1	20.167
T3	182.292-162.104			8.625	1	20.188
T4	162.104-141.896			10.708	1	20.208
T5	141.896-121.688			12.792	1	20.208
T6	121.688-101.479			15.042	1	20.208
T7	101.479-81.271			17.542	1	20.208
T8	81.271-61.000			20.042	1	20.271
T9	61.000-40.667			22.677	1	20.333
T10	40.667-20.333			25.177	1	20.333
T11	20.333-0.000			27.833	1	20.333

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	212.625-202.458	5.083	K Brace Down	No	Yes	0.000	0.000
T2	202.458-182.292	6.722	K Brace Down	No	Yes	0.000	0.000
T3	182.292-162.104	6.729	K Brace Down	No	Yes	0.000	0.000

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
T4	162.104-141.896	6.736	K Brace Down	No	Yes	0.000	0.000
T5	141.896-121.688	10.104	K Brace Down	No	Yes	0.000	0.000
T6	121.688-101.479	10.104	K Brace Down	No	Yes	0.000	0.000
T7	101.479-81.271	10.104	K Brace Down	No	Yes	0.000	0.000
T8	81.271-61.000	10.135	K Brace Down	No	Yes	0.000	0.000
T9	61.000-40.667	10.167	K Brace Down	No	Yes	0.000	0.000
T10	40.667-20.333	20.333	K1 Down	No	Yes	0.000	0.000
T11	20.333-0.000	20.333	K1 Down	No	Yes	0.000	0.000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 212.625-202.458	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T2 202.458-182.292	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T3 182.292-162.104	Pipe	ROHN 4 EH	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T4 162.104-141.896	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T5 141.896-121.688	Pipe	ROHN 6 EHS	A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T6 121.688-101.479	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T7 101.479-81.271	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T8 81.271-61.000	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T9 61.000-40.667	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T10 40.667-20.333	Pipe	ROHN 8 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T11 20.333-0.000	Pipe	ROHN 8 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (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 212.625-202.458	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T2 202.458-182.292	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T3 182.292-162.104	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T4 162.104-141.896	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T5 141.896-121.688	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T6 121.688-101.479	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T7 101.479-81.271	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T8 81.271-61.000	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T9 61.000-40.667	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T10 40.667-20.333	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T11 20.333-0.000	None	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 212.625-202.458	Single Angle		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T2 202.458-182.292	Single Angle		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T3 182.292-162.104	Single Angle		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T4 162.104-141.896	Single Angle		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T5 141.896-121.688	Single Angle		A572-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)
T6 121.688-101.479	Single Angle		A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T7 101.479-81.271	Single Angle		A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T8 81.271-61.000	Single Angle		A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T9 61.000-40.667	Single Angle		A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T10 40.667-20.333	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T11 20.333-0.000	Single Angle		A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Redundant Bracing Grade		Redundant Type	Redundant Size	K Factor
T10 40.667-20.333	A36 (36 ksi)	Horizontal (1)	Pipe	ROHN 1.5 STD	1
		Diagonal (1)	Pipe	ROHN 2 STD	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
T11 20.333-0.000	A36 (36 ksi)	Horizontal (1)	Pipe	ROHN 1.5 STD	1
		Diagonal (1)	Pipe	ROHN 2 STD	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	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 212.625-202.458	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T2 202.458-182.292	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T3 182.292-162.104	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T4 162.104-141.896	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T5 141.896-121.688	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T6 121.688-101.479	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T7 101.479-81.271	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T8 81.271-61.000	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T9 61.000-40.667	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T10 40.667-20.333	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt
T11 20.333-0.000	0.000	0.000	A36 (36 ksi)	1	1.03	1.05	Mid-Pt	Mid-Pt	Mid-Pt

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 212.625-202.458	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 202.458-182.292	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 182.292-162.104	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 162.104-141.896	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 141.896-121.688	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 121.688-101.479	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 101.479-81.271	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 81.271-61.000	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 61.000-40.667	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 40.667-20.333	No	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T11 20.333-0.000	No	No	1	1 1	1 1	1 1	1 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		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	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 212.625-202.458	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T2 202.458-182.292	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T3 182.292-162.104	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T4 162.104-141.896	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T5 141.896-121.688	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T6 121.688-101.479	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T7 101.479-81.271	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T8 81.271-61.000	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T9 61.000-40.667	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T10 40.667-20.333	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	0.75
T11 20.333-0.000	0.000	1	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	1	0.000	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 212.625-202.458	Flange	0.750 A325N	4	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T2 202.458-182.292	Flange	0.875 A325N	4	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T3 182.292-162.104	Flange	1.000 A325N	4	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T4 162.104-141.896	Flange	1.000 A325N	6	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T5 141.896-121.688	Flange	1.000 A325N	6	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T6 121.688-101.479	Flange	1.000 A325N	6	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T7 101.479-81.271	Flange	1.000 A325N	8	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T8 81.271-61.000	Flange	1.000 A325N	8	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T9 61.000-40.667	Flange	1.000 A325N	8	0.625 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.625 A325N	2	0.625 A325X	0
T10 40.667-20.333	Flange	1.000 A325N	8	0.750 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.750 A325N	2	0.625 A325X	0
T11 20.333-0.000	Flange	1.000 A354-BC	0	0.750 A325N	3	0.625 A325N	0	0.625 A325X	0	0.625 A325X	0	0.750 A325N	2	0.625 A325X	0

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
LDF4-50A(1/2")	A	No	No	Ar (CaAa)	51.000 - 0.000	0.000	0.46	1	1	0.630	0.630		0.000
HB114-1-08U4-M5J(1 1/4")	A	No	No	Ar (CaAa)	199.000 - 0.000	0.000	0.42	4	4	0.850 0.750	1.540		0.001
Feedline Ladder (Af) *-*-*-*	A	No	No	Af (CaAa)	199.000 - 0.000	0.000	-0.43	1	1	3.000	3.000		0.008
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	128.000 - 0.000	0.000	-0.4	5	5	1.000	1.090		0.000
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	145.000 - 128.000	0.000	-0.4	4	4	1.000	1.090		0.000
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	147.000 - 145.000	0.000	-0.4	3	3	1.000	1.090		0.000
LDF5-50A(7/8")	A	No	No	Ar (CaAa)	164.000 - 147.000	0.000	-0.4	2	2	1.000	1.090		0.000
LDF5-50A(7/8") *******	A	No	No	Ar (CaAa)	167.000 - 164.000	0.000	-0.4	1	1	1.000	1.090		0.000
CR 50 1873(1-5/8")	A	No	No	Ar (CaAa)	189.000 - 0.000	0.000	-0.44	12	6	0.850 0.750	1.980		0.001
3" Conduit	A	No	No	Ar (CaAa)	189.000 - 0.000	0.000	-0.4	1	1	3.000	3.000		0.003
PWRT-608-S(13/16)	A	No	No	Ar (CaAa)	189.000 - 0.000	0.000	-0.36	2	1	0.850 0.750	0.820		0.001
LDF2-50(3/8")	A	No	No	Ar (CaAa)	189.000 - 0.000	0.000	-0.36	2	2	0.440	0.440		0.000
WR-VG86ST-BRD(3/4) *-*-*-*	A	No	No	Ar (CaAa)	189.000 - 0.000	0.000	-0.35	4	2	0.850 0.750	0.795		0.001
LDF1-50A(1/4")	A	No	No	Ar (CaAa)	175.000 - 0.000	0.000	-0.47	4	2	0.345	0.345		0.000
LDF2-50(3/8")	A	No	No	Ar (CaAa)	162.000 - 0.000	0.000	-0.48	1	1	0.440	0.440		0.000
Feedline Ladder (Af) *-*-*-*	A	No	No	Af (CaAa)	189.000 - 0.000	0.000	-0.4	1	1	3.000	3.000		0.008
Safety Line 3/8 *-*-*-*	A	No	No	Ar (CaAa)	212.625 - 0.000	0.000	0	1	1	0.375	0.375		0.000
LDF7-50A(1-5/8")	B	No	No	Ar (CaAa)	139.000 - 0.000	0.000	-0.45	12	6	0.850 0.750	1.980		0.001
LDF5-50A(7/8")	B	No	No	Ar (CaAa)	139.000 - 0.000	0.000	-0.41	3	2	0.500	1.090		0.000
Feedline Ladder (Af) *-*-*-*	B	No	No	Af (CaAa)	139.000 - 0.000	0.000	-0.45	1	1	3.000	3.000		0.008
LDF6-50A(1-1/4")	B	No	No	Ar (CaAa)	175.000 - 0.000	0.000	0.4	12	12	1.550	1.550		0.001
Feedline Ladder (Af) *-*-*-*	B	No	No	Af (CaAa)	175.000 - 0.000	0.000	0.4	1	1	3.000	3.000		0.008
HB158-1-08U8-S8J18(1-5/8)	C	No	No	Ar (CaAa)	208.000 - 0.000	2.000	0.45	2	2	1.980	1.980		0.001
Feedline Ladder (Af)	C	No	No	Af (CaAa)	208.000 - 0.000	0.000	0.43	1	1	3.000	3.000		0.008
Feedline Ladder (Af) *-*-*-*	C	No	No	Af (CaAa)	183.000 - 0.000	0.000	-0.45	1	1	3.000	3.000		0.008
LDF4-50A(1/2")	A	No	No	Ar (CaAa)	112.000 - 0.000	0.000	-0.49	1	1	0.300	0.630		0.000
LDF4-50A(1/2") *-*-*-*	C	No	No	Ar (CaAa)	212.625 - 0.000	0.000	0.49	1	1	0.300	0.630		0.000

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
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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	212.625-202.458	A	0.000	0.000	0.381	0.000	0.002
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	5.606	0.000	0.062
T2	202.458-182.292	A	0.000	0.000	44.532	0.000	0.384
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	19.694	0.000	0.231
T3	182.292-162.104	A	0.000	0.000	101.429	0.000	0.769
		B	0.000	0.000	30.434	0.000	0.210
		C	0.000	0.000	29.454	0.000	0.395
T4	162.104-141.896	A	0.000	0.000	107.984	0.000	0.787
		B	0.000	0.000	47.692	0.000	0.330
		C	0.000	0.000	29.484	0.000	0.395
T5	141.896-121.688	A	0.000	0.000	112.188	0.000	0.800
		B	0.000	0.000	103.144	0.000	0.663
		C	0.000	0.000	29.484	0.000	0.395
T6	121.688-101.479	A	0.000	0.000	114.365	0.000	0.806
		B	0.000	0.000	112.419	0.000	0.718
		C	0.000	0.000	29.484	0.000	0.395
T7	101.479-81.271	A	0.000	0.000	114.975	0.000	0.807
		B	0.000	0.000	112.419	0.000	0.718
		C	0.000	0.000	29.484	0.000	0.395
T8	81.271-61.000	A	0.000	0.000	115.331	0.000	0.810
		B	0.000	0.000	112.767	0.000	0.721
		C	0.000	0.000	29.575	0.000	0.396
T9	61.000-40.667	A	0.000	0.000	116.337	0.000	0.814
		B	0.000	0.000	113.114	0.000	0.723
		C	0.000	0.000	29.666	0.000	0.398
T10	40.667-20.333	A	0.000	0.000	116.967	0.000	0.815
		B	0.000	0.000	113.114	0.000	0.723
		C	0.000	0.000	29.666	0.000	0.398
T11	20.333-0.000	A	0.000	0.000	116.968	0.000	0.815
		B	0.000	0.000	113.114	0.000	0.723
		C	0.000	0.000	29.666	0.000	0.398

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	212.625-202.458	A	1.532	0.000	0.000	3.497	0.000	0.039
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	15.375	0.000	0.235
T2	202.458-182.292	A	1.521	0.000	0.000	90.167	0.000	1.461
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	50.131	0.000	0.794
T3	182.292-162.104	A	1.504	0.000	0.000	196.864	0.000	3.129
		B		0.000	0.000	73.075	0.000	1.092

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
		C		0.000	0.000	65.528	0.000	1.152
T4	162.104-141.896	A	1.485	0.000	0.000	225.946	0.000	3.375
		B		0.000	0.000	114.331	0.000	1.695
		C		0.000	0.000	65.242	0.000	1.141
T5	141.896-121.688	A	1.464	0.000	0.000	233.619	0.000	3.459
		B		0.000	0.000	189.454	0.000	3.027
		C		0.000	0.000	64.842	0.000	1.128
T6	121.688-101.479	A	1.440	0.000	0.000	239.086	0.000	3.494
		B		0.000	0.000	201.391	0.000	3.216
		C		0.000	0.000	64.383	0.000	1.112
T7	101.479-81.271	A	1.412	0.000	0.000	240.433	0.000	3.471
		B		0.000	0.000	200.611	0.000	3.172
		C		0.000	0.000	63.842	0.000	1.095
T8	81.271-61.000	A	1.377	0.000	0.000	238.653	0.000	3.409
		B		0.000	0.000	200.273	0.000	3.129
		C		0.000	0.000	63.375	0.000	1.076
T9	61.000-40.667	A	1.331	0.000	0.000	239.493	0.000	3.360
		B		0.000	0.000	199.638	0.000	3.069
		C		0.000	0.000	62.702	0.000	1.052
T10	40.667-20.333	A	1.265	0.000	0.000	237.714	0.000	3.254
		B		0.000	0.000	197.815	0.000	2.970
		C		0.000	0.000	61.437	0.000	1.012
T11	20.333-0.000	A	1.133	0.000	0.000	227.660	0.000	2.987
		B		0.000	0.000	194.199	0.000	2.775
		C		0.000	0.000	58.928	0.000	0.935

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	212.625-202.458	-5.939	3.172	-8.896	3.729
T2	202.458-182.292	-16.233	3.841	-18.115	3.655
T3	182.292-162.104	-12.748	11.496	-15.883	11.026
T4	162.104-141.896	-11.610	14.512	-17.124	14.593
T5	141.896-121.688	-11.797	2.164	-17.456	5.492
T6	121.688-101.479	-13.555	0.604	-20.133	4.975
T7	101.479-81.271	-13.546	0.266	-22.696	5.843
T8	81.271-61.000	-14.584	0.329	-24.332	6.329
T9	61.000-40.667	-15.922	0.095	-26.244	5.989
T10	40.667-20.333	-17.775	-0.169	-28.587	5.677
T11	20.333-0.000	-19.079	-0.156	-29.946	5.982

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	23	Safety Line 3/8	202.46 - 212.63	0.6000	0.6000
T1	33	HB158-1-08U8-S8J18(1-5/8)	202.46 - 208.00	0.6000	0.6000
T1	37	Feedline Ladder (Af)	202.46 - 208.00	0.6000	0.6000
T1	42	LDF4-50A(1/2")	202.46 - 212.63	0.6000	0.6000
T2	2	HB114-1-08U4-M5J(1 1/4")	182.29 - 199.00	0.6000	0.6000
T2	3	Feedline Ladder (Af)	182.29 -	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	13	CR 50 1873(1-5/8")	199.00 - 182.29	0.6000	0.6000
T2	14	3" Conduit	189.00 - 182.29	1.0000	0.6000
T2	15	PWRT-608-S(13/16)	189.00 - 182.29	0.0000	0.0000
T2	16	LDF2-50(3/8")	189.00 - 182.29	0.6000	0.6000
T2	17	WR-VG86ST-BRD(3/4)	189.00 - 182.29	0.6000	0.6000
T2	21	Feedline Ladder (Af)	189.00 - 182.29	0.6000	0.6000
T2	23	Safety Line 3/8	189.00 - 182.29	0.6000	0.6000
T2	33	HB158-1-08U8-S8J18(1-5/8)	202.46 - 182.29	0.6000	0.6000
T2	37	Feedline Ladder (Af)	202.46 - 182.29	0.6000	0.6000
T2	39	Feedline Ladder (Af)	202.46 - 183.00	0.6000	0.6000
T2	42	LDF4-50A(1/2")	202.46 - 182.29	0.6000	0.6000
T3	2	HB114-1-08U4-M5J(1 1/4")	182.29 - 162.10	0.6000	0.6000
T3	3	Feedline Ladder (Af)	182.29 - 162.10	0.6000	0.6000
T3	9	LDF5-50A(7/8")	182.29 - 164.00	0.6000	0.6000
T3	10	LDF5-50A(7/8")	164.00 - 162.10	0.6000	0.6000
T3	13	CR 50 1873(1-5/8")	167.00 - 162.10	0.6000	0.6000
T3	14	3" Conduit	182.29 - 162.10	1.0000	0.6000
T3	15	PWRT-608-S(13/16)	182.29 - 162.10	0.0000	0.0000
T3	16	LDF2-50(3/8")	182.29 - 162.10	0.6000	0.6000
T3	17	WR-VG86ST-BRD(3/4)	182.29 - 162.10	0.6000	0.6000
T3	19	LDF1-50A(1/4")	182.29 - 162.10	0.6000	0.6000
T3	21	Feedline Ladder (Af)	175.00 - 162.10	0.6000	0.6000
T3	23	Safety Line 3/8	182.29 - 162.10	0.6000	0.6000
T3	30	LDF6-50A(1-1/4")	182.29 - 162.10	0.6000	0.6000
T3	31	Feedline Ladder (Af)	175.00 - 162.10	0.6000	0.6000
T3	33	HB158-1-08U8-S8J18(1-5/8)	175.00 - 162.10	0.6000	0.6000
T3	37	Feedline Ladder (Af)	182.29 - 162.10	0.6000	0.6000
T3	39	Feedline Ladder (Af)	182.29 - 162.10	0.6000	0.6000
T3	42	LDF4-50A(1/2")	182.29 - 162.10	0.6000	0.6000
T4	2	HB114-1-08U4-M5J(1 1/4")	182.29 - 141.90	0.6000	0.6000
T4	3	Feedline Ladder (Af)	162.10 - 141.90	0.6000	0.6000
T4	6	LDF5-50A(7/8")	162.10 - 141.90	0.6000	0.6000
T4	7	LDF5-50A(7/8")	145.00 - 141.90	0.6000	0.6000
T4	9	LDF5-50A(7/8")	147.00 - 141.90	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T4	13	CR 50 1873(1-5/8")	141.90 - 162.10	0.6000	0.6000
T4	14	3" Conduit	141.90 - 162.10	1.0000	0.6000
T4	15	PWRT-608-S(13/16)	141.90 - 162.10	0.0000	0.0000
T4	16	LDF2-50(3/8")	141.90 - 162.10	0.6000	0.6000
T4	17	WR-VG86ST-BRD(3/4)	141.90 - 162.10	0.6000	0.6000
T4	19	LDF1-50A(1/4")	141.90 - 162.10	0.6000	0.6000
T4	20	LDF2-50(3/8")	141.90 - 162.00	0.6000	0.6000
T4	21	Feedline Ladder (Af)	141.90 - 162.10	0.6000	0.6000
T4	23	Safety Line 3/8	141.90 - 162.10	0.6000	0.6000
T4	30	LDF6-50A(1-1/4")	141.90 - 162.10	0.6000	0.6000
T4	31	Feedline Ladder (Af)	141.90 - 162.10	0.6000	0.6000
T4	33	HB158-1-08U8-S8J18(1-5/8)	141.90 - 162.10	0.6000	0.6000
T4	37	Feedline Ladder (Af)	141.90 - 162.10	0.6000	0.6000
T4	39	Feedline Ladder (Af)	141.90 - 162.10	0.6000	0.6000
T4	42	LDF4-50A(1/2")	141.90 - 162.10	0.6000	0.6000
T5	2	HB114-1-08U4-M5J(1 1/4")	121.69 - 141.90	0.6000	0.6000
T5	3	Feedline Ladder (Af)	121.69 - 141.90	0.6000	0.6000
T5	5	LDF5-50A(7/8")	121.69 - 128.00	0.6000	0.6000
T5	6	LDF5-50A(7/8")	128.00 - 141.90	0.6000	0.6000
T5	13	CR 50 1873(1-5/8")	121.69 - 141.90	0.6000	0.6000
T5	14	3" Conduit	121.69 - 141.90	1.0000	0.6000
T5	15	PWRT-608-S(13/16)	121.69 - 141.90	0.0000	0.0000
T5	16	LDF2-50(3/8")	121.69 - 141.90	0.6000	0.6000
T5	17	WR-VG86ST-BRD(3/4)	121.69 - 141.90	0.6000	0.6000
T5	19	LDF1-50A(1/4")	121.69 - 141.90	0.6000	0.6000
T5	20	LDF2-50(3/8")	121.69 - 141.90	0.6000	0.6000
T5	21	Feedline Ladder (Af)	121.69 - 141.90	0.6000	0.6000
T5	23	Safety Line 3/8	121.69 - 141.90	0.6000	0.6000
T5	26	LDF7-50A(1-5/8")	121.69 - 139.00	0.6000	0.6000
T5	27	LDF5-50A(7/8")	121.69 - 139.00	0.6000	0.6000
T5	28	Feedline Ladder (Af)	121.69 - 139.00	0.6000	0.6000
T5	30	LDF6-50A(1-1/4")	121.69 - 141.90	0.6000	0.6000
T5	31	Feedline Ladder (Af)	121.69 - 141.90	0.6000	0.6000
T5	33	HB158-1-08U8-S8J18(1-5/8)	121.69 - 141.90	0.6000	0.6000
T5	37	Feedline Ladder (Af)	121.69 -	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	39	Feedline Ladder (Af)	141.90 - 121.69	0.6000	0.6000
T5	42	LDF4-50A(1/2")	141.90 - 121.69	0.6000	0.6000
T6	2	HB114-1-08U4-M5J(1 1/4")	141.90 - 101.48	0.6000	0.6000
T6	3	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	5	LDF5-50A(7/8")	121.69 - 101.48	0.6000	0.6000
T6	13	CR 50 1873(1-5/8")	121.69 - 101.48	0.6000	0.6000
T6	14	3" Conduit	121.69 - 101.48	1.0000	0.6000
T6	15	PWRT-608-S(13/16)	121.69 - 101.48	0.0000	0.0000
T6	16	LDF2-50(3/8")	121.69 - 101.48	0.6000	0.6000
T6	17	WR-VG86ST-BRD(3/4)	121.69 - 101.48	0.6000	0.6000
T6	19	LDF1-50A(1/4")	121.69 - 101.48	0.6000	0.6000
T6	20	LDF2-50(3/8")	121.69 - 101.48	0.6000	0.6000
T6	21	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	23	Safety Line 3/8	121.69 - 101.48	0.6000	0.6000
T6	26	LDF7-50A(1-5/8")	121.69 - 101.48	0.6000	0.6000
T6	27	LDF5-50A(7/8")	121.69 - 101.48	0.6000	0.6000
T6	28	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	30	LDF6-50A(1-1/4")	121.69 - 101.48	0.6000	0.6000
T6	31	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	33	HB158-1-08U8-S8J18(1-5/8)	121.69 - 101.48	0.6000	0.6000
T6	37	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	39	Feedline Ladder (Af)	121.69 - 101.48	0.6000	0.6000
T6	41	LDF4-50A(1/2")	121.69 - 101.48	0.6000	0.6000
T6	42	LDF4-50A(1/2")	112.00 - 101.48	0.6000	0.6000
T7	2	HB114-1-08U4-M5J(1 1/4")	121.69 - 81.27	0.6000	0.6000
T7	3	Feedline Ladder (Af)	101.48 - 81.27	0.6000	0.6000
T7	5	LDF5-50A(7/8")	101.48 - 81.27	0.6000	0.6000
T7	13	CR 50 1873(1-5/8")	101.48 - 81.27	0.6000	0.6000
T7	14	3" Conduit	101.48 - 81.27	0.6000	0.6000
T7	15	PWRT-608-S(13/16)	101.48 - 81.27	0.0000	0.0000
T7	16	LDF2-50(3/8")	101.48 - 81.27	0.6000	0.6000
T7	17	WR-VG86ST-BRD(3/4)	101.48 - 81.27	0.6000	0.6000
T7	19	LDF1-50A(1/4")	101.48 - 81.27	0.6000	0.6000
T7	20	LDF2-50(3/8")	101.48 - 81.27	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	21	Feedline Ladder (Af)	81.27 - 101.48	0.6000	0.6000
T7	23	Safety Line 3/8	81.27 - 101.48	0.6000	0.6000
T7	26	LDF7-50A(1-5/8")	81.27 - 101.48	0.6000	0.6000
T7	27	LDF5-50A(7/8")	81.27 - 101.48	0.6000	0.6000
T7	28	Feedline Ladder (Af)	81.27 - 101.48	0.6000	0.6000
T7	30	LDF6-50A(1-1/4")	81.27 - 101.48	0.6000	0.6000
T7	31	Feedline Ladder (Af)	81.27 - 101.48	0.6000	0.6000
T7	33	HB158-1-08U8-S8J18(1-5/8)	81.27 - 101.48	0.6000	0.6000
T7	37	Feedline Ladder (Af)	81.27 - 101.48	0.6000	0.6000
T7	39	Feedline Ladder (Af)	81.27 - 101.48	0.6000	0.6000
T7	41	LDF4-50A(1/2")	81.27 - 101.48	0.6000	0.6000
T7	42	LDF4-50A(1/2")	81.27 - 101.48	0.6000	0.6000
T8	2	HB114-1-08U4-M5J(1 1/4")	61.00 - 81.27	0.6000	0.6000
T8	3	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	5	LDF5-50A(7/8")	61.00 - 81.27	0.6000	0.6000
T8	13	CR 50 1873(1-5/8")	61.00 - 81.27	0.6000	0.6000
T8	14	3" Conduit	61.00 - 81.27	0.6000	0.6000
T8	15	PWRT-608-S(13/16)	61.00 - 81.27	0.0000	0.0000
T8	16	LDF2-50(3/8")	61.00 - 81.27	0.6000	0.6000
T8	17	WR-VG86ST-BRD(3/4)	61.00 - 81.27	0.6000	0.6000
T8	19	LDF1-50A(1/4")	61.00 - 81.27	0.6000	0.6000
T8	20	LDF2-50(3/8")	61.00 - 81.27	0.6000	0.6000
T8	21	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	23	Safety Line 3/8	61.00 - 81.27	0.6000	0.6000
T8	26	LDF7-50A(1-5/8")	61.00 - 81.27	0.6000	0.6000
T8	27	LDF5-50A(7/8")	61.00 - 81.27	0.6000	0.6000
T8	28	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	30	LDF6-50A(1-1/4")	61.00 - 81.27	0.6000	0.6000
T8	31	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	33	HB158-1-08U8-S8J18(1-5/8)	61.00 - 81.27	0.6000	0.6000
T8	37	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	39	Feedline Ladder (Af)	61.00 - 81.27	0.6000	0.6000
T8	41	LDF4-50A(1/2")	61.00 - 81.27	0.6000	0.6000
T8	42	LDF4-50A(1/2")	61.00 - 81.27	0.6000	0.6000
T9	1	LDF4-50A(1/2")	40.67 -	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T9	2	HB114-1-08U4-M5J(1 1/4")	51.00 - 40.67 - 61.00	0.6000	0.6000
T9	3	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	5	LDF5-50A(7/8")	40.67 - 61.00	0.6000	0.6000
T9	13	CR 50 1873(1-5/8")	40.67 - 61.00	0.6000	0.6000
T9	14	3"-Conduit	40.67 - 61.00	0.6000	0.6000
T9	15	PWRT-608-S(13/16)	40.67 - 61.00	0.0000	0.0000
T9	16	LDF2-50(3/8")	40.67 - 61.00	0.6000	0.6000
T9	17	WR-VG86ST-BRD(3/4)	40.67 - 61.00	0.6000	0.6000
T9	19	LDF1-50A(1/4")	40.67 - 61.00	0.6000	0.6000
T9	20	LDF2-50(3/8")	40.67 - 61.00	0.6000	0.6000
T9	21	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	23	Safety Line 3/8	40.67 - 61.00	0.6000	0.6000
T9	26	LDF7-50A(1-5/8")	40.67 - 61.00	0.6000	0.6000
T9	27	LDF5-50A(7/8")	40.67 - 61.00	0.6000	0.6000
T9	28	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	30	LDF6-50A(1-1/4")	40.67 - 61.00	0.6000	0.6000
T9	31	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	33	HB158-1-08U8-S8J18(1-5/8)	40.67 - 61.00	0.6000	0.6000
T9	37	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	39	Feedline Ladder (Af)	40.67 - 61.00	0.6000	0.6000
T9	41	LDF4-50A(1/2")	40.67 - 61.00	0.6000	0.6000
T9	42	LDF4-50A(1/2")	40.67 - 61.00	0.6000	0.6000
T10	1	LDF4-50A(1/2")	20.33 - 40.67	0.6000	0.6000
T10	2	HB114-1-08U4-M5J(1 1/4")	20.33 - 40.67	0.6000	0.6000
T10	3	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000
T10	5	LDF5-50A(7/8")	20.33 - 40.67	0.6000	0.6000
T10	13	CR 50 1873(1-5/8")	20.33 - 40.67	0.6000	0.6000
T10	14	3" Conduit	20.33 - 40.67	0.6000	0.6000
T10	15	PWRT-608-S(13/16)	20.33 - 40.67	0.0000	0.0000
T10	16	LDF2-50(3/8")	20.33 - 40.67	0.6000	0.6000
T10	17	WR-VG86ST-BRD(3/4)	20.33 - 40.67	0.6000	0.6000
T10	19	LDF1-50A(1/4")	20.33 - 40.67	0.6000	0.6000
T10	20	LDF2-50(3/8")	20.33 - 40.67	0.6000	0.6000
T10	21	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T10	23	Safety Line 3/8	20.33 - 40.67	0.6000	0.6000
T10	26	LDF7-50A(1-5/8")	20.33 - 40.67	0.6000	0.6000
T10	27	LDF5-50A(7/8")	20.33 - 40.67	0.6000	0.6000
T10	28	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000
T10	30	LDF6-50A(1-1/4")	20.33 - 40.67	0.6000	0.6000
T10	31	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000
T10	33	HB158-1-08U8-S8J18(1-5/8)	20.33 - 40.67	0.6000	0.6000
T10	37	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000
T10	39	Feedline Ladder (Af)	20.33 - 40.67	0.6000	0.6000
T10	41	LDF4-50A(1/2")	20.33 - 40.67	0.6000	0.6000
T10	42	LDF4-50A(1/2")	20.33 - 40.67	0.6000	0.6000
T11	1	LDF4-50A(1/2")	0.00 - 20.33	0.6000	0.6000
T11	2	HB114-1-08U4-M5J(1 1/4")	0.00 - 20.33	0.6000	0.6000
T11	3	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	5	LDF5-50A(7/8")	0.00 - 20.33	0.6000	0.6000
T11	13	CR 50 1873(1-5/8")	0.00 - 20.33	0.6000	0.6000
T11	14	3" Conduit	0.00 - 20.33	0.6000	0.6000
T11	15	PWRT-608-S(13/16)	0.00 - 20.33	0.0000	0.0000
T11	16	LDF2-50(3/8")	0.00 - 20.33	0.6000	0.6000
T11	17	WR-VG86ST-BRD(3/4)	0.00 - 20.33	0.6000	0.6000
T11	19	LDF1-50A(1/4")	0.00 - 20.33	0.6000	0.6000
T11	20	LDF2-50(3/8")	0.00 - 20.33	0.6000	0.6000
T11	21	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	23	Safety Line 3/8	0.00 - 20.33	0.6000	0.6000
T11	26	LDF7-50A(1-5/8")	0.00 - 20.33	0.6000	0.6000
T11	27	LDF5-50A(7/8")	0.00 - 20.33	0.6000	0.6000
T11	28	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	30	LDF6-50A(1-1/4")	0.00 - 20.33	0.6000	0.6000
T11	31	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	33	HB158-1-08U8-S8J18(1-5/8)	0.00 - 20.33	0.6000	0.6000
T11	37	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	39	Feedline Ladder (Af)	0.00 - 20.33	0.6000	0.6000
T11	41	LDF4-50A(1/2")	0.00 - 20.33	0.6000	0.6000
T11	42	LDF4-50A(1/2")	0.00 - 20.33	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Lightning Rod 5/8" x 6'	A	From Leg	0.000	0.000	213.625	No Ice	0.375	0.375	0.033
			0.000			1/2" Ice	0.989	0.989	0.037
			3.000			1" Ice	1.619	1.619	0.045
						2" Ice	2.464	2.464	0.074
Climb Leg Extension	A	From Leg	0.000	0.000	212.625	No Ice	1.473	1.473	0.025

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
			0.000			1/2"	1.803	1.803	0.038
			2.000			Ice	2.119	2.119	0.054
						1" Ice	2.780	2.780	0.098
						2" Ice			
Flash Beacon Lighting	B	From Leg	0.000	0.000	216.625	No Ice	2.700	2.700	0.050
			0.000			1/2"	3.100	3.100	0.070
			0.500			Ice	3.500	3.500	0.090
						1" Ice	4.300	4.300	0.130
						2" Ice			
4' x 2" Pipe Mount	B	From Leg	0.000	0.000	212.625	No Ice	0.785	0.785	0.029
			0.000			1/2"	1.028	1.028	0.035
			2.000			Ice	1.281	1.281	0.044
						1" Ice	1.814	1.814	0.072
						2" Ice			
Side Lighting	A	From Leg	0.500	0.000	112.000	No Ice	0.113	0.113	0.005
			0.000			1/2"	0.170	0.170	0.007
			0.000			Ice	0.233	0.233	0.010
						1" Ice	0.389	0.389	0.019
						2" Ice			
Side Lighting	B	From Leg	0.500	0.000	112.000	No Ice	0.113	0.113	0.005
			0.000			1/2"	0.170	0.170	0.007
			0.000			Ice	0.233	0.233	0.010
						1" Ice	0.389	0.389	0.019
						2" Ice			
Side Lighting	C	From Leg	0.500	0.000	112.000	No Ice	0.113	0.113	0.005
			0.000			1/2"	0.170	0.170	0.007
			0.000			Ice	0.233	0.233	0.010
						1" Ice	0.389	0.389	0.019
						2" Ice			
208									
(2) LPA-80080/6CF w/ Mount Pipe	A	From Leg	4.000	0.000	208.000	No Ice	4.564	10.259	0.046
			0.000			1/2"	5.105	11.427	0.113
			1.000			Ice	5.612	12.312	0.187
						1" Ice	6.651	14.129	0.363
						2" Ice			
(2) LPA-80080/6CF w/ Mount Pipe	B	From Leg	4.000	0.000	208.000	No Ice	4.564	10.259	0.046
			0.000			1/2"	5.105	11.427	0.113
			1.000			Ice	5.612	12.312	0.187
						1" Ice	6.651	14.129	0.363
						2" Ice			
(2) LPA-80080/6CF w/ Mount Pipe	C	From Leg	4.000	0.000	208.000	No Ice	4.564	10.259	0.046
			0.000			1/2"	5.105	11.427	0.113
			1.000			Ice	5.612	12.312	0.187
						1" Ice	6.651	14.129	0.363
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.000	0.000	208.000	No Ice	9.351	7.646	0.086
			0.000			1/2"	9.921	8.833	0.163
			1.000			Ice	10.455	9.734	0.247
						1" Ice	11.547	11.562	0.445
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.000	0.000	208.000	No Ice	9.351	7.646	0.086
			0.000			1/2"	9.921	8.833	0.163
			1.000			Ice	10.455	9.734	0.247
						1" Ice	11.547	11.562	0.445
						2" Ice			
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.000	0.000	208.000	No Ice	9.351	7.646	0.086
			0.000			1/2"	9.921	8.833	0.163
			1.000			Ice	10.455	9.734	0.247
						1" Ice	11.547	11.562	0.445
						2" Ice			
SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.000	0.000	208.000	No Ice	8.623	7.296	0.069
			0.000			1/2"	9.284	8.581	0.141
			1.000			Ice	9.914	9.718	0.220
						1" Ice	11.111	11.663	0.409
						2" Ice			

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
SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.623 9.284 9.914 11.111	7.296 8.581 9.718 11.663	0.069 0.141 0.220 0.409
SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	8.623 9.284 9.914 11.111	7.296 8.581 9.718 11.663	0.069 0.141 0.220 0.409
RFV01U-D2A	A	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.013 1.145 1.284 1.585	0.070 0.087 0.106 0.153
RFV01U-D2A	B	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.013 1.145 1.284 1.585	0.070 0.087 0.106 0.153
RFV01U-D2A	C	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.013 1.145 1.284 1.585	0.070 0.087 0.106 0.153
CBC1923T-DS-43	A	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.316 0.389 0.469 0.651	0.230 0.294 0.366 0.531	0.008 0.012 0.016 0.030
CBC1923T-DS-43	B	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.316 0.389 0.469 0.651	0.230 0.294 0.366 0.531	0.008 0.012 0.016 0.030
CBC1923T-DS-43	C	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.316 0.389 0.469 0.651	0.230 0.294 0.366 0.531	0.008 0.012 0.016 0.030
DB-B1-6C-12AB-0Z	A	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.364 3.597 3.838 4.343	2.192 2.395 2.606 3.049	0.021 0.050 0.082 0.158
DB-B1-6C-12AB-0Z	B	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.364 3.597 3.838 4.343	2.192 2.395 2.606 3.049	0.021 0.050 0.082 0.158
RFV01U-D1A	A	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
RFV01U-D1A	B	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175
RFV01U-D1A	C	From Leg	4.000 0.000 1.000	0.000	208.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.875 2.045 2.223 2.601	1.250 1.393 1.543 1.865	0.084 0.103 0.124 0.175

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
Sector Mount [SM 510-3]	C	None		0.000	208.000	No Ice	40.100	40.100	2.396
						1/2" Ice	57.330	57.330	3.089
						1" Ice	74.560	74.560	3.782
						2" Ice	109.020	109.020	5.167
199									
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	8.262	6.946	0.083
						1/2" Ice	8.822	8.127	0.151
						1" Ice	9.346	9.021	0.227
						2" Ice	10.418	10.844	0.406
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	8.262	6.946	0.083
						1/2" Ice	8.822	8.127	0.151
						1" Ice	9.346	9.021	0.227
						2" Ice	10.418	10.844	0.406
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	8.262	6.946	0.083
						1/2" Ice	8.822	8.127	0.151
						1" Ice	9.346	9.021	0.227
						2" Ice	10.418	10.844	0.406
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	6.580	4.959	0.077
						1/2" Ice	7.031	5.754	0.131
						1" Ice	7.473	6.472	0.193
						2" Ice	8.385	7.941	0.338
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	6.580	4.959	0.077
						1/2" Ice	7.031	5.754	0.131
						1" Ice	7.473	6.472	0.193
						2" Ice	8.385	7.941	0.338
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	6.580	4.959	0.077
						1/2" Ice	7.031	5.754	0.131
						1" Ice	7.473	6.472	0.193
						2" Ice	8.385	7.941	0.338
800MHz 2X50W RRH W/FILTER	A	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.058	1.932	0.064
						1/2" Ice	2.240	2.109	0.086
						1" Ice	2.429	2.293	0.111
						2" Ice	2.829	2.684	0.172
800MHz 2X50W RRH W/FILTER	B	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.058	1.932	0.064
						1/2" Ice	2.240	2.109	0.086
						1" Ice	2.429	2.293	0.111
						2" Ice	2.829	2.684	0.172
800MHz 2X50W RRH W/FILTER	C	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.058	1.932	0.064
						1/2" Ice	2.240	2.109	0.086
						1" Ice	2.429	2.293	0.111
						2" Ice	2.829	2.684	0.172
1900MHz RRH (65MHz)	A	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.313	2.375	0.060
						1/2" Ice	2.517	2.581	0.084
						1" Ice	2.728	2.794	0.111
						2" Ice	3.174	3.243	0.176
1900MHz RRH (65MHz)	B	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.313	2.375	0.060
						1/2" Ice	2.517	2.581	0.084
						1" Ice	2.728	2.794	0.111
						2" Ice	3.174	3.243	0.176
1900MHz RRH (65MHz)	C	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice	2.313	2.375	0.060
						1/2" Ice	2.517	2.581	0.084
						1" Ice	2.728	2.794	0.111
						2" Ice	3.174	3.243	0.176

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
						2" Ice			
TD-RRH8x20-25	A	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.045 4.298 4.557 5.098	1.533 1.712 1.899 2.293	0.070 0.097 0.128 0.200
TD-RRH8x20-25	B	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.045 4.298 4.557 5.098	1.533 1.712 1.899 2.293	0.070 0.097 0.128 0.200
TD-RRH8x20-25	C	From Leg	4.000 0.000 -1.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.045 4.298 4.557 5.098	1.533 1.712 1.899 2.293	0.070 0.097 0.128 0.200
(3) 4' x 2" Pipe Mount	A	From Leg	4.000 0.000 0.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
(3) 4' x 2" Pipe Mount	B	From Leg	4.000 0.000 0.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
(3) 4' x 2" Pipe Mount	C	From Leg	4.000 0.000 0.000	0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.785 1.028 1.281 1.814	0.785 1.028 1.281 1.814	0.029 0.035 0.044 0.072
Sector Mount [SM 505-3]	C	None		0.000	199.000	No Ice 1/2" Ice 1" Ice 2" Ice	34.860 49.790 64.720 94.580	34.860 49.790 64.720 94.580	1.725 2.317 2.909 4.092
189									
7770.00 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.746 6.179 6.607 7.488	4.254 5.014 5.711 7.155	0.055 0.103 0.157 0.287
7770.00 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.746 6.179 6.607 7.488	4.254 5.014 5.711 7.155	0.055 0.103 0.157 0.287
7770.00 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.746 6.179 6.607 7.488	4.254 5.014 5.711 7.155	0.055 0.103 0.157 0.287
(2) SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.973 6.361 6.757 7.573	5.192 5.852 6.518 7.886	0.070 0.124 0.186 0.330
(2) SBNHH-1D65A w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.973 6.361 6.757 7.573	5.192 5.852 6.518 7.886	0.070 0.124 0.186 0.330
(2) SBNHH-1D65A w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	189.000	No Ice 1/2" Ice	5.973 6.361 6.757	5.192 5.852 6.518	0.070 0.124 0.186

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
							1" Ice	7.573	7.886	0.330
							2" Ice			
7020.00	A	From Leg	4.000	0.000	0.000	189.000	No Ice	0.102	0.175	0.002
			0.000				1/2"	0.147	0.239	0.005
			1.000				Ice	0.199	0.311	0.009
							1" Ice	0.326	0.476	0.022
							2" Ice			
7020.00	B	From Leg	4.000	0.000	0.000	189.000	No Ice	0.102	0.175	0.002
			0.000				1/2"	0.147	0.239	0.005
			1.000				Ice	0.199	0.311	0.009
							1" Ice	0.326	0.476	0.022
							2" Ice			
7020.00	C	From Leg	4.000	0.000	0.000	189.000	No Ice	0.102	0.175	0.002
			0.000				1/2"	0.147	0.239	0.005
			1.000				Ice	0.199	0.311	0.009
							1" Ice	0.326	0.476	0.022
							2" Ice			
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	A	From Leg	4.000	0.000	0.000	189.000	No Ice	1.328	0.693	0.027
			0.000				1/2"	1.473	0.808	0.038
			1.000				Ice	1.625	0.930	0.052
							1" Ice	1.951	1.197	0.086
							2" Ice			
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	B	From Leg	4.000	0.000	0.000	189.000	No Ice	1.328	0.693	0.027
			0.000				1/2"	1.473	0.808	0.038
			1.000				Ice	1.625	0.930	0.052
							1" Ice	1.951	1.197	0.086
							2" Ice			
(2) DUAL BAND 800/1900 FULL BAND MASTHEAD	C	From Leg	4.000	0.000	0.000	189.000	No Ice	1.328	0.693	0.027
			0.000				1/2"	1.473	0.808	0.038
			1.000				Ice	1.625	0.930	0.052
							1" Ice	1.951	1.197	0.086
							2" Ice			
RRUS 11	A	From Leg	4.000	0.000	0.000	189.000	No Ice	2.784	1.187	0.051
			0.000				1/2"	2.992	1.334	0.072
			1.000				Ice	3.207	1.490	0.095
							1" Ice	3.658	1.833	0.153
							2" Ice			
RRUS 11	B	From Leg	4.000	0.000	0.000	189.000	No Ice	2.784	1.187	0.051
			0.000				1/2"	2.992	1.334	0.072
			1.000				Ice	3.207	1.490	0.095
							1" Ice	3.658	1.833	0.153
							2" Ice			
RRUS 11	C	From Leg	4.000	0.000	0.000	189.000	No Ice	2.784	1.187	0.051
			0.000				1/2"	2.992	1.334	0.072
			1.000				Ice	3.207	1.490	0.095
							1" Ice	3.658	1.833	0.153
							2" Ice			
DC6-48-60-18-8F	A	From Leg	1.000	0.000	0.000	189.000	No Ice	0.917	0.917	0.033
			0.000				1/2"	1.458	1.458	0.051
			1.000				Ice	1.643	1.643	0.071
							1" Ice	2.042	2.042	0.119
							2" Ice			
DC6-48-60-18-8F	C	From Leg	1.000	0.000	0.000	189.000	No Ice	0.917	0.917	0.033
			0.000				1/2"	1.458	1.458	0.051
			1.000				Ice	1.643	1.643	0.071
							1" Ice	2.042	2.042	0.119
							2" Ice			
SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	189.000	No Ice	5.973	5.192	0.070
			0.000				1/2"	6.361	5.852	0.124
			1.000				Ice	6.757	6.518	0.186
							1" Ice	7.573	7.886	0.330
							2" Ice			
SBNHH-1D65A w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	189.000	No Ice	5.973	5.192	0.070
			0.000				1/2"	6.361	5.852	0.124
			1.000				Ice	6.757	6.518	0.186

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
							1" Ice	7.573	7.886	0.330
							2" Ice			
SBNHH-1D65A w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	189.000	No Ice	5.973	5.192	0.070
			0.000				1/2" Ice	6.361	5.852	0.124
			1.000				1" Ice	6.757	6.518	0.186
							2" Ice	7.573	7.886	0.330
RRUS 32	A	From Leg	4.000	0.000	0.000	189.000	No Ice	2.857	1.777	0.055
			0.000				1/2" Ice	3.083	1.968	0.077
			1.000				1" Ice	3.316	2.166	0.103
							2" Ice	3.805	2.583	0.165
RRUS 32	B	From Leg	4.000	0.000	0.000	189.000	No Ice	2.857	1.777	0.055
			0.000				1/2" Ice	3.083	1.968	0.077
			1.000				1" Ice	3.316	2.166	0.103
							2" Ice	3.805	2.583	0.165
RRUS 32	C	From Leg	4.000	0.000	0.000	189.000	No Ice	2.857	1.777	0.055
			0.000				1/2" Ice	3.083	1.968	0.077
			1.000				1" Ice	3.316	2.166	0.103
							2" Ice	3.805	2.583	0.165
RRUS 32 B66	A	From Leg	4.000	0.000	0.000	189.000	No Ice	2.743	1.668	0.053
			0.000				1/2" Ice	2.965	1.855	0.074
			1.000				1" Ice	3.194	2.049	0.098
							2" Ice	3.675	2.458	0.157
RRUS 32 B66	B	From Leg	4.000	0.000	0.000	189.000	No Ice	2.743	1.668	0.053
			0.000				1/2" Ice	2.965	1.855	0.074
			1.000				1" Ice	3.194	2.049	0.098
							2" Ice	3.675	2.458	0.157
RRUS 32 B66	C	From Leg	4.000	0.000	0.000	189.000	No Ice	2.743	1.668	0.053
			0.000				1/2" Ice	2.965	1.855	0.074
			1.000				1" Ice	3.194	2.049	0.098
							2" Ice	3.675	2.458	0.157
RRUS 32 B2	A	From Leg	4.000	0.000	0.000	189.000	No Ice	2.731	1.668	0.053
			0.000				1/2" Ice	2.953	1.855	0.074
			1.000				1" Ice	3.182	2.049	0.098
							2" Ice	3.663	2.458	0.157
RRUS 32 B2	B	From Leg	4.000	0.000	0.000	189.000	No Ice	2.731	1.668	0.053
			0.000				1/2" Ice	2.953	1.855	0.074
			1.000				1" Ice	3.182	2.049	0.098
							2" Ice	3.663	2.458	0.157
RRUS 32 B2	C	From Leg	4.000	0.000	0.000	189.000	No Ice	2.731	1.668	0.053
			0.000				1/2" Ice	2.953	1.855	0.074
			1.000				1" Ice	3.182	2.049	0.098
							2" Ice	3.663	2.458	0.157
6' x 2" Mount Pipe	A	From Leg	4.000	0.000	0.000	189.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048
							2" Ice	3.060	3.060	0.090
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	0.000	189.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048
							2" Ice	3.060	3.060	0.090
6' x 2" Mount Pipe	C	From Leg	4.000	0.000	0.000	189.000	No Ice	1.425	1.425	0.022
			0.000				1/2" Ice	1.925	1.925	0.033
			0.000				1" Ice	2.294	2.294	0.048

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	3.060	3.060	0.090
						2" Ice			
Sector Mount [SM 510-3]	C	None		0.000	189.000	No Ice	40.100	40.100	2.396
						1/2" Ice	57.330	57.330	3.089
						1" Ice	74.560	74.560	3.782
						2" Ice	109.020	109.020	5.167
183									
APXV18-206517LS w/ Mount Pipe	A	From Leg	1.000 0.000 0.000	0.000	183.000	No Ice	5.286	4.667	0.053
						1/2" Ice	5.839	5.822	0.097
						1" Ice	6.357	6.687	0.149
						2" Ice	7.417	8.461	0.279
APXV18-206517LS w/ Mount Pipe	B	From Leg	1.000 0.000 0.000	0.000	183.000	No Ice	5.286	4.667	0.053
						1/2" Ice	5.839	5.822	0.097
						1" Ice	6.357	6.687	0.149
						2" Ice	7.417	8.461	0.279
APXV18-206517LS w/ Mount Pipe	C	From Leg	1.000 0.000 0.000	0.000	183.000	No Ice	5.286	4.667	0.053
						1/2" Ice	5.839	5.822	0.097
						1" Ice	6.357	6.687	0.149
						2" Ice	7.417	8.461	0.279
Pipe Mount [PM 601-3]	C	None		0.000	183.000	No Ice	4.390	4.390	0.195
						1/2" Ice	5.480	5.480	0.237
						1" Ice	6.570	6.570	0.280
						2" Ice	8.750	8.750	0.365
175									
(4) DB844H90E-XY w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	175.000	No Ice	3.299	4.802	0.032
						1/2" Ice	3.667	5.416	0.072
						1" Ice	4.035	6.040	0.117
						2" Ice	4.796	7.337	0.228
(4) DB844H90E-XY w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	175.000	No Ice	3.299	4.802	0.032
						1/2" Ice	3.667	5.416	0.072
						1" Ice	4.035	6.040	0.117
						2" Ice	4.796	7.337	0.228
(4) DB844H90E-XY w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	175.000	No Ice	3.299	4.802	0.032
						1/2" Ice	3.667	5.416	0.072
						1" Ice	4.035	6.040	0.117
						2" Ice	4.796	7.337	0.228
6' x 2" Mount Pipe	C	From Face	2.000 0.000 4.000	0.000	175.000	No Ice	1.425	1.425	0.022
						1/2" Ice	1.925	1.925	0.033
						1" Ice	2.294	2.294	0.048
						2" Ice	3.060	3.060	0.090
6' x 2" Mount Pipe	C	From Face	2.000 0.000 4.000	0.000	175.000	No Ice	1.425	1.425	0.022
						1/2" Ice	1.925	1.925	0.033
						1" Ice	2.294	2.294	0.048
						2" Ice	3.060	3.060	0.090
Sector Mount [SM 510-3]	C	None		0.000	175.000	No Ice	40.100	40.100	2.396
						1/2" Ice	57.330	57.330	3.089
						1" Ice	74.560	74.560	3.782
						2" Ice	109.020	109.020	5.167
167									
1151-3	A	From Leg	6.000 0.000 6.000	0.000	167.000	No Ice	4.180	4.180	0.016
						1/2" Ice	5.731	5.731	0.047
						1" Ice	7.299	7.299	0.087
						2" Ice	10.485	10.485	0.197

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
Side Arm Mount [SO 308-1]	A	From Leg	3.000 0.000 0.000	0.000	167.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
164									
1151-3	B	From Leg	6.000 0.000 9.000	0.000	164.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.180 5.731 7.299 10.485	4.180 5.731 7.299 10.485	0.016 0.047 0.087 0.197
Side Arm Mount [SO 308-1]	B	From Leg	3.000 0.000 0.000	0.000	164.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
162									
SD310-HL	A	From Leg	6.000 0.000 -2.000	0.000	162.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.107 1.357 1.617 2.163	1.107 1.357 1.617 2.163	6.500 6.510 6.524 6.559
Side Arm Mount [SO 308-1]	A	From Leg	3.000 0.000 0.000	0.000	162.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
147									
1151-3	A	From Leg	6.000 0.000 6.000	0.000	147.000	No Ice 1/2" Ice 1" Ice 2" Ice	4.180 5.731 7.299 10.485	4.180 5.731 7.299 10.485	0.016 0.047 0.087 0.197
Side Arm Mount [SO 308-1]	A	From Leg	3.000 0.000 0.000	0.000	147.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
145									
SD310-HL	B	From Leg	6.000 0.000 3.000	0.000	145.000	No Ice 1/2" Ice 1" Ice 2" Ice	1.107 1.357 1.617 2.163	1.107 1.357 1.617 2.163	6.500 6.510 6.524 6.559
Side Arm Mount [SO 308-1]	B	From Leg	3.000 0.000 0.000	0.000	145.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
139									
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	A	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	B	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383
ERICSSON AIR 21 B4A B2P w/ Mount Pipe	C	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	6.329 6.775 7.214 8.117	5.642 6.426 7.131 8.591	0.112 0.169 0.233 0.383
KRY 112 144/1	A	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.352 0.428 0.512 0.701	0.162 0.219 0.285 0.437	0.011 0.014 0.018 0.032
KRY 112 144/1	B	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.352 0.428 0.512 0.701	0.162 0.219 0.285 0.437	0.011 0.014 0.018 0.032
KRY 112 144/1	C	From Leg	2.000 0.000 1.000	0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.352 0.428 0.512 0.701	0.162 0.219 0.285 0.437	0.011 0.014 0.018 0.032
Side Arm Mount [SO 201-3]	C	None		0.000	139.000	No Ice 1/2" Ice 1" Ice 2" Ice	5.710 7.910 10.110 14.510	5.710 7.910 10.110 14.510	0.288 0.351 0.414 0.541
128 1142-2C	A	From Leg	6.000 0.000 4.000	0.000	128.000	No Ice 1/2" Ice 1" Ice 2" Ice	2.092 3.374 4.673 7.320	2.092 3.374 4.673 7.320	0.024 0.041 0.066 0.140
Side Arm Mount [SO 308-1]	A	From Leg	3.000 0.000 0.000	0.000	128.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.980 1.700 2.420 3.860	3.030 5.220 7.410 11.790	0.053 0.079 0.105 0.156
51 GPS_A	C	From Leg	2.000 0.000 0.000	0.000	51.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.255 0.320 0.393 0.561	0.255 0.320 0.393 0.561	0.001 0.005 0.010 0.025
Side Arm Mount [SO 701-1]	C	From Leg	1.000 0.000 0.000	0.000	51.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.850 1.140 1.430 2.010	1.670 2.340 3.010 4.350	0.065 0.079 0.093 0.121
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Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
HPD2-23	C	Paraboloid w/Shroud (HP)	From Leg	2.000 0.000 4.000	50.000		175.000	2.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.142 3.409 3.676 4.211	0.027 0.044 0.062 0.097
HPD2-23	C	Paraboloid w/Shroud (HP)	From Leg	2.000 0.000 4.000	-90.000		175.000	2.000	No Ice 1/2" Ice 1" Ice 2" Ice	3.142 3.409 3.676 4.211	0.027 0.044 0.062 0.097
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Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service

Comb. No.	Description
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	212.625 - 202.458	Leg	Max Tension	1	0.000	0.000	0.000
			Max. Compression	31	-4.675	0.069	-0.004
			Max. Mx	22	-1.093	0.482	-0.002
			Max. My	20	-1.691	0.000	0.500
			Max. Vy	14	1.710	-0.301	0.003
			Max. Vx	4	1.713	-0.002	-0.285
		Diagonal	Max Tension	25	3.202	0.000	0.000
			Max. Compression	24	-3.272	0.000	0.000
			Max. Mx	26	-0.085	0.042	0.000
			Max. Vy	26	-0.025	0.000	0.000
		Horizontal	Max Tension	14	2.348	-0.009	0.003
			Max. Compression	3	-2.309	0.000	0.000
			Max. Mx	29	-0.183	-0.027	-0.002
			Max. My	14	-1.075	-0.011	-0.006
			Max. Vy	29	-0.027	-0.027	-0.002
			Max. Vx	14	-0.001	-0.011	-0.006
		Top Girt	Max Tension	15	0.254	-0.005	0.000
			Max. Compression	2	-0.254	0.000	0.000
			Max. Mx	29	-0.028	-0.023	-0.000
			Max. My	2	0.144	-0.006	0.001
			Max. Vy	29	0.026	-0.023	-0.000
			Max. Vx	2	-0.000	-0.006	0.001
		Inner Bracing	Max Tension	2	0.004	0.000	0.000
			Max. Compression	2	-0.004	0.000	0.000
			Max. Mx	26	-0.000	-0.023	0.000
			Max. Vy	26	0.022	0.000	0.000
T2	202.458 - 182.292	Leg	Max Tension	23	19.216	0.128	0.015
			Max. Compression	18	-28.088	0.294	0.005
			Max. Mx	6	1.600	1.363	0.008
			Max. My	13	-2.491	-0.001	1.384
			Max. Vy	14	-1.442	0.125	-0.026
			Max. Vx	13	-1.467	0.000	0.111
		Diagonal	Max Tension	17	9.599	0.000	0.000
			Max. Compression	16	-9.672	0.000	0.000
			Max. Mx	26	-0.077	0.051	0.000
			Max. Vy	26	-0.026	0.000	0.000
		Horizontal	Max Tension	4	5.208	-0.012	-0.000
			Max. Compression	17	-5.177	0.000	0.000
			Max. Mx	37	-0.210	-0.035	-0.003
			Max. My	22	-0.756	-0.022	-0.012
			Max. Vy	37	0.029	-0.035	-0.003
			Max. Vx	22	0.003	0.000	0.000
		Inner Bracing	Max Tension	11	0.006	0.000	0.000
			Max. Compression	22	-0.006	0.000	0.000
			Max. Mx	26	-0.000	-0.023	0.000
			Max. Vy	26	0.022	0.000	0.000
T3	182.292 - 162.104	Leg	Max Tension	23	56.156	-0.278	0.003
			Max. Compression	18	-69.816	0.227	0.087
			Max. Mx	14	40.913	-0.358	-0.006
			Max. My	24	-6.500	-0.023	0.451
			Max. Vy	6	-0.956	-0.343	-0.061
			Max. Vx	24	0.999	-0.023	0.451
		Diagonal	Max Tension	9	9.962	0.000	0.000
			Max. Compression	8	-10.048	0.000	0.000
			Max. Mx	26	-0.112	0.068	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	26	-0.031	0.000	0.000
		Horizontal	Max Tension	8	6.174	0.000	0.000
			Max. Compression	8	-6.161	0.000	0.000
			Max. Mx	37	-0.229	-0.041	-0.003
			Max. My	10	1.234	-0.001	0.012
			Max. Vy	37	0.032	-0.041	-0.003
			Max. Vx	10	-0.003	0.000	0.000
		Inner Bracing	Max Tension	11	0.005	0.000	0.000
			Max. Compression	22	-0.007	0.000	0.000
			Max. Mx	26	-0.004	-0.031	0.000
			Max. Vy	26	0.025	0.000	0.000
T4	162.104 - 141.896	Leg	Max Tension	23	94.287	-0.486	-0.001
			Max. Compression	10	-119.347	0.683	-0.120
			Max. Mx	22	80.234	-1.463	0.064
			Max. My	12	-6.191	-0.003	-1.147
			Max. Vy	14	-0.800	-0.202	0.022
			Max. Vx	12	0.250	-0.003	-1.147
		Diagonal	Max Tension	8	9.938	0.000	0.000
			Max. Compression	8	-10.056	0.000	0.000
			Max. Mx	26	-0.294	0.086	0.000
			Max. Vy	26	0.037	0.000	0.000
		Horizontal	Max Tension	20	6.736	-0.025	-0.000
			Max. Compression	20	-6.888	-0.025	-0.000
			Max. Mx	29	-0.182	-0.070	-0.004
			Max. My	10	0.867	-0.003	0.016
			Max. Vy	29	0.047	-0.070	-0.004
			Max. Vx	10	-0.003	0.000	0.000
		Inner Bracing	Max Tension	11	0.005	0.000	0.000
			Max. Compression	22	-0.008	0.000	0.000
			Max. Mx	26	-0.004	-0.045	0.000
			Max. Vy	26	-0.030	0.000	0.000
T5	141.896 - 121.688	Leg	Max Tension	7	118.950	-0.878	0.065
			Max. Compression	10	-149.722	0.619	-0.083
			Max. Mx	22	91.536	-1.463	0.064
			Max. My	12	-6.823	-0.003	-1.147
			Max. Vy	22	-0.442	-1.463	0.064
			Max. Vx	12	-0.464	-0.003	-1.147
		Diagonal	Max Tension	20	13.035	0.000	0.000
			Max. Compression	20	-13.220	0.000	0.000
			Max. Mx	26	-0.113	0.179	0.000
			Max. Vy	26	-0.057	0.000	0.000
		Horizontal	Max Tension	20	7.837	-0.034	-0.000
			Max. Compression	20	-7.786	-0.034	-0.000
			Max. Mx	29	-0.072	-0.092	-0.004
			Max. My	10	1.625	-0.001	0.015
			Max. Vy	29	-0.053	-0.092	-0.004
			Max. Vx	10	-0.002	-0.001	0.015
		Inner Bracing	Max Tension	11	0.003	0.000	0.000
			Max. Compression	37	-0.008	0.000	0.000
			Max. Mx	26	-0.007	-0.059	0.000
			Max. Vy	26	-0.034	0.000	0.000
T6	121.688 - 101.479	Leg	Max Tension	7	147.943	-0.627	0.022
			Max. Compression	10	-183.255	0.919	-0.146
			Max. Mx	6	144.314	-0.946	0.037
			Max. My	12	-12.609	-0.040	-1.095
			Max. Vy	6	0.127	-0.946	0.037
			Max. Vx	24	-0.208	-0.034	1.094
		Diagonal	Max Tension	20	12.104	0.000	0.000
			Max. Compression	20	-12.321	0.000	0.000
			Max. Mx	26	-0.179	0.219	0.000
			Max. Vy	26	-0.065	0.000	0.000
		Horizontal	Max Tension	20	7.976	-0.042	-0.000
			Max. Compression	20	-7.926	-0.042	-0.000
			Max. Mx	29	-0.114	-0.108	-0.003
			Max. My	22	-0.278	-0.059	-0.014
			Max. Vy	29	-0.059	-0.108	-0.003

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	22	-0.002	0.000	0.000
		Inner Bracing	Max Tension	19	0.001	0.000	0.000
			Max. Compression	37	-0.010	0.000	0.000
			Max. Mx	26	-0.009	-0.105	0.000
			Max. Vy	26	0.051	0.000	0.000
T7	101.479 - 81.2708	Leg	Max Tension	7	174.296	-0.613	0.029
			Max. Compression	10	-214.208	0.783	-0.093
			Max. Mx	6	157.667	-0.946	0.037
			Max. My	12	-13.691	-0.040	-1.095
			Max. Vy	6	-0.127	-0.946	0.037
			Max. Vx	24	0.199	-0.034	1.093
		Diagonal	Max Tension	20	12.201	0.000	0.000
			Max. Compression	20	-12.578	0.000	0.000
			Max. Mx	26	-0.300	0.322	0.000
			Max. Vy	26	-0.090	0.000	0.000
		Horizontal	Max Tension	20	8.756	-0.089	-0.000
			Max. Compression	20	-8.615	-0.089	-0.000
			Max. Mx	29	-0.016	-0.191	-0.005
			Max. My	22	-1.219	-0.123	-0.018
			Max. Vy	29	0.089	-0.191	-0.005
			Max. Vx	22	0.002	-0.123	-0.018
		Inner Bracing	Max Tension	19	0.000	0.000	0.000
			Max. Compression	37	-0.013	0.000	0.000
			Max. Mx	26	-0.012	-0.159	0.000
			Max. Vy	26	0.068	0.000	0.000
T8	81.2708 - 61	Leg	Max Tension	7	199.049	-1.269	0.020
			Max. Compression	10	-243.844	0.734	-0.078
			Max. Mx	6	182.199	-1.281	0.019
			Max. My	12	-17.534	-0.052	-1.224
			Max. Vy	6	0.156	-1.281	0.019
			Max. Vx	12	0.201	-0.052	-1.224
		Diagonal	Max Tension	21	12.040	0.000	0.000
			Max. Compression	20	-12.519	0.000	0.000
			Max. Mx	26	-0.404	0.383	0.000
			Max. Vy	26	-0.101	0.000	0.000
		Horizontal	Max Tension	20	9.223	-0.110	-0.000
			Max. Compression	20	-9.004	-0.110	-0.000
			Max. Mx	29	0.056	-0.227	-0.005
			Max. My	22	0.158	-0.132	-0.017
			Max. Vy	29	-0.098	-0.227	-0.005
			Max. Vx	22	-0.002	-0.132	-0.017
		Inner Bracing	Max Tension	1	0.000	0.000	0.000
			Max. Compression	29	-0.015	0.000	0.000
			Max. Mx	26	-0.014	-0.255	0.000
			Max. Vy	26	0.096	0.000	0.000
T9	61 - 40.6667	Leg	Max Tension	23	223.739	-1.786	-0.007
			Max. Compression	10	-272.921	-2.659	-0.300
			Max. Mx	10	-272.921	-2.659	-0.300
			Max. My	24	-23.869	-0.621	3.478
			Max. Vy	10	0.532	2.043	-0.012
			Max. Vx	24	-0.432	-0.621	3.478
		Diagonal	Max Tension	21	13.044	0.000	0.000
			Max. Compression	20	-13.578	0.000	0.000
			Max. Mx	26	-0.481	0.444	0.000
			Max. Vy	26	-0.110	0.000	0.000
		Horizontal	Max Tension	20	10.501	-0.136	-0.000
			Max. Compression	21	-10.130	-0.102	-0.000
			Max. Mx	37	0.659	-0.272	-0.004
			Max. My	22	0.803	-0.152	-0.016
			Max. Vy	37	-0.107	-0.272	-0.004
			Max. Vx	22	0.001	0.000	0.000
		Inner Bracing	Max Tension	1	0.000	0.000	0.000
			Max. Compression	29	-0.015	0.000	0.000
			Max. Mx	26	-0.014	-0.312	0.000
			Max. Vy	26	0.104	0.000	0.000
T10	40.6667 - 20.3333	Leg	Max Tension	23	234.295	1.480	0.290
			Max. Compression	10	-285.924	-7.797	-0.634

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	10	-285.447	8.952	0.476
			Max. My	24	-26.432	-1.307	5.699
			Max. Vy	10	1.697	8.952	0.476
			Max. Vx	24	-1.005	-1.307	5.699
		Diagonal	Max Tension	21	18.065	-0.144	-0.028
			Max. Compression	20	-19.102	0.000	0.000
			Max. Mx	22	13.532	-0.202	0.062
			Max. My	20	-19.005	-0.002	-0.107
			Max. Vy	37	-0.073	-0.177	0.003
			Max. Vx	20	0.009	0.000	0.000
		Horizontal	Max Tension	20	10.116	-0.203	-0.000
			Max. Compression	20	-10.160	-0.205	-0.000
			Max. Mx	37	-0.699	-0.389	-0.006
			Max. My	18	1.299	-0.128	0.024
			Max. Vy	37	0.137	-0.389	-0.006
			Max. Vx	18	0.002	-0.133	0.024
		Redund Horz 1 Bracing	Max Tension	10	4.966	0.000	0.000
			Max. Compression	10	-4.966	0.000	0.000
			Max. Mx	26	1.007	0.041	0.000
			Max. Vy	26	-0.026	0.000	0.000
		Redund Diag 1 Bracing	Max Tension	10	4.587	0.000	0.000
			Max. Compression	10	-4.587	0.000	0.000
			Max. Mx	26	1.009	0.084	0.000
			Max. Vy	26	-0.029	0.000	0.000
		Redund Hip 1 Bracing	Max Tension	21	0.015	0.000	0.000
			Max. Compression	8	-0.027	0.000	0.000
			Max. Mx	26	-0.013	0.041	0.000
			Max. Vy	26	-0.026	0.000	0.000
		Redund Hip Diagonal 1 Bracing	Max Tension	31	0.073	0.000	0.000
			Max. Compression	37	-0.084	0.000	0.000
			Max. Mx	26	0.064	0.294	0.000
			Max. Vy	26	-0.077	0.000	0.000
		Inner Bracing	Max Tension	1	0.000	0.000	0.000
			Max. Compression	31	-0.018	0.000	0.000
			Max. Mx	26	-0.017	0.335	0.000
			Max. Vy	26	-0.106	0.000	0.000
T11	20.3333 - 0	Leg	Max Tension	23	256.597	5.235	0.652
			Max. Compression	10	-313.157	0.000	0.000
			Max. Mx	10	-312.682	8.137	0.434
			Max. My	24	-28.717	-1.308	5.697
			Max. Vy	10	-1.622	8.137	0.434
			Max. Vx	24	0.979	-1.308	5.697
		Diagonal	Max Tension	21	20.867	-0.140	-0.023
			Max. Compression	20	-21.863	0.000	0.000
			Max. Mx	22	15.611	-0.202	0.061
			Max. My	20	-21.056	-0.027	-0.106
			Max. Vy	37	-0.075	-0.184	0.003
			Max. Vx	20	0.008	-0.027	-0.106
		Horizontal	Max Tension	20	12.495	-0.243	-0.000
			Max. Compression	21	-12.176	-0.186	-0.000
			Max. Mx	37	0.734	-0.404	-0.007
			Max. My	22	-1.198	-0.314	-0.024
			Max. Vy	37	-0.140	-0.404	-0.007
			Max. Vx	22	-0.002	0.000	0.000
		Redund Horz 1 Bracing	Max Tension	10	5.434	0.000	0.000
			Max. Compression	10	-5.434	0.000	0.000
			Max. Mx	26	1.104	0.046	0.000
			Max. Vy	26	-0.027	0.000	0.000
		Redund Diag 1 Bracing	Max Tension	10	4.694	0.000	0.000
			Max. Compression	10	-4.694	0.000	0.000
			Max. Mx	26	1.031	0.091	0.000
			Max. Vy	26	-0.030	0.000	0.000
		Redund Hip 1	Max Tension	21	0.014	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
		Bracing					
			Max. Compression	8	-0.025	0.000	0.000
			Max. Mx	26	-0.010	0.046	0.000
			Max. Vy	26	-0.027	0.000	0.000
		Redund Hip Diagonal 1 Bracing	Max Tension	31	0.069	0.000	0.000
			Max. Compression	37	-0.078	0.000	0.000
			Max. Mx	26	0.061	0.319	0.000
			Max. Vy	26	-0.080	0.000	0.000
		Inner Bracing	Max Tension	23	0.001	0.000	0.000
			Max. Compression	31	-0.016	0.000	0.000
			Max. Mx	26	-0.014	0.387	0.000
			Max. Vy	26	-0.111	0.000	0.000

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	335.775	33.836	-19.945
	Max. H_x	18	335.775	33.836	-19.945
	Max. H_z	7	-280.928	-30.169	17.823
	Min. Vert	7	-280.928	-30.169	17.823
	Min. H_x	7	-280.928	-30.169	17.823
	Min. H_z	18	335.775	33.836	-19.945
Leg B	Max. Vert	10	343.506	-34.901	-18.806
	Max. H_x	23	-283.222	31.167	16.593
	Max. H_z	23	-283.222	31.167	16.593
	Min. Vert	23	-283.222	31.167	16.593
	Min. H_x	10	343.506	-34.901	-18.806
	Min. H_z	10	343.506	-34.901	-18.806
Leg A	Max. Vert	2	326.086	-0.893	37.144
	Max. H_x	20	34.623	6.534	2.509
	Max. H_z	2	326.086	-0.893	37.144
	Min. Vert	15	-266.012	0.943	-32.795
	Min. H_x	9	25.386	-6.481	1.834
	Min. H_z	15	-266.012	0.943	-32.795

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	83.385	0.000	0.000	-18.749	-38.078	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	100.062	-0.043	-60.805	-7615.971	-37.133	-48.168
0.9 Dead+1.0 Wind 0 deg - No Ice	75.046	-0.043	-60.805	-7610.347	-25.709	-48.168
1.2 Dead+1.0 Wind 30 deg - No Ice	100.062	30.797	-53.256	-6615.001	-3857.788	-11.842
0.9 Dead+1.0 Wind 30 deg - No Ice	75.046	30.797	-53.256	-6609.376	-3846.364	-11.842
1.2 Dead+1.0 Wind 60 deg - No Ice	100.062	56.280	-32.332	-3963.259	-6917.541	-18.564
0.9 Dead+1.0 Wind 60 deg - No Ice	75.046	56.280	-32.332	-3957.634	-6906.118	-18.564
1.2 Dead+1.0 Wind 90 deg - No Ice	100.062	67.063	0.036	-15.263	-8197.271	7.609
0.9 Dead+1.0 Wind 90 deg - No Ice	75.046	67.063	0.036	-9.639	-8185.847	7.609
1.2 Dead+1.0 Wind 120 deg	100.062	56.601	32.596	3989.051	-7014.405	61.777

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
- No Ice						
0.9 Dead+1.0 Wind 120 deg - No Ice	75.046	56.601	32.596	3994.676	-7002.981	61.777
1.2 Dead+1.0 Wind 150 deg - No Ice	100.062	30.253	52.169	6540.554	-3856.683	93.254
0.9 Dead+1.0 Wind 150 deg - No Ice	75.046	30.253	52.169	6546.178	-3845.259	93.254
1.2 Dead+1.0 Wind 180 deg - No Ice	100.062	0.051	60.777	7566.003	-55.566	47.977
0.9 Dead+1.0 Wind 180 deg - No Ice	75.046	0.051	60.777	7571.628	-44.143	47.977
1.2 Dead+1.0 Wind 210 deg - No Ice	100.062	-30.824	53.237	6566.623	3771.285	11.611
0.9 Dead+1.0 Wind 210 deg - No Ice	75.046	-30.824	53.237	6572.248	3782.709	11.611
1.2 Dead+1.0 Wind 240 deg - No Ice	100.062	-56.245	32.362	3923.603	6819.928	18.901
0.9 Dead+1.0 Wind 240 deg - No Ice	75.046	-56.245	32.362	3929.228	6831.351	18.901
1.2 Dead+1.0 Wind 270 deg - No Ice	100.062	-67.039	-0.054	-33.026	8101.720	-7.596
0.9 Dead+1.0 Wind 270 deg - No Ice	75.046	-67.039	-0.054	-27.401	8113.144	-7.596
1.2 Dead+1.0 Wind 300 deg - No Ice	100.062	-56.593	-32.607	-4035.992	6921.616	-61.803
0.9 Dead+1.0 Wind 300 deg - No Ice	75.046	-56.593	-32.607	-4030.367	6933.040	-61.803
1.2 Dead+1.0 Wind 330 deg - No Ice	100.062	-30.245	-52.178	-6587.290	3763.954	-93.315
0.9 Dead+1.0 Wind 330 deg - No Ice	75.046	-30.245	-52.178	-6581.665	3775.378	-93.315
1.2 Dead+1.0 Ice+1.0 Temp	207.623	0.000	0.000	12.088	53.555	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	207.623	0.007	-16.249	-2008.631	52.599	-19.857
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	207.623	8.520	-14.679	-1786.770	-991.806	-4.905
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	207.623	15.473	-8.885	-1061.648	-1819.571	1.877
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	207.623	17.986	-0.009	10.885	-2123.557	5.489
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	207.623	14.968	8.590	1064.397	-1782.768	17.222
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	207.623	8.227	14.175	1774.220	-970.615	26.909
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	207.623	-0.006	16.244	2031.883	54.269	19.822
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	207.623	-8.525	14.675	1810.318	1099.826	4.862
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	207.623	-15.466	8.890	1086.818	1925.525	-1.815
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	207.623	-17.981	0.005	12.680	2229.894	-5.487
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	207.623	-14.967	-8.592	-1040.582	1889.618	-17.227
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	207.623	-8.226	-14.177	-1750.367	1077.477	-26.921
Dead+Wind 0 deg - Service	83.385	-0.009	-12.953	-1636.294	-36.255	-10.261
Dead+Wind 30 deg - Service	83.385	6.560	-11.344	-1423.069	-850.122	-2.522
Dead+Wind 60 deg - Service	83.385	11.989	-6.887	-858.201	-1501.904	-3.954
Dead+Wind 90 deg - Service	83.385	14.286	0.008	-17.208	-1774.509	1.621
Dead+Wind 120 deg - Service	83.385	12.057	6.943	835.782	-1522.538	13.160
Dead+Wind 150 deg - Service	83.385	6.444	11.113	1379.298	-849.887	19.865
Dead+Wind 180 deg - Service	83.385	0.011	12.947	1597.737	-40.181	10.220
Dead+Wind 210 deg - Service	83.385	-6.566	11.340	1384.851	775.006	2.473
Dead+Wind 240 deg -	83.385	-11.981	6.894	821.841	1424.421	4.026

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
Service						
Dead+Wind 270 deg - Service	83.385	-14.281	-0.012	-20.992	1697.465	-1.618
Dead+Wind 300 deg - Service	83.385	-12.055	-6.946	-873.694	1446.082	-13.165
Dead+Wind 330 deg - Service	83.385	-6.443	-11.115	-1417.166	773.444	-19.878

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.000	-83.385	0.000	-0.000	83.385	0.000	0.000%
2	-0.043	-100.062	-60.805	0.043	100.062	60.805	0.000%
3	-0.043	-75.046	-60.805	0.043	75.046	60.805	0.000%
4	30.797	-100.062	-53.256	-30.797	100.062	53.256	0.000%
5	30.797	-75.046	-53.256	-30.797	75.046	53.256	0.000%
6	56.280	-100.062	-32.332	-56.280	100.062	32.332	0.000%
7	56.280	-75.046	-32.332	-56.280	75.046	32.332	0.000%
8	67.063	-100.062	0.036	-67.063	100.062	-0.036	0.000%
9	67.063	-75.046	0.036	-67.063	75.046	-0.036	0.000%
10	56.601	-100.062	32.596	-56.601	100.062	-32.596	0.000%
11	56.601	-75.046	32.596	-56.601	75.046	-32.596	0.000%
12	30.253	-100.062	52.169	-30.253	100.062	-52.169	0.000%
13	30.253	-75.046	52.169	-30.253	75.046	-52.169	0.000%
14	0.051	-100.062	60.777	-0.051	100.062	-60.777	0.000%
15	0.051	-75.046	60.777	-0.051	75.046	-60.777	0.000%
16	-30.824	-100.062	53.237	30.824	100.062	-53.237	0.000%
17	-30.824	-75.046	53.237	30.824	75.046	-53.237	0.000%
18	-56.245	-100.062	32.362	56.245	100.062	-32.362	0.000%
19	-56.245	-75.046	32.362	56.245	75.046	-32.362	0.000%
20	-67.039	-100.062	-0.054	67.039	100.062	0.054	0.000%
21	-67.039	-75.046	-0.054	67.039	75.046	0.054	0.000%
22	-56.593	-100.062	-32.607	56.593	100.062	32.607	0.000%
23	-56.593	-75.046	-32.607	56.593	75.046	32.607	0.000%
24	-30.245	-100.062	-52.178	30.245	100.062	52.178	0.000%
25	-30.245	-75.046	-52.178	30.245	75.046	52.178	0.000%
26	0.000	-207.623	0.000	0.000	207.623	0.000	0.000%
27	0.007	-207.623	-16.249	-0.007	207.623	16.249	0.000%
28	8.520	-207.623	-14.679	-8.520	207.623	14.679	0.000%
29	15.473	-207.623	-8.885	-15.473	207.623	8.885	0.000%
30	17.986	-207.623	-0.009	-17.986	207.623	0.009	0.000%
31	14.968	-207.623	8.590	-14.968	207.623	-8.590	0.000%
32	8.227	-207.623	14.175	-8.227	207.623	-14.175	0.000%
33	-0.006	-207.623	16.244	0.006	207.623	-16.244	0.000%
34	-8.525	-207.623	14.675	8.525	207.623	-14.675	0.000%
35	-15.466	-207.623	8.890	15.466	207.623	-8.890	0.000%
36	-17.981	-207.623	0.005	17.981	207.623	-0.005	0.000%
37	-14.967	-207.623	-8.592	14.967	207.623	8.592	0.000%
38	-8.226	-207.623	-14.177	8.226	207.623	14.177	0.000%
39	-0.009	-83.385	-12.953	0.009	83.385	12.953	0.000%
40	6.560	-83.385	-11.344	-6.560	83.385	11.344	0.000%
41	11.989	-83.385	-6.887	-11.989	83.385	6.887	0.000%
42	14.286	-83.385	0.008	-14.286	83.385	-0.008	0.000%
43	12.057	-83.385	6.943	-12.057	83.385	-6.943	0.000%
44	6.444	-83.385	11.113	-6.444	83.385	-11.113	0.000%
45	0.011	-83.385	12.947	-0.011	83.385	-12.947	0.000%
46	-6.566	-83.385	11.340	6.566	83.385	-11.340	0.000%
47	-11.981	-83.385	6.894	11.981	83.385	-6.894	0.000%
48	-14.281	-83.385	-0.012	14.281	83.385	0.012	0.000%
49	-12.055	-83.385	-6.946	12.055	83.385	6.946	0.000%
50	-6.443	-83.385	-11.115	6.443	83.385	11.115	0.000%

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	212.625 - 202.458	3.737	42	0.156	0.044
T2	202.458 - 182.292	3.405	42	0.156	0.044
T3	182.292 - 162.104	2.738	42	0.149	0.042
T4	162.104 - 141.896	2.114	42	0.135	0.036
T5	141.896 - 121.688	1.560	42	0.115	0.030
T6	121.688 - 101.479	1.115	42	0.092	0.024
T7	101.479 - 81.2708	0.754	42	0.074	0.019
T8	81.2708 - 61	0.478	42	0.055	0.015
T9	61 - 40.6667	0.270	42	0.039	0.011
T10	40.6667 - 20.3333	0.125	48	0.023	0.008
T11	20.3333 - 0	0.042	48	0.011	0.004

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
216.625	Flash Beacon Lighting	42	3.737	0.156	0.044	266974
213.625	Lightning Rod 5/8" x 6'	42	3.737	0.156	0.044	266974
212.625	Climb Leg Extension	42	3.737	0.156	0.044	266974
208.000	(2) LPA-80080/6CF w/ Mount Pipe	42	3.586	0.156	0.044	266974
199.000	APXVSPP18-C-A20 w/ Mount Pipe	42	3.290	0.155	0.044	272627
189.000	7770.00 w/ Mount Pipe	42	2.958	0.152	0.043	128436
183.000	APXV18-206517LS w/ Mount Pipe	42	2.761	0.149	0.043	72681
179.000	HPD2-23	42	2.633	0.147	0.042	72330
175.000	(4) DB844H90E-XY w/ Mount Pipe	42	2.506	0.145	0.041	68699
167.000	1151-3	42	2.260	0.139	0.038	51500
164.000	1151-3	42	2.170	0.136	0.037	47439
162.000	SD310-HL	42	2.111	0.135	0.036	45931
147.000	1151-3	42	1.690	0.120	0.031	41977
145.000	SD310-HL	42	1.638	0.118	0.031	40369
139.000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	42	1.490	0.112	0.029	39798
128.000	1142-2C	42	1.244	0.099	0.026	55412
112.000	Side Lighting	42	0.932	0.083	0.022	60607
51.000	GPS_A	42	0.190	0.031	0.010	77706

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	212.625 - 202.458	16.656	8	0.683	0.204
T2	202.458 -	15.184	8	0.682	0.205

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
	182.292				
T3	182.292 - 162.104	12.235	8	0.648	0.199
T4	162.104 - 141.896	9.493	8	0.577	0.169
T5	141.896 - 121.688	7.077	8	0.498	0.140
T6	121.688 - 101.479	5.099	8	0.407	0.114
T7	101.479 - 81.2708	3.469	8	0.329	0.089
T8	81.2708 - 61	2.213	8	0.247	0.071
T9	61 - 40.6667	1.259	8	0.176	0.053
T10	40.6667 - 20.3333	0.585	20	0.105	0.036
T11	20.3333 - 0	0.196	20	0.053	0.017

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
216.625	Flash Beacon Lighting	8	16.656	0.683	0.204	61775
213.625	Lightning Rod 5/8" x 6'	8	16.656	0.683	0.204	61775
212.625	Climb Leg Extension	8	16.656	0.683	0.204	61775
208.000	(2) LPA-80080/6CF w/ Mount Pipe	8	15.989	0.683	0.205	61775
199.000	APXVSPP18-C-A20 w/ Mount Pipe	8	14.677	0.679	0.205	60410
189.000	7770.00 w/ Mount Pipe	8	13.206	0.664	0.204	32398
183.000	APXV18-206517LS w/ Mount Pipe	8	12.336	0.650	0.200	17709
179.000	HPD2-23	8	11.768	0.638	0.196	16413
175.000	(4) DB844H90E-XY w/ Mount Pipe	8	11.211	0.625	0.190	16003
167.000	1151-3	8	10.132	0.596	0.177	14367
164.000	1151-3	8	9.738	0.584	0.172	13833
162.000	SD310-HL	8	9.480	0.577	0.169	13491
147.000	1151-3	8	7.647	0.520	0.147	10715
145.000	SD310-HL	8	7.420	0.512	0.144	10253
139.000	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	8	6.767	0.486	0.136	10228
128.000	1142-2C	8	5.675	0.435	0.122	13677
112.000	Side Lighting	8	4.273	0.369	0.101	13957
51.000	GPS_A	8	0.891	0.140	0.045	17168

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	212.625	Leg	A325N	0.750	4	0.390	30.101	0.013	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	1.091	13.806	0.079	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	1.174	13.806	0.085	1.05	Bolt Shear
T2	202.458	Leg	A325N	0.875	4	4.804	41.556	0.116	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	3.224	13.806	0.234	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	2.604	13.806	0.189	1.05	Bolt Shear
T3	182.292	Leg	A325N	1.000	4	14.039	54.517	0.258	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	3.349	13.806	0.243	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	3.087	13.806	0.224	1.05	Bolt Shear

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
T4	162.104	Leg	A325N	1.000	6	15.714	54.517	0.288	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	3.352	13.806	0.243	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	3.444	13.806	0.249	1.05	Bolt Shear
T5	141.896	Leg	A325N	1.000	6	19.825	54.517	0.364	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	4.407	13.806	0.319	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	3.918	13.806	0.284	1.05	Bolt Shear
T6	121.688	Leg	A325N	1.000	6	24.657	54.517	0.452	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	4.107	13.806	0.297	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	3.988	13.806	0.289	1.05	Bolt Shear
T7	101.479	Leg	A325N	1.000	8	21.787	54.517	0.400	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	4.193	13.806	0.304	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	4.378	13.806	0.317	1.05	Bolt Shear
T8	81.2708	Leg	A325N	1.000	8	24.881	54.517	0.456	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	4.173	13.806	0.302	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	4.612	13.806	0.334	1.05	Bolt Shear
T9	61	Leg	A325N	1.000	8	27.967	54.517	0.513	1.05	Bolt Tension
		Diagonal	A325N	0.625	3	4.526	13.806	0.328	1.05	Bolt Shear
		Horizontal	A325N	0.625	2	5.251	13.806	0.380	1.05	Bolt Shear
T10	40.6667	Leg	A325N	1.000	8	29.222	54.517	0.536	1.05	Bolt Tension
		Diagonal	A325N	0.750	3	6.367	19.880	0.320	1.05	Bolt Shear
		Horizontal	A325N	0.750	2	5.080	19.880	0.256	1.05	Bolt Shear
T11	20.3333	Diagonal	A325N	0.750	3	7.288	19.880	0.367	1.05	Bolt Shear
		Horizontal	A325N	0.750	2	6.247	19.880	0.314	1.05	Bolt Shear

Compression Checks

Leg 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	212.625 - 202.458	ROHN 2.5 STD	10.167	5.083	64.4 K=1.00	1.704	-4.675	56.631	0.083 [1]
T2	202.458 - 182.292	ROHN 3 EH	20.167	6.722	71.0 K=1.00	3.016	-28.088	93.888	0.299 [1]
T3	182.292 - 162.104	ROHN 4 EH	20.223	6.741	54.8 K=1.00	4.407	-69.816	159.259	0.438 [1]
T4	162.104 - 141.896	ROHN 5 EH	20.244	6.748	44.0 K=1.00	6.112	-119.347	238.686	0.500 [1]
T5	141.896 - 121.688	ROHN 6 EHS	20.250	10.125	54.6 K=1.00	6.713	-149.722	242.933	0.616 [1]
T6	121.688 - 101.479	ROHN 6 EH	20.260	10.130	55.4 K=1.00	8.405	-183.255	302.237	0.606 [1]
T7	101.479 - 81.2708	ROHN 6 EH	20.260	10.130	55.4 K=1.00	8.405	-214.208	302.237	0.709 [1]
T8	81.2708 - 61	ROHN 8 EHS	20.328	10.164	41.8 K=1.00	9.719	-243.844	384.981	0.633 [1]
T9	61 - 40.6667	ROHN 8 EHS	20.384	10.192	41.9 K=1.00	9.719	-272.921	384.707	0.709 [1]
T10	40.6667 - 20.3333	ROHN 8 EH	20.391	10.196	42.5 K=1.00	12.763	-285.924	503.236	0.568 [1]
T11	20.3333 - 0	ROHN 8 EH	20.373	10.187	42.5 K=1.00	12.763	-313.157	503.352	0.622 [1]

[1] $P_u / \phi P_n$ 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	212.625 - 202.458	ROHN 2 STD	6.639	6.453	98.4 K=1.00	1.075	-3.272	23.829	0.137 [1]
T2	202.458 - 182.292	ROHN 2 STD	7.987	7.717	117.6 K=1.00	1.075	-9.672	17.541	0.551 [1]
T3	182.292 - 162.104	ROHN 2 STD	8.602	8.301	126.5 K=1.00	1.075	-9.974	15.159	0.658 [1]
T4	162.104 - 141.896	ROHN 2 STD	9.291	8.954	136.5 K=1.00	1.075	-9.978	13.026	0.766 [1]
T5	141.896 - 121.688	ROHN 2.5 STD	12.600	12.138	153.7 K=1.00	1.704	-13.220	16.287	0.812 [1]
T6	121.688 - 101.479	ROHN 2.5 STD	13.385	12.964	164.2 K=1.00	1.704	-12.290	14.278	0.861 [1]
T7	101.479 - 81.2708	ROHN 3 STD	14.235	13.843	142.8 K=1.00	2.228	-12.578	24.700	0.509 [1]
T8	81.2708 - 61	ROHN 3 STD	15.213	14.731	151.9 K=1.00	2.228	-12.519	21.813	0.574 [1]
T9	61 - 40.6667	ROHN 3 STD	16.185	15.723	162.2 K=1.00	2.228	-13.578	19.146	0.709 [1]
T10	40.6667 - 20.3333	ROHN 3 STD	24.652	12.326	127.1 K=1.00	2.228	-19.102	31.156	0.613 [1]
T11	20.3333 - 0	ROHN 3 STD	25.288	12.644	130.4 K=1.00	2.228	-21.863	29.608	0.738 [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	212.625 - 202.458	ROHN 1.5 STD	8.521	4.141	79.8 K=1.00	0.799	-2.309	22.582	0.102 [1]
T2	202.458 - 182.292	ROHN 1.5 STD	8.597	4.153	80.0 K=1.00	0.799	-5.177	22.520	0.230 [1]
T3	182.292 - 162.104	ROHN 1.5 STD	10.014	4.819	92.9 K=1.00	0.799	-6.162	19.143	0.322 [1]
T4	162.104 - 141.896	ROHN 2 STD	12.097	5.817	88.7 K=1.00	1.075	-6.888	27.209	0.253 [1]
T5	141.896 - 121.688	ROHN 2 STD	13.917	6.682	101.9 K=1.00	1.075	-7.786	22.640	0.344 [1]
T6	121.688 - 101.479	ROHN 2 STD	16.292	7.870	120.0 K=1.00	1.075	-7.926	16.864	0.470 [1]
T7	101.479 - 81.2708	ROHN 2.5 STD	18.792	9.120	115.5 K=1.00	1.704	-8.615	28.852	0.299 [1]
T8	81.2708 - 61	ROHN 2.5 STD	21.359	10.320	130.7 K=1.00	1.704	-9.004	22.530	0.400 [1]
T9	61 - 40.6667	ROHN 2.5 STD	23.927	11.604	147.0 K=1.00	1.704	-10.131	17.820	0.568 [1]
T10	40.6667 - 20.3333	ROHN 3 STD	25.177	12.229	126.1 K=1.00	2.228	-10.160	31.651	0.321 [1]
T11	20.3333 - 0	ROHN 3 STD	27.833	13.557	139.8 K=1.00	2.228	-12.176	25.753	0.473 [1]

[1] P_u / ϕP_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	212.625 - 202.458	ROHN 1.5 STD	8.500	4.130	79.6 K=1.00	0.799	-0.254	22.635	0.011 [1]

[1] P_u / ϕP_n controls

Redundant Horizontal (1) 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 $\frac{P_u}{\phi P_n}$
T10	40.6667 - 20.3333	ROHN 1.5 STD	6.294	5.935	114.4 K=1.00	0.799	-4.966	13.007	0.382 [1]
T11	20.3333 - 0	ROHN 1.5 STD	6.958	6.599	127.2 K=1.00	0.799	-5.434	11.053	0.492 [1]

[1] P_u / ϕP_n controls

Redundant Diagonal (1) 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 $\frac{P_u}{\phi P_n}$
T10	40.6667 - 20.3333	ROHN 2 STD	11.628	10.887	166.0 K=1.00	1.075	-4.587	8.811	0.521 [1]
T11	20.3333 - 0	ROHN 2 STD	12.021	11.347	173.0 K=1.00	1.075	-4.694	8.111	0.579 [1]

[1] P_u / ϕP_n controls

Redundant Hip (1) 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 $\frac{P_u}{\phi P_n}$
T10	40.6667 - 20.3333	ROHN 1.5 STD	6.294	6.294	121.3 K=1.00	0.799	-0.027	11.936	0.002 [1]
T11	20.3333 - 0	ROHN 1.5 STD	6.958	6.958	134.1 K=1.00	0.799	-0.025	10.041	0.002 [1]

[1] P_u / ϕP_n controls

Redundant Hip Diagonal (1) 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 $\frac{P_u}{\phi P_n}$
T10	40.6667 - 20.3333	ROHN 2.5 STD	15.204	15.204	192.6 K=1.00	1.704	-0.084	10.381	0.008 [1]
T11	20.3333 - 0	ROHN 2.5 STD	16.022	16.022	202.9 K=1.00	1.704	-0.078	9.348	0.008 [1]

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	

[1] $P_u / \phi P_n$ controls

Inner Bracing Design Data (Compression)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	212.625 - 202.458	L2x2x1/8	4.250	4.250	128.3 K=1.00	0.484	-0.004	8.424	0.001 [1]
T2	202.458 - 182.292	L2x2x1/8	4.299	4.299	129.8 K=1.00	0.484	-0.006	8.234	0.001 [1]
T3	182.292 - 162.104	L2x2x1/8	4.660	4.660	140.7 K=1.00	0.484	-0.007	7.008	0.001 [1]
T4	162.104 - 141.896	L2x2x1/8	6.049	6.049	182.6 K=1.00	0.484	-0.007	4.159	0.002 [1]
T5	141.896 - 121.688	L2x2x1/8	6.958	6.958	210.0 K=1.00	0.484	-0.008	3.142	0.003 [1]
T6	121.688 - 101.479	L2 1/2x2 1/2x3/16	8.146	8.146	197.5 K=1.00	0.902	-0.010	6.620	0.001 [1]
T7	101.479 - 81.2708	L3x3x3/16	9.396	9.396	189.2 K=1.00	1.090	-0.013	8.717	0.001 [1]
T8	81.2708 - 61	L3 1/2x3 1/2x1/4	10.680	10.680	184.7 K=1.00	1.690	-0.015	14.185	0.001 [1]
T9	61 - 40.6667	L3 1/2x3 1/2x1/4	11.964	11.964	206.9 K=1.00	1.690	-0.015	11.304	0.001 [1]
T10	40.6667 - 20.3333	ROHN 3 STD	12.589	12.589	129.8 K=1.00	2.228	-0.018	29.869	0.001 [1]
T11	20.3333 - 0	ROHN 3 STD	13.917	13.917	143.5 K=1.00	2.228	-0.016	24.440	0.001 [1]

[1] $P_u / \phi P_n$ controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	212.625 - 202.458	ROHN 2.5 STD	10.167	5.083	64.4	1.704	0.081	76.682	0.001 [1]
T2	202.458 - 182.292	ROHN 3 EH	20.167	6.722	71.0	3.016	19.216	135.717	0.142 [1]
T3	182.292 - 162.104	ROHN 4 EH	20.223	6.741	54.8	4.407	56.156	198.335	0.283 [1]
T4	162.104 - 141.896	ROHN 5 EH	20.244	6.748	44.0	6.112	94.287	275.039	0.343 [1]
T5	141.896 - 121.688	ROHN 6 EHS	20.250	10.125	54.6	6.713	118.950	302.097	0.394 [1]
T6	121.688 - 101.479	ROHN 6 EH	20.260	10.130	55.4	8.405	147.943	378.222	0.391 [1]
T7	101.479 - 81.2708	ROHN 6 EH	20.260	10.130	55.4	8.405	174.296	378.222	0.461 [1]
T8	81.2708 - 61	ROHN 8 EHS	20.328	10.164	41.8	9.719	199.049	437.369	0.455 [1]
T9	61 - 40.6667	ROHN 8 EHS	20.384	10.192	41.9	9.719	223.739	437.369	0.512 [1]
T10	40.6667 -	ROHN 8 EH	20.391	10.196	42.5	12.763	234.295	574.322	0.408 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T11	20.3333 20.3333 - 0	ROHN 8 EH	20.373	10.187	42.5	12.763	256.597	574.322	0.447 [1]

[1] $P_u / \phi P_n$ 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	212.625 - 202.458	ROHN 2 STD	6.639	6.453	98.4	1.075	3.202	48.354	0.066 [1]
T2	202.458 - 182.292	ROHN 2 STD	7.987	7.717	117.6	1.075	9.599	48.354	0.199 [1]
T3	182.292 - 162.104	ROHN 2 STD	8.390	8.089	123.3	1.075	9.962	48.354	0.206 [1]
T4	162.104 - 141.896	ROHN 2 STD	9.055	8.719	132.9	1.075	9.938	48.354	0.206 [1]
T5	141.896 - 121.688	ROHN 2.5 STD	12.600	12.138	153.7	1.704	13.035	76.682	0.170 [1]
T6	121.688 - 101.479	ROHN 2.5 STD	12.984	12.563	159.1	1.704	12.104	76.682	0.158 [1]
T7	101.479 - 81.2708	ROHN 3 STD	14.235	13.843	142.8	2.228	12.201	100.281	0.122 [1]
T8	81.2708 - 61	ROHN 3 STD	15.213	14.731	151.9	2.228	12.040	100.281	0.120 [1]
T9	61 - 40.6667	ROHN 3 STD	16.185	15.723	162.2	2.228	13.044	100.281	0.130 [1]
T10	40.6667 - 20.3333	ROHN 3 STD	24.652	12.326	127.1	2.228	18.065	100.281	0.180 [1]
T11	20.3333 - 0	ROHN 3 STD	25.288	12.644	130.4	2.228	20.867	100.281	0.208 [1]

[1] $P_u / \phi P_n$ 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	212.625 - 202.458	ROHN 1.5 STD	8.521	4.141	79.8	0.799	2.348	35.976	0.065 [1]
T2	202.458 - 182.292	ROHN 1.5 STD	8.597	4.153	80.0	0.799	5.208	35.976	0.145 [1]
T3	182.292 - 162.104	ROHN 1.5 STD	10.014	4.819	92.9	0.799	6.174	35.976	0.172 [1]
T4	162.104 - 141.896	ROHN 2 STD	12.097	5.817	88.7	1.075	6.736	48.354	0.139 [1]
T5	141.896 - 121.688	ROHN 2 STD	13.917	6.682	101.9	1.075	7.837	48.354	0.162 [1]
T6	121.688 - 101.479	ROHN 2 STD	16.292	7.870	120.0	1.075	7.976	48.354	0.165 [1]
T7	101.479 - 81.2708	ROHN 2.5 STD	18.792	9.120	115.5	1.704	8.756	76.682	0.114 [1]
T8	81.2708 - 61	ROHN 2.5 STD	21.359	10.320	130.7	1.704	9.223	76.682	0.120 [1]
T9	61 - 40.6667	ROHN 2.5 STD	23.927	11.604	147.0	1.704	10.501	76.682	0.137 [1]
T10	40.6667 - 20.3333	ROHN 3 STD	25.177	12.229	126.1	2.228	10.116	100.281	0.101 [1]
T11	20.3333 - 0	ROHN 3 STD	27.833	13.557	139.8	2.228	12.495	100.281	0.125 [1]

[1] $P_u / \phi P_n$ controls

Top Girt Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	212.625 - 202.458	ROHN 1.5 STD	8.500	4.130	79.6	0.799	0.254	35.976	0.007 [1]

[1] $P_u / \phi P_n$ controls

Redundant Horizontal (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T10	40.6667 - 20.3333	ROHN 1.5 STD	6.294	5.935	114.4	0.799	4.966	25.902	0.192 [1]
T11	20.3333 - 0	ROHN 1.5 STD	6.958	6.599	127.2	0.799	5.434	25.902	0.210 [1]

[1] $P_u / \phi P_n$ controls

Redundant Diagonal (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T10	40.6667 - 20.3333	ROHN 2 STD	11.628	10.887	166.0	1.075	4.587	34.815	0.132 [1]
T11	20.3333 - 0	ROHN 2 STD	12.021	11.347	173.0	1.075	4.694	34.815	0.135 [1]

[1] $P_u / \phi P_n$ controls

Redundant Hip (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T10	40.6667 - 20.3333	ROHN 1.5 STD	6.294	6.294	121.3	0.799	0.015	25.902	0.001 [1]
T11	20.3333 - 0	ROHN 1.5 STD	6.958	6.958	134.1	0.799	0.014	25.902	0.001 [1]

[1] $P_u / \phi P_n$ controls

Redundant Hip Diagonal (1) Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T10	40.6667 - 20.3333	ROHN 2.5 STD	15.204	15.204	192.6	1.704	0.073	55.211	0.001 [1]

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T11	20.3333 - 0	ROHN 2.5 STD	16.022	16.022	202.9	1.704	0.069	55.211	0.001 [1]

[1] $P_u / \phi P_n$ controls

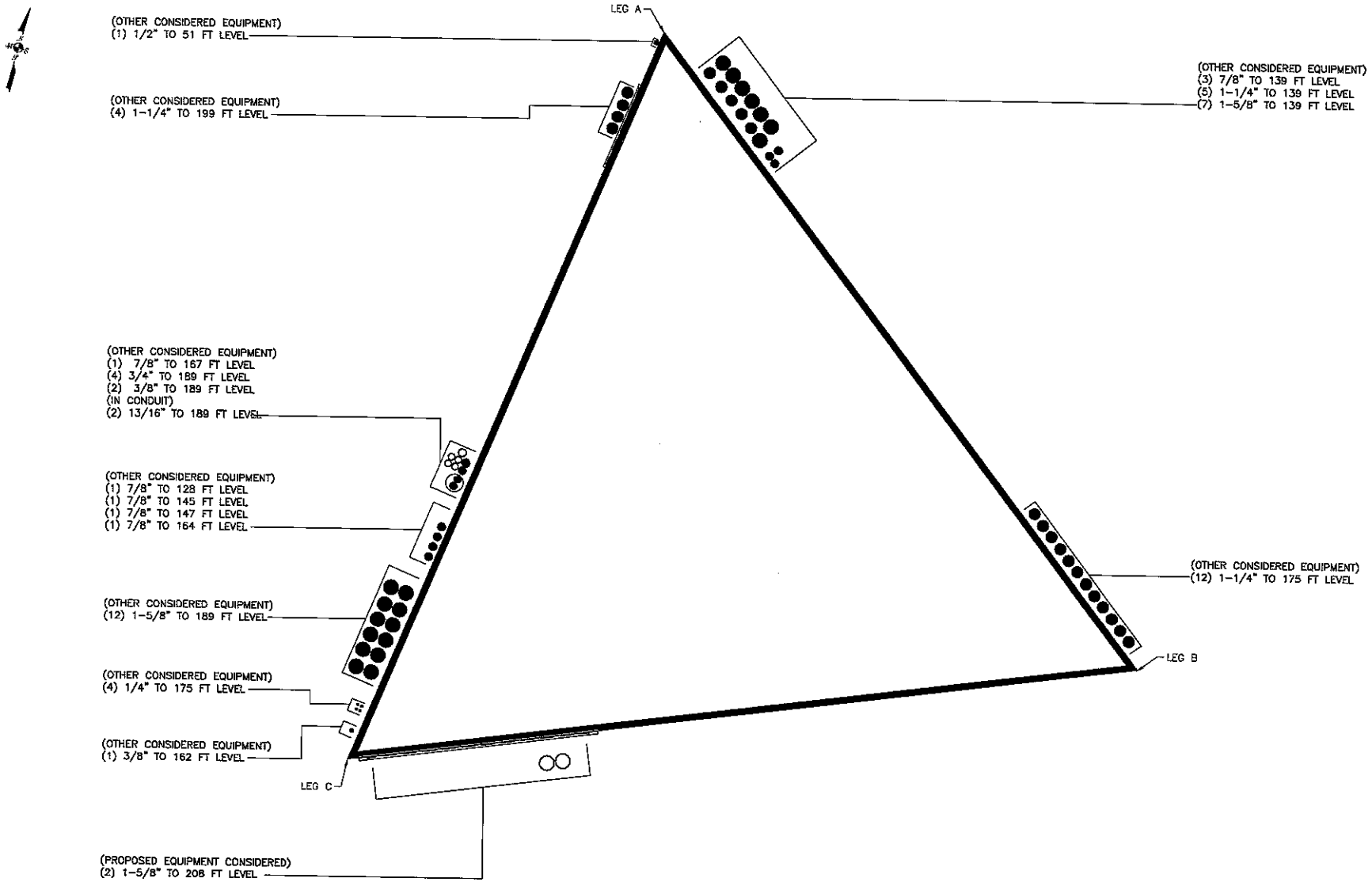
Inner Bracing Design Data (Tension)

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
T1	212.625 - 202.458	L2x2x1/8	4.250	4.250	81.4	0.484	0.004	15.694	0.000 [1]
T2	202.458 - 182.292	L2x2x1/8	4.299	4.299	82.4	0.484	0.006	15.694	0.000 [1]
T3	182.292 - 162.104	L2x2x1/8	4.313	4.313	82.6	0.484	0.005	15.694	0.000 [1]
T4	162.104 - 141.896	L2x2x1/8	5.354	5.354	102.6	0.484	0.005	15.694	0.000 [1]
T5	141.896 - 121.688	L2x2x1/8	6.396	6.396	122.6	0.484	0.003	15.694	0.000 [1]
T6	121.688 - 101.479	L2 1/2x2 1/2x3/16	7.521	7.521	116.0	0.902	0.001	29.225	0.000 [1]
T7	101.479 - 81.2708	L3x3x3/16	8.771	8.771	112.1	1.090	0.000	35.316	0.000 [1]
T11	20.3333 - 0	ROHN 3 STD	13.917	13.917	143.5	2.228	0.001	100.281	0.000 [1]

[1] $P_u / \phi P_n$ controls

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 806363 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIplate

Project Information	
BU #	806363
Site Name	HRT 105 943201
Order #	461185 Rev#2

Tower Information	
Tower Type	Self Support
TIA-222 Rev	H

Applied Loads	Comp.	Uplift
Axial (k)	344.00	283.00
Shear (k)	40.00	35.00

Anchor Rod Data	
Quantity:	10
Diameter (in):	1
Material Grade:	A354-BC
Grout Considered:	No
l_{ar} (in):	1.25
Eta Factor, η:	0.55
Thread Type:	N-Included
Configuration:	Symmetrical

Anchor Rod Results		
Axial, Pu (kips)	34.40	
Shear, Vu (kips)	4.00	
Moment, Mu (kip-in)	3.25	
Axial Cap., ϕPn (kips)	66.05	
Shear Cap., ϕVn (kips)	19.82	
Moment Cap., ϕMn (kip-in)	11.08	
Stress Rating	81.4%	**Pass**

SST Unit Base Foundation

BU # :	806363
Site Name:	HRT 105 943201
App. Number:	461185 Rev#2

TIA-222 Revision: H

Tower Centroid Offset?:	☐
Block Foundation?:	☑

Superstructure Analysis Reactions		
Global Moment, **M**:	8197	ft-kips
Global Axial, **P**:	100	kips
Global Shear, **V**:	67	kips
Leg Compression, P_{comp}:	344	kips
Leg Comp. Shear, V_{u_comp}:	40	kips
Leg Uplift, P_{uplift}:	283	kips
Leg Uplift. Shear, V_{u_uplift}:	35	kips
Tower Height, **H**:	212.625	ft
Base Face Width, **BW**:	30.041667	ft
BP Dist. Above Fdn, bp_{dist}:	3	in
Anchor Bolt Circle, **BC**:	12	in

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating***	**Check**
Lateral (Sliding) (kips)	344.22	67.00	**18.5%**	**Pass**
Bearing Pressure (ksf)	6.00	1.35	**21.4%**	**Pass**
*Overturning (kip*ft)*	17554.96	8515.25	**48.5%**	**Pass**
*Pad Flexure (kip*ft)*	7259.23	1717.67	**22.5%**	**Pass**
Pad Shear - 1-way (kips)	1971.72	197.79	**9.6%**	**Pass**
Pad Shear - Comp 2-way (ksi)	0.164	0.035	**20.4%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	1833.86	0.00	**0.0%**	**Pass**
Pad Shear - Tension 2-way (ksi)	0.164	0.039	**22.4%**	**Pass**
*Flexural 2-way (Tension) (kip*ft)*	1833.86	0.00	**0.0%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Soil Rating*:	**48.5%**
Structural Rating*:	**22.5%**

Pad Properties		
Depth, **D**:	4.00	ft
Pad Width, **W**:	40.25	ft
Pad Thickness, **T**:	4.50	ft
Pad Rebar Size (Bottom), **Sp**:	7	
Pad Rebar Quantity (Bottom), **mp**:	55	
Pad Clear Cover, cc_{pad}:	3	in

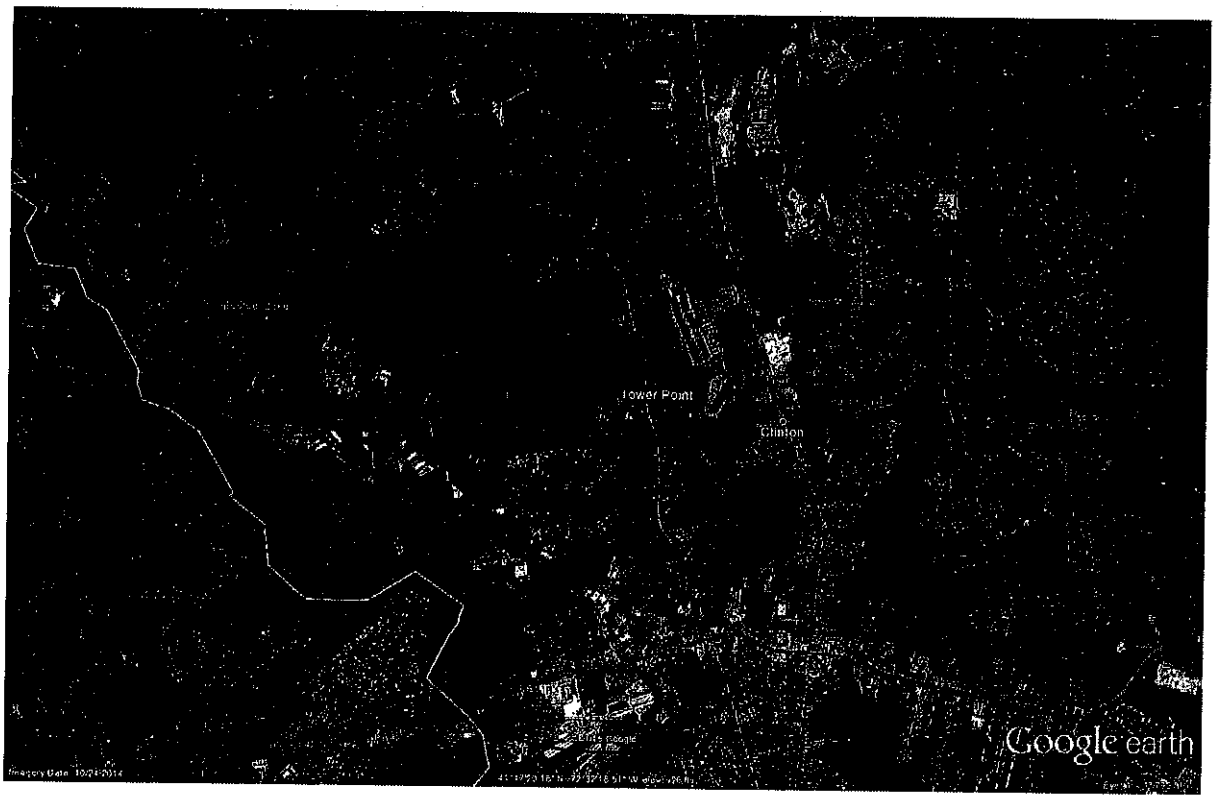
Material Properties		
Rebar Grade, **Fy**:	60000	psi
Concrete Compressive Strength, **F'c**:	3000	psi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties		
Total Soil Unit Weight, γ:	120	pcf
Ultimate Gross Bearing, Qult:	8.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	35	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:		
Neglected Depth, **N**:	3.3	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	3	ft

<-- Toggle between Gross and Net

Exposure Category Determination
BU#806363

- Latitude/Longitude = 41° 17' 20.2",-72° 32' 18.5"
- Tower Height = 212 ft
- Upwind Fetch Radius = Greater of 25 x Tower Height or 3250 ft = 5300 ft
- Minimum Open Patch = 164 ft x 164 ft
- Maximum continuous surface roughness category C arc angle = 15 degrees
- Kmz file saved in folder ... R:\SA Models - Letters\Work Area\Exposure_Topo_KMZ



Exposure Category for this site is B.

The determination is based on Crown Castle standard ENG-PRC-10202, Determination of Exposure Category, revision C.

Completed by: Erin Doyle

Date: 11/05/2015

Approved by: Jason Hedrich

Date: 11/06/2015

CROWN CASTLE

Unmitigated Percentage (B/C)

Inputs

Tower Height (ft):	180'
Starting Azimuth:	30°
Upwind Fetch Radius (ft):	4500'
20% Unmitigated Limit (ft):	900'
Overlay Size Selected:	30°

Subsector (Degrees)	Total Unmitigated Length (ft)	Percentage of Subsector Unmitigated
	'	0.0%
30°	'	0.0%
35°	295'	6.6%
40°	'	0.0%
45°	'	0.0%
50°	'	0.0%
55°	'	0.0%
	'	0.0%

THIS SITE IS EXPOSURE:	B

Length measurements should be taken to the nearest 5' increment.

The determination is based on Crown Castle standard ENG-PRC-10202, Determination of Exposure Category, revision C.

This chart is intended only for use with Exposures B and C and is <u>Not</u> applicable for Exposure D.

LEGEND	
	Considered Subsector
	Bookending Subsector

Topographic Factor Determination
BU#806363

- Latitude/Longitude = 41° 17' 20.2",-72° 32' 18.5"
- Tower Height = 212 ft
- Topo Radius = 10,560 ft
- Maximum continuous effective topo arc angle = 0 degrees
- Critical wind azimuth used in topo tool = 0
- Kmz file saved in folder ... R:\SA Models - Letters\Work Area\Exposure_Topo_KMZ

Exposure Category for this site is B.
No topo feature.
Topographic Factor (K_{zt}) at base is 1.0.

The determination is based on Crown Castle standard ENG-PRC-10040, Determination of Topographic Factor, initial release.

Completed by: Erin Doyle

Date: 11/05/2015

Approved by: Jason Hedrich

Date: 11/06/2015

Date: **October 4, 2018**

Charles McGuirt
Crown Castle
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8120 Sheridan Blvd, Suite A-311
Westminster, CO 80003
(919) 782-2710
brandon.little@ets-pllc.com

Subject:	**Mount Structural Analysis**	
Contractor Designation:	**Verizon Wireless Equipment Change-Out**	
	Carrier Site Number:	1941
	Carrier Site Name:	CLINTON CT
Crown Castle Designation:	**Crown Castle BU Number:**	806363
	Crown Castle Site Name:	HRT 105 943201
	Crown Castle JDE Number:	534509
	Crown Castle PO Number:	1263830
	Crown Castle Application Number:	461185 Rev. 2
Engineering Firm Designation:	**ETS Project No.:**	184424.14
Site Data:	**48 Cow Hill Road, Clinton, Middlesex County, CT 06413** **Latitude: 41° 17' 20.20" Longitude: -72° 32' 18.50"**	
Structure Information:	**Tower Height & Type:**	212.0-ft Self-Support
	Mount Elevation:	208.0-ft
	Mount Width & Type:	14.0-ft Sector Mount

Dear Charles McGuirt,

Engineered Tower Solutions, PLLC is pleased to submit this **"Mount Structural Analysis Report"** to determine the structural integrity of *Verizon Wireless's* antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

Based upon our analysis, we have determined the adequacy of the antenna mounting system that will support the existing and proposed loading to be for the following Load Case:

Sector Mount (Multiple) **Sufficient Capacity**

This analysis utilizes an ultimate 3-second gust wind speed of 135 mph as required by the *2016 Connecticut State Building Code*. Applicable Standard references and design criteria are listed in Section 2 – Analysis Criteria.

We at Engineered Tower Solutions, PLLC appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects, please give us a call.

Mount structural analysis prepared by:

Brandon R. Little, EI
Structural Engineer I

Respectfully Submitted by:

Frederic G. Bost, PE
Owner/President

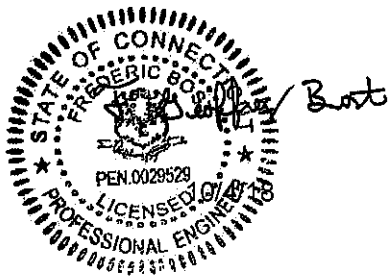


TABLE OF CONTENTS

1) INTRODUCTION

This mount is a 14.0 ft Sector mount installed at the 208.0 ft elevation of the 212.0 ft Self-Support tower. Engineered Tower Solutions, PLLC, did not visit the site. A mapping and/or mount manufacturer drawings were not provided. Therefore, per direction of Crown Castle, photos of the tower were compared with other mounts within our database and a similar and comparable mount was used to perform this mount analysis.

2) ANALYSIS CRITERIA

Building Code:	2012 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	135 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.50 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.169
Seismic S1:	0.059
Service Wind Speed:	30 mph

Table 1 – Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
208.0	209.0	3	Andrew	SBNHH-1D65B	(3) 14.0 ft Sector Mounts
		6	Antel	LPA-80080/6CF	
		6	Commscope	JAHH-65B-R3B	
		3	Commscope	CBC1923T-DS-43	
		2	RFS/Celwave	DB-B1-6C-12AB-0Z	
		3	Samsung	RFV01U-D1A	
		3	Samsung	RFV01U-D2A	

3) ANALYSIS PROCEDURE

Table 2 – Documents Provided

Document	Remarks	Reference	Source
Structural Level Drawings (Installed)	-	10/01/2018	CCI Sites
Structural Level Drawing (Proposed)	-	10/01/2018	CCI Sites
Carrier Application	App # 461185 Rev. 2	09/24/2018	CCI Sites
Structural Analysis Report	Jacobs Engineering Group, Inc.	7894056	CCI Sites

3.1) Analysis Method

RISA-3D (version 16.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix C.

3.2) Assumptions

1) Engineered Tower Solutions, PLLC, did not visit the site. A mapping and/or mount manufacturer drawings were not provided. Therefore, per direction of Crown Castle, photos of the tower were compared with other mounts within our database and a similar and comparable mount was used to perform this mount analysis.
2) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specification.
3) The configuration of antennas, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5) This Structural Analysis is not a condition assessment of the mount and is an evaluation of the theoretical structural capacity.
6) This analysis is based from the information supplied, and therefore, this report's results are as accurate as the supplied data.
7) Engineered Tower Solutions, PLLC makes no warranties, expressed and/or implied, in connection with this report, and disclaims any liability associated with material, fabrication, or erection of the mount. Engineered Tower Solutions, PLLC will not be held responsible from any consequential or incidental damages sustained by any person, firm, or organization as a result of the contents of this report. The maximum liability of Engineered Tower Solutions, PLLC pursuant to this report will be limited to the total fee received for compilation of this report.
8) It is the tower owner's responsibility to verify that the mount modeled and analyzed is the correct structure modeled.
9) The use of this report shall be limited to the purpose for which it was commissioned and may not be used for any other purposes without the written consent of Engineered Tower Solutions, PLLC.
10) Member connections are assumed to have been designed to meet or exceed the theoretical capacity of the connected member.
11) Steel grades have been assumed as follows:

a)	Channel, Solid Round, Angle, Plate	ASTM A36 (Gr 36)
b)	HSS (Rectangular)	ASTM 500 (Gr B-46)
c)	HSS (Round)	ASTM 500 (Gr B-42)
d)	Pipe	ASTM A53 (Gr 35)
e)	Connection Bolts	ASTM A325
f)	U-Bolts	SAE 429 Gr.2

This analysis may be affected if any assumptions are not valid or have been made in error. Engineered Tower Solutions, PLLC should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 3 – Mount Component Stresses vs. Capacity

Mount Centerline (ft)	Component	% Capacity	Pass/Fail	Notes
208.0	Face Mount – Horizontal	20.2	PASS	1
	Mount Pipe – Vertical	25.7	PASS	1
	Sidearm – Horizontal	39.5	PASS	1
	Sidearm – Diagonal	9.2	PASS	1
	Sidearm – Vertical	62.6	PASS	1

Notes:

1) See additional documentation in "Appendix C – Software Analysis Output" for calculations supporting the % capacity consumed.

Tower Mount Rating (max from all components) =	62.6%

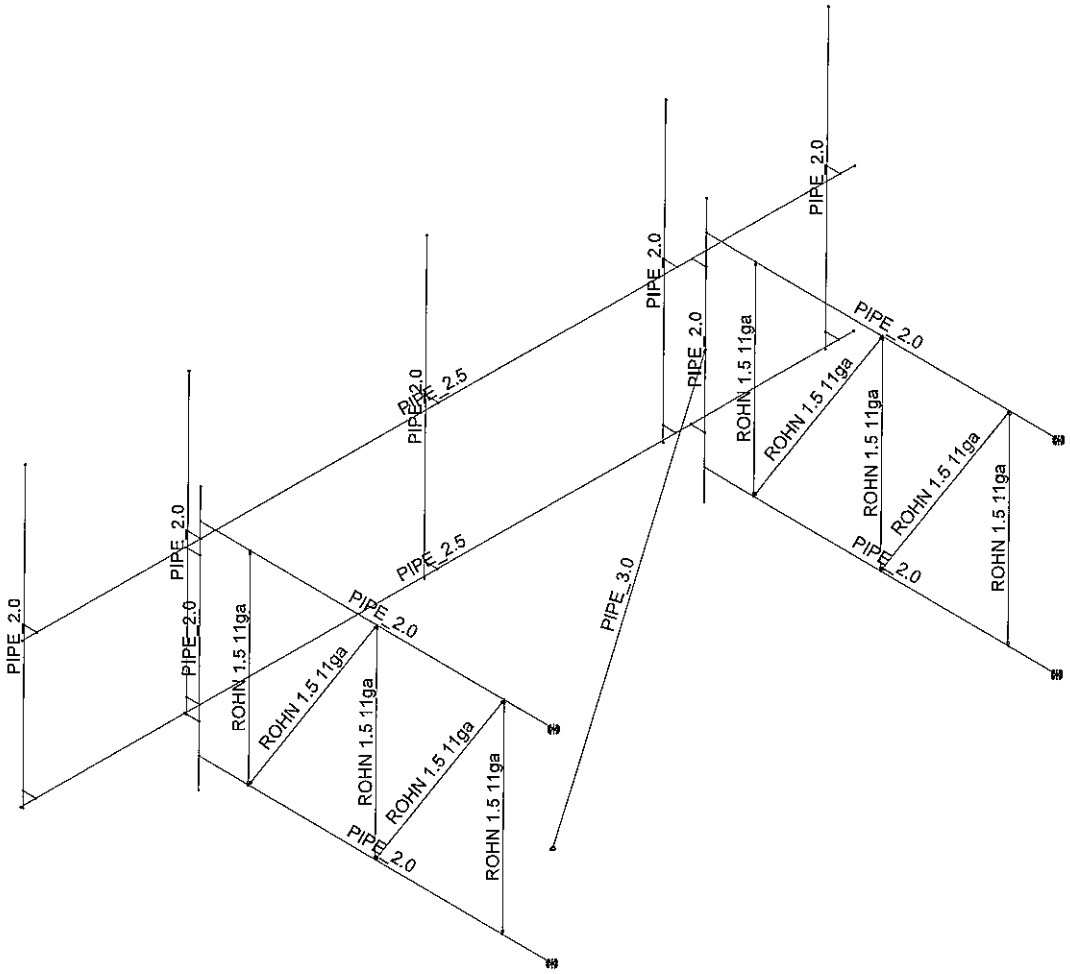
Verizon Mount Classification	M750R(900)-5[12]

4.1) Recommendations

The tower mount has sufficient capacity to carry the existing and proposed load configuration. No modifications are required at this time.

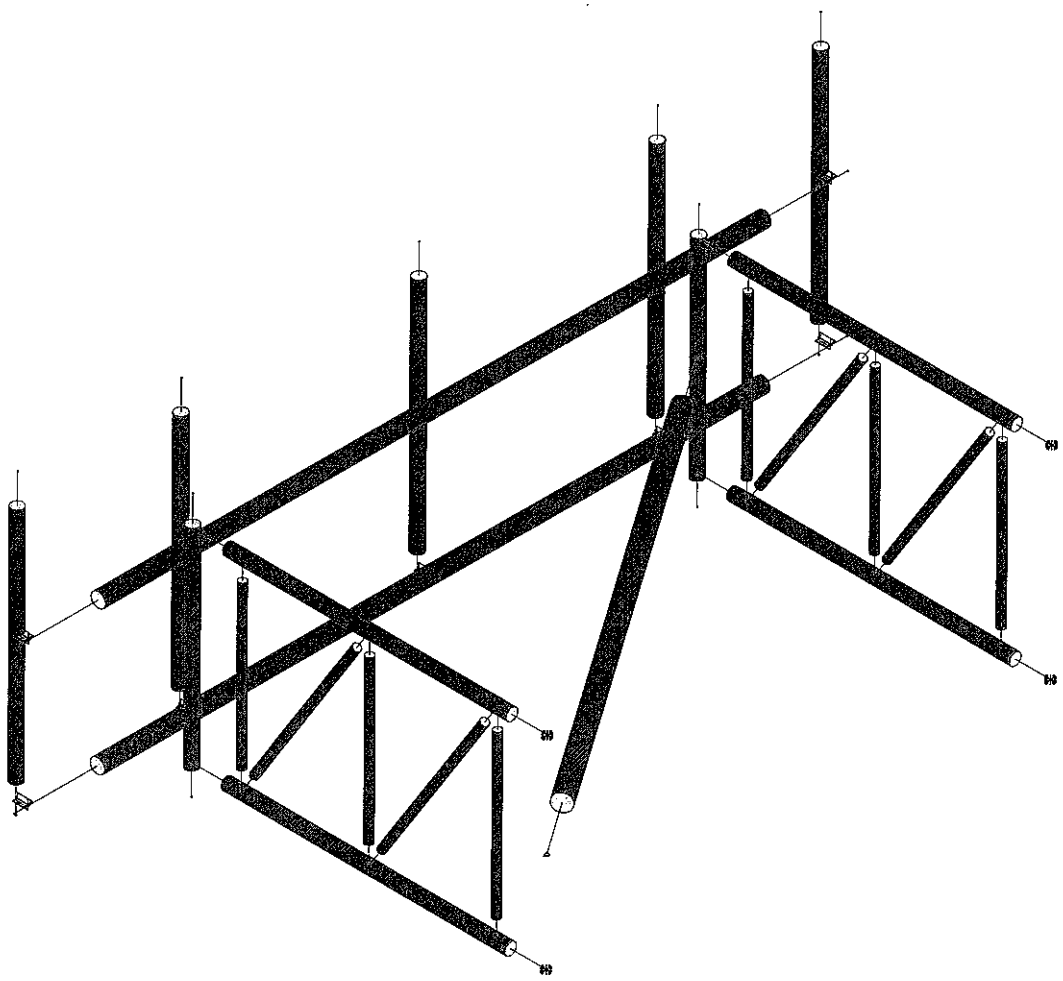
APPENDIX A

WIRE FRAME AND RENDERED MODELS



Loads: BLC 63, Maintenance Load, Lv (Pos. 7)

Engineered Tower Solutio...	806363 - HRT 105 943201 Mount Analysis	SK - 1
BRL		Oct 4, 2018 at 2:43 PM
184424.14		HRT 105 943201_Loaded.r3d



Loads: BLC 63, Maintenance Load, Lv (Pos. 7)

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APPENDIX B

SOFTWARE INPUT CALCULATIONS

ETS
ENGINEERED TOWER SOLUTIONS, PLLC

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	FM-BOT	N5	N7			PIPE_2.5	None	None	A53 Gr.B	Typical
2	FM-TOP	N6	N8			PIPE_2.5	None	None	A53 Gr.B	Typical
3	MP1	N59	N64			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
4	MP2	N60	N65			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
5	MP3	N61	N66			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
6	MP4	N62	N67			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
7	MP5	N63	N68			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
8	R1	N29	N33			RIGID	None	None	LINK	Typical
9	R2	N31A	N35A			RIGID	None	None	LINK	Typical
10	R3	N30A	N34A			RIGID	None	None	LINK	Typical
11	R4	N32	N36			RIGID	None	None	LINK	Typical
12	R5	N39A	N49A			RIGID	None	None	LINK	Typical
13	R6	N40	N50A			RIGID	None	None	LINK	Typical
14	R7	N41A	N51			RIGID	None	None	LINK	Typical
15	R8	N42A	N52			RIGID	None	None	LINK	Typical
16	R9	N43	N53			RIGID	None	None	LINK	Typical
17	R10	N44	N54			RIGID	None	None	LINK	Typical
18	R11	N45	N55			RIGID	None	None	LINK	Typical
19	R12	N46	N56			RIGID	None	None	LINK	Typical
20	R13	N47	N57			RIGID	None	None	LINK	Typical
21	R14	N48	N58			RIGID	None	None	LINK	Typical
22	SA1-BOT	N1	N9			PIPE_2.0	None	None	A53 Gr.B	Typical
23	SA1-D1	N31	N34			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
24	SA1-D2	N35	N38			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
25	SA1-TOP	N2	N10			PIPE_2.0	None	None	A53 Gr.B	Typical
26	SA1-V1	N30	N31			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
27	SA1-V2	N34	N35			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
28	SA1-V3	N38	N39			ROHN 1.5 11ga	Column	Pipe	A53 Gr.B	Typical
29	SA2-BOT	N41	N43A			PIPE_2.0	None	None	A53 Gr.B	Typical
30	SA2-D1	N46A	N47A			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
31	SA2-D2	N48A	N49			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
32	SA2-TOP	N42	N44A			PIPE_2.0	None	None	A53 Gr.B	Typical
33	SA2-V1	N45A	N46A			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
34	SA2-V2	N47A	N48A			ROHN 1.5 11ga	None	None	A53 Gr.B	Typical
35	SA2-V3	N49	N50			ROHN 1.5 11ga	Column	Pipe	A53 Gr.B	Typical
36	STAB	N38A	N37			PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
37	VERT1	N27	N25			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical
38	VERT2	N28	N26			PIPE_2.0	Column	Pipe	A53 Gr.B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	LINK		14	37.8	0
3	Total General		14	37.8	0
4					
5	Hot Rolled Steel				
6	A53 Gr.B	PIPE_2.0	11	694	.2
7	A53 Gr.B	PIPE_2.5	2	336	.2
8	A53 Gr.B	PIPE_3.0	1	124.9	0
9	A53 Gr.B	ROHN 1.5 11ga	10	439.9	0
10	Total HR Steel		24	1594.8	.5

Member Point Loads (BLC 1 : Dead Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-91.3	%49.2
2	MP2	Y	-63.3	%50
3	MP3	Y	-93.1	%49.2
4	MP4	Y	-40.6	%50
5	MP5	Y	-105.4	%49.2

Member Point Loads (BLC 2 : Wind Load (0 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	91.2	%49.2
2	MP2	X	0	%50
3	MP3	X	179	%49.2
4	MP4	X	0	%50
5	MP5	X	91.2	%49.2
6	MP1	Z	0	%49.2
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 3 : Wind Load (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	82.4	%49.2
2	MP2	X	12.5	%50
3	MP3	X	154.2	%49.2
4	MP4	X	12.5	%50
5	MP5	X	84.9	%49.2
6	MP1	Z	47.6	%49.2
7	MP2	Z	7.2	%50
8	MP3	Z	89	%49.2
9	MP4	Z	7.2	%50
10	MP5	Z	49	%49.2

Member Point Loads (BLC 4 : Wind Load (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	51.5	%49.2
2	MP2	X	21.7	%50
3	MP3	X	88.2	%49.2
4	MP4	X	21.7	%50
5	MP5	X	55.8	%49.2
6	MP1	Z	89.2	%49.2
7	MP2	Z	37.5	%50
8	MP3	Z	152.8	%49.2
9	MP4	Z	37.5	%50
10	MP5	Z	96.7	%49.2

Member Point Loads (BLC 5 : Wind Load (90 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	107	%49.2
7	MP2	Z	57.8	%50

Member Point Loads (BLC 5 : Wind Load (90 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
8	MP3	Z	175.5	%49.2
9	MP4	Z	57.8	%50
10	MP5	Z	118.5	%49.2

Member Point Loads (BLC 6 : Wind Load (120 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-51.5	%49.2
2	MP2	X	-21.7	%50
3	MP3	X	-88.2	%49.2
4	MP4	X	-21.7	%50
5	MP5	X	-55.8	%49.2
6	MP1	Z	89.2	%49.2
7	MP2	Z	37.5	%50
8	MP3	Z	152.8	%49.2
9	MP4	Z	37.5	%50
10	MP5	Z	96.7	%49.2

Member Point Loads (BLC 7 : Wind Load (150 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-82.4	%49.2
2	MP2	X	-12.5	%50
3	MP3	X	-154.2	%49.2
4	MP4	X	-12.5	%50
5	MP5	X	-84.9	%49.2
6	MP1	Z	47.6	%49.2
7	MP2	Z	7.2	%50
8	MP3	Z	89	%49.2
9	MP4	Z	7.2	%50
10	MP5	Z	49	%49.2

Member Point Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-91.2	%49.2
2	MP2	X	0	%50
3	MP3	X	-179	%49.2
4	MP4	X	0	%50
5	MP5	X	-91.2	%49.2
6	MP1	Z	0	%49.2
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 9 : Wind Load (210 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-82.4	%49.2
2	MP2	X	-12.5	%50
3	MP3	X	-154.2	%49.2
4	MP4	X	-12.5	%50
5	MP5	X	-84.9	%49.2
6	MP1	Z	-47.6	%49.2
7	MP2	Z	-7.2	%50
8	MP3	Z	-89	%49.2
9	MP4	Z	-7.2	%50
10	MP5	Z	-49	%49.2

Member Point Loads (BLC 10 : Wind Load (240 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-51.5	%49.2
2	MP2	X	-21.7	%50
3	MP3	X	-88.2	%49.2
4	MP4	X	-21.7	%50
5	MP5	X	-55.8	%49.2
6	MP1	Z	-89.2	%49.2
7	MP2	Z	-37.5	%50
8	MP3	Z	-152.8	%49.2
9	MP4	Z	-37.5	%50
10	MP5	Z	-96.7	%49.2

Member Point Loads (BLC 11 : Wind Load (270 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	-107	%49.2
7	MP2	Z	-57.8	%50
8	MP3	Z	-175.5	%49.2
9	MP4	Z	-57.8	%50
10	MP5	Z	-118.5	%49.2

Member Point Loads (BLC 12 : Wind Load (300 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	51.5	%49.2
2	MP2	X	21.7	%50
3	MP3	X	88.2	%49.2
4	MP4	X	21.7	%50
5	MP5	X	55.8	%49.2
6	MP1	Z	-89.2	%49.2
7	MP2	Z	-37.5	%50
8	MP3	Z	-152.8	%49.2
9	MP4	Z	-37.5	%50
10	MP5	Z	-96.7	%49.2

Member Point Loads (BLC 13 : Wind Load (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	82.4	%49.2
2	MP2	X	12.5	%50
3	MP3	X	154.2	%49.2
4	MP4	X	12.5	%50
5	MP5	X	84.9	%49.2
6	MP1	Z	-47.6	%49.2
7	MP2	Z	-7.2	%50
8	MP3	Z	-89	%49.2
9	MP4	Z	-7.2	%50
10	MP5	Z	-49	%49.2

Member Point Loads (BLC 14 : Ice Load)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-307.6	%49.2
2	MP2	Y	-282.2	%50
3	MP3	Y	-390.1	%49.2

Member Point Loads (BLC 14 : Ice Load) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP4	Y	-253.2	%50
5	MP5	Y	-310.3	%49.2

Member Point Loads (BLC 15 : Wind on Ice (0 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	16.4	%49.2
2	MP2	X	1	%50
3	MP3	X	30.2	%49.2
4	MP4	X	1	%50
5	MP5	X	16.4	%49.2
6	MP1	Z	0	%49.2
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 16 : Wind on Ice (30 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	16.1	%49.2
2	MP2	X	4	%50
3	MP3	X	27.8	%49.2
4	MP4	X	4	%50
5	MP5	X	16.5	%49.2
6	MP1	Z	9.3	%49.2
7	MP2	Z	2.3	%50
8	MP3	Z	16.1	%49.2
9	MP4	Z	2.3	%50
10	MP5	Z	9.5	%49.2

Member Point Loads (BLC 17 : Wind on Ice (60 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	11.6	%49.2
2	MP2	X	5.9	%50
3	MP3	X	18	%49.2
4	MP4	X	5.9	%50
5	MP5	X	12.3	%49.2
6	MP1	Z	20	%49.2
7	MP2	Z	10.3	%50
8	MP3	Z	31.2	%49.2
9	MP4	Z	10.3	%50
10	MP5	Z	21.2	%49.2

Member Point Loads (BLC 18 : Wind on Ice (90 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	25.4	%49.2
7	MP2	Z	15.5	%50
8	MP3	Z	38	%49.2
9	MP4	Z	15.5	%50
10	MP5	Z	27.2	%49.2

Member Point Loads (BLC 19 : Wind on Ice (120 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-11.6	%49.2
2	MP2	X	-5.9	%50
3	MP3	X	-18	%49.2
4	MP4	X	-5.9	%50
5	MP5	X	-12.3	%49.2
6	MP1	Z	20	%49.2
7	MP2	Z	10.3	%50
8	MP3	Z	31.2	%49.2
9	MP4	Z	10.3	%50
10	MP5	Z	21.2	%49.2

Member Point Loads (BLC 20 : Wind on Ice (150 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-16.1	%49.2
2	MP2	X	-4	%50
3	MP3	X	-27.8	%49.2
4	MP4	X	-4	%50
5	MP5	X	-16.5	%49.2
6	MP1	Z	9.3	%49.2
7	MP2	Z	2.3	%50
8	MP3	Z	16.1	%49.2
9	MP4	Z	2.3	%50
10	MP5	Z	9.5	%49.2

Member Point Loads (BLC 21 : Wind on Ice (180 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-16.4	%49.2
2	MP2	X	-1	%50
3	MP3	X	-30.2	%49.2
4	MP4	X	-1	%50
5	MP5	X	-16.4	%49.2
6	MP1	Z	0	%49.2
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 22 : Wind on Ice (210 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-16.1	%49.2
2	MP2	X	-4	%50
3	MP3	X	-27.8	%49.2
4	MP4	X	-4	%50
5	MP5	X	-16.5	%49.2
6	MP1	Z	-9.3	%49.2
7	MP2	Z	-2.3	%50
8	MP3	Z	-16.1	%49.2
9	MP4	Z	-2.3	%50
10	MP5	Z	-9.5	%49.2

Member Point Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-11.6	%49.2
2	MP2	X	-5.9	%50
3	MP3	X	-18	%49.2

Member Point Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP4	X	-5.9	%50
5	MP5	X	-12.3	%49.2
6	MP1	Z	-20	%49.2
7	MP2	Z	-10.3	%50
8	MP3	Z	-31.2	%49.2
9	MP4	Z	-10.3	%50
10	MP5	Z	-21.2	%49.2

Member Point Loads (BLC 24 : Wind on Ice (270 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	-25.4	%49.2
7	MP2	Z	-15.5	%50
8	MP3	Z	-38	%49.2
9	MP4	Z	-15.5	%50
10	MP5	Z	-27.2	%49.2

Member Point Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	11.6	%49.2
2	MP2	X	5.9	%50
3	MP3	X	18	%49.2
4	MP4	X	5.9	%50
5	MP5	X	12.3	%49.2
6	MP1	Z	-20	%49.2
7	MP2	Z	-10.3	%50
8	MP3	Z	-31.2	%49.2
9	MP4	Z	-10.3	%50
10	MP5	Z	-21.2	%49.2

Member Point Loads (BLC 26 : Wind on Ice (330 deg))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	16.1	%49.2
2	MP2	X	4	%50
3	MP3	X	27.8	%49.2
4	MP4	X	4	%50
5	MP5	X	16.5	%49.2
6	MP1	Z	-9.3	%49.2
7	MP2	Z	-2.3	%50
8	MP3	Z	-16.1	%49.2
9	MP4	Z	-2.3	%50
10	MP5	Z	-9.5	%49.2

Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	91.3	%49.2
2	MP2	X	63.3	%50
3	MP3	X	93.1	%49.2
4	MP4	X	40.6	%50
5	MP5	X	105.4	%49.2
6	MP1	Z	0	%49.2

Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 28 : Horizontal Seismic, Eh (30))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	79.1	%49.2
2	MP2	X	54.8	%50
3	MP3	X	80.6	%49.2
4	MP4	X	35.2	%50
5	MP5	X	91.3	%49.2
6	MP1	Z	45.6	%49.2
7	MP2	Z	31.6	%50
8	MP3	Z	46.5	%49.2
9	MP4	Z	20.3	%50
10	MP5	Z	52.7	%49.2

Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	45.7	%49.2
2	MP2	X	31.7	%50
3	MP3	X	46.6	%49.2
4	MP4	X	20.3	%50
5	MP5	X	52.7	%49.2
6	MP1	Z	79.1	%49.2
7	MP2	Z	54.8	%50
8	MP3	Z	80.6	%49.2
9	MP4	Z	35.2	%50
10	MP5	Z	91.3	%49.2

Member Point Loads (BLC 30 : Horizontal Seismic, Eh (90))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	91.3	%49.2
7	MP2	Z	63.3	%50
8	MP3	Z	93.1	%49.2
9	MP4	Z	40.6	%50
10	MP5	Z	105.4	%49.2

Member Point Loads (BLC 31 : Horizontal Seismic, Eh (120))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-45.6	%49.2
2	MP2	X	-31.6	%50
3	MP3	X	-46.5	%49.2
4	MP4	X	-20.3	%50
5	MP5	X	-52.7	%49.2
6	MP1	Z	79.1	%49.2
7	MP2	Z	54.8	%50
8	MP3	Z	80.6	%49.2
9	MP4	Z	35.2	%50

Member Point Loads (BLC 31 : Horizontal Seismic, Eh (120)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
10	MP5	Z	91.3	%49.2

Member Point Loads (BLC 32 : Horizontal Seismic, Eh (150))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-79.1	%49.2
2	MP2	X	-54.8	%50
3	MP3	X	-80.6	%49.2
4	MP4	X	-35.2	%50
5	MP5	X	-91.3	%49.2
6	MP1	Z	45.6	%49.2
7	MP2	Z	31.6	%50
8	MP3	Z	46.5	%49.2
9	MP4	Z	20.3	%50
10	MP5	Z	52.7	%49.2

Member Point Loads (BLC 33 : Horizontal Seismic, Eh (180))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-91.3	%49.2
2	MP2	X	-63.3	%50
3	MP3	X	-93.1	%49.2
4	MP4	X	-40.6	%50
5	MP5	X	-105.4	%49.2
6	MP1	Z	0	%49.2
7	MP2	Z	0	%50
8	MP3	Z	0	%49.2
9	MP4	Z	0	%50
10	MP5	Z	0	%49.2

Member Point Loads (BLC 34 : Horizontal Seismic, Eh (210))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-79.1	%49.2
2	MP2	X	-54.8	%50
3	MP3	X	-80.6	%49.2
4	MP4	X	-35.2	%50
5	MP5	X	-91.3	%49.2
6	MP1	Z	-45.7	%49.2
7	MP2	Z	-31.7	%50
8	MP3	Z	-46.6	%49.2
9	MP4	Z	-20.3	%50
10	MP5	Z	-52.7	%49.2

Member Point Loads (BLC 35 : Horizontal Seismic, Eh (240))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-45.7	%49.2
2	MP2	X	-31.7	%50
3	MP3	X	-46.6	%49.2
4	MP4	X	-20.3	%50
5	MP5	X	-52.7	%49.2
6	MP1	Z	-79.1	%49.2
7	MP2	Z	-54.8	%50
8	MP3	Z	-80.6	%49.2
9	MP4	Z	-35.2	%50
10	MP5	Z	-91.3	%49.2

Member Point Loads (BLC 36 : Horizontal Seismic, Eh (270))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	%49.2
2	MP2	X	0	%50
3	MP3	X	0	%49.2
4	MP4	X	0	%50
5	MP5	X	0	%49.2
6	MP1	Z	-91.3	%49.2
7	MP2	Z	-63.3	%50
8	MP3	Z	-93.1	%49.2
9	MP4	Z	-40.6	%50
10	MP5	Z	-105.4	%49.2

Member Point Loads (BLC 37 : Horizontal Seismic, Eh (300))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	45.7	%49.2
2	MP2	X	31.7	%50
3	MP3	X	46.6	%49.2
4	MP4	X	20.3	%50
5	MP5	X	52.7	%49.2
6	MP1	Z	-79.1	%49.2
7	MP2	Z	-54.8	%50
8	MP3	Z	-80.6	%49.2
9	MP4	Z	-35.2	%50
10	MP5	Z	-91.3	%49.2

Member Point Loads (BLC 38 : Horizontal Seismic, Eh (330))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	79.1	%49.2
2	MP2	X	54.8	%50
3	MP3	X	80.6	%49.2
4	MP4	X	35.2	%50
5	MP5	X	91.3	%49.2
6	MP1	Z	-45.7	%49.2
7	MP2	Z	-31.7	%50
8	MP3	Z	-46.6	%49.2
9	MP4	Z	-20.3	%50
10	MP5	Z	-52.7	%49.2

Member Point Loads (BLC 39 : Maintenance Load, Lm (MP1))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-500	%50

Member Point Loads (BLC 40 : Maintenance Load, Lm (MP2))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Y	-500	%50

Member Point Loads (BLC 41 : Maintenance Load, Lm (MP3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP3	Y	-500	%50

Member Point Loads (BLC 42 : Maintenance Load, Lm (MP4))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Y	-500	%50

Member Point Loads (BLC 43 : Maintenance Load, Lm (MP5))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP5	Y	-500	%50

Member Point Loads (BLC 57 : Maintenance Load, Lv (Pos. 1))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	FM-BOT	Y	-250	%50

Member Point Loads (BLC 58 : Maintenance Load, Lv (Pos. 2))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	FM-TOP	Y	-250	%50

Member Point Loads (BLC 59 : Maintenance Load, Lv (Pos. 3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA1-BOT	Y	-250	%100

Member Point Loads (BLC 60 : Maintenance Load, Lv (Pos. 4))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA1-TOP	Y	-250	%100

Member Point Loads (BLC 61 : Maintenance Load, Lv (Pos. 5))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA2-BOT	Y	-250	%100

Member Point Loads (BLC 62 : Maintenance Load, Lv (Pos. 6))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	SA2-TOP	Y	-250	%100

Member Distributed Loads (BLC 2 : Wind Load (0 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	14	14	0	0
2	FM-TOP	X	14	14	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	7.3	7.3	0	0
5	SA1-D2	X	7.3	7.3	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	7.3	7.3	0	0
8	SA1-V2	X	7.3	7.3	0	0
9	SA1-V3	X	7.3	7.3	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	7.3	7.3	0	0
12	SA2-D2	X	7.3	7.3	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	7.3	7.3	0	0
15	SA2-V2	X	7.3	7.3	0	0
16	SA2-V3	X	7.3	7.3	0	0
17	STAB	X	17	17	0	0
18	VERT1	X	11.5	11.5	0	0
19	VERT2	X	11.5	11.5	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	0	0	0	0
23	SA1-D1	Z	0	0	0	0
24	SA1-D2	Z	0	0	0	0

Member Distributed Loads (BLC 2 : Wind Load (0 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
25	SA1-TOP	Z	0	0	0	0
26	SA1-V1	Z	0	0	0	0
27	SA1-V2	Z	0	0	0	0
28	SA1-V3	Z	0	0	0	0
29	SA2-BOT	Z	0	0	0	0
30	SA2-D1	Z	0	0	0	0
31	SA2-D2	Z	0	0	0	0
32	SA2-TOP	Z	0	0	0	0
33	SA2-V1	Z	0	0	0	0
34	SA2-V2	Z	0	0	0	0
35	SA2-V3	Z	0	0	0	0
36	STAB	Z	0	0	0	0
37	VERT1	Z	0	0	0	0
38	VERT2	Z	0	0	0	0
39	MP1	X	42.1	42.1	0	%100
40	MP2	X	88.6	88.6	0	%100
41	MP3	X	88.6	88.6	0	%100
42	MP4	X	78.6	78.6	0	%100
43	MP5	X	42.1	42.1	0	%100
44	MP1	Z	0	0	0	0
45	MP2	Z	0	0	0	0
46	MP3	Z	0	0	0	0
47	MP4	Z	0	0	0	0
48	MP5	Z	0	0	0	0

Member Distributed Loads (BLC 3 : Wind Load (30 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	12.1	12.1	0	0
2	FM-TOP	X	12.1	12.1	0	0
3	SA1-BOT	X	10	10	0	0
4	SA1-D1	X	6.3	6.3	0	0
5	SA1-D2	X	6.3	6.3	0	0
6	SA1-TOP	X	10	10	0	0
7	SA1-V1	X	6.3	6.3	0	0
8	SA1-V2	X	6.3	6.3	0	0
9	SA1-V3	X	6.3	6.3	0	0
10	SA2-BOT	X	10	10	0	0
11	SA2-D1	X	6.3	6.3	0	0
12	SA2-D2	X	6.3	6.3	0	0
13	SA2-TOP	X	10	10	0	0
14	SA2-V1	X	6.3	6.3	0	0
15	SA2-V2	X	6.3	6.3	0	0
16	SA2-V3	X	6.3	6.3	0	0
17	STAB	X	14.7	14.7	0	0
18	VERT1	X	10	10	0	0
19	VERT2	X	10	10	0	0
20	FM-BOT	Z	7	7	0	0
21	FM-TOP	Z	7	7	0	0
22	SA1-BOT	Z	5.8	5.8	0	0
23	SA1-D1	Z	3.6	3.6	0	0
24	SA1-D2	Z	3.6	3.6	0	0
25	SA1-TOP	Z	5.8	5.8	0	0
26	SA1-V1	Z	3.6	3.6	0	0
27	SA1-V2	Z	3.6	3.6	0	0
28	SA1-V3	Z	3.6	3.6	0	0
29	SA2-BOT	Z	5.8	5.8	0	0

Member Distributed Loads (BLC 3 : Wind Load (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
30	SA2-D1	Z	3.6	3.6	0	0
31	SA2-D2	Z	3.6	3.6	0	0
32	SA2-TOP	Z	5.8	5.8	0	0
33	SA2-V1	Z	3.6	3.6	0	0
34	SA2-V2	Z	3.6	3.6	0	0
35	SA2-V3	Z	3.6	3.6	0	0
36	STAB	Z	8.5	8.5	0	0
37	VERT1	Z	5.8	5.8	0	0
38	VERT2	Z	5.8	5.8	0	0
39	MP1	X	45.5	45.5	0	%100
40	MP2	X	70.2	70.2	0	%100
41	MP3	X	70.2	70.2	0	%100
42	MP4	X	62.3	62.3	0	%100
43	MP5	X	45.5	45.5	0	%100
44	MP1	Z	26.3	26.3	0	%100
45	MP2	Z	40.5	40.5	0	%100
46	MP3	Z	40.5	40.5	0	%100
47	MP4	Z	36	36	0	%100
48	MP5	Z	26.3	26.3	0	%100

Member Distributed Loads (BLC 4 : Wind Load (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	7	7	0	0
2	FM-TOP	X	7	7	0	0
3	SA1-BOT	X	5.8	5.8	0	0
4	SA1-D1	X	3.6	3.6	0	0
5	SA1-D2	X	3.6	3.6	0	0
6	SA1-TOP	X	5.8	5.8	0	0
7	SA1-V1	X	3.6	3.6	0	0
8	SA1-V2	X	3.6	3.6	0	0
9	SA1-V3	X	3.6	3.6	0	0
10	SA2-BOT	X	5.8	5.8	0	0
11	SA2-D1	X	3.6	3.6	0	0
12	SA2-D2	X	3.6	3.6	0	0
13	SA2-TOP	X	5.8	5.8	0	0
14	SA2-V1	X	3.6	3.6	0	0
15	SA2-V2	X	3.6	3.6	0	0
16	SA2-V3	X	3.6	3.6	0	0
17	STAB	X	8.5	8.5	0	0
18	VERT1	X	5.8	5.8	0	0
19	VERT2	X	5.8	5.8	0	0
20	FM-BOT	Z	12.1	12.1	0	0
21	FM-TOP	Z	12.1	12.1	0	0
22	SA1-BOT	Z	10	10	0	0
23	SA1-D1	Z	6.3	6.3	0	0
24	SA1-D2	Z	6.3	6.3	0	0
25	SA1-TOP	Z	10	10	0	0
26	SA1-V1	Z	6.3	6.3	0	0
27	SA1-V2	Z	6.3	6.3	0	0
28	SA1-V3	Z	6.3	6.3	0	0
29	SA2-BOT	Z	10	10	0	0
30	SA2-D1	Z	6.3	6.3	0	0
31	SA2-D2	Z	6.3	6.3	0	0
32	SA2-TOP	Z	10	10	0	0
33	SA2-V1	Z	6.3	6.3	0	0
34	SA2-V2	Z	6.3	6.3	0	0

Member Distributed Loads (BLC 4 : Wind Load (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
35	SA2-V3	Z	6.3	6.3	0	0
36	STAB	Z	14.7	14.7	0	0
37	VERT1	Z	10	10	0	0
38	VERT2	Z	10	10	0	0
39	MP1	X	36.7	36.7	0	%100
40	MP2	X	32.9	32.9	0	%100
41	MP3	X	32.9	32.9	0	%100
42	MP4	X	29.3	29.3	0	%100
43	MP5	X	36.7	36.7	0	%100
44	MP1	Z	63.6	63.6	0	%100
45	MP2	Z	57	57	0	%100
46	MP3	Z	57	57	0	%100
47	MP4	Z	50.8	50.8	0	%100
48	MP5	Z	63.6	63.6	0	%100

Member Distributed Loads (BLC 5 : Wind Load (90 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	0	0	0	0
2	FM-TOP	X	0	0	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	0	0	0	0
5	SA1-D2	X	0	0	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	0	0	0	0
8	SA1-V2	X	0	0	0	0
9	SA1-V3	X	0	0	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	0	0	0	0
12	SA2-D2	X	0	0	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	0	0	0	0
15	SA2-V2	X	0	0	0	0
16	SA2-V3	X	0	0	0	0
17	STAB	X	0	0	0	0
18	VERT1	X	0	0	0	0
19	VERT2	X	0	0	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	11.5	11.5	0	0
23	SA1-D1	Z	7.3	7.3	0	0
24	SA1-D2	Z	7.3	7.3	0	0
25	SA1-TOP	Z	11.5	11.5	0	0
26	SA1-V1	Z	7.3	7.3	0	0
27	SA1-V2	Z	7.3	7.3	0	0
28	SA1-V3	Z	7.3	7.3	0	0
29	SA2-BOT	Z	11.5	11.5	0	0
30	SA2-D1	Z	7.3	7.3	0	0
31	SA2-D2	Z	7.3	7.3	0	0
32	SA2-TOP	Z	11.5	11.5	0	0
33	SA2-V1	Z	7.3	7.3	0	0
34	SA2-V2	Z	7.3	7.3	0	0
35	SA2-V3	Z	7.3	7.3	0	0
36	STAB	Z	17	17	0	0
37	VERT1	Z	11.5	11.5	0	0
38	VERT2	Z	11.5	11.5	0	0
39	MP1	X	0	0	0	0

Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
40	MP2	X	0	0	0	0
41	MP3	X	0	0	0	0
42	MP4	X	0	0	0	0
43	MP5	X	0	0	0	0
44	MP1	Z	83.8	83.8	0	%100
45	MP2	Z	58.2	58.2	0	%100
46	MP3	Z	58.2	58.2	0	%100
47	MP4	Z	52	52	0	%100
48	MP5	Z	83.8	83.8	0	%100

Member Distributed Loads (BLC 6 : Wind Load (120 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-7	-7	0	0
2	FM-TOP	X	-7	-7	0	0
3	SA1-BOT	X	-5.8	-5.8	0	0
4	SA1-D1	X	-3.6	-3.6	0	0
5	SA1-D2	X	-3.6	-3.6	0	0
6	SA1-TOP	X	-5.8	-5.8	0	0
7	SA1-V1	X	-3.6	-3.6	0	0
8	SA1-V2	X	-3.6	-3.6	0	0
9	SA1-V3	X	-3.6	-3.6	0	0
10	SA2-BOT	X	-5.8	-5.8	0	0
11	SA2-D1	X	-3.6	-3.6	0	0
12	SA2-D2	X	-3.6	-3.6	0	0
13	SA2-TOP	X	-5.8	-5.8	0	0
14	SA2-V1	X	-3.6	-3.6	0	0
15	SA2-V2	X	-3.6	-3.6	0	0
16	SA2-V3	X	-3.6	-3.6	0	0
17	STAB	X	-8.5	-8.5	0	0
18	VERT1	X	-5.8	-5.8	0	0
19	VERT2	X	-5.8	-5.8	0	0
20	FM-BOT	Z	12.1	12.1	0	0
21	FM-TOP	Z	12.1	12.1	0	0
22	SA1-BOT	Z	10	10	0	0
23	SA1-D1	Z	6.3	6.3	0	0
24	SA1-D2	Z	6.3	6.3	0	0
25	SA1-TOP	Z	10	10	0	0
26	SA1-V1	Z	6.3	6.3	0	0
27	SA1-V2	Z	6.3	6.3	0	0
28	SA1-V3	Z	6.3	6.3	0	0
29	SA2-BOT	Z	10	10	0	0
30	SA2-D1	Z	6.3	6.3	0	0
31	SA2-D2	Z	6.3	6.3	0	0
32	SA2-TOP	Z	10	10	0	0
33	SA2-V1	Z	6.3	6.3	0	0
34	SA2-V2	Z	6.3	6.3	0	0
35	SA2-V3	Z	6.3	6.3	0	0
36	STAB	Z	14.7	14.7	0	0
37	VERT1	Z	10	10	0	0
38	VERT2	Z	10	10	0	0
39	MP1	X	-36.7	-36.7	0	%100
40	MP2	X	-32.9	-32.9	0	%100
41	MP3	X	-32.9	-32.9	0	%100
42	MP4	X	-29.3	-29.3	0	%100
43	MP5	X	-36.7	-36.7	0	%100
44	MP1	Z	63.6	63.6	0	%100

Member Distributed Loads (BLC 6 : Wind Load (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
45	MP2	Z	57	57	0	%100
46	MP3	Z	57	57	0	%100
47	MP4	Z	50.8	50.8	0	%100
48	MP5	Z	63.6	63.6	0	%100

Member Distributed Loads (BLC 7 : Wind Load (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-12.1	-12.1	0	0
2	FM-TOP	X	-12.1	-12.1	0	0
3	SA1-BOT	X	-10	-10	0	0
4	SA1-D1	X	-6.3	-6.3	0	0
5	SA1-D2	X	-6.3	-6.3	0	0
6	SA1-TOP	X	-10	-10	0	0
7	SA1-V1	X	-6.3	-6.3	0	0
8	SA1-V2	X	-6.3	-6.3	0	0
9	SA1-V3	X	-6.3	-6.3	0	0
10	SA2-BOT	X	-10	-10	0	0
11	SA2-D1	X	-6.3	-6.3	0	0
12	SA2-D2	X	-6.3	-6.3	0	0
13	SA2-TOP	X	-10	-10	0	0
14	SA2-V1	X	-6.3	-6.3	0	0
15	SA2-V2	X	-6.3	-6.3	0	0
16	SA2-V3	X	-6.3	-6.3	0	0
17	STAB	X	-14.7	-14.7	0	0
18	VERT1	X	-10	-10	0	0
19	VERT2	X	-10	-10	0	0
20	FM-BOT	Z	7	7	0	0
21	FM-TOP	Z	7	7	0	0
22	SA1-BOT	Z	5.8	5.8	0	0
23	SA1-D1	Z	3.6	3.6	0	0
24	SA1-D2	Z	3.6	3.6	0	0
25	SA1-TOP	Z	5.8	5.8	0	0
26	SA1-V1	Z	3.6	3.6	0	0
27	SA1-V2	Z	3.6	3.6	0	0
28	SA1-V3	Z	3.6	3.6	0	0
29	SA2-BOT	Z	5.8	5.8	0	0
30	SA2-D1	Z	3.6	3.6	0	0
31	SA2-D2	Z	3.6	3.6	0	0
32	SA2-TOP	Z	5.8	5.8	0	0
33	SA2-V1	Z	3.6	3.6	0	0
34	SA2-V2	Z	3.6	3.6	0	0
35	SA2-V3	Z	3.6	3.6	0	0
36	STAB	Z	8.5	8.5	0	0
37	VERT1	Z	5.8	5.8	0	0
38	VERT2	Z	5.8	5.8	0	0
39	MP1	X	-45.5	-45.5	0	%100
40	MP2	X	-70.2	-70.2	0	%100
41	MP3	X	-70.2	-70.2	0	%100
42	MP4	X	-62.3	-62.3	0	%100
43	MP5	X	-45.5	-45.5	0	%100
44	MP1	Z	26.3	26.3	0	%100
45	MP2	Z	40.5	40.5	0	%100
46	MP3	Z	40.5	40.5	0	%100
47	MP4	Z	36	36	0	%100
48	MP5	Z	26.3	26.3	0	%100

Member Distributed Loads (BLC 8 : Wind Load (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-14	-14	0	0
2	FM-TOP	X	-14	-14	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	-7.3	-7.3	0	0
5	SA1-D2	X	-7.3	-7.3	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	-7.3	-7.3	0	0
8	SA1-V2	X	-7.3	-7.3	0	0
9	SA1-V3	X	-7.3	-7.3	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	-7.3	-7.3	0	0
12	SA2-D2	X	-7.3	-7.3	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	-7.3	-7.3	0	0
15	SA2-V2	X	-7.3	-7.3	0	0
16	SA2-V3	X	-7.3	-7.3	0	0
17	STAB	X	-17	-17	0	0
18	VERT1	X	-11.5	-11.5	0	0
19	VERT2	X	-11.5	-11.5	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	0	0	0	0
23	SA1-D1	Z	0	0	0	0
24	SA1-D2	Z	0	0	0	0
25	SA1-TOP	Z	0	0	0	0
26	SA1-V1	Z	0	0	0	0
27	SA1-V2	Z	0	0	0	0
28	SA1-V3	Z	0	0	0	0
29	SA2-BOT	Z	0	0	0	0
30	SA2-D1	Z	0	0	0	0
31	SA2-D2	Z	0	0	0	0
32	SA2-TOP	Z	0	0	0	0
33	SA2-V1	Z	0	0	0	0
34	SA2-V2	Z	0	0	0	0
35	SA2-V3	Z	0	0	0	0
36	STAB	Z	0	0	0	0
37	VERT1	Z	0	0	0	0
38	VERT2	Z	0	0	0	0
39	MP1	X	-42.1	-42.1	0	%100
40	MP2	X	-88.6	-88.6	0	%100
41	MP3	X	-88.6	-88.6	0	%100
42	MP4	X	-78.6	-78.6	0	%100
43	MP5	X	-42.1	-42.1	0	%100
44	MP1	Z	0	0	0	0
45	MP2	Z	0	0	0	0
46	MP3	Z	0	0	0	0
47	MP4	Z	0	0	0	0
48	MP5	Z	0	0	0	0

Member Distributed Loads (BLC 9 : Wind Load (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-12.1	-12.1	0	0
2	FM-TOP	X	-12.1	-12.1	0	0
3	SA1-BOT	X	-10	-10	0	0
4	SA1-D1	X	-6.3	-6.3	0	0
5	SA1-D2	X	-6.3	-6.3	0	0

Member Distributed Loads (BLC 9 : Wind Load (210 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
6	SA1-TOP	X	-10	-10	0	0
7	SA1-V1	X	-6.3	-6.3	0	0
8	SA1-V2	X	-6.3	-6.3	0	0
9	SA1-V3	X	-6.3	-6.3	0	0
10	SA2-BOT	X	-10	-10	0	0
11	SA2-D1	X	-6.3	-6.3	0	0
12	SA2-D2	X	-6.3	-6.3	0	0
13	SA2-TOP	X	-10	-10	0	0
14	SA2-V1	X	-6.3	-6.3	0	0
15	SA2-V2	X	-6.3	-6.3	0	0
16	SA2-V3	X	-6.3	-6.3	0	0
17	STAB	X	-14.7	-14.7	0	0
18	VERT1	X	-10	-10	0	0
19	VERT2	X	-10	-10	0	0
20	FM-BOT	Z	-7	-7	0	0
21	FM-TOP	Z	-7	-7	0	0
22	SA1-BOT	Z	-5.8	-5.8	0	0
23	SA1-D1	Z	-3.6	-3.6	0	0
24	SA1-D2	Z	-3.6	-3.6	0	0
25	SA1-TOP	Z	-5.8	-5.8	0	0
26	SA1-V1	Z	-3.6	-3.6	0	0
27	SA1-V2	Z	-3.6	-3.6	0	0
28	SA1-V3	Z	-3.6	-3.6	0	0
29	SA2-BOT	Z	-5.8	-5.8	0	0
30	SA2-D1	Z	-3.6	-3.6	0	0
31	SA2-D2	Z	-3.6	-3.6	0	0
32	SA2-TOP	Z	-5.8	-5.8	0	0
33	SA2-V1	Z	-3.6	-3.6	0	0
34	SA2-V2	Z	-3.6	-3.6	0	0
35	SA2-V3	Z	-3.6	-3.6	0	0
36	STAB	Z	-8.5	-8.5	0	0
37	VERT1	Z	-5.8	-5.8	0	0
38	VERT2	Z	-5.8	-5.8	0	0
39	MP1	X	-45.5	-45.5	0	%100
40	MP2	X	-70.2	-70.2	0	%100
41	MP3	X	-70.2	-70.2	0	%100
42	MP4	X	-62.3	-62.3	0	%100
43	MP5	X	-45.5	-45.5	0	%100
44	MP1	Z	-26.3	-26.3	0	%100
45	MP2	Z	-40.5	-40.5	0	%100
46	MP3	Z	-40.5	-40.5	0	%100
47	MP4	Z	-36	-36	0	%100
48	MP5	Z	-26.3	-26.3	0	%100

Member Distributed Loads (BLC 10 : Wind Load (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-7	-7	0	0
2	FM-TOP	X	-7	-7	0	0
3	SA1-BOT	X	-5.8	-5.8	0	0
4	SA1-D1	X	-3.6	-3.6	0	0
5	SA1-D2	X	-3.6	-3.6	0	0
6	SA1-TOP	X	-5.8	-5.8	0	0
7	SA1-V1	X	-3.6	-3.6	0	0
8	SA1-V2	X	-3.6	-3.6	0	0
9	SA1-V3	X	-3.6	-3.6	0	0
10	SA2-BOT	X	-5.8	-5.8	0	0

Member Distributed Loads (BLC 10 : Wind Load (240 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
11	SA2-D1	X	-3.6	-3.6	0	0
12	SA2-D2	X	-3.6	-3.6	0	0
13	SA2-TOP	X	-5.8	-5.8	0	0
14	SA2-V1	X	-3.6	-3.6	0	0
15	SA2-V2	X	-3.6	-3.6	0	0
16	SA2-V3	X	-3.6	-3.6	0	0
17	STAB	X	-8.5	-8.5	0	0
18	VERT1	X	-5.8	-5.8	0	0
19	VERT2	X	-5.8	-5.8	0	0
20	FM-BOT	Z	-12.1	-12.1	0	0
21	FM-TOP	Z	-12.1	-12.1	0	0
22	SA1-BOT	Z	-10	-10	0	0
23	SA1-D1	Z	-6.3	-6.3	0	0
24	SA1-D2	Z	-6.3	-6.3	0	0
25	SA1-TOP	Z	-10	-10	0	0
26	SA1-V1	Z	-6.3	-6.3	0	0
27	SA1-V2	Z	-6.3	-6.3	0	0
28	SA1-V3	Z	-6.3	-6.3	0	0
29	SA2-BOT	Z	-10	-10	0	0
30	SA2-D1	Z	-6.3	-6.3	0	0
31	SA2-D2	Z	-6.3	-6.3	0	0
32	SA2-TOP	Z	-10	-10	0	0
33	SA2-V1	Z	-6.3	-6.3	0	0
34	SA2-V2	Z	-6.3	-6.3	0	0
35	SA2-V3	Z	-6.3	-6.3	0	0
36	STAB	Z	-14.7	-14.7	0	0
37	VERT1	Z	-10	-10	0	0
38	VERT2	Z	-10	-10	0	0
39	MP1	X	-36.7	-36.7	0	%100
40	MP2	X	-32.9	-32.9	0	%100
41	MP3	X	-32.9	-32.9	0	%100
42	MP4	X	-29.3	-29.3	0	%100
43	MP5	X	-36.7	-36.7	0	%100
44	MP1	Z	-63.6	-63.6	0	%100
45	MP2	Z	-57	-57	0	%100
46	MP3	Z	-57	-57	0	%100
47	MP4	Z	-50.8	-50.8	0	%100
48	MP5	Z	-63.6	-63.6	0	%100

Member Distributed Loads (BLC 11 : Wind Load (270 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	0	0	0	0
2	FM-TOP	X	0	0	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	0	0	0	0
5	SA1-D2	X	0	0	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	0	0	0	0
8	SA1-V2	X	0	0	0	0
9	SA1-V3	X	0	0	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	0	0	0	0
12	SA2-D2	X	0	0	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	0	0	0	0
15	SA2-V2	X	0	0	0	0

Member Distributed Loads (BLC 11 : Wind Load (270 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
16	SA2-V3	X	0	0	0	0
17	STAB	X	0	0	0	0
18	VERT1	X	0	0	0	0
19	VERT2	X	0	0	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	-11.5	-11.5	0	0
23	SA1-D1	Z	-7.3	-7.3	0	0
24	SA1-D2	Z	-7.3	-7.3	0	0
25	SA1-TOP	Z	-11.5	-11.5	0	0
26	SA1-V1	Z	-7.3	-7.3	0	0
27	SA1-V2	Z	-7.3	-7.3	0	0
28	SA1-V3	Z	-7.3	-7.3	0	0
29	SA2-BOT	Z	-11.5	-11.5	0	0
30	SA2-D1	Z	-7.3	-7.3	0	0
31	SA2-D2	Z	-7.3	-7.3	0	0
32	SA2-TOP	Z	-11.5	-11.5	0	0
33	SA2-V1	Z	-7.3	-7.3	0	0
34	SA2-V2	Z	-7.3	-7.3	0	0
35	SA2-V3	Z	-7.3	-7.3	0	0
36	STAB	Z	-17	-17	0	0
37	VERT1	Z	-11.5	-11.5	0	0
38	VERT2	Z	-11.5	-11.5	0	0
39	MP1	X	0	0	0	0
40	MP2	X	0	0	0	0
41	MP3	X	0	0	0	0
42	MP4	X	0	0	0	0
43	MP5	X	0	0	0	0
44	MP1	Z	-83.8	-83.8	0	%100
45	MP2	Z	-58.2	-58.2	0	%100
46	MP3	Z	-58.2	-58.2	0	%100
47	MP4	Z	-52	-52	0	%100
48	MP5	Z	-83.8	-83.8	0	%100

Member Distributed Loads (BLC 12 : Wind Load (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	7	7	0	0
2	FM-TOP	X	7	7	0	0
3	SA1-BOT	X	5.8	5.8	0	0
4	SA1-D1	X	3.6	3.6	0	0
5	SA1-D2	X	3.6	3.6	0	0
6	SA1-TOP	X	5.8	5.8	0	0
7	SA1-V1	X	3.6	3.6	0	0
8	SA1-V2	X	3.6	3.6	0	0
9	SA1-V3	X	3.6	3.6	0	0
10	SA2-BOT	X	5.8	5.8	0	0
11	SA2-D1	X	3.6	3.6	0	0
12	SA2-D2	X	3.6	3.6	0	0
13	SA2-TOP	X	5.8	5.8	0	0
14	SA2-V1	X	3.6	3.6	0	0
15	SA2-V2	X	3.6	3.6	0	0
16	SA2-V3	X	3.6	3.6	0	0
17	STAB	X	8.5	8.5	0	0
18	VERT1	X	5.8	5.8	0	0
19	VERT2	X	5.8	5.8	0	0
20	FM-BOT	Z	-12.1	-12.1	0	0

Member Distributed Loads (BLC 12 : Wind Load (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
21	FM-TOP	Z	-12.1	-12.1	0	0
22	SA1-BOT	Z	-10	-10	0	0
23	SA1-D1	Z	-6.3	-6.3	0	0
24	SA1-D2	Z	-6.3	-6.3	0	0
25	SA1-TOP	Z	-10	-10	0	0
26	SA1-V1	Z	-6.3	-6.3	0	0
27	SA1-V2	Z	-6.3	-6.3	0	0
28	SA1-V3	Z	-6.3	-6.3	0	0
29	SA2-BOT	Z	-10	-10	0	0
30	SA2-D1	Z	-6.3	-6.3	0	0
31	SA2-D2	Z	-6.3	-6.3	0	0
32	SA2-TOP	Z	-10	-10	0	0
33	SA2-V1	Z	-6.3	-6.3	0	0
34	SA2-V2	Z	-6.3	-6.3	0	0
35	SA2-V3	Z	-6.3	-6.3	0	0
36	STAB	Z	-14.7	-14.7	0	0
37	VERT1	Z	-10	-10	0	0
38	VERT2	Z	-10	-10	0	0
39	MP1	X	36.7	36.7	0	%100
40	MP2	X	32.9	32.9	0	%100
41	MP3	X	32.9	32.9	0	%100
42	MP4	X	29.3	29.3	0	%100
43	MP5	X	36.7	36.7	0	%100
44	MP1	Z	-63.6	-63.6	0	%100
45	MP2	Z	-57	-57	0	%100
46	MP3	Z	-57	-57	0	%100
47	MP4	Z	-50.8	-50.8	0	%100
48	MP5	Z	-63.6	-63.6	0	%100

Member Distributed Loads (BLC 13 : Wind Load (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	12.1	12.1	0	0
2	FM-TOP	X	12.1	12.1	0	0
3	SA1-BOT	X	10	10	0	0
4	SA1-D1	X	6.3	6.3	0	0
5	SA1-D2	X	6.3	6.3	0	0
6	SA1-TOP	X	10	10	0	0
7	SA1-V1	X	6.3	6.3	0	0
8	SA1-V2	X	6.3	6.3	0	0
9	SA1-V3	X	6.3	6.3	0	0
10	SA2-BOT	X	10	10	0	0
11	SA2-D1	X	6.3	6.3	0	0
12	SA2-D2	X	6.3	6.3	0	0
13	SA2-TOP	X	10	10	0	0
14	SA2-V1	X	6.3	6.3	0	0
15	SA2-V2	X	6.3	6.3	0	0
16	SA2-V3	X	6.3	6.3	0	0
17	STAB	X	14.7	14.7	0	0
18	VERT1	X	10	10	0	0
19	VERT2	X	10	10	0	0
20	FM-BOT	Z	-7	-7	0	0
21	FM-TOP	Z	-7	-7	0	0
22	SA1-BOT	Z	-5.8	-5.8	0	0
23	SA1-D1	Z	-3.6	-3.6	0	0
24	SA1-D2	Z	-3.6	-3.6	0	0
25	SA1-TOP	Z	-5.8	-5.8	0	0

Member Distributed Loads (BLC 13 : Wind Load (330 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
26	SA1-V1	Z	-3.6	-3.6	0	0
27	SA1-V2	Z	-3.6	-3.6	0	0
28	SA1-V3	Z	-3.6	-3.6	0	0
29	SA2-BOT	Z	-5.8	-5.8	0	0
30	SA2-D1	Z	-3.6	-3.6	0	0
31	SA2-D2	Z	-3.6	-3.6	0	0
32	SA2-TOP	Z	-5.8	-5.8	0	0
33	SA2-V1	Z	-3.6	-3.6	0	0
34	SA2-V2	Z	-3.6	-3.6	0	0
35	SA2-V3	Z	-3.6	-3.6	0	0
36	STAB	Z	-8.5	-8.5	0	0
37	VERT1	Z	-5.8	-5.8	0	0
38	VERT2	Z	-5.8	-5.8	0	0
39	MP1	X	45.5	45.5	0	%100
40	MP2	X	70.2	70.2	0	%100
41	MP3	X	70.2	70.2	0	%100
42	MP4	X	62.3	62.3	0	%100
43	MP5	X	45.5	45.5	0	%100
44	MP1	Z	-26.3	-26.3	0	%100
45	MP2	Z	-40.5	-40.5	0	%100
46	MP3	Z	-40.5	-40.5	0	%100
47	MP4	Z	-36	-36	0	%100
48	MP5	Z	-26.3	-26.3	0	%100

Member Distributed Loads (BLC 14 : Ice Load)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	Y	-10.3	-10.3	0	0
2	FM-TOP	Y	-10.3	-10.3	0	0
3	SA1-BOT	Y	-9.2	-9.2	0	0
4	SA1-D1	Y	-7.3	-7.3	0	0
5	SA1-D2	Y	-7.3	-7.3	0	0
6	SA1-TOP	Y	-9.2	-9.2	0	0
7	SA1-V1	Y	-7.3	-7.3	0	0
8	SA1-V2	Y	-7.3	-7.3	0	0
9	SA1-V3	Y	-7.3	-7.3	0	0
10	SA2-BOT	Y	-9.2	-9.2	0	0
11	SA2-D1	Y	-7.3	-7.3	0	0
12	SA2-D2	Y	-7.3	-7.3	0	0
13	SA2-TOP	Y	-9.2	-9.2	0	0
14	SA2-V1	Y	-7.3	-7.3	0	0
15	SA2-V2	Y	-7.3	-7.3	0	0
16	SA2-V3	Y	-7.3	-7.3	0	0
17	STAB	Y	-11.7	-11.7	0	0
18	VERT1	Y	-9.2	-9.2	0	0
19	VERT2	Y	-9.2	-9.2	0	0

Member Distributed Loads (BLC 15 : Wind on Ice (0 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	4.3	4.3	0	0
2	FM-TOP	X	4.3	4.3	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	3.4	3.4	0	0
5	SA1-D2	X	3.4	3.4	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	3.4	3.4	0	0
8	SA1-V2	X	3.4	3.4	0	0

Member Distributed Loads (BLC 15 : Wind on Ice (0 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
9	SA1-V3	X	3.4	3.4	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	3.4	3.4	0	0
12	SA2-D2	X	3.4	3.4	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	3.4	3.4	0	0
15	SA2-V2	X	3.4	3.4	0	0
16	SA2-V3	X	3.4	3.4	0	0
17	STAB	X	4.7	4.7	0	0
18	VERT1	X	4	4	0	0
19	VERT2	X	4	4	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	0	0	0	0
23	SA1-D1	Z	0	0	0	0
24	SA1-D2	Z	0	0	0	0
25	SA1-TOP	Z	0	0	0	0
26	SA1-V1	Z	0	0	0	0
27	SA1-V2	Z	0	0	0	0
28	SA1-V3	Z	0	0	0	0
29	SA2-BOT	Z	0	0	0	0
30	SA2-D1	Z	0	0	0	0
31	SA2-D2	Z	0	0	0	0
32	SA2-TOP	Z	0	0	0	0
33	SA2-V1	Z	0	0	0	0
34	SA2-V2	Z	0	0	0	0
35	SA2-V3	Z	0	0	0	0
36	STAB	Z	0	0	0	0
37	VERT1	Z	0	0	0	0
38	VERT2	Z	0	0	0	0
39	MP1	X	7.3	7.3	0	%100
40	MP2	X	13.7	13.7	0	%100
41	MP3	X	13.7	13.7	0	%100
42	MP4	X	12.3	12.3	0	%100
43	MP5	X	7.3	7.3	0	%100
44	MP1	Z	0	0	0	0
45	MP2	Z	0	0	0	0
46	MP3	Z	0	0	0	0
47	MP4	Z	0	0	0	0
48	MP5	Z	0	0	0	0

Member Distributed Loads (BLC 16 : Wind on Ice (30 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	3.7	3.7	0	0
2	FM-TOP	X	3.7	3.7	0	0
3	SA1-BOT	X	3.5	3.5	0	0
4	SA1-D1	X	2.9	2.9	0	0
5	SA1-D2	X	2.9	2.9	0	0
6	SA1-TOP	X	3.5	3.5	0	0
7	SA1-V1	X	2.9	2.9	0	0
8	SA1-V2	X	2.9	2.9	0	0
9	SA1-V3	X	2.9	2.9	0	0
10	SA2-BOT	X	3.5	3.5	0	0
11	SA2-D1	X	2.9	2.9	0	0
12	SA2-D2	X	2.9	2.9	0	0
13	SA2-TOP	X	3.5	3.5	0	0

Member Distributed Loads (BLC 16 : Wind on Ice (30 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
14	SA2-V1	X	2.9	2.9	0	0
15	SA2-V2	X	2.9	2.9	0	0
16	SA2-V3	X	2.9	2.9	0	0
17	STAB	X	4.1	4.1	0	0
18	VERT1	X	3.5	3.5	0	0
19	VERT2	X	3.5	3.5	0	0
20	FM-BOT	Z	2.2	2.2	0	0
21	FM-TOP	Z	2.2	2.2	0	0
22	SA1-BOT	Z	2	2	0	0
23	SA1-D1	Z	1.7	1.7	0	0
24	SA1-D2	Z	1.7	1.7	0	0
25	SA1-TOP	Z	2	2	0	0
26	SA1-V1	Z	1.7	1.7	0	0
27	SA1-V2	Z	1.7	1.7	0	0
28	SA1-V3	Z	1.7	1.7	0	0
29	SA2-BOT	Z	2	2	0	0
30	SA2-D1	Z	1.7	1.7	0	0
31	SA2-D2	Z	1.7	1.7	0	0
32	SA2-TOP	Z	2	2	0	0
33	SA2-V1	Z	1.7	1.7	0	0
34	SA2-V2	Z	1.7	1.7	0	0
35	SA2-V3	Z	1.7	1.7	0	0
36	STAB	Z	2.4	2.4	0	0
37	VERT1	Z	2	2	0	0
38	VERT2	Z	2	2	0	0
39	MP1	X	7.6	7.6	0	%100
40	MP2	X	11	11	0	%100
41	MP3	X	11	11	0	%100
42	MP4	X	9.9	9.9	0	%100
43	MP5	X	7.6	7.6	0	%100
44	MP1	Z	4.4	4.4	0	%100
45	MP2	Z	6.3	6.3	0	%100
46	MP3	Z	6.3	6.3	0	%100
47	MP4	Z	5.7	5.7	0	%100
48	MP5	Z	4.4	4.4	0	%100

Member Distributed Loads (BLC 17 : Wind on Ice (60 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	2.2	2.2	0	0
2	FM-TOP	X	2.2	2.2	0	0
3	SA1-BOT	X	2	2	0	0
4	SA1-D1	X	1.7	1.7	0	0
5	SA1-D2	X	1.7	1.7	0	0
6	SA1-TOP	X	2	2	0	0
7	SA1-V1	X	1.7	1.7	0	0
8	SA1-V2	X	1.7	1.7	0	0
9	SA1-V3	X	1.7	1.7	0	0
10	SA2-BOT	X	2	2	0	0
11	SA2-D1	X	1.7	1.7	0	0
12	SA2-D2	X	1.7	1.7	0	0
13	SA2-TOP	X	2	2	0	0
14	SA2-V1	X	1.7	1.7	0	0
15	SA2-V2	X	1.7	1.7	0	0
16	SA2-V3	X	1.7	1.7	0	0
17	STAB	X	2.4	2.4	0	0
18	VERT1	X	2	2	0	0

Member Distributed Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
19	VERT2	X	2	2	0	0
20	FM-BOT	Z	3.7	3.7	0	0
21	FM-TOP	Z	3.7	3.7	0	0
22	SA1-BOT	Z	3.5	3.5	0	0
23	SA1-D1	Z	2.9	2.9	0	0
24	SA1-D2	Z	2.9	2.9	0	0
25	SA1-TOP	Z	3.5	3.5	0	0
26	SA1-V1	Z	2.9	2.9	0	0
27	SA1-V2	Z	2.9	2.9	0	0
28	SA1-V3	Z	2.9	2.9	0	0
29	SA2-BOT	Z	3.5	3.5	0	0
30	SA2-D1	Z	2.9	2.9	0	0
31	SA2-D2	Z	2.9	2.9	0	0
32	SA2-TOP	Z	3.5	3.5	0	0
33	SA2-V1	Z	2.9	2.9	0	0
34	SA2-V2	Z	2.9	2.9	0	0
35	SA2-V3	Z	2.9	2.9	0	0
36	STAB	Z	4.1	4.1	0	0
37	VERT1	Z	3.5	3.5	0	0
38	VERT2	Z	3.5	3.5	0	0
39	MP1	X	5.9	5.9	0	%100
40	MP2	X	5.4	5.4	0	%100
41	MP3	X	5.4	5.4	0	%100
42	MP4	X	4.9	4.9	0	%100
43	MP5	X	5.9	5.9	0	%100
44	MP1	Z	10.2	10.2	0	%100
45	MP2	Z	9.3	9.3	0	%100
46	MP3	Z	9.3	9.3	0	%100
47	MP4	Z	8.4	8.4	0	%100
48	MP5	Z	10.2	10.2	0	%100

Member Distributed Loads (BLC 18 : Wind on Ice (90 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	0	0	0	0
2	FM-TOP	X	0	0	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	0	0	0	0
5	SA1-D2	X	0	0	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	0	0	0	0
8	SA1-V2	X	0	0	0	0
9	SA1-V3	X	0	0	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	0	0	0	0
12	SA2-D2	X	0	0	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	0	0	0	0
15	SA2-V2	X	0	0	0	0
16	SA2-V3	X	0	0	0	0
17	STAB	X	0	0	0	0
18	VERT1	X	0	0	0	0
19	VERT2	X	0	0	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	4	4	0	0
23	SA1-D1	Z	3.4	3.4	0	0

Member Distributed Loads (BLC 18 : Wind on Ice (90 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
24	SA1-D2	Z	3.4	3.4	0	0
25	SA1-TOP	Z	4	4	0	0
26	SA1-V1	Z	3.4	3.4	0	0
27	SA1-V2	Z	3.4	3.4	0	0
28	SA1-V3	Z	3.4	3.4	0	0
29	SA2-BOT	Z	4	4	0	0
30	SA2-D1	Z	3.4	3.4	0	0
31	SA2-D2	Z	3.4	3.4	0	0
32	SA2-TOP	Z	4	4	0	0
33	SA2-V1	Z	3.4	3.4	0	0
34	SA2-V2	Z	3.4	3.4	0	0
35	SA2-V3	Z	3.4	3.4	0	0
36	STAB	Z	4.7	4.7	0	0
37	VERT1	Z	4	4	0	0
38	VERT2	Z	4	4	0	0
39	MP1	X	0	0	0	0
40	MP2	X	0	0	0	0
41	MP3	X	0	0	0	0
42	MP4	X	0	0	0	0
43	MP5	X	0	0	0	0
44	MP1	Z	13.3	13.3	0	%100
45	MP2	Z	9.7	9.7	0	%100
46	MP3	Z	9.7	9.7	0	%100
47	MP4	Z	8.9	8.9	0	%100
48	MP5	Z	13.3	13.3	0	%100

Member Distributed Loads (BLC 19 : Wind on Ice (120 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-2.2	-2.2	0	0
2	FM-TOP	X	-2.2	-2.2	0	0
3	SA1-BOT	X	-2	-2	0	0
4	SA1-D1	X	-1.7	-1.7	0	0
5	SA1-D2	X	-1.7	-1.7	0	0
6	SA1-TOP	X	-2	-2	0	0
7	SA1-V1	X	-1.7	-1.7	0	0
8	SA1-V2	X	-1.7	-1.7	0	0
9	SA1-V3	X	-1.7	-1.7	0	0
10	SA2-BOT	X	-2	-2	0	0
11	SA2-D1	X	-1.7	-1.7	0	0
12	SA2-D2	X	-1.7	-1.7	0	0
13	SA2-TOP	X	-2	-2	0	0
14	SA2-V1	X	-1.7	-1.7	0	0
15	SA2-V2	X	-1.7	-1.7	0	0
16	SA2-V3	X	-1.7	-1.7	0	0
17	STAB	X	-2.4	-2.4	0	0
18	VERT1	X	-2	-2	0	0
19	VERT2	X	-2	-2	0	0
20	FM-BOT	Z	3.7	3.7	0	0
21	FM-TOP	Z	3.7	3.7	0	0
22	SA1-BOT	Z	3.5	3.5	0	0
23	SA1-D1	Z	2.9	2.9	0	0
24	SA1-D2	Z	2.9	2.9	0	0
25	SA1-TOP	Z	3.5	3.5	0	0
26	SA1-V1	Z	2.9	2.9	0	0
27	SA1-V2	Z	2.9	2.9	0	0
28	SA1-V3	Z	2.9	2.9	0	0

Member Distributed Loads (BLC 19 : Wind on Ice (120 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
29	SA2-BOT	Z	3.5	3.5	0	0
30	SA2-D1	Z	2.9	2.9	0	0
31	SA2-D2	Z	2.9	2.9	0	0
32	SA2-TOP	Z	3.5	3.5	0	0
33	SA2-V1	Z	2.9	2.9	0	0
34	SA2-V2	Z	2.9	2.9	0	0
35	SA2-V3	Z	2.9	2.9	0	0
36	STAB	Z	4.1	4.1	0	0
37	VERT1	Z	3.5	3.5	0	0
38	VERT2	Z	3.5	3.5	0	0
39	MP1	X	-5.9	-5.9	0	%100
40	MP2	X	-5.4	-5.4	0	%100
41	MP3	X	-5.4	-5.4	0	%100
42	MP4	X	-4.9	-4.9	0	%100
43	MP5	X	-5.9	-5.9	0	%100
44	MP1	Z	10.2	10.2	0	%100
45	MP2	Z	9.3	9.3	0	%100
46	MP3	Z	9.3	9.3	0	%100
47	MP4	Z	8.4	8.4	0	%100
48	MP5	Z	10.2	10.2	0	%100

Member Distributed Loads (BLC 20 : Wind on Ice (150 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-3.7	-3.7	0	0
2	FM-TOP	X	-3.7	-3.7	0	0
3	SA1-BOT	X	-3.5	-3.5	0	0
4	SA1-D1	X	-2.9	-2.9	0	0
5	SA1-D2	X	-2.9	-2.9	0	0
6	SA1-TOP	X	-3.5	-3.5	0	0
7	SA1-V1	X	-2.9	-2.9	0	0
8	SA1-V2	X	-2.9	-2.9	0	0
9	SA1-V3	X	-2.9	-2.9	0	0
10	SA2-BOT	X	-3.5	-3.5	0	0
11	SA2-D1	X	-2.9	-2.9	0	0
12	SA2-D2	X	-2.9	-2.9	0	0
13	SA2-TOP	X	-3.5	-3.5	0	0
14	SA2-V1	X	-2.9	-2.9	0	0
15	SA2-V2	X	-2.9	-2.9	0	0
16	SA2-V3	X	-2.9	-2.9	0	0
17	STAB	X	-4.1	-4.1	0	0
18	VERT1	X	-3.5	-3.5	0	0
19	VERT2	X	-3.5	-3.5	0	0
20	FM-BOT	Z	2.2	2.2	0	0
21	FM-TOP	Z	2.2	2.2	0	0
22	SA1-BOT	Z	2	2	0	0
23	SA1-D1	Z	1.7	1.7	0	0
24	SA1-D2	Z	1.7	1.7	0	0
25	SA1-TOP	Z	2	2	0	0
26	SA1-V1	Z	1.7	1.7	0	0
27	SA1-V2	Z	1.7	1.7	0	0
28	SA1-V3	Z	1.7	1.7	0	0
29	SA2-BOT	Z	2	2	0	0
30	SA2-D1	Z	1.7	1.7	0	0
31	SA2-D2	Z	1.7	1.7	0	0
32	SA2-TOP	Z	2	2	0	0
33	SA2-V1	Z	1.7	1.7	0	0

Member Distributed Loads (BLC 20 : Wind on Ice (150 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
34	SA2-V2	Z	1.7	1.7	0	0
35	SA2-V3	Z	1.7	1.7	0	0
36	STAB	Z	2.4	2.4	0	0
37	VERT1	Z	2	2	0	0
38	VERT2	Z	2	2	0	0
39	MP1	X	-7.6	-7.6	0	%100
40	MP2	X	-11	-11	0	%100
41	MP3	X	-11	-11	0	%100
42	MP4	X	-9.9	-9.9	0	%100
43	MP5	X	-7.6	-7.6	0	%100
44	MP1	Z	4.4	4.4	0	%100
45	MP2	Z	6.3	6.3	0	%100
46	MP3	Z	6.3	6.3	0	%100
47	MP4	Z	5.7	5.7	0	%100
48	MP5	Z	4.4	4.4	0	%100

Member Distributed Loads (BLC 21 : Wind on Ice (180 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-4.3	-4.3	0	0
2	FM-TOP	X	-4.3	-4.3	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	-3.4	-3.4	0	0
5	SA1-D2	X	-3.4	-3.4	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	-3.4	-3.4	0	0
8	SA1-V2	X	-3.4	-3.4	0	0
9	SA1-V3	X	-3.4	-3.4	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	-3.4	-3.4	0	0
12	SA2-D2	X	-3.4	-3.4	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	-3.4	-3.4	0	0
15	SA2-V2	X	-3.4	-3.4	0	0
16	SA2-V3	X	-3.4	-3.4	0	0
17	STAB	X	-4.7	-4.7	0	0
18	VERT1	X	-4	-4	0	0
19	VERT2	X	-4	-4	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	0	0	0	0
23	SA1-D1	Z	0	0	0	0
24	SA1-D2	Z	0	0	0	0
25	SA1-TOP	Z	0	0	0	0
26	SA1-V1	Z	0	0	0	0
27	SA1-V2	Z	0	0	0	0
28	SA1-V3	Z	0	0	0	0
29	SA2-BOT	Z	0	0	0	0
30	SA2-D1	Z	0	0	0	0
31	SA2-D2	Z	0	0	0	0
32	SA2-TOP	Z	0	0	0	0
33	SA2-V1	Z	0	0	0	0
34	SA2-V2	Z	0	0	0	0
35	SA2-V3	Z	0	0	0	0
36	STAB	Z	0	0	0	0
37	VERT1	Z	0	0	0	0
38	VERT2	Z	0	0	0	0

Member Distributed Loads (BLC 21 : Wind on Ice (180 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
39	MP1	X	-7.3	-7.3	0	%100
40	MP2	X	-13.7	-13.7	0	%100
41	MP3	X	-13.7	-13.7	0	%100
42	MP4	X	-12.3	-12.3	0	%100
43	MP5	X	-7.3	-7.3	0	%100
44	MP1	Z	0	0	0	0
45	MP2	Z	0	0	0	0
46	MP3	Z	0	0	0	0
47	MP4	Z	0	0	0	0
48	MP5	Z	0	0	0	0

Member Distributed Loads (BLC 22 : Wind on Ice (210 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-3.7	-3.7	0	0
2	FM-TOP	X	-3.7	-3.7	0	0
3	SA1-BOT	X	-3.5	-3.5	0	0
4	SA1-D1	X	-2.9	-2.9	0	0
5	SA1-D2	X	-2.9	-2.9	0	0
6	SA1-TOP	X	-3.5	-3.5	0	0
7	SA1-V1	X	-2.9	-2.9	0	0
8	SA1-V2	X	-2.9	-2.9	0	0
9	SA1-V3	X	-2.9	-2.9	0	0
10	SA2-BOT	X	-3.5	-3.5	0	0
11	SA2-D1	X	-2.9	-2.9	0	0
12	SA2-D2	X	-2.9	-2.9	0	0
13	SA2-TOP	X	-3.5	-3.5	0	0
14	SA2-V1	X	-2.9	-2.9	0	0
15	SA2-V2	X	-2.9	-2.9	0	0
16	SA2-V3	X	-2.9	-2.9	0	0
17	STAB	X	-4.1	-4.1	0	0
18	VERT1	X	-3.5	-3.5	0	0
19	VERT2	X	-3.5	-3.5	0	0
20	FM-BOT	Z	-2.2	-2.2	0	0
21	FM-TOP	Z	-2.2	-2.2	0	0
22	SA1-BOT	Z	-2	-2	0	0
23	SA1-D1	Z	-1.7	-1.7	0	0
24	SA1-D2	Z	-1.7	-1.7	0	0
25	SA1-TOP	Z	-2	-2	0	0
26	SA1-V1	Z	-1.7	-1.7	0	0
27	SA1-V2	Z	-1.7	-1.7	0	0
28	SA1-V3	Z	-1.7	-1.7	0	0
29	SA2-BOT	Z	-2	-2	0	0
30	SA2-D1	Z	-1.7	-1.7	0	0
31	SA2-D2	Z	-1.7	-1.7	0	0
32	SA2-TOP	Z	-2	-2	0	0
33	SA2-V1	Z	-1.7	-1.7	0	0
34	SA2-V2	Z	-1.7	-1.7	0	0
35	SA2-V3	Z	-1.7	-1.7	0	0
36	STAB	Z	-2.4	-2.4	0	0
37	VERT1	Z	-2	-2	0	0
38	VERT2	Z	-2	-2	0	0
39	MP1	X	-7.6	-7.6	0	%100
40	MP2	X	-11	-11	0	%100
41	MP3	X	-11	-11	0	%100
42	MP4	X	-9.9	-9.9	0	%100
43	MP5	X	-7.6	-7.6	0	%100

Member Distributed Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
44	MP1	Z	-4.4	-4.4	0	%100
45	MP2	Z	-6.3	-6.3	0	%100
46	MP3	Z	-6.3	-6.3	0	%100
47	MP4	Z	-5.7	-5.7	0	%100
48	MP5	Z	-4.4	-4.4	0	%100

Member Distributed Loads (BLC 23 : Wind on Ice (240 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	-2.2	-2.2	0	0
2	FM-TOP	X	-2.2	-2.2	0	0
3	SA1-BOT	X	-2	-2	0	0
4	SA1-D1	X	-1.7	-1.7	0	0
5	SA1-D2	X	-1.7	-1.7	0	0
6	SA1-TOP	X	-2	-2	0	0
7	SA1-V1	X	-1.7	-1.7	0	0
8	SA1-V2	X	-1.7	-1.7	0	0
9	SA1-V3	X	-1.7	-1.7	0	0
10	SA2-BOT	X	-2	-2	0	0
11	SA2-D1	X	-1.7	-1.7	0	0
12	SA2-D2	X	-1.7	-1.7	0	0
13	SA2-TOP	X	-2	-2	0	0
14	SA2-V1	X	-1.7	-1.7	0	0
15	SA2-V2	X	-1.7	-1.7	0	0
16	SA2-V3	X	-1.7	-1.7	0	0
17	STAB	X	-2.4	-2.4	0	0
18	VERT1	X	-2	-2	0	0
19	VERT2	X	-2	-2	0	0
20	FM-BOT	Z	-3.7	-3.7	0	0
21	FM-TOP	Z	-3.7	-3.7	0	0
22	SA1-BOT	Z	-3.5	-3.5	0	0
23	SA1-D1	Z	-2.9	-2.9	0	0
24	SA1-D2	Z	-2.9	-2.9	0	0
25	SA1-TOP	Z	-3.5	-3.5	0	0
26	SA1-V1	Z	-2.9	-2.9	0	0
27	SA1-V2	Z	-2.9	-2.9	0	0
28	SA1-V3	Z	-2.9	-2.9	0	0
29	SA2-BOT	Z	-3.5	-3.5	0	0
30	SA2-D1	Z	-2.9	-2.9	0	0
31	SA2-D2	Z	-2.9	-2.9	0	0
32	SA2-TOP	Z	-3.5	-3.5	0	0
33	SA2-V1	Z	-2.9	-2.9	0	0
34	SA2-V2	Z	-2.9	-2.9	0	0
35	SA2-V3	Z	-2.9	-2.9	0	0
36	STAB	Z	-4.1	-4.1	0	0
37	VERT1	Z	-3.5	-3.5	0	0
38	VERT2	Z	-3.5	-3.5	0	0
39	MP1	X	-5.9	-5.9	0	%100
40	MP2	X	-5.4	-5.4	0	%100
41	MP3	X	-5.4	-5.4	0	%100
42	MP4	X	-4.9	-4.9	0	%100
43	MP5	X	-5.9	-5.9	0	%100
44	MP1	Z	-10.2	-10.2	0	%100
45	MP2	Z	-9.3	-9.3	0	%100
46	MP3	Z	-9.3	-9.3	0	%100
47	MP4	Z	-8.4	-8.4	0	%100
48	MP5	Z	-10.2	-10.2	0	%100

Member Distributed Loads (BLC 24 : Wind on Ice (270 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	0	0	0	0
2	FM-TOP	X	0	0	0	0
3	SA1-BOT	X	0	0	0	0
4	SA1-D1	X	0	0	0	0
5	SA1-D2	X	0	0	0	0
6	SA1-TOP	X	0	0	0	0
7	SA1-V1	X	0	0	0	0
8	SA1-V2	X	0	0	0	0
9	SA1-V3	X	0	0	0	0
10	SA2-BOT	X	0	0	0	0
11	SA2-D1	X	0	0	0	0
12	SA2-D2	X	0	0	0	0
13	SA2-TOP	X	0	0	0	0
14	SA2-V1	X	0	0	0	0
15	SA2-V2	X	0	0	0	0
16	SA2-V3	X	0	0	0	0
17	STAB	X	0	0	0	0
18	VERT1	X	0	0	0	0
19	VERT2	X	0	0	0	0
20	FM-BOT	Z	0	0	0	0
21	FM-TOP	Z	0	0	0	0
22	SA1-BOT	Z	-4	-4	0	0
23	SA1-D1	Z	-3.4	-3.4	0	0
24	SA1-D2	Z	-3.4	-3.4	0	0
25	SA1-TOP	Z	-4	-4	0	0
26	SA1-V1	Z	-3.4	-3.4	0	0
27	SA1-V2	Z	-3.4	-3.4	0	0
28	SA1-V3	Z	-3.4	-3.4	0	0
29	SA2-BOT	Z	-4	-4	0	0
30	SA2-D1	Z	-3.4	-3.4	0	0
31	SA2-D2	Z	-3.4	-3.4	0	0
32	SA2-TOP	Z	-4	-4	0	0
33	SA2-V1	Z	-3.4	-3.4	0	0
34	SA2-V2	Z	-3.4	-3.4	0	0
35	SA2-V3	Z	-3.4	-3.4	0	0
36	STAB	Z	-4.7	-4.7	0	0
37	VERT1	Z	-4	-4	0	0
38	VERT2	Z	-4	-4	0	0
39	MP1	X	0	0	0	0
40	MP2	X	0	0	0	0
41	MP3	X	0	0	0	0
42	MP4	X	0	0	0	0
43	MP5	X	0	0	0	0
44	MP1	Z	-13.3	-13.3	0	%100
45	MP2	Z	-9.7	-9.7	0	%100
46	MP3	Z	-9.7	-9.7	0	%100
47	MP4	Z	-8.9	-8.9	0	%100
48	MP5	Z	-13.3	-13.3	0	%100

Member Distributed Loads (BLC 25 : Wind on Ice (300 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	2.2	2.2	0	0
2	FM-TOP	X	2.2	2.2	0	0
3	SA1-BOT	X	2	2	0	0
4	SA1-D1	X	1.7	1.7	0	0
5	SA1-D2	X	1.7	1.7	0	0

Member Distributed Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
6	SA1-TOP	X	2	2	0	0
7	SA1-V1	X	1.7	1.7	0	0
8	SA1-V2	X	1.7	1.7	0	0
9	SA1-V3	X	1.7	1.7	0	0
10	SA2-BOT	X	2	2	0	0
11	SA2-D1	X	1.7	1.7	0	0
12	SA2-D2	X	1.7	1.7	0	0
13	SA2-TOP	X	2	2	0	0
14	SA2-V1	X	1.7	1.7	0	0
15	SA2-V2	X	1.7	1.7	0	0
16	SA2-V3	X	1.7	1.7	0	0
17	STAB	X	2.4	2.4	0	0
18	VERT1	X	2	2	0	0
19	VERT2	X	2	2	0	0
20	FM-BOT	Z	-3.7	-3.7	0	0
21	FM-TOP	Z	-3.7	-3.7	0	0
22	SA1-BOT	Z	-3.5	-3.5	0	0
23	SA1-D1	Z	-2.9	-2.9	0	0
24	SA1-D2	Z	-2.9	-2.9	0	0
25	SA1-TOP	Z	-3.5	-3.5	0	0
26	SA1-V1	Z	-2.9	-2.9	0	0
27	SA1-V2	Z	-2.9	-2.9	0	0
28	SA1-V3	Z	-2.9	-2.9	0	0
29	SA2-BOT	Z	-3.5	-3.5	0	0
30	SA2-D1	Z	-2.9	-2.9	0	0
31	SA2-D2	Z	-2.9	-2.9	0	0
32	SA2-TOP	Z	-3.5	-3.5	0	0
33	SA2-V1	Z	-2.9	-2.9	0	0
34	SA2-V2	Z	-2.9	-2.9	0	0
35	SA2-V3	Z	-2.9	-2.9	0	0
36	STAB	Z	-4.1	-4.1	0	0
37	VERT1	Z	-3.5	-3.5	0	0
38	VERT2	Z	-3.5	-3.5	0	0
39	MP1	X	5.9	5.9	0	%100
40	MP2	X	5.4	5.4	0	%100
41	MP3	X	5.4	5.4	0	%100
42	MP4	X	4.9	4.9	0	%100
43	MP5	X	5.9	5.9	0	%100
44	MP1	Z	-10.2	-10.2	0	%100
45	MP2	Z	-9.3	-9.3	0	%100
46	MP3	Z	-9.3	-9.3	0	%100
47	MP4	Z	-8.4	-8.4	0	%100
48	MP5	Z	-10.2	-10.2	0	%100

Member Distributed Loads (BLC 26 : Wind on Ice (330 deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	FM-BOT	X	3.7	3.7	0	0
2	FM-TOP	X	3.7	3.7	0	0
3	SA1-BOT	X	3.5	3.5	0	0
4	SA1-D1	X	2.9	2.9	0	0
5	SA1-D2	X	2.9	2.9	0	0
6	SA1-TOP	X	3.5	3.5	0	0
7	SA1-V1	X	2.9	2.9	0	0
8	SA1-V2	X	2.9	2.9	0	0
9	SA1-V3	X	2.9	2.9	0	0
10	SA2-BOT	X	3.5	3.5	0	0

Member Distributed Loads (BLC 26 : Wind on Ice (330 deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
11	SA2-D1	X	2.9	2.9	0	0
12	SA2-D2	X	2.9	2.9	0	0
13	SA2-TOP	X	3.5	3.5	0	0
14	SA2-V1	X	2.9	2.9	0	0
15	SA2-V2	X	2.9	2.9	0	0
16	SA2-V3	X	2.9	2.9	0	0
17	STAB	X	4.1	4.1	0	0
18	VERT1	X	3.5	3.5	0	0
19	VERT2	X	3.5	3.5	0	0
20	FM-BOT	Z	-2.2	-2.2	0	0
21	FM-TOP	Z	-2.2	-2.2	0	0
22	SA1-BOT	Z	-2	-2	0	0
23	SA1-D1	Z	-1.7	-1.7	0	0
24	SA1-D2	Z	-1.7	-1.7	0	0
25	SA1-TOP	Z	-2	-2	0	0
26	SA1-V1	Z	-1.7	-1.7	0	0
27	SA1-V2	Z	-1.7	-1.7	0	0
28	SA1-V3	Z	-1.7	-1.7	0	0
29	SA2-BOT	Z	-2	-2	0	0
30	SA2-D1	Z	-1.7	-1.7	0	0
31	SA2-D2	Z	-1.7	-1.7	0	0
32	SA2-TOP	Z	-2	-2	0	0
33	SA2-V1	Z	-1.7	-1.7	0	0
34	SA2-V2	Z	-1.7	-1.7	0	0
35	SA2-V3	Z	-1.7	-1.7	0	0
36	STAB	Z	-2.4	-2.4	0	0
37	VERT1	Z	-2	-2	0	0
38	VERT2	Z	-2	-2	0	0
39	MP1	X	7.6	7.6	0	%100
40	MP2	X	11	11	0	%100
41	MP3	X	11	11	0	%100
42	MP4	X	9.9	9.9	0	%100
43	MP5	X	7.6	7.6	0	%100
44	MP1	Z	-4.4	-4.4	0	%100
45	MP2	Z	-6.3	-6.3	0	%100
46	MP3	Z	-6.3	-6.3	0	%100
47	MP4	Z	-5.7	-5.7	0	%100
48	MP5	Z	-4.4	-4.4	0	%100

Load Combinations

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.4D	Yes	Y		1	1.4																				
2	1.2D + 1.0W (0 ...	Yes	Y		1	1.2	2	1																		
3	1.2D + 1.0W (30...	Yes	Y		1	1.2	3	1																		
4	1.2D + 1.0W (60...	Yes	Y		1	1.2	4	1																		
5	1.2D + 1.0W (90...	Yes	Y		1	1.2	5	1																		
6	1.2D + 1.0W (12...	Yes	Y		1	1.2	6	1																		
7	1.2D + 1.0W (15...	Yes	Y		1	1.2	7	1																		
8	1.2D + 1.0W (18...	Yes	Y		1	1.2	8	1																		
9	1.2D + 1.0W (21...	Yes	Y		1	1.2	9	1																		
10	1.2D + 1.0W (24...	Yes	Y		1	1.2	10	1																		
11	1.2D + 1.0W (27...	Yes	Y		1	1.2	11	1																		
12	1.2D + 1.0W (30...	Yes	Y		1	1.2	12	1																		
13	1.2D + 1.0W (33...	Yes	Y		1	1.2	13	1																		
14	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	15	1																

Load Combinations (Continued)

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
15	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	16	1														
16	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	17	1														
17	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	18	1														
18	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	19	1														
19	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	20	1														
20	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	21	1														
21	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	22	1														
22	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	23	1														
23	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	24	1														
24	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	25	1														
25	1.2D + Di + Wi (...	Yes	Y		1	1.2	14	1	26	1														
26	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	27	.09														
27	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	28	.09														
28	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	29	.09														
29	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	30	.09														
30	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	31	.09														
31	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	32	.09														
32	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	33	.09														
33	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	34	.09														
34	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	35	.09														
35	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	36	.09														
36	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	37	.09														
37	1.2D + 1.0 Ev + ...	Yes	Y		1	1.2	1	.036	38	.09														
38	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	2	.049														
39	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	3	.049														
40	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	4	.049														
41	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	5	.049														
42	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	6	.049														
43	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	7	.049														
44	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	8	.049														
45	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	9	.049														
46	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	10	.049														
47	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	11	.049														
48	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	12	.049														
49	1.2D + 1.5Lm1 +..	Yes	Y		1	1.2	39	1.5	13	.049														
50	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	2	.049														
51	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	3	.049														
52	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	4	.049														
53	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	5	.049														
54	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	6	.049														
55	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	7	.049														
56	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	8	.049														
57	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	9	.049														
58	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	10	.049														
59	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	11	.049														
60	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	12	.049														
61	1.2D + 1.5Lm2 +..	Yes	Y		1	1.2	40	1.5	13	.049														
62	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	2	.049														
63	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	3	.049														
64	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	4	.049														
65	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	5	.049														
66	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	6	.049														
67	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	7	.049														
68	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	8	.049														
69	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	9	.049														
70	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	10	.049														
71	1.2D + 1.5Lm3 +..	Yes	Y		1	1.2	41	1.5	11	.049														

Load Combinations (Continued)

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
72	1.2D + 1.5Lm3 +...	Yes	Y		1	1.2	41	1.5	12	.049														
73	1.2D + 1.5Lm3 +...	Yes	Y		1	1.2	41	1.5	13	.049														
74	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	2	.049														
75	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	3	.049														
76	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	4	.049														
77	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	5	.049														
78	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	6	.049														
79	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	7	.049														
80	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	8	.049														
81	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	9	.049														
82	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	10	.049														
83	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	11	.049														
84	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	12	.049														
85	1.2D + 1.5Lm4 +...	Yes	Y		1	1.2	42	1.5	13	.049														
86	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	2	.049														
87	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	3	.049														
88	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	4	.049														
89	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	5	.049														
90	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	6	.049														
91	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	7	.049														
92	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	8	.049														
93	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	9	.049														
94	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	10	.049														
95	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	11	.049														
96	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	12	.049														
97	1.2D + 1.5Lm5 +...	Yes	Y		1	1.2	43	1.5	13	.049														
98	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	2	.049														
99	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	3	.049														
100	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	4	.049														
101	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	5	.049														
102	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	6	.049														
103	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	7	.049														
104	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	8	.049														
105	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	9	.049														
106	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	10	.049														
107	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	11	.049														
108	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	12	.049														
109	1.2D + 1.5Lm6 +...	Yes	Y		1	1.2	44	1.5	13	.049														
110	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	2	.049														
111	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	3	.049														
112	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	4	.049														
113	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	5	.049														
114	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	6	.049														
115	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	7	.049														
116	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	8	.049														
117	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	9	.049														
118	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	10	.049														
119	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	11	.049														
120	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	12	.049														
121	1.2D + 1.5Lm7 +...	Yes	Y		1	1.2	45	1.5	13	.049														
122	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	2	.049														
123	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	3	.049														
124	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	4	.049														
125	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	5	.049														
126	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	6	.049														
127	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	7	.049														
128	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	8	.049														

Load Combinations (Continued)

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
129	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	9	.049														
130	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	10	.049														
131	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	11	.049														
132	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	12	.049														
133	1.2D + 1.5Lm8 +...	Yes	Y		1	1.2	46	1.5	13	.049														
134	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	2	.049														
135	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	3	.049														
136	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	4	.049														
137	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	5	.049														
138	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	6	.049														
139	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	7	.049														
140	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	8	.049														
141	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	9	.049														
142	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	10	.049														
143	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	11	.049														
144	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	12	.049														
145	1.2D + 1.5Lm9 +...	Yes	Y		1	1.2	47	1.5	13	.049														
146	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	2	.049														
147	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	3	.049														
148	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	4	.049														
149	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	5	.049														
150	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	6	.049														
151	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	7	.049														
152	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	8	.049														
153	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	9	.049														
154	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	10	.049														
155	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	11	.049														
156	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	12	.049														
157	1.2D + 1.5Lm10 ...	Yes	Y		1	1.2	48	1.5	13	.049														
158	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	2	.049														
159	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	3	.049														
160	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	4	.049														
161	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	5	.049														
162	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	6	.049														
163	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	7	.049														
164	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	8	.049														
165	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	9	.049														
166	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	10	.049														
167	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	11	.049														
168	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	12	.049														
169	1.2D + 1.5Lm11 ...	Yes	Y		1	1.2	49	1.5	13	.049														
170	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	2	.049														
171	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	3	.049														
172	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	4	.049														
173	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	5	.049														
174	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	6	.049														
175	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	7	.049														
176	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	8	.049														
177	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	9	.049														
178	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	10	.049														
179	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	11	.049														
180	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	12	.049														
181	1.2D + 1.5Lm12 ...	Yes	Y		1	1.2	50	1.5	13	.049														
182	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	2	.049														
183	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	3	.049														
184	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	4	.049														
185	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	5	.049														

Load Combinations (Continued)

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
186	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	6	.049														
187	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	7	.049														
188	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	8	.049														
189	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	9	.049														
190	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	10	.049														
191	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	11	.049														
192	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	12	.049														
193	1.2D + 1.5Lm13 ...	Yes	Y		1	1.2	51	1.5	13	.049														
194	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	2	.049														
195	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	3	.049														
196	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	4	.049														
197	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	5	.049														
198	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	6	.049														
199	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	7	.049														
200	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	8	.049														
201	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	9	.049														
202	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	10	.049														
203	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	11	.049														
204	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	12	.049														
205	1.2D + 1.5Lm14 ...	Yes	Y		1	1.2	52	1.5	13	.049														
206	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	2	.049														
207	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	3	.049														
208	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	4	.049														
209	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	5	.049														
210	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	6	.049														
211	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	7	.049														
212	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	8	.049														
213	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	9	.049														
214	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	10	.049														
215	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	11	.049														
216	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	12	.049														
217	1.2D + 1.5Lm15 ...	Yes	Y		1	1.2	53	1.5	13	.049														
218	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	2	.049														
219	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	3	.049														
220	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	4	.049														
221	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	5	.049														
222	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	6	.049														
223	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	7	.049														
224	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	8	.049														
225	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	9	.049														
226	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	10	.049														
227	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	11	.049														
228	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	12	.049														
229	1.2D + 1.5Lm16 ...	Yes	Y		1	1.2	54	1.5	13	.049														
230	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	2	.049														
231	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	3	.049														
232	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	4	.049														
233	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	5	.049														
234	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	6	.049														
235	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	7	.049														
236	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	8	.049														
237	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	9	.049														
238	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	10	.049														
239	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	11	.049														
240	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	12	.049														
241	1.2D + 1.5Lm17 ...	Yes	Y		1	1.2	55	1.5	13	.049														
242	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	2	.049														

Load Combinations (Continued)

	Description	Solve	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
243	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	3	.049														
244	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	4	.049														
245	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	5	.049														
246	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	6	.049														
247	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	7	.049														
248	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	8	.049														
249	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	9	.049														
250	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	10	.049														
251	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	11	.049														
252	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	12	.049														
253	1.2D + 1.5Lm18 ...	Yes	Y		1	1.2	56	1.5	13	.049														
254	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	57	1.5																
255	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	58	1.5																
256	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	59	1.5																
257	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	60	1.5																
258	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	61	1.5																
259	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	62	1.5																
260	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	63	1.5																
261	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	64	1.5																
262	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	65	1.5																
263	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	66	1.5																
264	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	67	1.5																
265	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	68	1.5																
266	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	69	1.5																
267	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	70	1.5																
268	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	71	1.5																
269	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	72	1.5																
270	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	73	1.5																
271	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	74	1.5																
272	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	75	1.5																
273	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	76	1.5																
274	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	77	1.5																
275	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	78	1.5																
276	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	79	1.5																
277	1.2D + 1.5Lv (Po...	Yes	Y		1	1.2	80	1.5																

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N1	max	-108.891	9	793.644	17	57.411	12	37.989	11	0	1	-73.09	11
2		min	-2664.921	15	110.361	11	-55.871	6	-38.492	41	0	1	-533.816	17
3	N2	max	2752.836	19	949.519	17	79.523	12	30.788	95	0	1	-86.586	11
4		min	-406.237	13	130.434	11	-83.033	6	-44.598	41	0	1	-634.779	17
5	N41	max	775.714	6	829.685	23	36.093	10	39.664	95	0	1	-85.083	5
6		min	-2988.573	24	133.459	5	-38.999	4	-23.754	41	0	1	-559.359	23
7	N42	max	2943.747	19	994.31	23	55.942	10	47.457	95	0	1	-100.79	5
8		min	-544.083	13	152.826	5	-55.501	4	-29.293	41	0	1	-665.274	23
9	N38A	max	1916.353	10	105.33	24	2796.105	11	0	1	0	1	0	1
10		min	-1919.248	4	43.618	4	-2791.885	5	0	1	0	1	0	1
11	Totals:	max	2999.467	8	3586.419	17	3018.656	11						
12		min	-2999.468	2	1063.21	11	-3018.656	5						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear Ch...	Loc...	Dir	LC	phi*P...	phi*P...	phi*M...	phi*M...	Cb	Eqn
1	VERT2	PIPE_2.0	.626	26.5	5	.256	46....		6	25429..	32130	1871....	1871....	1....	H1-1b
2	SA2-TOP	PIPE_2.0	.395	0	22	.113	0		95	20866..	32130	1871....	1871....	3....	H1-1b
3	SA1-TOP	PIPE_2.0	.380	0	18	.108	0		41	20866..	32130	1871....	1871....	3....	H1-1b
4	SA2-BOT	PIPE_2.0	.369	0	24	.116	62....		12	20866..	32130	1871....	1871....	3.03	H1-1b
5	SA1-BOT	PIPE_2.0	.348	0	16	.097	62....		39	20866..	32130	1871....	1871....	3....	H1-1b
6	MP5	PIPE_2.0	.257	3.125	96	.052	31....		12	23808..	32130	1871....	1871....	1....	H1-1b
7	MP1	PIPE_2.0	.252	31.875	41	.050	31....		4	23808..	32130	1871....	1871....	1....	H1-1b
8	FM-TOP	PIPE_2.5	.237	131.25	12	.199	133		12	28077..	50715	3596....	3596....	1....	H1-1b
9	VERT1	PIPE_2.0	.220	6.073	15	.123	46....		7	25429..	32130	1871....	1871....	2....	H1-1b
10	FM-BOT	PIPE_2.5	.202	136.5	12	.181	133		6	28077..	50715	3596....	3596....	2....	H1-1b
11	MP3	PIPE_2.0	.183	3.125	11	.041	3.1...		11	23808..	32130	1871....	1871....	1....	H1-1b
12	MP4	PIPE_2.0	.169	3.125	11	.029	31....		8	23808..	32130	1871....	1871....	1....	H1-1b
13	SA2-V2	ROHN 1....	.164	0	23	.015	0		95	11448..	16387..	601.3...	601.3...	1	H1-1..
14	SA1-V2	ROHN 1....	.155	0	17	.014	0		41	11448..	16387..	601.3...	601.3...	1	H1-1..
15	MP2	PIPE_2.0	.125	32.5	8	.031	31....		8	23808..	32130	1871....	1871....	2....	H1-1b
16	STAB	PIPE_3.0	.093	0	5	.006	0		25	36527..	65205	5748....	5748....	1....	H1-1..
17	SA2-D1	ROHN 1....	.092	24.239	14	.017	48....		10	9924....	16387..	601.3...	601.3...	1....	H1-1b
18	SA2-D2	ROHN 1....	.092	24.239	14	.017	48....		4	9924....	16387..	601.3...	601.3...	1....	H1-1b
19	SA1-D1	ROHN 1....	.089	24.239	14	.021	0		12	9924....	16387..	601.3...	601.3...	1....	H1-1b
20	SA1-D2	ROHN 1....	.088	24.239	14	.025	48....		12	9924....	16387..	601.3...	601.3...	1....	H1-1b
21	SA2-V3	ROHN 1....	.084	0	18	.013	0		11	11448..	16387..	601.3...	601.3...	1....	H1-1..
22	SA2-V1	ROHN 1....	.076	0	23	.017	0		95	11448..	16387..	601.3...	601.3...	1	H1-1..
23	SA1-V3	ROHN 1....	.075	0	19	.012	0		11	11448..	16387..	601.3...	601.3...	1....	H1-1..
24	SA1-V1	ROHN 1....	.072	0	17	.016	0		41	11448..	16387..	601.3...	601.3...	1	H1-1..

APPENDIX D

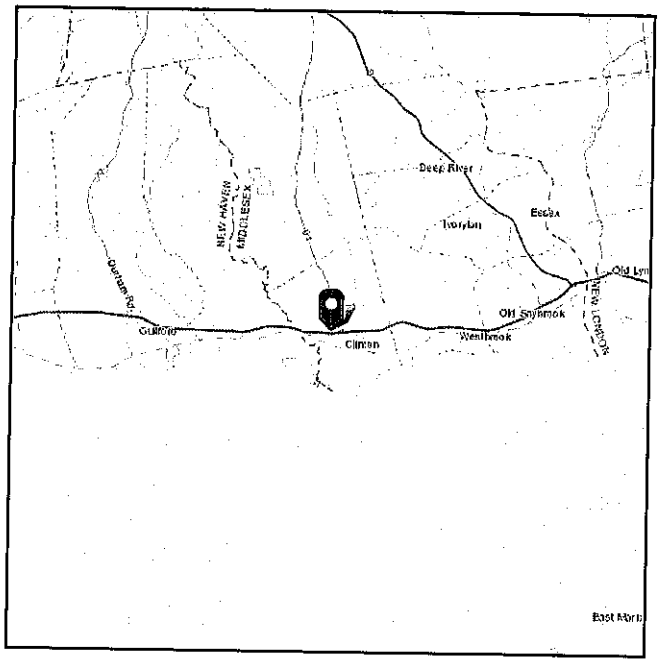
ASCE 7 HAZARDS REPORT

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 18.95 ft (NAVD 88)
Latitude: 41.288944
Longitude: -72.538472



Wind

Results:

Wind Speed:	130 Vmph
10-year MRI	78 Vmph
25-year MRI	88 Vmph
50-year MRI	97 Vmph
100-year MRI	106 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Thu Oct 04 2018

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 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

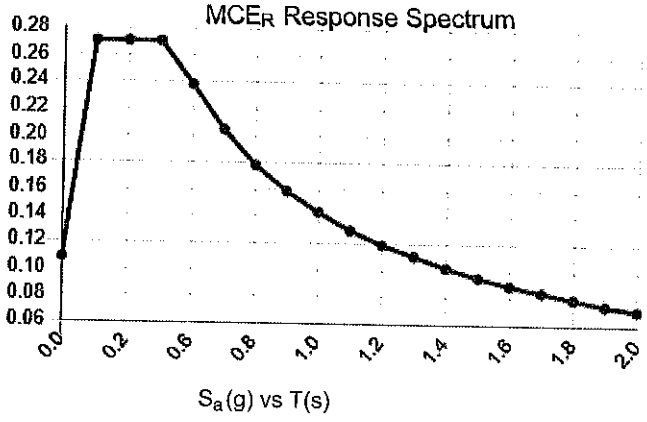
Seismic

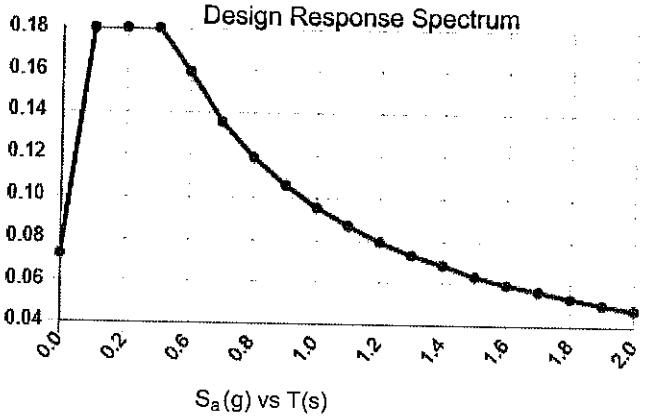
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.169	S_{DS} :	0.180
S_1 :	0.059	S_{D1} :	0.095
F_a :	1.600	T_L :	6.000
F_v :	2.400	PGA :	0.085
S_{MS} :	0.270	PGA_M :	0.137
S_{M1} :	0.143	F_{PGA} :	1.600
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Oct 04 2018

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Thu Oct 04 2018

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 50-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.

verizon

CROWN CASTLE

VERIZ

CROWN

CROWN

SITE AD

SITE TY

SITE INFORMATION

APPLICANT:
VERIZON
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

CONTACT:
TBD

PROPERTY OWNER:
TBD

TOWER OWNER:
CROWN CASTLE

CROWN CASTLE PM:
JEFFREY BARBADORA
(781) 970-0053

LATITUDE (NAD83):
41° 17' 20.20" N
41.288944

LONGITUDE (NAD83):
-72° 32' 18.50" W
-72.538472

COUNTY:
MIDDLESEX

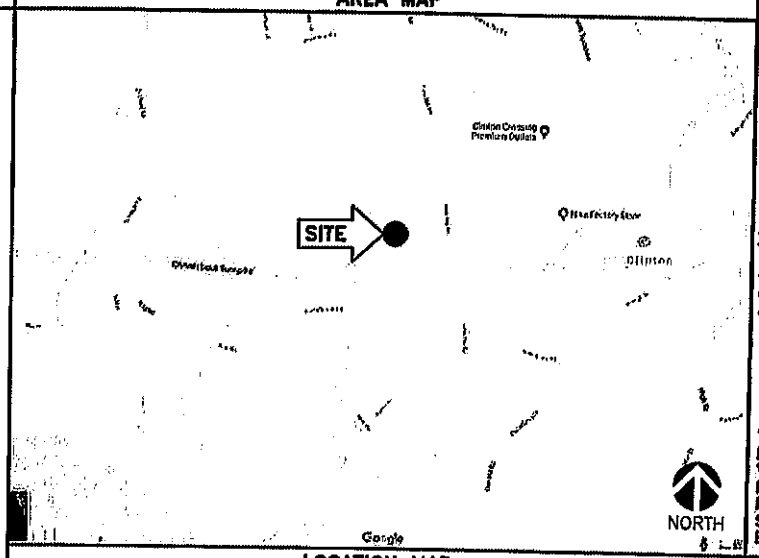
ZONING JURISDICTION:
-

POWER COMPANY:
NATIONAL GRID
(800) 322-3223

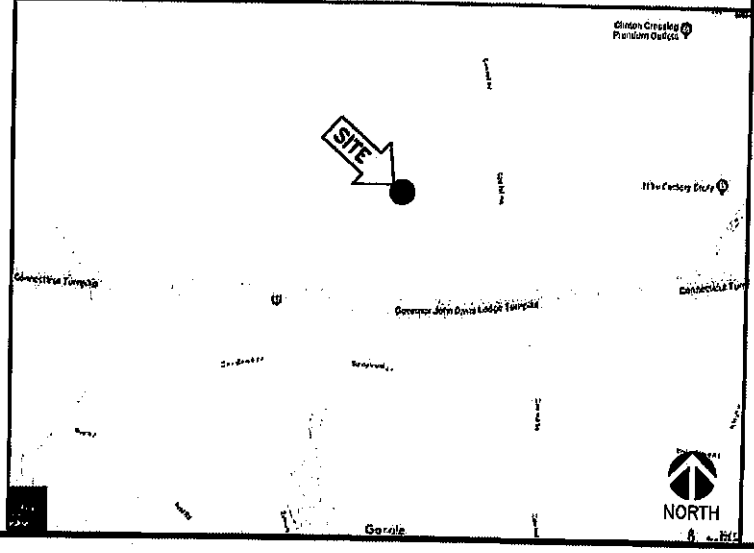
TELCO PROVIDER:
FIBER APP

VERIZON WIRELESS CM:
TBD

AREA MAP



LOCATION MAP



VERIZON PROPOSE
TELECOMMUNICATIO

VERIZON EQUIPMENT

- REMOVE (6) EXIS
- REMOVE (9) EXIS

VERIZON EQUIPMENT

- INSTALL (6) COM
- INSTALL (3) SAM
- INSTALL (3) SAM

THESE PLANS HAVE
EXISTING UNMANNE
VERIZON IN ACCOR
INFINIGY HAS INCOR
PLANS ARE NOT FO
STRUCTURAL, STABIL
ENGINEER. STRUCTU

ALL WORK SHALL
ACCORDANCE WITH
CODES AS ADOPTE
NOTHING IN THESE
NOT CONFORMING

1. INTERNATIONAL
2. TIA-EIA-222-
3. NFPA 780 -
4. 2017 NATIONA
5. ANY OTHER N
   MOST RECENT
6. RI BUILDING C
7. LOCAL BUILDIN
8. CITY/COUNTY

ELECTRICAL NOTES:

WORK INCLUDED

1. INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, PLANT SERVICES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS.
   B. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
   C. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS.
   D. EXECUTE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING OF EXISTING OR NEWLY INSTALLED CONSTRUCTION REQUIRED FOR THE WORK OF THIS CONTRACT. FOR SLAB PENETRATIONS THROUGH POST TENSION SLABS, X-RAY EXACT AREA OF PENETRATION PRIOR TO PERFORMING WORK. COORDINATE ALL X-RAY WORK WITH BUILDING ENGINEER.
   E. PROVIDE HANGERS, SUPPORTS, FOUNDATIONS, STRUCTURAL FRAMING SUPPORTS, AND BASES FOR CONDUIT AND EQUIPMENT PROVIDED OR INSTALLED UNDER THE WORK OF HIS CONTRACT. PROVIDE COUNTER FLASHING, SLEEVES AND SEALS FOR FLOOR AND WALL PENETRATIONS.
   F. MAINTAIN ALL EXISTING ELECTRICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATION DURING THE PROGRESS OF THE WORK INCLUDING PROVIDING ALL TEMPORARY JUMPERS, CONDUITS, CAPS, PROTECTIVE DEVICES, CONNECTIONS AND EQUIPMENT REQUIRED. PROVIDE TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
2. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR AN INSTALLATION THAT IS COMPLETE IN EVERY RESPECT. IT IS NOT THE INTENT TO GIVE EVERY DETAIL ON THE DRAWINGS AND IN THE SPECIFICATIONS. IF AN ITEM OF WORK IS INDICATED IN THE DRAWINGS, IT IS CONSIDERED SUFFICIENT FOR INCLUSION IN THE CONTRACT. FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT USUALLY FURNISHED OR NEEDED TO MAKE A COMPLETE INSTALLATION WHETHER OR NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

GENERAL REQUIREMENTS

1. PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL CODES.
2. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.
3. LOAD CALCULATIONS ARE BASED ON EXISTING BUILDING INFORMATION/DRAWINGS PROVIDED TO ENGINEERING. CONTRACTOR IS TO VERIFY ALL EXISTING RATINGS AND LOADS PRIOR TO PURCHASING OF SPECIFIED EQUIPMENT FOR COMPLIANCE TO NEC. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES AND REQUEST FURTHER DIRECTION BY ENGINEER.
4. EXISTING BUILDING EQUIPMENT IS NOTED ON THE DRAWINGS. NEW OR RELOCATED EQUIPMENT IS SHOWN WITH SOLID LINES. FUTURE EQUIPMENT (NOT IN THIS CONTRACT) IS DEPICTED WITH SHADED LINES. REQUEST CLARIFICATION OF DRAWINGS OR OF SPECIFICATIONS PRIOR TO PRICING OR INSTALLATION.
5. GENERAL
   A. AFTER CAREFULLY STUDYING THE DRAWINGS AND SPECIFICATIONS, AND BEFORE SUBMITTING THE PROPOSAL, MAKE A MANDATORY SITE VISIT TO ASCERTAIN CONDITIONS OF THE SITE, AND THE NATURE AND EXACT QUANTITY OF WORK TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO NOTIFY THE OWNER, IN WRITING, OF ANY DISCREPANCIES THAT MAY HAVE BEEN NOTED BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS.
   B. VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.
6. QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
   A. PROVIDE NEW MATERIALS AND EQUIPMENT OF A DOMESTIC MANUFACTURER BY THOSE REGULARLY ENGAGED IN THE PRODUCTION AND MANUFACTURE OF SPECIFIED MATERIALS AND EQUIPMENT. WHERE UL, OR OTHER AGENCY, HAS ESTABLISHED STANDARDS FOR MATERIALS, PROVIDE MATERIALS WHICH ARE LISTED AND LABELED ACCORDINGLY. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES MENTIONED HEREIN ARE INTENDED FOR THE PROPER FUNCTIONING OF THE WORK.
   B. WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE REQUIRED FOR THE WORK. INSTALL MATERIALS AND EQUIPMENT TO PRESENT A NEAT APPEARANCE WHEN COMPLETED AND IN ACCORDANCE WITH THE APPROVED RECOMMENDATIONS OF THE MANUFACTURER AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
   C. PROVIDE LABOR, MATERIALS, APPARATUS AND APPLIANCES ESSENTIAL TO THE FUNCTIONING OF THE SYSTEMS DESCRIBED OR INDICATED HEREIN, OR WHICH MAY BE REASONABLY IMPLIED AS ESSENTIAL WHENEVER MENTIONED IN THE CONTRACT DOCUMENT OR NOT.
   D. MAKE WRITTEN REQUESTS FOR SUPPLEMENTARY INSTRUCTIONS TO ARCHITECT/ENGINEER IN CASE OF DOUBT AS TO WORK INTENDED OR IN EVENT OF NEED FOR EXPLANATION THEREOF.
   E. PERFORMANCE AND MATERIAL REQUIREMENTS SCHEDULED OR SPECIFIED ARE MINIMUM STANDARD ACCEPTABLE. THE RIGHT TO JUDGE THE QUALITY OF EQUIPMENT THAT DEVIATES FROM THE CONTRACT DOCUMENT REMAINS SOLELY WITH ARCHITECT/ENGINEER. CONTRACT DOCUMENT OR NOT.

GUARANTEE

1. GUARANTEE MATERIALS, PARTS AND LABOR FOR WORK FOR ONE YEAR FROM THE DATE OF ISSUANCE OF OCCUPANCY PERMIT. DURING THAT PERIOD, MAKE GOOD FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP WITH NO ADDITIONAL COMPENSATION AND AS DIRECTED BY ARCHITECT.

CLEANING

1. REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE WORK.
2. CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.

COORDINATION AND SUPERVISION

1. CAREFULLY LAY OUT ALL WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS OR OTHER SURFACES. WHERE SUCH WORK IS NECESSARY, HOWEVER, PATCH AND REPAIR THE WORK IN AN APPROVED MANNER BY SKILLED MECHANICS AT NO ADDITIONAL COST TO THE OWNER. RENDER FULL COOPERATION TO OTHER TRADES WHERE WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES. ASSIST IN WORKING OUT SPACE CONDITIONS. IF WORK IS INSTALLED BEFORE COORDINATION WITH OTHER TRADES, OR CAUSES INTERFERENCE, MAKE CHANGES NECESSARY TO CORRECT CONDITIONS WITHOUT EXTRA CHARGE.

SUBMITTALS

1. AS-BUILT DRAWINGS:
   A. UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
2. SERVICE MANUALS:
   A. UPON COMPLETION OF THE WORK, FULLY INSTRUCT VERIZON AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
   B. PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT.

CUTTING AND PATCHING

1. PROVIDE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING REQUIRED TO COMPLETE THE WORK.
2. OBTAIN OWNER APPROVAL PRIOR TO CUTTING THROUGH FLOORS OR WALLS FOR PIPING OR CONDUIT.

TESTS, INSPECTION AND APPROVAL

1. BEFORE ENERGIZING ANY ELECTRICAL INSTALLATION, INSPECT EACH UNIT IN DETAIL. TIGHTEN ALL BOLTS AND CONNECTIONS (TORQUE-TIGHTEN WHERE REQUIRED) AND DETERMINE THAT ALL COMPONENTS ARE ALIGNED, AND THE EQUIPMENT IS IN SAFE, OPERATIONAL CONDITION.
2. PROVIDE THE COMPLETE ELECTRICAL SYSTEM FREE OF GROUND FAULTS AND SHORT CIRCUITS SUCH THAT THE SYSTEM WILL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITIONS, WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.

SPECIAL REQUIREMENTS

1. DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING OCCUPANTS. DO NOT INTERFERE WITH OR CUTOFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
2. WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING BUILDING UTILITIES AND SERVICE SYSTEMS, INCLUDING FEEDER OR BRANCH CIRCUITING SUPPLYING EXISTING FACILITIES, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON. SHUTDOWN NOTE: SCHEDULE AND NOTIFY OWNER 48 HOURS PRIOR TO SHUTDOWN. ALL SHUTDOWN WORK TO BE SCHEDULED AT A TIME CONVENIENT TO OWNER.

GROUNDING

1. ROUTE ALL GROUNDING CONDUCTORS AS SHOWN ON CONDUIT/GROUNDING RISER.
2. ROUTE 500 KCMIL CU. THHN CONDUCTOR FROM THE MGB LOCATION TO BUILDING STEEL. VERIFY BUILDING STEEL IS EFFECTIVELY GROUNDED PER NEC TO THE MAIN SERVICE GROUNDING ELECTRODE CONDUCTOR (GEC).
3. MAKE ALL GROUND CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED.
4. USE 1 HOLE, CRIMP TYPE, BURNDY COMPRESSIONS TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT GROUND CONNECTIONS.
5. HIRE AN INDEPENDENT LAB TO PERFORM THE SPECIFIED OHMS TESTING. PROVIDE 4 SETS OF THE CERTIFIED DOCUMENTS TO THE OWNER FOR VERIFICATION PRIOR TO THE PROJECT COMPLETION.

RACEWAYS

1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
   A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
   B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
   C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.

   ON THIS PROJECT.
   E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "VERIZON". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
   F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
   G. MINIMUM SIZE CONDUIT TO BE ¾" TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.

   AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.
   J. THE ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND CLEARANCES.
   K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.

RACEWAYS CONT'D

   L. PENETRATIONS OF WALLS, FLOORS AND ROO
   PASSAGE OF ELECTRICAL RACEWAYS, TO BE
   SEALED AFTER INSTALLATION OF RACEWAYS
   MAINTAIN THE STRUCTURAL OR WATERPROOF
   THE WALL, FLOOR OR ROOF SYSTEM TO BE P
   SEAL ALL CONDUIT PENETRATIONS THROUGH
   RATED WALLS, CEILINGS OR SMOKE TIGHT CO
   PARTITIONS TO MAINTAIN PROPER RATING OF
   CEILING.
   M. PROVIDE ALL CONDUIT ENDS WITH INSULATED
   GROUNDING BUSHINGS.
   N. CONDUIT TO BE SUPPORTED AT MAXIMUM DI
   8'-0", OR AS REQUIRED BY NEC, IN HORIZON
   VERTICAL DIRECTIONS.
   O. PROVIDE STAINLESS STEEL BLANK COVER PL
   JUNCTION BOXES AND/OR OUTLET BOXES NO
   EXPOSED AREAS. PROVIDE ALL OTHER UNUSE
   STANDARD STEEL COVER PLATES.
   P. WHERE APPLICABLE, PROVIDE ROOFTOP COND
   SYSTEM, CONFORMING TO ROOFTOP WARRANT
   PER BUILDING.

WIRES AND CABLES

1. CONTRACTOR TO COORDINATE WITH EQUIPMENT
   VENDOR FOR EXACT EQUIPMENT OVER-CURRENT
   VOLTAGE, WIRE SIZE AND PLUG CONFIGURATION,
   PRIOR TO BID.
2. ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH
   GROUND CONDUCTOR.
3. ALL WIRE AND CABLE TO BE 600VOLT, COPPER,
   THHN INSULATION, EXCEPT AS NOTED.
4. WIRE FOR POWER AND LIGHTING WILL NOT BE LE
   12AWG. ALL WIRE NO. 8 AND LARGER TO BE STR
5. CONTROL WIRING IS NOT TO BE LESS THAN NO.
   FLEXIBLE IN SINGLE CONDUCTORS OR MULTI-CON
   CABLES. CONTROL WIRING WILL CONSIST OF MULT
   CABLES WHEREVER POSSIBLE. CABLES TO BE PR
   AN OVERALL FLAME-RETARDANT, EXTRUDED JAC
   FOR PLENUM USE. ALL CONTROL WIRE TO BE 60
6. WIRE PREVIOUSLY PULLED INTO CONDUIT IS CON
   AND IS NOT TO BE RE-PULLED.
7. HOME RUNS AND BRANCH CIRCUIT WIRING FOR 2
   CIRCUITS:

LENGTH (FT.)	HOME RUN WIRE SIZE
0 TO 50	NO. 12
51 TO 100	NO. 10
101 TO 150	NO. 8

8. VOLTAGE DROP IS NOT TO EXCEED 3%.
9. MAKE ALL CONNECTIONS WITH UL APPROVED, SC
   PRESSURE TYPE INSULATED CONNECTORS: SCOTC
   APPROVED EQUAL.

WIRING DEVICES

1. ALL RECEPTACLES INSTALLED IN THIS PROJECT T
   GROUNDING TYPE, WITH GROUNDING PIN SLOT CO
   DEVICE GROUND SCREW FOR GROUND WIRE CONNE

DISCONNECT SWITCHES AND FUSES

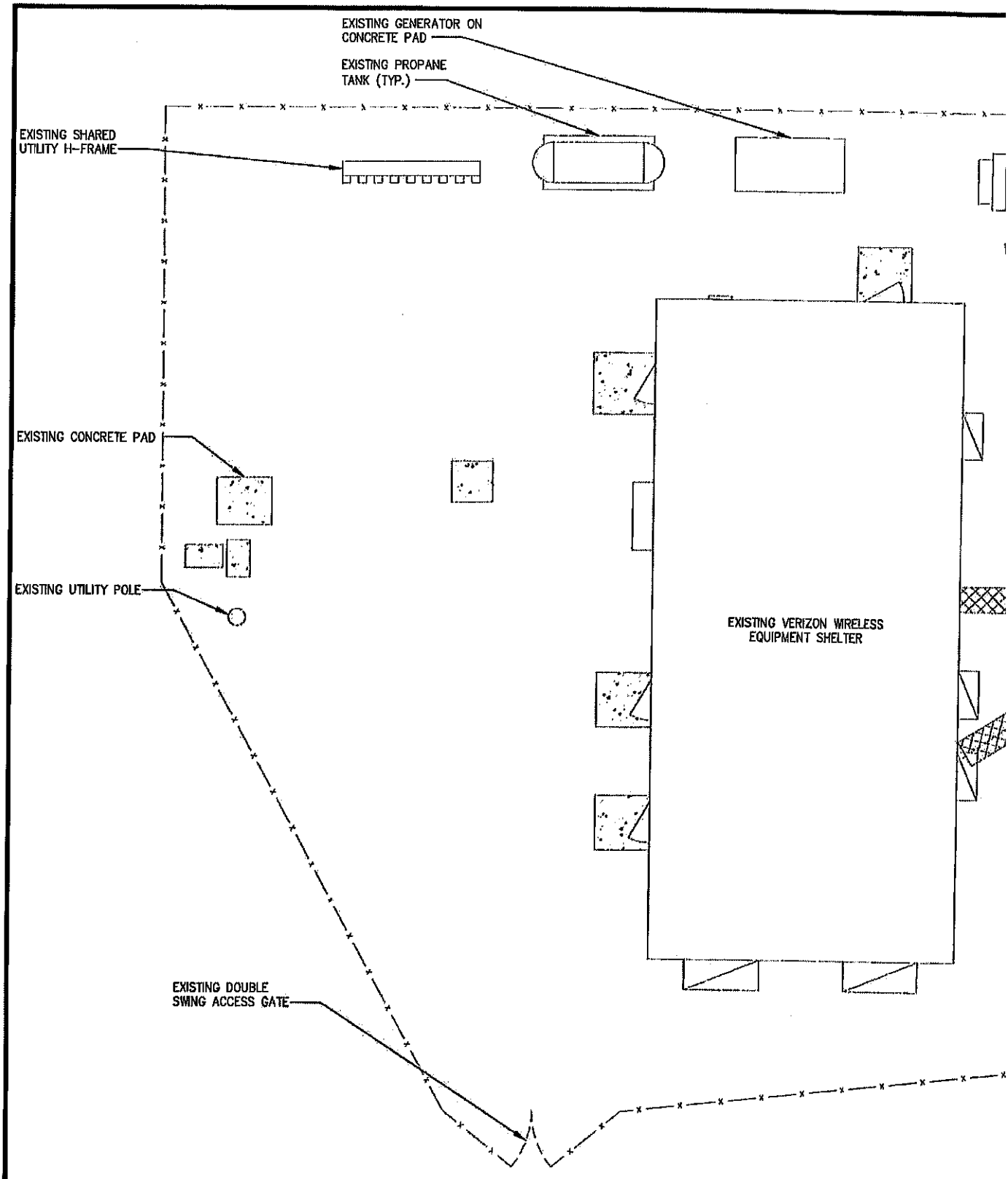
1. DISCONNECT SWITCHES TO BE VOLTAGE-RATED T
   CHARACTERISTICS OF THE SYSTEM FROM WHICH T
   SUPPLIED.
2. PROVIDE HEAVY-DUTY, METAL-ENCLOSED, EXTER
   DISCONNECT SWITCHES, FUSED OR UNFUSED, OF S
   AND SIZE AS REQUIRED TO PROPERLY PROTECT C
   THE LOAD FOR WHICH THEY ARE INTENDED.
3. PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTE
   INSTALLATION, NEMA 3R FOR EXTERIOR INSTALLAT
4. DISCONNECT SWITCHES TO BE MANUFACTURED BY
   A. GENERAL ELECTRIC COMPANY
   B. SQUARE-D
5. PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHE

INSTALLATION

1. INSTALL DISCONNECT SWITCHES WHERE INDICATED
   DRAWINGS.
2. INSTALL FUSES IN FUSIBLE DISCONNECT SWITCHES
   MUST MATCH IN TYPE AND RATING.
3. FUSES TO BE MOUNTED SO THAT THE LABELS SH
   RATINGS CAN BE READ WITHOUT REQUIRING FUSE
4. FURNISH AND DEPOSIT SPARE FUSES AT THE JOB
   FOLLOWS:
   A. THREE SPARES FOR EACH TYPE AND SIZE, IN
   60A, USED FOR INITIAL FUSING.
   B. TEN PERCENT SPARES FOR EACH TYPE AND SI
   AND INCLUDING 60A, USED FOR INITIAL FUSING,
   WILL LESS THAN THREE FUSES OF ONE PARTICU
   SIZE BE FURNISHED.

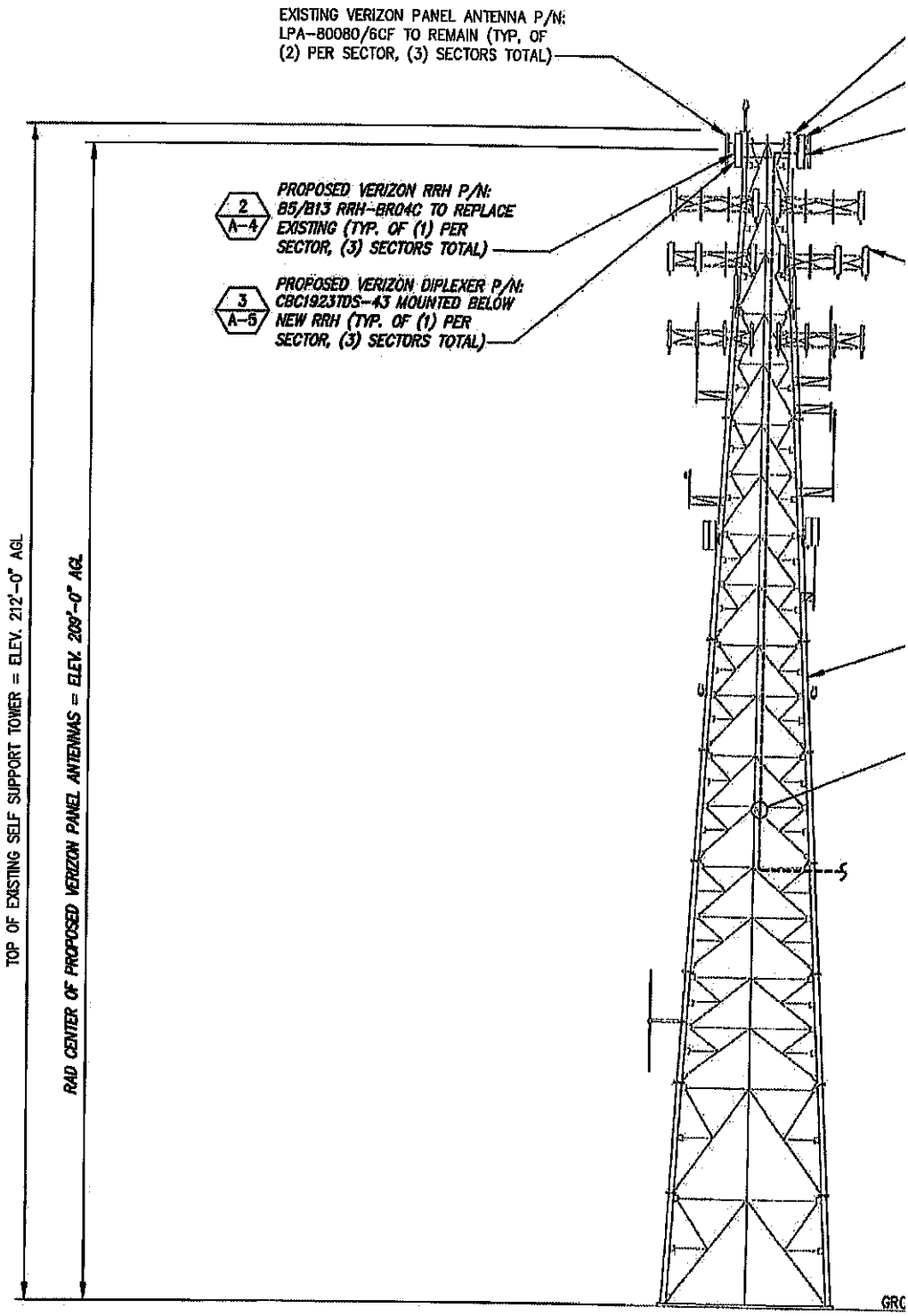
CONFLICTS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR V
   OF ALL MEASUREMENTS AT THE SITE BEFORE ORI
   MATERIALS OR DOING ANY WORK. NO EXTRA CHA
   COMPENSATION SHALL BE ALLOWED DUE TO DIFFE
   BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS I
   THE CONSTRUCTION DRAWINGS. ANY SUCH DISCRE
   DIMENSION WHICH MAY BE FOUND SHALL BE SUBI
   OWNER FOR CONSIDERATION BEFORE THE CONTRA
   PROCEEDS WITH THE WORK IN THE AFFECTED ARE
2. THE BIDDER, IF AWARDED THE CONTRACT, WILL N
   ALLOWED ANY EXTRA COMPENSATION BY REASON
   MATTER OR THING CONCERNING SUCH BIDDER MIG
   FULLY INFORMED THEMSELVES PRIOR TO THE BIDE
3. NO PLEA OF IGNORANCE OF CONDITIONS THAT E
   DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOU
   OF ANY OTHER RELEVANT MATTER CONCERNING T
   BE PERFORMED IN THE EXECUTION OF THE WORK
   ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR
   THE PART OF THE CONTRACTOR TO FULFILL EVER
   ALL THE REQUIREMENTS OF THE CONTRACT DOCUI
   GOVERNING THE WORK.

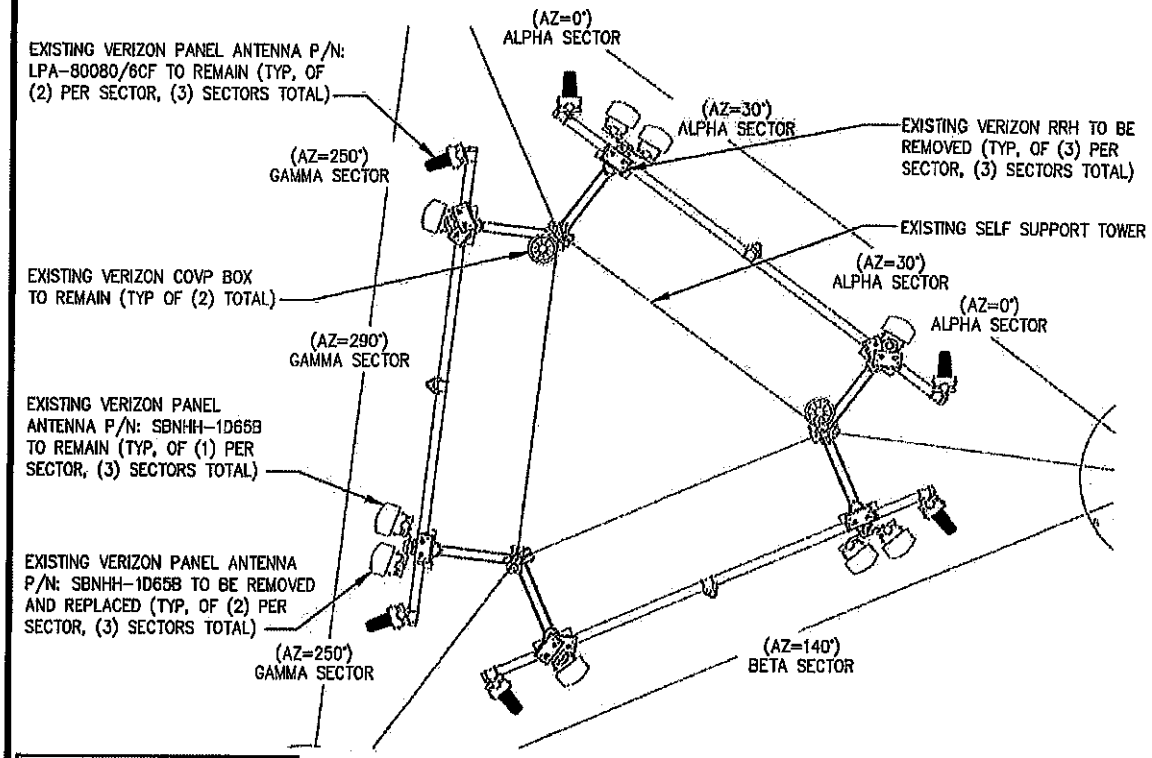


INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY. CONTRACTOR TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO ANY CONSTRUCTION

OVERALL SITE PLAN



PROPOSED TOWER ELEVATION

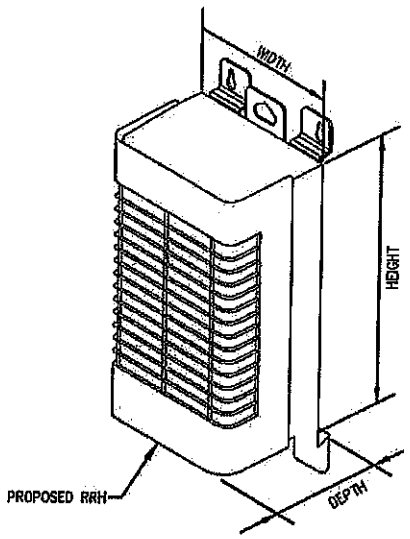


EXISTING ANTENNA LAYOUT | NO SCALE | 2

SITE LOADING CHART

SECTOR	POSITION	SECTOR COLOR	TECHNOLOGY	ANTENNA MODEL #	VENDOR	QTY. (REMOVED)	QTY. (NEW)	RRH (QTY/MODEL)
ALPHA	A3	RED	850	LPA-80080/6CF	ANTEL	---	---	---
ALPHA	A2	RED	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B2/B66A RRHBR049*
ALPHA	A3	RED	850	SBNHH-1D65B	ANDREW	---	---	---
ALPHA	A4	RED	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B5/B13 RRHBR04C W/ DIPLEXER*
ALPHA	A5	RED	850	LPA-80080/6CF	ANTEL	---	---	---
BETA	B1	BLUE	850	LPA-80080/6CF	ANTEL	---	---	---
BETA	B2	BLUE	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B2/B66A RRHBR049*
BETA	B3	BLUE	850	SBNHH-1D65B	ANDREW	---	---	---
BETA	B4	BLUE	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B5/B13 RRHBR04C W/ DIPLEXER*
BETA	B5	BLUE	850	LPA-80080/6CF	ANTEL	---	---	---
GAMMA	G1	WHITE	850	LPA-80080/6CF	ANTEL	---	---	---
GAMMA	G2	WHITE	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B2/B66A RRHBR049*
GAMMA	G3	WHITE	850	SBNHH-1D65B	ANDREW	---	---	---
GAMMA	G4	WHITE	850	*JAHH-65B-R3B*	*COMMSCOPE*	1	1	*(1) B5/B13 RRHBR04C W/ DIPLEXER*
GAMMA	G5	WHITE	850	LPA-80080/6CF	ANTEL	---	---	---

SITE LOADING CHART



SIZE AND WEIGHT TABLE				
RRH	WIDTH	DEPTH	HEIGHT	WEIGHT WO BRACKET
B66A-RRH4X45	11.9"	7.2"	25.8"	52.9 LBS

REMOTE RADIO HEAD SPECIFICATIONS | NO SCALE | 1

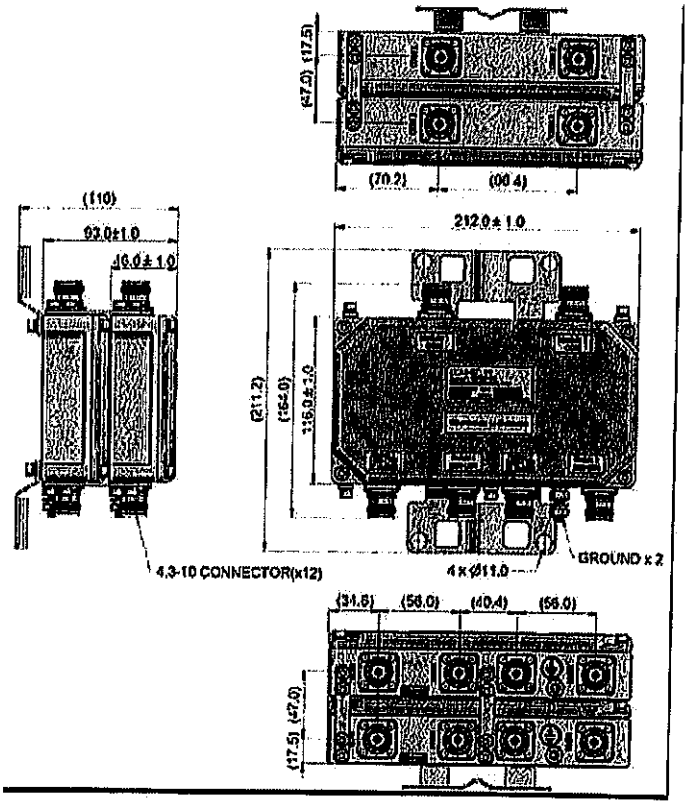
NOT USED | NO SCALE | 3

NOT USED	NO SCALE	1

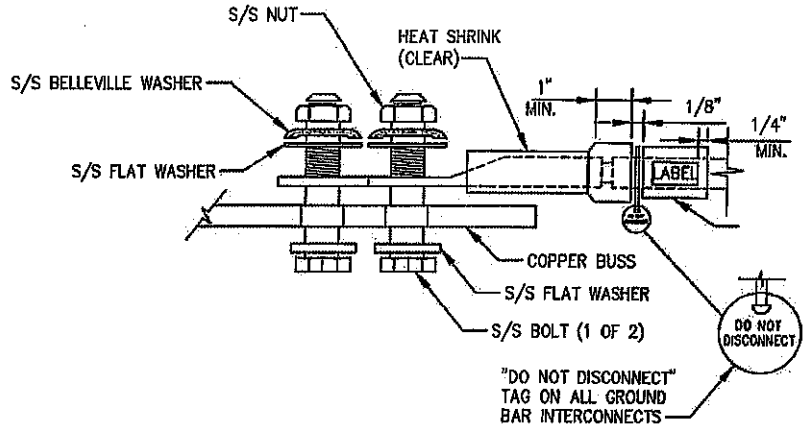
RFS DIPLEXER

PART NUMBER: CBC1923TDS-43

DIMENSIONS (HxWxD): 6.9"x5.50"x4.0"

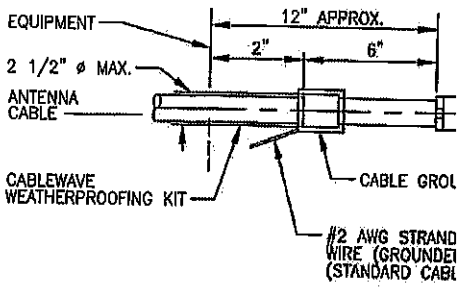


DIPLEXER DETAIL	NO SCALE	3



NOTE:
ALL MECHANICAL EXTERNAL TERMINATION SURFACES SHALL BE TREATED WITH T&B KOPR-SHIELD CP8 ANTI-OXIDATION COMPOUND.

TYPICAL EQUIPMENT GROUND CONNECTION | NO SCALE | 1



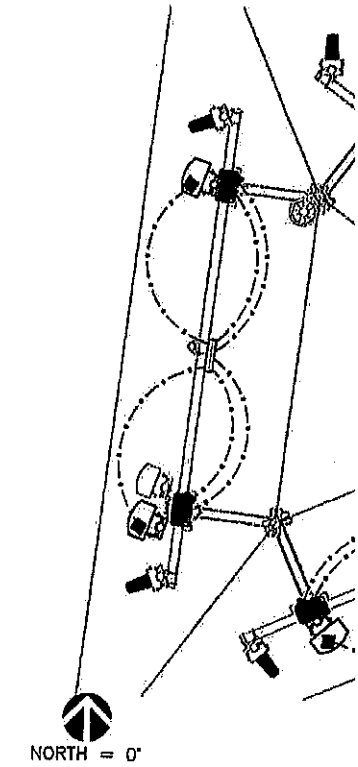
TO ANTENNA CABLE

NOTE:
DO NOT INSTALL CABLE GROUND KIT AT A BEND AN ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BA

TYPICAL CABLE GROUND KIT CONNECTION

GENERAL GROUNDING NOTES:

1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:
   - #2 BARE TINNED SOLID COPPER CONDUCTOR: EXOTHERMIC WELD TO RODS OR GROUND RING
   - LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
3. OWNER'S REPRESENTATIVE WILL INSPECT EXOTHERMIC WELD AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED.
4. CONTRACTOR TO INSTALL GROUNDING IN CLOSE PROXIMITY TO EQUIPMENT PLATFORM OR PAD.
5. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
6. ALL CADWELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE TEE TYPE.
7. BOND SERVICE CONDUITS TO GROUND RING AS THEY CROSS. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
8. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
9. THE MINIMUM SPACING BETWEEN GROUND RODS SHALL BE 10'-0" (MAX. 15'-0").
10. BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
11. THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND.
12. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250-30.



TYPICAL ANTENNA GROUNDING PLAN