Robinson+Cole

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Also admitted in Massachusetts

March 25, 2015

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

Re: **Notice of Exempt Modification – Facility Modification**
695 Old Colchester Road, Montville, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 305-foot level on an existing 370-foot guyed-lattice tower at 695 Old Colchester Road in Montville (the "Property"). The tower and Property are owned by Metrocast Communications of CT LLC. Cellco's use of the tower was approved by the Council in 1988. Cellco now intends to modify its facility by replacing all of its existing antennas with three (3) model LNX-6514DS-VTM, 700 MHz antennas; three (3) model LNX-6514DS-VTM, 850 MHz antennas; three (3) model HBXX-6517DS-VTM, 1900 MHz antennas; and three (3) model HBXX-6517DS-VTM, 2100 MHz antennas, all at the same 305-foot level on the tower. Cellco also intends to install six (6) remote radio heads ("RRHs") behind its 1900 MHz and 2100 MHz antennas and two (2) HYBRIFLEX™ antenna cables. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cables.

Please accept this letter as notification pursuant to R.C.S.A. § 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.C.S.A. § 16-50j-73, a copy of this letter is being sent to Ronald K. McDaniel, Mayor of the Town of Montville. A copy of this letter is also being sent to Metrocast Communications of CT LLC, the owner of the Property.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and RRHs will be installed on its existing antenna platform at the 305-foot level on the tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

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

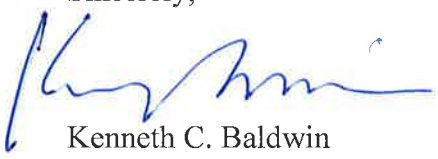
4. The operation of the replacement antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table with Cellco's modified facility is included in Attachment 2.

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

6. The tower, guy-wires and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

Enclosures
Copy to:
Ronald K. McDaniel, Montville Mayor
Metrocast Communications of CT LLC
Tim Parks

ATTACHMENT 1

Product Specifications

COMMSCOPE®

LNX-6514DS-VTM

Andrew® Antenna, 698–896 MHz, 65° horizontal beamwidth, RET compatible

POWERED BY ANDREW.

Electrical Specifications

Frequency Band, MHz	698–806	806–896
Gain, dBi	15.7	16.3
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Vertical, degrees	12.5	11.2
Beam Tilt, degrees	0–10	0–10
USLS, typical, dB	17	18
Front-to-Back Ratio at 180°, dB	32	30
CPR at Boresight, dB	20	20
CPR at Sector, dB	10	10
Isolation, dB	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153
Input Power per Port, maximum, watts	400	400
Polarization	±45°	±45°

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896
Beamwidth, Horizontal Tolerance, degrees	±3	±3

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, download the whitepaper Time to Raise the Bar on BSAs.

Mechanical Specifications

Color | Radome Material	Light gray | Fiberglass, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 2
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph
Antenna Dimensions, L x W x D	1847.0 mm x 301.0 mm x 181.0 mm | 72.7 in x 11.9 in x 7.1 in
Net Weight	14.2 kg | 31.3 lb
Model with factory installed AISG 2.0 RET	LNX-6514DS-A1M

Product Specifications

COMMSCOPE®

HBXX-6517DS-VTM

Andrew® Quad Port Teletilt® Antenna, 1710–2180 MHz, 65° horizontal beamwidth, RET compatible

POWERED BY ANDREW

Electrical Specifications

Frequency Band, MHz	1710–1880	1850–1990	1920–2180
Gain by all Beam Tilts, average, dBi	18.5	18.6	18.8
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.4
Gain by Beam Tilt, average, dBi	0 ° | 18.4 3 ° | 18.7 6 ° | 18.4	0 ° | 18.4 3 ° | 18.7 6 ° | 18.5	0 ° | 18.7 3 ° | 18.9 6 ° | 18.6
Beamwidth, Horizontal, degrees	67	66	65
Beamwidth, Horizontal Tolerance, degrees	±2.4	±1.7	±2.9
Beamwidth, Vertical, degrees	5.0	4.7	4.4
Beamwidth, Vertical Tolerance, degrees	±0.3	±0.3	±0.3
Beam Tilt, degrees	0–6	0–6	0–6
USLS, dB	18	19	19
Front-to-Back Total Power at 180° ± 30°, dB	25	26	26
CPR at Boresight, dB	22	23	22
CPR at Sector, dB	10	10	9
Isolation, dB	30	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°

**Values calculated using NGMN Alliance N-P-BASTA v9.6*

Mechanical Specifications

Color | Radome Material	Light gray | PVC, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 4
Wind Loading, maximum	668.0 N @ 150 km/h 150.2 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph
Antenna Dimensions, L x W x D	1903.0 mm x 305.0 mm x 166.0 mm | 74.9 in x 12.0 in x 6.5 in
Net Weight	19.5 kg | 43.0 lb
Model with factory installed AISG 2.0 RET	HBXX-6517DS-A2M

PCS RF MODULES

RRH1900 2X60 - HW CHARACTERISTICS

LA6.0.1/13.3

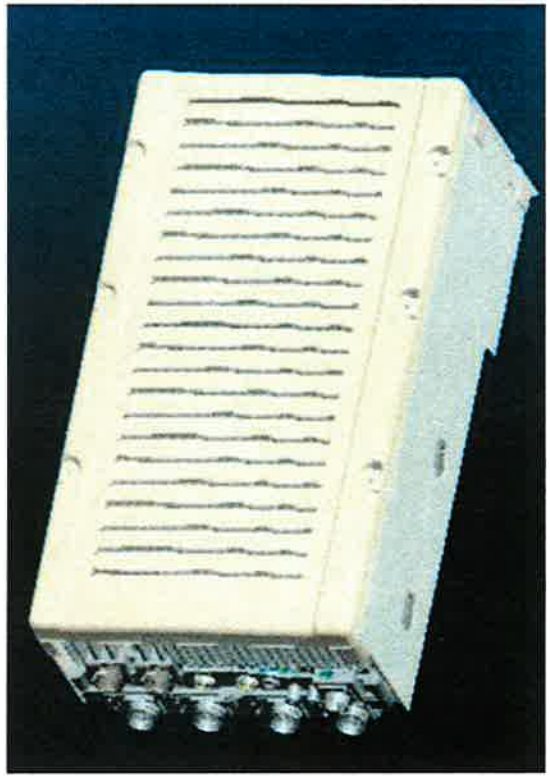
		RRH2x60
RF Output Power		2x60W
Instantaneous Bandwidth		20MHz
Transmitter		2 TX
Receiver	1900 HW version 1900A HW version	2 Branch RX – LA6.0.1 4 Branch RX – LR13.3
Features		AISG 2.0 for RET/TMA
		Internal Smart Bias-T
Power		-48VDC
CPRI Ports		2 CPRI Rate 3 Ports
External Alarms		4 External User Alarms
Monitor Ports		TX
Environmental		GR487 Compliance
RF Connectors		7/16 DIN (top mounted)

** Not a Verizon Wireless deployed product

NEW PCS RF MODULES FOR VZW
RRH2X60 - HW CHARACTERISTICS

LR14.3

	RRH2x60
RF Output Power	2x60W (4x30W HW Ready)
Instantaneous Bandwidth	60MHz
Target Reliability (Annual Return Rate)	<2%
Receiver	4 Branch Rx
Features	AISG 2.0 for RET/TMA
Power	-48VDC
	Internal Smart Bias-T
CPRI Ports	2 CPRI Rate 5 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX, RX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (downward facing)
Dimensions	22"(h) x 12"(w)x 9.4" (d)**
Weight	55lb**



**- Includes solar shield but not mounting brackets (8 lbs.)

Alcatel·Lucent

ALCATEL-LUCENT
WIRELESS PRODUCT DATASHEET
RRH2x60-AWS FOR BAND 4 APPLICATIONS

The Alcatel-Lucent RRH2x60-AWS is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.

A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent RRH2x60-AWS is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information.

The Alcatel-Lucent RRH2x60-AWS integrates all the latest technologies. This allows to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

The Alcatel-Lucent RRH2x60-AWS is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

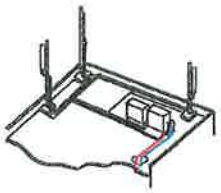
The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

The RRH2x60-AWS includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

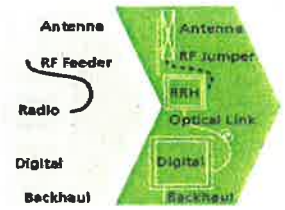
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent RRH2x60-AWS is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

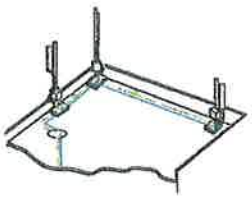
Installation can easily be done by a single person as the Alcatel-Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

- RRH2x60-AWS integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- RRH2x60-AWS is optimized for LTE operation
- RRH2x60-AWS is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and silent solutions, with minimum impact on the neighborhood, which ease the deployment
- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights
- HxWxD : 510x285x186mm (27 l with solar shield)
- Weight : 20 kg (44 lbs)

Electrical Data
- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption (ETSI average traffic load reference) : 250W @2x60W

RF Characteristics
- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

Connectivity
- Two CPRI optical ports for daisychaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 500m using MM fiber, up to 20km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications
- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65
- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data
- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B, CE Mark – European Directive : 2002/95/EC (ROHS); 2002/96/EC (WEEE); 1999/5/EC (R&TTE)
- Health : EN 50385

AT THE SPEED OF IDEAS™

Alcatel·Lucent

Product Data Sheet HB158-1-08U8-S8J18

HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX^{2} accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

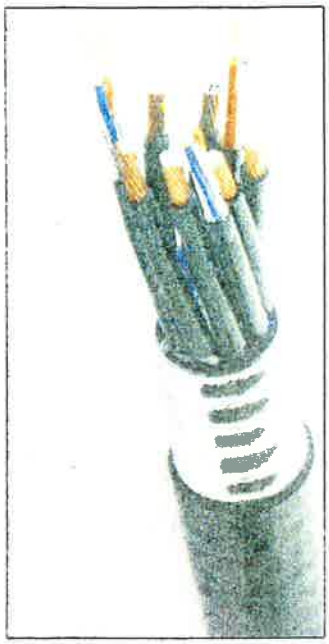


Figure 1: HYBRIFLEX Series

Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics – minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding – Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design – Decreases tower loading
- Robust cabling – Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH – Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable – Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket – Ensures long-lasting cable protection

Technical Specifications

Structure			
Outer Conductor Armor	Corrugated Aluminum	[mm (in)]	46.5 (1.83)
Jacket	Polyethylene, PE	[mm (in)]	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Mechanical Properties			
Weight, Approximate		[kg/m (lb/ft)]	1.9 (1.30)
Minimum Bending Radius, Single Bending		[mm (in)]	200 (8)
Minimum Bending Radius, Repeated Bending		[mm (in)]	500 (20)
Recommended/Maximum Clamp Spacing		[m (ft)]	1.0 / 1.2 (3.25 / 4.0)
Electrical Properties			
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	068 (0.205)
DC-Resistance Power Cable, 8.4mm²(8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
Fiber Optic Properties			
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		[µm]	50/125
Primary Coating (Acrylate)		[µm]	245
Buffer Diameter, Nominal		[µm]	900
Secondary Protection, Jacket, Nominal		[mm (in)]	2.0 (0.08)
Minimum Bending Radius		[mm (in)]	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL94-V0, UL1666 RoHS Compliant
DC Power Cable Properties			
Size (Power)		[mm² (AWG)]	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		[mm² (AWG)]	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		[mm (in)]	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, ICEA S-93-638 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Environmental			
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

* This data is provisional and subject to change

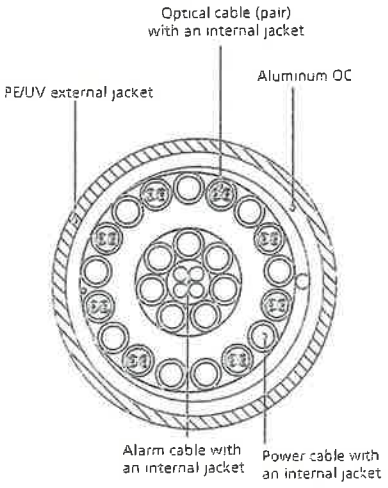


Figure 2: Construction Detail

ATTACHMENT 2

	General	Power	Density					
Site Name: Montville								
Tower Height: 370Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T UMTS	2	565	242.5	0.0069	880	0.5867	1.18%	
*AT&T UMTS	2	875	242.5	0.0107	1900	1.0000	1.07%	
*AT&T GSM	1	283	242.5	0.0017	880	0.5867	0.29%	
*AT&T GSM	4	525	242.5	0.0128	1900	1.0000	1.28%	
*AT&T LTE	1	1615	242.5	0.0099	734	0.4893	2.02%	
Verizon PCS	**11**	**315**	**305**	**0.0134**	**1970**	**1.0000**	**1.34%**	
Verizon Cellular	**9**	**276**	**305**	**0.0096**	**869**	**0.5793**	**1.66%**	
Verizon AWS	**1**	**2800**	**305**	**0.0108**	**2145**	**1.0000**	**1.08%**	
Verizon 700	**1**	**577**	**305**	**0.0022**	**746**	**0.4973**	**0.45%**	
								10.37%
* Source: Siting Council								

ATTACHMENT 3

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

370-ft Existing Guyed Lattice Tower

Proposed Verizon Wireless
Antenna Upgrade

Verizon Site Ref: Montville

695 Old Colchester Road
Montville, CT

Centek Project No. 15001.008

Date: February 13, 2015

Prepared for:

Verizon Wireless
99 East River Road, 9th Floor
East Hartford, CT 06108

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna upgrade proposed by Verizon Wireless on the existing guyed lattice tower located in Montville, Connecticut.

The host tower is a 370-ft, three face, guyed steel lattice tower originally designed and manufactured by PiROD. The original design documents were unavailable for use in this report. The tower geometry, structure member sizes, reinforcement information and foundation information were obtained from a previous structural analysis prepared by this URS Corp. Job No. VZ5-109 / 36922267, marked Revision #5, dated July 24, 2013.

Antenna and appurtenance inventory were taken from the aforementioned URS structural report and a Verizon RF data sheet.

The tower consists of fifteen (15) vertical sections constructed of solid round pipe legs conforming to ASTM A36. Diagonal and horizontal lateral support bracing consists of a combination of steel angle and solid round pipe construction conforming to ASTM A36. The vertical tower sections are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 5-ft at throughout its length.

Verizon Wireless proposes the removal of twelve (12) panel antennas and the installation of twelve (12) panel antennas, six (6) remote radio heads and two (2) main distribution boxes mounted on three (3) existing boom gates. Refer to the Antenna and Appurtenance Summary below for a detailed description of the proposed antenna and appurtenance configuration.

Antenna and Appurtenance Summary

The existing tower supports several communication antennas. The existing and proposed loads considered in the analysis consist of the following:

- WGBH (Existing):
  Antenna: One (1) Search Antenna leg mounted with an elevation of ±370-ft above grade level.
  Coax Cable: One (1) 7/8" coax cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 8-ft microwave dish pipe mounted with an elevation of ±355-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 20' by 3" ∅ Omni-directional (whip) antenna pipe mounted with an elevation of ±350-ft above the tower base.
  Coax Cable: Two (2) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.

- UNKNOWN (Existing):
  Antenna: One (1) 10' by 3" ∅ Omni-directional (whip) antenna mounted on a 3-ft side arm with an elevation of ±325-ft above the tower base.
  Coax Cable: One (1) 1-5/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- Secret Service (Existing):
  Antenna: One (1) 20' by 3" ∅ Omni-directional (whip) antenna pipe mounted with an elevation of ±250-ft above the tower base.
  Coax Cable: None
- AT&T (Existing):
  Antennas: Six (6) Powerwave 7770 panel antennas, six (6) TMA's, six (6) diplexers, one (1) SBNH-1D6565C panel antenna, one (1) AM-X-CD-16-65-00T panel antenna, one (1) P65-17-XLH-RR panel antenna, six (6) RRH's, and one (1) DC6-48-60-18-8F Surge Arrestor mounted on three (3) 12-ft T-frames with a RAD center elevation of ±242.5-ft above the existing tower base.
  Coax Cables: Twelve (12) 1-5/8" ∅ coax cables, one (1) fiber line, and two (2) DC power cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 4' yagi antenna leg mounted with an elevation of ±200-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: Four (4) 5' yagi antennas mounted on two (2) pipe mounts with an elevation of ±180-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 5' yagi antenna leg mounted with an elevation of ±148-ft above the tower base.
  Coax Cable: One (1) 1/2" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 8' yagi antenna leg mounted with an elevation of ±140-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 4' yagi antenna leg mounted with an elevation of ±125-ft above the tower base.
  Coax Cable: One (1) 1/2" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.

- UNKNOWN (Existing):
  Antenna: Four (4) antennas leg mounted with an elevation of ±88-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 6' yagi antenna leg mounted with an elevation of ±62-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- UNKNOWN (Existing):
  Antenna: One (1) 5' yagi antenna leg mounted with an elevation of ±40-ft above the tower base.
  Coax Cable: One (1) 7/8" coax cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- VERIZON (Existing to Remain):
  Antennas: Six (6) RFS FD9R6004/2C-3L diplexers mounted on three (3) boom gates with a RAD center elevation of ±305-ft above the existing tower base.
  Coax Cables: Twelve (12) 1-5/8" ∅ coax cables running on the face of the existing tower as specified in Section 3 of this report.
- VERIZON (Existing to be Removed):
  Antennas: Three (3) Antel BXA-70063-6CF, six (6) Antel LPA 80080/4CF and three (3) Antel BXA-171085-8BF panel antennas mounted on three (3) boom gates with a RAD center elevation of ±305-ft above the existing tower base.
- **VERIZON (Proposed):**
  Antennas: Six (6) Andrew LNX-6514DS panel antennas, six (6) Andrew HBXX-6517DS panel antennas, three (3) Alcatel-Lucent RRH2x60-AWS Remote Radio Heads, three (3) Alcatel-Lucent RRH2x60-PCS Remote Radio Heads and two (2) RFS DB-T1-6Z-8AB-0Z main distribution boxes mounted on three (3) boom gates with a RAD center elevation of ±305-ft above the existing tower base.
  Coax Cables: Two (2) 1-5/8" ∅ Hybriflex fiber lines running on the face of the existing tower as specified in Section 3 of this report.

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All previous reinforcements per the aforementioned URS report dated July 24, 2013 are complete as detailed.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower shaft, and the model assumes that the shaft members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (fastest mile) with no ice and a 75% reduction of wind force with ½ inch accumulative ice to determine stresses in members as per guidelines of TIA/EIA-222-F-96 entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix K of the CSBC[1] and the wind speed data available in the TIA/EIA-222-F-96 Standard. The higher of the two wind speeds is utilized in preparation of the tower analysis.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA/EIA-222-F, gravity loads of the tower structure and its components, and the application of ½" radial ice on the tower structure and its components.

Basic Wind Speed:	New London; v = 85 mph (fastest mile)	*[Section 16 of TIA/EIA-222-F-96]*
	Montville; v = 115 mph (3 second gust) equivalent to v = 95 mph (fastest mile)	*[Appendix K of the 2005 CT Building Code Supplement]*
	Appendix-K wind speed controls.	
Load Cases:	Load Case 1; 95 mph wind speed w/ no ice plus gravity load – used in calculation of tower stresses.	*[Section 2.3.16 of TIA/EIA-222-F-96]*
	Load Case 2; 82 mph wind speed w/ ½" radial ice plus gravity load – used in calculation of tower stresses. The 82 mph wind speed velocity represents 75% of the wind pressure generated by the 95 mph wind speed.	*[Section 2.3.16 of TIA/EIA-222-F-96]*
	Load Case 3; Seismic – not checked	*[Section 1614.5 of State Bldg. Code 2005] does not control in the design of this structure type*

[1] The 2005 Connecticut State Building Code as amended by the 2009 CT State Supplement. (CSBC)

Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower. Allowable stresses were determined based on Table 5 of the TIA/EIA code with a 1/3 increase per Section 3.1.1.1 of the same code.

- Calculated stresses were found to be within allowable limits. In Load Case 2, per tnxTower "Section Capacity Table", this tower was found to be at **95.6%** of its total capacity.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Leg (27)	200' - 206.25'	95.6%	**PASS**
Diagonal (T22)	231.25' - 237.5'	94.1%	**PASS**
Guy B @ 193.65' radius (T31)	162.5'-0"	84.3%	**PASS**

Foundations and Anchorage

The existing tower base foundation consists of a 3.0-ft square x 3-ft long reinforced concrete pedestal with a 7.0-ft square x 2.0-ft thick reinforced concrete pad bearing directly on the existing sub grade. Additionally, guy wire loading is transferred to twelve (12) existing concrete anchor support blocks. The sub-grade conditions used as the basis for the foundation analysis were derived from the aforementioned URS report.

- The worst case tower base and guy anchor reactions developed from the governing Load Case 2 were used in the verification of the anchorage foundations:

Tower Guy Reactions				
Vector	**Inner**	**Mid-Inner**	**Mid-Outer**	**Outer**
Horizontal (In Plane of GW)	12 kips	43 kips	66 kips	30 kips
Horizontal (Out of Plane of GW)	0 kips	1 kips	4 kips	3 kips
Vertical	6 kips	28 kips	75 kips	40 kips
Resultant Force at end of Guy Wire	13 kips	151 kips	100 kips	50 kips

Tower Base Reactions	
Vector	**Proposed Reaction**
Horizontal Shear	1.0 kips
Axial Compression	354.0 kips

Note 2: Obtained from tnxTower Analysis Load Case No. 2

Foundation	Design Limit	IBC 2003/2005 CT State Building Code Section 3108.4.2 (FS)[3]	Proposed Loading (FS)[3]	Result
Reinf. Conc. Anchor Block (C) at 114.41-ft radius.	Uplift	2.0	8.08	**PASS**
	Sliding	2.0	6.10	**PASS**
Reinf. Conc. Anchor Block (B) at 193.65-ft radius.	Uplift	2.0	3.46	**PASS**
	Sliding	2.0	3.40	**PASS**
Reinf. Conc. Anchor Block (A) at 224.79-ft radius.	Uplift	2.0	2.54	**PASS**
	Sliding	2.0	3.60	**PASS**
Reinf. Conc. Anchor Block (A) at 247.15-ft radius.	Uplift	2.0	3.10	**PASS**
	Sliding	2.0	4.80	**PASS**
		Allowable	**Proposed**	
Base Foundation	Bearing	8.0 ksf	7.61 ksf	**PASS**

Note 3: FS denotes 'Factor of Safety'.

Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon Wireless. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

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

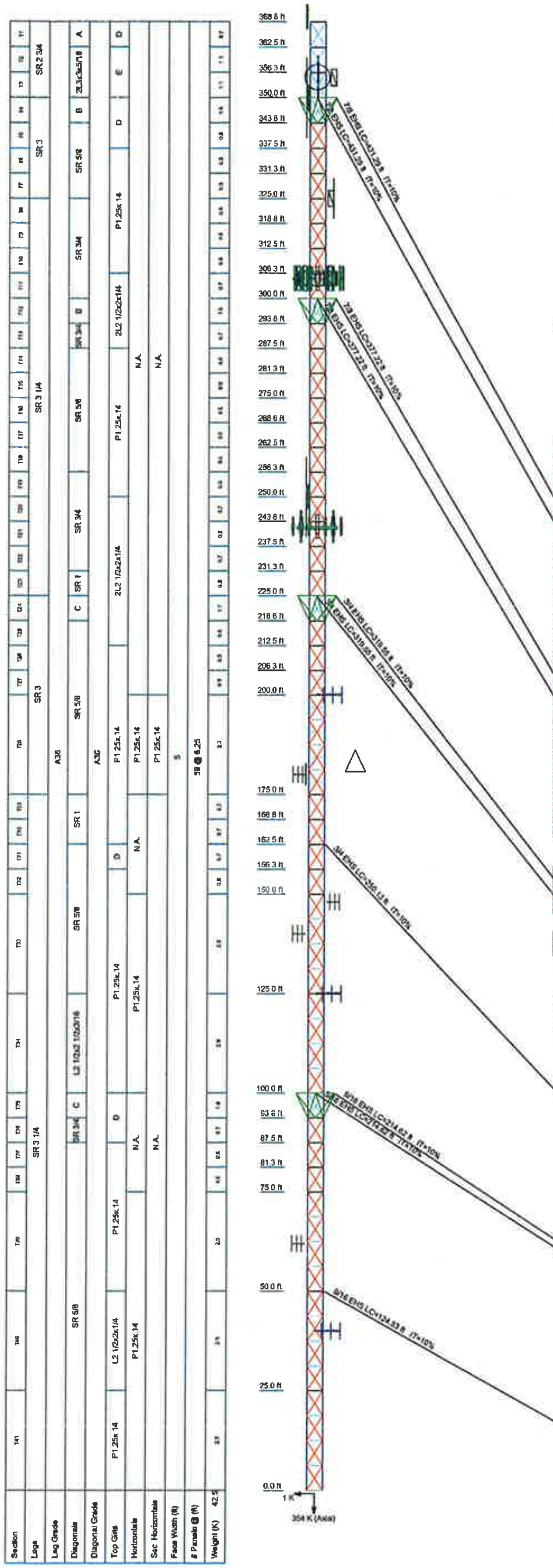
- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

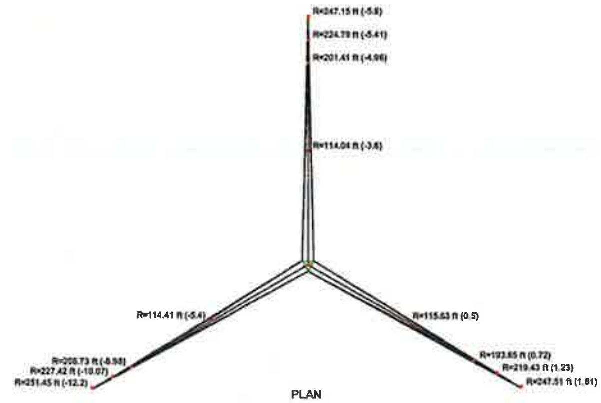
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly ERITower and RISATower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Search Antenna	370	Rohn 6' x 12' Boom Gate (1) (Verizon Existing)	305
10'6"x4" Pipe Mount	355	6'x4" Pipe Mount	250
Rohn 6' Side Arm(1)	355	20' x 3" Dia Omni	250
8' Dish	355	Pirod 12' T-Frame Sector Mount (1) (AT&T)	242.5
6'x4" Pipe Mount	350	Pirod 12' T-Frame Sector Mount (1) (AT&T)	242.5
20' x 3" Dia Omni	350	Pirod 12' T-Frame Sector Mount (1) (AT&T)	242.5
ROHN 3-ft Side Arm	325	(2) RRUS-11 (AT&T)	242.5
10' x 3" Dia Omni	325	(2) 7770.00 (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	(2) 7770.00 (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	(2) 7770.00 (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	AM-X-CD-16-65-00T-RET(72") (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	SBNH-1D6565C (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	P65-17-XLH-RR (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	(2) LPG21401 TMA (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	(2) LPG21401 TMA (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	(2) LPG21401 TMA (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	(2) LGP21901 Diplexer (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	(2) LGP21901 Diplexer (AT&T)	242.5
LNX-6514DS-T4M (Verizon Proposed)	305	(2) LGP21901 Diplexer (AT&T)	242.5
HBXX-6517DS (Verizon Proposed)	305	(2) RRUS-11 (AT&T)	242.5
RRH2x60-AWS (Verizon Proposed)	305	(2) RRUS-11 (AT&T)	242.5
RRH2x60-AWS (Verizon Proposed)	305	DC6-48-60-18-8F Surge Arrestor (AT&T)	242.5
RRH2x60-AWS (Verizon Proposed)	305	Yagi	200
RRH2x60-PCS (Verizon Proposed)	305	(4) Yagi	180
RRH2x60-PCS (Verizon Proposed)	305	(2) 5'3"x4" Pipe Mount	180
RRH2x60-PCS (Verizon Proposed)	305	Yagi	148
DB-T1-6Z-8AB-0Z (Verizon Proposed)	305	Yagi	140
DB-T1-6Z-8AB-0Z (Verizon Proposed)	305	Yagi	125
(2) FD9R6004/2C-3L Diplexer (Verizon Existing)	305	X-Style	88
(2) FD9R6004/2C-3L Diplexer (Verizon Existing)	305	X-Style	88
(2) FD9R6004/2C-3L Diplexer (Verizon Existing)	305	(2) X-Style	88
Rohn 6' x 12' Boom Gate (1) (Verizon Existing)	305	Yagi	62
Rohn 6' x 12' Boom Gate (1) (Verizon Existing)	305	Yagi	40

SYMBOL LIST

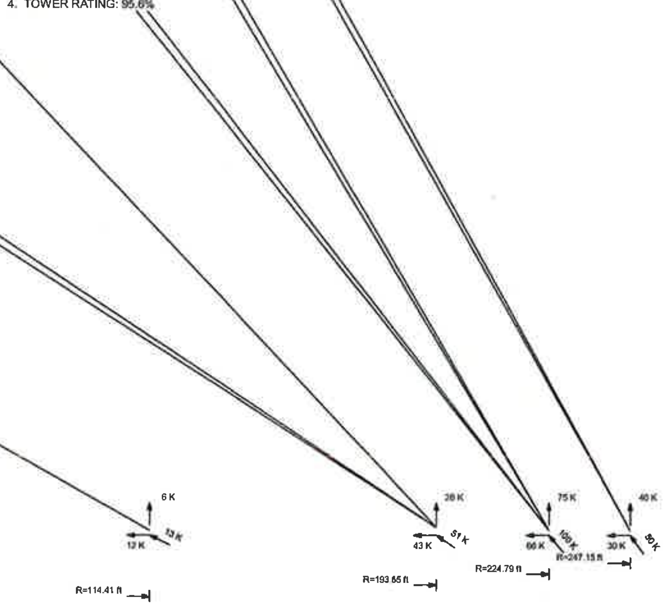
MARK	SIZE	MARK	SIZE
A	L2 1/2x2 1/2x1/4	D	2L2 1/2x2x1/4
B	L3x2 1/2x1/4	E	2L2 1/2x3x1/4
C	2L2 1/2x2 1/2x1/4		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

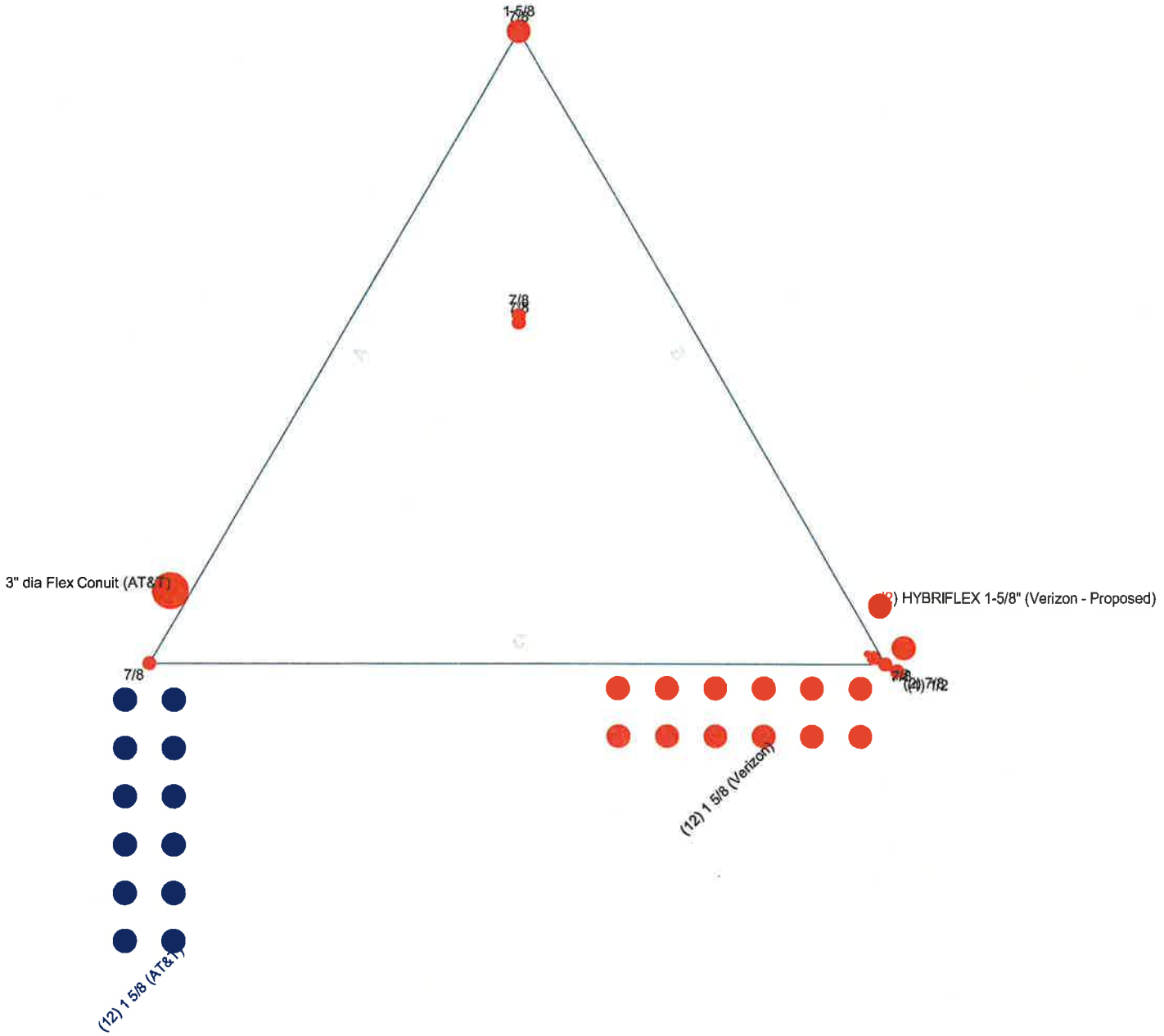
1. Tower designed for a 95 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 62 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 95.6%



Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job: ***15001.008 - Montville*** Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT*** Client: Verizon Wireless · Drawn by: TJL · App'd: Code: TIA/EIA-222-F · Date: 02/13/15 · Scale: NTS Path: · Dwg No. E-1

Feedline Plan

Round Flat App In Face App Out Face



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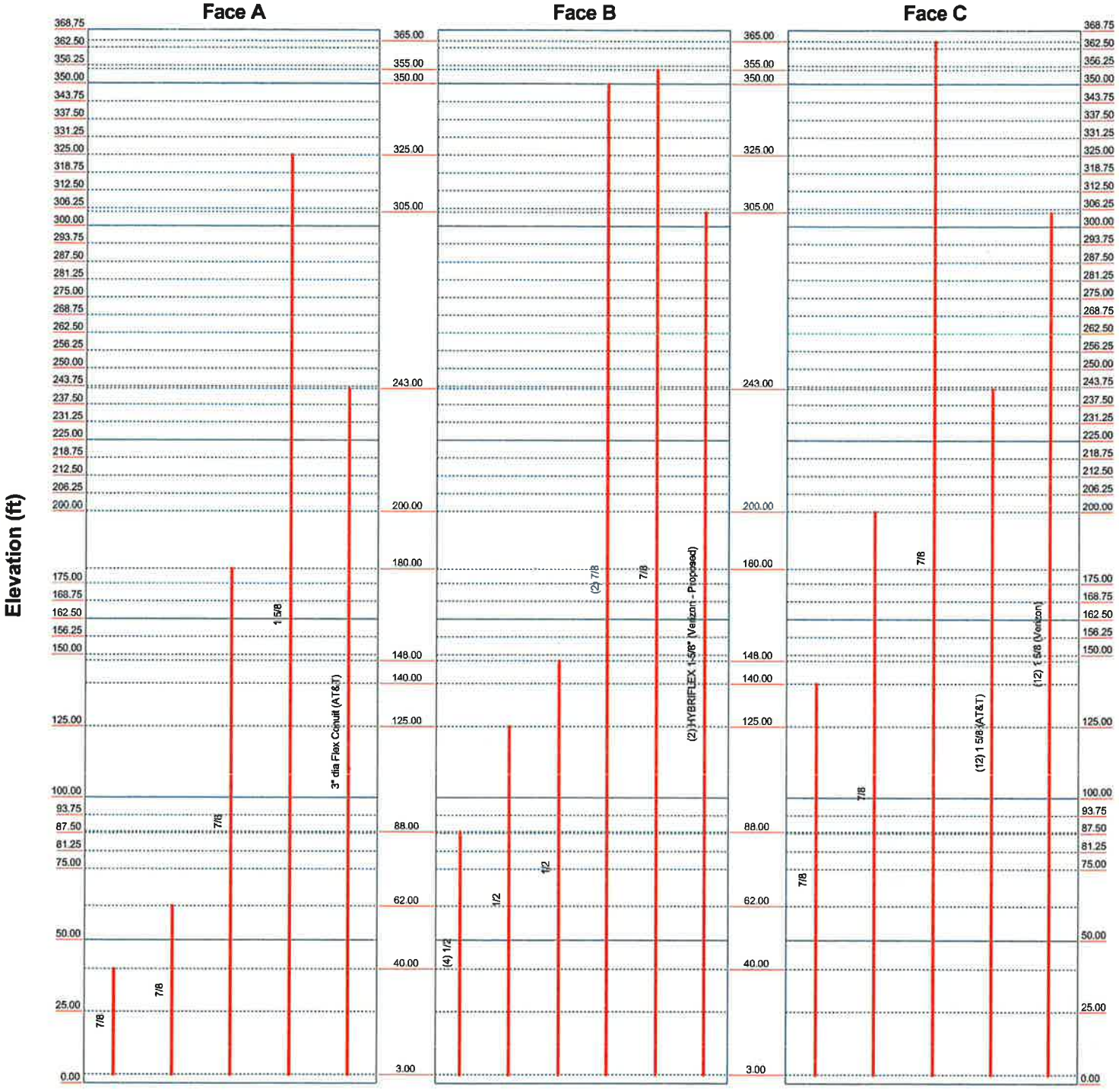
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job: 15001.008 - Montville			
Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT			
Client: Verizon Wireless	Drawn by: TJL	App'd:	
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS	
Path:		Dwg No. E-7	

Feedline Distribution Chart
0' - 368'9"

Round | Flat | App In Face | App Out Face | Truss Leg



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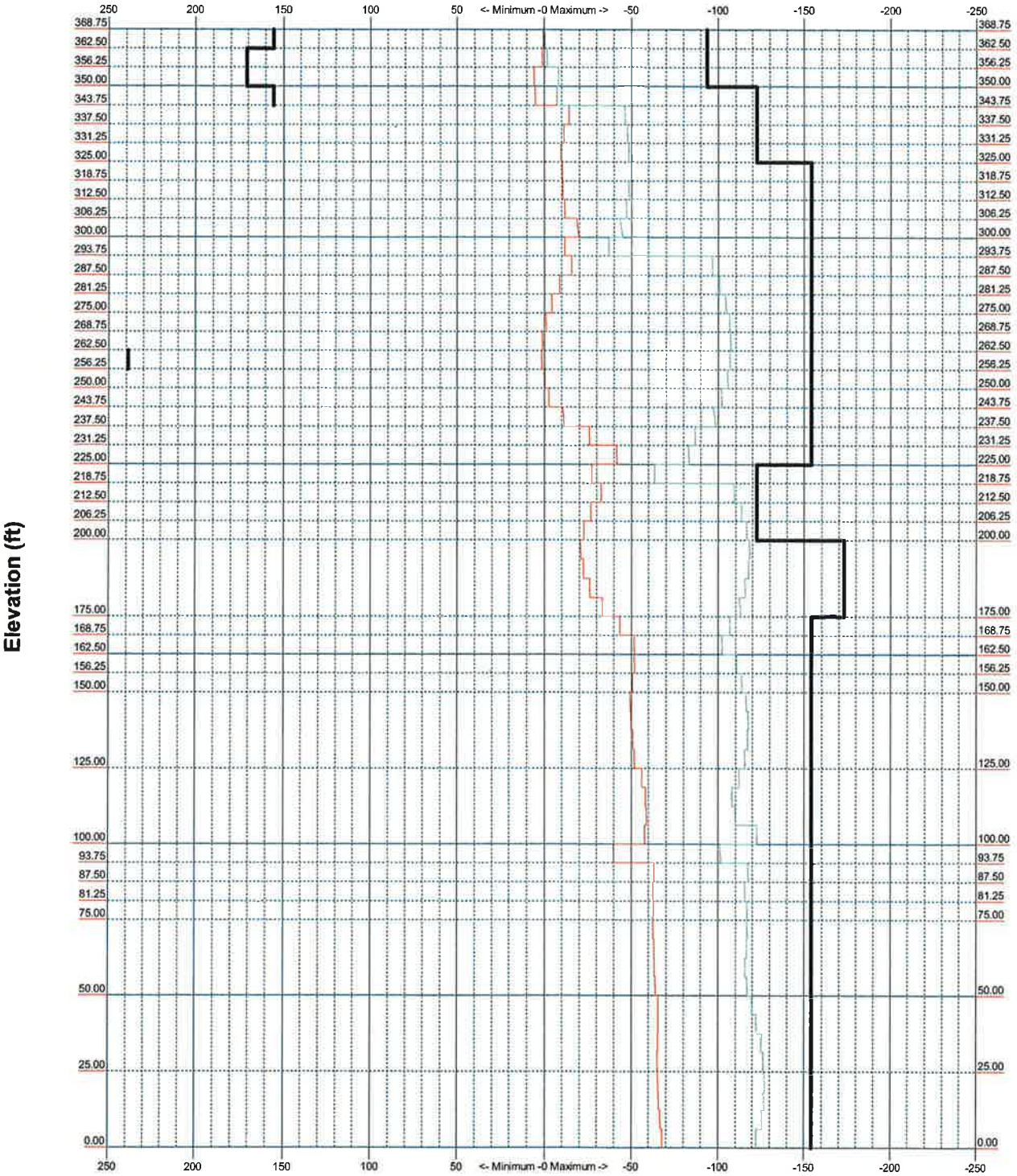
	Project: **370' Guyed Tower - 695 Old Colchester Road, Montville, CT**		
	Client: Verizon Wireless	Drawn by: TJL	App'd:
	Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
	Path:		Dwg No. E-7

TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Leg Capacity ——— **Leg Compression (K)**



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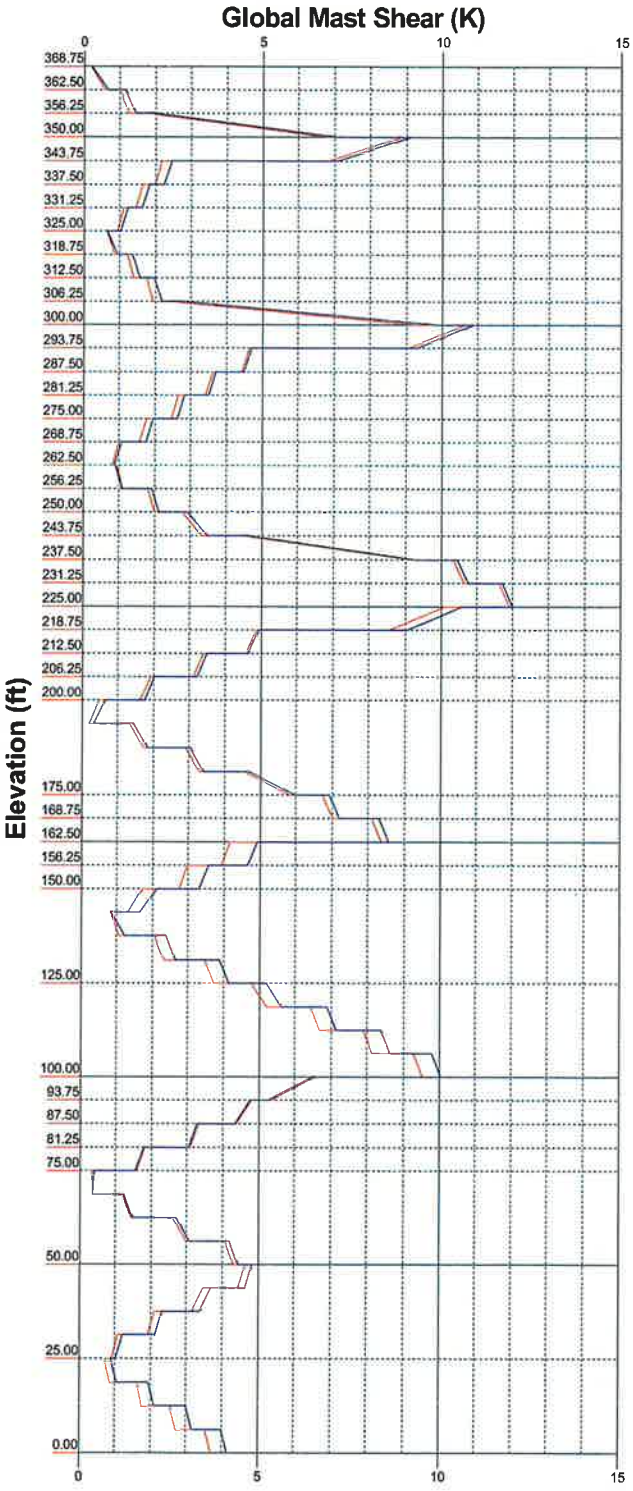
	Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT***		
	Client: Verizon Wireless	Drawn by: TJL	App'd:
	Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
	Path:		Dwg No. E-3

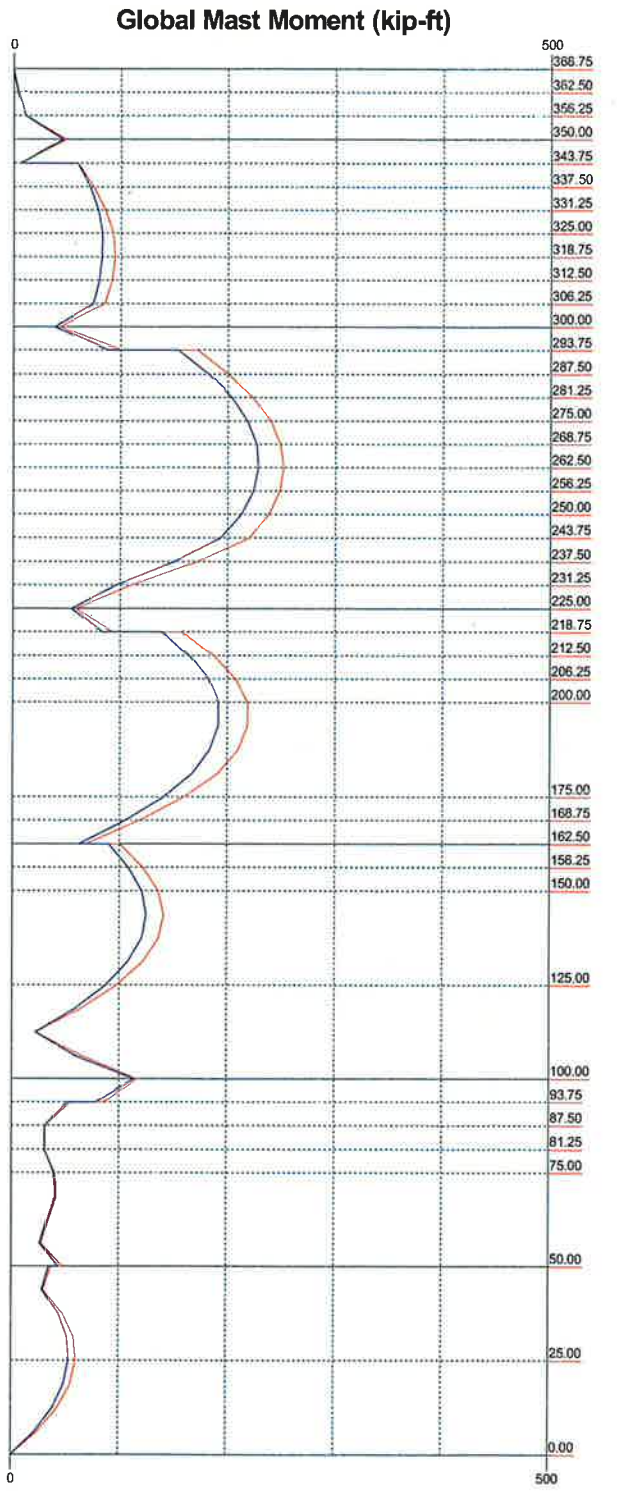
TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Vx Vz

Maximum Values

Mx Mz





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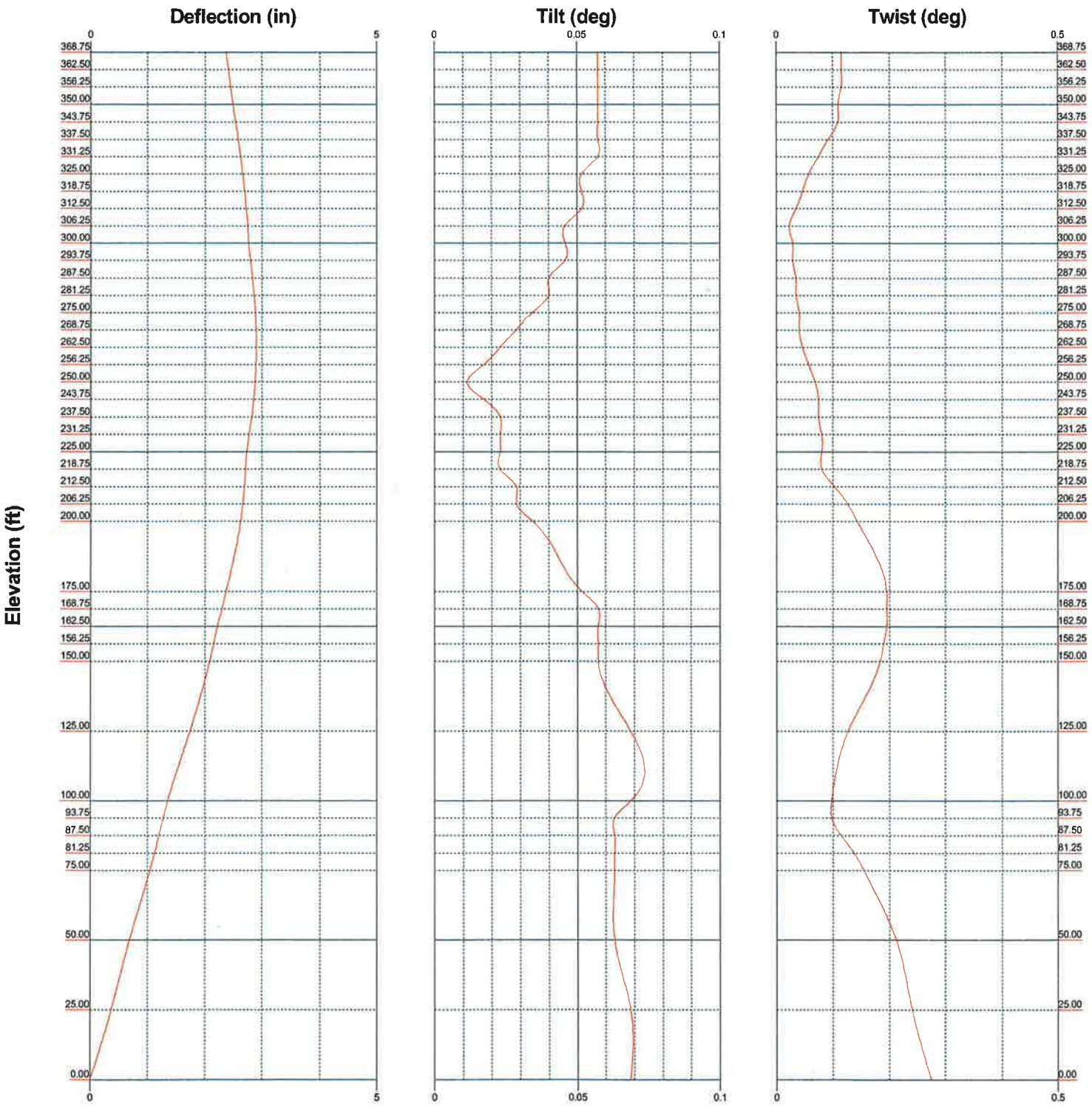
Job: *15001.008 - Montville*			
Project: *370' Guyed Tower - 695 Old Colchester Road, Montville, CT*			
Client: Verizon Wireless	Drawn by: TJL	App'd:	
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS	
Path:		Dwg No. E-4	

TIA/EIA-222-F - Service - 50 mph

Maximum Values



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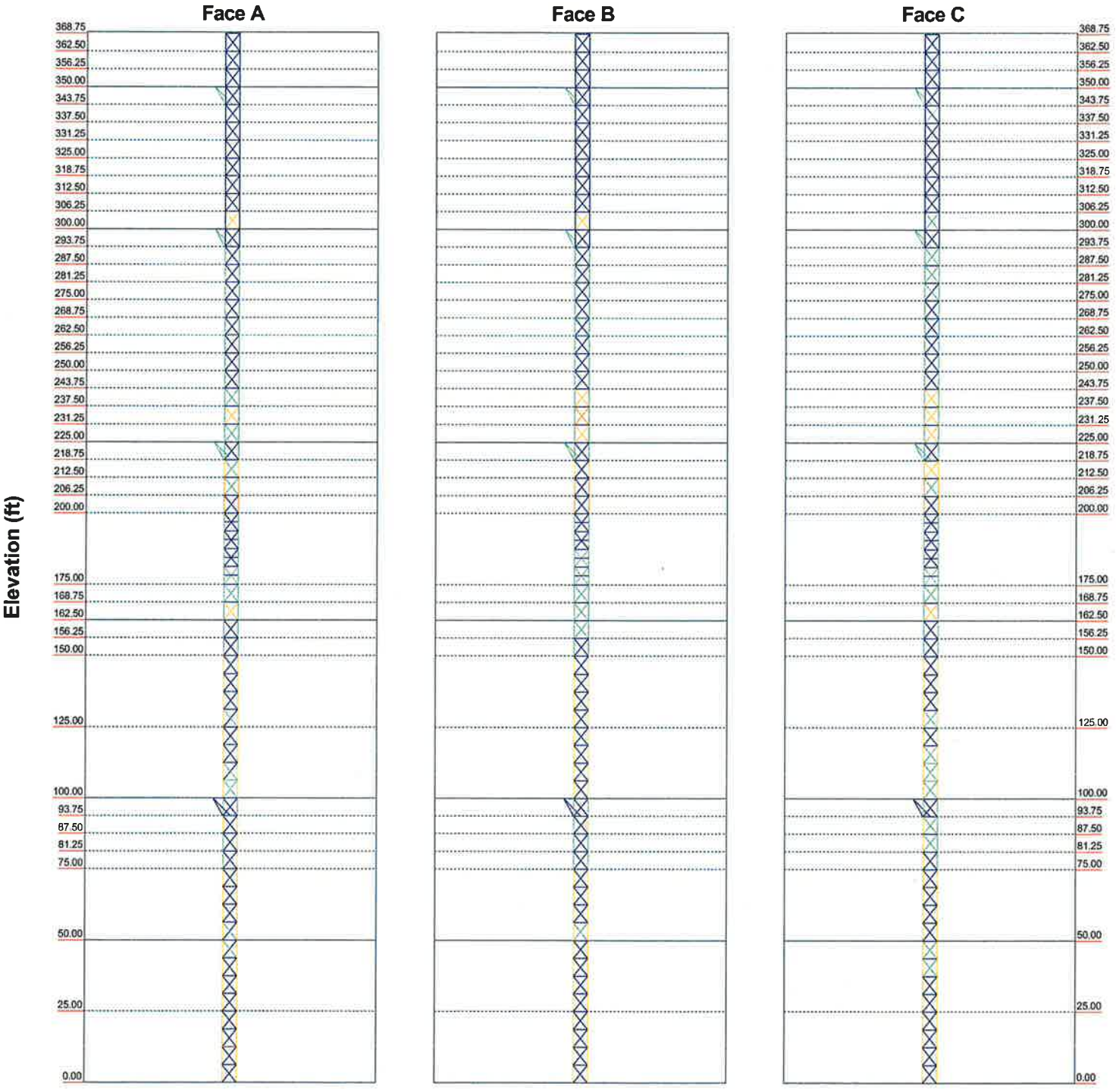
Client: Verizon Wireless	Drawn by: TJL	App'd:	
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS	
Path:		Dwg No. E-5	

Stress Distribution Chart
0' - 368'9"

> 100% | 90%-100% | 75%-90% | 50%-75% | < 50% Overstress



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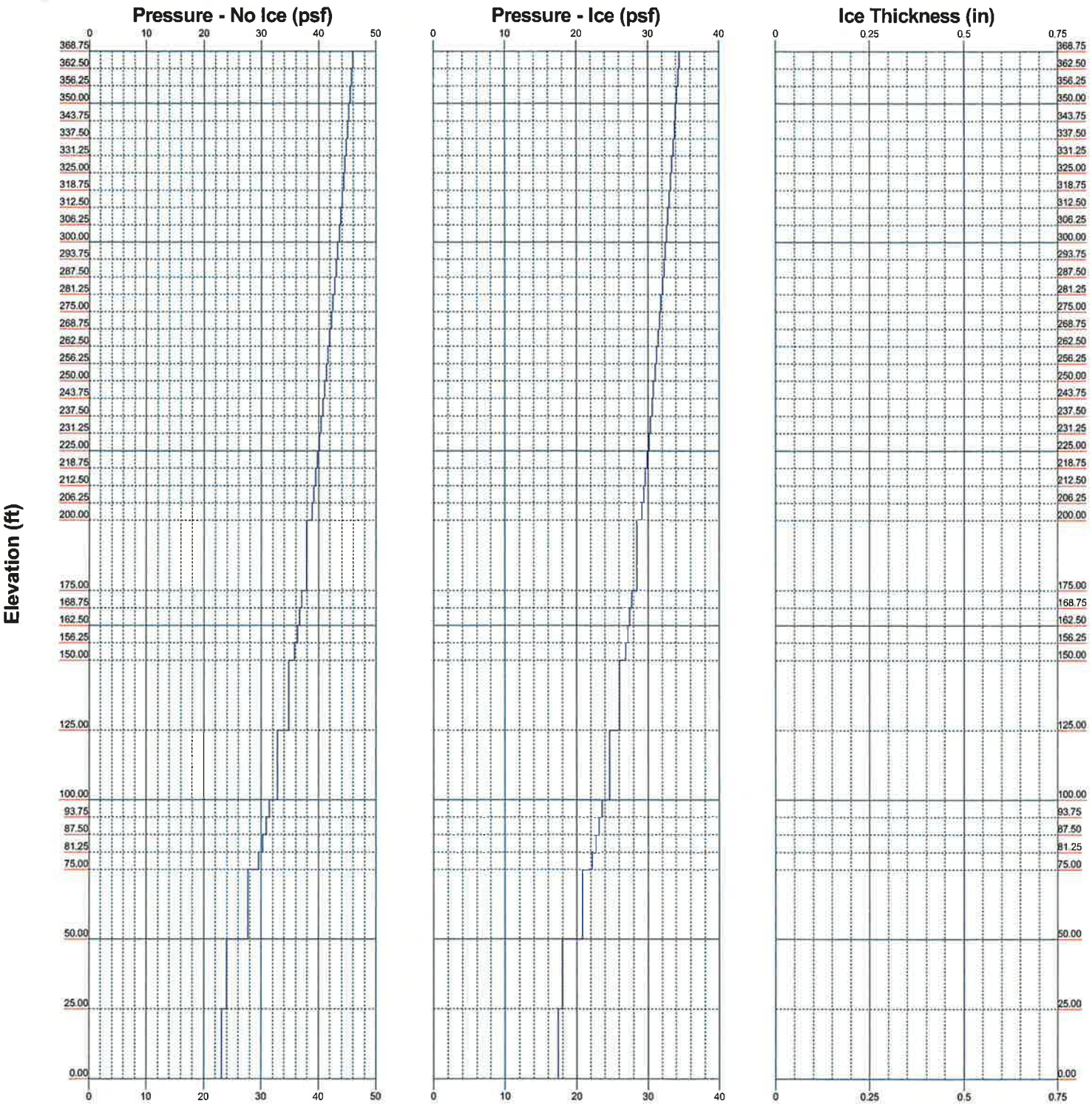
Job: *15001.008 - Montville*		
Project: *370' Guyed Tower - 695 Old Colchester Road, Montville, CT*		
Client: Verizon Wireless	Drawn by: TJL	App'd:
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
Path:		Dwg No. E-8

Wind Pressures and Ice Thickness

TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice



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Job: ***15001.008 - Montville***		
Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT***		
Client: Verizon Wireless	Drawn by: TJL	App'd:
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
Path:		Dwg No. E-9

tnxTower	Job	Page
	15001.008 - Montville	1 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	**Project** 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	**Date** 09:32:33 02/13/15
	Client Verizon Wireless	**Designed by** TJL

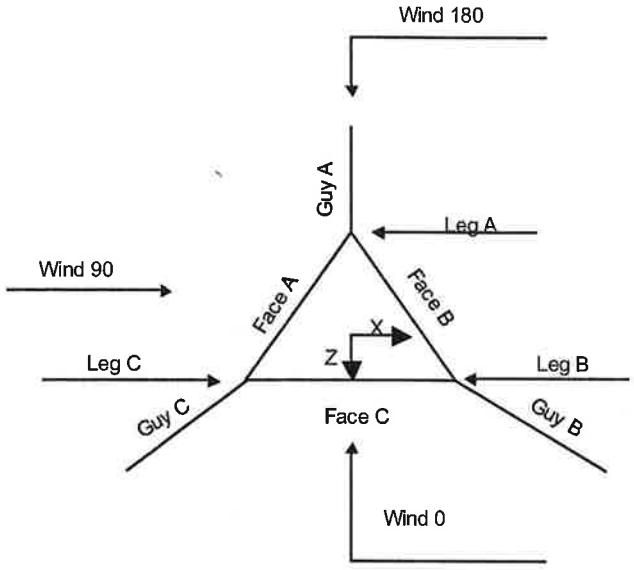
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 368.75 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 5.00 ft at the top and 5.00 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

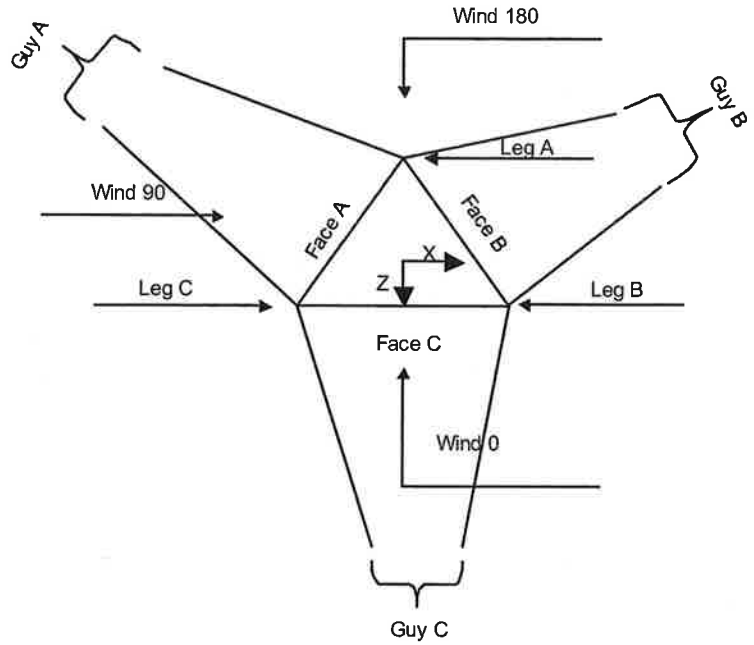
Basic wind speed of 95 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 82 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
Tension only take-up is 0.0313 in.
Pressures are calculated at each section.
Safety factor used in guy design is 2.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	√ Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	√ All Leg Panels Have Same Allowable
Escalate Ice	Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
√ Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		



Corner & Starmount Guyed Tower



Face Guyed

Tower Section Geometry

Tower Section	*Tower Elevation*	*Assembly Database*	*Description*	*Section Width*	*Number of Sections*	*Section Length*
	ft			*ft*		*ft*
T1	368.75-362.50			5.00	1	6.25
T2	362.50-356.25			5.00	1	6.25
T3	356.25-350.00			5.00	1	6.25
T4	350.00-343.75			5.00	1	6.25
T5	343.75-337.50			5.00	1	6.25
T6	337.50-331.25			5.00	1	6.25
T7	331.25-325.00			5.00	1	6.25
T8	325.00-318.75			5.00	1	6.25
T9	318.75-312.50			5.00	1	6.25
T10	312.50-306.25			5.00	1	6.25
T11	306.25-300.00			5.00	1	6.25
T12	300.00-293.75			5.00	1	6.25
T13	293.75-287.50			5.00	1	6.25
T14	287.50-281.25			5.00	1	6.25
T15	281.25-275.00			5.00	1	6.25
T16	275.00-268.75			5.00	1	6.25

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T17	268.75-262.50			5.00	1	6.25
T18	262.50-256.25			5.00	1	6.25
T19	256.25-250.00			5.00	1	6.25
T20	250.00-243.75			5.00	1	6.25
T21	243.75-237.50			5.00	1	6.25
T22	237.50-231.25			5.00	1	6.25
T23	231.25-225.00			5.00	1	6.25
T24	225.00-218.75			5.00	1	6.25
T25	218.75-212.50			5.00	1	6.25
T26	212.50-206.25			5.00	1	6.25
T27	206.25-200.00			5.00	1	6.25
T28	200.00-175.00			5.00	1	25.00
T29	175.00-168.75			5.00	1	6.25
T30	168.75-162.50			5.00	1	6.25
T31	162.50-156.25			5.00	1	6.25
T32	156.25-150.00			5.00	1	6.25
T33	150.00-125.00			5.00	1	25.00
T34	125.00-100.00			5.00	1	25.00
T35	100.00-93.75			5.00	1	6.25
T36	93.75-87.50			5.00	1	6.25
T37	87.50-81.25			5.00	1	6.25
T38	81.25-75.00			5.00	1	6.25
T39	75.00-50.00			5.00	1	25.00
T40	50.00-25.00			5.00	1	25.00
T41	25.00-0.00			5.00	1	25.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	368.75-362.50	6.25	X Brace	No	No	0.0000	0.0000
T2	362.50-356.25	6.25	X Brace	No	No	0.0000	0.0000
T3	356.25-350.00	6.25	X Brace	No	No	0.0000	0.0000
T4	350.00-343.75	6.25	X Brace	No	Yes	0.0000	0.0000
T5	343.75-337.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T6	337.50-331.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T7	331.25-325.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T8	325.00-318.75	6.25	TX Brace	No	Yes	0.0000	0.0000
T9	318.75-312.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T10	312.50-306.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T11	306.25-300.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T12	300.00-293.75	6.25	X Brace	No	Yes	0.0000	0.0000
T13	293.75-287.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T14	287.50-281.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T15	281.25-275.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T16	275.00-268.75	6.25	TX Brace	No	Yes	0.0000	0.0000
T17	268.75-262.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T18	262.50-256.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T19	256.25-250.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T20	250.00-243.75	6.25	TX Brace	No	Yes	0.0000	0.0000
T21	243.75-237.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T22	237.50-231.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T23	231.25-225.00	6.25	TX Brace	No	Yes	0.0000	0.0000

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
T24	225.00-218.75	6.25	X Brace	No	Yes	0.0000	0.0000
T25	218.75-212.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T26	212.50-206.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T27	206.25-200.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T28	200.00-175.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T29	175.00-168.75	6.25	TX Brace	No	Yes	0.0000	0.0000
T30	168.75-162.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T31	162.50-156.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T32	156.25-150.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T33	150.00-125.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T34	125.00-100.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T35	100.00-93.75	6.25	X Brace	No	Yes	0.0000	0.0000
T36	93.75-87.50	6.25	TX Brace	No	Yes	0.0000	0.0000
T37	87.50-81.25	6.25	TX Brace	No	Yes	0.0000	0.0000
T38	81.25-75.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T39	75.00-50.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T40	50.00-25.00	6.25	TX Brace	No	Yes	0.0000	0.0000
T41	25.00-0.00	6.25	TX Brace	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 368.75-362.50	Solid Round	2 3/4	A36 (36 ksi)	Single Angle	L2 1/2x2 1/2x1/4	A36 (36 ksi)
T2 362.50-356.25	Solid Round	2 3/4	A36 (36 ksi)	Double Angle	2L3x3x5/16	A36 (36 ksi)
T3 356.25-350.00	Solid Round	2 3/4	A36 (36 ksi)	Double Angle	2L3x3x5/16	A36 (36 ksi)
T4 350.00-343.75	Solid Round	3	A36 (36 ksi)	Single Angle	L3x2 1/2x1/4	A36 (36 ksi)
T5 343.75-337.50	Solid Round	3	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T6 337.50-331.25	Solid Round	3	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T7 331.25-325.00	Solid Round	3	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T8 325.00-318.75	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T9 318.75-312.50	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T10 312.50-306.25	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T11 306.25-300.00	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T12 300.00-293.75	Solid Round	3 1/4	A36 (36 ksi)	Single Angle	L3x2 1/2x1/4	A36 (36 ksi)
T13 293.75-287.50	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	3/4	A36 (36 ksi)
T14 287.50-281.25	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T15 281.25-275.00	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T16 275.00-268.75	Solid Round	3 1/4	A36 (36 ksi)	Solid Round	5/8	A36 (36 ksi)
T17	Solid Round	3 1/4	A36	Solid Round	5/8	A36

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
268.75-262.50			(36 ksi)			(36 ksi)
T18	Solid Round	3 1/4	A36	Solid Round	5/8	A36
262.50-256.25			(36 ksi)			(36 ksi)
T19	Solid Round	3 1/4	A36	Solid Round	3/4	A36
256.25-250.00			(36 ksi)			(36 ksi)
T20	Solid Round	3 1/4	A36	Solid Round	3/4	A36
250.00-243.75			(36 ksi)			(36 ksi)
T21	Solid Round	3 1/4	A36	Solid Round	3/4	A36
243.75-237.50			(36 ksi)			(36 ksi)
T22	Solid Round	3 1/4	A36	Solid Round	3/4	A36
237.50-231.25			(36 ksi)			(36 ksi)
T23	Solid Round	3 1/4	A36	Solid Round	1	A36
231.25-225.00			(36 ksi)			(36 ksi)
T24	Solid Round	3	A36	Double Angle	2L2 1/2x2 1/2x1/4	A36
225.00-218.75			(36 ksi)			(36 ksi)
T25	Solid Round	3	A36	Solid Round	5/8	A36
218.75-212.50			(36 ksi)			(36 ksi)
T26	Solid Round	3	A36	Solid Round	5/8	A36
212.50-206.25			(36 ksi)			(36 ksi)
T27	Solid Round	3	A36	Solid Round	5/8	A36
206.25-200.00			(36 ksi)			(36 ksi)
T28	Solid Round	3	A36	Solid Round	5/8	A36
200.00-175.00			(36 ksi)			(36 ksi)
T29	Solid Round	3 1/4	A36	Solid Round	1	A36
175.00-168.75			(36 ksi)			(36 ksi)
T30	Solid Round	3 1/4	A36	Solid Round	1	A36
168.75-162.50			(36 ksi)			(36 ksi)
T31	Solid Round	3 1/4	A36	Solid Round	5/8	A36
162.50-156.25			(36 ksi)			(36 ksi)
T32	Solid Round	3 1/4	A36	Solid Round	5/8	A36
156.25-150.00			(36 ksi)			(36 ksi)
T33	Solid Round	3 1/4	A36	Solid Round	5/8	A36
150.00-125.00			(36 ksi)			(36 ksi)
T34	Solid Round	3 1/4	A36	Single Angle	L2 1/2x2 1/2x3/16	A36
125.00-100.00			(36 ksi)			(36 ksi)
T35 100.00-93.75	Solid Round	3 1/4	A36	Double Angle	2L2 1/2x2 1/2x1/4	A36
			(36 ksi)			(36 ksi)
T36 93.75-87.50	Solid Round	3 1/4	A36	Solid Round	3/4	A36
			(36 ksi)			(36 ksi)
T37 87.50-81.25	Solid Round	3 1/4	A36	Solid Round	5/8	A36
			(36 ksi)			(36 ksi)
T38 81.25-75.00	Solid Round	3 1/4	A36	Solid Round	5/8	A36
			(36 ksi)			(36 ksi)
T39 75.00-50.00	Solid Round	3 1/4	A36	Solid Round	5/8	A36
			(36 ksi)			(36 ksi)
T40 50.00-25.00	Solid Round	3 1/4	A36	Solid Round	5/8	A36
			(36 ksi)			(36 ksi)
T41 25.00-0.00	Solid Round	3 1/4	A36	Solid Round	5/8	A36
			(36 ksi)			(36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 368.75-362.50	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
			(36 ksi)			(36 ksi)
T2 362.50-356.25	Double Angle	2L2 1/2x3x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T3 356.25-350.00	Double Angle	2L2 1/2x3x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T4 350.00-343.75	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T5 343.75-337.50	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T6 337.50-331.25	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T7 331.25-325.00	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T8 325.00-318.75	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T9 318.75-312.50	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T10 312.50-306.25	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T11 306.25-300.00	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T12 300.00-293.75	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T13 293.75-287.50	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T14 287.50-281.25	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T15 281.25-275.00	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T16 275.00-268.75	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T17 268.75-262.50	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T18 262.50-256.25	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T19 256.25-250.00	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T20 250.00-243.75	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T21 243.75-237.50	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T22 237.50-231.25	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T23 231.25-225.00	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T24 225.00-218.75	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T25 218.75-212.50	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T26 212.50-206.25	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T27 206.25-200.00	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T28 200.00-175.00	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T29 175.00-168.75	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T30 168.75-162.50	Pipe	P1.25x.14	A36	Pipe		A36
			(36 ksi)			(36 ksi)
T31 162.50-156.25	Double Angle	2L2 1/2x2x1/4	A36	Pipe		A36
			(36 ksi)			(36 ksi)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T32 156.25-150.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T33 150.00-125.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T34 125.00-100.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T35 100.00-93.75	Double Angle	2L2 1/2x2x1/4	A36 (36 ksi)	Pipe		A36 (36 ksi)
T36 93.75-87.50	Double Angle	2L2 1/2x2x1/4	A36 (36 ksi)	Pipe		A36 (36 ksi)
T37 87.50-81.25	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T38 81.25-75.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T39 75.00-50.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 ksi)
T40 50.00-25.00	Single Angle	L2 1/2x2x1/4	A36 (36 ksi)	Pipe		A36 (36 ksi)
T41 25.00-0.00	Pipe	P1.25x.14	A36 (36 ksi)	Pipe		A36 (36 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
T4 350.00-343.75	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T5 343.75-337.50	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T6 337.50-331.25	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T7 331.25-325.00	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T8 325.00-318.75	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T9 318.75-312.50	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T10 312.50-306.25	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T11 306.25-300.00	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T12 300.00-293.75	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T13 293.75-287.50	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T14 287.50-281.25	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T15 281.25-275.00	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T16 275.00-268.75	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T17 268.75-262.50	None	Flat Bar		A36 (36 ksi)	Pipe	P1.25x.14	A36 (36 ksi)
T18	None	Flat Bar		A36	Pipe	P1.25x.14	A36

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
262.50-256.25				(36 ksi)			(36 ksi)
T19	None	Flat Bar		A36	Pipe	P1.25x.14	A36
256.25-250.00				(36 ksi)			(36 ksi)
T20	None	Flat Bar		A36	Pipe	P1.25x.14	A36
250.00-243.75				(36 ksi)			(36 ksi)
T21	None	Flat Bar		A36	Pipe	P1.25x.14	A36
243.75-237.50				(36 ksi)			(36 ksi)
T22	None	Flat Bar		A36	Pipe	P1.25x.14	A36
237.50-231.25				(36 ksi)			(36 ksi)
T23	None	Flat Bar		A36	Pipe	P1.25x.14	A36
231.25-225.00				(36 ksi)			(36 ksi)
T24	None	Flat Bar		A36	Pipe	P1.25x.14	A36
225.00-218.75				(36 ksi)			(36 ksi)
T25	None	Flat Bar		A36	Pipe	P1.25x.14	A36
218.75-212.50				(36 ksi)			(36 ksi)
T26	None	Flat Bar		A36	Pipe	P1.25x.14	A36
212.50-206.25				(36 ksi)			(36 ksi)
T27	None	Flat Bar		A36	Pipe	P1.25x.14	A36
206.25-200.00				(36 ksi)			(36 ksi)
T28	None	Flat Bar		A36	Pipe	P1.25x.14	A36
200.00-175.00				(36 ksi)			(36 ksi)
T29	None	Single Angle		A36	Pipe	P1.25x.14	A36
175.00-168.75				(36 ksi)			(36 ksi)
T30	None	Single Angle		A36	Pipe	P1.25x.14	A36
168.75-162.50				(36 ksi)			(36 ksi)
T31	None	Single Angle		A36	Pipe	P1.25x.14	A36
162.50-156.25				(36 ksi)			(36 ksi)
T32	None	Single Angle		A36	Pipe	P1.25x.14	A36
156.25-150.00				(36 ksi)			(36 ksi)
T33	None	Single Angle		A36	Pipe	P1.25x.14	A36
150.00-125.00				(36 ksi)			(36 ksi)
T34	None	Single Angle		A36	Pipe	P1.25x.14	A36
125.00-100.00				(36 ksi)			(36 ksi)
T35 100.00-93.75	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T36 93.75-87.50	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T37 87.50-81.25	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T38 81.25-75.00	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T39 75.00-50.00	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T40 50.00-25.00	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 ksi)
T41 25.00-0.00	None	Single Angle		A36	Pipe	P1.25x.14	A36
				(36 ksi)			(36 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
T28	Pipe	P1.25x.14	A36	Solid Round		A572-50

Tower Elevation	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
ft						
200.00-175.00			(36 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals
ft	ft^2	in					in	in
T1 368.75-362.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T2 362.50-356.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T3 356.25-350.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T4 350.00-343.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T5 343.75-337.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T6 337.50-331.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T7 331.25-325.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T8 325.00-318.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T9 318.75-312.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T10 312.50-306.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T11 306.25-300.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T12 300.00-293.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T13 293.75-287.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T14 287.50-281.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T15 281.25-275.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T16 275.00-268.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T17 268.75-262.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T18 262.50-256.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T19 256.25-250.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T20 250.00-243.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T21 243.75-237.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T22 237.50-231.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T23 231.25-225.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000

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
T24 225.00-218.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T25 218.75-212.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T26 212.50-206.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T27 206.25-200.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T28 200.00-175.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T29 175.00-168.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T30 168.75-162.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T31 162.50-156.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T32 156.25-150.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T33 150.00-125.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T34 125.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T35 100.00-93.75	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T36 93.75-87.50	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T37 87.50-81.25	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T38 81.25-75.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T39 75.00-50.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T40 50.00-25.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000
T41 25.00-0.00	0.00	0.0000	A36 (36 ksi)	1	1	1	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 368.75-362.50	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 362.50-356.25	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 356.25-350.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 350.00-343.75	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 343.75-337.50	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	Single Diags X	Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
T6	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
337.50-331.25				1	1	1	1	1	1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
331.25-325.00				1	1	1	1	1	1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
325.00-318.75				1	1	1	1	1	1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
318.75-312.50				1	1	1	1	1	1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
312.50-306.25				1	1	1	1	1	1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
306.25-300.00				1	1	1	1	1	1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
300.00-293.75				1	1	1	1	1	1	1	1	1	1	1	1
T13	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
293.75-287.50				1	1	1	1	1	1	1	1	1	1	1	1
T14	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
287.50-281.25				1	1	1	1	1	1	1	1	1	1	1	1
T15	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
281.25-275.00				1	1	1	1	1	1	1	1	1	1	1	1
T16	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
275.00-268.75				1	1	1	1	1	1	1	1	1	1	1	1
T17	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
268.75-262.50				1	1	1	1	1	1	1	1	1	1	1	1
T18	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
262.50-256.25				1	1	1	1	1	1	1	1	1	1	1	1
T19	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
256.25-250.00				1	1	1	1	1	1	1	1	1	1	1	1
T20	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
250.00-243.75				1	1	1	1	1	1	1	1	1	1	1	1
T21	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
243.75-237.50				1	1	1	1	1	1	1	1	1	1	1	1
T22	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
237.50-231.25				1	1	1	1	1	1	1	1	1	1	1	1
T23	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
231.25-225.00				1	1	1	1	1	1	1	1	1	1	1	1
T24	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
225.00-218.75				1	1	1	1	1	1	1	1	1	1	1	1
T25	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
218.75-212.50				1	1	1	1	1	1	1	1	1	1	1	1
T26	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
212.50-206.25				1	1	1	1	1	1	1	1	1	1	1	1
T27	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
206.25-200.00				1	1	1	1	1	1	1	1	1	1	1	1
T28	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
200.00-175.00				1	1	1	1	1	1	1	1	1	1	1	1
T29	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
175.00-168.75				1	1	1	1	1	1	1	1	1	1	1	1
T30	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
168.75-162.50				1	1	1	1	1	1	1	1	1	1	1	1
T31	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
162.50-156.25				1	1	1	1	1	1	1	1	1	1	1	1
T32	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
156.25-150.00				1	1	1	1	1	1	1	1	1	1	1	1
T33	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
150.00-125.00				1	1	1	1	1	1	1	1	1	1	1	1
T34	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
125.00-100.00				1	1	1	1	1	1	1	1	1	1	1	1

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X	X Brace Diags Y	Single Diags X	Single Diags Y	Girts X	Girts Y	Horiz. X	Horiz. Y	Sec. Horiz. X	Sec. Horiz. Y	Inner Brace X	Inner Brace Y
T35	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
100.00-93.75				1	1	1	1	1	1	1	1	1	1	1	1
T36	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
93.75-87.50				1	1	1	1	1	1	1	1	1	1	1	1
T37	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
87.50-81.25				1	1	1	1	1	1	1	1	1	1	1	1
T38	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
81.25-75.00				1	1	1	1	1	1	1	1	1	1	1	1
T39	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
75.00-50.00				1	1	1	1	1	1	1	1	1	1	1	1
T40	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
50.00-25.00				1	1	1	1	1	1	1	1	1	1	1	1
T41	Yes	Yes	1	1	1	1	1	1	1	1	1	1	1	1	1
25.00-0.00				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 Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
368.75-362.50														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
362.50-356.25														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
356.25-350.00														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
350.00-343.75														
T5	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
343.75-337.50														
T6	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
337.50-331.25														
T7	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
331.25-325.00														
T8	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
325.00-318.75														
T9	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
318.75-312.50														
T10	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
312.50-306.25														
T11	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
306.25-300.00														
T12	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
300.00-293.75														
T13	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
293.75-287.50														
T14	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
287.50-281.25														

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
T15 281.25-275.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T16 275.00-268.75	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T17 268.75-262.50	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T18 262.50-256.25	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T19 256.25-250.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T20 250.00-243.75	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T21 243.75-237.50	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T22 237.50-231.25	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T23 231.25-225.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T24 225.00-218.75	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T25 218.75-212.50	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T26 212.50-206.25	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T27 206.25-200.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T28 200.00-175.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T29 175.00-168.75	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T30 168.75-162.50	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T31 162.50-156.25	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T32 156.25-150.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T33 150.00-125.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T34 125.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T35 100.00-93.75	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T36 93.75-87.50	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T37 87.50-81.25	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T38 81.25-75.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T39 75.00-50.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T40 50.00-25.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T41 25.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

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	Flange	0.7500	6	0.5000	2	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
368.75-362.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T2	Flange	0.7500	0	0.5000	2	0.5000	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
362.50-356.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T3	Flange	0.7500	0	0.5000	2	0.5000	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
356.25-350.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T4	Flange	0.7500	6	0.6250	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
350.00-343.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T5	Flange	0.7500	0	0.5000	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
343.75-337.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T6	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
337.50-331.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T7	Flange	0.7500	0	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
331.25-325.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T8	Flange	0.7500	6	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	1
325.00-318.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T9	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	1
318.75-312.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T10	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	1
312.50-306.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T11	Flange	0.7500	0	0.5000	2	0.6250	2	0.6250	0	0.6250	0	0.6250	2	0.6250	1
306.25-300.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T12	Flange	0.7500	6	0.6250	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
300.00-293.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T13	Flange	0.7500	0	0.5000	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
293.75-287.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T14	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
287.50-281.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T15	Flange	0.7500	0	0.5000	2	0.6250	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
281.25-275.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T16	Flange	0.7500	6	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
275.00-268.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T17	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
268.75-262.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T18	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
262.50-256.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T19	Flange	0.7500	0	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
256.25-250.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T20	Flange	0.7500	6	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
250.00-243.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T21	Flange	0.7500	0	0.5000	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
243.75-237.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T22	Flange	0.7500	0	0.5000	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
237.50-231.25		A325N		A325X		A325N		A325N		A325N		A325N		A325N	
T23	Flange	0.7500	0	0.5000	2	0.6250	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
231.25-225.00		A325N		A325X		A325N		A325N		A325N		A325N		A325N	
T24	Flange	0.7500	6	0.6250	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
225.00-218.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T25	Flange	0.7500	0	0.5000	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
218.75-212.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T26	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
212.50-206.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T27	Flange	0.7500	0	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
206.25-200.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T28	Flange	0.7500	6	0.5000	2	0.5000	2	0.6250	0	0.6250	0	0.6250	2	0.6250	0
200.00-175.00		A325N		A325N		A325N		A490X		A325N		A325N		A325N	

Tower Elevation ft	Leg Connection Type	Leg Bolt Size in	Leg No.	Diagonal Bolt Size in	Diagonal No.	Top Girt Bolt Size in	Top Girt No.	Bottom Girt Bolt Size in	Bottom Girt No.	Mid Girt Bolt Size in	Mid Girt No.	Long Horizontal Bolt Size in	Long Horizontal No.	Short Horizontal Bolt Size in	Short Horizontal No.
T29	Flange	0.7500	6	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
175.00-168.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T30	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
168.75-162.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T31	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
162.50-156.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T32	Flange	0.7500	0	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
156.25-150.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T33	Flange	0.7500	6	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
150.00-125.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T34	Flange	0.7500	6	0.6250	2	0.6250	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
125.00-100.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T35	Flange	0.7500	6	0.6250	2	0.6250	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
100.00-93.75		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T36	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
93.75-87.50		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T37	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
87.50-81.25		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T38	Flange	0.7500	0	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
81.25-75.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T39	Flange	0.7500	6	0.5000	2	0.5000	2	0.0000	0	0.6250	0	0.6250	2	0.6250	0
75.00-50.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T40	Flange	0.7500	6	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
50.00-25.00		A325N		A325N		A325N		A325N		A325N		A325N		A325N	
T41 25.00-0.00	Flange	0.7500	6	0.5000	2	0.5000	2	0.5000	0	0.6250	0	0.6250	2	0.6250	0
		A325N		A325N		A325N		A325N		A325N		A325N		A325N	

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
350	EHS	A	7/8	7.97	10%	19000	1.581	430.92	247.15	0.0000	-5.80	100%
		B	7/8	7.97	10%	19000	1.581	424.88	247.51	0.0000	1.81	100%
		C	7/8	7.97	10%	19000	1.581	438.63	251.45	0.0000	-12.20	100%
300	EHS	A	7/8	7.97	10%	19000	1.581	376.90	224.79	0.0000	-5.41	100%
		B	7/8	7.97	10%	19000	1.581	368.38	219.43	0.0000	1.23	100%
		C	7/8	7.97	10%	19000	1.581	382.21	227.42	0.0000	-10.07	100%
225	EHS	A	3/4	5.83	10%	19000	1.155	319.27	224.79	0.0000	-5.41	100%
		B	3/4	5.83	10%	19000	1.155	310.78	219.43	0.0000	1.23	100%
		C	3/4	5.83	10%	19000	1.155	324.45	227.42	0.0000	-10.07	100%
162.5	EHS	A	3/4	5.83	10%	19000	1.155	259.49	201.41	0.0000	-4.96	100%
		B	3/4	5.83	10%	19000	1.155	249.91	193.65	0.0000	0.72	100%
		C	3/4	5.83	10%	19000	1.155	266.15	206.73	0.0000	-8.98	100%
100	EHS	A	9/16	3.50	10%	21000	0.671	223.95	201.41	0.0000	-4.96	100%
		B	9/16	3.50	10%	21000	0.671	214.45	193.65	0.0000	0.72	100%
		C	9/16	3.50	10%	21000	0.671	230.53	206.73	0.0000	-8.98	100%
50	EHS	A	9/16	3.50	10%	21000	0.671	123.30	114.04	0.0000	-3.60	100%
		B	9/16	3.50	10%	21000	0.671	123.03	115.63	0.0000	0.50	100%
		C	9/16	3.50	10%	21000	0.671	124.42	114.41	0.0000	-5.40	100%

Guy Data(cont'd)

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
350	Torque Arm	12.00	49.0000	Bat Ear	A36 (36 ksi)	Double Angle	2L3x2 1/2x1/4
300	Torque Arm	12.00	49.0000	Bat Ear	A36 (36 ksi)	Double Angle	2L3x2 1/2x1/4
225	Torque Arm	12.00	49.0000	Bat Ear	A36 (36 ksi)	Double Angle	2L3x2 1/2x1/4
162.5	Corner						
100	Torque Arm	12.00	49.0000	Bat Ear	A36 (36 ksi)	Double Angle	2L3x2 1/2x1/4
50	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
350.00	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	
300.00	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	
225.00	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	
162.50	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	
100.00	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	
50.00	A572-50 (50 ksi)	Solid Round				A36 (36 ksi)	Channel	

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
350	0.68	0.67	0.69		17.81 7.3 sec/pulse	17.33 7.2 sec/pulse	18.44 7.4 sec/pulse	
300	0.60	0.58	0.60		13.69 6.4 sec/pulse	13.09 6.2 sec/pulse	14.07 6.5 sec/pulse	
225	0.37	0.36	0.37		9.88 5.4 sec/pulse	9.37 5.3 sec/pulse	10.20 5.5 sec/pulse	
162.5	0.30	0.29	0.31		6.57 4.4 sec/pulse	6.10 4.3 sec/pulse	6.91 4.5 sec/pulse	
100	0.15	0.14	0.15		4.76 3.8 sec/pulse	4.37 3.6 sec/pulse	5.05 3.9 sec/pulse	
50	0.08	0.08	0.08		1.45	1.45	1.48	

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
					2.1 sec/pulse	2.1 sec/pulse	2.1 sec/pulse	

Guy Data (cont'd)

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
350	No	No	1	1	1	1	1	1
300	No	No	1	1	1	1	1	1
225	No	No	1	1	1	1	1	1
162.5	No	No			1	1	1	1
100	No	No	1	1	1	1	1	1
50	No	No			1	1	1	1

Guy Data (cont'd)

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
350	0.8750 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
300	0.8750 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
225	0.8750 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
162.5	0.8750 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
100	0.8750 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75
50	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
350	A	172.10	37	28	0.5000
	B	175.91	37	28	0.5000
	C	168.90	37	28	0.5000
300	A	147.30	35	27	0.5000
	B	150.62	36	27	0.5000
	C	144.97	35	26	0.5000
225	A	109.80	33	24	0.5000
	B	113.12	33	25	0.5000
	C	107.47	32	24	0.5000

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
162.5	A	78.77	30	22	0.5000
	B	81.61	30	22	0.5000
	C	76.76	29	22	0.5000
100	A	47.52	26	19	0.5000
	B	50.36	26	20	0.5000
	C	45.51	25	19	0.5000
50	A	23.20	23	17	0.5000
	B	25.25	23	17	0.5000
	C	22.30	23	17	0.5000

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top Bottom K	F_x K	F_y K	F_z K	M_x kip-ft	M_y kip-ft	M_z kip-ft
350	A	55.5848	8.53 7.97	-0.11	7.15	-4.66	-24.76	28.35	-42.88
	A	55.5848	8.53 7.97	0.11	7.15	-4.66	-24.76	-28.35	42.88
	B	54.9653	8.52 7.97	4.15	7.09	2.26	49.10	28.78	0.00
	B	54.9653	8.52 7.97	4.04	7.09	2.47	-24.55	-28.78	-42.52
	C	55.5941	8.54 7.97	-3.98	7.16	2.43	-24.80	28.35	42.95
	C	55.5941	8.54 7.97	-4.09	7.16	2.23	49.59	-28.35	0.00
			Sum:	**0.12**	42.78	**0.07**	**-0.17**	0.00	**0.43**
300	A	54.0597	8.45 7.97	-0.13	6.95	-4.82	-24.06	29.34	-41.67
	A	54.0597	8.45 7.97	0.13	6.95	-4.82	-24.06	-29.34	41.67
	B	54.1282	8.44 7.97	4.23	6.94	2.29	48.08	29.29	0.00
	B	54.1282	8.44 7.97	4.09	6.94	2.52	-24.04	-29.29	-41.64
	C	54.1506	8.46 7.97	-4.10	6.96	2.51	-24.11	29.29	41.76
	C	54.1506	8.46 7.97	-4.23	6.96	2.29	48.22	-29.29	0.00
			Sum:	**-0.00**	41.69	**-0.02**	**0.03**	0.00	**0.12**
225	A	46.1415	6.10 5.83	-0.11	4.48	-4.13	-15.53	25.16	-26.90
	A	46.1415	6.10 5.83	0.11	4.48	-4.13	-15.53	-25.16	26.90
	B	46.0057	6.09 5.83	3.64	4.47	1.97	30.94	25.21	0.00
	B	46.0057	6.09 5.83	3.52	4.47	2.17	-15.47	-25.21	-26.80
	C	46.3767	6.10 5.83	-3.51	4.51	2.15	-15.61	25.06	27.03
	C	46.3767	6.10 5.83	-3.62	4.51	1.96	31.21	-25.06	0.00
			Sum:	**0.04**	26.91	**-0.01**	**0.02**	0.00	**0.24**
162.5	A	40.1486	6.02 5.83	0.00	3.97	-4.53	-11.46	0.00	0.00

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
	B	40.3002	6.02 5.83	3.91	3.98	2.26	5.74	0.00	-9.94
	C	40.0717	6.03 5.83	-3.93	3.97	2.27	5.73	-0.00	9.93
			Sum:	-0.02	11.92	-0.00	0.01	0.00	-0.01
100	A	27.9237	3.57 3.50	-0.09	1.73	-3.12	-5.99	19.06	-10.38
	A	27.9237	3.57 3.50	0.09	1.73	-3.12	-5.99	-19.06	10.38
	B	27.5536	3.57 3.50	2.76	1.71	1.48	11.82	19.12	0.00
	B	27.5536	3.57 3.50	2.66	1.71	1.65	-5.91	-19.12	-10.24
	C	28.1874	3.57 3.50	-2.65	1.75	1.64	-6.05	19.01	10.49
	C	28.1874	3.57 3.50	-2.74	1.75	1.48	12.11	-19.01	0.00
			Sum:	0.03	10.37	0.00	-0.02	0.00	0.25
50	A	25.7442	3.54 3.50	0.00	1.57	-3.17	-4.53	0.00	0.00
	B	23.7039	3.53 3.50	2.79	1.45	1.61	2.10	0.00	-3.64
	C	26.4162	3.54 3.50	-2.73	1.61	1.58	2.32	-0.00	4.02
			Sum:	0.06	4.63	0.02	-0.11	0.00	0.38

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
350	A	55.5848	11.72 10.86	-0.16	9.83	-6.37	-34.07	38.79	-59.01
	A	55.5848	11.72 10.86	0.16	9.83	-6.37	-34.07	-38.79	59.01
	B	54.9653	11.71 10.86	5.68	9.75	3.10	67.57	39.38	0.00
	B	54.9653	11.71 10.86	5.52	9.75	3.37	-33.79	-39.38	-58.52
	C	55.5941	11.74 10.86	-5.45	9.85	3.32	-34.14	38.81	59.13
	C	55.5941	11.74 10.86	-5.60	9.85	3.06	68.27	-38.81	0.00
			Sum:	0.16	58.89	0.10	-0.21	0.00	0.61
300	A	54.0597	11.59 10.85	-0.18	9.54	-6.58	-33.04	40.09	-57.23
	A	54.0597	11.59 10.85	0.18	9.54	-6.58	-33.04	-40.09	57.23
	B	54.1282	11.57 10.85	5.77	9.53	3.12	66.00	39.99	0.00
	B	54.1282	11.57 10.85	5.59	9.53	3.44	-33.00	-39.99	-57.16

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
	C	54.1506	11.60 10.85	-5.60	9.56	3.44	-33.12	40.02	57.37
	C	54.1506	11.60 10.85	-5.78	9.56	3.13	66.25	-40.02	0.00
			Sum:	**-0.01**	57.25	**-0.03**	**0.04**	0.00	**0.21**
225	A	46.1415	8.48 8.04	-0.15	6.26	-5.72	-21.68	34.83	-37.55
	A	46.1415	8.48 8.04	0.15	6.26	-5.72	-21.68	-34.83	37.55
	B	46.0057	8.46 8.03	5.03	6.23	2.72	43.15	34.88	0.00
	B	46.0057	8.46 8.03	4.88	6.23	3.00	-21.58	-34.88	-37.37
	C	46.3767	8.49 8.04	-4.86	6.29	2.98	-21.80	34.70	37.76
	C	46.3767	8.49 8.04	-5.01	6.29	2.72	43.60	-34.70	0.00
			Sum:	**0.04**	37.56	**-0.01**	**0.01**	0.00	**0.38**
162.5	A	40.1486	8.34 8.02	0.00	5.52	-6.25	-15.94	0.00	0.00
	B	40.3002	8.32 8.01	5.39	5.52	3.11	7.97	0.00	-13.80
	C	40.0717	8.36 8.03	-5.43	5.53	3.13	7.98	-0.00	13.82
			Sum:	**-0.04**	16.57	**-0.01**	**0.00**	0.00	**0.02**
100	A	27.9237	5.14 5.00	-0.14	2.52	-4.48	-8.74	27.33	-15.13
	A	27.9237	5.14 5.00	0.14	2.52	-4.48	-8.74	-27.33	15.13
	B	27.5536	5.12 4.99	3.95	2.48	2.12	17.17	27.35	0.00
	B	27.5536	5.12 4.99	3.81	2.48	2.36	-8.59	-27.35	-14.87
	C	28.1874	5.15 5.01	-3.81	2.55	2.35	-8.84	27.31	15.31
	C	28.1874	5.15 5.01	-3.94	2.55	2.12	17.68	-27.31	0.00
			Sum:	**0.00**	15.11	-0.00	**-0.04**	0.00	**0.44**
50	A	25.7442	4.96 4.89	0.00	2.22	-4.43	-6.40	0.00	0.00
	B	23.7039	4.95 4.89	3.90	2.06	2.25	2.97	0.00	-5.15
	C	26.4162	4.96 4.89	-3.82	2.27	2.20	3.28	-0.00	5.68
			Sum:	**0.09**	6.55	**0.02**	**-0.15**	0.00	**0.53**

Guy-Mast Forces (Excluding Wind) - Service

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top Bottom K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
350	A	55.5848	8.53	-0.11	7.15	-4.66	-24.76	28.35	-42.88

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top / Bottom / K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
			7.97						
	A	55.5848	8.53	0.11	7.15	-4.66	-24.76	-28.35	42.88
			7.97						
	B	54.9653	8.52	4.15	7.09	2.26	49.10	28.78	0.00
			7.97						
	B	54.9653	8.52	4.04	7.09	2.47	-24.55	-28.78	-42.52
			7.97						
	C	55.5941	8.54	-3.98	7.16	2.43	-24.80	28.35	42.95
			7.97						
	C	55.5941	8.54	-4.09	7.16	2.23	49.59	-28.35	0.00
			7.97						
			Sum:	**0.12**	42.78	**0.07**	**-0.17**	0.00	**0.43**
300	A	54.0597	8.45	-0.13	6.95	-4.82	-24.06	29.34	-41.67
			7.97						
	A	54.0597	8.45	0.13	6.95	-4.82	-24.06	-29.34	41.67
			7.97						
	B	54.1282	8.44	4.23	6.94	2.29	48.08	29.29	0.00
			7.97						
	B	54.1282	8.44	4.09	6.94	2.52	-24.04	-29.29	-41.64
			7.97						
	C	54.1506	8.46	-4.10	6.96	2.51	-24.11	29.29	41.76
			7.97						
	C	54.1506	8.46	-4.23	6.96	2.29	48.22	-29.29	0.00
			7.97						
			Sum:	**-0.00**	41.69	**-0.02**	**0.03**	0.00	**0.12**
225	A	46.1415	6.10	-0.11	4.48	-4.13	-15.53	25.16	-26.90
			5.83						
	A	46.1415	6.10	0.11	4.48	-4.13	-15.53	-25.16	26.90
			5.83						
	B	46.0057	6.09	3.64	4.47	1.97	30.94	25.21	0.00
			5.83						
	B	46.0057	6.09	3.52	4.47	2.17	-15.47	-25.21	-26.80
			5.83						
	C	46.3767	6.10	-3.51	4.51	2.15	-15.61	25.06	27.03
			5.83						
	C	46.3767	6.10	-3.62	4.51	1.96	31.21	-25.06	0.00
			5.83						
			Sum:	**0.04**	26.91	**-0.01**	**0.02**	0.00	**0.24**
162.5	A	40.1486	6.02	0.00	3.97	-4.53	-11.46	0.00	0.00
			5.83						
	B	40.3002	6.02	3.91	3.98	2.26	5.74	0.00	-9.94
			5.83						
	C	40.0717	6.03	-3.93	3.97	2.27	5.73	-0.00	9.93
			5.83						
			Sum:	**-0.02**	11.92	**-0.00**	**0.01**	0.00	**-0.01**
100	A	27.9237	3.57	-0.09	1.73	-3.12	-5.99	19.06	-10.38
			3.50						
	A	27.9237	3.57	0.09	1.73	-3.12	-5.99	-19.06	10.38
			3.50						
	B	27.5536	3.57	2.76	1.71	1.48	11.82	19.12	0.00
			3.50						
	B	27.5536	3.57	2.66	1.71	1.65	-5.91	-19.12	-10.24
			3.50						
	C	28.1874	3.57	-2.65	1.75	1.64	-6.05	19.01	10.49
			3.50						
	C	28.1874	3.57	-2.74	1.75	1.48	12.11	-19.01	0.00
			3.50						
			Sum:	**0.03**	10.37	**0.00**	**-0.02**	0.00	**0.25**
50	A	25.7442	3.54	0.00	1.57	-3.17	-4.53	0.00	0.00

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top / Bottom / K	F_x	F_y	F_z	M_x	M_y	M_z
ft		°		K	K	K	kip-ft	kip-ft	kip-ft
			3.50						
	B	23.7039	3.53	2.79	1.45	1.61	2.10	0.00	-3.64
			3.50						
	C	26.4162	3.54	-2.73	1.61	1.58	2.32	-0.00	4.02
			3.50						
			Sum:	0.06	4.63	0.02	-0.11	0.00	0.38

Guy-Tensioning Information

Guy Elevation		H	V	Temperature At Time Of Tensioning: 0 F Initial Tension	0 F Intercept	20 F Initial Tension	20 F Intercept	40 F Initial Tension	40 F Intercept	60 F Initial Tension	60 F Intercept	80 F Initial Tension	80 F Intercept	100 F Initial Tension	100 F Intercept	120 F Initial Tension	120 F Intercept
ft		ft	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft
350	A	243.76	355.80	8.905	15.99	8.589	16.56	8.277	17.17	7.970	17.81	7.669	18.49	7.374	19.20	7.085	19.96
	B	244.12	348.19	8.934	15.51	8.608	16.08	8.286	16.68	7.970	17.33	7.660	18.01	7.356	18.73	7.059	19.49
	C	248.06	362.20	8.900	16.57	8.585	17.16	8.275	17.78	7.970	18.44	7.671	19.14	7.377	19.87	7.091	20.65
300	A	221.41	305.41	9.004	12.15	8.654	12.63	8.310	13.14	7.970	13.69	7.636	14.27	7.309	14.89	6.989	15.55
	B	216.05	298.77	9.006	11.61	8.656	12.07	8.311	12.56	7.970	13.09	7.635	13.65	7.307	14.24	6.985	14.88
	C	224.04	310.07	8.997	12.50	8.650	12.99	8.307	13.52	7.970	14.07	7.639	14.67	7.314	15.30	6.997	15.97
225	A	221.41	230.41	6.891	8.39	6.531	8.84	6.177	9.34	5.830	9.88	5.492	10.48	5.163	11.13	4.846	11.84
	B	216.05	223.77	6.902	7.94	6.538	8.37	6.181	8.85	5.830	9.37	5.488	9.94	5.155	10.57	4.834	11.26
	C	224.04	235.07	6.878	8.67	6.522	9.14	6.173	9.65	5.830	10.20	5.496	10.81	5.171	11.47	4.858	12.19
162.5	A	198.52	167.46	7.154	5.37	6.705	5.72	6.263	6.12	5.830	6.57	5.408	7.07	5.000	7.64	4.609	8.28
	B	190.76	161.78	7.157	4.98	6.707	5.31	6.264	5.68	5.830	6.10	5.406	6.57	4.995	7.10	4.600	7.70
	C	203.84	171.48	7.150	5.65	6.702	6.02	6.261	6.44	5.830	6.91	5.410	7.43	5.005	8.03	4.616	8.69
100	A	198.04	104.96	4.641	3.60	4.252	3.93	3.871	4.31	3.500	4.76	3.143	5.30	2.804	5.94	2.488	6.68
	B	190.28	99.28	4.656	3.29	4.263	3.59	3.877	3.95	3.500	4.37	3.137	4.87	2.791	5.47	2.469	6.18
	C	203.35	108.98	4.630	3.82	4.245	4.17	3.867	4.57	3.500	5.05	3.147	5.61	2.812	6.27	2.501	7.04
50	A	111.15	53.60	4.758	1.07	4.335	1.17	3.916	1.30	3.500	1.45	3.091	1.64	2.690	1.89	2.305	2.20
	B	112.74	49.50	4.799	1.05	4.363	1.16	3.929	1.29	3.500	1.45	3.078	1.64	2.665	1.90	2.270	2.22
	C	111.52	55.40	4.743	1.09	4.326	1.20	3.911	1.32	3.500	1.48	3.095	1.67	2.700	1.91	2.319	2.23

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
7/8	A	No	Ar (Leg)	40.00 - 3.00	0.0000	0.4	1	1	1.1100	1.1100		0.54
7/8	A	No	Ar (Leg)	62.00 - 3.00	0.0000	0.39	1	1	1.1100	1.1100		0.54
1/2	B	No	Ar (Leg)	88.00 - 3.00	0.0000	0	4	4	0.5800	0.5800		0.25
1/2	B	No	Ar (Leg)	125.00 - 3.00	0.0000	0	1	1	0.5800	0.5800		0.25
7/8	C	No	Ar (Leg)	140.00 - 3.00	0.0000	0	1	1	1.1100	1.1100		0.54
1/2	B	No	Ar (Leg)	148.00 - 3.00	0.0000	0	1	1	0.5800	0.5800		0.25
7/8	A	No	Ar (Leg)	180.00 - 3.00	0.0000	0	1	1	1.1100	1.1100		0.54
7/8	C	No	Ar (Leg)	200.00 - 3.00	0.0000	0	1	1	1.1100	1.1100		0.54
1 5/8	A	No	Ar (Leg)	325.00 - 3.00	0.0000	0	1	1	1.9800	1.9800		1.04
7/8	B	No	Ar (Leg)	350.00 - 3.00	0.0000	0	2	2	1.1100	1.1100		0.54
7/8	B	No	Ar (Leg)	355.00 - 3.00	0.0000	0	1	1	1.1100	1.1100		0.54
7/8	C	No	Ar (Leg)	365.00 - 3.00	0.0000	0	1	1	1.1100	1.1100		0.54
3" dia Flex Conuit (AT&T)	A	Yes	Ar (CfAe)	243.00 - 3.00	0.0000	-0.4	1	1	3.0000	3.0000		5.00
1 5/8 (AT&T)	C	Yes	Ar (CaAa)	243.00 - 3.00	2.0000	0.5	12	2	1.9800	1.9800		1.04

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8 (Verizon)	C	Yes	Ar (CfAe)	305.00 - 3.00	1.0000	-0.3	12	6	1.9800	1.9800		1.04
HYBRIFLEX 1-5/8" (Verizon - Proposed)	B	Yes	Ar (CfAe)	305.00 - 3.00	1.0000	0.46	2	2	1.9800	1.9800		1.90

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	368.75-362.50	A	0.231	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.231	0.000	0.000	0.000	0.00
T2	362.50-356.25	A	0.578	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.578	0.000	0.000	0.000	0.00
T3	356.25-350.00	A	0.578	0.000	0.000	0.000	0.00
		B	0.463	0.000	0.000	0.000	0.00
		C	1.041	0.000	0.000	0.000	0.00
T4	350.00-343.75	A	0.578	0.000	0.000	0.000	0.00
		B	1.734	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T5	343.75-337.50	A	0.578	0.000	0.000	0.000	0.00
		B	1.734	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T6	337.50-331.25	A	0.578	0.000	0.000	0.000	0.00
		B	1.734	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T7	331.25-325.00	A	0.578	0.000	0.000	0.000	0.00
		B	1.734	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T8	325.00-318.75	A	1.609	0.000	0.000	0.000	0.01
		B	2.766	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T9	318.75-312.50	A	1.609	0.000	0.000	0.000	0.01
		B	2.766	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T10	312.50-306.25	A	1.609	0.000	0.000	0.000	0.01
		B	2.766	0.000	0.000	0.000	0.01
		C	2.313	0.000	0.000	0.000	0.00
T11	306.25-300.00	A	1.609	0.000	0.000	0.000	0.01
		B	4.416	0.000	0.000	0.000	0.03
		C	7.262	0.000	0.000	0.000	0.07
T12	300.00-293.75	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T13	293.75-287.50	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T14	287.50-281.25	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T15	281.25-275.00	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08

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
T16	275.00-268.75	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T17	268.75-262.50	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T18	262.50-256.25	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T19	256.25-250.00	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T20	250.00-243.75	A	1.609	0.000	0.000	0.000	0.01
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	0.000	0.000	0.08
T21	243.75-237.50	A	2.984	0.000	0.000	0.000	0.03
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	12.195	0.000	0.15
T22	237.50-231.25	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T23	231.25-225.00	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T24	225.00-218.75	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T25	218.75-212.50	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T26	212.50-206.25	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T27	206.25-200.00	A	3.172	0.000	0.000	0.000	0.04
		B	4.828	0.000	0.000	0.000	0.03
		C	8.500	0.000	13.858	0.000	0.16
T28	200.00-175.00	A	15.463	0.000	0.000	0.000	0.15
		B	19.775	0.000	0.000	0.000	0.14
		C	36.313	0.000	55.430	0.000	0.65
T29	175.00-168.75	A	4.328	0.000	0.000	0.000	0.04
		B	5.406	0.000	0.000	0.000	0.03
		C	9.078	0.000	13.858	0.000	0.16
T30	168.75-162.50	A	4.328	0.000	0.000	0.000	0.04
		B	5.406	0.000	0.000	0.000	0.03
		C	9.078	0.000	13.858	0.000	0.16
T31	162.50-156.25	A	4.328	0.000	0.000	0.000	0.04
		B	5.406	0.000	0.000	0.000	0.03
		C	9.078	0.000	13.858	0.000	0.16
T32	156.25-150.00	A	4.328	0.000	0.000	0.000	0.04
		B	5.406	0.000	0.000	0.000	0.03
		C	9.078	0.000	13.858	0.000	0.16
T33	150.00-125.00	A	18.700	0.000	0.000	0.000	0.16
		B	22.737	0.000	0.000	0.000	0.14
		C	38.812	0.000	55.430	0.000	0.66
T34	125.00-100.00	A	19.625	0.000	0.000	0.000	0.16
		B	24.042	0.000	0.000	0.000	0.15
		C	41.042	0.000	55.430	0.000	0.66
T35	100.00-93.75	A	4.906	0.000	0.000	0.000	0.04
		B	6.010	0.000	0.000	0.000	0.04
		C	10.260	0.000	13.858	0.000	0.17
T36	93.75-87.50	A	4.906	0.000	0.000	0.000	0.04

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
		B	6.107	0.000	0.000	0.000	0.04
		C	10.357	0.000	13.858	0.000	0.17
T37	87.50-81.25	A	4.906	0.000	0.000	0.000	0.04
		B	7.219	0.000	0.000	0.000	0.04
		C	11.469	0.000	13.858	0.000	0.17
T38	81.25-75.00	A	4.906	0.000	0.000	0.000	0.04
		B	7.219	0.000	0.000	0.000	0.04
		C	11.469	0.000	13.858	0.000	0.17
T39	75.00-50.00	A	20.735	0.000	0.000	0.000	0.17
		B	29.985	0.000	0.000	0.000	0.17
		C	45.875	0.000	55.430	0.000	0.66
T40	50.00-25.00	A	23.325	0.000	0.000	0.000	0.19
		B	32.575	0.000	0.000	0.000	0.17
		C	45.875	0.000	55.430	0.000	0.66
T41	25.00-0.00	A	21.340	0.000	0.000	0.000	0.17
		B	29.480	0.000	0.000	0.000	0.15
		C	40.370	0.000	48.779	0.000	0.58

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	368.75-362.50	A	0.500	0.440	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.440	0.000	0.000	0.000	0.00
T2	362.50-356.25	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		1.099	0.000	0.000	0.000	0.01
T3	356.25-350.00	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		0.879	0.000	0.000	0.000	0.01
		C		1.978	0.000	0.000	0.000	0.01
T4	350.00-343.75	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		3.297	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T5	343.75-337.50	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		3.297	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T6	337.50-331.25	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		3.297	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T7	331.25-325.00	A	0.500	1.099	0.000	0.000	0.000	0.00
		B		3.297	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T8	325.00-318.75	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		4.849	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T9	318.75-312.50	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		4.849	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T10	312.50-306.25	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		4.849	0.000	0.000	0.000	0.03
		C		4.396	0.000	0.000	0.000	0.01
T11	306.25-300.00	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.332	0.000	0.000	0.000	0.06
		C		11.846	0.000	0.000	0.000	0.16
T12	300.00-293.75	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07

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		13.708	0.000	0.000	0.000	0.20
T13	293.75-287.50	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T14	287.50-281.25	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T15	281.25-275.00	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T16	275.00-268.75	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T17	268.75-262.50	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T18	262.50-256.25	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T19	256.25-250.00	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T20	250.00-243.75	A	0.500	2.651	0.000	0.000	0.000	0.02
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	0.000	0.000	0.20
T21	243.75-237.50	A	0.500	4.484	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	12.745	0.000	0.37
T22	237.50-231.25	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T23	231.25-225.00	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T24	225.00-218.75	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T25	218.75-212.50	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T26	212.50-206.25	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T27	206.25-200.00	A	0.500	4.734	0.000	0.000	0.000	0.06
		B		7.953	0.000	0.000	0.000	0.07
		C		13.708	0.000	14.483	0.000	0.39
T28	200.00-175.00	A	0.500	24.212	0.000	0.000	0.000	0.25
		B		32.692	0.000	0.000	0.000	0.29
		C		59.229	0.000	57.930	0.000	1.61
T29	175.00-168.75	A	0.500	6.932	0.000	0.000	0.000	0.07
		B		9.052	0.000	0.000	0.000	0.07
		C		14.807	0.000	14.483	0.000	0.40
T30	168.75-162.50	A	0.500	6.932	0.000	0.000	0.000	0.07
		B		9.052	0.000	0.000	0.000	0.07
		C		14.807	0.000	14.483	0.000	0.40
T31	162.50-156.25	A	0.500	6.932	0.000	0.000	0.000	0.07
		B		9.052	0.000	0.000	0.000	0.07
		C		14.807	0.000	14.483	0.000	0.40
T32	156.25-150.00	A	0.500	6.932	0.000	0.000	0.000	0.07
		B		9.052	0.000	0.000	0.000	0.07
		C		14.807	0.000	14.483	0.000	0.40

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
T33	150.00-125.00	A	0.500	30.367	0.000	0.000	0.000	0.28
		B		39.237	0.000	0.000	0.000	0.31
		C		64.895	0.000	57.930	0.000	1.63
T34	125.00-100.00	A	0.500	32.125	0.000	0.000	0.000	0.28
		B		42.792	0.000	0.000	0.000	0.33
		C		70.208	0.000	57.930	0.000	1.65
T35	100.00-93.75	A	0.500	8.031	0.000	0.000	0.000	0.07
		B		10.698	0.000	0.000	0.000	0.08
		C		17.552	0.000	14.483	0.000	0.41
T36	93.75-87.50	A	0.500	8.031	0.000	0.000	0.000	0.07
		B		10.764	0.145	0.000	0.000	0.08
		C		17.618	0.145	14.483	0.000	0.41
T37	87.50-81.25	A	0.500	8.031	0.000	0.000	0.000	0.07
		B		11.521	1.813	0.000	0.000	0.10
		C		18.375	1.813	14.483	0.000	0.41
T38	81.25-75.00	A	0.500	8.031	0.000	0.000	0.000	0.07
		B		11.521	1.813	0.000	0.000	0.10
		C		18.375	1.813	14.483	0.000	0.41
T39	75.00-50.00	A	0.500	34.235	0.000	0.000	0.000	0.30
		B		48.193	7.250	0.000	0.000	0.42
		C		73.500	7.250	57.930	0.000	1.65
T40	50.00-25.00	A	0.500	39.158	0.000	0.000	0.000	0.34
		B		53.117	7.250	0.000	0.000	0.42
		C		73.500	7.250	57.930	0.000	1.65
T41	25.00-0.00	A	0.500	36.007	0.000	0.000	0.000	0.31
		B		48.290	6.380	0.000	0.000	0.37
		C		64.680	6.380	50.979	0.000	1.45

Feed Line Shielding

Section	Elevation ft	Face	A_R ft^2	A_R Ice ft^2	A_F ft^2	A_F Ice ft^2
T1	368.75-362.50	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T2	362.50-356.25	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T3	356.25-350.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T4	350.00-343.75	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T5	343.75-337.50	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T6	337.50-331.25	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T7	331.25-325.00	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T8	325.00-318.75	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000

Section	Elevation ft	Face	A_R ft^2	A_R Ice ft^2	A_F ft^2	A_F Ice ft^2
T9	318.75-312.50	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T10	312.50-306.25	A	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000
T11	306.25-300.00	A	0.000	0.000	0.000	0.000
		B	0.053	0.219	0.055	0.083
		C	0.158	0.656	0.165	0.248
T12	300.00-293.75	A	0.000	0.000	0.000	0.000
		B	0.000	0.174	0.333	0.501
		C	0.000	0.522	0.999	1.503
T13	293.75-287.50	A	0.000	0.000	0.000	0.000
		B	0.066	0.273	0.069	0.103
		C	0.198	0.820	0.206	0.310
T14	287.50-281.25	A	0.000	0.000	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.302	0.976	0.000	0.000
T15	281.25-275.00	A	0.000	0.000	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.302	0.976	0.000	0.000
T16	275.00-268.75	A	0.000	0.000	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.302	0.976	0.000	0.000
T17	268.75-262.50	A	0.000	0.000	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.302	0.976	0.000	0.000
T18	262.50-256.25	A	0.000	0.000	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.302	0.976	0.000	0.000
T19	256.25-250.00	A	0.000	0.000	0.000	0.000
		B	0.112	0.342	0.000	0.000
		C	0.335	1.026	0.000	0.000
T20	250.00-243.75	A	0.000	0.000	0.000	0.000
		B	0.066	0.273	0.069	0.103
		C	0.198	0.820	0.206	0.310
T21	243.75-237.50	A	0.044	0.161	0.046	0.061
		B	0.066	0.273	0.069	0.103
		C	0.256	1.060	0.267	0.401
T22	237.50-231.25	A	0.050	0.183	0.052	0.069
		B	0.066	0.273	0.069	0.103
		C	0.264	1.093	0.275	0.414
T23	231.25-225.00	A	0.067	0.206	0.052	0.069
		B	0.088	0.306	0.069	0.103
		C	0.352	1.226	0.275	0.414
T24	225.00-218.75	A	0.000	0.117	0.219	0.292
		B	0.000	0.174	0.289	0.435
		C	0.000	0.696	1.155	1.739
T25	218.75-212.50	A	0.042	0.172	0.052	0.069
		B	0.055	0.257	0.069	0.103
		C	0.220	1.027	0.275	0.414
T26	212.50-206.25	A	0.076	0.218	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.403	1.302	0.000	0.000
T27	206.25-200.00	A	0.076	0.218	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.403	1.302	0.000	0.000
T28	200.00-175.00	A	0.443	1.169	0.000	0.000
		B	0.585	1.742	0.000	0.000
		C	2.341	6.968	0.000	0.000
T29	175.00-168.75	A	0.101	0.252	0.000	0.000

Section	Elevation ft	Face	A_R ft^2	A_R Ice ft^2	A_F ft^2	A_F Ice ft^2
		B	0.134	0.375	0.000	0.000
		C	0.535	1.500	0.000	0.000
T30	168.75-162.50	A	0.101	0.252	0.000	0.000
		B	0.134	0.375	0.000	0.000
		C	0.535	1.500	0.000	0.000
T31	162.50-156.25	A	0.042	0.172	0.052	0.069
		B	0.055	0.257	0.069	0.103
		C	0.220	1.027	0.275	0.414
T32	156.25-150.00	A	0.076	0.218	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.403	1.302	0.000	0.000
T33	150.00-125.00	A	0.305	0.874	0.000	0.000
		B	0.403	1.302	0.000	0.000
		C	1.611	5.207	0.000	0.000
T34	125.00-100.00	A	0.138	0.651	0.667	0.889
		B	0.183	0.970	0.880	1.325
		C	0.730	3.882	3.522	5.300
T35	100.00-93.75	A	0.000	0.117	0.219	0.292
		B	0.000	0.174	0.289	0.435
		C	0.000	0.696	1.155	1.739
T36	93.75-87.50	A	0.050	0.183	0.052	0.069
		B	0.066	0.273	0.069	0.103
		C	0.264	1.093	0.275	0.414
T37	87.50-81.25	A	0.076	0.218	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.403	1.302	0.000	0.000
T38	81.25-75.00	A	0.076	0.218	0.000	0.000
		B	0.101	0.325	0.000	0.000
		C	0.403	1.302	0.000	0.000
T39	75.00-50.00	A	0.305	0.874	0.000	0.000
		B	0.403	1.302	0.000	0.000
		C	1.611	5.207	0.000	0.000
T40	50.00-25.00	A	0.270	0.828	0.052	0.069
		B	0.357	1.233	0.069	0.103
		C	1.428	4.932	0.275	0.414
T41	25.00-0.00	A	0.268	0.769	0.000	0.000
		B	0.354	1.145	0.000	0.000
		C	1.418	4.582	0.000	0.000

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	368.75-362.50	-0.3214	0.1856	-0.4376	0.2526
T2	362.50-356.25	-0.7171	0.4140	-0.9881	0.5705
T3	356.25-350.00	-0.1381	0.7177	-0.1877	0.9755
T4	350.00-343.75	1.2209	1.4097	1.6198	1.8704
T5	343.75-337.50	1.7931	2.0705	2.0849	2.4075
T6	337.50-331.25	1.8906	2.1831	2.1528	2.4859
T7	331.25-325.00	1.8906	2.1831	2.1528	2.4859
T8	325.00-318.75	1.6014	0.1999	1.8853	0.6397
T9	318.75-312.50	1.6025	0.2000	1.8868	0.6402
T10	312.50-306.25	1.6025	0.2000	1.8868	0.6402
T11	306.25-300.00	5.7291	4.3324	5.6051	4.3169
T12	300.00-293.75	4.7508	3.6625	5.0074	3.9160
T13	293.75-287.50	6.5117	5.1046	6.3282	5.0254

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
T14	287.50-281.25	6.9094	5.4303	6.5984	5.2524
T15	281.25-275.00	6.9094	5.4303	6.5984	5.2524
T16	275.00-268.75	6.9094	5.4303	6.5984	5.2524
T17	268.75-262.50	6.9094	5.4303	6.5984	5.2524
T18	262.50-256.25	6.9094	5.4303	6.5984	5.2524
T19	256.25-250.00	6.7772	5.3220	6.5096	5.1778
T20	250.00-243.75	6.5117	5.1046	6.3282	5.0254
T21	243.75-237.50	-2.5036	6.6550	-1.2261	6.3443
T22	237.50-231.25	-2.9319	6.7287	-1.6803	6.4236
T23	231.25-225.00	-2.9129	6.6367	-1.6794	6.3422
T24	225.00-218.75	-2.8288	6.1694	-1.6856	5.9167
T25	218.75-212.50	-2.9675	6.8351	-1.6926	6.5100
T26	212.50-206.25	-2.9887	6.9363	-1.6937	6.5986
T27	206.25-200.00	-2.9887	6.9363	-1.6937	6.5986
T28	200.00-175.00	-3.0976	6.7003	-1.9506	6.2746
T29	175.00-168.75	-3.0505	6.4458	-1.9112	5.9984
T30	168.75-162.50	-3.0511	6.4470	-1.9117	6.0001
T31	162.50-156.25	-3.0600	6.4868	-1.9128	6.0344
T32	156.25-150.00	-3.0812	6.5808	-1.9154	6.1151
T33	150.00-125.00	-3.0613	6.6098	-1.8410	6.1793
T34	125.00-100.00	-2.8583	6.0134	-1.6751	5.7037
T35	100.00-93.75	-2.8409	5.9327	-1.6743	5.6331
T36	93.75-87.50	-2.9252	6.5044	-1.6365	6.1217
T37	87.50-81.25	-2.5242	6.6878	-1.1552	6.2243
T38	81.25-75.00	-2.5242	6.6878	-1.1552	6.2243
T39	75.00-50.00	-2.5092	6.6147	-1.1452	6.1213
T40	50.00-25.00	-2.4713	6.4280	-1.1231	5.8733
T41	25.00-0.00	-2.4129	6.2627	-1.0876	5.6716

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Search Antenna	C	From Leg	1.00 0.00 0.00	0.0000	370.00	No Ice 1/2" Ice	1.28 3.73	3.73 4.39	0.30 0.45
10'6"x4" Pipe Mount	A	From Leg	0.50 0.00 0.00	0.0000	355.00	No Ice 1/2" Ice	4.72 5.62	4.72 5.62	0.11 0.15
Rohn 6' Side-Arm(1)	B	From Leg	3.00 0.00 0.00	0.0000	355.00	No Ice 1/2" Ice	10.60 15.40	10.60 15.40	0.14 0.21
20' x 3" Dia Omni	C	From Leg	1.00 0.00 0.00	0.0000	350.00	No Ice 1/2" Ice	6.00 8.03	6.00 8.03	0.05 0.09
6'x4" Pipe Mount	C	From Leg	0.50 0.00 0.00	0.0000	350.00	No Ice 1/2" Ice	2.09 2.46	2.09 2.46	0.05 0.07
10' x 3" Dia Omni	B	From Leg	3.00 0.00 0.00	0.0000	325.00	No Ice 1/2" Ice	3.00 4.03	3.00 4.03	0.03 0.05

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
ROHN 3-ft Side Arm	B	From Leg	2.00 0.00 0.00	0.0000	325.00	No Ice 1/2" Ice	3.10 5.00	3.10 5.00	0.07 0.10
20' x 3" Dia Omni	C	From Leg	1.00 0.00 0.00	0.0000	250.00	No Ice 1/2" Ice	6.00 8.03	6.00 8.03	0.05 0.09
6'x4" Pipe Mount	C	From Leg	0.50 0.00 0.00	0.0000	250.00	No Ice 1/2" Ice	2.09 2.46	2.09 2.46	0.05 0.07
Yagi	A	From Leg	1.00 0.00 0.00	0.0000	200.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
(4) Yagi	C	From Leg	1.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
(2) 5'3"x4" Pipe Mount	C	From Leg	1.00 0.00 0.00	0.0000	180.00	No Ice 1/2" Ice	1.88 2.21	1.88 2.21	0.06 0.07
Yagi	B	From Leg	1.00 0.00 0.00	0.0000	148.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
Yagi	C	From Leg	1.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
Yagi	A	From Leg	1.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
X-Style	A	From Leg	1.00 0.00 0.00	0.0000	88.00	No Ice 1/2" Ice	1.50 1.50	2.00 2.00	0.02 0.03
(2) X-Style	B	From Leg	1.00 0.00 0.00	0.0000	88.00	No Ice 1/2" Ice	1.50 1.50	2.00 2.00	0.02 0.03
X-Style	A	From Leg	1.00 0.00 0.00	0.0000	88.00	No Ice 1/2" Ice	1.50 1.50	2.00 2.00	0.02 0.03
Yagi	C	From Leg	1.00 0.00 0.00	0.0000	62.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
Yagi	A	From Leg	1.00 0.00 0.00	0.0000	40.00	No Ice 1/2" Ice	5.00 6.50	5.00 6.50	0.04 0.06
(2) 7770.00 (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	242.50	No Ice 1/2" Ice	5.88 6.31	2.93 3.27	0.04 0.07
(2) 7770.00 (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	242.50	No Ice 1/2" Ice	5.88 6.31	2.93 3.27	0.04 0.07
(2) 7770.00 (AT&T)	C	From Leg	3.00 0.00 0.00	0.0000	242.50	No Ice 1/2" Ice	5.88 6.31	2.93 3.27	0.04 0.07
AM-X-CD-16-65-00T-RET(72") (AT&T)	A	From Leg	3.00 0.00 0.00	0.0000	242.50	No Ice 1/2" Ice	8.26 8.81	4.64 5.09	0.05 0.10
SBNH-1D6565C (AT&T)	B	From Leg	3.00 0.00 0.00	0.0000	242.50	No Ice 1/2" Ice	11.41 12.03	7.70 8.29	0.06 0.13

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
P65-17-XLH-RR	C	From Leg	3.00	0.0000	242.50	No Ice	11.47	6.80	0.06
(AT&T)			0.00			1/2" Ice	12.08	7.38	0.12
			0.00						
(2) LPG21401 TMA	A	From Leg	3.00	0.0000	242.50	No Ice	0.95	0.37	0.02
(AT&T)			0.00			1/2" Ice	1.09	0.48	0.02
			0.00						
(2) LPG21401 TMA	B	From Leg	3.00	0.0000	242.50	No Ice	0.95	0.37	0.02
(AT&T)			0.00			1/2" Ice	1.09	0.48	0.02
			0.00						
(2) LPG21401 TMA	C	From Leg	3.00	0.0000	242.50	No Ice	0.95	0.37	0.02
(AT&T)			0.00			1/2" Ice	1.09	0.48	0.02
			0.00						
(2) LGP21901 Diplexer	A	From Leg	3.00	0.0000	242.50	No Ice	0.23	0.12	0.01
(AT&T)			0.00			1/2" Ice	0.30	0.17	0.01
			0.00						
(2) LGP21901 Diplexer	B	From Leg	3.00	0.0000	242.50	No Ice	0.23	0.12	0.01
(AT&T)			0.00			1/2" Ice	0.30	0.17	0.01
			0.00						
(2) LGP21901 Diplexer	C	From Leg	3.00	0.0000	242.50	No Ice	0.23	0.12	0.01
(AT&T)			0.00			1/2" Ice	0.30	0.17	0.01
			0.00						
(2) RRUS-11	A	From Leg	3.00	0.0000	242.50	No Ice	2.99	1.25	0.05
(AT&T)			0.00			1/2" Ice	3.23	1.41	0.07
			0.00						
(2) RRUS-11	B	From Leg	3.00	0.0000	242.50	No Ice	2.99	1.25	0.05
(AT&T)			0.00			1/2" Ice	3.23	1.41	0.07
			0.00						
(2) RRUS-11	C	From Leg	3.00	0.0000	242.50	No Ice	2.99	1.25	0.05
(AT&T)			0.00			1/2" Ice	3.23	1.41	0.07
			0.00						
DC6-48-60-18-8F Surge	A	From Leg	3.00	0.0000	242.50	No Ice	2.23	2.23	0.02
Arrestor			0.00			1/2" Ice	2.45	2.45	0.04
(AT&T)			0.00						
Pirod 12' T-Frame Sector	A	From Leg	1.00	0.0000	242.50	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(AT&T)			0.00						
Pirod 12' T-Frame Sector	B	From Leg	1.00	0.0000	242.50	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(AT&T)			0.00						
Pirod 12' T-Frame Sector	C	From Leg	1.00	0.0000	242.50	No Ice	13.60	13.60	0.47
Mount (1)			0.00			1/2" Ice	18.40	18.40	0.60
(AT&T)			0.00						
LNX-6514DS-T4M	A	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			-6.00			1/2" Ice	8.96	5.86	0.09
			0.00						
HBXX-6517DS	A	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			-4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
LNX-6514DS-T4M	A	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			0.00			1/2" Ice	8.96	5.86	0.09
			0.00						
HBXX-6517DS	A	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
LNX-6514DS-T4M	B	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			-6.00			1/2" Ice	8.96	5.86	0.09
			0.00						

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
HBXX-6517DS	B	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			-4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
LNX-6514DS-T4M	B	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			0.00			1/2" Ice	8.96	5.86	0.09
			0.00						
HBXX-6517DS	B	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
LNX-6514DS-T4M	C	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			-6.00			1/2" Ice	8.96	5.86	0.09
			0.00						
HBXX-6517DS	C	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			-4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
LNX-6514DS-T4M	C	From Leg	3.00	0.0000	305.00	No Ice	8.41	5.41	0.04
(Verizon Proposed)			0.00			1/2" Ice	8.96	5.86	0.09
			0.00						
HBXX-6517DS	C	From Leg	3.00	0.0000	305.00	No Ice	8.74	5.24	0.05
(Verizon Proposed)			4.00			1/2" Ice	9.31	5.71	0.10
			0.00						
RRH2x60-AWS	A	From Leg	3.00	0.0000	305.00	No Ice	2.19	1.43	0.05
(Verizon Proposed)			4.00			1/2" Ice	2.40	1.61	0.07
			0.00						
RRH2x60-AWS	B	From Leg	3.00	0.0000	305.00	No Ice	2.19	1.43	0.05
(Verizon Proposed)			4.00			1/2" Ice	2.40	1.61	0.07
			0.00						
RRH2x60-AWS	C	From Leg	3.00	0.0000	305.00	No Ice	2.19	1.43	0.05
(Verizon Proposed)			4.00			1/2" Ice	2.40	1.61	0.07
			0.00						
RRH2x60-PCS	A	From Leg	3.00	0.0000	305.00	No Ice	2.58	2.03	0.06
(Verizon Proposed)			-4.00			1/2" Ice	2.80	2.24	0.08
			0.00						
RRH2x60-PCS	B	From Leg	3.00	0.0000	305.00	No Ice	2.58	2.03	0.06
(Verizon Proposed)			-4.00			1/2" Ice	2.80	2.24	0.08
			0.00						
RRH2x60-PCS	C	From Leg	3.00	0.0000	305.00	No Ice	2.58	2.03	0.06
(Verizon Proposed)			-4.00			1/2" Ice	2.80	2.24	0.08
			0.00						
DB-T1-6Z-8AB-0Z	A	From Leg	3.00	0.0000	305.00	No Ice	5.60	2.33	0.04
(Verizon Proposed)			0.00			1/2" Ice	5.92	2.56	0.08
			0.00						
DB-T1-6Z-8AB-0Z	B	From Leg	3.00	0.0000	305.00	No Ice	5.60	2.33	0.04
(Verizon Proposed)			0.00			1/2" Ice	5.92	2.56	0.08
			0.00						
(2) FD9R6004/2C-3L	A	From Leg	3.00	0.0000	305.00	No Ice	0.37	0.08	0.00
Diplexer			0.00			1/2" Ice	0.45	0.14	0.01
(Verizon Existing)			0.00						
(2) FD9R6004/2C-3L	B	From Leg	3.00	0.0000	305.00	No Ice	0.37	0.08	0.00
Diplexer			0.00			1/2" Ice	0.45	0.14	0.01
(Verizon Existing)			0.00						
(2) FD9R6004/2C-3L	C	From Leg	3.00	0.0000	305.00	No Ice	0.37	0.08	0.00
Diplexer			0.00			1/2" Ice	0.45	0.14	0.01
(Verizon Existing)			0.00						
Rohn 6' x 12' Boom Gate (1)	A	From Leg	1.00	0.0000	305.00	No Ice	16.60	16.60	0.56
(Verizon Existing)			0.00			1/2" Ice	19.80	19.80	0.70
			0.00						

Description	Face or Leg	Offset Type	Offsets: Horz Lateral (ft) Vert (ft) (ft)	Azimuth Adjustment (°)	Placement (ft)		C_AA_A Front (ft^2)	C_AA_A Side (ft^2)	Weight (K)
Rohn 6' x 12' Boom Gate (1) (Verizon Existing)	B	From Leg	1.00 0.00 0.00	0.0000	305.00	No Ice 1/2" Ice	16.60 19.80	16.60 19.80	0.56 0.70
Rohn 6' x 12' Boom Gate (1) (Verizon Existing)	C	From Leg	1.00 0.00 0.00	0.0000	305.00	No Ice 1/2" Ice	16.60 19.80	16.60 19.80	0.56 0.70

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral (ft) Vert (ft)	Azimuth Adjustment (°)	3 dB Beam Width (°)	Elevation (ft)	Outside Diameter (ft)		Aperture Area (ft^2)	Weight (K)
8' Dish	A	Paraboloid w/o Radome	From Leg	1.00 0.00 0.00	Worst		355.00	8.00	No Ice 1/2" Ice	50.27 51.32	0.10 0.26

Tower Pressures - No Ice

$G_H = 1.075$

Section Elevation (ft)	z (ft)	K_Z	q_z (psf)	A_G (ft^2)	Face	A_F (ft^2)	A_R (ft^2)	A_{leg} (ft^2)	Leg %	C_AA_A In Face (ft^2)	C_AA_A Out Face (ft^2)
T1	365.63	1.988	46	32.682	A	4.176	3.096	2.865	39.39	0.000	0.000
368.75-362.50					B	4.176	2.865		40.69	0.000	0.000
					C	4.176	3.096		39.39	0.000	0.000
T2	359.38	1.978	46	32.682	A	4.812	3.443	2.865	34.70	0.000	0.000
362.50-356.25					B	4.812	2.865		37.31	0.000	0.000
					C	4.812	3.443		34.70	0.000	0.000
T3	353.13	1.968	45	32.682	A	4.812	3.443	2.865	34.70	0.000	0.000
356.25-350.00					B	4.812	3.327		35.19	0.000	0.000
					C	4.812	3.905		32.86	0.000	0.000
T4	346.88	1.958	45	32.813	A	4.804	3.703	3.125	36.73	0.000	0.000
350.00-343.75					B	4.804	4.859		32.34	0.000	0.000
					C	4.804	5.438		30.51	0.000	0.000
T5	340.63	1.948	45	32.813	A	0.990	4.495	3.125	56.98	0.000	0.000
343.75-337.50					B	0.990	5.651		47.06	0.000	0.000
					C	0.990	6.230		43.29	0.000	0.000
T6	334.38	1.938	45	32.813	A	0.000	5.152	3.125	60.65	0.000	0.000
337.50-331.25					B	0.000	6.309		49.54	0.000	0.000
					C	0.000	6.887		45.38	0.000	0.000
T7	328.13	1.928	45	32.813	A	0.000	5.152	3.125	60.65	0.000	0.000
331.25-325.00					B	0.000	6.309		49.54	0.000	0.000
					C	0.000	6.887		45.38	0.000	0.000

tnxTower	Job: 15001.008 - Montville	Page: 36 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T8	321.88	1.917	44	32.943	A	0.000	6.600	3.385	51.29	0.000	0.000
325.00-318.75					B	0.000	7.757		43.65	0.000	0.000
					C	0.000	7.303		46.35	0.000	0.000
T9	315.63	1.906	44	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
318.75-312.50					B	0.000	7.752		43.67	0.000	0.000
					C	0.000	7.298		46.39	0.000	0.000
T10	309.38	1.895	44	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
312.50-306.25					B	0.000	7.752		43.67	0.000	0.000
					C	0.000	7.298		46.39	0.000	0.000
T11	303.13	1.884	44	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
306.25-300.00					B	0.930	8.695		35.17	0.000	0.000
					C	0.820	11.436		27.62	0.000	0.000
T12	296.88	1.873	43	32.943	A	4.770	4.995	3.385	34.67	0.000	0.000
300.00-293.75					B	4.438	8.214		26.76	0.000	0.000
					C	3.772	11.885		21.62	0.000	0.000
T13	290.63	1.862	43	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
293.75-287.50					B	0.916	9.094		33.82	0.000	0.000
					C	0.779	12.634		25.24	0.000	0.000
T14	284.38	1.85	43	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
287.50-281.25					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T15	278.13	1.839	42	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
281.25-275.00					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T16	271.88	1.827	42	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
275.00-268.75					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T17	265.63	1.815	42	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
268.75-262.50					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T18	259.38	1.802	42	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
262.50-256.25					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T19	253.13	1.79	41	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
256.25-250.00					B	0.000	9.702		34.89	0.000	0.000
					C	0.000	13.151		25.74	0.000	0.000
T20	246.88	1.777	41	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
250.00-243.75					B	0.916	9.094		33.82	0.000	0.000
					C	0.779	12.634		25.24	0.000	0.000
T21	240.63	1.764	41	32.943	A	0.939	7.272	3.385	41.23	0.000	0.000
243.75-237.50					B	0.916	9.094		33.82	0.000	0.000
					C	0.718	12.576		25.47	12.195	0.000
T22	234.38	1.751	40	32.943	A	0.933	7.454	3.385	40.37	0.000	0.000
237.50-231.25					B	0.916	9.094		33.82	0.000	0.000
					C	0.710	12.568		25.50	13.858	0.000
T23	228.13	1.737	40	32.943	A	0.933	7.752	3.385	38.98	0.000	0.000
231.25-225.00					B	0.916	9.387		32.86	0.000	0.000
					C	0.710	12.795		25.07	13.858	0.000
T24	221.88	1.724	40	32.813	A	3.928	6.297	3.125	30.56	0.000	0.000
225.00-218.75					B	3.858	7.953		26.46	0.000	0.000
					C	2.991	11.625		21.38	13.858	0.000
T25	215.63	1.71	40	32.813	A	0.938	7.047	3.125	39.14	0.000	0.000
218.75-212.50					B	0.921	8.690		32.51	0.000	0.000
					C	0.715	12.197		24.20	13.858	0.000
T26	209.38	1.695	39	32.813	A	0.000	7.670	3.125	40.74	0.000	0.000
212.50-206.25					B	0.000	9.302		33.60	0.000	0.000
					C	0.000	12.671		24.66	13.858	0.000
T27	203.13	1.681	39	32.813	A	0.000	7.670	3.125	40.74	0.000	0.000
206.25-200.00					B	0.000	9.302		33.60	0.000	0.000
					C	0.000	12.671		24.66	13.858	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T28	187.50	1.643	38	131.250	A	0.000	35.944	12.500	34.78	0.000	0.000
200.00-175.00					B	0.000	40.115		31.16	0.000	0.000
					C	0.000	54.896		22.77	55.430	0.000
T29	171.88	1.602	37	32.943	A	0.000	9.534	3.385	35.51	0.000	0.000
175.00-168.75					B	0.000	10.580		32.00	0.000	0.000
					C	0.000	13.850		24.44	13.858	0.000
T30	165.63	1.586	37	32.943	A	0.000	9.528	3.385	35.53	0.000	0.000
168.75-162.50					B	0.000	10.574		32.02	0.000	0.000
					C	0.000	13.845		24.45	13.858	0.000
T31	159.38	1.568	36	32.943	A	0.933	8.460	3.385	36.04	0.000	0.000
162.50-156.25					B	0.916	9.525		32.42	0.000	0.000
					C	0.710	13.032		24.64	13.858	0.000
T32	153.13	1.55	36	32.943	A	0.000	9.080	3.385	37.28	0.000	0.000
156.25-150.00					B	0.000	10.134		33.41	0.000	0.000
					C	0.000	13.504		25.07	13.858	0.000
T33	137.50	1.503	35	131.771	A	0.000	37.708	13.542	35.91	0.000	0.000
150.00-125.00					B	0.000	41.647		32.52	0.000	0.000
					C	0.000	56.514		23.96	55.430	0.000
T34	112.50	1.42	33	131.771	A	11.950	35.645	13.542	28.45	0.000	0.000
125.00-100.00					B	11.737	40.018		26.17	0.000	0.000
					C	9.096	56.470		20.65	55.430	0.000
T35	96.88	1.36	31	32.943	A	3.921	8.292	3.385	27.72	0.000	0.000
100.00-93.75					B	3.851	9.396		25.56	0.000	0.000
					C	2.984	13.646		20.36	13.858	0.000
T36	90.63	1.335	31	32.943	A	0.933	9.188	3.385	33.45	0.000	0.000
93.75-87.50					B	0.916	10.373		29.99	0.000	0.000
					C	0.710	14.425		22.37	13.858	0.000
T37	84.38	1.308	30	32.943	A	0.000	9.658	3.385	35.05	0.000	0.000
87.50-81.25					B	0.000	11.946		28.34	0.000	0.000
					C	0.000	15.894		21.30	13.858	0.000
T38	78.13	1.279	30	32.943	A	0.000	9.658	3.385	35.05	0.000	0.000
81.25-75.00					B	0.000	11.946		28.34	0.000	0.000
					C	0.000	15.894		21.30	13.858	0.000
T39	62.50	1.2	28	131.771	A	0.000	39.743	13.542	34.07	0.000	0.000
75.00-50.00					B	0.000	48.895		27.70	0.000	0.000
					C	0.000	63.577		21.30	55.430	0.000
T40	37.50	1.037	24	131.771	A	0.933	41.713	13.542	31.75	0.000	0.000
50.00-25.00					B	0.916	50.877		26.15	0.000	0.000
					C	0.710	63.105		21.22	55.430	0.000
T41 25.00-0.00	12.50	1	23	131.771	A	0.000	40.384	13.542	33.53	0.000	0.000
					B	0.000	48.438		27.96	0.000	0.000
					C	0.000	58.265		23.24	48.779	0.000

Tower Pressure - With Ice

$G_H = 1.075$

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	365.63	1.988	34	0.5000	33.203	A	4.176	6.016	3.906	38.33	0.000	0.000
368.75-362.50						B	4.176	5.577		40.05	0.000	0.000
						C	4.176	6.016		38.33	0.000	0.000
T2	359.38	1.978	34	0.5000	33.203	A	4.812	6.676	3.906	34.00	0.000	0.000
362.50-356.25						B	4.812	5.577		37.60	0.000	0.000

tnxTower	Job	Page
	15001.008 - Montville	38 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	**Project** 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	**Date** 09:32:33 02/13/15
	Client Verizon Wireless	**Designed by** TJL

Section Elevation	z	K_Z	q_z	t_Z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	in	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
						C	4.812	6.676		34.00	0.000	0.000
T3	353.13	1.968	34	0.5000	33.203	A	4.812	6.676	3.906	34.00	0.000	0.000
356.25-350.00						B	4.812	6.456		34.67	0.000	0.000
						C	4.812	7.555		31.59	0.000	0.000
T4	346.88	1.958	34	0.5000	33.333	A	4.804	6.933	4.167	35.50	0.000	0.000
350.00-343.75						B	4.804	9.131		29.90	0.000	0.000
						C	4.804	10.230		27.71	0.000	0.000
T5	340.63	1.948	34	0.5000	33.333	A	0.990	7.721	4.167	47.84	0.000	0.000
343.75-337.50						B	0.990	9.919		38.20	0.000	0.000
						C	0.990	11.018		34.70	0.000	0.000
T6	334.38	1.938	34	0.5000	33.333	A	0.000	8.378	4.167	49.73	0.000	0.000
337.50-331.25						B	0.000	10.576		39.40	0.000	0.000
						C	0.000	11.675		35.69	0.000	0.000
T7	328.13	1.928	33	0.5000	33.333	A	0.000	8.378	4.167	49.73	0.000	0.000
331.25-325.00						B	0.000	10.576		39.40	0.000	0.000
						C	0.000	11.675		35.69	0.000	0.000
T8	321.88	1.917	33	0.5000	33.464	A	0.000	10.344	4.427	42.80	0.000	0.000
325.00-318.75						B	0.000	12.542		35.30	0.000	0.000
						C	0.000	12.089		36.62	0.000	0.000
T9	315.63	1.906	33	0.5000	33.464	A	0.000	10.334	4.427	42.84	0.000	0.000
318.75-312.50						B	0.000	12.532		35.33	0.000	0.000
						C	0.000	12.079		36.65	0.000	0.000
T10	309.38	1.895	33	0.5000	33.464	A	0.000	10.334	4.427	42.84	0.000	0.000
312.50-306.25						B	0.000	12.532		35.33	0.000	0.000
						C	0.000	12.079		36.65	0.000	0.000
T11	303.13	1.884	33	0.5000	33.464	A	0.985	9.680	4.427	41.51	0.000	0.000
306.25-300.00						B	0.902	14.143		29.42	0.000	0.000
						C	0.737	18.219		23.35	0.000	0.000
T12	296.88	1.873	32	0.5000	33.464	A	4.770	8.734	4.427	32.78	0.000	0.000
300.00-293.75						B	4.269	13.862		24.42	0.000	0.000
						C	3.267	19.270		19.64	0.000	0.000
T13	290.63	1.862	32	0.5000	33.464	A	0.985	9.680	4.427	41.51	0.000	0.000
293.75-287.50						B	0.882	14.709		28.40	0.000	0.000
						C	0.675	19.918		21.50	0.000	0.000
T14	284.38	1.85	32	0.5000	33.464	A	0.000	10.177	4.427	43.50	0.000	0.000
287.50-281.25						B	0.000	15.153		29.22	0.000	0.000
						C	0.000	20.258		21.85	0.000	0.000
T15	278.13	1.839	32	0.5000	33.464	A	0.000	10.177	4.427	43.50	0.000	0.000
281.25-275.00						B	0.000	15.153		29.22	0.000	0.000
						C	0.000	20.258		21.85	0.000	0.000
T16	271.88	1.827	32	0.5000	33.464	A	0.000	10.177	4.427	43.50	0.000	0.000
275.00-268.75						B	0.000	15.153		29.22	0.000	0.000
						C	0.000	20.258		21.85	0.000	0.000
T17	265.63	1.815	31	0.5000	33.464	A	0.000	10.177	4.427	43.50	0.000	0.000
268.75-262.50						B	0.000	15.153		29.22	0.000	0.000
						C	0.000	20.258		21.85	0.000	0.000
T18	259.38	1.802	31	0.5000	33.464	A	0.000	10.177	4.427	43.50	0.000	0.000
262.50-256.25						B	0.000	15.153		29.22	0.000	0.000
						C	0.000	20.258		21.85	0.000	0.000
T19	253.13	1.79	31	0.5000	33.464	A	0.000	10.334	4.427	42.84	0.000	0.000
256.25-250.00						B	0.000	15.295		28.95	0.000	0.000
						C	0.000	20.366		21.74	0.000	0.000
T20	246.88	1.777	31	0.5000	33.464	A	0.985	9.680	4.427	41.51	0.000	0.000
250.00-243.75						B	0.882	14.709		28.40	0.000	0.000
						C	0.675	19.918		21.50	0.000	0.000
T21	240.63	1.764	31	0.5000	33.464	A	0.924	11.352	4.427	36.06	0.000	0.000
243.75-237.50						B	0.882	14.709		28.40	0.000	0.000
						C	0.584	19.677		21.85	12.745	0.000
T22	234.38	1.751	30	0.5000	33.464	A	0.916	11.580	4.427	35.43	0.000	0.000
237.50-231.25						B	0.882	14.709		28.40	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	0.571	19.644		21.90	14.483	0.000
T23	228.13	1.737	30	0.5000	33.464	A	0.916	11.873	4.427	34.62	0.000	0.000
231.25-225.00						B	0.882	14.991		27.89	0.000	0.000
						C	0.571	19.827		21.70	14.483	0.000
T24	221.88	1.724	30	0.5000	33.333	A	3.855	10.443	4.167	29.14	0.000	0.000
225.00-218.75						B	3.712	13.604		24.06	0.000	0.000
						C	2.408	18.838		19.61	14.483	0.000
T25	215.63	1.71	30	0.5000	33.333	A	0.920	11.184	4.167	34.42	0.000	0.000
218.75-212.50						B	0.886	14.318		27.40	0.000	0.000
						C	0.576	19.303		20.96	14.483	0.000
T26	209.38	1.695	29	0.5000	33.333	A	0.000	11.795	4.167	35.33	0.000	0.000
212.50-206.25						B	0.000	14.907		27.95	0.000	0.000
						C	0.000	19.686		21.17	14.483	0.000
T27	203.13	1.681	29	0.5000	33.333	A	0.000	11.795	4.167	35.33	0.000	0.000
206.25-200.00						B	0.000	14.907		27.95	0.000	0.000
						C	0.000	19.686		21.17	14.483	0.000
T28	187.50	1.643	28	0.5000	133.333	A	0.000	56.371	16.667	29.57	0.000	0.000
200.00-175.00						B	0.000	64.277		25.93	0.000	0.000
						C	0.000	85.588		19.47	57.930	0.000
T29	171.88	1.602	28	0.5000	33.464	A	0.000	14.690	4.427	30.14	0.000	0.000
175.00-168.75						B	0.000	16.686		26.53	0.000	0.000
						C	0.000	21.316		20.77	14.483	0.000
T30	165.63	1.586	27	0.5000	33.464	A	0.000	14.679	4.427	30.16	0.000	0.000
168.75-162.50						B	0.000	16.676		26.55	0.000	0.000
						C	0.000	21.306		20.78	14.483	0.000
T31	159.38	1.568	27	0.5000	33.464	A	0.916	13.631	4.427	30.43	0.000	0.000
162.50-156.25						B	0.882	15.667		26.75	0.000	0.000
						C	0.571	20.652		20.86	14.483	0.000
T32	153.13	1.55	27	0.5000	33.464	A	0.000	14.240	4.427	31.09	0.000	0.000
156.25-150.00						B	0.000	16.252		27.24	0.000	0.000
						C	0.000	21.031		21.05	14.483	0.000
T33	137.50	1.503	26	0.5000	133.854	A	0.000	59.596	17.708	29.71	0.000	0.000
150.00-125.00						B	0.000	68.038		26.03	0.000	0.000
						C	0.000	89.791		19.72	57.930	0.000
T34	112.50	1.42	25	0.5000	133.854	A	11.728	58.422	17.708	25.24	0.000	0.000
125.00-100.00						B	11.292	68.770		22.12	0.000	0.000
						C	7.317	93.275		17.60	57.930	0.000
T35	96.88	1.36	24	0.5000	33.464	A	3.848	13.997	4.427	24.81	0.000	0.000
100.00-93.75						B	3.705	16.607		21.80	0.000	0.000
						C	2.401	22.939		17.47	14.483	0.000
T36 93.75-87.50	90.63	1.335	23	0.5000	33.464	A	0.916	14.877	4.427	28.03	0.000	0.000
						B	1.027	17.520		23.87	0.000	0.000
						C	0.716	23.554		18.24	14.483	0.000
T37 87.50-81.25	84.38	1.308	23	0.5000	33.464	A	0.000	15.339	4.427	28.86	0.000	0.000
						B	1.813	18.721		21.56	0.000	0.000
						C	1.813	24.599		16.76	14.483	0.000
T38 81.25-75.00	78.13	1.279	22	0.5000	33.464	A	0.000	15.339	4.427	28.86	0.000	0.000
						B	1.813	18.721		21.56	0.000	0.000
						C	1.813	24.599		16.76	14.483	0.000
T39 75.00-50.00	62.50	1.2	21	0.5000	133.854	A	0.000	63.464	17.708	27.90	0.000	0.000
						B	7.250	76.994		21.02	0.000	0.000
						C	7.250	98.396		16.76	57.930	0.000
T40 50.00-25.00	37.50	1.037	18	0.5000	133.854	A	0.916	67.779	17.708	25.78	0.000	0.000
						B	8.132	81.332		19.79	0.000	0.000
						C	7.821	98.017		16.73	57.930	0.000
T41 25.00-0.00	12.50	1	17	0.5000	133.854	A	0.000	65.341	17.708	27.10	0.000	0.000
						B	6.380	77.247		21.18	0.000	0.000
						C	6.380	90.201		18.34	50.979	0.000

Tower Pressure - Service

$G_H = 1.075$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1	365.63	1.988	13	32.682	A	4.176	3.096	2.865	39.39	0.000	0.000
368.75-362.50					B	4.176	2.865		40.69	0.000	0.000
					C	4.176	3.096		39.39	0.000	0.000
T2	359.38	1.978	13	32.682	A	4.812	3.443	2.865	34.70	0.000	0.000
362.50-356.25					B	4.812	2.865		37.31	0.000	0.000
					C	4.812	3.443		34.70	0.000	0.000
T3	353.13	1.968	13	32.682	A	4.812	3.443	2.865	34.70	0.000	0.000
356.25-350.00					B	4.812	3.327		35.19	0.000	0.000
					C	4.812	3.905		32.86	0.000	0.000
T4	346.88	1.958	13	32.813	A	4.804	3.703	3.125	36.73	0.000	0.000
350.00-343.75					B	4.804	4.859		32.34	0.000	0.000
					C	4.804	5.438		30.51	0.000	0.000
T5	340.63	1.948	12	32.813	A	0.990	4.495	3.125	56.98	0.000	0.000
343.75-337.50					B	0.990	5.651		47.06	0.000	0.000
					C	0.990	6.230		43.29	0.000	0.000
T6	334.38	1.938	12	32.813	A	0.000	5.152	3.125	60.65	0.000	0.000
337.50-331.25					B	0.000	6.309		49.54	0.000	0.000
					C	0.000	6.887		45.38	0.000	0.000
T7	328.13	1.928	12	32.813	A	0.000	5.152	3.125	60.65	0.000	0.000
331.25-325.00					B	0.000	6.309		49.54	0.000	0.000
					C	0.000	6.887		45.38	0.000	0.000
T8	321.88	1.917	12	32.943	A	0.000	6.600	3.385	51.29	0.000	0.000
325.00-318.75					B	0.000	7.757		43.65	0.000	0.000
					C	0.000	7.303		46.35	0.000	0.000
T9	315.63	1.906	12	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
318.75-312.50					B	0.000	7.752		43.67	0.000	0.000
					C	0.000	7.298		46.39	0.000	0.000
T10	309.38	1.895	12	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
312.50-306.25					B	0.000	7.752		43.67	0.000	0.000
					C	0.000	7.298		46.39	0.000	0.000
T11	303.13	1.884	12	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
306.25-300.00					B	0.930	8.695		35.17	0.000	0.000
					C	0.820	11.436		27.62	0.000	0.000
T12	296.88	1.873	12	32.943	A	4.770	4.995	3.385	34.67	0.000	0.000
300.00-293.75					B	4.438	8.214		26.76	0.000	0.000
					C	3.772	11.885		21.62	0.000	0.000
T13	290.63	1.862	12	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
293.75-287.50					B	0.916	9.094		33.82	0.000	0.000
					C	0.779	12.634		25.24	0.000	0.000
T14	284.38	1.85	12	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
287.50-281.25					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T15	278.13	1.839	12	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
281.25-275.00					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T16	271.88	1.827	12	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
275.00-268.75					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T17	265.63	1.815	12	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000
268.75-262.50					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T18	259.38	1.802	12	32.943	A	0.000	6.438	3.385	52.59	0.000	0.000

tnxTower	Job: 15001.008 - Montville	Page: 41 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
262.50-256.25					B	0.000	9.556		35.43	0.000	0.000
					C	0.000	13.026		25.99	0.000	0.000
T19	253.13	1.79	11	32.943	A	0.000	6.595	3.385	51.33	0.000	0.000
256.25-250.00					B	0.000	9.702		34.89	0.000	0.000
					C	0.000	13.151		25.74	0.000	0.000
T20	246.88	1.777	11	32.943	A	0.985	5.941	3.385	48.88	0.000	0.000
250.00-243.75					B	0.916	9.094		33.82	0.000	0.000
					C	0.779	12.634		25.24	0.000	0.000
T21	240.63	1.764	11	32.943	A	0.939	7.272	3.385	41.23	0.000	0.000
243.75-237.50					B	0.916	9.094		33.82	0.000	0.000
					C	0.718	12.576		25.47	12.195	0.000
T22	234.38	1.751	11	32.943	A	0.933	7.454	3.385	40.37	0.000	0.000
237.50-231.25					B	0.916	9.094		33.82	0.000	0.000
					C	0.710	12.568		25.50	13.858	0.000
T23	228.13	1.737	11	32.943	A	0.933	7.752	3.385	38.98	0.000	0.000
231.25-225.00					B	0.916	9.387		32.86	0.000	0.000
					C	0.710	12.795		25.07	13.858	0.000
T24	221.88	1.724	11	32.813	A	3.928	6.297	3.125	30.56	0.000	0.000
225.00-218.75					B	3.858	7.953		26.46	0.000	0.000
					C	2.991	11.625		21.38	13.858	0.000
T25	215.63	1.71	11	32.813	A	0.938	7.047	3.125	39.14	0.000	0.000
218.75-212.50					B	0.921	8.690		32.51	0.000	0.000
					C	0.715	12.197		24.20	13.858	0.000
T26	209.38	1.695	11	32.813	A	0.000	7.670	3.125	40.74	0.000	0.000
212.50-206.25					B	0.000	9.302		33.60	0.000	0.000
					C	0.000	12.671		24.66	13.858	0.000
T27	203.13	1.681	11	32.813	A	0.000	7.670	3.125	40.74	0.000	0.000
206.25-200.00					B	0.000	9.302		33.60	0.000	0.000
					C	0.000	12.671		24.66	13.858	0.000
T28	187.50	1.643	11	131.250	A	0.000	35.944	12.500	34.78	0.000	0.000
200.00-175.00					B	0.000	40.115		31.16	0.000	0.000
					C	0.000	54.896		22.77	55.430	0.000
T29	171.88	1.602	10	32.943	A	0.000	9.534	3.385	35.51	0.000	0.000
175.00-168.75					B	0.000	10.580		32.00	0.000	0.000
					C	0.000	13.850		24.44	13.858	0.000
T30	165.63	1.586	10	32.943	A	0.000	9.528	3.385	35.53	0.000	0.000
168.75-162.50					B	0.000	10.574		32.02	0.000	0.000
					C	0.000	13.845		24.45	13.858	0.000
T31	159.38	1.568	10	32.943	A	0.933	8.460	3.385	36.04	0.000	0.000
162.50-156.25					B	0.916	9.525		32.42	0.000	0.000
					C	0.710	13.032		24.64	13.858	0.000
T32	153.13	1.55	10	32.943	A	0.000	9.080	3.385	37.28	0.000	0.000
156.25-150.00					B	0.000	10.134		33.41	0.000	0.000
					C	0.000	13.504		25.07	13.858	0.000
T33	137.50	1.503	10	131.771	A	0.000	37.708	13.542	35.91	0.000	0.000
150.00-125.00					B	0.000	41.647		32.52	0.000	0.000
					C	0.000	56.514		23.96	55.430	0.000
T34	112.50	1.42	9	131.771	A	11.950	35.645	13.542	28.45	0.000	0.000
125.00-100.00					B	11.737	40.018		26.17	0.000	0.000
					C	9.096	56.470		20.65	55.430	0.000
T35	96.88	1.36	9	32.943	A	3.921	8.292	3.385	27.72	0.000	0.000
100.00-93.75					B	3.851	9.396		25.56	0.000	0.000
					C	2.984	13.646		20.36	13.858	0.000
T36	90.63	1.335	9	32.943	A	0.933	9.188	3.385	33.45	0.000	0.000
93.75-87.50					B	0.916	10.373		29.99	0.000	0.000
					C	0.710	14.425		22.37	13.858	0.000
T37	84.38	1.308	8	32.943	A	0.000	9.658	3.385	35.05	0.000	0.000
87.50-81.25					B	0.000	11.946		28.34	0.000	0.000
					C	0.000	15.894		21.30	13.858	0.000
T38	78.13	1.279	8	32.943	A	0.000	9.658	3.385	35.05	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
81.25-75.00					B	0.000	11.946		28.34	0.000	0.000
					C	0.000	15.894		21.30	13.858	0.000
T39	62.50	1.2	8	131.771	A	0.000	39.743	13.542	34.07	0.000	0.000
75.00-50.00					B	0.000	48.895		27.70	0.000	0.000
					C	0.000	63.577		21.30	55.430	0.000
T40	37.50	1.037	7	131.771	A	0.933	41.713	13.542	31.75	0.000	0.000
50.00-25.00					B	0.916	50.877		26.15	0.000	0.000
					C	0.710	63.105		21.22	55.430	0.000
T41 25.00-0.00	12.50	1	6	131.771	A	0.000	40.384	13.542	33.53	0.000	0.000
					B	0.000	48.438		27.96	0.000	0.000
					C	0.000	58.265		23.24	48.779	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	1	1	6.019	0.75	119.95	C
368.75-362.50			B	0.215	2.545	0.594	1	1	5.877			
			C	0.223	2.523	0.595	1	1	6.019			
T2	0.00	1.09	A	0.253	2.43	0.603	1	1	6.887	0.82	131.55	C
362.50-356.25			B	0.235	2.484	0.598	1	1	6.526			
			C	0.253	2.43	0.603	1	1	6.887			
T3	0.01	1.09	A	0.253	2.43	0.603	1	1	6.887	0.84	134.14	C
356.25-350.00			B	0.249	2.44	0.602	1	1	6.814			
			C	0.267	2.388	0.606	1	1	7.180			
T4	0.01	0.77	A	0.259	2.41	0.604	1	1	7.042	0.90	144.03	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	1	1	7.789			
			C	0.312	2.264	0.62	1	1	8.174			
T5	0.01	0.61	A	0.167	2.709	0.584	1	1	3.616	0.57	91.97	C
343.75-337.50			B	0.202	2.588	0.591	1	1	4.329			
			C	0.22	2.531	0.595	1	1	4.694			
T6	0.01	0.54	A	0.157	2.746	0.583	1	1	3.002	0.50	80.55	C
337.50-331.25			B	0.192	2.622	0.589	1	1	3.715			
			C	0.21	2.563	0.592	1	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	1	1	3.002	0.50	80.11	C
331.25-325.00			B	0.192	2.622	0.589	1	1	3.715			
			C	0.21	2.563	0.592	1	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	1	1	3.897	0.55	87.74	B
325.00-318.75			B	0.235	2.482	0.598	1	1	4.641			
			C	0.222	2.525	0.595	1	1	4.346			
T9	0.02	0.64	A	0.2	2.595	0.59	1	1	3.894	0.55	87.20	B
318.75-312.50			B	0.235	2.482	0.598	1	1	4.637			
			C	0.222	2.526	0.595	1	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	1	1	3.894	0.54	86.71	B
312.50-306.25			B	0.235	2.482	0.598	1	1	4.637			
			C	0.222	2.526	0.595	1	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	1	1	4.506	0.81	129.44	C
306.25-300.00			B	0.292	2.317	0.614	1	1	6.265			
			C	0.372	2.122	0.641	1	1	8.146			
T12	0.12	0.85	A	0.296	2.306	0.615	1	1	7.841	1.07	171.57	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	1	1	9.737			
			C	0.475	1.934	0.685	1	1	11.916			
T13	0.12	0.71	A	0.21	2.562	0.593	1	1	4.506	0.86	137.24	C
293.75-287.50			B	0.304	2.286	0.617	1	1	6.528			
			C	0.407	2.05	0.655	1	1	9.048			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T14	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.81	129.02	C
287.50-281.25			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.80	128.20	C
281.25-275.00			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T16	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.80	127.37	C
275.00-268.75			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.79	126.53	C
268.75-262.50			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.79	125.67	C
262.50-256.25			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	1	1	3.894	0.79	125.83	C
256.25-250.00			B	0.295	2.311	0.614	1	1	5.960			
			C	0.399	2.066	0.651	1	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	1	1	4.506	0.82	130.99	C
250.00-243.75			B	0.304	2.286	0.617	1	1	6.528			
			C	0.407	2.05	0.655	1	1	9.048			
T21	0.22	0.71	A	0.249	2.44	0.602	1	1	5.315	1.34	214.28	C
243.75-237.50			B	0.304	2.286	0.617	1	1	6.528			
			C	0.404	2.057	0.653	1	1	8.931			
T22	0.23	0.71	A	0.255	2.424	0.603	1	1	5.428	1.40	224.08	C
237.50-231.25			B	0.304	2.286	0.617	1	1	6.528			
			C	0.403	2.058	0.653	1	1	8.915			
T23	0.23	0.77	A	0.264	2.397	0.605	1	1	5.627	1.40	224.14	C
231.25-225.00			B	0.313	2.263	0.62	1	1	6.736			
			C	0.41	2.045	0.656	1	1	9.100			
T24	0.23	0.95	A	0.312	2.266	0.62	1	1	7.829	1.51	241.39	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	1	1	8.916			
			C	0.445	1.981	0.671	1	1	10.794			
T25	0.23	0.61	A	0.243	2.458	0.6	1	1	5.167	1.35	215.93	C
218.75-212.50			B	0.293	2.315	0.614	1	1	6.254			
			C	0.393	2.077	0.649	1	1	8.630			
T26	0.23	0.54	A	0.234	2.487	0.598	1	1	4.585	1.30	208.75	C
212.50-206.25			B	0.283	2.341	0.611	1	1	5.683			
			C	0.386	2.092	0.646	1	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	1	1	4.585	1.29	206.95	C
206.25-200.00			B	0.283	2.341	0.611	1	1	5.683			
			C	0.386	2.092	0.646	1	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	1	1	21.863	5.26	210.30	C
200.00-175.00			B	0.306	2.281	0.618	1	1	24.776			
			C	0.418	2.029	0.659	1	1	36.189			
T29	0.24	0.69	A	0.289	2.325	0.613	1	1	5.842	1.29	206.14	C
175.00-168.75			B	0.321	2.241	0.623	1	1	6.587			
			C	0.42	2.025	0.66	1	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	1	1	5.838	1.27	203.93	C
168.75-162.50			B	0.321	2.242	0.623	1	1	6.583			
			C	0.42	2.025	0.66	1	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	1	1	6.106	1.28	204.01	C
162.50-156.25			B	0.317	2.252	0.621	1	1	6.834			
			C	0.417	2.031	0.659	1	1	9.295			
T32	0.24	0.61	A	0.276	2.363	0.609	1	1	5.527	1.23	196.92	C
156.25-150.00			B	0.308	2.276	0.618	1	1	6.265			
			C	0.41	2.045	0.656	1	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	1	1	23.068	4.88	195.40	C
150.00-125.00			B	0.316	2.254	0.621	1	1	25.860			
			C	0.429	2.01	0.664	1	1	37.514			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T34	0.98	2.84	A	0.361	2.146	0.637	1	1	34.640	5.20	208.13	C
125.00-100.00			B	0.393	2.079	0.649	1	1	37.695			
			C	0.498	1.903	0.696	1	1	48.413			
T35	0.24	1.03	A	0.371	2.125	0.64	1	1	9.228	1.27	203.24	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	1	1	9.981			
			C	0.505	1.894	0.7	1	1	12.536			
T36	0.24	0.71	A	0.307	2.277	0.618	1	1	6.613	1.14	182.40	C
93.75-87.50			B	0.343	2.189	0.63	1	1	7.450			
			C	0.459	1.958	0.678	1	1	10.485			
T37	0.25	0.61	A	0.293	2.314	0.614	1	1	5.929	1.13	181.45	C
87.50-81.25			B	0.363	2.143	0.637	1	1	7.611			
			C	0.482	1.924	0.689	1	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	1	1	5.929	1.11	177.50	C
81.25-75.00			B	0.363	2.143	0.637	1	1	7.611			
			C	0.482	1.924	0.689	1	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	1	1	24.497	4.16	166.54	C
75.00-50.00			B	0.371	2.124	0.64	1	1	31.304			
			C	0.482	1.924	0.689	1	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	1	1	26.938	3.62	144.68	C
50.00-25.00			B	0.393	2.078	0.649	1	1	33.925			
			C	0.484	1.921	0.69	1	1	44.229			
T41	0.91	2.45	A	0.306	2.279	0.618	1	1	24.954	3.14	125.47	C
25.00-0.00			B	0.368	2.132	0.639	1	1	30.948			
			C	0.442	1.987	0.67	1	1	39.021			
Sum Weight:	10.69	42.50								60.43		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	0.8	1	5.184	0.65	103.31	C
368.75-362.50			B	0.215	2.545	0.594	0.8	1	5.041			
			C	0.223	2.523	0.595	0.8	1	5.184			
T2	0.00	1.09	A	0.253	2.43	0.603	0.8	1	5.924	0.71	113.17	C
362.50-356.25			B	0.235	2.484	0.598	0.8	1	5.563			
			C	0.253	2.43	0.603	0.8	1	5.924			
T3	0.01	1.09	A	0.253	2.43	0.603	0.8	1	5.924	0.73	116.16	C
356.25-350.00			B	0.249	2.44	0.602	0.8	1	5.852			
			C	0.267	2.388	0.606	0.8	1	6.218			
T4	0.01	0.77	A	0.259	2.41	0.604	0.8	1	6.081	0.79	127.10	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	0.8	1	6.828			
			C	0.312	2.264	0.62	0.8	1	7.213			
T5	0.01	0.61	A	0.167	2.709	0.584	0.8	1	3.418	0.55	88.09	C
343.75-337.50			B	0.202	2.588	0.591	0.8	1	4.131			
			C	0.22	2.531	0.595	0.8	1	4.496			
T6	0.01	0.54	A	0.157	2.746	0.583	0.8	1	3.002	0.50	80.55	C
337.50-331.25			B	0.192	2.622	0.589	0.8	1	3.715			
			C	0.21	2.563	0.592	0.8	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	0.8	1	3.002	0.50	80.11	C
331.25-325.00			B	0.192	2.622	0.589	0.8	1	3.715			
			C	0.21	2.563	0.592	0.8	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.897	0.55	87.74	B
325.00-318.75			B	0.235	2.482	0.598	0.8	1	4.641			
			C	0.222	2.525	0.595	0.8	1	4.346			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T9	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.55	87.20	B
318.75-312.50			B	0.235	2.482	0.598	0.8	1	4.637			
			C	0.222	2.526	0.595	0.8	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.54	86.71	B
312.50-306.25			B	0.235	2.482	0.598	0.8	1	4.637			
			C	0.222	2.526	0.595	0.8	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.79	126.84	C
306.25-300.00			B	0.292	2.317	0.614	0.8	1	6.079			
			C	0.372	2.122	0.641	0.8	1	7.982			
T12	0.12	0.85	A	0.296	2.306	0.615	0.8	1	6.887	1.00	160.71	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	0.8	1	8.850			
			C	0.475	1.934	0.685	0.8	1	11.161			
T13	0.12	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.84	134.88	C
293.75-287.50			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.407	2.05	0.655	0.8	1	8.892			
T14	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.81	129.02	C
287.50-281.25			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.80	128.20	C
281.25-275.00			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T16	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.80	127.37	C
275.00-268.75			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.79	126.53	C
268.75-262.50			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.79	125.67	C
262.50-256.25			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.79	125.83	C
256.25-250.00			B	0.295	2.311	0.614	0.8	1	5.960			
			C	0.399	2.066	0.651	0.8	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.80	128.74	C
250.00-243.75			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.407	2.05	0.655	0.8	1	8.892			
T21	0.22	0.71	A	0.249	2.44	0.602	0.8	1	5.127	1.33	212.21	C
243.75-237.50			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.404	2.057	0.653	0.8	1	8.787			
T22	0.23	0.71	A	0.255	2.424	0.603	0.8	1	5.241	1.39	222.04	C
237.50-231.25			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.403	2.058	0.653	0.8	1	8.773			
T23	0.23	0.77	A	0.264	2.397	0.605	0.8	1	5.440	1.39	222.14	C
231.25-225.00			B	0.313	2.263	0.62	0.8	1	6.552			
			C	0.41	2.045	0.656	0.8	1	8.958			
T24	0.23	0.95	A	0.312	2.266	0.62	0.8	1	7.043	1.46	233.27	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	0.8	1	8.145			
			C	0.445	1.981	0.671	0.8	1	10.195			
T25	0.23	0.61	A	0.243	2.458	0.6	0.8	1	4.980	1.34	213.92	C
218.75-212.50			B	0.293	2.315	0.614	0.8	1	6.070			
			C	0.393	2.077	0.649	0.8	1	8.487			
T26	0.23	0.54	A	0.234	2.487	0.598	0.8	1	4.585	1.30	208.75	C
212.50-206.25			B	0.283	2.341	0.611	0.8	1	5.683			
			C	0.386	2.092	0.646	0.8	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	0.8	1	4.585	1.29	206.95	C
206.25-200.00			B	0.283	2.341	0.611	0.8	1	5.683			
			C	0.386	2.092	0.646	0.8	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	0.8	1	21.863	5.26	210.30	C
200.00-175.00			B	0.306	2.281	0.618	0.8	1	24.776			
			C	0.418	2.029	0.659	0.8	1	36.189			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T29	0.24	0.69	A	0.289	2.325	0.613	0.8	1	5.842	1.29	206.14	C
175.00-168.75			B	0.321	2.241	0.623	0.8	1	6.587			
			C	0.42	2.025	0.66	0.8	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	0.8	1	5.838	1.27	203.93	C
168.75-162.50			B	0.321	2.242	0.623	0.8	1	6.583			
			C	0.42	2.025	0.66	0.8	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	0.8	1	5.920	1.26	202.21	C
162.50-156.25			B	0.317	2.252	0.621	0.8	1	6.651			
			C	0.417	2.031	0.659	0.8	1	9.153			
T32	0.24	0.61	A	0.276	2.363	0.609	0.8	1	5.527	1.23	196.92	C
156.25-150.00			B	0.308	2.276	0.618	0.8	1	6.265			
			C	0.41	2.045	0.656	0.8	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	0.8	1	23.068	4.88	195.40	C
150.00-125.00			B	0.316	2.254	0.621	0.8	1	25.860			
			C	0.429	2.01	0.664	0.8	1	37.514			
T34	0.98	2.84	A	0.361	2.146	0.637	0.8	1	32.250	5.08	203.25	C
125.00-100.00			B	0.393	2.079	0.649	0.8	1	35.348			
			C	0.498	1.903	0.696	0.8	1	46.594			
T35	0.24	1.03	A	0.371	2.125	0.64	0.8	1	8.444	1.23	197.13	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	0.8	1	9.211			
			C	0.505	1.894	0.7	0.8	1	11.939			
T36	0.24	0.71	A	0.307	2.277	0.618	0.8	1	6.426	1.13	180.92	C
93.75-87.50			B	0.343	2.189	0.63	0.8	1	7.267			
			C	0.459	1.958	0.678	0.8	1	10.343			
T37	0.25	0.61	A	0.293	2.314	0.614	0.8	1	5.929	1.13	181.45	C
87.50-81.25			B	0.363	2.143	0.637	0.8	1	7.611			
			C	0.482	1.924	0.689	0.8	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	0.8	1	5.929	1.11	177.50	C
81.25-75.00			B	0.363	2.143	0.637	0.8	1	7.611			
			C	0.482	1.924	0.689	0.8	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	0.8	1	24.497	4.16	166.54	C
75.00-50.00			B	0.371	2.124	0.64	0.8	1	31.304			
			C	0.482	1.924	0.689	0.8	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	0.8	1	26.751	3.61	144.40	C
50.00-25.00			B	0.393	2.078	0.649	0.8	1	33.741			
			C	0.484	1.921	0.69	0.8	1	44.087			
T41	0.91	2.45	A	0.306	2.279	0.618	0.8	1	24.954	3.14	125.47	C
25.00-0.00			B	0.368	2.132	0.639	0.8	1	30.948			
			C	0.442	1.987	0.67	0.8	1	39.021			
Sum Weight:	10.69	42.50								59.57		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	0.85	1	5.392	0.67	107.47	C
368.75-362.50			B	0.215	2.545	0.594	0.85	1	5.250			
			C	0.223	2.523	0.595	0.85	1	5.392			
T2	0.00	1.09	A	0.253	2.43	0.603	0.85	1	6.165	0.74	117.76	C
362.50-356.25			B	0.235	2.484	0.598	0.85	1	5.804			
			C	0.253	2.43	0.603	0.85	1	6.165			
T3	0.01	1.09	A	0.253	2.43	0.603	0.85	1	6.165	0.75	120.65	C
356.25-350.00			B	0.249	2.44	0.602	0.85	1	6.092			
			C	0.267	2.388	0.606	0.85	1	6.458			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T4	0.01	0.77	A	0.259	2.41	0.604	0.85	1	6.321	0.82	131.34	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	0.85	1	7.068			
			C	0.312	2.264	0.62	0.85	1	7.453			
T5	0.01	0.61	A	0.167	2.709	0.584	0.85	1	3.467	0.56	89.06	C
343.75-337.50			B	0.202	2.588	0.591	0.85	1	4.181			
			C	0.22	2.531	0.595	0.85	1	4.546			
T6	0.01	0.54	A	0.157	2.746	0.583	0.85	1	3.002	0.50	80.55	C
337.50-331.25			B	0.192	2.622	0.589	0.85	1	3.715			
			C	0.21	2.563	0.592	0.85	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	0.85	1	3.002	0.50	80.11	C
331.25-325.00			B	0.192	2.622	0.589	0.85	1	3.715			
			C	0.21	2.563	0.592	0.85	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.897	0.55	87.74	B
325.00-318.75			B	0.235	2.482	0.598	0.85	1	4.641			
			C	0.222	2.525	0.595	0.85	1	4.346			
T9	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.55	87.20	B
318.75-312.50			B	0.235	2.482	0.598	0.85	1	4.637			
			C	0.222	2.526	0.595	0.85	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.54	86.71	B
312.50-306.25			B	0.235	2.482	0.598	0.85	1	4.637			
			C	0.222	2.526	0.595	0.85	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.80	127.49	C
306.25-300.00			B	0.292	2.317	0.614	0.85	1	6.125			
			C	0.372	2.122	0.641	0.85	1	8.023			
T12	0.12	0.85	A	0.296	2.306	0.615	0.85	1	7.126	1.02	163.42	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	0.85	1	9.071			
			C	0.475	1.934	0.685	0.85	1	11.350			
T13	0.12	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.85	135.47	C
293.75-287.50			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.407	2.05	0.655	0.85	1	8.931			
T14	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.81	129.02	C
287.50-281.25			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.80	128.20	C
281.25-275.00			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T16	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.80	127.37	C
275.00-268.75			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.79	126.53	C
268.75-262.50			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.79	125.67	C
262.50-256.25			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.79	125.83	C
256.25-250.00			B	0.295	2.311	0.614	0.85	1	5.960			
			C	0.399	2.066	0.651	0.85	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.81	129.30	C
250.00-243.75			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.407	2.05	0.655	0.85	1	8.931			
T21	0.22	0.71	A	0.249	2.44	0.602	0.85	1	5.174	1.33	212.73	C
243.75-237.50			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.404	2.057	0.653	0.85	1	8.823			
T22	0.23	0.71	A	0.255	2.424	0.603	0.85	1	5.288	1.39	222.55	C
237.50-231.25			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.403	2.058	0.653	0.85	1	8.808			
T23	0.23	0.77	A	0.264	2.397	0.605	0.85	1	5.487	1.39	222.64	C
231.25-225.00			B	0.313	2.263	0.62	0.85	1	6.598			
			C	0.41	2.045	0.656	0.85	1	8.994			

tnxTower	Job: 15001.008 - Montville	Page: 48 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T24	0.23	0.95	A	0.312	2.266	0.62	0.85	1	7.240	1.47	235.30	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	0.85	1	8.338			
			C	0.445	1.981	0.671	0.85	1	10.345			
T25	0.23	0.61	A	0.243	2.458	0.6	0.85	1	5.027	1.34	214.42	C
218.75-212.50			B	0.293	2.315	0.614	0.85	1	6.116			
			C	0.393	2.077	0.649	0.85	1	8.523			
T26	0.23	0.54	A	0.234	2.487	0.598	0.85	1	4.585	1.30	208.75	C
212.50-206.25			B	0.283	2.341	0.611	0.85	1	5.683			
			C	0.386	2.092	0.646	0.85	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	0.85	1	4.585	1.29	206.95	C
206.25-200.00			B	0.283	2.341	0.611	0.85	1	5.683			
			C	0.386	2.092	0.646	0.85	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	0.85	1	21.863	5.26	210.30	C
200.00-175.00			B	0.306	2.281	0.618	0.85	1	24.776			
			C	0.418	2.029	0.659	0.85	1	36.189			
T29	0.24	0.69	A	0.289	2.325	0.613	0.85	1	5.842	1.29	206.14	C
175.00-168.75			B	0.321	2.241	0.623	0.85	1	6.587			
			C	0.42	2.025	0.66	0.85	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	0.85	1	5.838	1.27	203.93	C
168.75-162.50			B	0.321	2.242	0.623	0.85	1	6.583			
			C	0.42	2.025	0.66	0.85	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	0.85	1	5.966	1.27	202.66	C
162.50-156.25			B	0.317	2.252	0.621	0.85	1	6.696			
			C	0.417	2.031	0.659	0.85	1	9.189			
T32	0.24	0.61	A	0.276	2.363	0.609	0.85	1	5.527	1.23	196.92	C
156.25-150.00			B	0.308	2.276	0.618	0.85	1	6.265			
			C	0.41	2.045	0.656	0.85	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	0.85	1	23.068	4.88	195.40	C
150.00-125.00			B	0.316	2.254	0.621	0.85	1	25.860			
			C	0.429	2.01	0.664	0.85	1	37.514			
T34	0.98	2.84	A	0.361	2.146	0.637	0.85	1	32.847	5.11	204.47	C
125.00-100.00			B	0.393	2.079	0.649	0.85	1	35.935			
			C	0.498	1.903	0.696	0.85	1	47.049			
T35	0.24	1.03	A	0.371	2.125	0.64	0.85	1	8.640	1.24	198.66	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	0.85	1	9.404			
			C	0.505	1.894	0.7	0.85	1	12.088			
T36	0.24	0.71	A	0.307	2.277	0.618	0.85	1	6.473	1.13	181.29	C
93.75-87.50			B	0.343	2.189	0.63	0.85	1	7.313			
			C	0.459	1.958	0.678	0.85	1	10.379			
T37	0.25	0.61	A	0.293	2.314	0.614	0.85	1	5.929	1.13	181.45	C
87.50-81.25			B	0.363	2.143	0.637	0.85	1	7.611			
			C	0.482	1.924	0.689	0.85	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	0.85	1	5.929	1.11	177.50	C
81.25-75.00			B	0.363	2.143	0.637	0.85	1	7.611			
			C	0.482	1.924	0.689	0.85	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	0.85	1	24.497	4.16	166.54	C
75.00-50.00			B	0.371	2.124	0.64	0.85	1	31.304			
			C	0.482	1.924	0.689	0.85	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	0.85	1	26.798	3.61	144.47	C
50.00-25.00			B	0.393	2.078	0.649	0.85	1	33.787			
			C	0.484	1.921	0.69	0.85	1	44.122			
T41	0.91	2.45	A	0.306	2.279	0.618	0.85	1	24.954	3.14	125.47	C
25.00-0.00			B	0.368	2.132	0.639	0.85	1	30.948			
			C	0.442	1.987	0.67	0.85	1	39.021			
Sum Weight:	10.69	42.50								59.78		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T1	0.00	0.88	A	0.307	2.278	0.618	1	1	7.894	0.67	106.54	C
368.75-362.50			B	0.294	2.313	0.614	1	1	7.600			
			C	0.307	2.278	0.618	1	1	7.894			
T2	0.01	1.38	A	0.346	2.181	0.631	1	1	9.025	0.73	116.05	C
362.50-356.25			B	0.313	2.262	0.62	1	1	8.270			
			C	0.346	2.181	0.631	1	1	9.025			
T3	0.02	1.38	A	0.346	2.181	0.631	1	1	9.025	0.75	120.12	C
356.25-350.00			B	0.339	2.197	0.629	1	1	8.871			
			C	0.372	2.121	0.641	1	1	9.653			
T4	0.04	0.98	A	0.352	2.167	0.633	1	1	9.194	0.84	134.62	C
350.00-343.75		TA 1.10	B	0.418	2.029	0.659	1	1	10.823			
			C	0.451	1.972	0.674	1	1	11.697			
T5	0.04	0.73	A	0.261	2.404	0.605	1	1	5.659	0.62	99.77	C
343.75-337.50			B	0.327	2.226	0.625	1	1	7.185			
			C	0.36	2.148	0.636	1	1	7.999			
T6	0.04	0.63	A	0.251	2.433	0.602	1	1	5.045	0.58	92.60	C
337.50-331.25			B	0.317	2.251	0.621	1	1	6.571			
			C	0.35	2.171	0.633	1	1	7.385			
T7	0.04	0.63	A	0.251	2.433	0.602	1	1	5.045	0.58	92.11	C
331.25-325.00			B	0.317	2.251	0.621	1	1	6.571			
			C	0.35	2.171	0.633	1	1	7.385			
T8	0.05	0.74	A	0.309	2.272	0.619	1	1	6.400	0.61	97.29	B
325.00-318.75			B	0.375	2.116	0.642	1	1	8.047			
			C	0.361	2.146	0.637	1	1	7.695			
T9	0.05	0.74	A	0.309	2.273	0.619	1	1	6.393	0.60	96.69	B
318.75-312.50			B	0.375	2.117	0.642	1	1	8.040			
			C	0.361	2.146	0.636	1	1	7.688			
T10	0.05	0.74	A	0.309	2.273	0.619	1	1	6.393	0.60	96.14	B
312.50-306.25			B	0.375	2.117	0.642	1	1	8.040			
			C	0.361	2.146	0.636	1	1	7.688			
T11	0.24	0.83	A	0.319	2.247	0.622	1	1	7.004	0.91	144.85	C
306.25-300.00			B	0.45	1.974	0.673	1	1	10.422			
			C	0.566	1.829	0.734	1	1	14.103			
T12	0.29	1.06	A	0.404	2.057	0.653	1	1	10.474	1.16	185.59	C
300.00-293.75		TA 1.10	B	0.542	1.852	0.72	1	1	14.246			
			C	0.673	1.777	0.801	1	1	18.709			
T13	0.29	0.83	A	0.319	2.247	0.622	1	1	7.004	0.99	158.15	C
293.75-287.50			B	0.466	1.948	0.681	1	1	10.894			
			C	0.615	1.795	0.763	1	1	15.875			
T14	0.29	0.71	A	0.304	2.285	0.617	1	1	6.281	0.95	152.27	C
287.50-281.25			B	0.453	1.969	0.675	1	1	10.222			
			C	0.605	1.801	0.757	1	1	15.333			
T15	0.29	0.71	A	0.304	2.285	0.617	1	1	6.281	0.95	151.31	C
281.25-275.00			B	0.453	1.969	0.675	1	1	10.222			
			C	0.605	1.801	0.757	1	1	15.333			
T16	0.29	0.71	A	0.304	2.285	0.617	1	1	6.281	0.94	150.33	C
275.00-268.75			B	0.453	1.969	0.675	1	1	10.222			
			C	0.605	1.801	0.757	1	1	15.333			
T17	0.29	0.71	A	0.304	2.285	0.617	1	1	6.281	0.93	149.33	C
268.75-262.50			B	0.453	1.969	0.675	1	1	10.222			
			C	0.605	1.801	0.757	1	1	15.333			
T18	0.29	0.71	A	0.304	2.285	0.617	1	1	6.281	0.93	148.32	C
262.50-256.25			B	0.453	1.969	0.675	1	1	10.222			
			C	0.605	1.801	0.757	1	1	15.333			
T19	0.29	0.74	A	0.309	2.273	0.619	1	1	6.393	0.93	148.32	C
256.25-250.00			B	0.457	1.962	0.677	1	1	10.347			
			C	0.609	1.799	0.759	1	1	15.456			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T20	0.29	0.83	A	0.319	2.247	0.622	1	1	7.004	0.94	150.95	C
250.00-243.75			B	0.466	1.948	0.681	1	1	10.894			
			C	0.615	1.795	0.763	1	1	15.875			
T21	0.50	0.83	A	0.367	2.133	0.639	1	1	8.174	1.33	213.56	C
243.75-237.50			B	0.466	1.948	0.681	1	1	10.894			
			C	0.605	1.801	0.757	1	1	15.479			
T22	0.52	0.83	A	0.373	2.119	0.641	1	1	8.340	1.38	220.59	C
237.50-231.25			B	0.466	1.948	0.681	1	1	10.894			
			C	0.604	1.802	0.756	1	1	15.425			
T23	0.52	0.90	A	0.382	2.1	0.644	1	1	8.568	1.38	220.55	C
231.25-225.00			B	0.474	1.936	0.685	1	1	11.147			
			C	0.61	1.798	0.76	1	1	15.630			
T24	0.52	1.20	A	0.429	2.01	0.664	1	1	10.787	1.44	230.79	C
225.00-218.75		TA 1.10	B	0.519	1.876	0.708	1	1	13.339			
			C	0.637	1.786	0.777	1	1	17.048			
T25	0.52	0.73	A	0.363	2.142	0.637	1	1	8.047	1.33	212.59	C
218.75-212.50			B	0.456	1.964	0.676	1	1	10.567			
			C	0.596	1.806	0.751	1	1	15.080			
T26	0.52	0.63	A	0.354	2.163	0.634	1	1	7.476	1.30	207.84	C
212.50-206.25			B	0.447	1.978	0.672	1	1	10.017			
			C	0.591	1.81	0.748	1	1	14.722			
T27	0.52	0.63	A	0.354	2.163	0.634	1	1	7.476	1.29	206.05	C
206.25-200.00			B	0.447	1.978	0.672	1	1	10.017			
			C	0.591	1.81	0.748	1	1	14.722			
T28	2.14	2.73	A	0.423	2.021	0.661	1	1	37.270	5.42	216.71	C
200.00-175.00			B	0.482	1.924	0.689	1	1	44.256			
			C	0.642	1.784	0.78	1	1	66.771			
T29	0.54	0.80	A	0.439	1.992	0.668	1	1	9.817	1.32	210.41	C
175.00-168.75			B	0.499	1.902	0.697	1	1	11.627			
			C	0.637	1.786	0.777	1	1	16.561			
T30	0.54	0.80	A	0.439	1.993	0.668	1	1	9.808	1.30	208.10	C
168.75-162.50			B	0.498	1.902	0.697	1	1	11.617			
			C	0.637	1.786	0.777	1	1	16.549			
T31	0.54	0.81	A	0.435	1.999	0.666	1	1	10.000	1.29	206.15	C
162.50-156.25			B	0.495	1.907	0.695	1	1	11.766			
			C	0.634	1.787	0.775	1	1	16.579			
T32	0.54	0.71	A	0.426	2.016	0.662	1	1	9.432	1.26	201.05	C
156.25-150.00			B	0.486	1.919	0.69	1	1	11.219			
			C	0.628	1.789	0.771	1	1	16.225			
T33	2.22	2.84	A	0.445	1.981	0.671	1	1	39.995	5.20	207.81	C
150.00-125.00			B	0.508	1.889	0.702	1	1	47.747			
			C	0.671	1.777	0.799	1	1	71.787			
T34	2.26	3.54	A	0.524	1.871	0.71	1	1	53.212	5.66	226.50	C
125.00-100.00			B	0.598	1.805	0.752	1	1	63.038			
			C	0.752	1.788	0.858	1	1	87.349			
T35	0.56	1.28	A	0.533	1.861	0.715	1	1	13.856	1.37	219.76	C
100.00-93.75		TA 1.10	B	0.607	1.8	0.758	1	1	16.291			
			C	0.757	1.791	0.862	1	1	22.184			
T36	0.57	0.83	A	0.472	1.939	0.684	1	1	11.086	1.27	202.45	C
93.75-87.50			B	0.554	1.84	0.727	1	1	13.758			
			C	0.725	1.78	0.838	1	1	20.461			
T37	0.59	0.71	A	0.458	1.96	0.677	1	1	10.386	1.39	223.12	C
87.50-81.25			B	0.614	1.796	0.762	1	1	16.078			
			C	0.789	1.808	0.888	1	1	23.649			
T38	0.59	0.71	A	0.458	1.96	0.677	1	1	10.386	1.36	218.27	C
81.25-75.00			B	0.614	1.796	0.762	1	1	16.078			
			C	0.789	1.808	0.888	1	1	23.649			
T39	2.36	2.84	A	0.474	1.936	0.685	1	1	43.451	5.12	204.79	C
75.00-50.00			B	0.629	1.789	0.772	1	1	66.691			
			C	0.789	1.808	0.888	1	1	94.596			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T40	2.41	2.87	A	0.513	1.883	0.704	1	1	48.655	4.44	177.54	C
50.00-25.00			B	0.668	1.778	0.798	1	1	73.021			
			C	0.791	1.809	0.889	1	1	94.944			
T41	2.13	2.84	A	0.488	1.916	0.692	1	1	45.185	3.66	146.33	C
25.00-0.00			B	0.625	1.791	0.769	1	1	65.788			
			C	0.722	1.779	0.836	1	1	81.744			
Sum Weight:	24.83	51.11								65.70		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.88	A	0.307	2.278	0.618	0.8	1	7.059	0.60	95.27	C
368.75-362.50			B	0.294	2.313	0.614	0.8	1	6.765			
			C	0.307	2.278	0.618	0.8	1	7.059			
T2	0.01	1.38	A	0.346	2.181	0.631	0.8	1	8.063	0.65	103.68	C
362.50-356.25			B	0.313	2.262	0.62	0.8	1	7.307			
			C	0.346	2.181	0.631	0.8	1	8.063			
T3	0.02	1.38	A	0.346	2.181	0.631	0.8	1	8.063	0.68	108.15	C
356.25-350.00			B	0.339	2.197	0.629	0.8	1	7.909			
			C	0.372	2.121	0.641	0.8	1	8.691			
T4	0.04	0.98	A	0.352	2.167	0.633	0.8	1	8.234	0.77	123.56	C
350.00-343.75		TA 1.10	B	0.418	2.029	0.659	0.8	1	9.862			
			C	0.451	1.972	0.674	0.8	1	10.736			
T5	0.04	0.73	A	0.261	2.404	0.605	0.8	1	5.461	0.61	97.31	C
343.75-337.50			B	0.327	2.226	0.625	0.8	1	6.987			
			C	0.36	2.148	0.636	0.8	1	7.801			
T6	0.04	0.63	A	0.251	2.433	0.602	0.8	1	5.045	0.58	92.60	C
337.50-331.25			B	0.317	2.251	0.621	0.8	1	6.571			
			C	0.35	2.171	0.633	0.8	1	7.385			
T7	0.04	0.63	A	0.251	2.433	0.602	0.8	1	5.045	0.58	92.11	C
331.25-325.00			B	0.317	2.251	0.621	0.8	1	6.571			
			C	0.35	2.171	0.633	0.8	1	7.385			
T8	0.05	0.74	A	0.309	2.272	0.619	0.8	1	6.400	0.61	97.29	B
325.00-318.75			B	0.375	2.116	0.642	0.8	1	8.047			
			C	0.361	2.146	0.637	0.8	1	7.695			
T9	0.05	0.74	A	0.309	2.273	0.619	0.8	1	6.393	0.60	96.69	B
318.75-312.50			B	0.375	2.117	0.642	0.8	1	8.040			
			C	0.361	2.146	0.636	0.8	1	7.688			
T10	0.05	0.74	A	0.309	2.273	0.619	0.8	1	6.393	0.60	96.14	B
312.50-306.25			B	0.375	2.117	0.642	0.8	1	8.040			
			C	0.361	2.146	0.636	0.8	1	7.688			
T11	0.24	0.83	A	0.319	2.247	0.622	0.8	1	6.807	0.90	143.33	C
306.25-300.00			B	0.45	1.974	0.673	0.8	1	10.241			
			C	0.566	1.829	0.734	0.8	1	13.956			
T12	0.29	1.06	A	0.404	2.057	0.653	0.8	1	9.520	1.12	179.11	C
300.00-293.75		TA 1.10	B	0.542	1.852	0.72	0.8	1	13.392			
			C	0.673	1.777	0.801	0.8	1	18.055			
T13	0.29	0.83	A	0.319	2.247	0.622	0.8	1	6.807	0.98	156.80	C
293.75-287.50			B	0.466	1.948	0.681	0.8	1	10.718			
			C	0.615	1.795	0.763	0.8	1	15.740			
T14	0.29	0.71	A	0.304	2.285	0.617	0.8	1	6.281	0.95	152.27	C
287.50-281.25			B	0.453	1.969	0.675	0.8	1	10.222			
			C	0.605	1.801	0.757	0.8	1	15.333			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T15	0.29	0.71	A	0.304	2.285	0.617	0.8	1	6.281	0.95	151.31	C
281.25-275.00			B	0.453	1.969	0.675	0.8	1	10.222			
			C	0.605	1.801	0.757	0.8	1	15.333			
T16	0.29	0.71	A	0.304	2.285	0.617	0.8	1	6.281	0.94	150.33	C
275.00-268.75			B	0.453	1.969	0.675	0.8	1	10.222			
			C	0.605	1.801	0.757	0.8	1	15.333			
T17	0.29	0.71	A	0.304	2.285	0.617	0.8	1	6.281	0.93	149.33	C
268.75-262.50			B	0.453	1.969	0.675	0.8	1	10.222			
			C	0.605	1.801	0.757	0.8	1	15.333			
T18	0.29	0.71	A	0.304	2.285	0.617	0.8	1	6.281	0.93	148.32	C
262.50-256.25			B	0.453	1.969	0.675	0.8	1	10.222			
			C	0.605	1.801	0.757	0.8	1	15.333			
T19	0.29	0.74	A	0.309	2.273	0.619	0.8	1	6.393	0.93	148.32	C
256.25-250.00			B	0.457	1.962	0.677	0.8	1	10.347			
			C	0.609	1.799	0.759	0.8	1	15.456			
T20	0.29	0.83	A	0.319	2.247	0.622	0.8	1	6.807	0.94	149.66	C
250.00-243.75			B	0.466	1.948	0.681	0.8	1	10.718			
			C	0.615	1.795	0.763	0.8	1	15.740			
T21	0.50	0.83	A	0.367	2.133	0.639	0.8	1	7.989	1.33	212.45	C
243.75-237.50			B	0.466	1.948	0.681	0.8	1	10.718			
			C	0.605	1.801	0.757	0.8	1	15.362			
T22	0.52	0.83	A	0.373	2.119	0.641	0.8	1	8.157	1.37	219.51	C
237.50-231.25			B	0.466	1.948	0.681	0.8	1	10.718			
			C	0.604	1.802	0.756	0.8	1	15.311			
T23	0.52	0.90	A	0.382	2.1	0.644	0.8	1	8.385	1.37	219.49	C
231.25-225.00			B	0.474	1.936	0.685	0.8	1	10.971			
			C	0.61	1.798	0.76	0.8	1	15.516			
T24	0.52	1.20	A	0.429	2.01	0.664	0.8	1	10.016	1.41	226.37	C
225.00-218.75		TA 1.10	B	0.519	1.876	0.708	0.8	1	12.596			
			C	0.637	1.786	0.777	0.8	1	16.567			
T25	0.52	0.73	A	0.363	2.142	0.637	0.8	1	7.863	1.32	211.53	C
218.75-212.50			B	0.456	1.964	0.676	0.8	1	10.390			
			C	0.596	1.806	0.751	0.8	1	14.965			
T26	0.52	0.63	A	0.354	2.163	0.634	0.8	1	7.476	1.30	207.84	C
212.50-206.25			B	0.447	1.978	0.672	0.8	1	10.017			
			C	0.591	1.81	0.748	0.8	1	14.722			
T27	0.52	0.63	A	0.354	2.163	0.634	0.8	1	7.476	1.29	206.05	C
206.25-200.00			B	0.447	1.978	0.672	0.8	1	10.017			
			C	0.591	1.81	0.748	0.8	1	14.722			
T28	2.14	2.73	A	0.423	2.021	0.661	0.8	1	37.270	5.42	216.71	C
200.00-175.00			B	0.482	1.924	0.689	0.8	1	44.256			
			C	0.642	1.784	0.78	0.8	1	66.771			
T29	0.54	0.80	A	0.439	1.992	0.668	0.8	1	9.817	1.32	210.41	C
175.00-168.75			B	0.499	1.902	0.697	0.8	1	11.627			
			C	0.637	1.786	0.777	0.8	1	16.561			
T30	0.54	0.80	A	0.439	1.993	0.668	0.8	1	9.808	1.30	208.10	C
168.75-162.50			B	0.498	1.902	0.697	0.8	1	11.617			
			C	0.637	1.786	0.777	0.8	1	16.549			
T31	0.54	0.81	A	0.435	1.999	0.666	0.8	1	9.816	1.28	205.20	C
162.50-156.25			B	0.495	1.907	0.695	0.8	1	11.590			
			C	0.634	1.787	0.775	0.8	1	16.465			
T32	0.54	0.71	A	0.426	2.016	0.662	0.8	1	9.432	1.26	201.05	C
156.25-150.00			B	0.486	1.919	0.69	0.8	1	11.219			
			C	0.628	1.789	0.771	0.8	1	16.225			
T33	2.22	2.84	A	0.445	1.981	0.671	0.8	1	39.995	5.20	207.81	C
150.00-125.00			B	0.508	1.889	0.702	0.8	1	47.747			
			C	0.671	1.777	0.799	0.8	1	71.787			
T34	2.26	3.54	A	0.524	1.871	0.71	0.8	1	50.867	5.59	223.73	C
125.00-100.00			B	0.598	1.805	0.752	0.8	1	60.780			
			C	0.752	1.788	0.858	0.8	1	85.886			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T35	0.56	1.28	A	0.533	1.861	0.715	0.8	1	13.087	1.35	216.28	C
100.00-93.75		TA 1.10	B	0.607	1.8	0.758	0.8	1	15.550			
			C	0.757	1.791	0.862	0.8	1	21.704			
T36	0.57	0.83	A	0.472	1.939	0.684	0.8	1	10.902	1.26	201.44	C
93.75-87.50			B	0.554	1.84	0.727	0.8	1	13.552			
			C	0.725	1.78	0.838	0.8	1	20.318			
T37	0.59	0.71	A	0.458	1.96	0.677	0.8	1	10.386	1.38	220.57	C
87.50-81.25			B	0.614	1.796	0.762	0.8	1	15.716			
			C	0.789	1.808	0.888	0.8	1	23.286			
T38	0.59	0.71	A	0.458	1.96	0.677	0.8	1	10.386	1.35	215.77	C
81.25-75.00			B	0.614	1.796	0.762	0.8	1	15.716			
			C	0.789	1.808	0.888	0.8	1	23.286			
T39	2.36	2.84	A	0.474	1.936	0.685	0.8	1	43.451	5.06	202.45	C
75.00-50.00			B	0.629	1.789	0.772	0.8	1	65.241			
			C	0.789	1.808	0.888	0.8	1	93.146			
T40	2.41	2.87	A	0.513	1.883	0.704	0.8	1	48.471	4.38	175.35	C
50.00-25.00			B	0.668	1.778	0.798	0.8	1	71.394			
			C	0.791	1.809	0.889	0.8	1	93.379			
T41	2.13	2.84	A	0.488	1.916	0.692	0.8	1	45.185	3.62	144.64	C
25.00-0.00			B	0.625	1.791	0.769	0.8	1	64.512			
			C	0.722	1.779	0.836	0.8	1	80.468			
Sum Weight:	24.83	51.11								64.98		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.88	A	0.307	2.278	0.618	0.85	1	7.268	0.61	98.09	C
368.75-362.50			B	0.294	2.313	0.614	0.85	1	6.974			
			C	0.307	2.278	0.618	0.85	1	7.268			
T2	0.01	1.38	A	0.346	2.181	0.631	0.85	1	8.303	0.67	106.77	C
362.50-356.25			B	0.313	2.262	0.62	0.85	1	7.548			
			C	0.346	2.181	0.631	0.85	1	8.303			
T3	0.02	1.38	A	0.346	2.181	0.631	0.85	1	8.303	0.69	111.14	C
356.25-350.00			B	0.339	2.197	0.629	0.85	1	8.150			
			C	0.372	2.121	0.641	0.85	1	8.931			
T4	0.04	0.98	A	0.352	2.167	0.633	0.85	1	8.474	0.79	126.33	C
350.00-343.75		TA 1.10	B	0.418	2.029	0.659	0.85	1	10.102			
			C	0.451	1.972	0.674	0.85	1	10.976			
T5	0.04	0.73	A	0.261	2.404	0.605	0.85	1	5.511	0.61	97.92	C
343.75-337.50			B	0.327	2.226	0.625	0.85	1	7.037			
			C	0.36	2.148	0.636	0.85	1	7.850			
T6	0.04	0.63	A	0.251	2.433	0.602	0.85	1	5.045	0.58	92.60	C
337.50-331.25			B	0.317	2.251	0.621	0.85	1	6.571			
			C	0.35	2.171	0.633	0.85	1	7.385			
T7	0.04	0.63	A	0.251	2.433	0.602	0.85	1	5.045	0.58	92.11	C
331.25-325.00			B	0.317	2.251	0.621	0.85	1	6.571			
			C	0.35	2.171	0.633	0.85	1	7.385			
T8	0.05	0.74	A	0.309	2.272	0.619	0.85	1	6.400	0.61	97.29	B
325.00-318.75			B	0.375	2.116	0.642	0.85	1	8.047			
			C	0.361	2.146	0.637	0.85	1	7.695			
T9	0.05	0.74	A	0.309	2.273	0.619	0.85	1	6.393	0.60	96.69	B
318.75-312.50			B	0.375	2.117	0.642	0.85	1	8.040			
			C	0.361	2.146	0.636	0.85	1	7.688			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T10	0.05	0.74	A	0.309	2.273	0.619	0.85	1	6.393	0.60	96.14	B
312.50-306.25			B	0.375	2.117	0.642	0.85	1	8.040			
			C	0.361	2.146	0.636	0.85	1	7.688			
T11	0.24	0.83	A	0.319	2.247	0.622	0.85	1	6.857	0.90	143.71	C
306.25-300.00			B	0.45	1.974	0.673	0.85	1	10.287			
			C	0.566	1.829	0.734	0.85	1	13.993			
T12	0.29	1.06	A	0.404	2.057	0.653	0.85	1	9.759	1.13	180.73	C
300.00-293.75		TA 1.10	B	0.542	1.852	0.72	0.85	1	13.606			
			C	0.673	1.777	0.801	0.85	1	18.218			
T13	0.29	0.83	A	0.319	2.247	0.622	0.85	1	6.857	0.98	157.14	C
293.75-287.50			B	0.466	1.948	0.681	0.85	1	10.762			
			C	0.615	1.795	0.763	0.85	1	15.773			
T14	0.29	0.71	A	0.304	2.285	0.617	0.85	1	6.281	0.95	152.27	C
287.50-281.25			B	0.453	1.969	0.675	0.85	1	10.222			
			C	0.605	1.801	0.757	0.85	1	15.333			
T15	0.29	0.71	A	0.304	2.285	0.617	0.85	1	6.281	0.95	151.31	C
281.25-275.00			B	0.453	1.969	0.675	0.85	1	10.222			
			C	0.605	1.801	0.757	0.85	1	15.333			
T16	0.29	0.71	A	0.304	2.285	0.617	0.85	1	6.281	0.94	150.33	C
275.00-268.75			B	0.453	1.969	0.675	0.85	1	10.222			
			C	0.605	1.801	0.757	0.85	1	15.333			
T17	0.29	0.71	A	0.304	2.285	0.617	0.85	1	6.281	0.93	149.33	C
268.75-262.50			B	0.453	1.969	0.675	0.85	1	10.222			
			C	0.605	1.801	0.757	0.85	1	15.333			
T18	0.29	0.71	A	0.304	2.285	0.617	0.85	1	6.281	0.93	148.32	C
262.50-256.25			B	0.453	1.969	0.675	0.85	1	10.222			
			C	0.605	1.801	0.757	0.85	1	15.333			
T19	0.29	0.74	A	0.309	2.273	0.619	0.85	1	6.393	0.93	148.32	C
256.25-250.00			B	0.457	1.962	0.677	0.85	1	10.347			
			C	0.609	1.799	0.759	0.85	1	15.456			
T20	0.29	0.83	A	0.319	2.247	0.622	0.85	1	6.857	0.94	149.98	C
250.00-243.75			B	0.466	1.948	0.681	0.85	1	10.762			
			C	0.615	1.795	0.763	0.85	1	15.773			
T21	0.50	0.83	A	0.367	2.133	0.639	0.85	1	8.035	1.33	212.73	C
243.75-237.50			B	0.466	1.948	0.681	0.85	1	10.762			
			C	0.605	1.801	0.757	0.85	1	15.391			
T22	0.52	0.83	A	0.373	2.119	0.641	0.85	1	8.203	1.37	219.78	C
237.50-231.25			B	0.466	1.948	0.681	0.85	1	10.762			
			C	0.604	1.802	0.756	0.85	1	15.339			
T23	0.52	0.90	A	0.382	2.1	0.644	0.85	1	8.431	1.37	219.75	C
231.25-225.00			B	0.474	1.936	0.685	0.85	1	11.015			
			C	0.61	1.798	0.76	0.85	1	15.545			
T24	0.52	1.20	A	0.429	2.01	0.664	0.85	1	10.209	1.42	227.47	C
225.00-218.75		TA 1.10	B	0.519	1.876	0.708	0.85	1	12.782			
			C	0.637	1.786	0.777	0.85	1	16.687			
T25	0.52	0.73	A	0.363	2.142	0.637	0.85	1	7.909	1.32	211.80	C
218.75-212.50			B	0.456	1.964	0.676	0.85	1	10.434			
			C	0.596	1.806	0.751	0.85	1	14.994			
T26	0.52	0.63	A	0.354	2.163	0.634	0.85	1	7.476	1.30	207.84	C
212.50-206.25			B	0.447	1.978	0.672	0.85	1	10.017			
			C	0.591	1.81	0.748	0.85	1	14.722			
T27	0.52	0.63	A	0.354	2.163	0.634	0.85	1	7.476	1.29	206.05	C
206.25-200.00			B	0.447	1.978	0.672	0.85	1	10.017			
			C	0.591	1.81	0.748	0.85	1	14.722			
T28	2.14	2.73	A	0.423	2.021	0.661	0.85	1	37.270	5.42	216.71	C
200.00-175.00			B	0.482	1.924	0.689	0.85	1	44.256			
			C	0.642	1.784	0.78	0.85	1	66.771			
T29	0.54	0.80	A	0.439	1.992	0.668	0.85	1	9.817	1.32	210.41	C
175.00-168.75			B	0.499	1.902	0.697	0.85	1	11.627			
			C	0.637	1.786	0.777	0.85	1	16.561			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T30	0.54	0.80	A	0.439	1.993	0.668	0.85	1	9.808	1.30	208.10	C
168.75-162.50			B	0.498	1.902	0.697	0.85	1	11.617			
			C	0.637	1.786	0.777	0.85	1	16.549			
T31	0.54	0.81	A	0.435	1.999	0.666	0.85	1	9.862	1.28	205.44	C
162.50-156.25			B	0.495	1.907	0.695	0.85	1	11.634			
			C	0.634	1.787	0.775	0.85	1	16.494			
T32	0.54	0.71	A	0.426	2.016	0.662	0.85	1	9.432	1.26	201.05	C
156.25-150.00			B	0.486	1.919	0.69	0.85	1	11.219			
			C	0.628	1.789	0.771	0.85	1	16.225			
T33	2.22	2.84	A	0.445	1.981	0.671	0.85	1	39.995	5.20	207.81	C
150.00-125.00			B	0.508	1.889	0.702	0.85	1	47.747			
			C	0.671	1.777	0.799	0.85	1	71.787			
T34	2.26	3.54	A	0.524	1.871	0.71	0.85	1	51.453	5.61	224.42	C
125.00-100.00			B	0.598	1.805	0.752	0.85	1	61.345			
			C	0.752	1.788	0.858	0.85	1	86.252			
T35	0.56	1.28	A	0.533	1.861	0.715	0.85	1	13.279	1.36	217.15	C
100.00-93.75		TA 1.10	B	0.607	1.8	0.758	0.85	1	15.735			
			C	0.757	1.791	0.862	0.85	1	21.824			
T36	0.57	0.83	A	0.472	1.939	0.684	0.85	1	10.948	1.26	201.69	C
93.75-87.50			B	0.554	1.84	0.727	0.85	1	13.604			
			C	0.725	1.78	0.838	0.85	1	20.354			
T37	0.59	0.71	A	0.458	1.96	0.677	0.85	1	10.386	1.38	221.21	C
87.50-81.25			B	0.614	1.796	0.762	0.85	1	15.807			
			C	0.789	1.808	0.888	0.85	1	23.377			
T38	0.59	0.71	A	0.458	1.96	0.677	0.85	1	10.386	1.35	216.40	C
81.25-75.00			B	0.614	1.796	0.762	0.85	1	15.807			
			C	0.789	1.808	0.888	0.85	1	23.377			
T39	2.36	2.84	A	0.474	1.936	0.685	0.85	1	43.451	5.08	203.03	C
75.00-50.00			B	0.629	1.789	0.772	0.85	1	65.604			
			C	0.789	1.808	0.888	0.85	1	93.508			
T40	2.41	2.87	A	0.513	1.883	0.704	0.85	1	48.517	4.40	175.90	C
50.00-25.00			B	0.668	1.778	0.798	0.85	1	71.801			
			C	0.791	1.809	0.889	0.85	1	93.770			
T41	2.13	2.84	A	0.488	1.916	0.692	0.85	1	45.185	3.63	145.07	C
25.00-0.00			B	0.625	1.791	0.769	0.85	1	64.831			
			C	0.722	1.779	0.836	0.85	1	80.787			
Sum Weight:	24.83	51.11								65.16		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	1	1	6.019	0.21	33.23	C
368.75-362.50			B	0.215	2.545	0.594	1	1	5.877			
			C	0.223	2.523	0.595	1	1	6.019			
T2	0.00	1.09	A	0.253	2.43	0.603	1	1	6.887	0.23	36.44	C
362.50-356.25			B	0.235	2.484	0.598	1	1	6.526			
			C	0.253	2.43	0.603	1	1	6.887			
T3	0.01	1.09	A	0.253	2.43	0.603	1	1	6.887	0.23	37.16	C
356.25-350.00			B	0.249	2.44	0.602	1	1	6.814			
			C	0.267	2.388	0.606	1	1	7.180			
T4	0.01	0.77	A	0.259	2.41	0.604	1	1	7.042	0.25	39.90	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	1	1	7.789			
			C	0.312	2.264	0.62	1	1	8.174			

tnxTower	Job: 15001.008 - Montville	Page: 56 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T5	0.01	0.61	A	0.167	2.709	0.584	1	1	3.616	0.16	25.48	C
343.75-337.50			B	0.202	2.588	0.591	1	1	4.329			
			C	0.22	2.531	0.595	1	1	4.694			
T6	0.01	0.54	A	0.157	2.746	0.583	1	1	3.002	0.14	22.31	C
337.50-331.25			B	0.192	2.622	0.589	1	1	3.715			
			C	0.21	2.563	0.592	1	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	1	1	3.002	0.14	22.19	C
331.25-325.00			B	0.192	2.622	0.589	1	1	3.715			
			C	0.21	2.563	0.592	1	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	1	1	3.897	0.15	24.30	B
325.00-318.75			B	0.235	2.482	0.598	1	1	4.641			
			C	0.222	2.525	0.595	1	1	4.346			
T9	0.02	0.64	A	0.2	2.595	0.59	1	1	3.894	0.15	24.16	B
318.75-312.50			B	0.235	2.482	0.598	1	1	4.637			
			C	0.222	2.526	0.595	1	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	1	1	3.894	0.15	24.02	B
312.50-306.25			B	0.235	2.482	0.598	1	1	4.637			
			C	0.222	2.526	0.595	1	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	1	1	4.506	0.22	35.86	C
306.25-300.00			B	0.292	2.317	0.614	1	1	6.265			
			C	0.372	2.122	0.641	1	1	8.146			
T12	0.12	0.85	A	0.296	2.306	0.615	1	1	7.841	0.30	47.53	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	1	1	9.737			
			C	0.475	1.934	0.685	1	1	11.916			
T13	0.12	0.71	A	0.21	2.562	0.593	1	1	4.506	0.24	38.02	C
293.75-287.50			B	0.304	2.286	0.617	1	1	6.528			
			C	0.407	2.05	0.655	1	1	9.048			
T14	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.22	35.74	C
287.50-281.25			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.22	35.51	C
281.25-275.00			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T16	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.22	35.28	C
275.00-268.75			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.22	35.05	C
268.75-262.50			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	1	1	3.795	0.22	34.81	C
262.50-256.25			B	0.29	2.323	0.613	1	1	5.857			
			C	0.395	2.073	0.65	1	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	1	1	3.894	0.22	34.86	C
256.25-250.00			B	0.295	2.311	0.614	1	1	5.960			
			C	0.399	2.066	0.651	1	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	1	1	4.506	0.23	36.29	C
250.00-243.75			B	0.304	2.286	0.617	1	1	6.528			
			C	0.407	2.05	0.655	1	1	9.048			
T21	0.22	0.71	A	0.249	2.44	0.602	1	1	5.315	0.37	59.36	C
243.75-237.50			B	0.304	2.286	0.617	1	1	6.528			
			C	0.404	2.057	0.653	1	1	8.931			
T22	0.23	0.71	A	0.255	2.424	0.603	1	1	5.428	0.39	62.07	C
237.50-231.25			B	0.304	2.286	0.617	1	1	6.528			
			C	0.403	2.058	0.653	1	1	8.915			
T23	0.23	0.77	A	0.264	2.397	0.605	1	1	5.627	0.39	62.09	C
231.25-225.00			B	0.313	2.263	0.62	1	1	6.736			
			C	0.41	2.045	0.656	1	1	9.100			
T24	0.23	0.95	A	0.312	2.266	0.62	1	1	7.829	0.42	66.87	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	1	1	8.916			
			C	0.445	1.981	0.671	1	1	10.794			

tnxTower	Job	Page
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Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	**Project** 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	**Date** 09:32:33 02/13/15
	Client Verizon Wireless	**Designed by** TJL

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T25	0.23	0.61	A	0.243	2.458	0.6	1	1	5.167	0.37	59.82	C
218.75-212.50			B	0.293	2.315	0.614	1	1	6.254			
			C	0.393	2.077	0.649	1	1	8.630			
T26	0.23	0.54	A	0.234	2.487	0.598	1	1	4.585	0.36	57.82	C
212.50-206.25			B	0.283	2.341	0.611	1	1	5.683			
			C	0.386	2.092	0.646	1	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	1	1	4.585	0.36	57.33	C
206.25-200.00			B	0.283	2.341	0.611	1	1	5.683			
			C	0.386	2.092	0.646	1	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	1	1	21.863	1.46	58.25	C
200.00-175.00			B	0.306	2.281	0.618	1	1	24.776			
			C	0.418	2.029	0.659	1	1	36.189			
T29	0.24	0.69	A	0.289	2.325	0.613	1	1	5.842	0.36	57.10	C
175.00-168.75			B	0.321	2.241	0.623	1	1	6.587			
			C	0.42	2.025	0.66	1	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	1	1	5.838	0.35	56.49	C
168.75-162.50			B	0.321	2.242	0.623	1	1	6.583			
			C	0.42	2.025	0.66	1	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	1	1	6.106	0.35	56.51	C
162.50-156.25			B	0.317	2.252	0.621	1	1	6.834			
			C	0.417	2.031	0.659	1	1	9.295			
T32	0.24	0.61	A	0.276	2.363	0.609	1	1	5.527	0.34	54.55	C
156.25-150.00			B	0.308	2.276	0.618	1	1	6.265			
			C	0.41	2.045	0.656	1	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	1	1	23.068	1.35	54.13	C
150.00-125.00			B	0.316	2.254	0.621	1	1	25.860			
			C	0.429	2.01	0.664	1	1	37.514			
T34	0.98	2.84	A	0.361	2.146	0.637	1	1	34.640	1.44	57.65	C
125.00-100.00			B	0.393	2.079	0.649	1	1	37.695			
			C	0.498	1.903	0.696	1	1	48.413			
T35	0.24	1.03	A	0.371	2.125	0.64	1	1	9.228	0.35	56.30	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	1	1	9.981			
			C	0.505	1.894	0.7	1	1	12.536			
T36	0.24	0.71	A	0.307	2.277	0.618	1	1	6.613	0.32	50.53	C
93.75-87.50			B	0.343	2.189	0.63	1	1	7.450			
			C	0.459	1.958	0.678	1	1	10.485			
T37	0.25	0.61	A	0.293	2.314	0.614	1	1	5.929	0.31	50.26	C
87.50-81.25			B	0.363	2.143	0.637	1	1	7.611			
			C	0.482	1.924	0.689	1	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	1	1	5.929	0.31	49.17	C
81.25-75.00			B	0.363	2.143	0.637	1	1	7.611			
			C	0.482	1.924	0.689	1	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	1	1	24.497	1.15	46.13	C
75.00-50.00			B	0.371	2.124	0.64	1	1	31.304			
			C	0.482	1.924	0.689	1	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	1	1	26.938	1.00	40.08	C
50.00-25.00			B	0.393	2.078	0.649	1	1	33.925			
			C	0.484	1.921	0.69	1	1	44.229			
T41	0.91	2.45	A	0.306	2.279	0.618	1	1	24.954	0.87	34.76	C
25.00-0.00			B	0.368	2.132	0.639	1	1	30.948			
			C	0.442	1.987	0.67	1	1	39.021			
Sum Weight:	10.69	42.50								16.74		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	0.8	1	5.184	0.18	28.62	C
368.75-362.50			B	0.215	2.545	0.594	0.8	1	5.041			
			C	0.223	2.523	0.595	0.8	1	5.184			
T2	0.00	1.09	A	0.253	2.43	0.603	0.8	1	5.924	0.20	31.35	C
362.50-356.25			B	0.235	2.484	0.598	0.8	1	5.563			
			C	0.253	2.43	0.603	0.8	1	5.924			
T3	0.01	1.09	A	0.253	2.43	0.603	0.8	1	5.924	0.20	32.18	C
356.25-350.00			B	0.249	2.44	0.602	0.8	1	5.852			
			C	0.267	2.388	0.606	0.8	1	6.218			
T4	0.01	0.77	A	0.259	2.41	0.604	0.8	1	6.081	0.22	35.21	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	0.8	1	6.828			
			C	0.312	2.264	0.62	0.8	1	7.213			
T5	0.01	0.61	A	0.167	2.709	0.584	0.8	1	3.418	0.15	24.40	C
343.75-337.50			B	0.202	2.588	0.591	0.8	1	4.131			
			C	0.22	2.531	0.595	0.8	1	4.496			
T6	0.01	0.54	A	0.157	2.746	0.583	0.8	1	3.002	0.14	22.31	C
337.50-331.25			B	0.192	2.622	0.589	0.8	1	3.715			
			C	0.21	2.563	0.592	0.8	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	0.8	1	3.002	0.14	22.19	C
331.25-325.00			B	0.192	2.622	0.589	0.8	1	3.715			
			C	0.21	2.563	0.592	0.8	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.897	0.15	24.30	B
325.00-318.75			B	0.235	2.482	0.598	0.8	1	4.641			
			C	0.222	2.525	0.595	0.8	1	4.346			
T9	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.15	24.16	B
318.75-312.50			B	0.235	2.482	0.598	0.8	1	4.637			
			C	0.222	2.526	0.595	0.8	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.15	24.02	B
312.50-306.25			B	0.235	2.482	0.598	0.8	1	4.637			
			C	0.222	2.526	0.595	0.8	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.22	35.14	C
306.25-300.00			B	0.292	2.317	0.614	0.8	1	6.079			
			C	0.372	2.122	0.641	0.8	1	7.982			
T12	0.12	0.85	A	0.296	2.306	0.615	0.8	1	6.887	0.28	44.52	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	0.8	1	8.850			
			C	0.475	1.934	0.685	0.8	1	11.161			
T13	0.12	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.23	37.36	C
293.75-287.50			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.407	2.05	0.655	0.8	1	8.892			
T14	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.22	35.74	C
287.50-281.25			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.22	35.51	C
281.25-275.00			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T16	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.22	35.28	C
275.00-268.75			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.22	35.05	C
268.75-262.50			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	0.8	1	3.795	0.22	34.81	C
262.50-256.25			B	0.29	2.323	0.613	0.8	1	5.857			
			C	0.395	2.073	0.65	0.8	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	0.8	1	3.894	0.22	34.86	C
256.25-250.00			B	0.295	2.311	0.614	0.8	1	5.960			
			C	0.399	2.066	0.651	0.8	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	0.8	1	4.309	0.22	35.66	C
250.00-243.75			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.407	2.05	0.655	0.8	1	8.892			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T21	0.22	0.71	A	0.249	2.44	0.602	0.8	1	5.127	0.37	58.78	C
243.75-237.50			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.404	2.057	0.653	0.8	1	8.787			
T22	0.23	0.71	A	0.255	2.424	0.603	0.8	1	5.241	0.38	61.51	C
237.50-231.25			B	0.304	2.286	0.617	0.8	1	6.345			
			C	0.403	2.058	0.653	0.8	1	8.773			
T23	0.23	0.77	A	0.264	2.397	0.605	0.8	1	5.440	0.38	61.53	C
231.25-225.00			B	0.313	2.263	0.62	0.8	1	6.552			
			C	0.41	2.045	0.656	0.8	1	8.958			
T24	0.23	0.95	A	0.312	2.266	0.62	0.8	1	7.043	0.40	64.62	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	0.8	1	8.145			
			C	0.445	1.981	0.671	0.8	1	10.195			
T25	0.23	0.61	A	0.243	2.458	0.6	0.8	1	4.980	0.37	59.26	C
218.75-212.50			B	0.293	2.315	0.614	0.8	1	6.070			
			C	0.393	2.077	0.649	0.8	1	8.487			
T26	0.23	0.54	A	0.234	2.487	0.598	0.8	1	4.585	0.36	57.82	C
212.50-206.25			B	0.283	2.341	0.611	0.8	1	5.683			
			C	0.386	2.092	0.646	0.8	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	0.8	1	4.585	0.36	57.33	C
206.25-200.00			B	0.283	2.341	0.611	0.8	1	5.683			
			C	0.386	2.092	0.646	0.8	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	0.8	1	21.863	1.46	58.25	C
200.00-175.00			B	0.306	2.281	0.618	0.8	1	24.776			
			C	0.418	2.029	0.659	0.8	1	36.189			
T29	0.24	0.69	A	0.289	2.325	0.613	0.8	1	5.842	0.36	57.10	C
175.00-168.75			B	0.321	2.241	0.623	0.8	1	6.587			
			C	0.42	2.025	0.66	0.8	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	0.8	1	5.838	0.35	56.49	C
168.75-162.50			B	0.321	2.242	0.623	0.8	1	6.583			
			C	0.42	2.025	0.66	0.8	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	0.8	1	5.920	0.35	56.01	C
162.50-156.25			B	0.317	2.252	0.621	0.8	1	6.651			
			C	0.417	2.031	0.659	0.8	1	9.153			
T32	0.24	0.61	A	0.276	2.363	0.609	0.8	1	5.527	0.34	54.55	C
156.25-150.00			B	0.308	2.276	0.618	0.8	1	6.265			
			C	0.41	2.045	0.656	0.8	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	0.8	1	23.068	1.35	54.13	C
150.00-125.00			B	0.316	2.254	0.621	0.8	1	25.860			
			C	0.429	2.01	0.664	0.8	1	37.514			
T34	0.98	2.84	A	0.361	2.146	0.637	0.8	1	32.250	1.41	56.30	C
125.00-100.00			B	0.393	2.079	0.649	0.8	1	35.348			
			C	0.498	1.903	0.696	0.8	1	46.594			
T35	0.24	1.03	A	0.371	2.125	0.64	0.8	1	8.444	0.34	54.61	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	0.8	1	9.211			
			C	0.505	1.894	0.7	0.8	1	11.939			
T36	0.24	0.71	A	0.307	2.277	0.618	0.8	1	6.426	0.31	50.12	C
93.75-87.50			B	0.343	2.189	0.63	0.8	1	7.267			
			C	0.459	1.958	0.678	0.8	1	10.343			
T37	0.25	0.61	A	0.293	2.314	0.614	0.8	1	5.929	0.31	50.26	C
87.50-81.25			B	0.363	2.143	0.637	0.8	1	7.611			
			C	0.482	1.924	0.689	0.8	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	0.8	1	5.929	0.31	49.17	C
81.25-75.00			B	0.363	2.143	0.637	0.8	1	7.611			
			C	0.482	1.924	0.689	0.8	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	0.8	1	24.497	1.15	46.13	C
75.00-50.00			B	0.371	2.124	0.64	0.8	1	31.304			
			C	0.482	1.924	0.689	0.8	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	0.8	1	26.751	1.00	40.00	C
50.00-25.00			B	0.393	2.078	0.649	0.8	1	33.741			
			C	0.484	1.921	0.69	0.8	1	44.087			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T41	0.91	2.45	A	0.306	2.279	0.618	0.8	1	24.954	0.87	34.76	C
25.00-0.00			B	0.368	2.132	0.639	0.8	1	30.948			
			C	0.442	1.987	0.67	0.8	1	39.021			
Sum Weight:	10.69	42.50								16.50		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w plf	Ctrl. Face
T1	0.00	0.68	A	0.223	2.523	0.595	0.85	1	5.392	0.19	29.77	C
368.75-362.50			B	0.215	2.545	0.594	0.85	1	5.250			
			C	0.223	2.523	0.595	0.85	1	5.392			
T2	0.00	1.09	A	0.253	2.43	0.603	0.85	1	6.165	0.20	32.62	C
362.50-356.25			B	0.235	2.484	0.598	0.85	1	5.804			
			C	0.253	2.43	0.603	0.85	1	6.165			
T3	0.01	1.09	A	0.253	2.43	0.603	0.85	1	6.165	0.21	33.42	C
356.25-350.00			B	0.249	2.44	0.602	0.85	1	6.092			
			C	0.267	2.388	0.606	0.85	1	6.458			
T4	0.01	0.77	A	0.259	2.41	0.604	0.85	1	6.321	0.23	36.38	C
350.00-343.75		TA 0.79	B	0.295	2.311	0.614	0.85	1	7.068			
			C	0.312	2.264	0.62	0.85	1	7.453			
T5	0.01	0.61	A	0.167	2.709	0.584	0.85	1	3.467	0.15	24.67	C
343.75-337.50			B	0.202	2.588	0.591	0.85	1	4.181			
			C	0.22	2.531	0.595	0.85	1	4.546			
T6	0.01	0.54	A	0.157	2.746	0.583	0.85	1	3.002	0.14	22.31	C
337.50-331.25			B	0.192	2.622	0.589	0.85	1	3.715			
			C	0.21	2.563	0.592	0.85	1	4.080			
T7	0.01	0.54	A	0.157	2.746	0.583	0.85	1	3.002	0.14	22.19	C
331.25-325.00			B	0.192	2.622	0.589	0.85	1	3.715			
			C	0.21	2.563	0.592	0.85	1	4.080			
T8	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.897	0.15	24.30	B
325.00-318.75			B	0.235	2.482	0.598	0.85	1	4.641			
			C	0.222	2.525	0.595	0.85	1	4.346			
T9	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.15	24.16	B
318.75-312.50			B	0.235	2.482	0.598	0.85	1	4.637			
			C	0.222	2.526	0.595	0.85	1	4.343			
T10	0.02	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.15	24.02	B
312.50-306.25			B	0.235	2.482	0.598	0.85	1	4.637			
			C	0.222	2.526	0.595	0.85	1	4.343			
T11	0.10	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.22	35.32	C
306.25-300.00			B	0.292	2.317	0.614	0.85	1	6.125			
			C	0.372	2.122	0.641	0.85	1	8.023			
T12	0.12	0.85	A	0.296	2.306	0.615	0.85	1	7.126	0.28	45.27	C
300.00-293.75		TA 0.79	B	0.384	2.096	0.645	0.85	1	9.071			
			C	0.475	1.934	0.685	0.85	1	11.350			
T13	0.12	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.23	37.53	C
293.75-287.50			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.407	2.05	0.655	0.85	1	8.931			
T14	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.22	35.74	C
287.50-281.25			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T15	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.22	35.51	C
281.25-275.00			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T16	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.22	35.28	C
275.00-268.75			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T17	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.22	35.05	C
268.75-262.50			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T18	0.12	0.61	A	0.195	2.611	0.589	0.85	1	3.795	0.22	34.81	C
262.50-256.25			B	0.29	2.323	0.613	0.85	1	5.857			
			C	0.395	2.073	0.65	0.85	1	8.464			
T19	0.12	0.64	A	0.2	2.595	0.59	0.85	1	3.894	0.22	34.86	C
256.25-250.00			B	0.295	2.311	0.614	0.85	1	5.960			
			C	0.399	2.066	0.651	0.85	1	8.565			
T20	0.12	0.71	A	0.21	2.562	0.593	0.85	1	4.358	0.22	35.82	C
250.00-243.75			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.407	2.05	0.655	0.85	1	8.931			
T21	0.22	0.71	A	0.249	2.44	0.602	0.85	1	5.174	0.37	58.93	C
243.75-237.50			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.404	2.057	0.653	0.85	1	8.823			
T22	0.23	0.71	A	0.255	2.424	0.603	0.85	1	5.288	0.39	61.65	C
237.50-231.25			B	0.304	2.286	0.617	0.85	1	6.391			
			C	0.403	2.058	0.653	0.85	1	8.808			
T23	0.23	0.77	A	0.264	2.397	0.605	0.85	1	5.487	0.39	61.67	C
231.25-225.00			B	0.313	2.263	0.62	0.85	1	6.598			
			C	0.41	2.045	0.656	0.85	1	8.994			
T24	0.23	0.95	A	0.312	2.266	0.62	0.85	1	7.240	0.41	65.18	C
225.00-218.75		TA 0.79	B	0.36	2.149	0.636	0.85	1	8.338			
			C	0.445	1.981	0.671	0.85	1	10.345			
T25	0.23	0.61	A	0.243	2.458	0.6	0.85	1	5.027	0.37	59.40	C
218.75-212.50			B	0.293	2.315	0.614	0.85	1	6.116			
			C	0.393	2.077	0.649	0.85	1	8.523			
T26	0.23	0.54	A	0.234	2.487	0.598	0.85	1	4.585	0.36	57.82	C
212.50-206.25			B	0.283	2.341	0.611	0.85	1	5.683			
			C	0.386	2.092	0.646	0.85	1	8.186			
T27	0.23	0.54	A	0.234	2.487	0.598	0.85	1	4.585	0.36	57.33	C
206.25-200.00			B	0.283	2.341	0.611	0.85	1	5.683			
			C	0.386	2.092	0.646	0.85	1	8.186			
T28	0.94	2.28	A	0.274	2.368	0.608	0.85	1	21.863	1.46	58.25	C
200.00-175.00			B	0.306	2.281	0.618	0.85	1	24.776			
			C	0.418	2.029	0.659	0.85	1	36.189			
T29	0.24	0.69	A	0.289	2.325	0.613	0.85	1	5.842	0.36	57.10	C
175.00-168.75			B	0.321	2.241	0.623	0.85	1	6.587			
			C	0.42	2.025	0.66	0.85	1	9.143			
T30	0.24	0.69	A	0.289	2.325	0.613	0.85	1	5.838	0.35	56.49	C
168.75-162.50			B	0.321	2.242	0.623	0.85	1	6.583			
			C	0.42	2.025	0.66	0.85	1	9.139			
T31	0.24	0.69	A	0.285	2.336	0.611	0.85	1	5.966	0.35	56.14	C
162.50-156.25			B	0.317	2.252	0.621	0.85	1	6.696			
			C	0.417	2.031	0.659	0.85	1	9.189			
T32	0.24	0.61	A	0.276	2.363	0.609	0.85	1	5.527	0.34	54.55	C
156.25-150.00			B	0.308	2.276	0.618	0.85	1	6.265			
			C	0.41	2.045	0.656	0.85	1	8.854			
T33	0.96	2.45	A	0.286	2.333	0.612	0.85	1	23.068	1.35	54.13	C
150.00-125.00			B	0.316	2.254	0.621	0.85	1	25.860			
			C	0.429	2.01	0.664	0.85	1	37.514			
T34	0.98	2.84	A	0.361	2.146	0.637	0.85	1	32.847	1.42	56.64	C
125.00-100.00			B	0.393	2.079	0.649	0.85	1	35.935			
			C	0.498	1.903	0.696	0.85	1	47.049			
T35	0.24	1.03	A	0.371	2.125	0.64	0.85	1	8.640	0.34	55.03	C
100.00-93.75		TA 0.79	B	0.402	2.06	0.652	0.85	1	9.404			
			C	0.505	1.894	0.7	0.85	1	12.088			

tnxTower	Job: 15001.008 - Montville	Page: 62 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft^2	F K	w plf	Ctrl. Face
T36	0.24	0.71	A	0.307	2.277	0.618	0.85	1	6.473	0.31	50.22	C
93.75-87.50			B	0.343	2.189	0.63	0.85	1	7.313			
			C	0.459	1.958	0.678	0.85	1	10.379			
T37	0.25	0.61	A	0.293	2.314	0.614	0.85	1	5.929	0.31	50.26	C
87.50-81.25			B	0.363	2.143	0.637	0.85	1	7.611			
			C	0.482	1.924	0.689	0.85	1	10.947			
T38	0.25	0.61	A	0.293	2.314	0.614	0.85	1	5.929	0.31	49.17	C
81.25-75.00			B	0.363	2.143	0.637	0.85	1	7.611			
			C	0.482	1.924	0.689	0.85	1	10.947			
T39	1.01	2.45	A	0.302	2.292	0.616	0.85	1	24.497	1.15	46.13	C
75.00-50.00			B	0.371	2.124	0.64	0.85	1	31.304			
			C	0.482	1.924	0.689	0.85	1	43.787			
T40	1.02	2.47	A	0.324	2.235	0.623	0.85	1	26.798	1.00	40.02	C
50.00-25.00			B	0.393	2.078	0.649	0.85	1	33.787			
			C	0.484	1.921	0.69	0.85	1	44.122			
T41	0.91	2.45	A	0.306	2.279	0.618	0.85	1	24.954	0.87	34.76	C
25.00-0.00			B	0.368	2.132	0.639	0.85	1	30.948			
			C	0.442	1.987	0.67	0.85	1	39.021			
Sum Weight:	10.69	42.50								16.56		

Force Totals (Does not include forces on guys)

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Torques kip-ft
Leg Weight	29.84			
Bracing Weight	12.66			
Total Member Self-Weight	42.50			
Guy Weight	11.91			
Total Weight	71.57			
Wind 0 deg - No Ice		-0.09	-86.63	-7.38
Wind 30 deg - No Ice		42.87	-74.42	1.76
Wind 60 deg - No Ice		74.15	-42.81	10.37
Wind 90 deg - No Ice		85.89	0.09	16.28
Wind 120 deg - No Ice		74.99	43.39	17.93
Wind 150 deg - No Ice		43.02	74.51	14.52
Wind 180 deg - No Ice		0.09	85.77	7.37
Wind 210 deg - No Ice		-42.87	74.42	-1.76
Wind 240 deg - No Ice		-74.90	43.24	-10.55
Wind 270 deg - No Ice		-85.89	-0.09	-16.28
Wind 300 deg - No Ice		-74.24	-42.96	-17.73
Wind 330 deg - No Ice		-43.02	-74.51	-14.52
Member Ice	8.61			
Guy Ice	7.23			
Total Weight Ice	104.56			
Wind 0 deg - Ice		-0.04	-88.46	-2.00
Wind 30 deg - Ice		43.91	-76.12	8.93
Wind 60 deg - Ice		75.93	-43.84	17.42
Wind 90 deg - Ice		87.88	0.04	21.31
Wind 120 deg - Ice		76.59	44.26	19.60
Wind 150 deg - Ice		43.97	76.16	12.38
Wind 180 deg - Ice		0.04	87.74	1.99
Wind 210 deg - Ice		-43.91	76.12	-8.93
Wind 240 deg - Ice		-76.55	44.20	-17.60
Wind 270 deg - Ice		-87.88	-0.04	-21.31

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Torques kip-ft
Wind 300 deg - Ice		-75.97	-43.90	-19.41
Wind 330 deg - Ice		-43.97	-76.16	-12.38
Total Weight	71.57			
Wind 0 deg - Service		-0.02	-24.00	-2.05
Wind 30 deg - Service		11.88	-20.62	0.49
Wind 60 deg - Service		20.54	-11.86	2.87
Wind 90 deg - Service		23.79	0.02	4.51
Wind 120 deg - Service		20.77	12.02	4.97
Wind 150 deg - Service		11.92	20.64	4.02
Wind 180 deg - Service		0.02	23.76	2.04
Wind 210 deg - Service		-11.88	20.62	-0.49
Wind 240 deg - Service		-20.75	11.98	-2.92
Wind 270 deg - Service		-23.79	-0.02	-4.51
Wind 300 deg - Service		-20.56	-11.90	-4.91
Wind 330 deg - Service		-11.92	-20.64	-4.02

Load Combinations

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

Comb. No.	Description
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T1	368.75 - 362.5	Leg	Max Tension	12	0.32	-0.00	-0.00
			Max. Compression	23	-1.13	-0.01	0.11
			Max. Mx	5	-0.09	0.25	0.00
			Max. My	12	0.27	0.00	-0.19
			Max. Vy	6	-0.11	-0.00	0.00
			Max. Vx	2	0.17	-0.00	-0.00
		Diagonal	Max Tension	2	0.34	0.00	0.00
			Max. Compression	2	-0.41	0.00	0.00
			Max. Mx	24	0.25	0.01	0.00
			Max. My	2	-0.40	0.00	0.00
			Max. Vy	24	-0.01	0.01	0.00
			Max. Vx	15	0.00	0.00	0.00
		Top Girt	Max Tension	2	0.10	0.00	0.00
			Max. Compression	17	-0.09	0.00	0.00
			Max. Mx	14	-0.01	0.03	0.00
			Max. My	18	-0.08	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
T2	362.5 - 356.25	Leg	Max Tension	12	0.86	0.00	-0.19
			Max. Compression	23	-1.98	0.25	-0.60
			Max. Mx	11	-0.43	1.30	-0.02
			Max. My	7	-1.28	-0.09	-0.94
			Max. Vy	11	-0.29	1.30	-0.02
			Max. Vx	7	0.21	-0.09	-0.94
		Diagonal	Max Tension	12	0.85	0.00	0.00
			Max. Compression	6	-1.20	0.00	0.00
			Max. Mx	24	-0.53	-0.03	-0.01
			Max. My	6	-0.20	-0.01	0.01
			Max. Vy	24	0.03	-0.03	-0.01
			Max. Vx	6	0.00	0.00	0.00
		Top Girt	Max Tension	21	0.31	0.00	0.00
			Max. Compression	10	-0.17	0.00	0.00
			Max. Mx	14	0.04	0.04	0.00
			Max. My	18	0.21	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
T3	356.25 - 350	Leg	Max Tension	8	5.90	-0.12	-0.64
			Max. Compression	6	-8.54	-0.37	-0.75
			Max. Mx	5	-0.70	2.12	-0.02
			Max. My	7	-6.99	-0.09	1.49
			Max. Vy	11	2.74	1.30	-0.02
			Max. Vx	7	-1.95	-0.09	-0.94
		Diagonal	Max Tension	6	5.44	0.00	0.00
			Max. Compression	12	-5.11	0.00	0.00
			Max. Mx	20	-0.59	-0.05	-0.01
			Max. My	6	-4.16	0.00	-0.08
			Max. Vy	20	-0.03	-0.05	-0.01
			Max. Vx	6	0.02	0.00	-0.08
		Top Girt	Max Tension	6	1.26	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	4	-1.26	0.00	0.00
			Max. Mx	14	0.05	0.04	0.00
			Max. My	18	-0.95	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	18	0.00	0.00	0.00
T4	350 - 343.75	Leg	Max Tension	12	5.14	0.42	0.73
			Max. Compression	2	-7.51	0.01	0.14
			Max. Mx	5	-1.27	-1.24	-0.03
			Max. My	7	-6.26	-0.16	-0.90
			Max. Vy	5	-0.68	-1.24	-0.03
			Max. Vx	2	0.77	-0.01	0.70
		Diagonal	Max Tension	18	3.83	0.00	0.00
			Max. Compression	18	-4.20	0.00	0.00
			Max. Mx	24	-1.80	0.03	0.00
			Max. My	5	-3.81	0.02	0.01
			Max. Vy	24	-0.02	0.03	0.00
			Max. Vx	5	-0.00	0.02	0.01
		Top Girt	Max Tension	21	9.30	0.00	0.00
			Max. Compression	6	-6.51	0.00	0.00
			Max. Mx	14	1.38	0.03	0.00
			Max. My	18	8.32	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	24.97		
			Top Tension	21	25.82		
			Top Cable Vert	21	21.88		
			Top Cable Norm	21	13.72		
			Top Cable Tan	21	0.02		
			Bot Cable Vert	21	-19.91		
			Bot Cable Norm	21	15.07		
			Bot Cable Tan	21	0.03		
		Guy B	Bottom Tension	25	24.99		
			Top Tension	25	25.82		
			Top Cable Vert	25	21.72		
			Top Cable Norm	25	13.97		
			Top Cable Tan	25	0.02		
			Bot Cable Vert	25	-19.77		
			Bot Cable Norm	25	15.28		
			Bot Cable Tan	25	0.03		
		Guy C	Bottom Tension	17	24.90		
			Top Tension	17	25.76		
			Top Cable Vert	17	21.84		
			Top Cable Norm	17	13.67		
			Top Cable Tan	17	0.02		
			Bot Cable Vert	17	-19.84		
			Bot Cable Norm	17	15.04		
			Bot Cable Tan	17	0.03		
		Torque Arm Top	Max Tension	25	23.77	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	22	21.62	0.06	0.00
			Max. My	18	23.50	0.00	-0.00
			Max. Vy	22	0.04	0.00	0.00
			Max. Vx	18	0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-27.59	0.00	0.00
			Max. Mx	19	-24.17	0.08	0.00
			Max. My	18	-11.31	0.00	0.00
			Max. Vy	19	-0.04	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
T5	343.75 - 337.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-46.30	0.04	0.02

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	11	-15.92	0.26	0.19
			Max. My	10	-32.10	0.22	-0.22
			Max. Vy	11	0.09	0.26	-0.21
			Max. Vx	3	0.07	-0.09	0.18
		Diagonal	Max Tension	11	4.44	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	21	-4.26	0.00	0.00
			Max. Mx	14	-2.04	0.03	0.00
			Max. My	18	-3.91	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
T6	337.5 - 331.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-47.69	-0.03	-0.01
			Max. Mx	24	-45.29	-0.08	0.04
			Max. My	15	-40.87	0.00	-0.06
			Max. Vy	5	0.05	-0.03	-0.01
			Max. Vx	3	-0.05	-0.02	0.04
		Diagonal	Max Tension	11	4.10	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	11	-2.66	0.00	0.00
			Max. Mx	14	-2.44	0.01	0.00
			Max. My	18	-2.40	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	18	0.00	0.00	0.00
T7	331.25 - 325	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-48.52	-0.03	0.02
			Max. Mx	24	-15.31	-0.07	-0.03
			Max. My	15	-42.22	0.01	-0.08
			Max. Vy	5	-0.05	-0.03	-0.01
			Max. Vx	3	0.05	-0.02	0.04
		Diagonal	Max Tension	11	3.48	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2.47	0.00	0.00
			Max. Mx	14	-2.33	0.01	0.00
			Max. My	18	-2.33	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	18	0.00	0.00	0.00
T8	325 - 318.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-49.93	0.04	0.01
			Max. Mx	23	-12.24	-0.06	-0.03
			Max. My	16	-37.54	0.02	-0.07
			Max. Vy	17	-0.21	0.03	-0.05
			Max. Vx	22	-0.29	-0.04	0.04
		Diagonal	Max Tension	5	3.81	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2.98	0.00	0.00
			Max. Mx	14	-2.78	0.01	0.00
			Max. My	16	-2.83	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T9	318.75 - 312.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-48.68	-0.14	-0.05
			Max. Mx	11	-39.42	-0.19	0.01
			Max. My	8	-39.19	-0.01	0.17
			Max. Vy	11	0.08	0.06	-0.00
			Max. Vx	2	0.08	0.00	0.06
		Diagonal	Max Tension	12	3.90	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	12	-3.39	0.00	0.00
			Max. Mx	14	-3.22	0.01	0.00
			Max. My	16	-3.22	0.00	-0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T10	312.5 - 306.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-47.21	0.54	0.19
			Max. Mx	5	-38.07	-0.75	-0.05
			Max. My	2	-11.95	0.02	0.75
			Max. Vy	11	-0.19	0.75	-0.03
			Max. Vx	2	-0.19	0.02	0.75
		Diagonal	Max Tension	12	4.20	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	37	-3.45	0.00	0.00
			Max. Mx	14	-3.32	0.01	0.00
			Max. My	16	-3.21	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T11	306.25 - 300	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-44.86	-0.07	1.09
			Max. Mx	5	-37.33	1.71	0.00
			Max. My	8	-31.11	0.11	1.77
			Max. Vy	11	1.91	0.75	-0.03
			Max. Vx	2	1.96	0.04	0.70
		Diagonal	Max Tension	7	9.47	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	12	-5.14	0.00	0.00
			Max. Mx	14	-3.72	0.03	0.00
			Max. My	16	-4.62	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	16	-0.00	0.00	0.00
T12	300 - 293.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	15	-37.11	0.02	-0.03
			Max. Mx	5	-28.82	-1.37	0.00
			Max. My	8	-22.39	0.11	-1.35
			Max. Vy	5	-0.63	-1.37	0.00
			Max. Vx	8	-0.64	0.11	-1.35
		Diagonal	Max Tension	5	2.57	0.00	0.00
			Max. Compression	17	-7.78	0.00	0.00
			Max. Mx	22	0.92	0.05	-0.00
			Max. My	18	-7.43	0.01	0.01
			Max. Vy	22	-0.02	0.05	-0.00
			Max. Vx	18	-0.00	0.00	0.00
		Top Girt	Max Tension	21	12.20	0.00	0.00
			Max. Compression	6	-8.50	0.00	0.00
			Max. Mx	14	0.46	0.03	0.00
			Max. My	16	10.54	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	16	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	27.13		
			Top Tension	21	27.86		
			Top Cable Vert	21	23.04		
			Top Cable Norm	21	15.66		
			Top Cable Tan	21	0.02		
			Bot Cable Vert	21	-21.35		
			Bot Cable Norm	21	16.73		
			Bot Cable Tan	21	0.03		
		Guy B	Bottom Tension	25	26.85		
			Top Tension	25	27.57		
			Top Cable Vert	25	22.82		
			Top Cable Norm	25	15.48		
			Top Cable Tan	25	0.02		
			Bot Cable Vert	25	-21.16		
			Bot Cable Norm	25	16.53		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Bot Cable Tan	25	0.03		
		Guy C	Bottom Tension	17	26.98		
			Top Tension	17	27.72		
			Top Cable Vert	17	22.96		
			Top Cable Norm	17	15.53		
			Top Cable Tan	17	0.02		
			Bot Cable Vert	17	-21.25		
			Bot Cable Norm	17	16.62		
			Bot Cable Tan	17	0.02		
		Torque Arm Top	Max Tension	21	24.43	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	19	18.79	0.06	0.00
			Max. My	16	19.04	0.00	0.00
			Max. Vy	19	0.04	0.00	0.00
			Max. Vx	16	-0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-30.13	0.00	0.00
			Max. Mx	19	-24.33	0.08	0.00
			Max. My	16	-8.77	0.00	-0.00
			Max. Vy	19	-0.04	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T13	293.75 - 287.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-96.56	0.00	-0.03
			Max. Mx	4	-37.27	0.22	-0.02
			Max. My	17	-94.62	-0.12	-0.15
			Max. Vy	18	-0.07	-0.13	-0.14
			Max. Vx	8	0.08	0.00	-0.05
		Diagonal	Max Tension	18	6.73	0.00	0.00
		Top Girt	Max Tension	15	0.66	0.00	0.00
			Max. Compression	4	-2.66	0.00	0.00
			Max. Mx	14	-1.15	0.03	0.00
			Max. My	16	-2.31	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T14	287.5 - 281.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-101.09	-0.08	-0.00
			Max. Mx	24	-97.50	-0.13	0.03
			Max. My	15	-86.27	-0.01	-0.13
			Max. Vy	18	-0.08	-0.07	0.06
			Max. Vx	22	-0.08	-0.01	-0.07
		Diagonal	Max Tension	5	5.54	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	18	-3.80	0.00	0.00
			Max. Mx	14	-2.46	0.01	0.00
			Max. My	16	-2.49	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T15	281.25 - 275	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-104.61	-0.07	-0.01
			Max. Mx	24	-16.66	-0.18	0.01
			Max. My	15	-88.38	-0.01	-0.15
			Max. Vy	23	-0.05	-0.06	0.05
			Max. Vx	22	0.07	-0.03	0.02
		Diagonal	Max Tension	5	4.55	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	5	-3.18	0.00	0.00
			Max. Mx	14	-1.95	0.01	0.00
			Max. My	16	-2.05	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T16	275 - 268.75	Leg	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	25	-106.61	-0.05	-0.02
			Max. Mx	18	-13.87	0.15	0.01
			Max. My	15	-90.46	-0.01	-0.15
			Max. Vy	17	0.05	0.03	-0.00
			Max. Vx	22	-0.06	-0.03	0.02
		Diagonal	Max Tension	5	3.44	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	5	-2.52	0.00	0.00
			Max. Mx	14	-1.97	0.01	0.00
			Max. My	16	-2.12	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T17	268.75 - 262.5	Leg	Max Tension	6	0.92	0.05	0.04
			Max. Compression	25	-107.41	-0.06	-0.06
			Max. Mx	18	-13.10	0.14	0.04
			Max. My	15	-91.47	-0.01	-0.16
			Max. Vy	17	-0.05	0.03	-0.00
			Max. Vx	22	-0.06	-0.03	0.03
		Diagonal	Max Tension	6	2.90	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2.37	0.00	0.00
			Max. Mx	14	-1.96	0.01	0.00
			Max. My	16	-2.12	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	16	0.00	0.00	0.00
T18	262.5 - 256.25	Leg	Max Tension	6	1.60	0.07	0.06
			Max. Compression	25	-107.01	-0.02	0.02
			Max. Mx	24	-102.81	-0.12	-0.02
			Max. My	15	-91.37	-0.01	-0.13
			Max. Vy	17	0.06	-0.02	0.00
			Max. Vx	21	0.07	-0.00	-0.03
		Diagonal	Max Tension	7	2.52	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2.34	0.00	0.00
			Max. Mx	14	-1.93	0.01	0.00
			Max. My	17	-1.18	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	17	-0.00	0.00	0.00
T19	256.25 - 250	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-105.70	-0.14	-0.06
			Max. Mx	5	-7.00	0.21	0.05
			Max. My	2	-79.19	-0.03	-0.23
			Max. Vy	11	0.08	-0.00	0.00
			Max. Vx	21	-0.09	-0.00	-0.03
		Diagonal	Max Tension	26	3.54	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-2.85	0.00	0.00
			Max. Mx	14	-2.36	0.01	0.00
			Max. My	17	-1.46	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	17	-0.00	0.00	0.00
T20	250 - 243.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-102.33	0.36	0.16
			Max. Mx	5	-9.01	-0.53	-0.00
			Max. My	2	-78.96	-0.01	0.52
			Max. Vy	5	0.16	-0.53	-0.00
			Max. Vx	20	-0.16	0.11	0.18
		Diagonal	Max Tension	26	4.10	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-3.46	0.00	0.00
			Max. Mx	14	-2.94	0.03	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	17	-1.82	0.00	0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	17	-0.00	0.00	0.00
T21	243.75 - 237.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-98.67	0.21	0.10
			Max. Mx	11	-82.08	-1.26	-0.02
			Max. My	8	-42.84	-0.01	1.28
			Max. Vy	5	-1.45	-0.53	-0.00
			Max. Vx	2	1.42	-0.04	0.52
		Diagonal	Max Tension	26	9.61	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-4.58	0.00	0.00
			Max. Mx	14	-3.01	0.03	0.00
			Max. My	17	-3.02	0.00	0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	17	-0.00	0.00	0.00
T22	237.5 - 231.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86.85	0.07	-0.00
			Max. Mx	11	-73.40	0.27	-0.01
			Max. My	13	-65.89	0.15	0.30
			Max. Vy	5	-0.12	-0.27	-0.01
			Max. Vx	13	0.14	0.15	0.30
		Diagonal	Max Tension	26	11.97	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-6.75	0.00	0.00
			Max. Mx	14	-2.96	0.03	0.00
			Max. My	25	-5.07	0.00	0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
T23	231.25 - 225	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	22	-83.25	0.25	-0.48
			Max. Mx	12	-61.35	0.53	0.22
			Max. My	8	-61.68	0.08	-0.59
			Max. Vy	11	-0.15	0.46	-0.03
			Max. Vx	13	-0.16	0.25	0.43
		Diagonal	Max Tension	26	12.77	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-7.70	0.00	0.00
			Max. Mx	14	-4.14	0.03	0.00
			Max. My	25	-6.37	0.00	0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
T24	225 - 218.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	22	-63.32	0.10	-0.21
			Max. Mx	12	-43.82	0.53	0.22
			Max. My	8	-44.00	0.08	-0.59
			Max. Vy	11	0.42	0.53	-0.01
			Max. Vx	8	-0.44	0.08	-0.59
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	17	-14.44	0.00	0.00
			Max. Mx	24	-4.94	-0.09	-0.01
			Max. My	18	-13.23	0.02	-0.03
			Max. Vy	24	0.04	-0.09	-0.01
			Max. Vx	18	-0.01	0.00	0.00
		Top Girt	Max Tension	25	17.06	0.00	0.00
			Max. Compression	2	-6.65	0.00	0.00
			Max. Mx	14	2.06	0.03	0.00
			Max. My	25	-2.64	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	23.13		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Top Tension	21	23.57		
			Top Cable Vert	21	17.35		
			Top Cable Norm	21	15.95		
			Top Cable Tan	21	0.02		
			Bot Cable Vert	21	-16.21		
			Bot Cable Norm	21	16.50		
			Bot Cable Tan	21	0.01		
		Guy B	Bottom Tension	25	23.62		
			Top Tension	25	24.04		
			Top Cable Vert	25	17.64		
			Top Cable Norm	25	16.33		
			Top Cable Tan	25	0.01		
			Bot Cable Vert	25	-16.53		
			Bot Cable Norm	25	16.87		
			Bot Cable Tan	25	0.01		
		Guy C	Bottom Tension	17	23.30		
			Top Tension	17	23.74		
			Top Cable Vert	17	17.55		
			Top Cable Norm	17	15.99		
			Top Cable Tan	17	0.01		
			Bot Cable Vert	17	-16.39		
			Bot Cable Norm	17	16.56		
			Bot Cable Tan	17	0.02		
		Torque Arm Top	Max Tension	25	22.54	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	25	9.41	0.06	0.00
			Max. My	25	7.98	0.00	-0.00
			Max. Vy	25	0.04	0.00	0.00
			Max. Vx	25	0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-23.85	0.00	0.00
			Max. Mx	21	-6.82	0.08	0.00
			Max. My	25	-23.77	0.00	0.00
			Max. Vy	21	-0.04	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
T25	218.75 - 212.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	18	-109.16	0.15	0.03
			Max. Mx	12	-89.76	0.48	-0.15
			Max. My	7	-84.03	-0.23	-0.48
			Max. Vy	5	-0.17	-0.47	-0.20
			Max. Vx	7	-0.17	-0.23	-0.48
		Diagonal	Max Tension	5	7.15	0.00	0.00
		Top Girt	Max Tension	15	5.83	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	2.49	0.03	0.00
			Max. My	25	3.73	0.00	0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
T26	212.5 - 206.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	18	-113.79	0.02	0.00
			Max. Mx	5	-98.20	0.20	0.03
			Max. My	2	-94.86	0.03	-0.20
			Max. Vy	5	0.10	0.01	0.01
			Max. Vx	13	-0.09	-0.01	-0.02
		Diagonal	Max Tension	12	5.76	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-4.05	0.00	0.00
			Max. Mx	14	-1.47	0.01	0.00
			Max. My	25	-3.71	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T27	206.25 - 200	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-116.89	-0.04	-0.08
			Max. Mx	5	-101.07	0.15	-0.03
			Max. My	2	-96.39	0.02	-0.16
			Max. Vy	5	-0.08	0.01	0.01
			Max. Vx	7	0.08	0.05	-0.00
		Diagonal	Max Tension	12	4.02	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-3.15	0.00	0.00
			Max. Mx	14	-1.36	0.01	0.00
			Max. My	25	-2.81	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	25	-0.00	0.00	0.00
T28	200 - 175	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	25	-118.48	-0.05	-0.09
			Max. Mx	19	-48.31	0.47	0.00
			Max. My	2	-93.66	-0.14	-0.63
			Max. Vy	6	-0.53	-0.22	-0.03
			Max. Vx	7	-0.60	-0.01	-0.14
		Diagonal	Max Tension	16	5.91	0.00	0.00
		Horizontal	Max Tension	25	2.05	0.00	0.00
			Max. Compression	26	-3.09	0.00	0.00
			Max. Mx	14	1.06	0.01	0.00
			Max. My	20	2.04	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	25	2.05	0.00	0.00
			Max. Compression	25	-2.05	0.00	0.00
			Max. Mx	14	1.06	0.01	0.00
			Max. My	20	2.04	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
		Top Girt	Max Tension	16	0.02	0.00	0.00
			Max. Compression	6	-2.06	0.00	0.00
			Max. Mx	14	-1.33	0.01	0.00
			Max. My	20	-0.87	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
T29	175 - 168.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-106.88	0.08	-0.20
			Max. Mx	24	-65.91	0.44	0.04
			Max. My	21	-83.43	-0.04	-0.49
			Max. Vy	24	0.16	0.44	0.04
			Max. Vx	8	-0.16	-0.03	-0.48
		Diagonal	Max Tension	16	8.02	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-4.27	0.00	0.00
			Max. Mx	14	-2.14	0.01	0.00
			Max. My	20	-3.73	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
T30	168.75 - 162.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-102.43	0.21	0.33
			Max. Mx	24	-97.17	0.58	-0.06
			Max. My	21	-94.18	-0.01	-0.61
			Max. Vy	18	0.19	-0.58	-0.05
			Max. Vx	21	0.17	-0.01	-0.61
		Diagonal	Max Tension	16	8.77	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-5.25	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	14	-3.38	0.01	0.00
			Max. My	20	-4.48	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	20	0.00	0.00	0.00
T31	162.5 - 156.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-110.51	-0.34	-0.31
			Max. Mx	24	-108.13	0.58	-0.06
			Max. My	21	-106.03	-0.01	-0.61
			Max. Vy	18	-0.19	-0.58	-0.05
			Max. Vx	21	-0.17	-0.01	-0.61
		Diagonal	Max Tension	20	4.74	0.00	0.00
		Top Girt	Max Tension	19	7.47	0.00	0.00
			Max. Compression	4	-1.30	0.00	0.00
			Max. Mx	14	0.59	0.03	0.00
			Max. My	20	1.51	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	20	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	24.10		
			Top Tension	21	24.42		
			Top Cable Vert	21	16.01		
			Top Cable Norm	21	18.43		
			Top Cable Tan	21	0.01		
			Bot Cable Vert	21	-15.17		
			Bot Cable Norm	21	18.72		
			Bot Cable Tan	21	0.01		
		Guy B	Bottom Tension	25	24.27		
			Top Tension	25	24.58		
			Top Cable Vert	25	16.16		
			Top Cable Norm	25	18.53		
			Top Cable Tan	25	0.01		
			Bot Cable Vert	25	-15.34		
			Bot Cable Norm	25	18.81		
			Bot Cable Tan	25	0.01		
		Guy C	Bottom Tension	17	24.01		
			Top Tension	17	24.33		
			Top Cable Vert	17	15.94		
			Top Cable Norm	17	18.39		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	17	-15.08		
			Bot Cable Norm	17	18.68		
			Bot Cable Tan	17	0.00		
T32	156.25 - 150	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-114.10	-0.01	-0.05
			Max. Mx	18	-113.08	0.21	0.02
			Max. My	15	-111.83	0.04	-0.19
			Max. Vy	5	0.11	-0.06	-0.03
			Max. Vx	13	-0.09	0.02	0.02
		Diagonal	Max Tension	20	3.87	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	20	-2.68	0.00	0.00
			Max. Mx	14	-1.47	0.01	0.00
			Max. My	19	-2.26	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T33	150 - 125	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-117.66	-0.01	-0.02
			Max. Mx	11	-63.50	0.27	0.15
			Max. My	13	-88.44	0.19	0.34
			Max. Vy	11	-0.13	0.27	0.15
			Max. Vx	13	-0.14	0.19	0.34
		Diagonal	Max Tension	6	5.48	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
		Horizontal	Max Tension	16	2.04	0.00	0.00
			Max. Compression	6	-3.15	0.00	0.00
			Max. Mx	14	1.20	0.01	0.00
			Max. My	19	1.98	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	20	-1.91	0.00	0.00
			Max. Mx	14	-1.39	0.01	0.00
			Max. My	19	-1.70	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T34	125 - 100	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-122.79	0.45	0.15
			Max. Mx	24	-89.17	0.55	-0.19
			Max. My	15	-98.71	0.05	0.59
			Max. Vy	5	0.16	-0.54	-0.16
			Max. Vx	2	-0.17	0.05	0.59
		Diagonal	Max Tension	18	12.10	0.00	0.00
		Horizontal	Max Tension	24	2.13	0.00	0.00
			Max. Compression	18	-7.10	0.00	0.00
			Max. Mx	14	1.29	0.01	0.00
			Max. My	18	2.08	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-4.10	0.00	0.00
			Max. Mx	14	-2.15	0.01	0.00
			Max. My	18	-3.88	0.00	0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	18	-0.00	0.00	0.00
T35	100 - 93.75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-101.58	0.39	0.13
			Max. Mx	24	-62.93	0.55	-0.19
			Max. My	15	-74.06	0.05	0.59
			Max. Vy	5	-0.35	-0.54	-0.16
			Max. Vx	2	0.37	0.05	0.59
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-15.42	0.00	0.00
			Max. Mx	24	-12.58	-0.10	-0.01
			Max. My	18	-15.29	0.01	-0.02
			Max. Vy	24	0.04	-0.10	-0.01
			Max. Vx	18	-0.01	0.00	0.00
		Top Girt	Max Tension	25	16.51	0.00	0.00
			Max. Compression	10	-3.93	0.00	0.00
			Max. Mx	14	3.79	0.03	0.00
			Max. My	19	11.26	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	19	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	13.75		
			Top Tension	21	13.89		
			Top Cable Vert	21	6.67		
			Top Cable Norm	21	12.18		
			Top Cable Tan	21	0.01		
			Bot Cable Vert	21	-6.24		
			Bot Cable Norm	21	12.26		
			Bot Cable Tan	21	0.00		
		Guy B	Bottom Tension	25	14.41		
			Top Tension	25	14.54		
			Top Cable Vert	25	6.88		
			Top Cable Norm	25	12.81		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Top Cable Tan	25	0.01		
			Bot Cable Vert	25	-6.47		
			Bot Cable Norm	25	12.88		
			Bot Cable Tan	25	0.00		
		Guy C	Bottom Tension	17	13.96		
			Top Tension	17	14.11		
			Top Cable Vert	17	6.84		
			Top Cable Norm	17	12.34		
			Top Cable Tan	17	0.00		
			Bot Cable Vert	17	-6.39		
			Bot Cable Norm	17	12.42		
			Bot Cable Tan	17	0.01		
		Torque Arm Top	Max Tension	25	14.88	0.00	0.00
			Max. Compression	11	-1.15	0.00	0.00
			Max. Mx	14	4.62	0.06	0.00
			Max. My	19	11.07	0.00	-0.00
			Max. Vy	14	0.04	0.00	0.00
			Max. Vx	19	-0.00	0.00	0.00
		Torque Arm Bottom	Max Tension	6	1.28	0.00	0.00
			Max. Compression	18	-11.26	0.00	0.00
			Max. Mx	16	-6.15	0.08	0.00
			Max. My	19	1.20	0.00	-0.00
			Max. Vy	16	-0.04	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T36	93.75 - 87.5	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-117.62	0.14	0.09
			Max. Mx	24	-106.93	0.44	-0.17
			Max. My	20	-112.97	-0.20	-0.32
			Max. Vy	24	0.12	0.44	-0.17
			Max. Vx	8	0.12	-0.03	-0.03
		Diagonal	Max Tension	24	7.56	0.00	0.00
		Top Girt	Max Tension	21	7.02	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	14	3.93	0.03	0.00
			Max. My	19	6.28	0.00	-0.00
			Max. Vy	14	0.03	0.00	0.00
			Max. Vx	19	-0.00	0.00	0.00
T37	87.5 - 81.25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-115.72	0.04	0.04
			Max. Mx	25	-113.16	0.15	0.13
			Max. My	7	-92.27	-0.04	-0.16
			Max. Vy	24	0.09	0.14	0.09
			Max. Vx	7	-0.09	-0.04	-0.16
		Diagonal	Max Tension	24	6.03	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-4.23	0.00	0.00
			Max. Mx	14	-1.55	0.01	0.00
			Max. My	19	-0.86	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T38	81.25 - 75	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-117.03	0.04	0.01
			Max. Mx	18	-106.42	0.14	0.00
			Max. My	20	-112.62	0.02	0.13
			Max. Vy	24	-0.07	-0.02	0.02
			Max. Vx	7	0.07	0.01	0.00
		Diagonal	Max Tension	24	4.23	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	24	-3.21	0.00	0.00
			Max. Mx	14	-1.15	0.01	0.00
			Max. My	19	-0.57	0.00	-0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T39	75 - 50	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-117.17	0.04	0.02
			Max. Mx	24	-110.36	0.71	-0.11
			Max. My	21	-107.67	0.04	-0.67
			Max. Vy	24	-0.20	0.71	-0.11
			Max. Vx	21	0.17	0.04	-0.67
		Diagonal	Max Tension	26	4.95	0.00	0.00
		Horizontal	Max Tension	19	2.03	0.00	0.00
			Max. Compression	26	-2.82	0.00	0.00
			Max. Mx	14	1.39	0.01	0.00
			Max. My	19	2.02	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
		Top Girt	Max Tension	1	0.00	0.00	0.00
			Max. Compression	19	-2.06	0.00	0.00
			Max. Mx	14	-1.15	0.01	0.00
			Max. My	19	-0.93	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
T40	50 - 25	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	22	-126.35	-0.03	0.05
			Max. Mx	24	-116.34	0.71	-0.11
			Max. My	21	-114.88	0.04	-0.67
			Max. Vy	24	0.19	0.71	-0.11
			Max. Vx	21	-0.16	0.04	-0.67
		Diagonal	Max Tension	24	5.85	0.00	0.00
		Horizontal	Max Tension	22	2.19	0.00	0.00
			Max. Compression	24	-3.35	0.00	0.00
			Max. Mx	14	1.45	0.01	0.00
			Max. My	19	2.14	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
		Top Girt	Max Tension	15	5.22	0.00	0.00
			Max. Compression	4	-0.44	0.00	0.00
			Max. Mx	14	1.16	-0.02	0.00
			Max. My	19	0.41	0.00	0.00
			Max. Vy	14	0.01	0.00	0.00
			Max. Vx	19	-0.00	0.00	0.00
		Guy A	Bottom Tension	21	13.09		
			Top Tension	21	13.16		
			Top Cable Vert	21	5.80		
			Top Cable Norm	21	11.82		
			Top Cable Tan	21	0.00		
			Bot Cable Vert	21	-5.58		
			Bot Cable Norm	21	11.85		
			Bot Cable Tan	21	0.00		
		Guy B	Bottom Tension	25	12.96		
			Top Tension	25	13.02		
			Top Cable Vert	25	5.32		
			Top Cable Norm	25	11.89		
			Top Cable Tan	25	0.01		
			Bot Cable Vert	25	-5.10		
			Bot Cable Norm	25	11.91		
			Bot Cable Tan	25	0.01		
		Guy C	Bottom Tension	17	13.20		
			Top Tension	17	13.28		
			Top Cable Vert	17	5.99		
			Top Cable Norm	17	11.85		
			Top Cable Tan	17	0.00		

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Bot Cable Vert	17	-5.76		
			Bot Cable Norm	17	11.88		
			Bot Cable Tan	17	0.00		
T41	25 - 0	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	16	-126.90	0.04	-0.07
			Max. Mx	18	-121.90	-1.81	0.60
			Max. My	20	-121.73	-0.22	-1.97
			Max. Vy	18	0.41	-1.81	0.60
			Max. Vx	20	0.42	-0.22	-1.97
		Diagonal	Max Tension	16	3.67	0.00	0.00
		Horizontal	Max Tension	16	2.20	0.00	0.00
			Max. Compression	16	-2.20	0.00	0.00
			Max. Mx	14	1.48	0.01	0.00
			Max. My	19	2.15	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
		Top Girt	Max Tension	15	0.06	0.00	0.00
			Max. Compression	29	-1.46	0.00	0.00
			Max. Mx	14	-1.03	0.01	0.00
			Max. My	19	-0.68	0.00	-0.00
			Max. Vy	14	-0.01	0.00	0.00
			Max. Vx	19	0.00	0.00	0.00
		Base Beam	Max Tension	19	0.06	-338.28	0.00
			Max. Compression	17	-3.42	1.98	0.00
			Max. Mx	22	-118.36	-339.73	-1.79
			Max. My	15	-118.03	-338.97	3.35
			Max. Vy	22	-118.36	-339.73	-1.79
			Max. Vx	15	1.16	-338.97	3.35

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Guy C @ 251.45 ft Elev -12.2 ft Azimuth 240 deg	Max. Vert	10	-5.90	-2.82	1.63
	Max. H_x	10	-5.90	-2.82	1.63
	Max. H_z	16	-37.23	-23.84	15.07
	Min. Vert	17	-39.40	-25.87	14.94
	Min. H_x	17	-39.40	-25.87	14.94
	Min. H_z	10	-5.90	-2.82	1.63
Guy B @ 247.51 ft Elev 1.81 ft Azimuth 120 deg	Max. Vert	6	-5.42	2.64	1.52
	Max. H_x	25	-39.05	26.15	15.11
	Max. H_z	26	-36.78	24.06	15.18
	Min. Vert	25	-39.05	26.15	15.11
	Min. H_x	6	-5.42	2.64	1.52
	Min. H_z	6	-5.42	2.64	1.52
Guy A @ 247.15 ft Elev -5.8 ft Azimuth 0 deg	Max. Vert	2	-5.77	0.00	-3.18
	Max. H_x	24	-25.49	2.50	-18.18

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. H_z	2	-5.77	0.00	-3.18
	Min. Vert	21	-39.62	-0.00	-30.00
	Min. H_x	18	-25.21	-2.50	-17.99
	Min. H_z	21	-39.62	-0.00	-30.00
Guy C @ 227.42 ft Elev -10.07 ft Azimuth 240 deg	Max. Vert	10	-4.79	-2.48	1.43
	Max. H_x	10	-4.79	-2.48	1.43
	Max. H_z	17	-74.54	-56.86	32.81
	Min. Vert	17	-74.54	-56.86	32.81
	Min. H_x	17	-74.54	-56.86	32.81
	Min. H_z	10	-4.79	-2.48	1.43
Guy B @ 219.43 ft Elev 1.23 ft Azimuth 120 deg	Max. Vert	6	-4.52	2.32	1.34
	Max. H_x	25	-74.61	57.20	32.99
	Max. H_z	25	-74.61	57.20	32.99
	Min. Vert	25	-74.61	57.20	32.99
	Min. H_x	6	-4.52	2.32	1.34
	Min. H_z	6	-4.52	2.32	1.34
Guy A @ 224.79 ft Elev -5.41 ft Azimuth 0 deg	Max. Vert	2	-4.65	-0.00	-2.78
	Max. H_x	24	-41.15	3.69	-35.15
	Max. H_z	2	-4.65	-0.00	-2.78
	Min. Vert	21	-74.72	0.01	-66.09
	Min. H_x	18	-40.64	-3.69	-34.72
	Min. H_z	21	-74.72	0.01	-66.09
Guy C @ 206.73 ft Elev -8.98 ft Azimuth 240 deg	Max. Vert	10	-0.19	-0.37	0.22
	Max. H_x	10	-0.19	-0.37	0.22
	Max. H_z	17	-27.35	-36.88	21.26
	Min. Vert	17	-27.35	-36.88	21.26
	Min. H_x	17	-27.35	-36.88	21.26
	Min. H_z	10	-0.19	-0.37	0.22
Guy B @ 193.65 ft Elev 0.72 ft Azimuth 120 deg	Max. Vert	6	-0.18	0.35	0.20
	Max. H_x	25	-27.54	37.38	21.52
	Max. H_z	25	-27.54	37.38	21.52
	Min. Vert	25	-27.54	37.38	21.52
	Min. H_x	6	-0.18	0.35	0.20
	Min. H_z	6	-0.18	0.35	0.20
Guy A @ 201.41 ft Elev -4.96 ft Azimuth 0 deg	Max. Vert	2	-0.18	-0.00	-0.42
	Max. H_x	24	-14.32	1.33	-22.67
	Max. H_z	2	-0.18	-0.00	-0.42
	Min. Vert	21	-27.40	0.02	-42.77
	Min. H_x	18	-14.10	-1.33	-22.33
	Min. H_z	21	-27.40	0.02	-42.77
Guy C @ 114.41 ft Elev -5.4 ft	Max. Vert	10	-0.06	-0.14	0.08

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Azimuth 240 deg					
	Max. H_x	10	-0.06	-0.14	0.08
	Max. H_z	17	-5.76	-10.29	5.94
	Min. Vert	17	-5.76	-10.29	5.94
	Min. H_x	17	-5.76	-10.29	5.94
	Min. H_z	10	-0.06	-0.14	0.08
Guy B @ 115.63 ft Elev 0.5 ft Azimuth 120 deg	Max. Vert	6	-0.06	0.16	0.09
	Max. H_x	25	-5.10	10.32	5.95
	Max. H_z	25	-5.10	10.32	5.95
	Min. Vert	25	-5.10	10.32	5.95
	Min. H_x	6	-0.06	0.16	0.09
	Min. H_z	6	-0.06	0.16	0.09
Guy A @ 114.04 ft Elev -3.6 ft Azimuth 0 deg	Max. Vert	2	-0.06	-0.00	-0.16
	Max. H_x	24	-2.79	0.19	-5.96
	Max. H_z	2	-0.06	-0.00	-0.16
	Min. Vert	21	-5.58	0.00	-11.85
	Min. H_x	18	-2.75	-0.19	-5.87
	Min. H_z	21	-5.58	0.00	-11.85
Mast	Max. Vert	24	354.24	1.13	0.41
	Max. H_x	25	351.27	1.17	0.84
	Max. H_z	15	353.55	-0.03	1.33
	Max. M_x	1	0.00	-0.04	0.05
	Max. M_z	1	0.00	-0.04	0.05
	Max. Torsion	1	0.00	-0.04	0.05
	Min. Vert	1	197.88	-0.04	0.05
	Min. H_x	17	349.14	-1.27	0.74
	Min. H_z	21	350.35	-0.14	-1.26
	Min. M_x	1	0.00	-0.04	0.05
	Min. M_z	1	0.00	-0.04	0.05
	Min. Torsion	1	0.00	-0.04	0.05

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	197.88	0.04	-0.05	0.00	0.00	0.00
Dead+Wind 0 deg - No Ice+Guy	289.18	-0.01	-0.80	0.00	0.00	0.00
Dead+Wind 30 deg - No Ice+Guy	281.59	0.82	-0.68	0.00	0.00	0.00
Dead+Wind 60 deg - No Ice+Guy	268.07	1.15	-0.66	0.00	0.00	0.00
Dead+Wind 90 deg - No Ice+Guy	281.30	0.97	-0.40	0.00	0.00	0.00
Dead+Wind 120 deg - No Ice+Guy	289.39	0.64	0.32	0.00	0.00	0.00
Dead+Wind 150 deg - No Ice+Guy	281.55	0.18	0.99	0.00	0.00	0.00
Dead+Wind 180 deg - No Ice+Guy	269.05	0.08	1.25	0.00	0.00	0.00

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead+Wind 210 deg - No Ice+Guy	282.13	-0.11	0.97	0.00	0.00	0.00
Dead+Wind 240 deg - No Ice+Guy	289.18	-0.63	0.32	0.00	0.00	0.00
Dead+Wind 270 deg - No Ice+Guy	282.07	-0.96	-0.44	0.00	0.00	0.00
Dead+Wind 300 deg - No Ice+Guy	269.89	-1.11	-0.72	0.00	0.00	0.00
Dead+Wind 330 deg - No Ice+Guy	281.78	-0.82	-0.72	0.00	0.00	0.00
Dead+Ice+Temp+Guy	252.75	0.07	-0.13	0.00	0.00	0.00
Dead+Wind 0 deg+Ice+Temp+Guy	353.55	0.03	-1.33	0.00	0.00	0.00
Dead+Wind 30 deg+Ice+Temp+Guy	353.13	0.90	-0.97	0.00	0.00	0.00
Dead+Wind 60 deg+Ice+Temp+Guy	349.14	1.27	-0.74	0.00	0.00	0.00
Dead+Wind 90 deg+Ice+Temp+Guy	352.75	1.19	-0.36	0.00	0.00	0.00
Dead+Wind 120 deg+Ice+Temp+Guy	353.74	1.03	0.49	0.00	0.00	0.00
Dead+Wind 150 deg+Ice+Temp+Guy	353.13	0.39	1.06	0.00	0.00	0.00
Dead+Wind 180 deg+Ice+Temp+Guy	350.35	0.14	1.26	0.00	0.00	0.00
Dead+Wind 210 deg+Ice+Temp+Guy	354.18	-0.23	1.04	0.00	0.00	0.00
Dead+Wind 240 deg+Ice+Temp+Guy	354.07	-0.96	0.47	0.00	0.00	0.00
Dead+Wind 270 deg+Ice+Temp+Guy	354.24	-1.13	-0.41	0.00	0.00	0.00
Dead+Wind 300 deg+Ice+Temp+Guy	351.27	-1.17	-0.84	0.00	0.00	0.00
Dead+Wind 330 deg+Ice+Temp+Guy	353.58	-0.84	-1.05	0.00	0.00	0.00
Dead+Wind 0 deg - Service+Guy	201.33	0.03	-0.65	0.00	0.00	0.00
Dead+Wind 30 deg - Service+Guy	201.42	0.30	-0.57	0.00	0.00	0.00
Dead+Wind 60 deg - Service+Guy	201.73	0.52	-0.33	0.00	0.00	0.00
Dead+Wind 90 deg - Service+Guy	201.27	0.62	-0.02	0.00	0.00	0.00
Dead+Wind 120 deg - Service+Guy	201.02	0.56	0.25	0.00	0.00	0.00
Dead+Wind 150 deg - Service+Guy	201.50	0.35	0.44	0.00	0.00	0.00
Dead+Wind 180 deg - Service+Guy	202.07	0.04	0.51	0.00	0.00	0.00
Dead+Wind 210 deg - Service+Guy	201.73	-0.27	0.44	0.00	0.00	0.00
Dead+Wind 240 deg - Service+Guy	201.55	-0.48	0.24	0.00	0.00	0.00
Dead+Wind 270 deg - Service+Guy	202.01	-0.55	-0.03	0.00	0.00	0.00
Dead+Wind 300 deg - Service+Guy	202.50	-0.45	-0.34	0.00	0.00	0.00
Dead+Wind 330 deg - Service+Guy	201.93	-0.24	-0.57	0.00	0.00	0.00

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	0.00	-71.57	0.00	0.01	71.57	0.00	0.008%
2	-0.11	-72.34	-105.18	0.11	72.34	105.18	0.002%
3	52.11	-71.60	-90.45	-52.11	71.60	90.45	0.002%
4	90.19	-70.85	-52.06	-90.19	70.85	52.06	0.001%
5	104.41	-71.65	0.11	-104.41	71.65	-0.11	0.002%
6	91.07	-72.42	52.69	-91.06	72.42	-52.69	0.003%
7	52.31	-71.61	90.57	-52.30	71.61	-90.57	0.002%
8	0.11	-70.79	104.32	-0.11	70.79	-104.32	0.002%
9	-52.11	-71.53	90.45	52.11	71.53	-90.45	0.001%
10	-90.94	-72.28	52.49	90.94	72.28	-52.49	0.002%
11	-104.41	-71.48	-0.11	104.41	71.48	0.11	0.001%
12	-90.32	-70.71	-52.26	90.32	70.71	52.26	0.001%
13	-52.31	-71.52	-90.57	52.31	71.52	90.57	0.002%
14	0.00	-104.55	0.00	0.00	104.55	0.00	0.003%
15	-0.08	-105.91	-119.55	0.08	105.91	119.55	0.002%
16	59.39	-104.62	-102.98	-59.39	104.62	102.98	0.002%
17	102.82	-103.31	-59.34	-102.82	103.31	59.34	0.002%
18	118.93	-104.70	0.08	-118.92	104.70	-0.08	0.002%
19	103.55	-106.05	59.85	-103.55	106.05	-59.85	0.003%
20	59.54	-104.63	103.09	-59.54	104.63	-103.09	0.002%
21	0.08	-103.20	118.83	-0.08	103.20	-118.83	0.003%
22	-59.39	-104.49	102.98	59.39	104.49	-102.98	0.001%
23	-103.44	-105.80	59.70	103.44	105.80	-59.70	0.002%
24	-118.93	-104.41	-0.08	118.92	104.41	0.08	0.001%
25	-102.93	-103.06	-59.49	102.92	103.06	59.49	0.002%
26	-59.54	-104.47	-103.09	59.54	104.47	103.09	0.002%
27	-0.03	-71.78	-29.14	0.03	71.78	29.13	0.002%
28	14.43	-71.58	-25.05	-14.43	71.58	25.05	0.002%
29	24.98	-71.37	-14.42	-24.98	71.37	14.42	0.005%
30	28.92	-71.59	0.03	-28.92	71.59	-0.03	0.001%
31	25.23	-71.80	14.60	-25.23	71.80	-14.59	0.002%
32	14.49	-71.58	25.09	-14.49	71.58	-25.09	0.001%
33	0.03	-71.35	28.90	-0.03	71.35	-28.89	0.005%
34	-14.43	-71.56	25.05	14.43	71.56	-25.05	0.002%
35	-25.19	-71.76	14.54	25.19	71.76	-14.54	0.002%
36	-28.92	-71.54	-0.03	28.92	71.54	0.03	0.002%
37	-25.02	-71.33	-14.48	25.02	71.33	14.47	0.004%
38	-14.49	-71.55	-25.09	14.49	71.55	25.09	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	7	0.00000001	0.00005419
2	Yes	14	0.00000001	0.00005825
3	Yes	14	0.00000001	0.00003967
4	Yes	10	0.00000001	0.00006465
5	Yes	14	0.00000001	0.00004579
6	Yes	14	0.00004878	0.00006599
7	Yes	14	0.00000001	0.00004575
8	Yes	10	0.00000001	0.00009395
9	Yes	14	0.00000001	0.00003558

10	Yes	14	0.00000001	0.00005358
11	Yes	14	0.00000001	0.00003576
12	Yes	10	0.00000001	0.00006099
13	Yes	14	0.00000001	0.00003973
14	Yes	6	0.00000001	0.00005455
15	Yes	14	0.00004993	0.00006966
16	Yes	14	0.00000001	0.00005062
17	Yes	10	0.00000001	0.00008051
18	Yes	14	0.00000001	0.00005847
19	Yes	14	0.00005727	0.00007887
20	Yes	14	0.00000001	0.00005965
21	Yes	10	0.00006342	0.00009848
22	Yes	14	0.00000001	0.00004563
23	Yes	14	0.00000001	0.00006326
24	Yes	14	0.00000001	0.00004533
25	Yes	10	0.00000001	0.00005874
26	Yes	14	0.00000001	0.00005129
27	Yes	9	0.00000001	0.00007233
28	Yes	9	0.00000001	0.00005279
29	Yes	8	0.00000001	0.00005720
30	Yes	9	0.00000001	0.00004821
31	Yes	9	0.00000001	0.00006830
32	Yes	9	0.00000001	0.00004773
33	Yes	8	0.00000001	0.00005397
34	Yes	9	0.00000001	0.00005489
35	Yes	9	0.00000001	0.00007479
36	Yes	9	0.00000001	0.00005378
37	Yes	8	0.00000001	0.00005069
38	Yes	9	0.00000001	0.00005123

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	368.75 - 362.5	2.371	33	0.0559	0.1131
T2	362.5 - 356.25	2.409	33	0.0561	0.1132
T3	356.25 - 350	2.448	33	0.0565	0.1136
T4	350 - 343.75	2.487	33	0.0580	0.1106
T5	343.75 - 337.5	2.533	33	0.0591	0.1097
T6	337.5 - 331.25	2.578	33	0.0574	0.0922
T7	331.25 - 325	2.619	33	0.0555	0.0734
T8	325 - 318.75	2.656	33	0.0533	0.0555
T9	318.75 - 312.5	2.689	33	0.0514	0.0444
T10	312.5 - 306.25	2.719	33	0.0496	0.0336
T11	306.25 - 300	2.746	33	0.0480	0.0251
T12	300 - 293.75	2.761	29	0.0474	0.0276
T13	293.75 - 287.5	2.797	29	0.0467	0.0278
T14	287.5 - 281.25	2.831	29	0.0426	0.0317
T15	281.25 - 275	2.861	29	0.0378	0.0359
T16	275 - 268.75	2.882	29	0.0324	0.0383
T17	268.75 - 262.5	2.894	29	0.0267	0.0429
T18	262.5 - 256.25	2.897	29	0.0208	0.0481
T19	256.25 - 250	2.891	29	0.0149	0.0593
T20	250 - 243.75	2.877	29	0.0133	0.0671
T21	243.75 - 237.5	2.855	29	0.0180	0.0723
T22	237.5 - 231.25	2.818	29	0.0218	0.0766
T23	231.25 - 225	2.772	29	0.0237	0.0791
T24	225 - 218.75	2.731	29	0.0234	0.0795
T25	218.75 - 212.5	2.707	29	0.0226	0.0800

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T26	212.5 - 206.25	2.688	29	0.0260	0.1029
T27	206.25 - 200	2.661	29	0.0303	0.1243
T28	200 - 175	2.624	29	0.0352	0.1430
T29	175 - 168.75	2.373	29	0.0536	0.1945
T30	168.75 - 162.5	2.297	29	0.0556	0.1938
T31	162.5 - 156.25	2.218	29	0.0562	0.1925
T32	156.25 - 150	2.154	29	0.0576	0.1882
T33	150 - 125	2.085	29	0.0596	0.1815
T34	125 - 100	1.741	29	0.0690	0.1280
T35	100 - 93.75	1.358	35	0.0672	0.0997
T36	93.75 - 87.5	1.276	35	0.0645	0.1000
T37	87.5 - 81.25	1.200	35	0.0638	0.1149
T38	81.25 - 75	1.123	35	0.0636	0.1359
T39	75 - 50	1.042	35	0.0638	0.1551
T40	50 - 25	0.686	35	0.0643	0.2100
T41	25 - 0	0.370	35	0.0664	0.2418

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
370.00	Search Antenna	33	2.371	0.0559	0.1131	259566
355.00	8' Dish	33	2.456	0.0567	0.1130	569919
350.00	Guy	33	2.487	0.0580	0.1106	48663
325.00	10' x 3" Dia Omni	33	2.656	0.0533	0.0555	105494
305.00	LNX-6514DS-T4M	33	2.749	0.0478	0.0258	37979
300.00	Guy	29	2.761	0.0474	0.0276	19106
250.00	20' x 3" Dia Omni	29	2.877	0.0133	0.0671	61159
242.50	(2) 7770.00	29	2.849	0.0189	0.0732	27355
225.00	Guy	29	2.731	0.0234	0.0795	26283
200.00	Yagi	29	2.624	0.0352	0.1430	33507
180.00	(4) Yagi	29	2.432	0.0509	0.1906	79923
162.50	Guy	29	2.218	0.0562	0.1925	25168
148.00	Yagi	29	2.061	0.0604	0.1785	55926
140.00	Yagi	29	1.959	0.0636	0.1624	64839
125.00	Yagi	29	1.741	0.0690	0.1280	92192
100.00	Guy	35	1.358	0.0672	0.0997	57203
88.00	X-Style	35	1.206	0.0638	0.1133	572802
62.00	Yagi	35	0.857	0.0642	0.1876	743711
50.00	Guy	35	0.686	0.0643	0.2100	71375
40.00	Yagi	35	0.558	0.0649	0.2241	252447

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	368.75 - 362.5	15.636	21	0.2394	0.5320
T2	362.5 - 356.25	15.693	21	0.2396	0.5323
T3	356.25 - 350	15.845	6	0.2402	0.5337
T4	350 - 343.75	16.086	6	0.2448	0.5229

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T5	343.75 - 337.5	16.358	6	0.2473	0.5197
T6	337.5 - 331.25	16.629	6	0.2376	0.4412
T7	331.25 - 325	16.885	6	0.2262	0.3584
T8	325 - 318.75	17.123	6	0.2135	0.2849
T9	318.75 - 312.5	17.341	6	0.2023	0.2392
T10	312.5 - 306.25	17.542	6	0.1912	0.2278
T11	306.25 - 300	17.731	6	0.1806	0.2367
T12	300 - 293.75	17.857	6	0.1729	0.2518
T13	293.75 - 287.5	18.053	6	0.1648	0.2525
T14	287.5 - 281.25	18.247	6	0.1428	0.2675
T15	281.25 - 275	18.425	6	0.1177	0.2819
T16	275 - 268.75	18.560	6	0.0902	0.2907
T17	268.75 - 262.5	18.649	6	0.0769	0.2995
T18	262.5 - 256.25	18.694	6	0.0979	0.3182
T19	256.25 - 250	18.695	6	0.1196	0.3301
T20	250 - 243.75	18.653	6	0.1400	0.3338
T21	243.75 - 237.5	18.572	6	0.1586	0.3328
T22	237.5 - 231.25	18.408	6	0.1734	0.3581
T23	231.25 - 225	18.184	6	0.1814	0.3828
T24	225 - 218.75	17.992	6	0.1805	0.3894
T25	218.75 - 212.5	17.848	6	0.1771	0.3913
T26	212.5 - 206.25	17.738	6	0.1900	0.5307
T27	206.25 - 200	17.579	6	0.2062	0.6617
T28	200 - 175	17.357	6	0.2243	0.7586
T29	175 - 168.75	15.837	6	0.3193	1.0303
T30	168.75 - 162.5	15.372	6	0.3358	1.0189
T31	162.5 - 156.25	14.888	6	0.3470	1.0050
T32	156.25 - 150	14.463	6	0.3605	0.9809
T33	150 - 125	14.006	6	0.3760	0.9446
T34	125 - 100	11.782	19	0.4370	0.6935
T35	100 - 93.75	9.323	19	0.4442	0.5088
T36	93.75 - 87.5	8.777	19	0.4361	0.5098
T37	87.5 - 81.25	8.280	19	0.4350	0.5905
T38	81.25 - 75	7.788	19	0.4361	0.7247
T39	75 - 50	7.267	19	0.4384	0.8607
T40	50 - 25	4.847	19	0.4419	1.2282
T41	25 - 0	2.647	19	0.4626	1.4801

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
370.00	Search Antenna	21	15.636	0.2394	0.5320	86841
355.00	8' Dish	6	15.893	0.2409	0.5315	175950
350.00	Guy	6	16.086	0.2448	0.5229	13384
325.00	10' x 3" Dia Omni	6	17.123	0.2135	0.2849	19001
305.00	LNX-6514DS-T4M	6	17.758	0.1788	0.2398	8082
300.00	Guy	6	17.857	0.1729	0.2518	4394
250.00	20' x 3" Dia Omni	6	18.653	0.1400	0.3338	12086
242.50	(2) 7770.00	6	18.546	0.1619	0.3316	4819
225.00	Guy	6	17.992	0.1805	0.3894	5298
200.00	Yagi	6	17.357	0.2243	0.7586	5633
180.00	(4) Yagi	6	16.193	0.3012	1.0119	17183
162.50	Guy	6	14.888	0.3470	1.0050	3723
148.00	Yagi	6	13.850	0.3813	0.9280	9810
140.00	Yagi	6	13.180	0.4027	0.8541	11678

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125.00	Yagi	19	11.782	0.4370	0.6935	17936
100.00	Guy	19	9.323	0.4442	0.5088	9792
88.00	X-Style	19	8.319	0.4350	0.5814	33622
62.00	Yagi	19	6.024	0.4403	1.0776	77738
50.00	Guy	19	4.847	0.4419	1.2282	8952
40.00	Yagi	19	3.963	0.4493	1.3340	31166

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	368.75	Leg	A325N	0.7500	6	0.05	19.44	0.003 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	0.20	4.12	0.049 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	0.05	12.89	0.004 ✓	1.333	Bolt Shear
T2	362.5	Diagonal	A325N	0.5000	2	0.60	8.25	0.073 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	0.15	8.25	0.019 ✓	1.333	Bolt Shear
T3	356.25	Diagonal	A325N	0.5000	2	2.72	8.25	0.330 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	0.63	8.25	0.077 ✓	1.333	Bolt Shear
T4	350	Leg	A325N	0.7500	6	0.86	19.44	0.044 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	2	2.10	6.44	0.326 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	4.65	12.89	0.361 ✓	1.333	Bolt Shear
T5	343.75	Diagonal	A325N	0.5000	2	2.22	4.12	0.538 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	2.13	12.89	0.165 ✓	1.333	Bolt Shear
T6	337.5	Diagonal	A325N	0.5000	2	2.05	4.12	0.497 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.33	4.12	0.323 ✓	1.333	Bolt Shear
T7	331.25	Diagonal	A325N	0.5000	2	1.74	4.12	0.421 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.23	4.12	0.299 ✓	1.333	Bolt Shear
T8	325	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	1.90	4.12	0.462 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.49	4.12	0.361 ✓	1.333	Bolt Shear
T9	318.75	Diagonal	A325N	0.5000	2	1.95	4.12	0.473 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.69	4.12	0.411 ✓	1.333	Bolt Shear
T10	312.5	Diagonal	A325N	0.5000	2	2.10	4.12	0.509 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.71	4.12	0.415 ✓	1.333	Bolt Shear
T11	306.25	Diagonal	A325N	0.5000	2	4.73	4.12	1.148 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	2.57	12.89	0.199 ✓	1.333	Bolt Shear
T12	300	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	2	3.89	6.44	0.604 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	6.10	12.89	0.473 ✓	1.333	Bolt Shear
T13	293.75	Diagonal	A325N	0.5000	2	3.36	4.12	0.816 ✓	1.333	Bolt Shear

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
		Top Girt	A325N	0.6250	2	1.33	12.89	0.103 ✓	1.333	Bolt Shear
T14	287.5	Diagonal	A325N	0.5000	2	2.77	4.12	0.672 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.90	4.12	0.461 ✓	1.333	Bolt Shear
T15	281.25	Diagonal	A325N	0.5000	2	2.27	4.12	0.551 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	1.59	6.44	0.246 ✓	1.333	Bolt Shear
T16	275	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	1.72	4.12	0.417 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.26	4.12	0.306 ✓	1.333	Bolt Shear
T17	268.75	Diagonal	A325N	0.5000	2	1.45	4.12	0.352 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.18	4.12	0.287 ✓	1.333	Bolt Shear
T18	262.5	Diagonal	A325N	0.5000	2	1.26	4.12	0.305 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.17	4.12	0.283 ✓	1.333	Bolt Shear
T19	256.25	Diagonal	A325N	0.5000	2	1.77	4.12	0.430 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.43	4.12	0.346 ✓	1.333	Bolt Shear
T20	250	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	2.05	4.12	0.497 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.73	8.25	0.210 ✓	1.333	Bolt Shear
T21	243.75	Diagonal	A325N	0.5000	2	4.80	4.12	1.165 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	2.29	12.89	0.178 ✓	1.333	Bolt Shear
T22	237.5	Diagonal	A325X	0.5000	2	5.99	5.89	1.016 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	3.37	12.89	0.262 ✓	1.333	Bolt Shear
T23	231.25	Diagonal	A325X	0.5000	2	6.38	5.89	1.084 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	3.85	12.89	0.299 ✓	1.333	Bolt Shear
T24	225	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	2	7.22	12.89	0.560 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	8.53	12.89	0.662 ✓	1.333	Bolt Shear
T25	218.75	Diagonal	A325N	0.5000	2	3.57	4.12	0.867 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	2.92	12.89	0.226 ✓	1.333	Bolt Shear
T26	212.5	Diagonal	A325N	0.5000	2	2.88	4.12	0.698 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	2.02	4.12	0.491 ✓	1.333	Bolt Shear
T27	206.25	Diagonal	A325N	0.5000	2	2.01	4.12	0.487 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.57	4.12	0.381 ✓	1.333	Bolt Shear
T28	200	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	2.95	4.12	0.716 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	1.55	6.44	0.240 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.03	4.12	0.250 ✓	1.333	Bolt Shear
T29	175	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	4.01	4.12	0.973 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	2.14	4.12	0.518 ✓	1.333	Bolt Shear
T30	168.75	Diagonal	A325N	0.5000	2	4.39	4.12	1.064 ✓	1.333	Bolt Shear

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
		Top Girt	A325N	0.5000	2	2.63	4.12	0.637 ✓	1.333	Bolt Shear
T31	162.5	Diagonal	A325N	0.5000	2	2.37	4.12	0.574 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	3.73	8.25	0.453 ✓	1.333	Bolt Shear
T32	156.25	Diagonal	A325N	0.5000	2	1.94	4.12	0.470 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.34	4.12	0.325 ✓	1.333	Bolt Shear
T33	150	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	2.74	4.12	0.664 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	1.58	6.44	0.245 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	0.96	4.12	0.232 ✓	1.333	Bolt Shear
T34	125	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	2	6.05	6.44	0.939 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	3.55	6.44	0.551 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	2.05	6.44	0.318 ✓	1.333	Bolt Shear
T35	100	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.6250	2	7.71	12.89	0.598 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.6250	2	8.25	12.89	0.641 ✓	1.333	Bolt Shear
T36	93.75	Diagonal	A325N	0.5000	2	3.78	4.12	0.917 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	3.51	8.25	0.426 ✓	1.333	Bolt Shear
T37	87.5	Diagonal	A325N	0.5000	2	3.02	4.12	0.732 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	2.12	4.12	0.513 ✓	1.333	Bolt Shear
T38	81.25	Diagonal	A325N	0.5000	2	2.11	4.12	0.513 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.61	4.12	0.389 ✓	1.333	Bolt Shear
T39	75	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	2.47	4.12	0.600 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	1.41	6.44	0.219 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	1.03	4.12	0.250 ✓	1.333	Bolt Shear
T40	50	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	2.93	4.12	0.710 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	1.67	6.44	0.260 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	2.61	4.12	0.633 ✓	1.333	Bolt Shear
T41	25	Leg	A325N	0.7500	6	0.00	19.44	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325N	0.5000	2	1.84	4.12	0.445 ✓	1.333	Bolt Shear
		Horizontal	A325N	0.6250	2	1.10	6.44	0.171 ✓	1.333	Bolt Shear
		Top Girt	A325N	0.5000	2	0.71	4.12	0.173 ✓	1.333	Bolt Shear

Guy Design Data

Section No.	Elevation ft	Size	Initial Tension K	Breaking Load K	Actual T K	Allowable T_a K	Required S.F.	Actual S.F.
T4	350.00 (A) (679)	7/8 EHS	7.97	79.70	25.82	39.85	2.000	3.086 ✔
	350.00 (A) (680)	7/8 EHS	7.97	79.70	25.58	39.85	2.000	3.115 ✔
	350.00 (B) (673)	7/8 EHS	7.97	79.70	25.22	39.85	2.000	3.160 ✔
	350.00 (B) (674)	7/8 EHS	7.97	79.70	25.82	39.85	2.000	3.086 ✔
	350.00 (C) (667)	7/8 EHS	7.97	79.70	25.76	39.85	2.000	3.093 ✔
	350.00 (C) (668)	7/8 EHS	7.97	79.70	25.42	39.85	2.000	3.135 ✔
T12	300.00 (A) (697)	7/8 EHS	7.97	79.70	27.86	39.85	2.000	2.861 ✔
	300.00 (A) (698)	7/8 EHS	7.97	79.70	27.56	39.85	2.000	2.892 ✔
	300.00 (B) (691)	7/8 EHS	7.97	79.70	27.52	39.85	2.000	2.896 ✔
	300.00 (B) (692)	7/8 EHS	7.97	79.70	27.57	39.85	2.000	2.891 ✔
	300.00 (C) (685)	7/8 EHS	7.97	79.70	27.46	39.85	2.000	2.902 ✔
	300.00 (C) (686)	7/8 EHS	7.97	79.70	27.72	39.85	2.000	2.875 ✔
T24	225.00 (A) (715)	3/4 EHS	5.83	58.30	23.33	29.15	2.000	2.499 ✔
	225.00 (A) (716)	3/4 EHS	5.83	58.30	23.57	29.15	2.000	2.473 ✔
	225.00 (B) (709)	3/4 EHS	5.83	58.30	24.04	29.15	2.000	2.425 ✔
	225.00 (B) (710)	3/4 EHS	5.83	58.30	23.02	29.15	2.000	2.532 ✔
	225.00 (C) (703)	3/4 EHS	5.83	58.30	22.99	29.15	2.000	2.536 ✔
	225.00 (C) (704)	3/4 EHS	5.83	58.30	23.74	29.15	2.000	2.455 ✔
T31	162.50 (A) (723)	3/4 EHS	5.83	58.30	24.42	29.15	2.000	2.388 ✔
	162.50 (B) (722)	3/4 EHS	5.83	58.30	24.58	29.15	2.000	2.372 ✔
	162.50 (C) (721)	3/4 EHS	5.83	58.30	24.33	29.15	2.000	2.396 ✔
T35	100.00 (A) (736)	9/16 EHS	3.50	35.00	13.50	17.50	2.000	2.593 ✔
	100.00 (A) (737)	9/16 EHS	3.50	35.00	13.89	17.50	2.000	2.520 ✔
	100.00 (B) (730)	9/16 EHS	3.50	35.00	14.54	17.50	2.000	2.407 ✔
	100.00 (B) (731)	9/16 EHS	3.50	35.00	12.94	17.50	2.000	2.705 ✔
	100.00 (C) (724)	9/16 EHS	3.50	35.00	13.05	17.50	2.000	2.683 ✔
	100.00 (C) (725)	9/16 EHS	3.50	35.00	14.11	17.50	2.000	2.481 ✔
T40	50.00 (A) (744)	9/16 EHS	3.50	35.00	13.16	17.50	2.000	2.659 ✔
	50.00 (B) (743)	9/16 EHS	3.50	35.00	13.02	17.50	2.000	2.688 ✔
	50.00 (C) (742)	9/16 EHS	3.50	35.00	13.28	17.50	2.000	2.636 ✔

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	Mast Stability Index	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	2 3/4	6.25	6.25	109.1 K=1.00	1.00	11.794	5.9396	-1.13	70.05	0.016 ✓
T2	362.5 - 356.25	2 3/4	6.25	6.25	109.1 K=1.00	1.00	11.794	5.9396	-1.98	70.05	0.028 ✓
T3	356.25 - 350	2 3/4	6.25	6.25	109.1 K=1.00	1.00	11.794	5.9396	-8.54	70.05	0.122 ✓
T4	350 - 343.75	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-7.51	91.73	0.082 ✓
T5	343.75 - 337.5	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-46.30	91.73	0.505 ✓
T6	337.5 - 331.25	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-47.69	91.73	0.520 ✓
T7	331.25 - 325	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-48.52	91.73	0.529 ✓
T8	325 - 318.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-49.93	115.55	0.432 ✓
T9	318.75 - 312.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-48.68	115.55	0.421 ✓
T10	312.5 - 306.25	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-47.21	115.55	0.409 ✓
T11	306.25 - 300	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-44.86	115.55	0.388 ✓
T12	300 - 293.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-37.11	115.55	0.321 ✓
T13	293.75 - 287.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-96.56	115.55	0.836 ✓
T14	287.5 - 281.25	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-101.09	115.55	0.875 ✓
T15	281.25 - 275	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-104.61	115.55	0.905 ✓
T16	275 - 268.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-106.61	115.55	0.923 ✓
T17	268.75 - 262.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-107.41	115.55	0.930 ✓
T18	262.5 - 256.25	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-107.01	115.55	0.926 ✓
T19	256.25 - 250	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-105.70	115.55	0.915 ✓
T20	250 - 243.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-102.33	115.55	0.886 ✓
T21	243.75 - 237.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-98.67	115.55	0.854 ✓
T22	237.5 - 231.25	3 1/4	6.25	6.25	92.3	1.00	13.928	8.2958	-86.85	115.55	0.752

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	Mast Stability Index	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
					K=1.00						✓
T23	231.25 - 225	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-83.25	115.55	0.720 ✓
T24	225 - 218.75	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-63.32	91.73	0.690 ✓
T25	218.75 - 212.5	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-109.16	91.73	1.190 ✓
T26	212.5 - 206.25	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-113.79	91.73	1.240 ✓
T27	206.25 - 200	3	6.25	6.25	100.0 K=1.00	1.00	12.978	7.0686	-116.89	91.73	1.274 ✓
T28	200 - 175	3	25.00	3.13	50.0 K=1.00	1.00	18.351	7.0686	-118.48	129.71	0.913 ✓
T29	175 - 168.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-106.88	115.55	0.925 ✓
T30	168.75 - 162.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-102.43	115.55	0.887 ✓
T31	162.5 - 156.25	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-110.51	115.55	0.956 ✓
T32	156.25 - 150	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-114.10	115.55	0.987 ✓
T33	150 - 125	3 1/4	25.00	6.25	92.3 K=1.00	1.00	13.928	8.2958	-117.66	115.55	1.018 ✓
T34	125 - 100	3 1/4	25.00	6.25	92.3 K=1.00	1.00	13.928	8.2958	-122.79	115.55	1.063 ✓
T35	100 - 93.75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-101.58	115.55	0.879 ✓
T36	93.75 - 87.5	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-117.62	115.55	1.018 ✓
T37	87.5 - 81.25	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-115.72	115.55	1.001 ✓
T38	81.25 - 75	3 1/4	6.25	6.25	92.3 K=1.00	1.00	13.928	8.2958	-117.03	115.55	1.013 ✓
T39	75 - 50	3 1/4	25.00	6.25	92.3 K=1.00	1.00	13.928	8.2958	-117.18	115.55	1.014 ✓
T40	50 - 25	3 1/4	25.00	6.25	92.3 K=1.00	1.00	13.928	8.2958	-126.35	115.55	1.093 ✓
T41	25 - 0	3 1/4	25.00	6.25	92.3 K=1.00	1.00	13.928	8.2958	-126.90	115.55	1.098 ✓

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	L2 1/2x2 1/2x1/4	8.00	3.64	96.7 K=1.09	13.385	1.1900	-0.41	15.93	0.026 ✓
T2	362.5 - 356.25	2L3x3x5/16	8.00	3.64	65.5	16.885	3.5500	-1.20	59.94	0.020

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
					K=1.38					✓
T3	356.25 - 350	2L3x3x5/16	8.00	3.64	65.5 K=1.38	16.885	3.5500	-5.11	59.94	0.085 ✓
T4	350 - 343.75	L3x2 1/2x1/4	8.00	3.60	91.4 K=1.12	14.032	1.3100	-4.20	18.38	0.228 ✓
T12	300 - 293.75	L3x2 1/2x1/4	8.00	3.57	90.9 K=1.12	14.100	1.3100	-7.78	18.47	0.421 ✓
T24	225 - 218.75	2L2 1/2x2 1/2x1/4	8.00	3.59	72.0 K=1.29	16.222	2.3800	-14.44	38.61	0.374 ✓
T35	100 - 93.75	2L2 1/2x2 1/2x1/4	8.00	3.57	71.8 K=1.29	16.243	2.3800	-15.42	38.66	0.399 ✓

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T28	200 - 175	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-3.09	8.19	0.377 ✓
T33	150 - 125	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.15	8.23	0.383 ✓
T34	125 - 100	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-7.10	8.23	0.863 ✓
T39	75 - 50	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.82	8.23	0.343 ✓
T40	50 - 25	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.35	8.23	0.407 ✓
T41	25 - 0	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.20	8.23	0.267 ✓

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T28	200 - 175	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-2.05	8.19	0.250 ✓

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	2L2 1/2x2x1/4	5.00	4.34	93.2	13.815	2.1300	-0.09	29.43	0.003

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
					K=1.40					✓
T2	362.5 - 356.25	2L2 1/2x3x1/4	5.00	4.42	95.2 K=1.35	13.577	2.6300	-0.17	35.71	0.005 ✓
T3	356.25 - 350	2L2 1/2x3x1/4	5.00	4.42	95.2 K=1.35	13.577	2.6300	-1.26	35.71	0.035 ✓
T4	350 - 343.75	2L2 1/2x2x1/4	5.00	4.34	93.2 K=1.40	13.815	2.1300	-6.51	29.43	0.221 ✓
T5	343.75 - 337.5	2L2 1/2x2x1/4	5.00	4.32	93.1 K=1.41	13.835	2.1300	-4.26	29.47	0.145 ✓
T6	337.5 - 331.25	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-2.53	8.19	0.308* ✓
T7	331.25 - 325	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-2.41	8.19	0.294* ✓
T8	325 - 318.75	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-2.87	8.19	0.351* ✓
T9	318.75 - 312.5	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.32	8.23	0.403* ✓
T10	312.5 - 306.25	P1.25x.14	5.00	4.73	105,2 K=1.00	12.315	0.6685	-3.43	8.23	0.416* ✓
T11	306.25 - 300	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-5.14	29.51	0.174 ✓
T12	300 - 293.75	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-8.50	29.51	0.288 ✓
T13	293.75 - 287.5	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-2.66	29.51	0.090 ✓
T14	287.5 - 281.25	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.80	8.23	0.462 ✓
T15	281.25 - 275	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.18	8.23	0.386 ✓
T16	275 - 268.75	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.12	8.23	0.258* ✓
T17	268.75 - 262.5	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.12	8.23	0.257* ✓
T18	262.5 - 256.25	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.09	8.23	0.254* ✓
T19	256.25 - 250	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.57	8.23	0.312* ✓
T20	250 - 243.75	2L2 1/2x2x1/4	5.00	4.38	93.5 K=1.40	13.786	2.1300	-3.20	29.36	0.109* ✓
T21	243.75 - 237.5	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-4.58	29.51	0.155 ✓
T22	237.5 - 231.25	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-6.75	29.51	0.229 ✓
T23	231.25 - 225	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-7.70	29.51	0.261 ✓
T24	225 - 218.75	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-6.65	29.51	0.225 ✓
T26	212.5 - 206.25	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-4.05	8.19	0.494 ✓
T27	206.25 - 200	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-3.15	8.19	0.384 ✓
T28	200 - 175	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-1.61	8.19	0.196*

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T29	175 - 168.75	P1.25x.14	5.00	4.75	105.6 K=1.00	12.254	0.6685	-4.27	8.19	0.521
T30	168.75 - 162.5	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-5.25	8.23	0.638
T31	162.5 - 156.25	2L2 1/2x2x1/4	5.00	4.38	93.5 K=1.40	13.786	2.1300	-1.30	29.36	0.044
T32	156.25 - 150	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.68	8.23	0.326
T33	150 - 125	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-1.68	8.23	0.204*
T34	125 - 100	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-4.10	8.23	0.497
T35	100 - 93.75	2L2 1/2x2x1/4	5.00	4.30	92.9 K=1.41	13.854	2.1300	-3.93	29.51	0.133
T37	87.5 - 81.25	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-4.23	8.23	0.514
T38	81.25 - 75	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-3.21	8.23	0.390
T39	75 - 50	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-2.06	8.23	0.250
T40	50 - 25	L2 1/2x2x1/4	5.00	4.38	122.3 K=0.99	9.943	1.0600	-0.44	10.54	0.041
T41	25 - 0	P1.25x.14	5.00	4.73	105.2 K=1.00	12.315	0.6685	-1.43	8.23	0.173*

* DL controls

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T35	100 - 93.75 (726)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-0.98	41.87	0.023
T35	100 - 93.75 (727)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-1.01	41.87	0.024
T35	100 - 93.75 (732)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-1.03	41.87	0.025
T35	100 - 93.75 (733)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-1.15	41.87	0.027
T35	100 - 93.75 (738)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-1.03	41.87	0.025
T35	100 - 93.75 (739)	2L3x2 1/2x1/4	6.03	5.89	74.8 K=1.00	15.921	2.6300	-0.95	41.87	0.023

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T4	350 - 343.75 (671)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-26.89	31.41	0.856 ✔
T4	350 - 343.75 (672)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-27.29	31.41	0.869 ✔
T4	350 - 343.75 (677)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-27.59	31.41	0.878 ✔
T4	350 - 343.75 (678)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-27.48	31.41	0.875 ✔
T4	350 - 343.75 (683)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-26.93	31.41	0.857 ✔
T4	350 - 343.75 (684)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-27.42	31.41	0.873 ✔
T12	300 - 293.75 (689)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-29.24	31.48	0.929 ✔
T12	300 - 293.75 (690)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-29.77	31.48	0.946 ✔
T12	300 - 293.75 (695)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-30.13	31.48	0.957 ✔
T12	300 - 293.75 (696)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-30.07	31.48	0.955 ✔
T12	300 - 293.75 (701)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-29.30	31.48	0.931 ✔
T12	300 - 293.75 (702)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-29.87	31.48	0.949 ✔
T24	225 - 218.75 (707)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-22.50	31.41	0.716 ✔
T24	225 - 218.75 (708)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-23.37	31.41	0.744 ✔
T24	225 - 218.75 (713)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-23.30	31.41	0.742 ✔
T24	225 - 218.75 (714)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-23.85	31.41	0.759 ✔
T24	225 - 218.75 (719)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-22.24	31.41	0.708 ✔
T24	225 - 218.75 (720)	2L3x2 1/2x1/4	8.68	8.50	108.0 K=1.00	11.943	2.6300	-22.55	31.41	0.718 ✔
T35	100 - 93.75 (728)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-10.27	31.48	0.326 ✔
T35	100 - 93.75 (729)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-10.69	31.48	0.340 ✔
T35	100 - 93.75 (734)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-11.26	31.48	0.358 ✔
T35	100 - 93.75 (735)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-11.26	31.48	0.358 ✔
T35	100 - 93.75 (740)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-9.78	31.48	0.311 ✔
T35	100 - 93.75 (741)	2L3x2 1/2x1/4	8.68	8.49	107.8 K=1.00	11.968	2.6300	-10.31	31.48	0.327 ✔

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	2 3/4	6.25	6.25	109.1	21.600	5.9396	0.32	128.29	0.002 ✔
T2	362.5 - 356.25	2 3/4	6.25	6.25	109.1	21.600	5.9396	0.86	128.29	0.007 ✔
T3	356.25 - 350	2 3/4	6.25	6.25	109.1	21.600	5.9396	5.90	128.29	0.046 ✔
T4	350 - 343.75	3	6.25	6.25	100.0	21.600	7.0686	5.14	152.68	0.034 ✔
T17	268.75 - 262.5	3 1/4	6.25	6.25	92.3	21.600	8.2958	0.92	179.19	0.005 ✔
T18	262.5 - 256.25	3 1/4	6.25	6.25	92.3	21.600	8.2958	1.60	179.19	0.009 ✔

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	L2 1/2x2 1/2x1/4	8.00	3.64	59.6	29.000	0.7753	0.34	22.48	0.015 ✔
T2	362.5 - 356.25	2L3x3x5/16	8.00	3.64	49.7	29.000	2.3695	0.85	68.72	0.012 ✔
T3	356.25 - 350	2L3x3x5/16	8.00	3.64	49.7	29.000	2.3695	5.44	68.72	0.079 ✔
T4	350 - 343.75	L3x2 1/2x1/4	8.00	3.60	61.0	29.000	0.8419	3.83	24.41	0.157 ✔
T5	343.75 - 337.5	5/8	8.00	7.60	584.0	21.600	0.3068	4.44	6.63	0.670 ✔
T6	337.5 - 331.25	5/8	8.00	7.60	584.0	21.600	0.3068	4.10	6.63	0.619 ✔
T7	331.25 - 325	5/8	8.00	7.60	584.0	21.600	0.3068	3.48	6.63	0.524 ✔
T8	325 - 318.75	3/4	8.00	7.59	485.6	21.600	0.4418	3.81	9.54	0.399 ✔
T9	318.75 - 312.5	3/4	8.00	7.57	484.5	21.600	0.4418	3.90	9.54	0.409 ✔
T10	312.5 - 306.25	3/4	8.00	7.57	484.5	21.600	0.4418	4.20	9.54	0.440 ✔
T11	306.25 - 300	3/4	8.00	7.57	484.5	21.600	0.4418	9.47	9.54	0.992 ✔
T12	300 - 293.75	L3x2 1/2x1/4	8.00	3.57	60.4	29.000	0.8419	2.57	24.41	0.105 ✔

tnxTower	Job: 15001.008 - Montville	Page: 96 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T13	293.75 - 287.5	3/4	8.00	7.57	484.5	21.600	0.4418	6.73	9.54	0.705
T14	287.5 - 281.25	5/8	8.00	7.57	581.4	21.600	0.3068	5.54	6.63	0.836
T15	281.25 - 275	5/8	8.00	7.57	581.4	21.600	0.3068	4.55	6.63	0.686
T16	275 - 268.75	5/8	8.00	7.57	581.4	21.600	0.3068	3.44	6.63	0.519
T17	268.75 - 262.5	5/8	8.00	7.57	581.4	21.600	0.3068	2.90	6.63	0.438
T18	262.5 - 256.25	5/8	8.00	7.57	581.4	21.600	0.3068	2.52	6.63	0.380
T19	256.25 - 250	3/4	8.00	7.57	484.5	21.600	0.4418	3.54	9.54	0.371
T20	250 - 243.75	3/4	8.00	7.57	484.5	21.600	0.4418	4.10	9.54	0.429
T21	243.75 - 237.5	3/4	8.00	7.57	484.5	21.600	0.4418	9.61	9.54	1.007
T22	237.5 - 231.25	3/4	8.00	7.57	484.5	21.600	0.4418	11.97	9.54	1.254
T23	231.25 - 225	1	8.00	7.57	363.4	21.600	0.7854	12.77	16.96	0.753
T25	218.75 - 212.5	5/8	8.00	7.60	584.0	21.600	0.3068	7.15	6.63	1.079
T26	212.5 - 206.25	5/8	8.00	7.60	584.0	21.600	0.3068	5.76	6.63	0.869
T27	206.25 - 200	5/8	8.00	7.60	584.0	21.600	0.3068	4.02	6.63	0.606
T28	200 - 175	5/8	8.00	7.60	584.0	21.600	0.3068	5.91	6.63	0.891
T29	175 - 168.75	1	8.00	7.59	364.2	21.600	0.7854	8.02	16.96	0.473
T30	168.75 - 162.5	1	8.00	7.57	363.4	21.600	0.7854	8.77	16.96	0.517
T31	162.5 - 156.25	5/8	8.00	7.57	581.4	21.600	0.3068	4.74	6.63	0.715
T32	156.25 - 150	5/8	8.00	7.57	581.4	21.600	0.3068	3.87	6.63	0.585
T33	150 - 125	5/8	8.00	7.57	581.4	21.600	0.3068	5.48	6.63	0.826
T34	125 - 100	L2 1/2x2 1/2x3/16	8.00	7.14	116.8	29.000	0.5710	12.10	16.56	0.731
T36	93.75 - 87.5	3/4	8.00	7.57	484.5	21.600	0.4418	7.56	9.54	0.792
T37	87.5 - 81.25	5/8	8.00	7.57	581.4	21.600	0.3068	6.03	6.63	0.910
T38	81.25 - 75	5/8	8.00	7.57	581.4	21.600	0.3068	4.23	6.63	0.638
T39	75 - 50	5/8	8.00	7.57	581.4	21.600	0.3068	4.95	6.63	0.747
T40	50 - 25	5/8	8.00	7.57	581.4	21.600	0.3068	5.85	6.63	0.883
T41	25 - 0	5/8	8.00	7.57	581.4	21.600	0.3068	3.67	6.63	0.554

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
										✔

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T28	200 - 175	P1.25x.14	5.00	4.75	105.6	21.600	0.6685	2.05	14.44	0.142 ✔
T33	150 - 125	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	2.04	14.44	0.141 ✔
T34	125 - 100	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	2.13	14.44	0.147 ✔
T39	75 - 50	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	2.03	14.44	0.141 ✔
T40	50 - 25	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	2.19	14.44	0.152 ✔
T41	25 - 0	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	2.20	14.44	0.152 ✔

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T28	200 - 175	P1.25x.14	5.00	4.75	105.6	21.600	0.6685	2.05	14.44	0.142 ✔

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T1	368.75 - 362.5	2L2 1/2x2x1/4	5.00	4.34	73.0	29.000	1.3162	0.10	38.17	0.003 ✔
T2	362.5 - 356.25	2L2 1/2x3x1/4	5.00	4.42	76.0	29.000	1.7381	0.31	50.41	0.006 ✔
T3	356.25 - 350	2L2 1/2x3x1/4	5.00	4.42	76.0	29.000	1.7381	1.26	50.41	0.025 ✔
T4	350 - 343.75	2L2 1/2x2x1/4	5.00	4.34	73.0	29.000	1.3162	9.30	38.17	0.244 ✔
T12	300 - 293.75	2L2 1/2x2x1/4	5.00	4.30	72.4	29.000	1.3162	12.20	38.17	0.319 ✔
T13	293.75 - 287.5	2L2 1/2x2x1/4	5.00	4.30	72.4	29.000	1.3162	0.66	38.17	0.017 ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T24	225 - 218.75	2L2 1/2x2x1/4	5.00	4.30	72.4	29.000	1.3162	17.06	38.17	0.447
T25	218.75 - 212.5	2L2 1/2x2x1/4	5.00	4.32	72.7	29.000	1.3162	5.83	38.17	0.153
T28	200 - 175	P1.25x.14	5.00	4.75	105.6	21.600	0.6685	0.02	14.44	0.002
T31	162.5 - 156.25	2L2 1/2x2x1/4	5.00	4.38	72.4	29.000	1.3631	7.47	39.53	0.189
T35	100 - 93.75	2L2 1/2x2x1/4	5.00	4.30	72.4	29.000	1.3162	16.51	38.17	0.432
T36	93.75 - 87.5	2L2 1/2x2x1/4	5.00	4.38	72.4	29.000	1.3631	7.02	39.53	0.178
T40	50 - 25	L2 1/2x2x1/4	5.00	4.38	95.8	29.000	0.6778	5.22	19.66	0.266
T41	25 - 0	P1.25x.14	5.00	4.73	105.2	21.600	0.6685	0.06	14.44	0.004

Torque-Arm Top Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T4	350 - 343.75 (669)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	22.94	56.81	0.404
T4	350 - 343.75 (670)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	23.50	56.81	0.414
T4	350 - 343.75 (675)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	22.54	56.81	0.397
T4	350 - 343.75 (676)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	22.48	56.81	0.396
T4	350 - 343.75 (681)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	23.02	56.81	0.405
T4	350 - 343.75 (682)	2L3x2 1/2x1/4	6.03	5.91	75.1	21.600	2.6300	23.77	56.81	0.418
T12	300 - 293.75 (687)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	24.06	56.81	0.423
T12	300 - 293.75 (688)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	24.36	56.81	0.429
T12	300 - 293.75 (693)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	23.82	56.81	0.419
T12	300 - 293.75 (694)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	24.22	56.81	0.426
T12	300 - 293.75 (699)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	24.43	56.81	0.430
T12	300 - 293.75 (700)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	24.42	56.81	0.430
T24	225 - 218.75 (705)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	22.06	56.81	0.388
T24	225 - 218.75	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	21.64	56.81	0.381

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
	(706)									✓
T24	225 - 218.75 (711)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	22.54	56.81	0.397 ✓
T24	225 - 218.75 (712)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	22.32	56.81	0.393 ✓
T24	225 - 218.75 (717)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	22.19	56.81	0.391 ✓
T24	225 - 218.75 (718)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	21.96	56.81	0.386 ✓
T35	100 - 93.75 (726)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	14.21	56.81	0.250 ✓
T35	100 - 93.75 (727)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	13.73	56.81	0.242 ✓
T35	100 - 93.75 (732)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	14.88	56.81	0.262 ✓
T35	100 - 93.75 (733)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	14.38	56.81	0.253 ✓
T35	100 - 93.75 (738)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	13.54	56.81	0.238 ✓
T35	100 - 93.75 (739)	2L3x2 1/2x1/4	6.03	5.89	74.8	21.600	2.6300	13.35	56.81	0.235 ✓

Torque-Arm Bottom Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
T35	100 - 93.75 (728)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	0.75	56.81	0.013 ✓
T35	100 - 93.75 (729)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	1.00	56.81	0.018 ✓
T35	100 - 93.75 (734)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	1.14	56.81	0.020 ✓
T35	100 - 93.75 (735)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	1.28	56.81	0.022 ✓
T35	100 - 93.75 (740)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	0.60	56.81	0.011 ✓
T35	100 - 93.75 (741)	2L3x2 1/2x1/4	8.68	8.49	107.8	21.600	2.6300	0.80	56.81	0.014 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	368.75 - 362.5	Leg	2 3/4	1	-1.13	93.38	1.2	Pass
T2	362.5 - 356.25	Leg	2 3/4	13	-1.98	93.38	2.1	Pass
T3	356.25 - 350	Leg	2 3/4	26	-8.54	93.38	9.1	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T4	350 - 343.75	Leg	3	39	-7.51	122.28	6.1	Pass
T5	343.75 - 337.5	Leg	3	49	-46.30	122.28	37.9	Pass
T6	337.5 - 331.25	Leg	3	61	-47.69	122.28	39.0	Pass
T7	331.25 - 325	Leg	3	74	-48.52	122.28	39.7	Pass
T8	325 - 318.75	Leg	3 1/4	86	-49.93	154.02	32.4	Pass
T9	318.75 - 312.5	Leg	3 1/4	98	-48.68	154.02	31.6	Pass
T10	312.5 - 306.25	Leg	3 1/4	110	-47.21	154.02	30.6	Pass
T11	306.25 - 300	Leg	3 1/4	122	-44.86	154.02	29.1	Pass
T12	300 - 293.75	Leg	3 1/4	134	-37.11	154.02	24.1	Pass
T13	293.75 - 287.5	Leg	3 1/4	146	-96.56	154.02	62.7	Pass
T14	287.5 - 281.25	Leg	3 1/4	158	-101.09	154.02	65.6	Pass
T15	281.25 - 275	Leg	3 1/4	170	-104.61	154.02	67.9	Pass
T16	275 - 268.75	Leg	3 1/4	182	-106.61	154.02	69.2	Pass
T17	268.75 - 262.5	Leg	3 1/4	194	-107.41	154.02	69.7	Pass
T18	262.5 - 256.25	Leg	3 1/4	206	-107.01	154.02	69.5	Pass
T19	256.25 - 250	Leg	3 1/4	218	-105.70	154.02	68.6	Pass
T20	250 - 243.75	Leg	3 1/4	230	-102.33	154.02	66.4	Pass
T21	243.75 - 237.5	Leg	3 1/4	242	-98.67	154.02	64.1	Pass
T22	237.5 - 231.25	Leg	3 1/4	254	-86.85	154.02	56.4	Pass
T23	231.25 - 225	Leg	3 1/4	266	-83.25	154.02	54.0	Pass
T24	225 - 218.75	Leg	3	278	-63.32	122.28	51.8	Pass
T25	218.75 - 212.5	Leg	3	289	-109.16	122.28	89.3	Pass
T26	212.5 - 206.25	Leg	3	301	-113.79	122.28	93.1	Pass
T27	206.25 - 200	Leg	3	314	-116.89	122.28	95.6	Pass
T28	200 - 175	Leg	3	326	-118.48	172.91	68.5	Pass
T29	175 - 168.75	Leg	3 1/4	376	-106.88	154.02	69.4	Pass
T30	168.75 - 162.5	Leg	3 1/4	388	-102.43	154.02	66.5	Pass
T31	162.5 - 156.25	Leg	3 1/4	402	-110.51	154.02	71.7	Pass
T32	156.25 - 150	Leg	3 1/4	412	-114.10	154.02	74.1	Pass
T33	150 - 125	Leg	3 1/4	424	-117.66	154.02	76.4	Pass
T34	125 - 100	Leg	3 1/4	463	-122.79	154.02	79.7	Pass
T35	100 - 93.75	Leg	3 1/4	502	-101.58	154.02	65.9	Pass
T36	93.75 - 87.5	Leg	3 1/4	514	-117.62	154.02	76.4	Pass
T37	87.5 - 81.25	Leg	3 1/4	526	-115.72	154.02	75.1	Pass
T38	81.25 - 75	Leg	3 1/4	538	-117.03	154.02	76.0	Pass
T39	75 - 50	Leg	3 1/4	550	-117.18	154.02	76.1	Pass
T40	50 - 25	Leg	3 1/4	591	-126.35	154.02	82.0	Pass
T41	25 - 0	Leg	3 1/4	628	-126.90	154.02	82.4	Pass
T1	368.75 - 362.5	Diagonal	L2 1/2x2 1/2x1/4	11	-0.41	21.23	1.9 3.7 (b)	Pass
T2	362.5 - 356.25	Diagonal	2L3x3x5/16	20	-1.20	79.90	1.5 5.5 (b)	Pass
T3	356.25 - 350	Diagonal	2L3x3x5/16	34	-5.11	79.90	6.4 24.7 (b)	Pass
T4	350 - 343.75	Diagonal	L3x2 1/2x1/4	43	-4.20	24.50	17.1 24.4 (b)	Pass
T5	343.75 - 337.5	Diagonal	5/8	55	4.44	8.83	50.2	Pass
T6	337.5 - 331.25	Diagonal	5/8	67	4.10	8.83	46.4	Pass
T7	331.25 - 325	Diagonal	5/8	79	3.48	8.83	39.3	Pass
T8	325 - 318.75	Diagonal	3/4	96	3.81	12.72	29.9 34.6 (b)	Pass
T9	318.75 - 312.5	Diagonal	3/4	105	3.90	12.72	30.7 35.5 (b)	Pass
T10	312.5 - 306.25	Diagonal	3/4	117	4.20	12.72	33.0 38.2 (b)	Pass
T11	306.25 - 300	Diagonal	3/4	130	9.47	12.72	74.4 86.1 (b)	Pass
T12	300 - 293.75	Diagonal	L3x2 1/2x1/4	139	-7.78	24.62	31.6 45.3 (b)	Pass
T13	293.75 - 287.5	Diagonal	3/4	152	6.73	12.72	52.9 61.2 (b)	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T14	287.5 - 281.25	Diagonal	5/8	164	5.54	8.83	62.7	Pass
T15	281.25 - 275	Diagonal	5/8	176	4.55	8.83	51.5	Pass
T16	275 - 268.75	Diagonal	5/8	188	3.44	8.83	39.0	Pass
T17	268.75 - 262.5	Diagonal	5/8	200	2.90	8.83	32.8	Pass
T18	262.5 - 256.25	Diagonal	5/8	212	2.52	8.83	28.5	Pass
T19	256.25 - 250	Diagonal	3/4	225	3.54	12.72	27.9 32.2 (b)	Pass
T20	250 - 243.75	Diagonal	3/4	237	4.10	12.72	32.2 37.3 (b)	Pass
T21	243.75 - 237.5	Diagonal	3/4	249	9.61	12.72	75.5 87.4 (b)	Pass
T22	237.5 - 231.25	Diagonal	3/4	261	11.97	12.72	94.1	Pass
T23	231.25 - 225	Diagonal	1	273	12.77	22.61	56.5 81.3 (b)	Pass
T24	225 - 218.75	Diagonal	2L2 1/2x2 1/2x1/4	283	-14.44	51.46	28.1 42.0 (b)	Pass
T25	218.75 - 212.5	Diagonal	5/8	296	7.15	8.83	80.9	Pass
T26	212.5 - 206.25	Diagonal	5/8	307	5.76	8.83	65.2	Pass
T27	206.25 - 200	Diagonal	5/8	319	4.02	8.83	45.5	Pass
T28	200 - 175	Diagonal	5/8	336	5.91	8.83	66.8	Pass
T29	175 - 168.75	Diagonal	1	387	8.02	22.61	35.5 73.0 (b)	Pass
T30	168.75 - 162.5	Diagonal	1	399	8.77	22.61	38.8 79.8 (b)	Pass
T31	162.5 - 156.25	Diagonal	5/8	408	4.74	8.83	53.6	Pass
T32	156.25 - 150	Diagonal	5/8	420	3.87	8.83	43.9	Pass
T33	150 - 125	Diagonal	5/8	430	5.48	8.83	62.0	Pass
T34	125 - 100	Diagonal	L2 1/2x2 1/2x3/16	469	12.10	22.07	54.8 70.4 (b)	Pass
T35	100 - 93.75	Diagonal	2L2 1/2x2 1/2x1/4	509	-15.42	51.53	29.9 44.9 (b)	Pass
T36	93.75 - 87.5	Diagonal	3/4	520	7.56	12.72	59.4 68.8 (b)	Pass
T37	87.5 - 81.25	Diagonal	5/8	532	6.03	8.83	68.3	Pass
T38	81.25 - 75	Diagonal	5/8	544	4.23	8.83	47.9	Pass
T39	75 - 50	Diagonal	5/8	558	4.95	8.83	56.0	Pass
T40	50 - 25	Diagonal	5/8	622	5.85	8.83	66.3	Pass
T41	25 - 0	Diagonal	5/8	639	3.67	8.83	41.6	Pass
T28	200 - 175	Horizontal	P1.25x.14	338	-3.09	10.92	28.3	Pass
T33	150 - 125	Horizontal	P1.25x.14	436	-3.15	10.97	28.7	Pass
T34	125 - 100	Horizontal	P1.25x.14	475	-7.10	10.97	64.7	Pass
T39	75 - 50	Horizontal	P1.25x.14	563	-2.82	10.97	25.7	Pass
T40	50 - 25	Horizontal	P1.25x.14	619	-3.35	10.97	30.5	Pass
T41	25 - 0	Horizontal	P1.25x.14	651	-2.20	10.97	20.0	Pass
T28	200 - 175	Secondary Horizontal	P1.25x.14	340	-2.05	10.92	18.8	Pass
T1	368.75 - 362.5	Top Girt	2L2 1/2x2x1/4	5	-0.09	39.23	0.2 0.3 (b)	Pass
T2	362.5 - 356.25	Top Girt	2L2 1/2x3x1/4	16	0.31	67.19	0.5 1.4 (b)	Pass
T3	356.25 - 350	Top Girt	2L2 1/2x3x1/4	29	-1.26	47.60	2.6 5.7 (b)	Pass
T4	350 - 343.75	Top Girt	2L2 1/2x2x1/4	40	9.30	50.88	18.3 27.1 (b)	Pass
T5	343.75 - 337.5	Top Girt	2L2 1/2x2x1/4	52	-4.26	39.28	10.8 12.4 (b)	Pass
T6	337.5 - 331.25	Top Girt	P1.25x.14	65	-2.53	8.19	30.8	Pass
T7	331.25 - 325	Top Girt	P1.25x.14	77	-2.41	8.19	29.4	Pass
T8	325 - 318.75	Top Girt	P1.25x.14	89	-2.87	8.19	35.1	Pass
T9	318.75 - 312.5	Top Girt	P1.25x.14	102	-3.32	8.23	40.3	Pass
T10	312.5 - 306.25	Top Girt	P1.25x.14	114	-3.43	8.23	41.6	Pass
T11	306.25 - 300	Top Girt	2L2 1/2x2x1/4	126	-5.14	39.34	13.1	Pass

tnxTower	Job: 15001.008 - Montville	Page: 102 of 103
Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Project: 370' Guyed Tower - 695 Old Colchester Road, Montville, CT	Date: 09:32:33 02/13/15
	Client: Verizon Wireless	Designed by: TJL

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T12	300 - 293.75	Top Girt	2L2 1/2x2x1/4	136	12.20	50.88	14.9 (b) 24.0	Pass
T13	293.75 - 287.5	Top Girt	2L2 1/2x2x1/4	149	-2.66	39.34	35.5 (b) 6.8	Pass
T14	287.5 - 281.25	Top Girt	P1.25x.14	160	-3.80	10.97	7.7 (b) 34.6	Pass
T15	281.25 - 275	Top Girt	P1.25x.14	172	-3.18	10.97	28.9	Pass
T16	275 - 268.75	Top Girt	P1.25x.14	186	-2.12	8.23	25.8	Pass
T17	268.75 - 262.5	Top Girt	P1.25x.14	198	-2.12	8.23	25.7	Pass
T18	262.5 - 256.25	Top Girt	P1.25x.14	210	-2.09	8.23	25.4	Pass
T19	256.25 - 250	Top Girt	P1.25x.14	222	-2.57	8.23	31.2	Pass
T20	250 - 243.75	Top Girt	2L2 1/2x2x1/4	234	-3.20	29.36	10.9	Pass
T21	243.75 - 237.5	Top Girt	2L2 1/2x2x1/4	245	-4.58	39.34	15.7 (b) 11.6	Pass
T22	237.5 - 231.25	Top Girt	2L2 1/2x2x1/4	257	-6.75	39.34	13.3 (b) 17.2	Pass
T23	231.25 - 225	Top Girt	2L2 1/2x2x1/4	269	-7.70	39.34	19.6 (b) 19.6	Pass
T24	225 - 218.75	Top Girt	2L2 1/2x2x1/4	282	17.06	50.88	22.4 (b) 33.5	Pass
T25	218.75 - 212.5	Top Girt	2L2 1/2x2x1/4	292	5.83	50.88	49.7 (b) 11.5	Pass
T26	212.5 - 206.25	Top Girt	P1.25x.14	304	-4.05	10.92	17.0 (b) 37.1	Pass
T27	206.25 - 200	Top Girt	P1.25x.14	316	-3.15	10.92	28.8	Pass
T28	200 - 175	Top Girt	P1.25x.14	330	-1.61	8.19	19.6	Pass
T29	175 - 168.75	Top Girt	P1.25x.14	381	-4.27	10.92	39.1	Pass
T30	168.75 - 162.5	Top Girt	P1.25x.14	393	-5.25	10.97	47.8	Pass
T31	162.5 - 156.25	Top Girt	2L2 1/2x2x1/4	405	7.47	52.69	14.2	Pass
T32	156.25 - 150	Top Girt	P1.25x.14	416	-2.68	10.97	34.0 (b) 24.4	Pass
T33	150 - 125	Top Girt	P1.25x.14	429	-1.68	8.23	20.4	Pass
T34	125 - 100	Top Girt	P1.25x.14	466	-4.10	10.97	37.3	Pass
T35	100 - 93.75	Top Girt	2L2 1/2x2x1/4	507	16.51	50.88	32.4	Pass
T36	93.75 - 87.5	Top Girt	2L2 1/2x2x1/4	517	7.02	52.69	48.1 (b) 13.3	Pass
T37	87.5 - 81.25	Top Girt	P1.25x.14	529	-4.23	10.97	31.9 (b) 38.6	Pass
T38	81.25 - 75	Top Girt	P1.25x.14	541	-3.21	10.97	29.3	Pass
T39	75 - 50	Top Girt	P1.25x.14	553	-2.06	10.97	18.8	Pass
T40	50 - 25	Top Girt	L2 1/2x2x1/4	592	5.22	26.20	19.9	Pass
T41	25 - 0	Top Girt	P1.25x.14	632	-1.43	8.23	47.5 (b) 17.3	Pass
T4	350 - 343.75	Guy A@350	7/8	679	25.82	39.85	64.8	Pass
T12	300 - 293.75	Guy A@300	7/8	697	27.86	39.85	69.9	Pass
T24	225 - 218.75	Guy A@225	3/4	716	23.57	29.15	80.9	Pass
T31	162.5 - 156.25	Guy A@162.5	3/4	723	24.42	29.15	83.8	Pass
T35	100 - 93.75	Guy A@100	9/16	737	13.89	17.50	79.4	Pass
T40	50 - 25	Guy A@50	9/16	744	13.16	17.50	75.2	Pass
T4	350 - 343.75	Guy B@350	7/8	674	25.82	39.85	64.8	Pass
T12	300 - 293.75	Guy B@300	7/8	692	27.57	39.85	69.2	Pass
T24	225 - 218.75	Guy B@225	3/4	709	24.04	29.15	82.5	Pass
T31	162.5 - 156.25	Guy B@162.5	3/4	722	24.58	29.15	84.3	Pass
T35	100 - 93.75	Guy B@100	9/16	730	14.54	17.50	83.1	Pass
T40	50 - 25	Guy B@50	9/16	743	13.02	17.50	74.4	Pass
T4	350 - 343.75	Guy C@350	7/8	667	25.76	39.85	64.7	Pass
T12	300 - 293.75	Guy C@300	7/8	686	27.72	39.85	69.6	Pass
T24	225 - 218.75	Guy C@225	3/4	704	23.74	29.15	81.5	Pass
T31	162.5 - 156.25	Guy C@162.5	3/4	721	24.33	29.15	83.5	Pass
T35	100 - 93.75	Guy C@100	9/16	725	14.11	17.50	80.6	Pass
T40	50 - 25	Guy C@50	9/16	742	13.28	17.50	75.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T4	350 - 343.75	Torque Arm Top@350	2L3x2 1/2x1/4	682	23.77	75.73	31.4	Pass
T12	300 - 293.75	Torque Arm Top@300	2L3x2 1/2x1/4	699	24.43	75.73	32.3	Pass
T24	225 - 218.75	Torque Arm Top@225	2L3x2 1/2x1/4	711	22.54	75.73	29.8	Pass
T35	100 - 93.75	Torque Arm Top@100	2L3x2 1/2x1/4	732	14.88	75.73	19.7	Pass
T4	350 - 343.75	Torque Arm Bottom@350	2L3x2 1/2x1/4	677	-27.59	41.87	65.9	Pass
T12	300 - 293.75	Torque Arm Bottom@300	2L3x2 1/2x1/4	695	-30.13	41.96	71.8	Pass
T24	225 - 218.75	Torque Arm Bottom@225	2L3x2 1/2x1/4	714	-23.85	41.87	57.0	Pass
T35	100 - 93.75	Torque Arm Bottom@100	2L3x2 1/2x1/4	734	-11.26	41.96	26.8	Pass

	Summary	
Leg (T27)	95.6	Pass
Diagonal (T22)	94.1	Pass
Horizontal (T34)	64.7	Pass
Secondary Horizontal (T28)	18.8	Pass
Top Girt (T24)	49.7	Pass
Guy A (T31)	83.8	Pass
Guy B (T31)	84.3	Pass
Guy C (T31)	83.5	Pass
Torque Arm Top (T12)	32.3	Pass
Torque Arm Bottom (T12)	71.8	Pass
Bolt Checks	87.4	Pass
RATING =	**95.6**	**Pass**

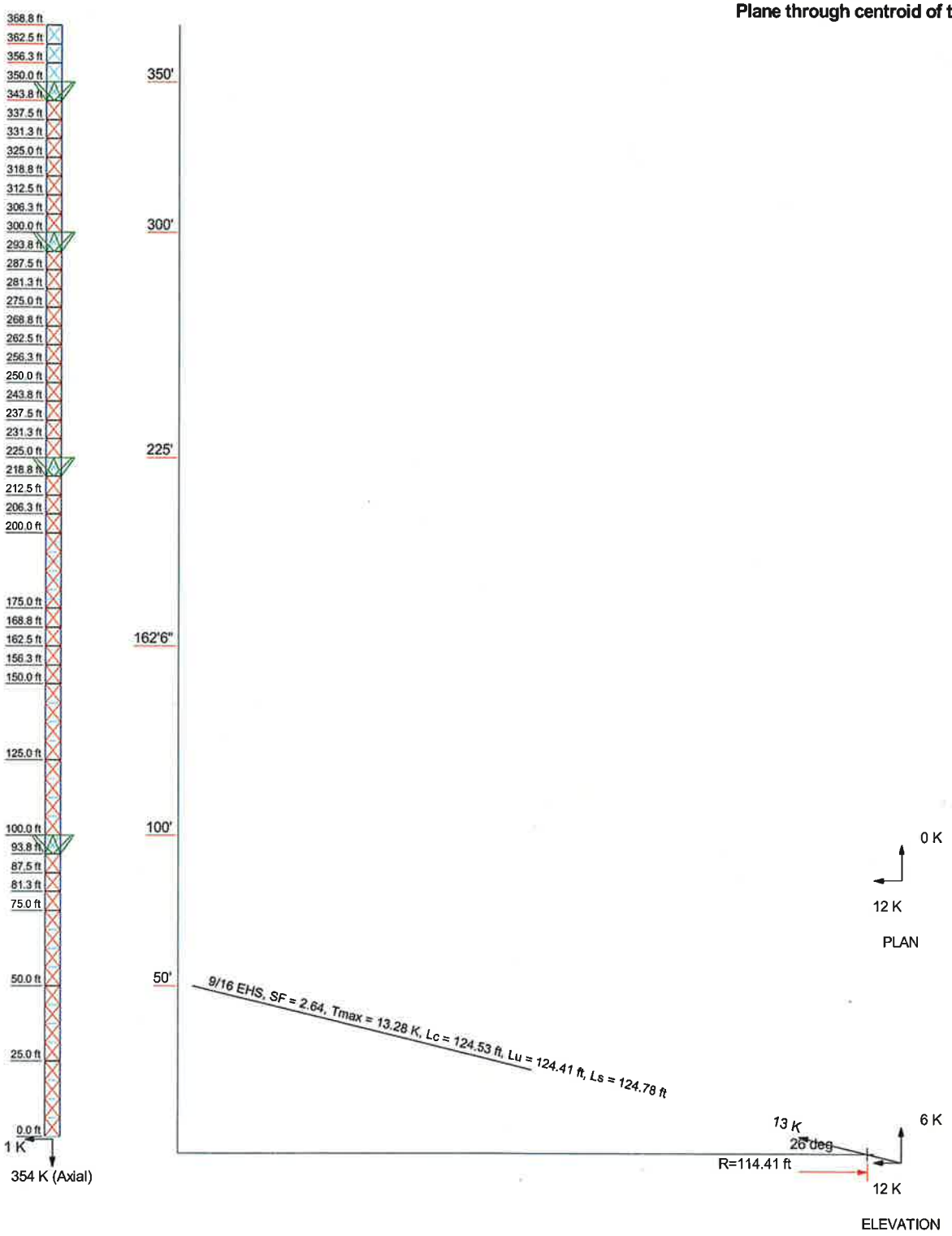
Guy Tensions and Tower Reactions

TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Maximum Values

Anchor 'C'@114.41 ft Azimuth 240 deg Elev -5.4 ft

Plane through centroid of tower



Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
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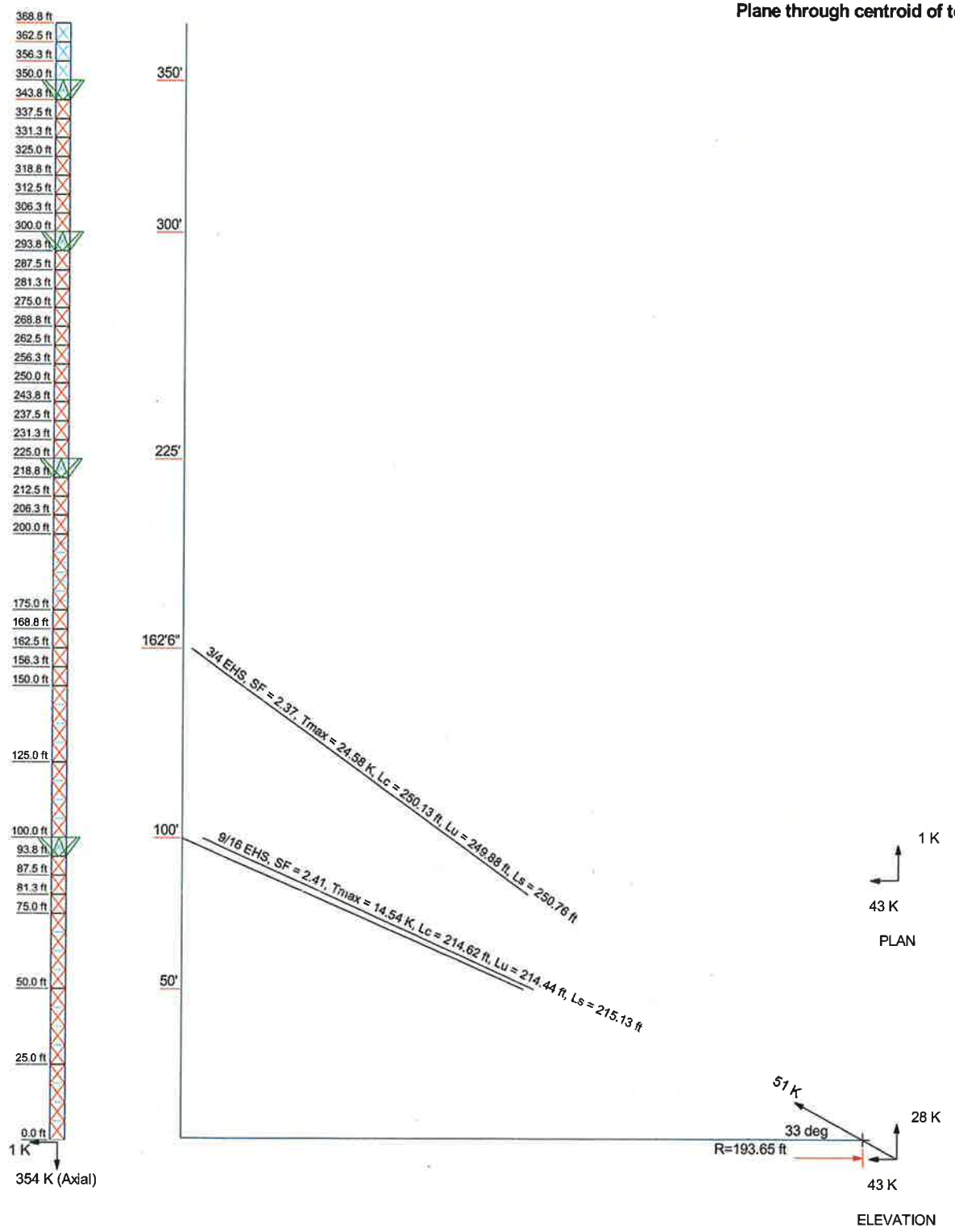
Job: ***15001.008 - Montville***		
Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT***		
Client: Verizon Wireless	Drawn by: TJL	App'd:
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
Path:		Dwg No. E-6

Guy Tensions and Tower Reactions
TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Maximum Values
Anchor 'B'@193.65 ft Azimuth 120 deg Elev 0.72 ft
Plane through centroid of tower



Centek Engineering Inc. 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	Job: ***15001.008 - Montville***		
	Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT***		
	Client: Verizon Wireless	Drawn by: TJL	App'd:
	Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS
	Path:		Dwg No. E-6

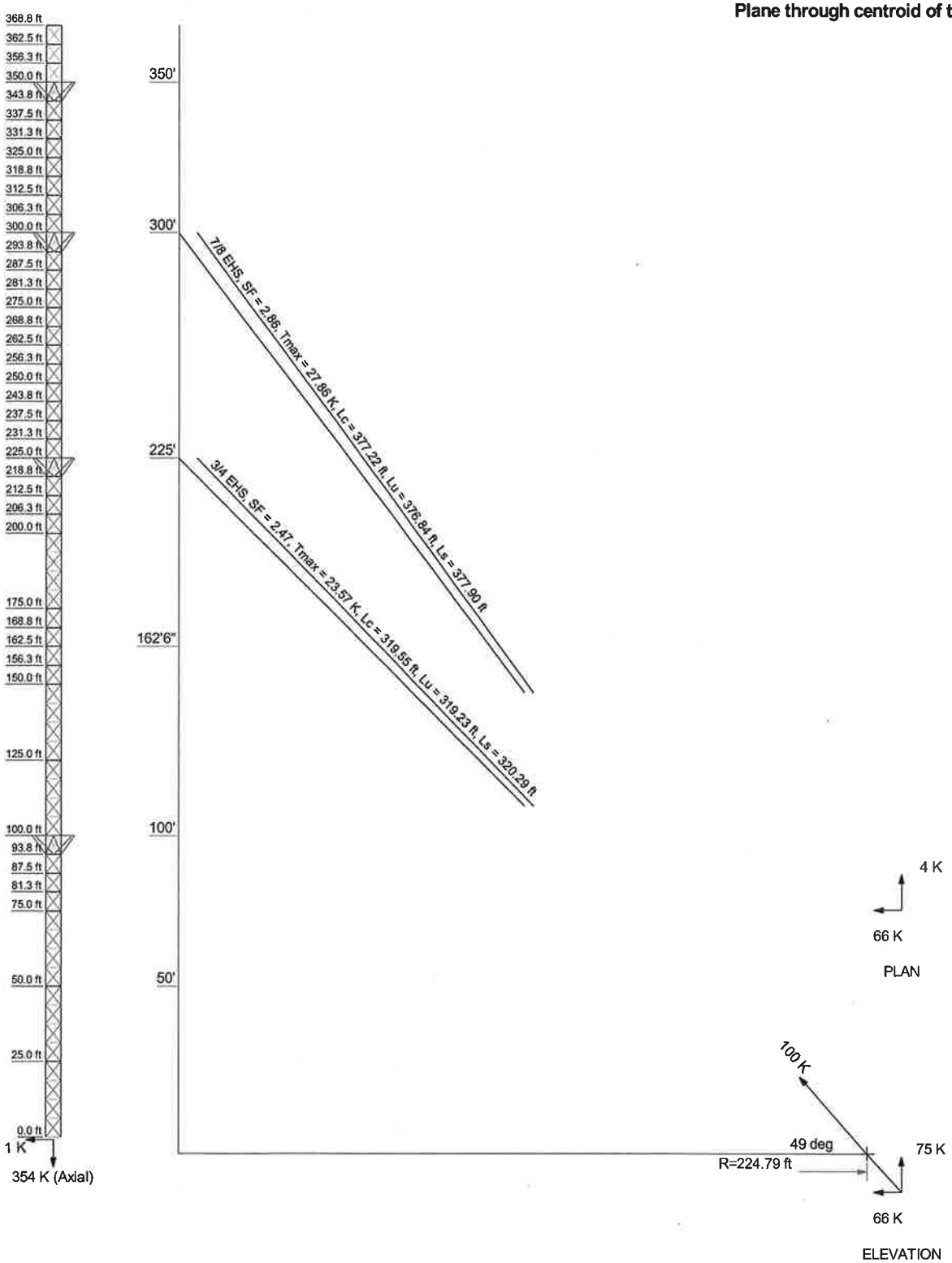
Guy Tensions and Tower Reactions

TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Maximum Values

Anchor 'A'@224.79 ft Azimuth 0 deg Elev -5.41 ft

Plane through centroid of tower



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Phone: (203) 488-0580
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Job: *15001.008 - Montville*			
Project: *370' Guyed Tower - 695 Old Colchester Road, Montville, CT*			
Client: Verizon Wireless	Drawn by: TJL	App'd:	
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS	
Path:		Dwg No. E-6	

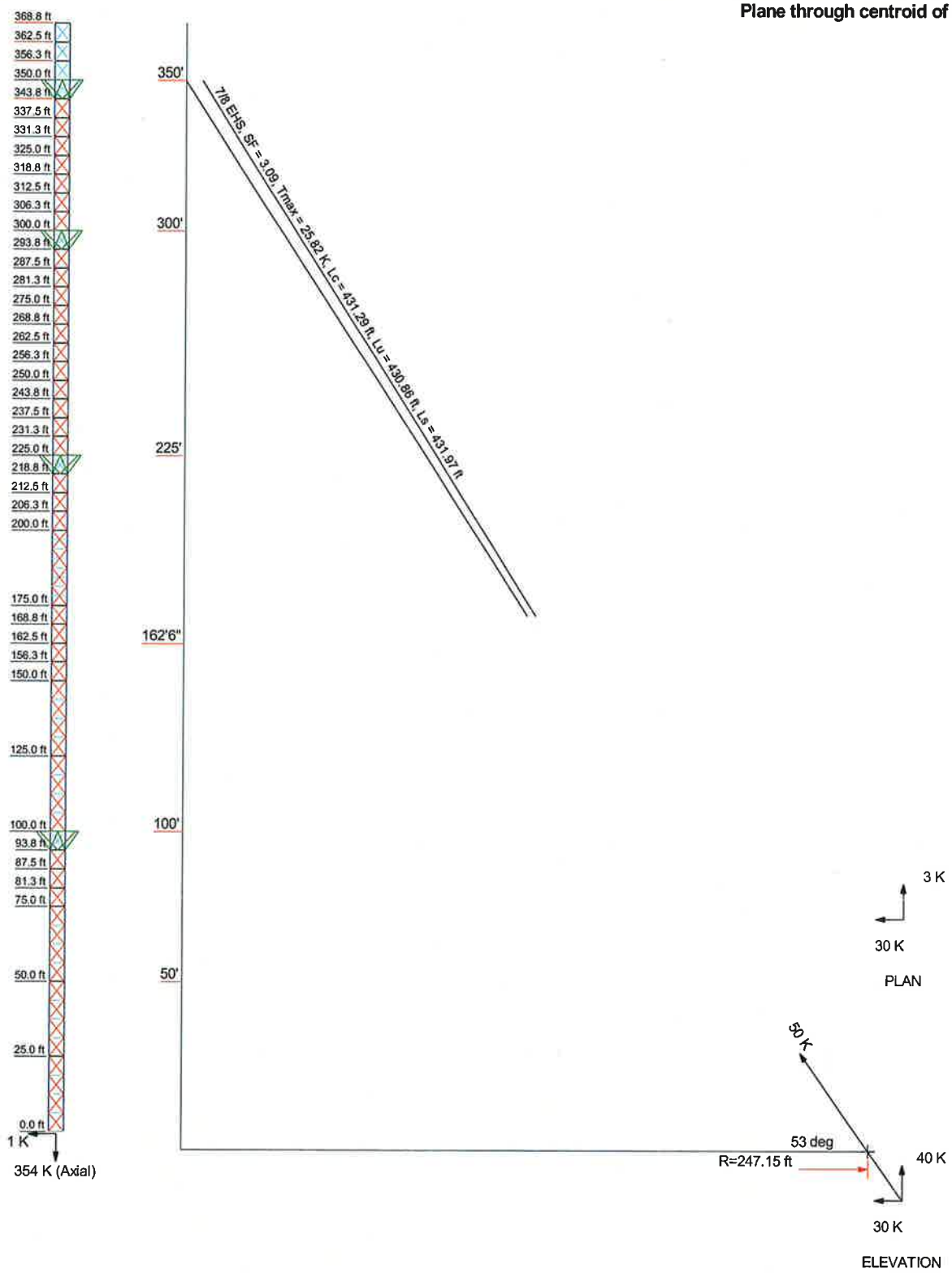
Guy Tensions and Tower Reactions

TIA/EIA-222-F - 95 mph/82 mph 0.5000 in Ice

Maximum Values

Anchor 'A'@247.15 ft Azimuth 0 deg Elev -5.8 ft

Plane through centroid of tower



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Job: **15001.008 - Montville**			
Project: ***370' Guyed Tower - 695 Old Colchester Road, Montville, CT***			
Client: Verizon Wireless	Drawn by: TJL	App'd:	
Code: TIA/EIA-222-F	Date: 02/13/15	Scale: NTS	
Path:		Dwg No. E-6	

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Subject:		Base Foundation Analysis
Location:		370-ft Guyed Lattice Tower Montville, CT
Rev. 0: 2/12/15		Prepared by: T.J.L. Checked by: C.F.C. Job No. 150001.008

Guyed Tower Base Foundation:

Input Data:

Tower Data

Shear Force =	Shear := 1·kip	(User Input from tnxTower)	
Axial Force =	Axial := 354·kip	(User Input from tnxTower)	
Tower Height =	$H_t := 370 \cdot ft$	(User Input)	

Footing Data:

Overall Depth of Footing =	$D_f := 3.5 \cdot ft$	(User Input)	
Length of Pier =	$L_p := 3.0 \cdot ft$	(User Input)	
Extension of Pier Above Grade =	$L_{pag} := 1.50 \cdot ft$	(User Input)	
Width of Pier =	$W_p := 3.0 \cdot ft$	(User Input)	
Thickness of Footing =	$T_f := 2.0 \cdot ft$	(User Input)	
Width of Footing =	$W_{f1} := 7 \cdot ft$	(User Input)	
Length of Footing =	$W_{f2} := 7 \cdot ft$	(User Input)	

Material Properties:

Concrete Compressive Strength =	$f_c := 3000 \cdot psi$	(User Input)	
Steel Reinforcment Yield Strength =	$f_y := 60000 \cdot psi$	(User Input)	
Internal Friction Angle of Soil =	$\Phi_s := 30 \cdot deg$	(User Input)	
Allowable Soil Bearing Capacity =	$q_s := 8000 \cdot psf$	(User Input)	
Unit Weight of Soil =	$\gamma_{soil} := 120 \cdot pcf$	(User Input)	
Unit Weight of Concrete =	$\gamma_{conc} := 150 \cdot pcf$	(User Input)	
Foundation Bouyancy =	Bouyancy := 0	(User Input)	(Yes=1 / No=0)
Depth to Neglect =	$n := 0 \cdot ft$	(User Input)	
Cohesion of Clay Type Soil =	$c := 0 \cdot ksf$	(User Input)	(Use 0 for Sandy Soil)
Seismic Zone Factor =	Z := 2	(User Input)	
Coefficient of Friction Between Concrete =	$\mu := 0.45$	(User Input)	

Calculated Factors:

Coefficient of Lateral Soil Pressure =

$$K_p := \frac{1 + \sin(\Phi_s)}{1 - \sin(\Phi_s)} = 3$$

Load Factor =

$$LF := \begin{cases} 1.333 & \text{if } H_t \le 700 \cdot ft \\ 1.7 & \text{if } H_t \ge 1200 \cdot ft \\ 1.333 + \left(\frac{H_t - 700ft}{1200ft - 700ft}\right) \cdot 0.4 & \text{otherwise} \end{cases} = 1.333$$

Stability of Footing:

Adjusted Concrete Unit Weight = $\gamma_c := if(Bouyancy = 1, \gamma_{conc} - 62.4pcf, \gamma_{conc}) = 150 \cdot pcf$

Adjusted Soil Unit Weight = $\gamma_s := if(Bouyancy = 1, \gamma_{soil} - 62.4pcf, \gamma_{soil}) = 120 \cdot pcf$

Passive Pressure = $P_{pn} := K_p \cdot \gamma_s \cdot n + c \cdot 2 \cdot \sqrt{K_p} = 0 \cdot ksf$

$P_{pt} := K_p \cdot \gamma_s \cdot (D_f - T_f) + c \cdot 2 \cdot \sqrt{K_p} = 0.54 \cdot ksf$

$P_{top} := if[n < (D_f - T_f), P_{pt}, P_{pn}] = 0.54 \cdot ksf$

$P_{bot} := K_p \cdot \gamma_s \cdot D_f + c \cdot 2 \cdot \sqrt{K_p} = 1.26 \cdot ksf$

$P_{ave} := \frac{P_{top} + P_{bot}}{2} = 0.9 \cdot ksf$

$T_p := if[n < (D_f - T_f), T_f, (D_f - n)] = 2$

$A_p := W_{f1} \cdot T_p = 14$

Soil Shear Resistance = $Sl_1 := P_{ave} \cdot A_p = 12.6 \cdot kip$

Weight of Concrete = $WT_c := \left[(W_{f1} \cdot W_{f2} \cdot T_f) + W_p{}^2 L_p\right] \cdot \gamma_c = 18.75 \cdot kip$

Total Weight = $WT_{tot} := WT_c + Axial = 372.75 \cdot kip$

Soil/Concrete Friction Resistance = $Sl_2 := \mu \cdot WT_{tot} = 167.74 \cdot kips$

Total Sliding Resistance = $Sl_{tot} := Sl_1 + Sl_2 = 180.34 \cdot kips$

Sliding Resistance Ratio = $Sliding\_Resistance_{ratio} := \frac{Shear \cdot 2.0}{Sl_{tot}} = 0.01$

$Sliding\_Resistance\_Check := if\left[\left(\frac{Shear \cdot 2.0}{Sl_{tot}} < 1.0\right), "Okay", "No\ Good"\right]$

Sliding_Resistance_Check = "Okay"

Bearing Pressure Caused by Footing:

Area of the Mat = $A_{mat} := W_{f1} \cdot W_{f2} = 49$

Maximum Pressure in Mat = $P_{max} := \frac{WT_{tot}}{A_{mat}} = 7.61 \cdot ksf$

$Max\_Pressure\_Check := if(P_{max} < q_s, "Okay", "No\ Good")$

Max_Pressure_Check = "Okay"

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Job :	Verizon ~ Montville: 370-ft Guyed Lattice Tower	**Project No.**	15001.008	**Sheet**	1 of 2
Address:	695 Old Colchester Rd., Madison, CT	**Computed by**	TJL	**Date**	2/13/15
Description:	Guy Anchor Evaluation - 2005 CSBC 3108.4.2/TIA Req	**Checked by**	CFC	**Date**	

CHECK UPLIFT RESISTANCE

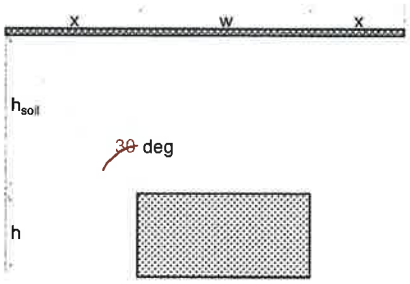
ANCHOR (C) AT 114.41ft RADIUS

RESULTS FROM COMPUTER ANALYSIS:

Uplift =	6	kips
Sliding =	12	kips

CONCRETE PARAMETERS:

γ conc =	150	pcf
w =	4	ft
h =	3	ft
d =	10	ft
Vol. =	*120.00*	ft^3
Wc =	*18.00*	kips



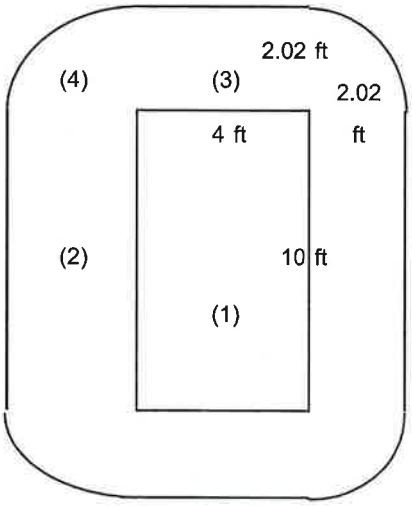
Foundation Section

SOIL PARAMETERS:

γ_{soil} =	120	pcf
h_{soil} =	3.5	ft
x =	*2.02*	ft

Soil Weight (Wr):

(1) =	16.80	kips
(2) =	8.49	kips
(3) =	3.39	kips
(4) =	1.80	kips
*(5) Anchor Reinf. =	0	kips
Total =	30.48	kips



Foundation Plan View

CHECK UPLIFT (PER EIA/TIA-222-F STANDARD AND 2005 CT BUILDING CODE):

(Wr + Wc) / 2.0 > UPLIFT

24.24 **>** *6* ***OK*** ***FOS =*** *8.08*

→ ***GUY ANCHORS AGAINST UPLIFT ARE ADEQUATE***

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Address:	695 Old Colchester Rd., Madison, CT	**Computed by**	TJL	**Date**	2/13/15
Description:	Guy Anchor Evaluation - 2005 CSBC 3108.4.2/TIA Req	**Checked by**	CFC	**Date**	

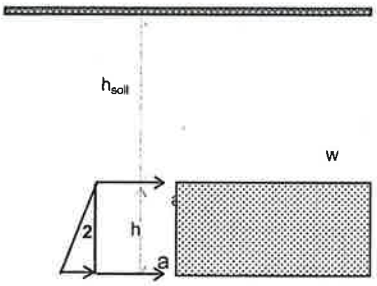
CHECK SLIDING RESISTANCE

SOIL PARAMETERS

$\gamma soil$ =	120	pcf
h_{soil} =	3.5	ft
h =	3	ft
ϕ =	30	degrees

ANCHOR PARAMETERS

w =	4.0	ft
h =	3.0	ft
d =	10.0	ft



Foundation Elevation View

K_p = 3.00

HORIZONTAL FORCES

1 =	37.80 k
2 =	16.20 k
RESIST TO SLIDING =	54.00 k

SOIL & CONCRETE WEIGHT =	Wr + Wc =	48.48 k
UPLIFT REACTIONS =		-6 k
SUM =		42.48 k

COEF. OF FRICTION, (0.45) =	19.12 k
RESIST TO SLIDING =	54.00 k
SUM =	73.12 k

SF AGAINST SLIDING

SF = 6.1 > 2 OK

→ ***GUY ANCHORS AGAINST SLIDING ARE ADEQUATE***

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Address:	695 Old Colchester Rd., Madison, CT	**Computed by**	TJL	**Date**		2/13/15	
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CHECK UPLIFT RESISTANCE

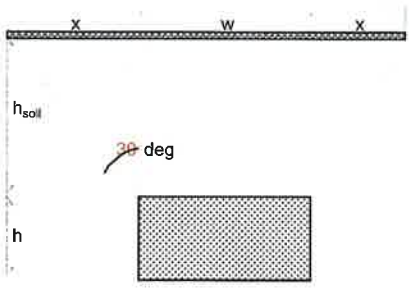
ANCHOR (B) AT 193.65ft RADIUS

RESULTS FROM COMPUTER ANALYSIS:

Uplift =	28	kips
Sliding =	43	kips

CONCRETE PARAMETERS:

γ_{conc} =	150	pcf
w =	4	ft
h =	4	ft
d =	10	ft
Vol. =	*160.00*	ft^3
Wc =	*24.00*	kips



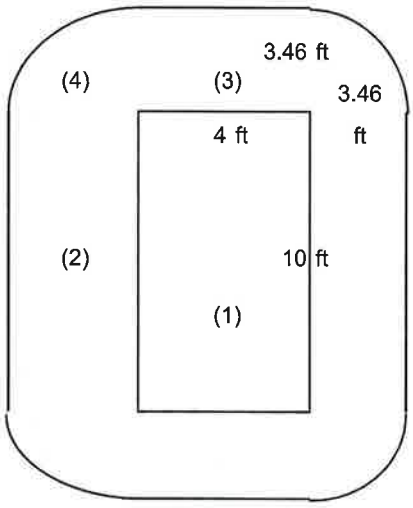
Foundation Section

SOIL PARAMETERS:

γ_{soil} =	120	pcf
h_{soil} =	6	ft
x =	*3.46*	ft

Soil Weight (Wr):

(1) =	28.80	kips
(2) =	24.94	kips
(3) =	9.98	kips
(4) =	9.05	kips
*(5) Anchor Reinf. =	0	kips
Total =	72.77	kips



Foundation Plan View

CHECK UPLIFT (PER EIA/TIA-222-F STANDARD AND 2005 CT BUILDING CODE):

(Wr + Wc) / 2.0 > UPLIFT

48.38 **>** *28* ***OK*** ***FOS =*** *3.46*

→ ***GUY ANCHORS AGAINST UPLIFT ARE ADEQUATE***

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Address:	695 Old Colchester Rd., Madison, CT	**Computed by**	TJL	**Date**	2/13/15
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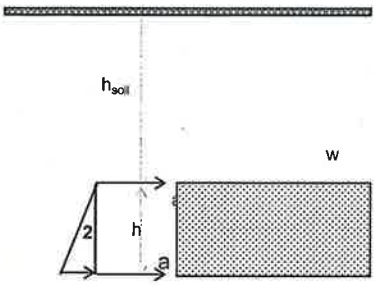
CHECK SLIDING RESISTANCE

SOIL PARAMETERS

γ soil =	120	pcf
h_{soil} =	6	ft
h =	4	ft
ϕ =	30	degrees

ANCHOR PARAMETERS

w =	4.0	ft
h =	4.0	ft
d =	10.0	ft



Foundation Elevation View

K_p = 3.00

HORIZONTAL FORCES

1 =	86.40 k
2 =	28.80 k
RESIST TO SLIDING =	115.20 k

SOIL & CONCRETE WEIGHT =	Wr + Wc =	96.77 k
UPLIFT REACTIONS =		-28 k
SUM =		68.77 k

COEF. OF FRICTION, (0.45) =	30.94 k
RESIST TO SLIDING =	115.20 k
SUM =	146.14 k

SF AGAINST SLIDING

SF = 3.4 > 2 OK

→ ***GUY ANCHORS AGAINST SLIDING ARE ADEQUATE***

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CHECK UPLIFT RESISTANCE

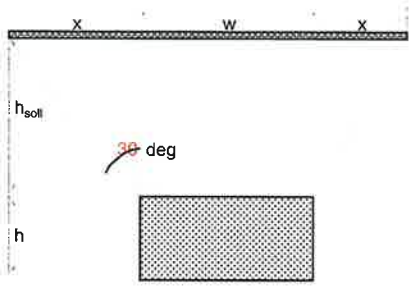
ANCHOR (A) AT 224.79ft RADIUS

RESULTS FROM COMPUTER ANALYSIS:

Uplift =	75	kips
Sliding =	66	kips

CONCRETE PARAMETERS:

γ conc =	150	pcf
w =	6	ft
h =	4	ft
d =	16	ft
Vol. =	*384.00*	ft^3
Wc =	*57.60*	kips



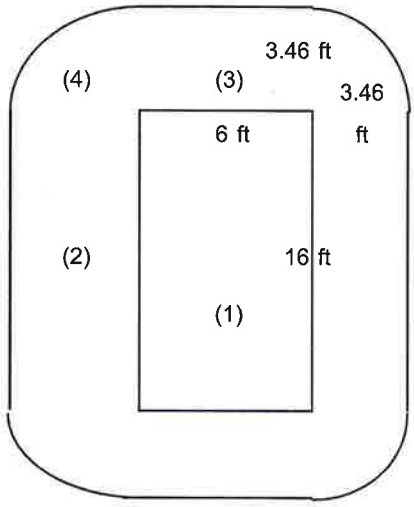
Foundation Section

SOIL PARAMETERS:

γ_{soil} =	120	pcf
h_{soil} =	6	ft
x =	*3.46*	ft

Soil Weight (Wr):

(1) =	69.12	kips
(2) =	39.91	kips
(3) =	14.96	kips
(4) =	9.05	kips
*(5) Anchor Reinf. =	0	kips
Total =	133.04	kips



Foundation Plan View

CHECK UPLIFT (PER EIA/TIA-222-F STANDARD AND 2005 CT BUILDING CODE):

(Wr + Wc) / 2.0 > UPLIFT

95.32 > *75* ***OK*** ***FOS =*** *2.54*

→ ***GUY ANCHORS AGAINST UPLIFT ARE ADEQUATE***

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Description:	Guy Anchor Evaluation - 2005 CSBC 3108.4.2/TIA Req	**Checked by**	CFC	**Date**	

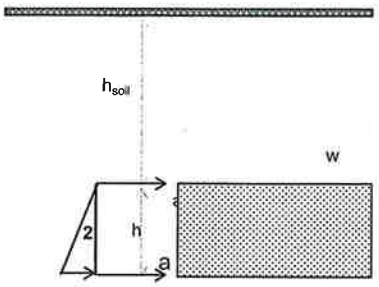
CHECK SLIDING RESISTANCE

SOIL PARAMETERS

$\gamma soil$ =	120	pcf
h_{soil} =	6	ft
h =	4	ft
ϕ =	30	degrees

ANCHOR PARAMETERS

w =	6.0	ft
h =	4.0	ft
d =	16.0	ft



Foundation Elevation View

K_p = 3.00

HORIZONTAL FORCES

1 =	138.24 k
2 =	46.08 k
RESIST TO SLIDING =	184.32 k

SOIL & CONCRETE WEIGHT =	Wr + Wc =	190.64 k
UPLIFT REACTIONS =		-75 k
SUM =		115.64 k

COEF. OF FRICTION, (0.45) =	52.04 k
RESIST TO SLIDING =	184.32 k
SUM =	236.36 k

SF AGAINST SLIDING

SF = 3.6 > 2 OK

→ ***GUY ANCHORS AGAINST SLIDING ARE ADEQUATE***

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CHECK UPLIFT RESISTANCE

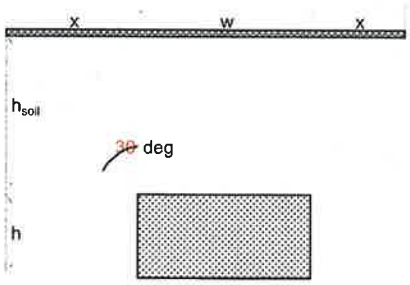
ANCHOR (A) AT 247.15ft RADIUS

RESULTS FROM COMPUTER ANALYSIS:

Uplift =	40	kips
Sliding =	30	kips

CONCRETE PARAMETERS:

γ_{conc} =	150	pcf
w =	4	ft
h =	3	ft
d =	12	ft
Vol. =	*144.00*	ft^3
Wc =	*21.60*	kips



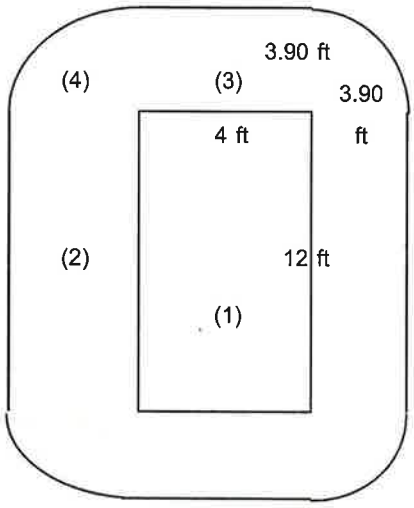
Foundation Section

SOIL PARAMETERS:

γ_{soil} =	120	pcf
h_{soil} =	6.75	ft
x =	*3.90*	ft

Soil Weight (Wr):

(1) =	38.88	kips
(2) =	37.88	kips
(3) =	12.63	kips
(4) =	12.88	kips
*(5) Anchor Reinf. =	0	kips
Total =	102.27	kips



Foundation Plan View

CHECK UPLIFT (PER EIA/TIA-222-F STANDARD AND 2005 CT BUILDING CODE):

(Wr + Wc) / 2.0 > UPLIFT

61.93 > *40* ***OK*** ***FOS =*** *3.10*

→ ***GUY ANCHORS AGAINST UPLIFT ARE ADEQUATE***

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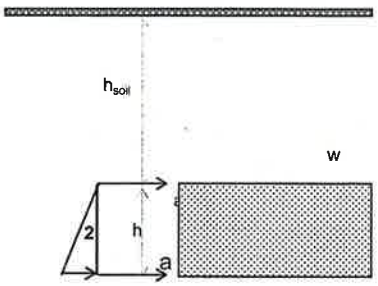
CHECK SLIDING RESISTANCE

SOIL PARAMETERS

γ soil =	120	pcf
h_{soil} =	6.75	ft
h =	3	ft
ϕ =	30	degrees

ANCHOR PARAMETERS

w =	4.0	ft
h =	3.0	ft
d =	12.0	ft



Foundation Elevation View

K_p = 3.00

HORIZONTAL FORCES

1 =	87.48 k
2 =	19.44 k
RESIST TO SLIDING =	106.92 k

SOIL & CONCRETE WEIGHT =	Wr + Wc =	123.87 k
UPLIFT REACTIONS =		-40 k
SUM =		83.87 k

COEF. OF FRICTION, (0.45) =	37.74 k
RESIST TO SLIDING =	106.92 k
SUM =	144.66 k

SF AGAINST SLIDING

SF = 4.8 > 2 OK

→ ***GUY ANCHORS AGAINST SLIDING ARE ADEQUATE***

SITE NAME	MONTVILLE CT		ECP - CELL #		2	13
LATITUDE	41-27-11.00 N		LONGITUDE		72-09-14.00 W	
Additional Comments: 2015 AWS ADD.			SAVE BUTTON			
			STRUCTURE TYPE		Lattice	
AWS - LTE ANTENNA ADD	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	2100 MHz BBU		2100 MHz BBU		2100 MHz BBU	
ANTENNA TYPE	HBXX-6517DS-A2M		HBXX-6517DS-A2M		HBXX-6517DS-A2M	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/ELEC)	0M/4E		0M/5E		0M/4E	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL						
RRH - QTY/MODEL	1	ALU RH_2X60-AWS	1	ALU RH_2X60-AWS	1	ALU RH_2X60-AWS
SECTOR DISTRIBUTION BOX						
MAIN DISTRIBUTION BOX	2			DB-T1-6Z-8AB-0Z		
700 Mhz - LTE Current Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	eNodeB		eNodeB		eNodeB	
ANTENNA TYPE	BXA-70063-6CF_2		BXA-70063-6CF_2		BXA-70063-6CF_2	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/DEG)	2		4		0	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL						
700 Mhz - LTE Future Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	eNodeB		eNodeB		eNodeB	
ANTENNA TYPE	LNX-6514DS-A1M		LNX-6514DS-A1M		LNX-6514DS-A1M	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/DEG)	0M/4E		0M/7E		0M/2E	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL						
850 Celluar - Current Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	Cellular Modcell 4.0B		Cellular Modcell 4.0B		Cellular Modcell 4.0B	
ANTENNA TYPE	LPA-80080-4CF		LPA-80080-4CF EDIN 4		LPA-80080-4CF	
QTY OF ANTENNAS PER FACE	2		2		2	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/DEG)	4		5		0	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL	2	FD9R6004_2C-3L	2	FD9R6004_2C-3L	2	FD9R6004_2C-3L
850 Celluar - Future Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	Cellular Modcell 4.0B		Cellular Modcell 4.0B		Cellular Modcell 4.0B	
ANTENNA TYPE	LNX-6514DS-A1M		LNX-6514DS-A1M		LNX-6514DS-A1M	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/ELEC)	0M/4E		0M/7E		0M/0E	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL	2	FD9R6004_2C-3L	2	FD9R6004_2C-3L	2	FD9R6004_2C-3L
DIPLEX WITH LTE CABLE						
1900 PCS - Current Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	PCS Modcell 4.0B		PCS Modcell 4.0B		PCS Modcell 4.0B	
ANTENNA TYPE	BXA-171085-8BF_2		BXA-171085-8BF_2		BXA-171085-8BF_2	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/DEG)	0		8		0	
RAD CTR (FT AGL)	305		305		305	
TMA - QTY / MODEL						
DIPLEXER - QTY / MODEL		diplexed with cell		diplexed with cell		diplexed with cell
1900 PCS - Future Config	**ALPHA**		**BETA**		**GAMMA**	
EQUIPMENT TYPE	PCS Modcell 4.0B		PCS Modcell 4.0B		PCS Modcell 4.0B	
ANTENNA TYPE	HBXX-6517DS-A2M		HBXX-6517DS-A2M		HBXX-6517DS-A2M	
QTY OF ANTENNAS PER FACE	1		1		1	
ORIENTATION (DEG)	30		150		270	
DOWN TILT (MECH/DEG)	0M/4E		0M/5E		0M/4E	
RAD CTR (FT AGL)	305		305		305	
RRH - QTY/MODEL	1	ALU RRH_2X60-PCS	1	ALU RRH_2X60-PCS	1	ALU RRH_2X60-PCS
TMA - QTY / MODEL						
DIPLEX WITH CELLULAR CABLE	diplexed with cell		diplexed with cell		diplexed with cell	

NUMBER OF CABLE'S NEEDED						ESTIMATED CABLE LENGTH			
MAINLINE SIZE	1 5/8"	TOTAL # OF MAINLINES			12	MAINLINE (FT)			
JUMPER SIZE	1/2 "	TOTAL # OF TOP JUMPERS			18	TOP JUMPER (FT)			12
Equipment Cable Ordering		MAIN CABLE	12	+	0	TOP JUMPER #	18	+	0
FIBER LINE SIZE	1 5/8"	TOTAL # OF FIBER LINES			2	FIBER LINE MODEL #			HB158-1-08U8-S8J18
JUMPER SIZE	5/8"	TOTAL # OF TOP JUMPERS			3	TOP JUMPER MODEL #			HB058-1-08U1-S1J18
Fiber Cable Ordering		FIBER CABLE	0	+	2	TOP JUMPER #	0	+	3

TX / RX FREQUENCIES				TX POWER OUTPUT	
Cellular A-Band		PCS F / AWS-Band		700 Mhz C - E	Cellular (Watts)	20
TX - 869-880,890-891.5 MHz		TX - 1970-1975 / 2145-21		TX - 746-757	PCS (Watts)	16
RX - 824-835,845-846.5 MHz		RX - 1890-1895 / 1745-17		RX - 776-787	LTE (Watts)	60

ALPHA				BETA				GAMMA			
Ant.	Freq.	Func.	Color Code	Ant.	Freq.	Func.	Color Code	Ant.	Freq.	Func.	Color Code
A1	800	Tx1/Rx0	RED	A7	800	Tx2/Rx0	BLUE	A13	800	Tx3/Rx0	GREEN
A2	1900	Tx1/Rx0	RED/ WHITE	A8	1900	Tx2/Rx0	BLUE/ WHITE	A14	1900	Tx3/Rx0	GREEN/WHITE
A3	700	Tx1/Rx0	RED/ ORANGE	A9	700	Tx2/Rx0	BLUE/ ORANGE	A15	700	Tx3/Rx0	GREEN/ORANGE
A4	700	Tx4/Rx1	RED/RED/ ORANGE	A10	700	Tx5/Rx1	BLUE/BLUE/ ORANGE	A16	700	Tx6/Rx1	GREEN/GREEN/ ORANGE
A5	1900	Tx4/Rx1	RED/RED/ WHITE	A11	1900	Tx5/Rx1	BLUE/BLUE/ WHITE	A17	1900	Tx6/Rx1	GREEN/GREEN/ WHITE
A6	800	Tx4/Rx1	RED/RED	A12	800	Tx5/Rx1	BLUE/BLUE	A18	800	Tx6/Rx1	GREEN/GREEN

RF ENGINEER	RF MANAGER	INITIALS	DATE
Prepared By: Mark Brauer	Rob Hesselbach	MB	3/11/2014

Site Configuration

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

LNX-6514DS-VTM

Andrew® Antenna, 698–896 MHz, 65° horizontal beamwidth, RET compatible

- Great solution to maximize network coverage and capacity
- Excellent gain, VSWR, front-to-back ratio, and PIM specifications for robust network performance
- Ideal choice for site collocations and tough zoning restrictions
- Excellent solution for site sharing and maximizing capacity
- Fully compatible with Andrew remote electrical tilt system for greater OpEx savings
- The RF connectors are designed for IP67 rating and the radome for IP56 rating

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**
Gain, dBi	15.7	16.3
Beamwidth, Horizontal, degrees	65	65
Beamwidth, Horizontal Tolerance, degrees	±3	±3
Beamwidth, Vertical, degrees	12.5	11.2
Beam Tilt, degrees	0–10	0–10
USLS, typical, dB	17	18
Front-to-Back Ratio at 180°, dB	32	30
CPR at Boresight, dB	20	20
CPR at Sector, dB	10	10
Isolation, dB	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153
Input Power per Port, maximum, watts	400	400
Polarization	±45°	±45°
Impedance	50 ohm	50 ohm

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol®
Band	Single band
Brand	DualPol® | Teletilt®
Operating Frequency Band	698 – 896 MHz

Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity, total	2
Lightning Protection	dc Ground
Radiator Material	Aluminum
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Product Specifications

LNX-6514DS-VTM

Dimensions

Depth	181.0 mm | 7.1 in
Length	1847.0 mm | 72.7 in
Width	301.0 mm | 11.9 in
Net Weight	17.6 kg | 38.8 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 1.1 Actuator	LNX-6514DS-R2M
Model with Factory Installed AISG 2.0 Actuator	LNX-6514DS-A1M
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

DB380 — Pipe Mounting Kit for 2.4"-4.5" (60-115mm) OD round members on wide panel antennas. Includes 2 clamp sets and double nuts.

DB5083 — Downtilt Mounting Kit for 2.4"-4.5" (60 - 115 mm) OD round members. Includes a heavy-duty, galvanized steel downtilt mounting bracket assembly and associated hardware. This kit is compatible with the DB380 pipe mount kit for panel antennas that are equipped with two mounting brackets.

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

HBXX-6517DS-VTM

Andrew® Quad Port Teletilt® Antenna, 1710–2180 MHz; 65° horizontal beamwidth, RET compatible

- Superior azimuth tracking and pattern symmetry with excellent passive intermodulation suppression
- The values presented on this datasheet have been calculated based on N-P-BASTA White Paper version 9.6 by the NGMN Alliance

Electrical Specifications

Frequency Band, MHz	**1710–1880**	**1850–1990**	**1920–2180**
Gain by all Beam Tilts, average, dBi	18.5	18.6	18.8
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.3	±0.4
Gain by Beam Tilt, average, dBi	0 ° | 18.4 3 ° | 18.7 6 ° | 18.4	0 ° | 18.4 3 ° | 18.7 6 ° | 18.5	0 ° | 18.7 3 ° | 18.9 6 ° | 18.6
Beamwidth, Horizontal, degrees	67	66	65
Beamwidth, Horizontal Tolerance, degrees	±2.4	±1.7	±2.9
Beamwidth, Vertical, degrees	5.0	4.7	4.4
Beamwidth, Vertical Tolerance, degrees	±0.3	±0.3	±0.3
Beam Tilt, degrees	0–6	0–6	0–6
USLS, dB	18	19	19
Front-to-Back Total Power at 180° ± 30°, dB	25	26	26
CPR at Boresight, dB	22	23	22
CPR at Sector, dB	10	10	9
Isolation, dB	30	30	30
VSWR | Return Loss, dB	1.4 | 15.6	1.4 | 15.6	1.4 | 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® single band, quad
Band	Single band
Brand	DualPol® | Teletilt®
Operating Frequency Band	1710 – 2180 MHz
Number of Ports, all types	4

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Low loss circuit board
Radome Material	PVC, UV resistant
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom

Product Specifications

HBXX-6517DS-VTM

RF Connector Quantity, total	4
Wind Loading, maximum	668.0 N @ 150 km/h 150.2 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Dimensions

Depth	166.0 mm | 6.5 in
Length	1903.0 mm | 74.9 in
Width	305.0 mm | 12.0 in
Net Weight	19.5 kg | 43.0 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 1.1 Actuator	HBXX-6517DS-R2M
Model with Factory Installed AISG 2.0 Actuator	HBXX-6517DS-A2M
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

600899A-2 — Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

ALCATEL-LUCENT
WIRELESS PRODUCT DATASHEET
RRH2X60-AWS FOR BAND 4 APPLICATIONS

The Alcatel-Lucent RRH2x60-AWS is a high power, small form factor Remote Radio Head operating in the AWS frequency band (3GPP Band 4) for LTE technology. It is designed with an eco-efficient approach, providing operators with the means to achieve high quality and high capacity coverage with minimum site requirements and efficient operation.

A distributed Node B expands the deployment options by using two components, a Base Band Unit (BBU) containing the digital assets and a separate RRH containing the radio-frequency (RF) elements. This modular design optimizes available space and allows the main components of a Node B to be installed separately, within the same site or several kilometers apart.

The Alcatel-Lucent RRH2x60-AWS is linked to the BBU by an optical-fiber connection carrying downlink and uplink digital radio signals along with operations, administration and maintenance (OA&M) information.

SUPERIOR RF PERFORMANCE

The Alcatel-Lucent RRH2x60-AWS integrates all the latest technologies. This allows to offer best-in-class characteristics.

It delivers an outstanding 120 watts of total RF power thanks to its two transmit RF paths of 60 W each.

It is ideally suited to support multiple-input multiple-output (MIMO) 2x2 operation.

It includes four RF receivers to natively support 4-way uplink reception diversity. This improves the radio uplink coverage and this can be used to extend the cell radius commensurate with 2x2MIMO 2x60 W for the downlink.

It supports multiple discontinuous LTE carriers within an instantaneous bandwidth of 45 MHz corresponding to the entire AWS B4 spectrum.

The latest generation power amplifiers (PA) used in this product achieve high efficiency (>40%), resulting in improved power consumption figures.

OPTIMIZED TCO

The Alcatel-Lucent RRH2x60-AWS is designed to make available all the benefits of a distributed Node B, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX).

The Alcatel-Lucent RRH2x60-AWS is a very cost-effective solution to deploy LTE MIMO.

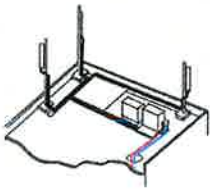
EASY INSTALLATION

The RRH2x60-AWS includes a reversible mounting bracket which allows for ease of installation behind an antenna, or on a rooftop knee wall while providing easy access to the mid body RF connectors.

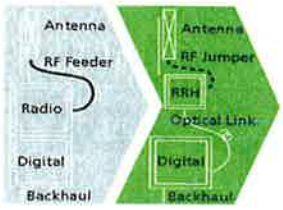
The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment. However, many of these sites can host an Alcatel-Lucent RRH2x60-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

The Alcatel-Lucent RRH2x60-AWS is a zero-footprint solution and is convection cooled without fans for silent operation, simplifying negotiations with site property owners and minimizing environmental impacts.

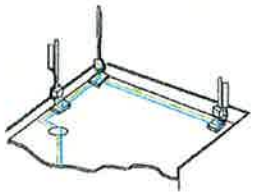
Installation can easily be done by a single person as the Alcatel–Lucent RRH2x60-AWS is compact and weighs about 20 kg, eliminating the need for a crane to hoist the BTS cabinet to the rooftop. A site can be in operation in less than one day.



Macro



RRH for space-constrained cell sites



Distributed

FEATURES

- RRH2x60-AWS integrates two power amplifiers of 60W rating (at each antenna connector)
- Support multiple carriers over the entire 3GPP band 4
- RRH2x60-AWS is optimized for LTE operation
- RRH2x60-AWS is a very compact and lightweight product
- Advanced power management techniques are embedded to provide power savings, such as PA bias control

BENEFITS

- MIMO LTE operation with only one single unit per sector
- Improved uplink coverage with built-in 4-way receive diversity capability
- RRH can be mounted close to the antenna, eliminating nearly all losses in RF cables and thus reducing power consumption by 50% compared to conventional solutions
- Distributed configurations provide easily deployable and cost-effective solutions, near zero footprint and silent solutions, with minimum impact on the neighborhood, which ease the deployment
- RETA and TMA support without additional hardware thanks to the AISG v2.0 port and the integrated Bias-Tees. Bias-Tees support AISG DC supply and signaling.

TECHNICAL SPECIFICATIONS

Specifications listed are hardware capabilities. Some capabilities depend on support in a specific software release or future release.

Dimensions and weights

- HxWxD : 510x285x186mm (27 l with solar shield)
- Weight : 20 kg (44 lbs)

Electrical Data

- Power Supply : -48V DC (-40.5 to -57V)
- Power Consumption (ETSI average traffic load reference) : 250W @2x60W

RF Characteristics

- Frequency band: 1710-1755, UL / 2110-2155 MHz, DL (3GPP band 4)
- Output power: 2x60W at antenna connectors
- Technology supported: LTE
- Instantaneous bandwidth: 45 MHz
- Rx diversity: 2-way and 4-way uplink reception
- Typical sensitivity without Rx diversity: -105 dBm for LTE

Connectivity

- Two CPRI optical ports for daisychaining and up to six RRHs per fiber
- Type of optical fiber: Single-Mode (SM) and Multi-Mode (MM) SFPs
- Optical fiber length: up to 500m using MM fiber, up to 20km using SM fiber
- TMA/RETA : AISG 2.0 (RS485 connector and internal Bias-Tee)
- Six external alarms
- Surge protection for all external ports (DC and RF)

Environmental specifications

- Operating temperature: -40°C to 55°C including solar load
- Operating relative humidity: 8% to 100%
- Environmental Conditions : ETS 300 019-1-4 class 4.1E
- Ingress Protection : IEC 60529 IP65
- Acoustic Noise : Noiseless (natural convection cooling)

Safety and Regulatory Data

- EMC : 3GPP 25113, EN 301 489-1, EN 301 489-23, GR 1089, GR 3108, OET-65
- Safety : IEC60950-1, EN 60825-1, UL, ANSI/NFPA 70, CAN/CSA-C22.2
- Regulatory : FCC Part 15 Class B, CE Mark – European Directive : 2002/95/EC (ROHS); 2002/96/EC (WEEE); 1999/5/EC (R&TTE)
- Health : EN 50385

Alcatel·Lucent

AT THE SPEED OF IDEAS™

Product Data Sheet DB-B1 and DB-T1 Series

DC and Fiber Management Distribution Boxes for HYBRIFLEX™ Cable

Product Description

The RFS Distribution Box design comes with the option for pluggable over voltage protection (OVP) for up to 6 remote radios and the connection for 6 pairs of optical fiber with LC optical fiber cable management. There is a hybrid cable input with a jumper configuration for power and optical fiber to the remote radio heads (RRHs). A custom wall, a 2-inch pole, and an H-Frame mounting bracket are included. Both the compact and standard design are available with lightening protection.

Features/Benefits

- Designed to accommodate varying diameters of HYBRIFLEX™ (combined power and fiber optic) cables – up to 2 inches
- Supports Single- and Multi-Mode Optical fiber
- NEMA 4x rated enclosure – allows **flexibility for indoor or outdoor installation** on a roof or tower top
- Weatherproof enclosure and ports – **improves system reliability**
- Modular design – makes replacement or addition of OVP easy without removal of other components within the box
- Strikesorb OVP technology – protects equipment from damaging surges up to 60 kA on an 8/20 waveform and up to 5 kA on a 10/350 waveform (certain models only)
- Low residual voltage and high impedance – **ideally suited for RRH technology** – won't shut down the RRH the way spark gap technology does (certain models only)

Technical Specifications

Mechanical Specifications

Model Number	DB-B1-6C-8AB-0Z	DB-T1-6Z-8AB-0Z
Enclosure Design	Standard, 6 OVP's	Standard without OVP
Dimensions - H x W x D, mm (in)	610 x 610 x 254 (24 x 24 x 10)	610 x 610 x 254 (24 x 24 x 10)
Weight, kg (lb)	20 (44)	20 (44)
Suppression Connection Method	Compression lug, #2-#14 AWG Copper, #2-#12 Aluminum	
Fiber Connection Method	LC-LC Single- or Multi-mode duplex	
Environmental Rating	NEMA 4x	
Operating Temperature, °C (°F)	-40 to +80 (-40 to +176)	
UV Protection	ISO 4892-2 Method A Xenon-Arc 2160 hrs	

Electrical Specifications

Nominal Operating Voltage	48 VDC	
Nominal Discharge Current (I_n) per UL 1449 3rd Ed	20 kA 8/20 µs	N/A
Maximum Discharge Current (I_{max}) per NEMA LS-1	60 kA 8/20 µs	N/A
Maximum Impulse (Lightning) Current (I_{imp}) per IEC 61643-1	5 kA 10/350 µs	N/A
Maximum Continuous Operating Voltage (U_c)	75 VDC	N/A
Voltage Protection Rating per UL1449 3rd Ed	400 V	N/A
Protection Class as per IEC 61643-1	Class 1	N/A
Strikesorb OVP Compliance	ANSI/UL 1449-3rd Ed	N/A
	IEEE C62.41	N/A
	NEMA LS-1	N/A
	IEC 61643-1	N/A
	IEC 61643-12	N/A
	EN 61643-11	N/A

* This data is provisional and subject to change.