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KENNETH C. BALDWIN

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Also admitted in Massachusetts

March 17, 2014

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

Re: **Notice of Exempt Modification – Facility Modification**
100 Old Redding Road, Redding, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 172-foot level of the existing 180-foot tower at 100 Old Redding Road in Redding, Connecticut (the "Property"). The tower is owned by American Tower Corporation. The Council approved Cellco's use of the existing tower in 2000. Cellco now intends to modify its facility by replacing six (6) of its existing antennas with three (3) model LNX-6514DS-VTM, 1900 MHz antennas and three (3) model HBX-6517DS-VTM, 2100 MHz antennas, at the same 172-foot level on the tower. Cellco also intends to install three (3) remote radio heads ("RRHs") behind its 2100 MHz antennas and one (1) HYBRIFLEX™ antenna cable. Included in Attachment 1 are specifications for Cellco's replacement antennas, RRHs and HYBRIFLEX™ cable.

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 Julia Pemberton, Redding's First Selectman and Robert J. Kraufman, 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. The replacement antennas and RRHs will be located at the 172-foot level on the 180-foot 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 modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A worst-case RF emissions calculation for 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 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:
Julia Pemberton, Redding First Selectman
Robert J. Kraufman
Sandy M. Carter

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, 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°

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	17.6 kg | 38.8 lb
Model with factory installed AISG 2.0 RET	LNX-6514DS-A1M

Product Specifications

COMMSCOPE®

HBX-6517DS-VTM

Andrew® 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, dBi	19.0	19.1	19.2
Beamwidth, Horizontal, degrees	65	65	65
Beamwidth, Vertical, degrees	5.0	4.7	4.4
Beam Tilt, degrees	0–6	0–6	0–6
USLS, typical, dB	18	18	18
Front-to-Back Ratio at 180°, dB	30	30	30
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°

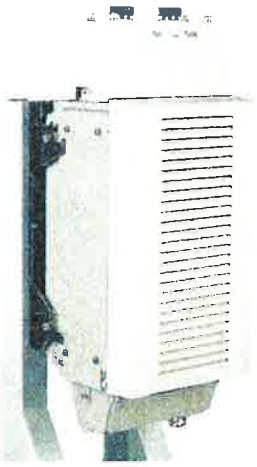
Mechanical Specifications

Color | Radome Material	Light gray | PVC, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 2
Wind Loading, maximum	393.2 N @ 150 km/h 88.4 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph
Antenna Dimensions, L x W x D	1902.0 mm x 166.0 mm x 83.0 mm | 74.9 in x 6.5 in x 3.3 in
Net Weight	6.2 kg | 13.7 lb
Model with factory installed AISG 2.0 RET	HBX-6517DS-A1M

Alcatel-Lucent RRH2x40-AWS

REMOTE RADIO HEAD

The Alcatel-Lucent RRH2x40-AWS is a high-power, small form-factor Remote Radio Head (RRH) operating in the AWS frequency band (1700/2100MHz - 3GPP Band 4). The Alcatel-Lucent RRH2x40-AWS is designed with an eco-efficient approach, providing operators with the means to achieve high quality and capacity coverage with minimum site requirements.



A distributed eNodeB expands 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 an eNodeB to be installed separately, within the same site or several kilometres apart.

The Alcatel-Lucent RRH2x40-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 RRH2x40-AWS has two transmit RF paths, 40 W RF output power per transmit path, and is designed to manage up to four-way receive diversity. The device is ideally suited to support macro coverage, with multiple-input multiple-output (MIMO) 2x2 operation in up to 20 MHz of bandwidth.

The Alcatel-Lucent RRH2x40-AWS is designed to make available all the benefits of a distributed eNodeB, with excellent RF characteristics, with low capital expenditures (CAPEX) and low operating expenditures (OPEX). The limited space available in some sites may prevent the installation of traditional single-cabinet BTS equipment or require costly cranes to be employed, leaving coverage holes. However, many of these sites can host an Alcatel-Lucent RRH2x40-AWS installation, providing more flexible site selection and improved network quality along with greatly reduced installation time and costs.

Fast, low-cost installation and deployment

The Alcatel-Lucent RRH2x40-AWS is a zero-footprint solution and operates noise-free, simplifying negotiations with site property owners and minimizing environmental impacts. Installation can easily be done by a single person because the Alcatel-Lucent RRH2x40-AWS is compact and weighs less than 20 kg (44 lb), 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 — a fraction of the time required for a traditional BTS.

Excellent RF performance

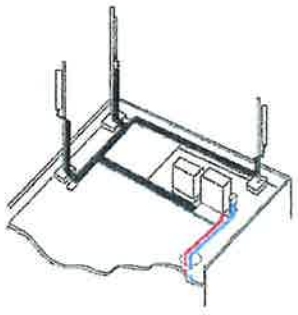
Because of its small size and weight, the Alcatel-Lucent RRH2x40-AWS can be installed close to the antenna. Operators can therefore locate the Alcatel-Lucent RRH2x40-AWS where RF engineering is deemed ideal, minimizing trade-offs between available sites and RF optimum sites. The RF feeder cost and installation costs are reduced or eliminated, and there is no need for a Tower Mounted Amplifier (TMA) because losses introduced by the RF feeder are greatly reduced.
The Alcatel-Lucent RRH2x40-AWS provides more RF power while at the same time consuming less electricity.

Features

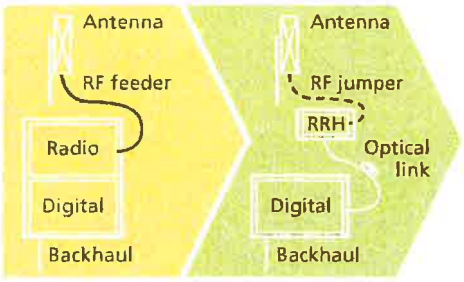
- Zero-footprint deployment
- Easy installation, with a lightweight unit can be carried and set up by one person
- Optimized RF power, with flexible site selection and elimination of a TMA
- Convection-cooled (fanless)
- Noise-free
- Best-in-class power efficiency, with significantly reduced energy consumption

Benefits

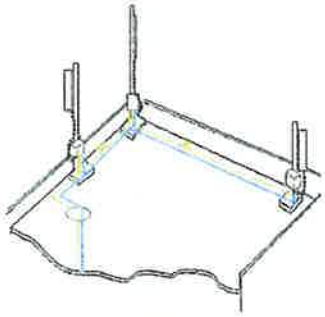
- Leverages existing real estate with lower site costs
- Reduces installation costs, with fewer installation materials and simplified logistics
- Decreases power costs and minimizes environmental impacts, with the potential for eco-sustainable power options
- Improves RF performance and adds flexibility to network planning



Macro



RRH for space-constrained cell sites



Distributed

Technical specifications

Physical dimensions

- Height: 620 mm (24.4 in.)
- Width: 270 mm (10.63 in.)
- Depth: 170m (6.7 in.)
- Weight (without mounting kit): less than 20 kg (44 lb)

Power

- Power supply: -48VDC

Operating environment

- Outdoor temperature range:
  - ¬ With solar load: -40°C to +50°C (-40°F to +122°F)
  - ¬ Without solar load: -40°C to +55°C (-40°F to +131°F)
- Passive convection cooling (no fans)
- Enclosure protection
  - ¬ IP65 (International Protection rating)

RF characteristics

- Frequency band: 1700/2100 MHz (AWS); 3GPP Band 4
- Bandwidth: up to 20 MHz
- RF output power at antenna port: 40 W nominal RF power for each Tx port
- Rx diversity: 2-way or 4-way with optional Rx Diversity module
- Noise figure: below 2.0 dB typical
- Antenna Line Device features
  - ¬ TMA and Remote electrical tilt (RET) support via AISG v2.0

Optical characteristics

Type/number of fibers

- Single-mode variant
  - ¬ One Single Mode Single Fiber per RRH2x, carrying UL and DL using CWDM
  - ¬ Single mode dual fiber (SM/DF)
- Multi-mode variant
  - ¬ Two Multi-mode fibers per RRH2x: one carrying UL, the other carrying DL

Optical fiber length

- Up to 500 m (0.31 mi), using MM fiber
- Up to 20 km (12.43 mi), using SM fiber

Digital Ports and Alarms

- Two optical ports to support daisy-chaining
- Six external alarms

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® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

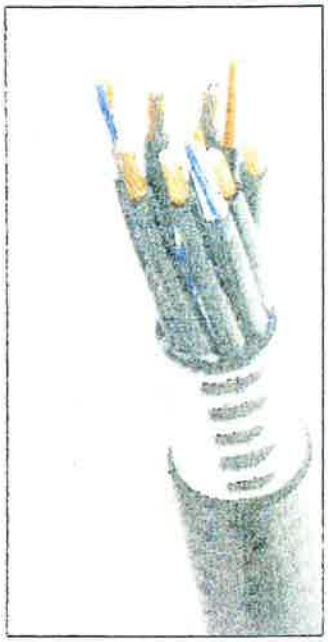


Figure 1: HYBRIFLEX Series

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

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
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)
DC-Resistance Outer Conductor Armor		[Ω/km (Ω/1000ft)]	.068 (0.205)
DC-Resistance Power Cable, 3.4mm² (8AWG)		[Ω/km (Ω/1000ft)]	2.1 (0.307)
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
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-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Installation Temperature		[°C (°F)]	-40 to +65 (-40 to149)
Operation Temperature		[°C (°F)]	-40 to +65 (-40 to149)

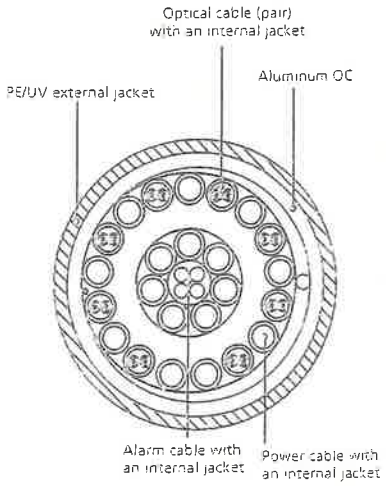


Figure 2: Construction Detail

* This data is provisional and subject to change

ATTACHMENT 2

	General	Power	Density					
Site Name: Topstone (Redding)								
Tower Height: Verizon @ 172t								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*AT&T UMTS	1	500	180	0.0055	880	0.5867	0.95%	
*AT&T UMTS	1	500	180	0.0055	1900	1.0000	0.55%	
*AT&T LTE	1	500	180	0.0055	734	0.4893	1.13%	
*AT&T GSM	2	296	180	0.0066	880	0.5867	1.12%	
*MetroPCS	3	443.61	140	0.0244	2140	1.0000	2.44%	
*Sprint CDMA/LTE	2	778	157	0.0227	1962.5	1.0000	2.27%	
*Sprint CDMA/LTE	1	438	157	0.0064	850	0.5667	1.13%	
*Nextel			164	0.0131	851	0.5673	2.31%	
*Omnipoint/T-Mobile			150	0.0050	1930	1.0000	0.50%	
*State Police			127	0.0000	866.0125	0.5773	0.00%	
*State Police			127	0.0000	823.2	0.5488	0.00%	
*State Police			127	0.0000	866.275	0.5775	0.00%	
*DMV			100	0.0000		0.2000	0.02%	
*CMED			100	0.0000		0.3084	0.01%	
*FBI			65	0.0105		0.2000	5.27%	
Verizon	**15**	**292**	**172**	**0.0532**	**1970**	**1.0000**	**5.32%**	
Verizon	**9**	**348**	**172**	**0.0381**	**869**	**0.5793**	**6.57%**	
Verizon	**1**	**1750**	**172**	**0.0213**	**2145**	**1.0000**	**2.13%**	
Verizon	**1**	**779**	**172**	**0.0095**	**698**	**0.4653**	**2.03%**	
								33.77%
* Source: Siting Council								

ATTACHMENT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**180 ft Self Supported Tower**
ATC Site Name	:	**Redding, CT**
ATC Site Number	:	**302522**
Engineering Number	:	**56662821**
Proposed Carrier	:	**Verizon**
Carrier Site Name	:	**Topstone**
Carrier Site Number	:	**N/A**
Site Location	:	**Old Redding Road** **West Redding, CT 06896-2702** **41.287083,-73.438200**
County	:	**Fairfield**
Date	:	**February 6, 2014**
Max Usage	:	**100%**
Result	:	**Pass**

Amir H. Tabarestani, E.I.
Structural Engineer I

Feb 6 2014 3:18 PM

AMERICAN TOWER®
CORPORATION

Eng. Number 56662821
February 6, 2014

Table of Contents

AMERICAN TOWER®
CORPORATION

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by Verizon.

Supporting Documents

Tower Drawings	Rohn Drawing #C951762, dated December 26, 1995
Foundation Drawing	Rohn Drawing #A953313-1, dated January 1, 1996
Geotechnical Report	SoilTesting Job #591, december 26, 1995

Analysis

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

Basic Wind Speed:	85 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	74 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (5) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

Conclusion

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

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Mount Elev.[1] (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
180.0	3	Powerwave P65-16-XLH-RR	Sector Frames	(12) 1 1/4" Coax (2) 0.74" 8 AWG 7 (1) 0.28" RG6	AT&T Mobility
	6	Ericsson RRUS 11			
	1	Raycap DC6-48-60-18-8F			
	3	Powerwave TT19-08BP111-001			
	6	Powerwave LGP21401			
	6	Powerwave 7770.00			
172.0	1	Swedcom SWCP 2x7014	Sector Frames	(12) 1 5/8" Coax	Verizon
	1	Antel BXA-70063/6CF			
	1	RFS APX75-866512-CT2			
	6	RFS FD9R6004/1C-3L			
	3	Rymsa MGD3-800T0			
164.0	12	Decibel DB844H90E-XY	Sector Frames	(12) 1 5/8" Coax	Sprint Nextel
154.0	3	Alcatel-Lucent 800 MHz RRH	Sector Frames	(6) 1 5/8" Coax (3) 1 1/4" Hybriflex	
	3	Alcatel-Lucent 1900 MHz 4x45 R			
	3	RFS APXVSPP18-C-A20			
	6	Decibel DB980H90E-KL			
142.0	4	Scala OGT9-840	Side Arms	(4) 1 5/8" Coax (2) 3/8" Coax	CT State Police
	2	TX RX 422-86A-99575-18R1			
140.0	1	Morad VHF 156-Deluxe	Sector Frames	(1) 1/2" Coax	
	3	Kathrein 800 10504		(12) 1 5/8" Coax (1) 5/16" Coax	Metro PCS
	6	Kathrein 860-10025			
	3	Kathrein 742 351			
136.0	-	-	Empty Side Arm	-	--
135.0	1	8 ft. Ice Shield	Leg	-	CT State Police
134.0	1	8 ft. Ice Shield	Leg	-	
131.0	2	Andrew DB810K-XT	Side Arms	(2) 1 5/8" Coax	
129.0	1	RFS PA6-65AC w/ Radome	Pipe	(1) EW63	
128.0	1	RFS PA6-65AC w/ Radome	Pipe	(1) EW63	
127.0	2	Sinclair SE419-SF3P4LDF	Side Arms	(2) 1 5/8" Coax (1) 3/8" Coax	
	1	Bird 432-83H-01-T			
126.0	-	-	Empty Side Arm	-	--
119.5	-	-	Empty Side Arm	-	
118.0	2	Decibel DB586	Side Arms	(2) 7/8" Coax	CT Light & Power
115.5	-	-	Empty Side Arm	-	--
107.0	1	Sinclair SD210D	Side Arms	(2) 7/8" Coax	CT Light & Power
90.0	1	PCTEL GPS-TMG-HR-26N	Standoff	(1) 1/2" Coax	Sprint Nextel
84.0	1	Andrew DB264-A	Standoff	(1) 7/8" Coax	CT State Police
82.0	1	12' Omni	Sprint Nextel	(1) 7/8" Coax	CT DMV
30.0	1	GPS	Leg	(1) 1/2" Coax	Verizon

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
172.0	172.0	3	Andrew LNX-6514DS-VTM	Sector Frames	(1) 1 5/8" Hybriflex	Verizon
		1	RFS DB-T1-6Z-8AB-0Z			
		3	Andrew HBX-6517DS-VTM			
		3	Alcatel-Lucent RRH2x40-AWS			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax stacked on top of existing Verizon coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	100%	Pass
Diagonals	87%	Pass
Horizontals	33%	Pass
Anchor Bolts	59%	Pass
Leg Bolts	73%	Pass

Foundations

Reaction Component	Analysis Reactions
Uplift (Kips)	287.4
Axial (Kips)	340.4
Shear (Kips)	35.0

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
172.0	0.502	0.117	0.354

***Deflection, Twist and Sway was evaluated considering a design wind speed of 50 mph (Fastest Mile) per ANSI/TIA/EIA-222-F.**

AMERICAN TOWER®
CORPORATION

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

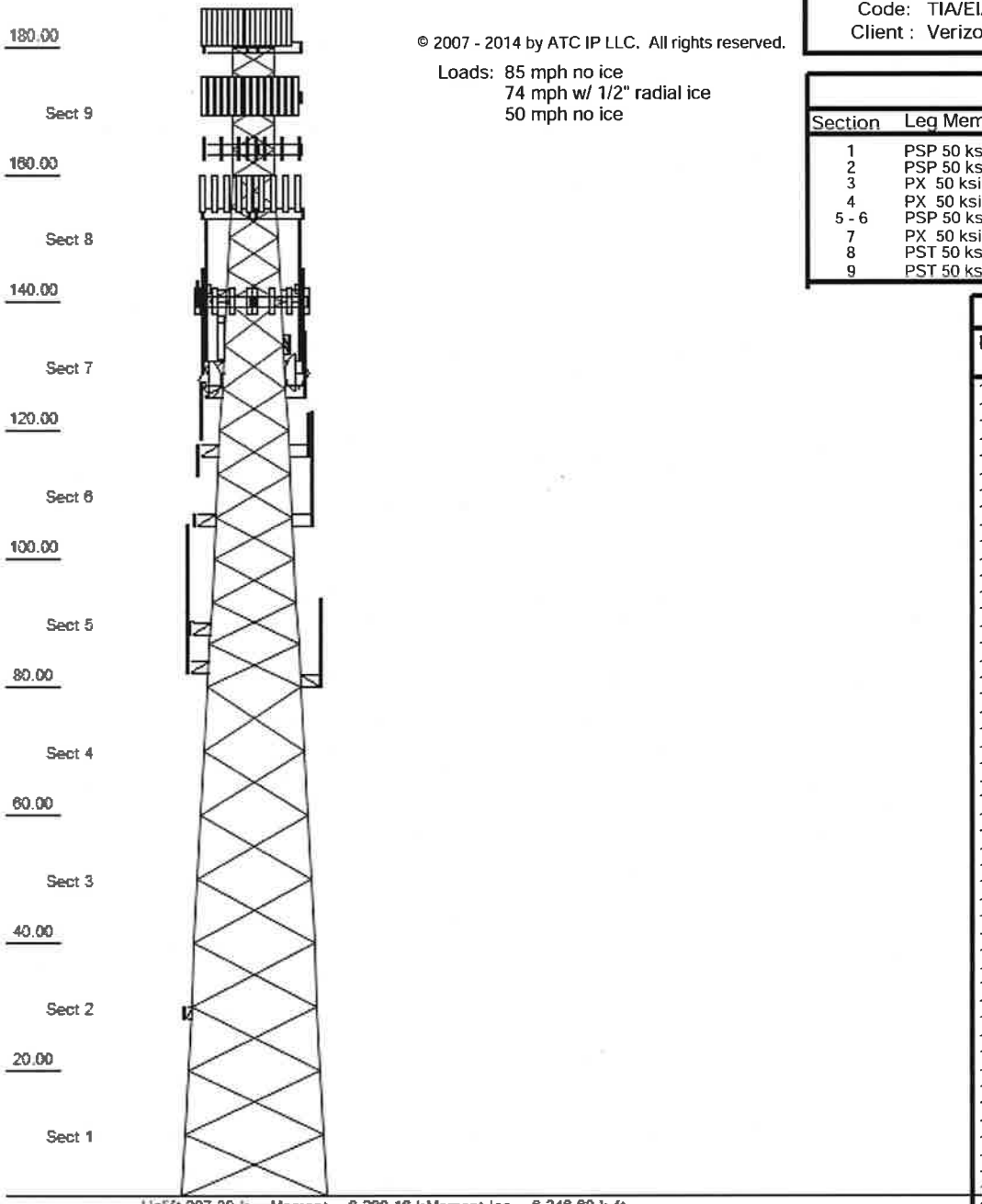
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, 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 that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. 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.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Uplift 287.39 k Moment 6,268.16 k Moment Ice 6,246.60 k-ft
Vert 340.45 k Tot Down 47.05 k Tot Down Ice 80.52 k
Horiz 35.01 k Tot Shear 56.75 k Tot Shear Ice 56.21 k

Loads: 85 mph no ice
74 mph w/ 1/2" radial ice
50 mph no ice

Job Information

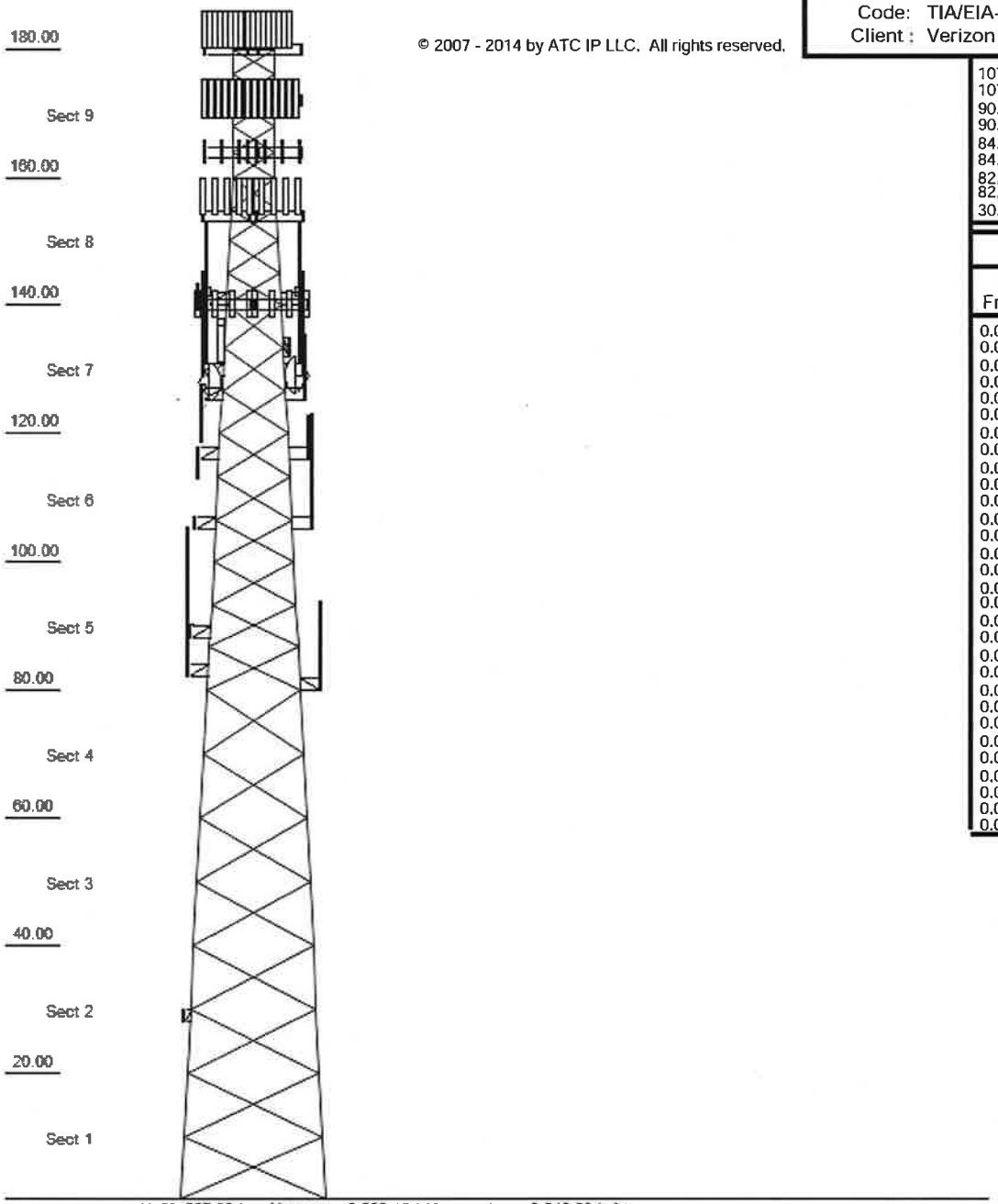
Tower :	302522	Location : Redding, CT	
Code:	TIA/EIA-222 Rev F	Shape : Triangle	Base Width : 23.00 ft
Client :	Verizon Wireless		Top Width : 6.65 ft

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	PSP 50 ksi	ROHN 8 EHS	SAE 50 ksi 4X4X0.3125	
2	PSP 50 ksi	ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PX 50 ksi	6" DIA PIPE	SAE 50 ksi 4X4X0.25	
4	PX 50 ksi	6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5 - 6	PSP 50 ksi	ROHN 5 EH	SAE 50 ksi 3X3X0.25	
7	PX 50 ksi	4" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
8	PST 50 ksi	3" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 1.75X1.75X0.1875
9	PST 50 ksi	2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 1.75X1.75X0.1875

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
180.00	Panel	3	Powerwave P65-16-XLH-RR
180.00	Panel	6	Ericsson RRUS 11
180.00	Panel	1	Raycap DC6-48-60-18-8F
180.00	Panel	3	Powerwave TT19-08BP111-001
180.00	Panel	6	Powerwave LGP21401
180.00	Panel	6	Powerwave 7770.00
180.00	Mounting Frame	3	Round Sector Frame
172.00	Panel	3	Andrew LNX-6514DS-T4M
172.00	Panel	1	RFS DB-T1-6Z-8AB-0Z
172.00	Panel	3	Andrew HBX-6517DS-VTM
172.00	Panel	1	Swedcom SWCP 2x7014
172.00	Panel	1	Antel BXA-70063/6CF
172.00	Mounting Frame	3	Round Sector Frame
172.00	Panel	1	RFS APX75-866512-CT2
172.00	Panel	3	Alcatel-Lucent RRH2x40-AWS
172.00	Panel	6	RFS FD9R6004/1C-3L
172.00	Panel	3	Rymsa MGD3-800T0
164.00	Panel	12	Decibel DB844H90E-XY
164.00	Mounting Frame	3	Round Sector Frame
154.00	Panel	3	Alcatel-Lucent 800 MHz RRH
154.00	Panel	3	Alcatel-Lucent 1900 MHz 4x45 R
154.00	Panel	3	RFS APXVSPP18-C-A20
154.00	Mounting Frame	3	Round Sector Frame
154.00	Panel	6	Decibel DB980H90E-KL
142.00	Whip	2	Scala OGT9-840
142.00	Straight Arm	2	Side Arm
142.00	Panel	2	TX RX 422-86A-99575-18R1
142.00	Whip	2	Scala OGT9-840
140.00	Whip	1	Morad VHF 156-Deluxe
140.00	Panel	3	Kathrein 800 10504
140.00	Panel	6	Kathrein 860-10025
140.00	Panel	3	Kathrein 742 351
140.00	Mounting Frame	3	Round Sector Frame
136.00	Straight Arm	1	Empty Side Arm
135.00	Panel	1	8 ft. Ice Shield
134.00	Panel	1	8 ft. Ice Shield
131.00	Straight Arm	2	Round Side Arm
131.00	Whip	2	Decibel DB810K-XT
129.00	Dish	1	RFS PA6-65AC w/ Radome
128.00	Dish	1	RFS PA6-65AC w/ Radome
127.00	Whip	1	Sinclair SE419-SF3P4LDF
127.00	Panel	1	Bird 432-83H-01-T
127.00	Whip	1	Sinclair SE419-SF3P4LDF
127.00	Straight Arm	2	Round Side Arm
126.00	Straight Arm	1	Flat Side Arm
119.50	Straight Arm	1	Flat Side Arm
118.00	Whip	1	Decibel DB586
118.00	Straight Arm	2	Round Side Arm
118.00	Whip	1	Decibel DB586
115.50	Straight Arm	1	Flat Side Arm



Uplift 287.39 k Moment 6,268.16 k Moment Ice 6,246.60 k-ft
Vert 340.45 k Tot Down 47.05 k Tot Down Ice 80.52 k
Horiz 35.01 k Tot Shear 56.75 k Tot Shear Ice 56.21 k

Job Information

Tower :	302522	Location :	Redding, CT
Code:	TIA/EIA-222 Rev F	Shape :	Triangle
Client :	Verizon Wireless		

Base Width : 23.00 ft
Top Width : 6.65 ft

107.00	Whip	1	Sinclair SD210D
107.00	Straight Arm	2	Side Arm
90.00	Straight Arm	1	Standoff
90.00	Panel	1	PCTEL GPS-TMG-HR-26N
84.00	Whip	1	Andrew DB264-A
84.00	Straight Arm	1	Standoff
82.00	Whip	1	12' Omni
82.00	Straight Arm	1	Sprint Nextel
30.00	Whip	1	GPS

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.000	180.00	1	Wave Guide
0.000	180.00	12	1 1/4" Coax
0.000	180.00	2	0.74" 8 AWG 7
0.000	180.00	1	0.28" RG6
0.000	172.00	1	Wave Guide
0.000	172.00	1	1 5/8" Hybriflex
0.000	172.00	12	1 5/8" Coax
0.000	164.00	1	Wave Guide
0.000	164.00	12	1 5/8" Coax
0.000	154.00	2	1 5/8" Coax
0.000	154.00	4	1 5/8" Coax
0.000	154.00	3	1 1/4" Hybriflex
0.000	142.00	2	3/8" Coax
0.000	142.00	4	1 5/8" Coax
0.000	140.00	1	Wave Guide
0.000	140.00	1	Wave Guide
0.000	140.00	1	5/16" Coax
0.000	140.00	1	1/2" Coax
0.000	140.00	12	1 5/8" Coax
0.000	131.00	2	1 5/8" Coax
0.000	129.00	1	EW63
0.000	128.00	1	EW63
0.000	127.00	1	3/8" Coax
0.000	127.00	2	1 5/8" Coax
0.000	118.00	2	7/8" Coax
0.000	107.00	2	7/8" Coax
0.000	90.000	1	1/2" Coax
0.000	84.000	1	7/8" Coax
0.000	82.000	1	7/8" Coax
0.000	30.000	1	1/2" Coax

Site Number: 302522
Location: Redding, CT

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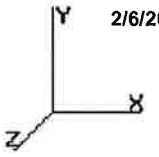

Code: TIA/EIA-222 Rev F

Gh : 1.12

Section Forces

LoadCase Normal No Ice — 85.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	29.55	14.42	43.51	0.00	0.43	2.00	1.00	1.00	0.67	43.40	0.00	0.00	1,444.5	0.0	2,874.42	0.00	2,874.42	2
8	150.0	28.51	17.81	55.91	0.00	0.48	1.93	1.00	1.00	0.69	56.17	0.00	0.00	2,271.7	0.0	3,466.31	0.00	3,466.31	1
7	130.0	27.37	19.33	66.71	0.00	0.44	1.99	1.00	1.00	0.67	63.92	0.00	0.00	3,432.8	0.0	3,904.97	0.00	3,904.97	3
6	110.0	26.09	24.69	81.64	0.00	0.45	1.97	1.00	1.00	0.67	79.63	0.00	0.00	4,170.0	0.0	4,598.26	0.00	4,598.26	3
5	90.00	24.64	27.34	82.00	0.00	0.39	2.07	1.00	1.00	0.65	80.61	0.00	0.00	4,340.6	0.0	4,616.62	0.00	4,616.62	3
4	70.00	22.93	26.23	87.21	0.00	0.36	2.15	1.00	1.00	0.64	81.63	0.00	0.00	4,770.9	0.0	4,518.40	0.00	4,518.40	3
3	50.00	20.83	31.58	87.22	0.00	0.33	2.22	1.00	1.00	0.63	86.18	0.00	0.00	5,092.5	0.0	4,458.23	0.00	4,458.23	3
2	30.00	18.50	33.86	93.89	0.00	0.32	2.25	1.00	1.00	0.62	92.26	0.00	0.00	5,509.1	0.0	4,295.45	0.00	4,295.45	3
1	10.00	18.50	36.27	93.89	0.00	0.30	2.31	1.00	1.00	0.61	93.97	0.00	0.00	6,117.6	0.0	4,494.93	0.00	4,494.93	3
														37,149.8	0.0			37,227.58	

LoadCase 60 deg No Ice — 85.00 mph Wind at 60 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	29.55	14.42	43.51	0.00	0.43	2.00	0.80	1.00	0.67	40.52	0.00	0.00	1,444.5	0.0	2,683.47	0.00	2,683.47	2
8	150.0	28.51	17.81	55.91	0.00	0.48	1.93	0.80	1.00	0.69	52.61	0.00	0.00	2,271.7	0.0	3,246.52	0.00	3,246.52	1
7	130.0	27.37	19.33	66.71	0.00	0.44	1.99	0.80	1.00	0.67	60.05	0.00	0.00	3,432.8	0.0	3,668.75	0.00	3,668.75	3
6	110.0	26.09	24.69	81.64	0.00	0.45	1.97	0.80	1.00	0.67	74.69	0.00	0.00	4,170.0	0.0	4,313.09	0.00	4,313.09	3
5	90.00	24.64	27.34	82.00	0.00	0.39	2.07	0.80	1.00	0.65	75.14	0.00	0.00	4,340.6	0.0	4,303.43	0.00	4,303.43	3
4	70.00	22.93	26.23	87.21	0.00	0.36	2.15	0.80	1.00	0.64	76.39	0.00	0.00	4,770.9	0.0	4,228.04	0.00	4,228.04	3
3	50.00	20.83	31.58	87.22	0.00	0.33	2.22	0.80	1.00	0.63	79.86	0.00	0.00	5,092.5	0.0	4,131.46	0.00	4,131.46	3
2	30.00	18.50	33.86	93.89	0.00	0.32	2.25	0.80	1.00	0.62	85.49	0.00	0.00	5,509.1	0.0	3,980.16	0.00	3,980.16	3
1	10.00	18.50	36.27	93.89	0.00	0.30	2.31	0.80	1.00	0.61	86.72	0.00	0.00	6,117.6	0.0	4,147.99	0.00	4,147.99	3
														37,149.8	0.0			34,702.92	

LoadCase 90 deg No Ice — 85.00 mph Wind at 90 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	29.55	14.42	43.51	0.00	0.43	2.00	0.85	1.00	0.67	41.24	0.00	0.00	1,444.5	0.0	2,731.21	0.00	2,731.21	2
8	150.0	28.51	17.81	55.91	0.00	0.48	1.93	0.85	1.00	0.69	53.50	0.00	0.00	2,271.7	0.0	3,301.47	0.00	3,301.47	1
7	130.0	27.37	19.33	66.71	0.00	0.44	1.99	0.85	1.00	0.67	61.02	0.00	0.00	3,432.8	0.0	3,727.80	0.00	3,727.80	3

Site Number: 302522
Location: Redding, CT

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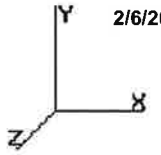
Code: TIA/EIA-222 Rev F



Gh : 1.12

Section Forces

6	110.0	26.09	24.69	81.64	0.00	0.45	1.97	0.85	1.00	0.67	75.93	0.00	0.00	4,170.0	0.0	4,384.38	0.00	4,384.38	3
5	90.00	24.64	27.34	82.00	0.00	0.39	2.07	0.85	1.00	0.65	76.50	0.00	0.00	4,340.6	0.0	4,381.73	0.00	4,381.73	3
4	70.00	22.93	26.23	87.21	0.00	0.36	2.15	0.85	1.00	0.64	77.70	0.00	0.00	4,770.9	0.0	4,300.63	0.00	4,300.63	3
3	50.00	20.83	31.58	87.22	0.00	0.33	2.22	0.85	1.00	0.63	81.44	0.00	0.00	5,092.5	0.0	4,213.15	0.00	4,213.15	3
2	30.00	18.50	33.86	93.89	0.00	0.32	2.25	0.85	1.00	0.62	87.18	0.00	0.00	5,509.1	0.0	4,058.98	0.00	4,058.98	3
1	10.00	18.50	36.27	93.89	0.00	0.30	2.31	0.85	1.00	0.61	88.53	0.00	0.00	6,117.6	0.0	4,234.73	0.00	4,234.73	3
														37,149.8	0.0			35,334.09	

LoadCase Normal Ice — 73.61 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	22.16	14.42	80.54	37.03	0.71	1.78	1.00	1.00	0.83	81.15	0.00	0.00	2,714.9	1,270.4	3,582.07	0.00	3,582.07	2
8	150.0	21.38	17.81	91.61	35.70	0.71	1.78	1.00	1.00	0.83	93.46	0.00	0.00	4,300.8	2,029.1	3,979.35	0.00	3,979.35	1
7	130.0	20.52	19.33	110.98	44.27	0.67	1.78	1.00	1.00	0.80	107.63	0.00	0.00	6,330.8	2,898.0	4,402.12	0.00	4,402.12	3
6	110.0	19.57	24.69	133.44	51.80	0.67	1.78	1.00	1.00	0.80	131.13	0.00	0.00	7,424.3	3,254.3	5,111.96	0.00	5,111.96	3
5	90.00	18.48	27.34	135.02	53.02	0.59	1.81	1.00	1.00	0.75	127.99	0.00	0.00	7,717.9	3,377.3	4,805.49	0.00	4,805.49	3
4	70.00	17.20	26.23	140.13	52.92	0.52	1.87	1.00	1.00	0.71	125.78	0.00	0.00	8,186.3	3,415.5	4,533.39	0.00	4,533.39	3
3	50.00	15.62	31.58	140.73	53.52	0.48	1.93	1.00	1.00	0.69	128.38	0.00	0.00	8,666.3	3,573.8	4,330.04	0.00	4,330.04	3
2	30.00	13.87	33.86	148.02	54.13	0.45	1.97	1.00	1.00	0.68	133.84	0.00	0.00	9,235.8	3,726.7	4,090.69	0.00	4,090.69	3
1	10.00	13.87	36.27	148.62	54.73	0.42	2.03	1.00	1.00	0.66	134.36	0.00	0.00	9,922.8	3,805.2	4,231.10	0.00	4,231.10	3
														64,500.0	27,350.2			39,066.21	

LoadCase 60 deg Ice — 73.61 mph Wind at 60 deg From Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	22.16	14.42	80.54	37.03	0.71	1.78	0.80	1.00	0.83	78.27	0.00	0.00	2,714.9	1,270.4	3,454.82	0.00	3,454.82	2
8	150.0	21.38	17.81	91.61	35.70	0.71	1.78	0.80	1.00	0.83	89.90	0.00	0.00	4,300.8	2,029.1	3,827.72	0.00	3,827.72	1
7	130.0	20.52	19.33	110.98	44.27	0.67	1.78	0.80	1.00	0.80	103.76	0.00	0.00	6,330.8	2,898.0	4,243.97	0.00	4,243.97	3
6	110.0	19.57	24.69	133.44	51.80	0.67	1.78	0.80	1.00	0.80	126.19	0.00	0.00	7,424.3	3,254.3	4,919.45	0.00	4,919.45	3
5	90.00	18.48	27.34	135.02	53.02	0.59	1.81	0.80	1.00	0.75	122.52	0.00	0.00	7,717.9	3,377.3	4,600.18	0.00	4,600.18	3
4	70.00	17.20	26.23	140.13	52.92	0.52	1.87	0.80	1.00	0.71	120.53	0.00	0.00	8,186.3	3,415.5	4,344.32	0.00	4,344.32	3
3	50.00	15.62	31.58	140.73	53.52	0.48	1.93	0.80	1.00	0.69	122.06	0.00	0.00	8,666.3	3,573.8	4,116.98	0.00	4,116.98	3
2	30.00	13.87	33.86	148.02	54.13	0.45	1.97	0.80	1.00	0.68	127.06	0.00	0.00	9,235.8	3,726.7	3,883.70	0.00	3,883.70	3
1	10.00	13.87	36.27	148.62	54.73	0.42	2.03	0.80	1.00	0.66	127.11	0.00	0.00	9,922.8	3,805.2	4,002.69	0.00	4,002.69	3
														64,500.0	27,350.2			37,393.83	

Site Number: 302522
Location: Redding, CT

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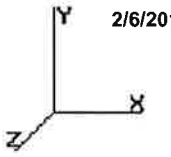
Code: TIA/EIA-222 Rev F



Gh : 1.12

Section Forces

LoadCase 90 deg Ice — 73.61 mph Wind at 90 deg From Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	22.16	14.42	80.54	37.03	0.71	1.78	0.85	1.00	0.83	78.99	0.00	0.00	2,714.9	1,270.4	3,486.63	0.00	3,486.63	2
8	150.0	21.38	17.81	91.61	35.70	0.71	1.78	0.85	1.00	0.83	90.79	0.00	0.00	4,300.8	2,029.1	3,865.63	0.00	3,865.63	1
7	130.0	20.52	19.33	110.98	44.27	0.67	1.78	0.85	1.00	0.80	104.73	0.00	0.00	6,330.8	2,898.0	4,283.51	0.00	4,283.51	3
6	110.0	19.57	24.69	133.44	51.80	0.67	1.78	0.85	1.00	0.80	127.43	0.00	0.00	7,424.3	3,254.3	4,967.58	0.00	4,967.58	3
5	90.00	18.48	27.34	135.02	53.02	0.59	1.81	0.85	1.00	0.75	123.89	0.00	0.00	7,717.9	3,377.3	4,651.50	0.00	4,651.50	3
4	70.00	17.20	26.23	140.13	52.92	0.52	1.87	0.85	1.00	0.71	121.84	0.00	0.00	8,186.3	3,415.5	4,391.59	0.00	4,391.59	3
3	50.00	15.62	31.58	140.73	53.52	0.48	1.93	0.85	1.00	0.69	123.64	0.00	0.00	8,666.3	3,573.8	4,170.25	0.00	4,170.25	3
2	30.00	13.87	33.86	148.02	54.13	0.45	1.97	0.85	1.00	0.68	128.76	0.00	0.00	9,235.8	3,726.7	3,935.45	0.00	3,935.45	3
1	10.00	13.87	36.27	148.62	54.73	0.42	2.03	0.85	1.00	0.66	128.92	0.00	0.00	9,922.8	3,805.2	4,059.79	0.00	4,059.79	3
														64,500.0	27,350.2			37,811.92	

LoadCase Normal — 50.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	10.22	14.42	43.51	0.00	0.43	2.00	1.00	1.00	0.67	43.40	0.00	0.00	1,444.5	0.0	994.61	0.00	994.61	2
8	150.0	9.86	17.81	55.91	0.00	0.48	1.93	1.00	1.00	0.69	56.17	0.00	0.00	2,271.7	0.0	1,199.41	0.00	1,199.41	1
7	130.0	9.47	19.33	66.71	0.00	0.44	1.99	1.00	1.00	0.67	63.92	0.00	0.00	3,432.8	0.0	1,351.20	0.00	1,351.20	3
6	110.0	9.03	24.69	81.64	0.00	0.45	1.97	1.00	1.00	0.67	79.63	0.00	0.00	4,170.0	0.0	1,591.09	0.00	1,591.09	3
5	90.00	8.52	27.34	82.00	0.00	0.39	2.07	1.00	1.00	0.65	80.61	0.00	0.00	4,340.6	0.0	1,597.45	0.00	1,597.45	3
4	70.00	7.93	26.23	87.21	0.00	0.36	2.15	1.00	1.00	0.64	81.63	0.00	0.00	4,770.9	0.0	1,563.46	0.00	1,563.46	3
3	50.00	7.21	31.58	87.22	0.00	0.33	2.22	1.00	1.00	0.63	86.18	0.00	0.00	5,092.5	0.0	1,542.64	0.00	1,542.64	3
2	30.00	6.40	33.86	93.89	0.00	0.32	2.25	1.00	1.00	0.62	92.26	0.00	0.00	5,509.1	0.0	1,486.32	0.00	1,486.32	3
1	10.00	6.40	36.27	93.89	0.00	0.30	2.31	1.00	1.00	0.61	93.97	0.00	0.00	6,117.6	0.0	1,555.34	0.00	1,555.34	3
														37,149.8	0.0			12,881.52	

LoadCase 60 deg — 50.00 mph Wind at 60 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	10.22	14.42	43.51	0.00	0.43	2.00	0.80	1.00	0.67	40.52	0.00	0.00	1,444.5	0.0	928.54	0.00	928.54	2
8	150.0	9.86	17.81	55.91	0.00	0.48	1.93	0.80	1.00	0.69	52.61	0.00	0.00	2,271.7	0.0	1,123.36	0.00	1,123.36	1
7	130.0	9.47	19.33	66.71	0.00	0.44	1.99	0.80	1.00	0.67	60.05	0.00	0.00	3,432.8	0.0	1,269.46	0.00	1,269.46	3
6	110.0	9.03	24.69	81.64	0.00	0.45	1.97	0.80	1.00	0.67	74.69	0.00	0.00	4,170.0	0.0	1,492.42	0.00	1,492.42	3

Site Number: 302522
Location: Redding, CT

Code: TIA/EIA-222 Rev F

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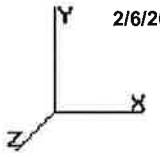

Gh : 1.12

Section Forces

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
5	90.00	8.52	27.34	82.00	0.00	0.39	2.07	0.80	1.00	0.65	75.14	0.00	0.00	4,340.6	0.0	1,489.08	0.00	1,489.08	3
4	70.00	7.93	26.23	87.21	0.00	0.36	2.15	0.80	1.00	0.64	76.39	0.00	0.00	4,770.9	0.0	1,462.99	0.00	1,462.99	3
3	50.00	7.21	31.58	87.22	0.00	0.33	2.22	0.80	1.00	0.63	79.86	0.00	0.00	5,092.5	0.0	1,429.57	0.00	1,429.57	3
2	30.00	6.40	33.86	93.89	0.00	0.32	2.25	0.80	1.00	0.62	85.49	0.00	0.00	5,509.1	0.0	1,377.22	0.00	1,377.22	3
1	10.00	6.40	36.27	93.89	0.00	0.30	2.31	0.80	1.00	0.61	86.72	0.00	0.00	6,117.6	0.0	1,435.29	0.00	1,435.29	3
														37,149.8	0.0			12,007.93	

LoadCase 90 deg — **50.00 mph Wind at 90 deg From Face with No Ice**

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
9	170.0	10.22	14.42	43.51	0.00	0.43	2.00	0.85	1.00	0.67	41.24	0.00	0.00	1,444.5	0.0	945.06	0.00	945.06	2
8	150.0	9.86	17.81	55.91	0.00	0.48	1.93	0.85	1.00	0.69	53.50	0.00	0.00	2,271.7	0.0	1,142.38	0.00	1,142.38	1
7	130.0	9.47	19.33	66.71	0.00	0.44	1.99	0.85	1.00	0.67	61.02	0.00	0.00	3,432.8	0.0	1,289.90	0.00	1,289.90	3
6	110.0	9.03	24.69	81.64	0.00	0.45	1.97	0.85	1.00	0.67	75.93	0.00	0.00	4,170.0	0.0	1,517.09	0.00	1,517.09	3
5	90.00	8.52	27.34	82.00	0.00	0.39	2.07	0.85	1.00	0.65	76.50	0.00	0.00	4,340.6	0.0	1,516.17	0.00	1,516.17	3
4	70.00	7.93	26.23	87.21	0.00	0.36	2.15	0.85	1.00	0.64	77.70	0.00	0.00	4,770.9	0.0	1,488.11	0.00	1,488.11	3
3	50.00	7.21	31.58	87.22	0.00	0.33	2.22	0.85	1.00	0.63	81.44	0.00	0.00	5,092.5	0.0	1,457.84	0.00	1,457.84	3
2	30.00	6.40	33.86	93.89	0.00	0.32	2.25	0.85	1.00	0.62	87.18	0.00	0.00	5,509.1	0.0	1,404.49	0.00	1,404.49	3
1	10.00	6.40	36.27	93.89	0.00	0.30	2.31	0.85	1.00	0.61	88.53	0.00	0.00	6,117.6	0.0	1,465.30	0.00	1,465.30	3
														37,149.8	0.0			12,226.33	

Site Number: 302522
Location: Redding, CT

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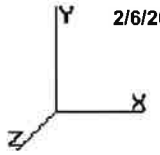
Code: TIA/EIA-222 Rev F



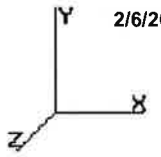
Tower Loading

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
180.0	Powerwave P65-16-XLH-RR	3	53.00	8.400	0.78	100.20	9.220	0.78	0.000	0.00	2.000
180.0	Ericsson RRUS 11	6	55.00	2.940	0.50	74.30	3.290	0.50	0.000	0.00	0.000
180.0	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	49.50	1.670	1.00	0.000	0.00	0.000
180.0	Powerwave TT19-08BP111-	3	16.00	0.640	0.33	21.80	0.820	0.33	0.000	0.00	0.000
180.0	Powerwave LGP21401	6	14.10	1.290	0.33	21.26	1.530	0.33	0.000	0.00	0.000
180.0	Powerwave 7770.00	6	35.00	5.880	0.75	67.63	6.530	0.75	0.000	0.00	0.000
180.0	Round Sector Frame	3	300.00	14.400	0.75	415.00	19.200	0.75	0.000	0.00	0.000
172.0	Andrew LNX-6514DS-T4M	3	38.40	8.410	0.69	88.90	9.240	0.69	0.000	0.00	0.000
172.0	RFS DB-T1-6Z-8AB-0Z	1	44.00	5.600	1.00	144.50	6.080	1.00	0.000	0.00	0.000
172.0	Andrew HBX-6517DS-VTM	3	13.20	5.240	0.81	45.30	5.849	0.81	0.000	0.00	0.000
172.0	Swedcom SWCP 2x7014	1	30.00	10.440	1.00	101.60	11.370	1.00	0.000	0.00	0.000
172.0	Antel BXA-70063/6CF	1	17.00	7.730	1.00	58.00	8.540	1.00	0.000	0.00	0.000
172.0	Round Sector Frame	3	300.00	14.400	0.75	415.00	19.200	0.75	0.000	0.00	0.000
172.0	RFS APX75-866512-CT2	1	19.80	6.220	1.00	52.80	6.850	1.00	0.000	0.00	0.000
172.0	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.510	0.80	61.40	2.870	0.50	0.000	0.00	0.000
172.0	RFS FD9R6004/1C-3L	6	3.10	0.370	0.33	5.40	0.500	0.33	0.000	0.00	0.000
172.0	Rymsa MGD3-800T0	3	19.80	3.450	0.82	39.87	3.980	0.82	0.000	0.00	1.000
164.0	Decibel DB844H90E-XY	12	14.00	3.730	0.91	40.30	3.570	0.91	0.000	0.00	0.000
164.0	Round Sector Frame	3	300.00	14.400	0.75	415.00	19.200	0.75	0.000	0.00	0.000
154.0	Alcatel-Lucent 800 MHz RRH	3	53.00	2.490	0.50	74.10	2.820	0.50	0.000	0.00	3.000
154.0	Alcatel-Lucent 1900 MHz	3	60.00	2.710	0.50	83.10	3.070	0.50	0.000	0.00	3.000
154.0	RFS APXVSPP18-C-A20	3	57.00	8.260	0.82	106.50	9.080	0.82	0.000	0.00	3.000
154.0	Round Sector Frame	3	300.00	14.400	0.75	415.00	19.200	0.75	0.000	0.00	0.000
154.0	Decibel DB980H90E-KL	6	8.50	3.800	0.79	28.62	4.370	0.79	0.000	0.00	3.000
142.0	Scala OGT9-840	2	18.50	2.270	1.00	36.10	3.440	1.00	0.000	0.00	-6.000
142.0	Side Arm	2	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000
142.0	TX RX 422-86A-99575-18R1	2	40.00	3.110	0.50	58.70	3.470	0.50	0.000	0.00	0.000
142.0	Scala OGT9-840	2	18.50	2.270	1.00	36.10	3.440	1.00	0.000	0.00	6.000
140.0	Morad VHF 156-Deluxe	1	0.90	0.260	1.00	3.56	0.570	1.00	0.000	0.00	2.500
140.0	Kathrein 800 10504	3	17.60	3.340	0.78	35.70	3.870	0.78	0.000	0.00	0.000
140.0	Kathrein 860-10025	6	1.10	0.160	0.33	2.64	0.260	0.33	0.000	0.00	0.000
140.0	Kathrein 742 351	3	29.80	5.880	0.65	57.10	6.510	0.65	0.000	0.00	0.000
140.0	Round Sector Frame	3	300.00	14.400	0.75	415.00	19.200	0.75	0.000	0.00	0.000
136.0	Empty Side Arm	1	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000
135.0	8 ft. Ice Shield	1	150.00	6.000	1.00	350.00	7.500	1.00	0.000	0.00	0.000
134.0	8 ft. Ice Shield	1	150.00	6.000	1.00	350.00	7.500	1.00	0.000	0.00	0.000
131.0	Round Side Arm	2	100.00	5.000	1.00	175.00	5.900	0.80	0.000	0.00	0.000
131.0	Decibel DB810K-XT	2	35.00	4.350	1.00	70.00	5.800	1.00	0.000	0.00	7.250
129.0	RFS PA6-65AC w/ Radome	1	250.00	24.410	1.00	453.50	25.090	1.00	0.000	0.00	0.000
128.0	RFS PA6-65AC w/ Radome	1	250.00	24.410	1.00	453.50	25.090	1.00	0.000	0.00	0.000
127.0	Sinclair SE419-SF3P4LDF	1	24.00	9.550	1.00	66.50	10.510	1.00	0.000	0.00	-6.000
127.0	Bird 432-83H-01-T	1	25.00	1.630	1.00	37.44	1.900	1.00	0.000	0.00	0.000
127.0	Sinclair SE419-SF3P4LDF	1	24.00	9.550	1.00	66.50	10.510	1.00	0.000	0.00	6.000
127.0	Round Side Arm	2	100.00	5.000	1.00	175.00	5.900	0.80	0.000	0.00	0.000
126.0	Flat Side Arm	1	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000
119.5	Flat Side Arm	1	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000
118.0	Decibel DB586	1	8.30	0.740	1.00	14.50	1.230	1.00	0.000	0.00	-2.500
118.0	Round Side Arm	2	100.00	5.000	1.00	175.00	5.900	0.80	0.000	0.00	0.000
118.0	Decibel DB586	1	8.30	0.740	1.00	14.50	1.230	1.00	0.000	0.00	2.500
115.5	Flat Side Arm	1	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000

Site Number: 302522
Location: Redding, CT

Code: TIA/EIA-222 Rev F



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Tower Loading

107.0	Sinclair SD210D	1	40.00	4.450	1.00	77.00	7.610	1.00	0.000	0.00	8.000
107.0	Side Arm	2	150.00	6.300	1.00	230.00	7.000	1.00	0.000	0.00	0.000
90.00	Standoff	1	50.00	3.000	1.00	75.00	3.500	1.00	0.000	0.00	0.000
90.00	PCTEL GPS-TMG-HR-26N	1	0.60	0.090	1.00	1.90	0.140	1.00	0.000	0.00	0.000
84.00	Andrew DB264-A	1	36.00	5.900	1.00	89.10	11.380	1.00	0.000	0.00	10.000
84.00	Standoff	1	50.00	3.000	1.00	75.00	3.500	1.00	0.000	0.00	0.000
82.00	12' Omni	1	40.00	3.600	1.00	66.06	4.830	1.00	0.000	0.00	8.000
82.00	Sprint Nextel	1	50.00	3.000	1.00	75.00	3.500	1.00	0.000	0.00	0.000
30.00	GPS	1	5.00	0.040	1.00	5.94	0.090	1.00	0.000	0.00	2.000
	Totals	141	9902.90			16022.81			Number of Appurtenances :59		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
0.00	180.0	0.28" RG6	1	0.28	0.03	100.00	2	Separate
0.00	180.0	0.74" 8 AWG 7	2	0.74	0.49	100.00	2	Separate
0.00	180.0	1 1/4" Coax	12	1.55	0.63	100.00	2	Separate
0.00	180.0	Wave Guide	1	1.50	6.00	100.00	2	Separate
0.00	172.0	1 5/8" Coax	12	1.98	0.82	100.00	1	Separate
0.00	172.0	1 5/8" Hybriflex	1	1.98	1.30	0.00	1	Separate
0.00	172.0	Wave Guide	1	1.50	6.00	100.00	1	Separate
0.00	164.0	1 5/8" Coax	12	1.98	0.82	0.00	1	Separate
0.00	164.0	Wave Guide	1	1.50	6.00	100.00	1	Separate
0.00	154.0	1 1/4" Hybriflex	3	1.54	1.00	0.00	1	Separate
0.00	154.0	1 5/8" Coax	4	1.98	0.82	50.00	1	Separate
0.00	154.0	1 5/8" Coax	2	1.98	0.82	100.00	3	Separate
0.00	142.0	1 5/8" Coax	4	1.98	0.82	100.00	3	Separate
0.00	142.0	3/8" Coax	2	0.44	0.08	100.00	3	Separate
0.00	140.0	1 5/8" Coax	12	1.98	0.82	50.00	3	Separate
0.00	140.0	1/2" Coax	1	0.63	0.15	100.00	3	Separate
0.00	140.0	5/16" Coax	1	0.32	0.04	100.00	3	Separate
0.00	140.0	Wave Guide	1	1.50	6.00	100.00	3	Separate
0.00	140.0	Wave Guide	1	1.50	6.00	100.00	3	Separate
0.00	131.0	1 5/8" Coax	2	1.98	0.82	100.00	3	Separate
0.00	129.0	EW63	1	2.01	0.51	100.00	3	Separate
0.00	128.0	EW63	1	2.01	0.51	100.00	3	Separate
0.00	127.0	1 5/8" Coax	2	1.98	0.82	100.00	3	Separate
0.00	127.0	3/8" Coax	1	0.44	0.08	100.00	3	Separate
0.00	118.0	7/8" Coax	2	1.09	0.33	100.00	2	Separate
0.00	107.0	7/8" Coax	2	1.09	0.33	100.00	2	Separate
0.00	90.00	1/2" Coax	1	0.63	0.15	100.00	1	Separate
0.00	84.00	7/8" Coax	1	1.09	0.33	100.00	3	Separate
0.00	82.00	7/8" Coax	1	1.09	0.33	100.00	2	Separate
0.00	30.00	1/2" Coax	1	0.63	0.15	100.00	1	Separate

Site Number: 302522
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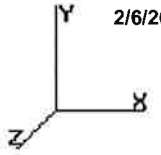

Force/Stress Summary

Section: 1 SSV — Bot Elev (ft): 0.00 — Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-333.31	Normal Ice	10.02	100	100	100	41.2	34.2	332.64	0	0	0.00	0.00	100	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.3125	-11.35	90 deg Ice	23.71	50	75	50	179.9	6.2	14.77	1	1	14.13	24.37	80	Bolt Shear

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	281.23	60 deg No Ice	50	388.79	0	0	0.00	0.00	72	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.3125	11.36	90 deg Ice	50	69.75	1	1	14.13	15.23	80	Bolt Shear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	260.07	60 deg No Ice	0.00	0		
Top Compression	308.53	Normal Ice	0.00	0		
Bot Tension	289.39	60 deg No Ice	490.92	59	10	1" A354-BC
Bot Compression	340.61	Normal Ice	0.00	0		

Section: 2 SSV — Bot Elev (ft): 20.00 — Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	-300.27	Normal Ice	10.02	100	100	100	41.2	34.2	332.64	0	0	0.00	0.00	90	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-10.33	90 deg No Ice	22.81	50	75	50	172.2	6.7	13.03	1	1	14.13	19.50	79	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 8 EHS	253.75	60 deg No Ice	50	388.79	0	0	0.00	0.00	65	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	10.70	90 deg Ice	50	56.45	1	1	14.13	12.19	87	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	230.94	60 deg No Ice	0.00	0		
Top Compression	273.64	Normal Ice	0.00	0		
Bot Tension	260.07	60 deg No Ice	368.63	71	8	1 A325
Bot Compression	308.53	Normal Ice	0.00	0		

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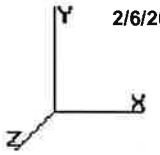

Force/Stress Summary

Section: 3 SSV — **Bot Elev (ft): 40.00** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-265.01	Normal Ice	10.02	100	100	100	54.8	31.5	264.19	0	0	0.00	0.00	100	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-9.70	90 deg Ice	20.06	50	75	50	151.4	8.7	16.85	1	1	14.13	19.50	68	Bolt Shear

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	225.11	60 deg No Ice	50	335.99	0	0	0.00	0.00	66	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	9.56	90 deg Ice	50	56.45	1	1	14.13	12.19	78	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	201.89	60 deg No Ice	0.00	0		
Top Compression	238.30	Normal Ice	0.00	0		
Bot Tension	230.94	60 deg No Ice	368.63	63	8	1 A325
Bot Compression	273.64	Normal Ice	0.00	0		

Section: 4 SSV — **Bot Elev (ft): 60.00** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-228.31	Normal Ice	10.02	100	100	100	54.8	31.5	264.22	0	0	0.00	0.00	86	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-9.89	90 deg Ice	19.17	50	75	50	165.7	7.2	12.25	1	1	14.13	19.50	80	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	194.75	60 deg No Ice	50	335.99	0	0	0.00	0.00	57	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	9.84	90 deg Ice	50	48.32	1	1	14.13	12.19	80	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	168.32	60 deg No Ice	0.00	0		
Top Compression	198.51	Normal Ice	0.00	0		
Bot Tension	201.89	60 deg No Ice	276.47	73	6	1 A325
Bot Compression	238.30	Normal Ice	0.00	0		

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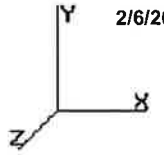

Force/Stress Summary

Section: 5 SSV — **Bot Elev (ft): 80.00** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 5 EH	-191.38	Normal Ice	6.68	100	100	100	43.6	33.8	206.30	0	0	0.00	0.00	92	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-8.47	90 deg Ice	15.97	50	75	50	161.9	7.6	10.94	1	1	14.13	19.50	77	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 5 EH	163.86	60 deg No Ice	50	244.39	0	0	0.00	0.00	67	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.42	90 deg Ice	50	40.20	1	1	14.13	12.19	69	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	133.36	60 deg No Ice	0.00	0		
Top Compression	156.68	Normal Ice	0.00	0		
Bot Tension	168.32	60 deg No Ice	276.47	61	6	1 A325
Bot Compression	198.51	Normal Ice	0.00	0		

Section: 6 SSV — **Bot Elev (ft): 100.0** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 5 EH	-149.43	Normal Ice	6.68	100	100	100	43.6	33.8	206.30	0	0	0.00	0.00	72	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-8.21	90 deg No Ice	14.16	50	75	50	143.6	9.7	13.91	1	1	14.13	19.50	59	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PSP - ROHN 5 EH	127.80	60 deg No Ice	50	244.39	0	0	0.00	0.00	52	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.17	90 deg Ice	50	40.20	1	1	14.13	12.19	67	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	94.35	60 deg No Ice	0.00	0		
Top Compression	112.27	Normal Ice	0.00	0		
Bot Tension	133.36	60 deg No Ice	276.47	48	6	1 A325
Bot Compression	156.68	Normal Ice	0.00	0		

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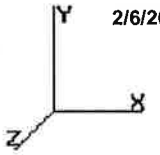

Force/Stress Summary

Section: 7 SSV — **Bot Elev (ft): 120.0** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	-104.45	Normal Ice	6.68	100	100	100	54.2	31.6	139.30	0	0	0.00	0.00	74	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-7.67	90 deg No Ice	12.42	50	75	50	151.9	8.6	10.27	1	1	14.13	17.40	74	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	88.22	60 deg No Ice	50	176.40	0	0	0.00	0.00	50	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	7.56	90 deg No Ice	36	28.62	1	1	14.13	10.87	69	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	56.52	60 deg No Ice	0.00	0		
Top Compression	68.08	Normal Ice	0.00	0		
Bot Tension	94.35	60 deg No Ice	184.32	51	4	1 A325
Bot Compression	112.27	Normal Ice	0.00	0		

Section: 8 SSV — **Bot Elev (ft): 140.0** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 3" DIA PIPE	-62.48	Normal Ice	5.01	100	100	100	51.8	32.1	71.55	0	0	0.00	0.00	87	Member X
HORIZ SAE - 1.75X1.75X0.18	-0.53	Normal No Ice	6.688	100	100	100	234.0	3.6	2.26	1	1	9.81	10.87	23	Member Z
DIAG SAE - 2X2X0.25	-4.95	90 deg No Ice	9.863	50	75	50	151.4	8.7	8.17	1	1	9.81	14.50	60	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 3" DIA PIPE	53.39	60 deg No Ice	50	89.20	0	0	0.00	0.00	59	Member
HORIZ SAE - 1.75X1.75X0.18	0.53	60 deg No Ice	36	14.27	1	1	9.81	6.80	7	Bolt Bear
DIAG SAE - 2X2X0.25	5.00	90 deg No Ice	36	22.28	1	1	9.81	9.06	55	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	23.13	60 deg No Ice	0.00	0		
Top Compression	28.47	Normal Ice	0.00	0		
Bot Tension	56.52	60 deg No Ice	141.12	40	4	7/8 A325
Bot Compression	68.08	Normal Ice	0.00	0		

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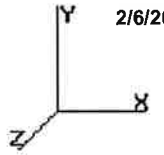

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Force/Stress Summary

Section: 9 SSV — **Bot Elev (ft): 160.0** — **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-23.99	Normal Ice	4.00	100	100	100	50.7	32.3	55.08	0	0	0.00	0.00	43	Member X
HORIZ SAE - 1.75X1.75X0.18	-0.77	60 deg No Ice	6.646	100	100	100	232.5	3.7	2.29	1	1	9.81	10.87	33	Member Z
DIAG SAE - 1.75X1.75X0.18	-4.65	90 deg No Ice	7.789	50	75	50	136.2	10.7	6.66	1	1	9.81	10.87	69	Member Z

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	19.15	60 deg No Ice	50	68.16	0	0	0.00	0.00	28	Member
HORIZ SAE - 1.75X1.75X0.18	1.01	Normal No Ice	36	14.27	1	1	9.81	6.80	14	Bolt Bear
DIAG SAE - 1.75X1.75X0.18	4.58	90 deg No Ice	36	14.27	1	1	9.81	6.80	67	Bolt Bear

Max Splice Forces	Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0		
Top Compression	1.04	60 deg Ice	0.00	0		
Bot Tension	23.13	60 deg No Ice	106.02	22	4	3/4 A325
Bot Compression	28.47	Normal Ice	0.00	0		

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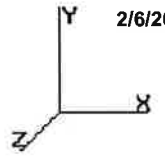

Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)
90 deg	1b	-7.94	-75.71	-3.86
	1a	-9.77	107.07	4.93
	1	-1.25	15.68	-1.07
60 deg	1b	-8.84	-89.02	-5.10
	1a	-6.33	67.88	2.43
	1	-1.06	68.19	-6.70
Normal	1b	-3.61	-38.68	-3.39
	1a	3.61	-38.68	-3.39
	1	0.00	124.40	-12.84
90 deg Ice	1b	-27.12	-239.06	-13.59
	1a	-24.30	292.74	12.02
	1	-3.53	26.85	1.57
60 deg Ice	1b	-29.88	-278.70	-17.24
	1a	-14.35	179.16	4.83
	1	-3.00	180.06	-14.86
Normal Ice	1b	-14.45	-129.96	-11.99
	1a	14.45	-129.96	-11.99
	1	0.00	340.45	-32.22
90 deg No Ice	1b	-24.80	-248.85	-12.21
	1a	-26.44	280.22	13.21
	1	-3.61	15.69	-1.00
60 deg No Ice	1b	-27.42	-287.39	-15.82
	1a	-16.49	166.78	6.01
	1	-3.05	167.66	-17.30
Normal No Ice	1b	-12.26	-141.66	-10.87
	1a	12.26	-141.66	-10.87
	1	0.00	330.37	-35.01

(-) = Uplift (+) = Down

Max Uplift:	287.39 (kip)	Moment:	6,268.16 (ft-kip)	Normal No Ice
Max Down:	340.45 (kip)	Total Down:	47.05 (kip)	
Max Shear:	35.01 (kip)	Total Shear:	56.75 (kip)	

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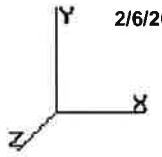
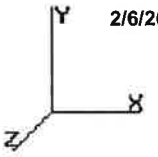


Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
50.00 mph Wind at 60 deg From Face with No Ice	30.00	0.0165	0.0074	0.0555
	80.00	0.1008	0.0300	0.1400
	86.67	0.1181	0.0359	0.1547
	106.67	0.1798	0.0506	0.1956
	113.33	0.2035	0.0549	0.2091
	120.00	0.2285	0.0591	0.2199
	126.67	0.2552	0.0682	0.2375
	133.33	0.2836	0.0769	0.2462
	140.00	0.3133	0.0834	0.2622
	155.00	0.3884	0.1259	0.2918
	164.00	0.4384	0.1227	0.3300
	172.00	0.4852	0.1173	0.3332
	180.00	0.5317	0.1156	0.3250
50.00 mph Wind at 90 deg From Face with No Ice	30.00	0.0167	0.0055	0.0559
	80.00	0.1015	0.0198	0.1402
	86.67	0.1189	0.0233	0.1539
	106.67	0.1810	0.0320	0.1949
	113.33	0.2047	0.0345	0.2095
	120.00	0.2299	0.0369	0.2199
	126.67	0.2567	0.0420	0.2382
	133.33	0.2852	0.0467	0.2425
	140.00	0.3150	0.0502	0.2632
	155.00	0.3904	0.0719	0.2688
	164.00	0.4405	0.0693	0.3290
	172.00	0.4874	0.0656	0.3308
	180.00	0.5340	0.0640	0.3073
50.00 mph Wind Normal To Face with No Ice	30.00	0.0174	0.0042	0.0579
	80.00	0.1047	0.0215	0.1479
	86.67	0.1225	0.0264	0.1656
	106.67	0.1864	0.0385	0.2074
	113.33	0.2108	0.0421	0.2178
	120.00	0.2367	0.0455	0.2300
	126.67	0.2644	0.0535	0.2464
	133.33	0.2937	0.0612	0.2688
	140.00	0.3244	0.0670	0.2717
	155.00	0.4022	0.1066	0.3615
	164.00	0.4539	0.1034	0.3478
	172.00	0.5024	0.0975	0.3538
	180.00	0.5507	0.0949	0.3875
73.61 mph Wind at 60 deg From Face with Ice	30.00	0.0510	0.0294	0.1682
	80.00	0.2961	0.1192	0.4088
	86.67	0.3466	0.1429	0.4500
	106.67	0.5262	0.1999	0.5676
	113.33	0.5948	0.2162	0.6079
	120.00	0.6675	0.2317	0.6388
	126.67	0.7450	0.2657	0.6894
	133.33	0.8272	0.2980	0.7147
	140.00	0.9133	0.3227	0.7599



	155.00	1.1306	0.4822	0.8511
	164.00	1.2749	0.5022	0.9531
	172.00	1.4090	0.5140	0.9616
	180.00	1.5438	0.5233	0.9422
73.61 mph Wind at 90 deg From Face with Ice	30.00	0.0503	0.0183	0.1673
	80.00	0.2966	0.0673	0.4076
	86.67	0.3474	0.0794	0.4442
	106.67	0.5275	0.1081	0.5635
	113.33	0.5963	0.1162	0.6071
	120.00	0.6691	0.1239	0.6363
	126.67	0.7469	0.1401	0.6893
	133.33	0.8291	0.1550	0.7015
	140.00	0.9156	0.1663	0.7604
	155.00	1.1330	0.2350	0.7903
	164.00	1.2776	0.2393	0.9486
	172.00	1.4120	0.2393	0.9545
	180.00	1.5467	0.2393	0.8992
73.61 mph Wind Normal To Face with Ice	30.00	0.0492	0.0159	0.1688
	80.00	0.3011	0.0771	0.4264
	86.67	0.3533	0.0944	0.4826
	106.67	0.5373	0.1344	0.5999
	113.33	0.6078	0.1457	0.6279
	120.00	0.6820	0.1565	0.6631
	126.67	0.7615	0.1812	0.7096
	133.33	0.8456	0.2050	0.7746
	140.00	0.9345	0.2229	0.7822
	155.00	1.1572	0.3424	1.0214
	164.00	1.3060	0.3509	0.9919
	172.00	1.4444	0.3499	1.0086
	180.00	1.5825	0.3496	1.0883
85.00 mph Wind at 60 deg From Face with No Ice	30.00	0.0480	0.0290	0.1610
	80.00	0.2922	0.1176	0.4052
	86.67	0.3422	0.1412	0.4478
	106.67	0.5211	0.2021	0.5656
	113.33	0.5895	0.2203	0.6055
	120.00	0.6622	0.2379	0.6375
	126.67	0.7395	0.2763	0.6876
	133.33	0.8216	0.3129	0.7132
	140.00	0.9077	0.3420	0.7588
	155.00	1.1253	0.5324	0.8479
	164.00	1.2701	0.5566	0.9568
	172.00	1.4048	0.5711	0.9648
	180.00	1.5402	0.5824	0.9419
85.00 mph Wind at 90 deg From Face with No Ice	30.00	0.0480	0.0178	0.1614
	80.00	0.2937	0.0655	0.4049
	86.67	0.3442	0.0774	0.4451
	106.67	0.5240	0.1077	0.5636
	113.33	0.5928	0.1165	0.6059
	120.00	0.6656	0.1251	0.6359
	126.67	0.7434	0.1432	0.6888
	133.33	0.8258	0.1598	0.7010
	140.00	0.9123	0.1730	0.7610
	155.00	1.1305	0.2545	0.7762
	164.00	1.2758	0.2597	0.9522
	172.00	1.4112	0.2597	0.9579

Site Number: 302522
Location: Redding, CT

Code: TIA/EIA-222 Rev F

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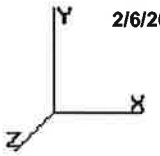
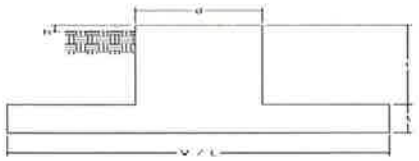


	180.00	1.5464	0.2599	0.8898
85.00 mph Wind Normal To Face with No Ice	30.00	0.0502	0.0153	0.1674
	80.00	0.3026	0.0747	0.4279
	86.67	0.3543	0.0918	0.4799
	106.67	0.5391	0.1345	0.6014
	113.33	0.6097	0.1473	0.6317
	120.00	0.6847	0.1597	0.6675
	126.67	0.7647	0.1877	0.7147
	133.33	0.8495	0.2148	0.7798
	140.00	0.9384	0.2361	0.7887
	155.00	1.1635	0.3793	1.0502
	164.00	1.3140	0.3898	1.0060
	172.00	1.4543	0.3888	1.0247
	180.00	1.5942	0.3884	1.1216
		0.0000	0.0000	0.0000

Site Name:	Redding, CT	*Program Last Updated:*	*11/15/2012*
Site Number:	302522		
Engineering Number:	56662821		
Engineer:	B. Lanier		
Date:	02/06/14		
Tower Type:	SST w/3 Legs		



Design Loads (Unfactored)

Design / Analysis / Mapping:	Analysis		Concrete Strength (f'_c):	3000	psi
Compression/Leg:	340.5	k	Pad Tension Steel Depth:	50.00	in
Uplift/Leg:	287.4	k	Wind Load Factor:	1.3	
Total Shear:	56.8	k	ϕ_{Shear}:	0.75	
Moment:	6268.2	k-ft	$\phi_{Flexure\ /\ Tension}$:	0.90	
Tower + Appurtenance Weight:	47.1	k	$\phi_{Compression:}$	0.65	
Depth to Base of Foundation:	4.00	ft	β:	0.85	
Diameter of Pier (d):	1.00	ft	Bottom Pad Rebar Size #:	7	
Height of Pier above Ground (h):	0.00		# of Bottom Pad Rebar:	39	
Width of Pad (W):	32.25	ft	Pad Bottom Steel Area:	23.40	in^2
Length of Pad (L):	32.25	ft	Pad Steel F_y:	60000	psi
Thickness of Pad (t):	4.50	ft	Top Pad Rebar Size #:	7	
Tower Leg Center to Center:	23.00	ft	# of Top Pad Rebar:	39	
Number of Tower Legs:	3.0	(1 if MP or GT)	Pad Top Steel Area:	23.40	in^2
Tower Center from Mat Center:	0.00	ft			
Depth Below Ground Surface to Water Table:	10.00	ft			
Unit Weight of Concrete:	150.0	pcf			
Unit Weight of Soil Above Water Table:	100.0	pcf			
Unit Weight of Water:	62.4	pcf			
Unit Weight of Soil Below Water Table:	50.0	pcf			
Friction Angle of Uplift:	15.00	Degrees			
Ultimate Coefficient of Shear Friction:	0.35				
Allowable Compressive Bearing Pressure:	8000.0	psf			
Ultimate Passive Pressure on Pad Face:	0.0	psf			
Allowable Capacity Increase:	1.00				

Overturning Factor of Safety

Design OTM:	6495.2	k-ft
OTM Resistance:	12304.5	k-ft
OTM Resistance / Design OTM Factor of Safety:	1.89	Result: OK

Soil Bearing Pressure Usage:

Net Bearing Pressure:	2323	psf
Allowable Bearing Pressure:	8000	psf
Net Bearing Pressure/Allowable Bearing Pressure:	0.29	Result: OK
Load Direction Controling Design Bearing Pressure:	Diagonal to Pad Edge	

Sliding Factor of Safety

Total Ultimate Sliding Resistance:	262.2	k
Sliding Resistance/Sliding Design Factor of Safety:	4.62	Result: OK

One Way Shear, Flexual Capacity, and Punching Shear

Factored One Way Shear (V_u):	280.5	k
One Way Shear Capacity (ϕV_c):	1157.6	k - ACI11.3.1.1
$V_u / \phi V_c$:	0.24	Result: OK
Load Direction Controling Shear Capacity:	Diagonal to Pad Edge	
Lower Pad Steel Factored Moment (M_u):	2708.9	k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	5082.0	k-ft - ACI10.3
$M_u / \phi M_n$:	0.53	Result: OK
Load Direction Controling Flexural Capacity:	Diagonal to Pad Edge	
Upper Steel Pad Factored Moment (M_u):	1236.2	k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	5201.3	k-ft
$M_u / \phi M_n$:	0.24	Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0012	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0012	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	10	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	10	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	410.9	k
Nominal Punching Shear Capacity ($\phi_c V_n$):	1600.3	k - ACI11.12.2.1
$V_u / \phi V_c$:	0.26	Result: OK

Nominal and Design Moment Capacity and Factored Design Loads