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Hartford, CT 06103-3597  
Main (860) 275-8200  
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kbaldwin@rc.com  
Direct (860) 275-8345

Also admitted in Massachusetts

January 28, 2014

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

Re: **Notice of Exempt Modification – Antenna Swap  
401 Wakelee Avenue, Ansonia, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) wireless telecommunications antennas at the 177-foot level on an existing 196-foot lattice tower at 401 Wakelee Avenue in Ansonia (the “Property”). The tower is owned by American Tower Corporation. The Council approved Cellco’s use of this tower in 2001. Cellco now intends to replace two (2) of its existing antennas with one (1) model BXA-70063-6BF 750 MHz antenna and one (1) model SLCP 2x6014 750 MHz antenna at the same 177-foot level. Included in Attachment 1 are the specifications for the replacement antennas.

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 Ansonia’s Mayor, David Cassetti. The City of Ansonia is 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 will be located at the 177-foot level on the 196-foot tower.



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# ROBINSON & COLE<sub>LLP</sub>

Melanie A. Bachman  
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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 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 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:

David Casseti, Ansonia Mayor  
Sandy M. Carter



# **ATTACHMENT 1**

## BXA-70063-6BF-EDIN-X

X-Pol | FET Panel | 63° | 14.5 dBd

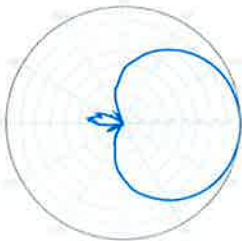
Replace 'X' with desired electrical downtilt

Antenna is also available with N connector(s). Replace "EDIN" with "N" in the model number when ordering.



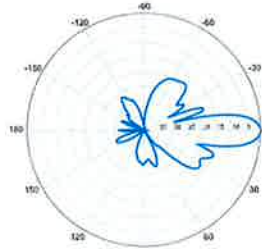
Electrical Characteristics	696-900 MHz		
Frequency bands	696-806 MHz	806-900 MHz	
Polarization	±45°		
Horizontal beamwidth	65°	63°	
Vertical beamwidth	13°	11°	
Gain	14.0 dBd (16.1 dBi)	14.5 dBd (16.6 dBi)	
Electrical downtilt (X)	0, 2, 3, 4, 5, 6, 8, 10		
Impedance	50Ω		
VSWR	≤1.35:1		
Upper sidelobe suppression (0°)	-18.3 dB	-18.2 dB	
Front-to-back ratio (+/-30°)	-33.4 dB	-36.3 dB	
Null fill	5% (-26.02 dB)		
Isolation between ports	< -25 dB		
Input power with EDIN connectors	500 W		
Input power with N connectors	300 W		
Lightning protection	Direct Ground		
Connector(s)	2 Ports / EDIN or N / Female / Bottom		
Mechanical Characteristics			
Dimensions Length x Width x Depth	1742 x 285 x 135 mm	68.6 x 11.2 x 5.3 in	
Depth with z-brackets	175 mm	6.9 in	
Weight without mounting brackets	8.7 kg	19.2 lbs	
Survival wind speed	> 201 km/hr	> 125 mph	
Wind area	Front: 0.50 m <sup>2</sup> Side: 0.24 m <sup>2</sup>	Front: 5.3 ft <sup>2</sup> Side: 2.5 ft <sup>2</sup>	
Wind load @ 161 km/hr (100 mph)	Front: 733 N Side: 386 N	Front: 164 lbf Side: 88 lbf	
Mounting Options	Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit	36210008	40-115 mm 1.57-4.5 in	6.9 kg 15.2 lbs
Concealment Configurations	For concealment configurations, order BXA-70063-6BF-EDIN-X-FP		

**BXA-70063-6BF-EDIN-X**



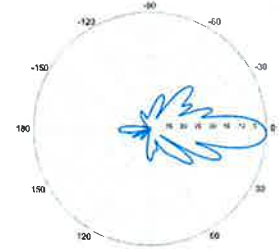
Horizontal | 750 MHz

**BXA-70063-6BF-EDIN-0**

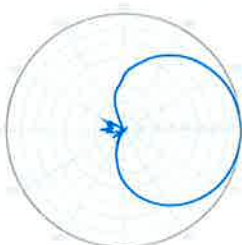


0° | Vertical | 750 MHz

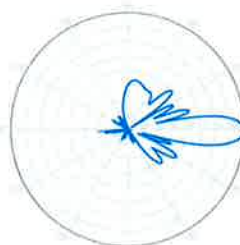
**BXA-70063-6BF-EDIN-2**



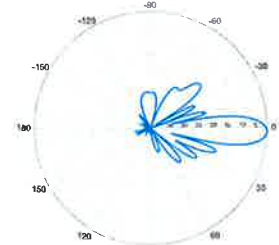
2° | Vertical | 750 MHz



Horizontal | 850 MHz



0° | Vertical | 850 MHz



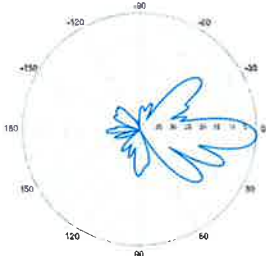
2° | Vertical | 850 MHz

Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

**BXA-70063-6BF-EDIN-X**

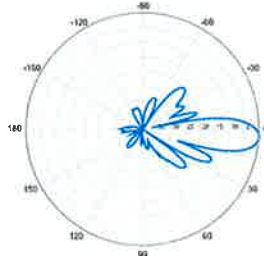
X-Pol | FET Panel | 63° | 14.5 dBd

**BXA-70063-6BF-EDIN-3**



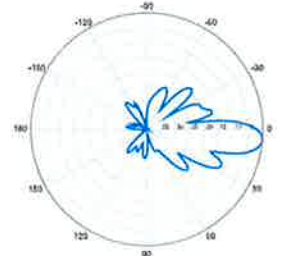
3° | Vertical | 750 MHz

**BXA-70063-6BF-EDIN-4**

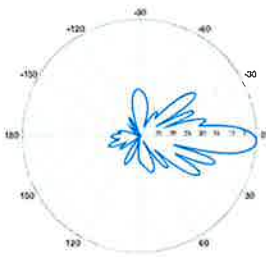


4° | Vertical | 750 MHz

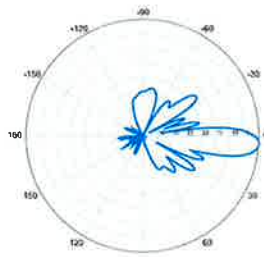
**BXA-70063-6BF-EDIN-5**



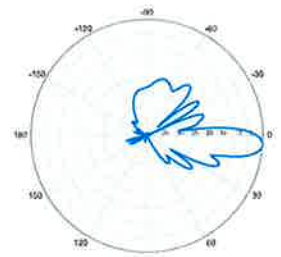
5° | Vertical | 750 MHz



3° | Vertical | 850 MHz

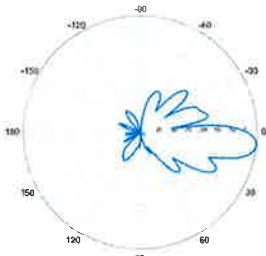


4° | Vertical | 850 MHz



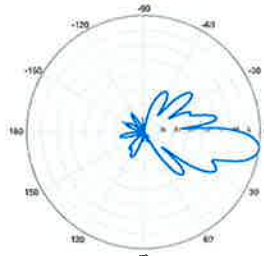
5° | Vertical | 850 MHz

**BXA-70063-6BF-EDIN-6**



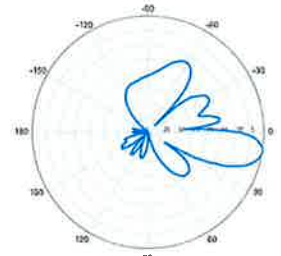
6° | Vertical | 750 MHz

**BXA-70063-6BF-EDIN-8**

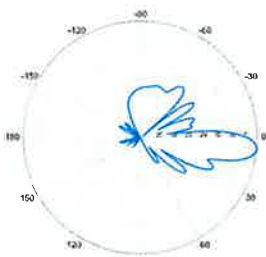


8° | Vertical | 750 MHz

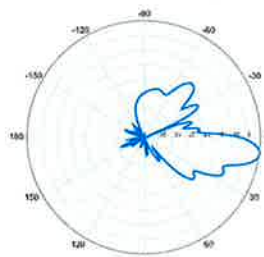
**BXA-70063-6BF-EDIN-10**



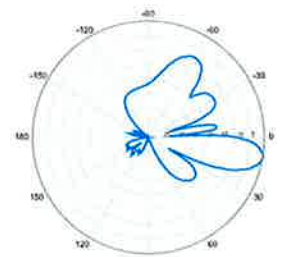
10° | Vertical | 750 MHz



6° | Vertical | 850 MHz



8° | Vertical | 850 MHz



10° | Vertical | 850 MHz

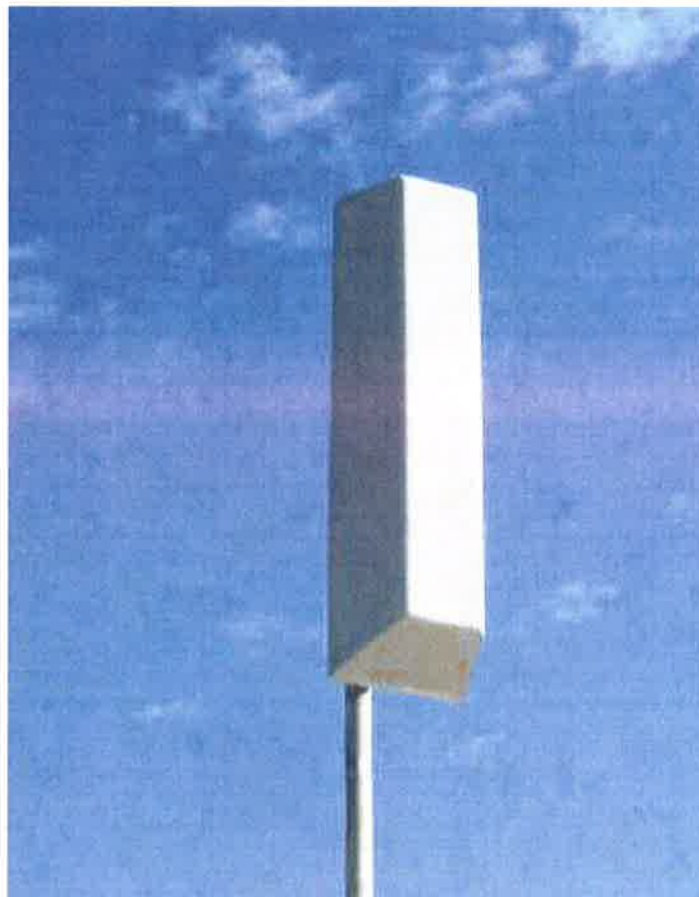
Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

# SLCP 2x6014

Dual (2x) Circularly Polarized log-periodic antenna

## Features

- ❑ Transmit Diversity Gain
- ❑ Can be configured to combine space & polarization diversity
- ❑ Outstanding performance over the entire band (700 - 800 MHz)
- ❑ Excellent Axial Ratio
- ❑ Optimized for 4G & 3G systems
- ❑ Low intermodulation
- ❑ Improved Side-to-side rejection
- ❑ Fading reduction
- ❑ Excellent isolation between ports



## Electrical specifications

Frequency range:	<b>700-800 MHz</b>
Impedance:	<b>50 ohm</b>
Connector type:	<b>7/16 Din</b>
Return loss:	<b>18 dB</b>
Polarization:	<b>Circular</b>
Gain ea. port [Circular]:	<b>2x14 dBdC</b>
Gain ea. port [Linear]:	<b>2x11 dBdL</b>
Axial Ratio:	<b>2 dB</b>
Isolation between ports (TX band):	<b>30 dB</b>
Front-to-back ratio:	<b>30 dB</b>
Intermodulation (2x20W):	<b>IM3 150 dB</b>
	<b>IM5 160 dB</b>
	<b>IM7/9 170 dB</b>
Power rating:	<b>2x 500 W</b>
H-plane (-3 dB point):	<b>2x 55°</b>
V-plane (-3 dB point):	<b>2x 16°</b>
Lightning protection:	<b>DC grounded</b>

## Mechanical specifications

Overall height:	<b>53 in</b>	<b>[1346 mm]</b>
Width:	<b>14 in</b>	<b>[356 mm]</b>
Depth:	<b>11 in</b>	<b>[279 mm]</b>
Weight (excluding brackets):	<b>20 lbs</b>	<b>[9 Kg]</b>
Wind load measured up to:	<b>150 mph</b>	<b>[240 Km/h]</b>
Wind area (side of antenna):	<b>5.15 sq. ft.</b>	<b>[0.48 sq.m]</b>
Lateral thrust at 113 mph/ 180 Km/h (worst case):	<b>263 lbs</b>	<b>[1171 N]</b>

## Materials

Radiating Elements:	<b>Aluminum</b>
Transformer (Power distribution)	<b>Ceramic PCB</b>
Chassis:	<b>Aluminum</b>
Radome:	<b>Grey Fiberglass/PVC</b>
Mounting bolts:	<b>Stainless steel</b>

*The SLCP 2x6014 is made in the U.S.A.*

# **ATTACHMENT 2**





# **ATTACHMENT 3**



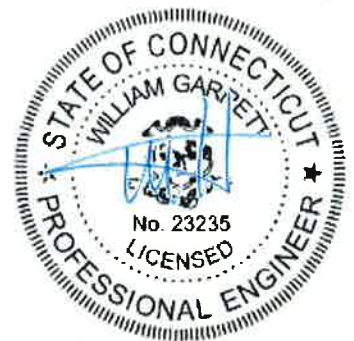
**AMERICAN TOWER®**  
CORPORATION

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## Structural Analysis Report

**Structure** : 196 ft Self Supported Tower  
**ATC Site Name** : Ansonia Wakelee, CT  
**ATC Site Number** : 302470  
**Engineering Number** : 54522223  
**Proposed Carrier** : Verizon  
**Carrier Site Name** : Ansoania  
**Carrier Site Number** : N/A  
**Site Location** : 401 Wakelee Ave  
Ansonia, CT 06401-1226  
41.356069,-73.092000  
**County** : New Haven  
**Date** : November 5, 2013  
**Max Usage** : 92%  
**Result** : Pass

Amir H. Tabarestani, E.I.



Nov 11 2013 6:37 PM



Eng. Number 54522223  
November 5, 2013

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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 196 ft self supported tower to reflect the change in loading by Verizon.

## Supporting Documents

<b>Tower Drawings</b>	Rohn Drawing #A991899, dated July 7, 1999
<b>Foundation Drawing</b>	Rohn Drawing #A992523-1, dated September 22, 1999
<b>Geotechnical Report</b>	Tectonic Engineering Consultants W.O. #1170C754, dated May 20, 1999

## Analysis

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

<b>Basic Wind Speed:</b>	105 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Category:</b>	1

## 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 me via email at [amir.tabarestani@americantower.com](mailto:amir.tabarestani@americantower.com) or call 919-466-5244.



**Existing and Reserved Equipment**

Mount Elev. <sup>1</sup> (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
194.0	3	Argus LLPX310R	Sector Frames	(6) 5/16" Coax (2) 3" Conduit (2) 1/2" Coax	Clearwire
	2	DragonWave A-ANT-18G-2-C			
	3	NextNet BTS-2500			
	2	DragonWave Horizon Compact		(10) 1 1/4" Coax (6) 1 5/8" Coax	
	3	KMW TTA (HB-X-WM-17-65-00T)			
	3	72" x 12" Panels			
	9	48" x 12" Panels			
183.0	2	Powerwave P40-16-XLPP-RRR	Sector Frames	(6) 7/8" Coax (3) 1 1/4" Hybriflex	Sprint Nextel
	6	Andrew DB980H90E-M			
	1	RFS APXVSP18-C-A20			
	3	Alcatel-Lucent 800 MHz RRH			
	3	Alcatel-Lucent 1900 MHz 4x45 RRH			
175.0	3	Ryma MGD3-800TX	Sector Frames	(12) 1 5/8" Coax	Verizon
	1	Powerwave P65-16-XL-2			
	12	RFS FD9R6004/2C-3L			
	3	Antel BXA-80080/4CF			
	3	Antel BXA-171063-8CF-EDIN-X			
167.0	9	72" x 12" Panel	Sector Frames	(2) 0.78" 8 AWG 6 (12) 1 5/8" Coax (1) 3" Conduit (1) 0.39" Cable	AT&T Mobility
	3	36" x 8" x 6" Panel			
	6	Ericsson RRUS 11			
	1	Raycap DC6-48-60-18-8F			
	9	14" x 9" TTA			
157.0	3	Kathrein 742 213	Leg	(6) 1 5/8" Coax	Metro PCS
148.0	3	Ericsson KRY 112 144/1	Sector Frames	(12) 1 5/8" Coax (1) 1 1/4" Hybriflex	T-Mobile
	3	Ericsson AIR 21, 1.3M, B4A B2P			
	3	Ericsson AIR 21, 1.3M, B2A B4P			
125.0	2	Motorola PTP54600	Leg	(2) 1/4" Coax	City Of Ansonia
104.0	2	2" x 8" GPS	Side Arms	(2) 1/2" Coax	Sprint Nextel
82.0	1	10' Omni	Side Arm	(1) 1/2" Coax	Ansonia Fire Dept.
76.0	1	PCTEL GPS-TMG-HR-26N	Side Arm	(1) 1/2" Coax	Sprint Nextel

**Proposed Equipment**

Elevation <sup>1</sup> (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
175.0	177.0	1	Swedcom SLCP 2x6014	Sector Frames	-	Verizon
		1	Antel BXA-70063-6BF-EDIN-X			

<sup>1</sup>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).



**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	92%	Pass
Diagonals	92%	Pass
Horizontals	15%	Pass
Anchor Bolts	59%	Pass
Leg Bolts	74%	Pass

**Foundations**

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	301.1	406.5	353.3	87%
Axial (Kips)	343.0	463.1	405.9	88%
Shear (Kips)	36.3	49.0	41.2	84%

\* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

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

**Deflection, Twist and Sway\***

Antenna Elevation (ft)	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
175.0	1.061	0.020	0.685

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



## **Standard Conditions**

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.

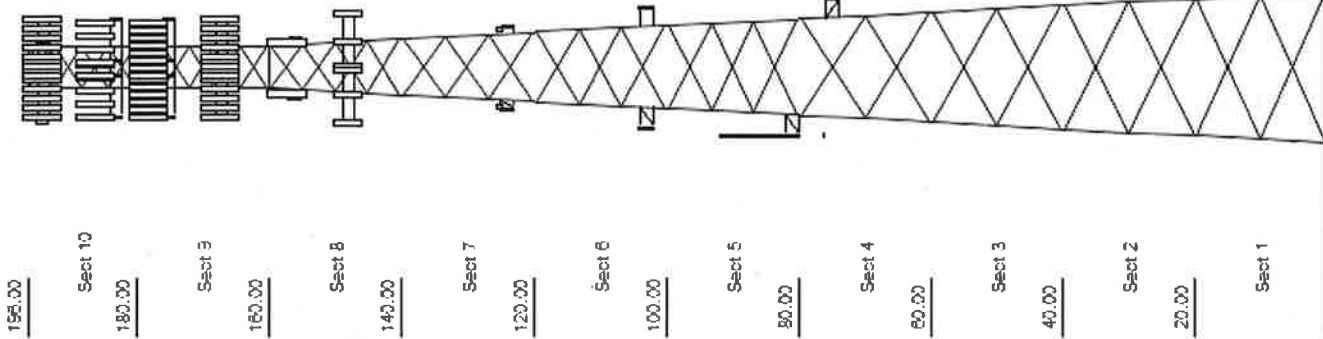
Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort 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.

Job Information		
Tower : 302470	Location : Ansonia Wakelee, CT	Base Width : 23.00 ft
Code : ANSUTIA-222 Rev G	Shape : Triangle	Top Width : 6.65 ft
Client : Verizon Wireless		

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Loads: 105 mph no ice  
50 mph w / 3/4" radial ice  
60 mph Serviceability  
105 mph Serviceability



Sections Properties		
Section	Leg Members	Horizontal Members
1	PX 50 ksi 8" DIA PIPE	SAE 50 ksi 4X4X0.25
2	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.25
3	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 3.5X3.5X0.25
4	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25
5	PSP 50 ksi ROHN 6 EHS	SAE 50 ksi 3X3X0.25
6-7	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25
8	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25
9	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.1875
10	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875
		SAE 36 ksi 2X2X0.125
		SAE 36 ksi 2X2X0.125

Discrete Appurtenance		
Elev (ft)	Type	Qty Description
194.00	Panel	3 Argus LLPX310R
194.00	Dish	2 DragonWave A-ANT-18G-2-C
194.00	Panel	3 NextNet BTS-2500
194.00	Panel	2 DragonWave Horizon Compact
194.00	Panel	3 KIMW TTA IHB-X4WM-17-65-00T
194.00	Mounting Frame	3 Round Sector Frames
194.00	Panel	3 72" x 12" Panels
194.00	Panel	9 48" x 12" Panels
183.00	Panel	2 Powerwave P40-16-XLPP-RRR
183.00	Panel	6 Andrew DB980H90E-M
183.00	Panel	1 RFS APXVSP18.C-420
183.00	Panel	3 Alcatel-Lucent 800 MHz RRH
183.00	Panel	3 Alcatel-Lucent 1900 MHz 4x45 R
175.00	Mounting Frame	3 Round Sector Frames
175.00	Panel	1 Swedcom SLCF 2x6014
175.00	Panel	1 Antel BXA-70063-6BF-EDIN-X
175.00	Panel	3 Rymasa MGD3-800TX
175.00	Panel	1 Powerwave P65-16-XL-2
175.00	Mounting Frame	3 Flat Light Sector Frames
175.00	Panel	12 RFS FD9R6004/2C-3L
175.00	Panel	3 Antel BXA-80080/4CF
167.00	Panel	3 Antel BXA-171063-8CF-EDIN-X
167.00	Panel	9 72" x 12" Panel
167.00	Panel	3 36" x 8" x 6" Panel
167.00	Panel	6 Ericsson RRUS 11
167.00	Panel	1 Raycap DC6-48-60-18-8F
167.00	Mounting Frame	3 Round Sector Frames
167.00	Mounting Frame	9 14" x 9" TTA
157.00	Panel	3 Kathrein 742 213
148.00	Panel	3 Ericsson KRY112 144/1
148.00	Panel	3 Ericsson AIR 21, 1.3M, B4A B2P
148.00	Panel	3 Ericsson AIR 21, 1.3M, B2A B4P
125.00	Mounting Frame	3 Round Sector Frame
104.00	Panel	2 Motorola FTP54600
104.00	Straight Arm	2 Side Arms
82.00	Whip	2 2" x 6" GPS
82.00	Straight Arm	1 Side Arm
76.00	Whip	1 10' Omni
76.00	Straight Arm	1 Side Arm
76.00	Panel	1 PC-TEL GPS-TMG-HR-26N

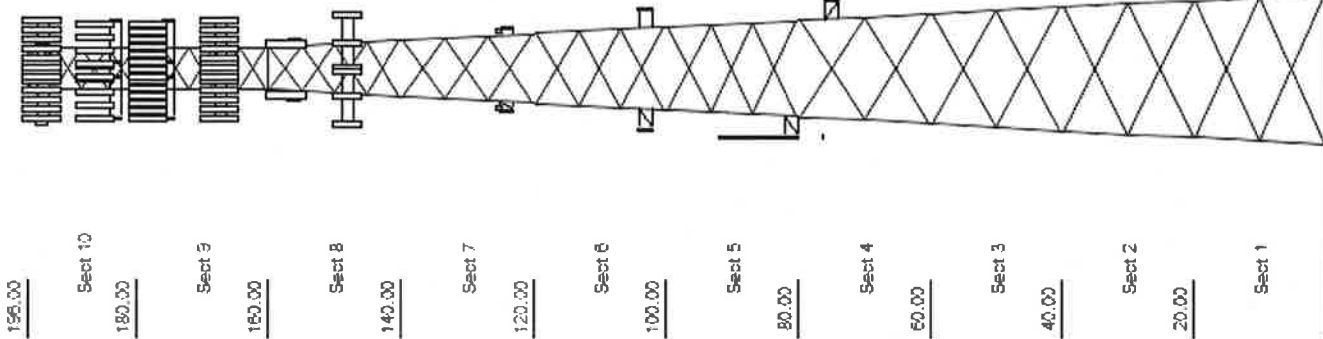
Linear Appurtenance		
Elev (ft)	From To	Qty Description
8,000	194.00	2 Wave Guide
8,000	194.00	6 5/16" Coax
8,000	194.00	2 3" Conduit
8,000	194.00	2 1/2" Coax

Uplift 353.31 k Moment 7,550.75 ft-k  
Vert 425.89 k Total Down 63.87 k  
Horiz 41.19 k Total Shear 67.42 k



Job Information		
Tower : 302470	Location : Ansonia Wakelee, CT	Base Width : 23.00 ft
Code : ANS/TIA-222 Rev G	Shape : Triangle	Top Width : 6.65 ft
Client : Verizon Wireless		

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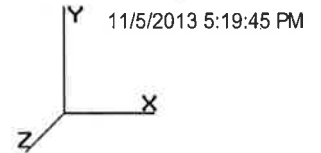


Uplift 353.31 k Moment 7,850.75 ft-k  
 Vert 426.85 k Total Down 83.97 k  
 Horiz 41.19 k Total Shear 67.42 k

8,000	194.00	6	1 5/8" Coax
8,000	194.00	10	1 1/4" Coax
5,000	194.00	1	Climbing Ladder
8,000	183.00	1	Wave Guide
8,000	183.00	6	7/8" Coax
8,000	183.00	3	1 1/4" Hybriflex
8,000	175.00	6	1 5/8" Coax
8,000	175.00	6	1 5/8" Coax
8,000	167.00	1	Wave Guide
8,000	167.00	1	3" Conduit
8,000	167.00	12	1 5/8" Coax
8,000	167.00	2	0.78" 8 AWG 6
8,000	167.00	1	0.39" Cable
8,000	157.00	1	Waveguide
8,000	157.00	6	1 5/8" Coax
8,000	148.00	1	Wave Guide
8,000	148.00	12	1 5/8" Coax
8,000	148.00	1	1 1/4" Hybriflex
8,000	125.00	2	1/4" Coax
8,000	104.00	2	1/2" Coax
8,000	82.000	1	1/2" Coax
8,000	78.000	1	1/2" Coax

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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### Section Forces

#### LoadCase 1.2D + 1.6W Normal

105.00 mph Normal to Face with No Ice

Gust Response Factor : 0.85  
 Dead Load Factor : 1.20  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice		Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)								Weight (lb)	Weight Ice (lb)				
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.18	34.61	0.00	1,618.3	0.0	1,501.14	1,189.5	2,690.68
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	1.00	1.00	0.00	17.49	99.92	0.00	3,088.7	0.0	1,766.70	2,688.9	4,455.68
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	1.00	1.00	0.00	19.28	150.76	0.00	4,436.9	0.0	1,883.38	3,914.5	5,797.94
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	1.00	1.00	0.00	22.02	167.42	0.00	5,282.0	0.0	2,096.22	4,132.3	6,228.59
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	1.00	1.00	0.00	24.05	168.28	0.00	5,440.7	0.0	2,233.19	3,960.3	6,193.52
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.47	168.39	0.00	6,018.6	0.0	2,716.49	3,742.0	6,458.51
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	1.00	1.00	0.00	30.14	170.17	0.00	6,370.8	0.0	2,493.12	3,520.1	6,013.29
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	1.00	1.00	0.00	34.88	170.38	0.00	6,846.6	0.0	2,595.59	3,201.5	5,797.10
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	1.00	1.00	0.00	40.61	170.38	0.00	7,255.5	0.0	2,611.27	2,766.7	5,378.02
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.93	102.73	0.00	7,094.7	0.0	2,783.75	1,672.3	4,456.10
													53,452.8	0.0			53,469.43	

#### LoadCase 1.2D + 1.6W 60 deg

105.00 mph 60 deg with No Ice

Gust Response Factor : 0.85  
 Dead Load Factor : 1.20  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice		Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)								Weight (lb)	Weight Ice (lb)				
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.22	34.61	0.00	1,618.3	0.0	1,293.18	1,189.5	2,482.72
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	0.80	1.00	0.00	15.00	99.92	0.00	3,088.7	0.0	1,514.76	2,688.9	4,203.74
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	0.80	1.00	0.00	16.72	150.76	0.00	4,436.9	0.0	1,632.73	3,914.5	5,547.30
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	0.80	1.00	0.00	19.19	167.42	0.00	5,282.0	0.0	1,826.65	4,132.3	5,959.02
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	0.80	1.00	0.00	20.78	168.28	0.00	5,440.7	0.0	1,929.55	3,960.3	5,889.88
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.04	168.39	0.00	6,018.6	0.0	2,333.73	3,742.0	6,075.75
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	0.80	1.00	0.00	25.93	170.17	0.00	6,370.8	0.0	2,144.37	3,520.1	5,664.54
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	0.80	1.00	0.00	30.29	170.38	0.00	6,846.6	0.0	2,253.54	3,201.5	5,455.06
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	0.80	1.00	0.00	34.87	170.38	0.00	7,255.5	0.0	2,242.01	2,766.7	5,008.76
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.70	102.73	0.00	7,094.7	0.0	2,380.02	1,672.3	4,052.37
													53,452.8	0.0			50,339.13	

#### LoadCase 1.2D + 1.6W 90 deg

105.00 mph 90 deg with No Ice

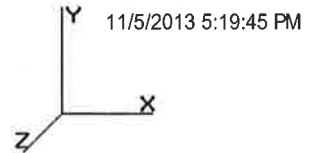
Gust Response Factor : 0.85  
 Dead Load Factor : 1.20  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	qz (psf)	Total Area			Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice		Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)	Ice Round Area (sqft)								Weight (lb)	Weight Ice (lb)				
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.71	34.61	0.00	1,618.3	0.0	1,345.17	1,189.5	2,534.71

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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**Section Forces**

9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	0.85	1.00	0.00	15.62	99.92	0.00	3,088.7	0.0	1,577.75	2,688.9	4,266.72
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	0.85	1.00	0.00	17.36	150.76	0.00	4,436.9	0.0	1,695.39	3,914.5	5,609.96
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	0.85	1.00	0.00	19.90	167.42	0.00	5,282.0	0.0	1,894.05	4,132.3	6,026.41
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	0.85	1.00	0.00	21.59	168.28	0.00	5,440.7	0.0	2,005.46	3,960.3	5,965.79
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.14	168.39	0.00	6,018.6	0.0	2,429.42	3,742.0	6,171.44
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	0.85	1.00	0.00	26.98	170.17	0.00	6,370.8	0.0	2,231.56	3,520.1	5,751.72
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	0.85	1.00	0.00	31.44	170.38	0.00	6,846.6	0.0	2,339.06	3,201.5	5,540.57
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	0.85	1.00	0.00	36.30	170.38	0.00	7,255.5	0.0	2,334.33	2,766.7	5,101.07
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.26	102.73	0.00	7,094.7	0.0	2,480.95	1,672.3	4,153.30
														53,452.8	0.0	51,121.71		

**LoadCase 0.9D + 1.6W Normal**

105.00 mph Normal to Face with No Ice (Reduced DL)

Gust Response Factor : 0.85  
 Dead Load Factor : 0.90  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)														
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.18	34.61	0.00	1,213.8	0.0	1,501.14	1,189.5	2,690.68
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	1.00	1.00	0.00	17.49	99.92	0.00	2,316.5	0.0	1,766.70	2,688.9	4,455.68
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	1.00	1.00	0.00	19.28	150.76	0.00	3,327.7	0.0	1,883.38	3,914.5	5,797.94
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	1.00	1.00	0.00	22.02	167.42	0.00	3,961.5	0.0	2,096.22	4,132.3	6,228.59
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	1.00	1.00	0.00	24.05	168.28	0.00	4,080.5	0.0	2,233.19	3,960.3	6,193.52
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.47	168.39	0.00	4,513.9	0.0	2,716.49	3,742.0	6,458.51
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	1.00	1.00	0.00	30.14	170.17	0.00	4,778.1	0.0	2,493.12	3,520.1	6,013.29
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	1.00	1.00	0.00	34.88	170.38	0.00	5,134.9	0.0	2,595.59	3,201.5	5,797.10
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	1.00	1.00	0.00	40.61	170.38	0.00	5,441.6	0.0	2,611.27	2,766.7	5,378.02
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.93	102.73	0.00	5,321.0	0.0	2,783.75	1,672.3	4,456.10
														40,089.6	0.0	53,469.43		

**LoadCase 0.9D + 1.6W 60 deg**

105.00 mph 60 deg with No Ice (Reduced DL)

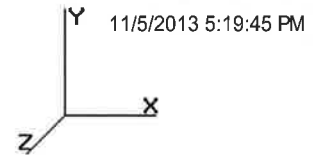
Gust Response Factor : 0.85  
 Dead Load Factor : 0.90  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)														
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.22	34.61	0.00	1,213.8	0.0	1,293.18	1,189.5	2,482.72
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	0.80	1.00	0.00	15.00	99.92	0.00	2,316.5	0.0	1,514.76	2,688.9	4,203.74
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	0.80	1.00	0.00	16.72	150.76	0.00	3,327.7	0.0	1,632.73	3,914.5	5,547.30
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	0.80	1.00	0.00	19.19	167.42	0.00	3,961.5	0.0	1,826.65	4,132.3	5,959.02
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	0.80	1.00	0.00	20.78	168.28	0.00	4,080.5	0.0	1,929.55	3,960.3	5,889.88
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.04	168.39	0.00	4,513.9	0.0	2,333.73	3,742.0	6,075.75
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	0.80	1.00	0.00	25.93	170.17	0.00	4,778.1	0.0	2,144.37	3,520.1	5,664.54
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	0.80	1.00	0.00	30.29	170.38	0.00	5,134.9	0.0	2,253.54	3,201.5	5,455.06
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	0.80	1.00	0.00	34.87	170.38	0.00	5,441.6	0.0	2,242.01	2,766.7	5,008.76
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.70	102.73	0.00	5,321.0	0.0	2,380.02	1,672.3	4,052.37
														40,089.6	0.0	50,339.13		

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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### Section Forces

**LoadCase 0.9D + 1.6W 90 deg**

105.00 mph 90 deg with No Ice (Reduced DL)

Gust Response Factor : 0.85  
 Dead Load Factor : 0.90  
 Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind		Total Flat Area	Total Round Area	Ice Round Area	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	Height (ft)	qz (psf)	(sqft)	(sqft)	(sqft)													
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.71	34.61	0.00	1,213.8	0.0	1,345.17	1,189.5	2,534.71
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	0.85	1.00	0.00	15.62	99.92	0.00	2,316.5	0.0	1,577.75	2,688.9	4,266.72
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	0.85	1.00	0.00	17.36	150.76	0.00	3,327.7	0.0	1,695.39	3,914.5	5,609.96
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	0.85	1.00	0.00	19.90	167.42	0.00	3,961.5	0.0	1,894.05	4,132.3	6,026.41
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	0.85	1.00	0.00	21.59	168.28	0.00	4,080.5	0.0	2,005.46	3,960.3	5,965.79
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.14	168.39	0.00	4,513.9	0.0	2,429.42	3,742.0	6,171.44
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	0.85	1.00	0.00	26.98	170.17	0.00	4,778.1	0.0	2,231.56	3,520.1	5,751.72
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	0.85	1.00	0.00	31.44	170.38	0.00	5,134.9	0.0	2,339.06	3,201.5	5,540.57
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	0.85	1.00	0.00	36.30	170.38	0.00	5,441.6	0.0	2,334.33	2,766.7	5,101.07
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.26	102.73	0.00	5,321.0	0.0	2,480.95	1,672.3	4,153.30
														40,089.6	0.0			51,121.71

**LoadCase 1.2D + 1.0Di + 1.0Wi Normal**

50.00 mph Normal with 0.75 in Radial Ice

Gust Response Factor : 0.85  
 Dead Load Factor : 1.20  
 Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00  
 Ice Importance Factor : 1.00

Sect Seq	Wind		Total Flat Area	Total Round Area	Ice Round Area	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	Height (ft)	qz (psf)	(sqft)	(sqft)	(sqft)													
10	188.0	6.44	7.86	30.08	29.93	0.33	2.22	1.00	1.00	1.79	30.73	52.99	22.69	5,482.4	3,864.0	373.67	369.41	743.09
9	170.0	6.26	9.98	37.08	34.68	0.32	2.24	1.00	1.00	1.77	38.06	136.94	134.00	11,445.5	8,356.8	453.30	985.77	1,439.07
8	150.0	6.04	12.83	50.06	35.03	0.37	2.12	1.00	1.00	1.75	44.09	200.76	200.59	15,493.6	11,056.0	480.26	1,326.4	1,806.67
7	130.0	5.79	14.16	50.35	31.78	0.30	2.28	1.00	1.00	1.72	44.39	224.53	207.54	17,001.1	11,719.0	499.25	1,443.2	1,942.44
6	110.0	5.52	16.35	52.79	34.21	0.27	2.37	1.00	1.00	1.69	47.56	224.54	215.64	17,358.7	11,917.0	528.76	1,435.4	1,964.24
5	90.00	5.22	22.17	58.62	36.50	0.27	2.37	1.00	1.00	1.66	56.84	223.64	221.74	18,530.7	12,512.0	596.25	1,376.9	1,973.20
4	70.00	4.86	21.08	53.00	30.88	0.22	2.52	1.00	1.00	1.62	51.75	224.19	226.64	18,441.9	12,071.0	539.09	1,346.7	1,885.82
3	50.00	4.41	22.98	60.53	31.73	0.22	2.53	1.00	1.00	1.56	58.00	222.79	221.83	18,917.1	12,070.0	549.66	1,205.9	1,755.55
2	30.00	3.81	28.71	60.76	31.96	0.21	2.55	1.00	1.00	1.49	63.77	220.45	213.27	19,152.7	11,897.0	527.18	1,017.9	1,545.10
1	10.00	3.81	31.13	59.05	30.25	0.20	2.61	1.00	1.00	1.33	65.01	130.66	117.76	15,047.2	7,952.5	548.74	586.09	1,134.83
														156,871.0	103,418.0			16,190.02

**LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg**

50.00 mph 60 deg with 0.75 in Radial Ice

Gust Response Factor : 0.85  
 Dead Load Factor : 1.20  
 Wind Load Factor : 1.00

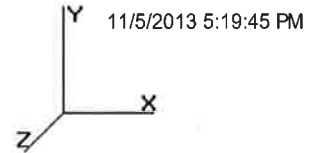
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00  
 Ice Importance Factor : 1.00

Sect Seq	Wind		Total Flat Area	Total Round Area	Ice Round Area	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Linear Area (sqft)	Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
	Height (ft)	qz (psf)	(sqft)	(sqft)	(sqft)													
10	188.0	6.44	7.86	30.08	29.93	0.33	2.22	0.80	1.00	1.79	29.16	52.99	22.69	5,482.4	3,864.0	354.57	369.41	723.98

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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**Section Forces**

9	170.0	6.26	9.98	37.08	34.68	0.32	2.24	0.80	1.00	1.77	36.07	136.94	134.00	11,445.5	8,356.8	429.54	985.77	1,415.31	
8	150.0	6.04	12.83	50.06	35.03	0.37	2.12	0.80	1.00	1.75	41.52	200.76	200.59	15,493.6	11,056.	452.30	1,326.4	1,778.72	
7	130.0	5.79	14.16	50.35	31.78	0.30	2.28	0.80	1.00	1.72	41.56	224.53	207.54	17,001.1	11,719.	467.40	1,443.2	1,910.59	
6	110.0	5.52	16.35	52.79	34.21	0.27	2.37	0.80	1.00	1.69	44.29	224.54	215.64	17,358.7	11,917.	492.41	1,435.4	1,927.89	
5	90.00	5.22	22.17	58.62	36.50	0.27	2.37	0.80	1.00	1.66	52.40	223.64	221.74	18,530.7	12,512.	549.73	1,376.9	1,926.68	
4	70.00	4.86	21.08	53.00	30.88	0.22	2.52	0.80	1.00	1.62	47.54	224.19	226.64	18,441.9	12,071.	495.16	1,346.7	1,841.90	
3	50.00	4.41	22.98	60.53	31.73	0.22	2.53	0.80	1.00	1.56	53.40	222.79	221.83	18,917.1	12,070.	506.09	1,205.9	1,711.99	
2	30.00	3.81	28.71	60.76	31.96	0.21	2.55	0.80	1.00	1.49	58.03	220.45	213.27	19,152.7	11,897.	479.71	1,017.9	1,497.63	
1	10.00	3.81	31.13	59.05	30.25	0.20	2.61	0.80	1.00	1.33	58.79	130.66	117.76	15,047.2	7,952.5	496.19	586.09	1,082.28	
															156,871.0	103,418.			15,816.97

**LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg**

50.00 mph 90 deg with 0.75 in Radial Ice

Gust Response Factor : 0.85

Dead Load Factor : 1.20

Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Ice Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice Area		Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)								Linear Area (sqft)	Linear Area (sqft)						
10	188.0	6.44	7.86	30.08	29.93	0.33	2.22	0.85	1.00	1.79	29.56	52.99	22.69	5,482.4	3,864.0	359.34	369.41	728.76	
9	170.0	6.26	9.98	37.08	34.68	0.32	2.24	0.85	1.00	1.77	36.57	136.94	134.00	11,445.5	8,356.8	435.48	985.77	1,421.25	
8	150.0	6.04	12.83	50.06	35.03	0.37	2.12	0.85	1.00	1.75	42.17	200.76	200.59	15,493.6	11,056.	459.29	1,326.4	1,785.70	
7	130.0	5.79	14.16	50.35	31.78	0.30	2.28	0.85	1.00	1.72	42.27	224.53	207.54	17,001.1	11,719.	475.36	1,443.2	1,918.55	
6	110.0	5.52	16.35	52.79	34.21	0.27	2.37	0.85	1.00	1.69	45.11	224.54	215.64	17,358.7	11,917.	501.50	1,435.4	1,936.98	
5	90.00	5.22	22.17	58.62	36.50	0.27	2.37	0.85	1.00	1.66	53.51	223.64	221.74	18,530.7	12,512.	561.36	1,376.9	1,938.31	
4	70.00	4.86	21.08	53.00	30.88	0.22	2.52	0.85	1.00	1.62	48.59	224.19	226.64	18,441.9	12,071.	506.15	1,346.7	1,852.88	
3	50.00	4.41	22.98	60.53	31.73	0.22	2.53	0.85	1.00	1.56	54.55	222.79	221.83	18,917.1	12,070.	516.98	1,205.9	1,722.88	
2	30.00	3.81	28.71	60.76	31.96	0.21	2.55	0.85	1.00	1.49	59.46	220.45	213.27	19,152.7	11,897.	491.57	1,017.9	1,509.50	
1	10.00	3.81	31.13	59.05	30.25	0.20	2.61	0.85	1.00	1.33	60.35	130.66	117.76	15,047.2	7,952.5	509.33	586.09	1,095.42	
															156,871.0	103,418.			15,910.23

**LoadCase 1.0D + 1.0W Service Normal**

Serviceability - 60.00 Wind Normal

Gust Response Factor : 0.85

Dead Load Factor : 1.00

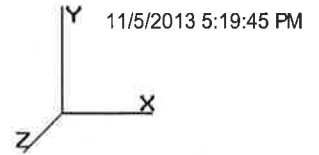
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice Area		Total Weight (lb)	Ice Weight (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)								Linear Area (sqft)	Linear Area (sqft)						
10	188.0	9.27	9.82	7.67	0.00	0.16	2.74	1.00	1.00	0.00	14.18	34.61	0.00	1,348.6	0.0	306.36	242.76	549.12	
9	170.0	9.01	12.47	11.67	0.00	0.17	2.69	1.00	1.00	0.00	19.12	99.92	0.00	2,573.9	0.0	394.21	541.75	935.95	
8	150.0	8.69	12.83	15.03	0.00	0.17	2.70	1.00	1.00	0.00	21.40	150.76	0.00	3,697.4	0.0	426.46	778.62	1,205.08	
7	130.0	8.34	14.16	18.57	0.00	0.16	2.74	1.00	1.00	0.00	24.72	167.42	0.00	4,401.7	0.0	480.19	843.34	1,323.53	
6	110.0	7.96	16.35	18.58	0.00	0.14	2.80	1.00	1.00	0.00	26.88	168.28	0.00	4,533.9	0.0	509.37	808.23	1,317.60	
5	90.00	7.51	22.17	22.12	0.00	0.15	2.76	1.00	1.00	0.00	31.47	168.39	0.00	5,015.5	0.0	554.39	763.68	1,318.06	
4	70.00	6.99	21.08	22.12	0.00	0.13	2.84	1.00	1.00	0.00	33.60	170.17	0.00	5,309.0	0.0	567.18	718.40	1,285.58	
3	50.00	6.35	22.98	28.80	0.00	0.14	2.81	1.00	1.00	0.00	34.88	170.38	0.00	5,705.5	0.0	529.71	653.37	1,183.08	
2	30.00	5.49	28.71	28.80	0.00	0.14	2.81	1.00	1.00	0.00	40.61	170.38	0.00	6,046.2	0.0	532.91	564.64	1,097.56	
1	10.00	5.48	31.13	28.80	0.00	0.13	2.84	1.00	1.00	0.00	42.93	102.73	0.00	5,912.3	0.0	568.11	341.30	909.41	
															44,544.0	0.0			11,124.97

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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### Section Forces

**LoadCase 1.0D + 1.0W Service 60 deg**

**Serviceability - 60.00 Wind 60 deg**

Gust Response Factor : 0.85  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Weight		Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)									Total (lb)	Ice (lb)				
10	188.0	9.27	9.82	7.67	0.00	0.16	2.74	0.80	1.00	0.00	12.22	34.61	0.00	1,348.6	0.0	263.92	242.76	506.68
9	170.0	9.01	12.47	11.67	0.00	0.17	2.69	0.80	1.00	0.00	16.63	99.92	0.00	2,573.9	0.0	342.79	541.75	884.54
8	150.0	8.69	12.83	15.03	0.00	0.17	2.70	0.80	1.00	0.00	18.83	150.76	0.00	3,697.4	0.0	375.30	778.62	1,153.92
7	130.0	8.34	14.16	18.57	0.00	0.16	2.74	0.80	1.00	0.00	21.89	167.42	0.00	4,401.7	0.0	425.18	843.34	1,268.52
6	110.0	7.96	16.35	18.58	0.00	0.14	2.80	0.80	1.00	0.00	23.61	168.28	0.00	4,533.9	0.0	447.41	808.23	1,255.64
5	90.00	7.51	22.17	22.12	0.00	0.15	2.76	0.80	1.00	0.00	27.04	168.39	0.00	5,015.5	0.0	476.27	763.68	1,239.95
4	70.00	6.99	21.08	22.12	0.00	0.13	2.84	0.80	1.00	0.00	29.39	170.17	0.00	5,309.0	0.0	496.00	718.40	1,214.40
3	50.00	6.35	22.98	28.80	0.00	0.14	2.81	0.80	1.00	0.00	30.29	170.38	0.00	5,705.5	0.0	459.91	653.37	1,113.28
2	30.00	5.49	28.71	28.80	0.00	0.14	2.81	0.80	1.00	0.00	34.87	170.38	0.00	6,046.2	0.0	457.55	564.64	1,022.20
1	10.00	5.48	31.13	28.80	0.00	0.13	2.84	0.80	1.00	0.00	36.70	102.73	0.00	5,912.3	0.0	485.72	341.30	827.01
													44,544.0	0.0				

**LoadCase 1.0D + 1.0W Service 90 deg**

**105.00 Serviceability - 60.00 Wind 90 deg**

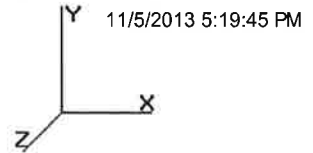
Gust Response Factor : 0.85  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Height (ft)	Wind qz (psf)	Total Area		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Weight		Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
			Flat Area (sqft)	Round Area (sqft)									Total (lb)	Ice (lb)				
10	188.0	28.39	9.82	7.67	0.00	0.16	2.74	0.85	1.00	0.00	12.71	34.61	0.00	1,348.6	0.0	840.73	743.46	1,584.19
9	170.0	27.59	12.47	11.67	0.00	0.17	2.69	0.85	1.00	0.00	15.62	99.92	0.00	2,573.9	0.0	986.09	1,680.6	2,666.70
8	150.0	26.62	12.83	15.03	0.00	0.17	2.70	0.85	1.00	0.00	17.36	150.76	0.00	3,697.4	0.0	1,059.62	2,446.6	3,506.22
7	130.0	25.55	14.16	18.57	0.00	0.16	2.74	0.85	1.00	0.00	19.90	167.42	0.00	4,401.7	0.0	1,183.78	2,582.7	3,766.51
6	110.0	24.36	16.35	18.58	0.00	0.14	2.80	0.85	1.00	0.00	21.59	168.28	0.00	4,533.9	0.0	1,253.41	2,475.2	3,728.62
5	90.00	23.01	22.17	22.12	0.00	0.15	2.76	0.85	1.00	0.00	28.14	168.39	0.00	5,015.5	0.0	1,518.39	2,338.7	3,857.15
4	70.00	21.41	21.08	22.12	0.00	0.13	2.84	0.85	1.00	0.00	26.98	170.17	0.00	5,309.0	0.0	1,394.72	2,200.1	3,594.83
3	50.00	19.45	22.98	28.80	0.00	0.14	2.81	0.85	1.00	0.00	31.44	170.38	0.00	5,705.5	0.0	1,461.91	2,000.9	3,462.85
2	30.00	16.81	28.71	28.80	0.00	0.14	2.81	0.85	1.00	0.00	36.30	170.38	0.00	6,046.2	0.0	1,458.95	1,729.2	3,188.17
1	10.00	16.79	31.13	28.80	0.00	0.13	2.84	0.85	1.00	0.00	38.26	102.73	0.00	5,912.3	0.0	1,550.59	1,045.2	2,595.81
													44,544.0	0.0				

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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### Tower Loading

#### Discrete Appurtenance Properties

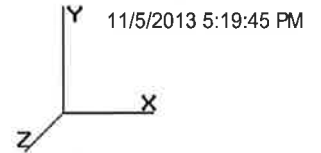
Attach Elev (ft)	Description	Qty	No Ice		Ice		Len (ft)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)						
194.0	Argus LLPX310R	3	28.60	4.290	38.81	5.822	3.500	11.80	4.500	0.80	0.73	0.000
194.0	DragonWave A-ANT-18G-2-C	2	27.10	5.680	127.12	7.708	2.170	0.000	0.000	0.80	0.95	0.000
194.0	NextNet BTS-2500	3	35.00	1.820	47.50	2.470	1.583	11.30	5.100	0.80	0.50	0.000
194.0	DragonWave Horizon	2	10.60	0.360	14.38	0.488	0.392	9.300	9.300	0.80	0.50	0.000
194.0	KMW TTA (HB-X-WM-17-65-	3	15.90	0.560	21.58	0.760	1.325	7.300	3.700	0.80	0.50	0.000
194.0	Round Sector Frames	3	300.00	14.400	677.01	31.365	0.000	0.000	0.000	0.75	0.75	0.000
194.0	72" x 12" Panels	3	40.00	8.130	54.28	11.033	6.000	12.00	6.000	0.80	0.67	0.000
194.0	48" x 12" Panels	9	30.00	5.070	40.71	6.880	4.000	12.00	6.000	0.80	0.67	0.000
183.0	Powerwave P40-16-XLPP-	2	64.00	9.070	279.33	10.346	4.500	20.00	6.500	0.80	0.69	2.000
183.0	Andrew DB980H90E-M	6	8.50	3.900	105.35	4.974	5.000	6.300	3.000	0.80	0.79	2.000
183.0	RFS APXVSP18-C-A20	1	57.00	8.020	262.15	9.346	6.000	11.80	7.000	0.80	1.00	2.000
183.0	Alcatel-Lucent 800 MHz RRH	3	53.00	2.130	142.87	2.761	1.640	13.00	10.80	0.80	0.67	2.000
183.0	Alcatel-Lucent 1900 MHz	3	60.00	2.320	157.84	3.010	2.090	11.10	10.70	0.80	0.67	2.000
183.0	Round Sector Frames	3	300.00	14.400	621.31	24.682	0.000	0.000	0.000	0.75	0.75	0.000
175.0	Swedcom SLCP 2x6014	1	20.00	6.480	222.54	7.595	4.420	14.00	11.00	0.80	1.00	2.000
175.0	Antel BXA-70063-6BF-EDIN-X	1	19.20	7.260	191.62	8.517	5.720	11.20	5.300	0.80	1.00	2.000
175.0	Rymsa MGD3-800TX	3	15.40	3.340	20.84	4.521	4.530	6.300	3.500	0.80	0.82	2.000
175.0	Powerwave P65-16-XL-2	1	33.00	8.130	217.53	9.447	6.000	12.00	5.000	0.80	1.00	2.000
175.0	Flat Light Sector Frames	3	400.00	17.900	705.37	33.210	0.000	0.000	0.000	0.75	0.75	0.000
175.0	RFS FD9R6004/2C-3L	12	3.10	0.310	16.54	0.586	0.483	6.500	1.500	0.80	0.50	2.000
175.0	Antel BXA-80080/4CF	3	14.30	4.800	143.95	5.773	4.010	11.20	5.900	0.80	0.80	2.000
175.0	Antel BXA-171063-8CF-EDIN-X	3	10.50	2.940	95.19	3.819	4.040	6.100	4.100	0.80	0.87	2.000
167.0	72" x 12" Panel	9	45.00	8.130	239.56	9.447	6.000	12.00	6.000	0.80	0.67	0.000
167.0	36" x 8" x 6" Panel	3	25.00	2.580	109.90	3.323	3.000	8.000	6.000	0.80	0.67	0.000
167.0	Ericsson RRUS 11	6	55.00	2.520	136.67	3.174	1.480	17.00	7.200	0.80	0.67	0.000
167.0	Raycap DC6-48-60-18-8F	1	31.80	2.280	126.19	2.862	2.000	11.00	11.00	0.80	1.00	0.000
167.0	Round Sector Frames	3	300.00	14.400	618.10	24.579	0.000	0.000	0.000	0.75	0.75	0.000
167.0	14" x 9" TTA	9	10.00	1.050	13.53	1.198	1.167	9.000	6.000	0.80	0.50	0.000
157.0	Kathrein 742 213	3	22.00	5.140	134.99	6.407	6.370	6.100	2.700	1.00	0.78	0.000
148.0	Ericsson KRY 112 144/1	3	11.00	0.350	27.39	0.635	0.580	6.100	2.700	0.80	0.50	0.000
148.0	Ericsson AIR 21, 1.3M, B4A	3	81.50	6.090	250.49	7.193	4.670	12.10	7.900	0.80	0.85	0.000
148.0	Ericsson AIR 21, 1.3M, B2A	3	83.00	6.050	252.04	7.148	4.670	12.00	8.000	0.80	0.86	0.000
148.0	Round Sector Frame	3	300.00	14.400	668.59	30.986	0.000	0.000	0.000	0.75	0.75	0.000
125.0	Motorola PTP54600	2	12.10	1.750	16.26	2.352	1.210	14.50	3.800	1.00	0.73	0.000
104.0	Side Arms	2	200.00	2.000	267.68	2.271	0.000	0.000	0.000	1.00	0.85	0.000
104.0	2" x 8" GPS	2	0.26	0.140	0.40	0.466	0.670	2.000	2.000	0.90	1.00	0.000
82.00	Side Arm	1	200.00	2.000	266.33	2.265	0.000	0.000	0.000	1.00	1.00	0.000
82.00	10' Omni	1	25.00	3.000	33.29	3.995	10.00	3.000	3.000	1.00	1.00	5.000
76.00	Side Arm	1	200.00	2.000	264.69	2.259	0.000	0.000	0.000	1.00	1.00	0.000
76.00	PCTEL GPS-TMG-HR-26N	1	0.60	0.080	9.99	0.313	0.417	3.200	3.200	1.00	1.00	0.000
<b>Totals</b>		<b>129</b>	<b>8683.52</b>		<b>21663.63</b>					<b>Number of Appurtenances : 40</b>		

#### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
5.00	194.0	Climbing Ladder	1	2.00	6.90	0	Lin App	Individual	0.00	N	1.00	1.00	0.00

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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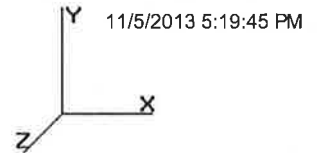
### Tower Loading

8.00	194.0	1 1/4" Coax	10	1.55	0.63	70	3	Block	0.00	N	0.00	1.00	0.00
8.00	194.0	1 5/8" Coax	6	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
8.00	194.0	1/2" Coax	2	0.63	0.15	0	2	Individual	0.00	N	1.00	1.00	0.00
8.00	194.0	3" Conduit	2	3.00	7.58	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	194.0	5/16" Coax	6	0.00	0.04	0	2	Individual	0.00	N	0.00	0.00	0.01
8.00	194.0	Wave Guide	2	1.00	5.00	50	3	Block	0.00	N	0.00	1.00	0.00
8.00	183.0	1 1/4" Hybriflex	3	0.00	1.00	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	183.0	7/8" Coax	6	1.09	0.33	0	2	Cluster	9.84	N	0.00	1.00	0.00
8.00	183.0	Wave Guide	1	1.00	5.00	0	2	Individual	0.00	N	0.00	1.00	0.00
8.00	175.0	1 5/8" Coax	6	1.98	0.82	0	3	Individual	0.00	N	0.00	1.00	0.01
8.00	175.0	1 5/8" Coax	6	1.98	0.82	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	167.0	0.39" Cable	1	0.39	0.07	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	167.0	0.78" 8 AWG6	2	0.78	0.59	0	Lin App	Individual	0.00	N	0.00	1.00	0.00
8.00	167.0	1 5/8" Coax	12	1.98	0.82	0	1	Cluster	12.25	N	0.00	1.00	0.00
8.00	167.0	3" Conduit	1	3.50	7.58	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	167.0	Wave Guide	1	1.00	5.00	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	157.0	1 5/8" Coax	6	1.98	0.82	0	1	Cluster	7.81	N	0.00	1.00	0.00
8.00	157.0	Waveguide	1	0.00	6.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
8.00	148.0	1 1/4" Hybriflex	1	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
8.00	148.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	0.00	1.00	0.00
8.00	148.0	Wave Guide	1	1.00	5.00	0	3	Individual	0.00	N	0.00	1.00	0.00
8.00	125.0	1/4" Coax	2	0.34	0.06	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	104.0	1/2" Coax	2	0.00	0.15	0	3	Individual	0.00	N	0.00	1.00	0.00
8.00	82.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	0.00	1.00	0.00
8.00	76.00	1/2" Coax	1	0.63	0.15	0	2	Individual	0.00	N	0.00	1.00	0.00



Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class: II  
 Exposure: B  
 Topo: 1

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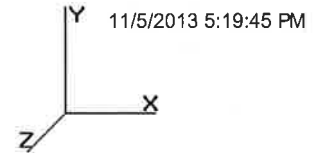
### Force/Stress Summary

Section: 1		15N25		Bot Elev (ft): 0.00				Height (ft): 20.000								
		Force		Len		Bracing %		F'y		phi		Shear		Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Num Bolts	Num Holes	phiRnv	phiRn	Use %	
<b>Max Compression Member</b>																
LEG	PX - 8" DIA PIPE	-397.03	1.2D + 1.6W	9.77	100	100	100	40.7	50.0	510.32	0	0	0.00	0.00	77	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	-12.42	0.9D + 1.6W 90	23.62	50	50	50	178.3	43.5	13.79	1	1	17.89	23.40	90	Member Z
<b>Max Tension Member</b>																
LEG	PX - 8" DIA PIPE	355.22	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00	0	0	0.00	0.00	61	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	12.17	1.2D + 1.6W 90	50	65	62.93	1	1	0.00	0.00	1	1	0.00	23.40	19	Member
<b>Max Splice Forces</b>																
		Force (kip)	Load Case	Capacity (kip)		Use %	Num Bolts		Bolt Type							
Top Tension		323.80	0.9D + 1.6W 60	0.00	0	0	0									
Top Compression		371.28	1.2D + 1.6W	0.00	0	0										
Bot Tension		355.22	0.9D + 1.6W 60	605.70	59	10	1" A354-BC									
Bot Compression		407.11	1.2D + 1.6W	0.00	0	0										

Section: 2		14N46		Bot Elev (ft): 20.00				Height (ft): 20.000								
		Force		Len		Bracing %		F'y		phi		Shear		Bear		
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Num Bolts	Num Holes	phiRnv	phiRn	Use %	
<b>Max Compression Member</b>																
LEG	PSP - ROHN 8 EHS	-359.75	1.2D + 1.6W	9.77	100	100	100	40.1	50.0	388.80	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 - 4X4X0.25	-11.96	1.2D + 1.6W 90	22.69	50	50	50	171.3	43.5	14.94	1	1	17.89	23.40	80	Member Z
<b>Max Tension Member</b>																
LEG	PSP - ROHN 8 EHS	324.14	0.9D + 1.6W 60	50	65	437.40	0	0	0.00	0.00	0	0	0.00	0.00	74	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	11.63	1.2D + 1.6W 90	50	65	62.93	1	1	0.00	0.00	1	1	0.00	23.40	18	Member
<b>Max Splice Forces</b>																
		Force (kip)	Load Case	Capacity (kip)		Use %	Num Bolts		Bolt Type							
Top Tension		289.88	0.9D + 1.6W 60	0.00	0	0	0									
Top Compression		331.50	1.2D + 1.6W	0.00	0	0										
Bot Tension		323.80	0.9D + 1.6W 60	436.16	74	8	1 A325									
Bot Compression		371.28	1.2D + 1.6W	0.00	0	0										

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class: II  
 Exposure: B  
 Topo: 1

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### Force/Stress Summary

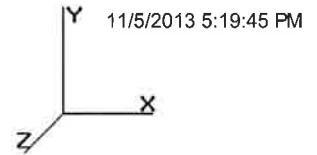
Section: 3		13N88		Bot Elev (ft): 40.00				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	-320.47	1.2D + 1.6W	9.77	100	100	100	40.1	50.0	388.78	0	0	0.00	0.00	82 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	-10.81	1.2D + 1.6W 90	20.87	50	50	50	180.5	49.5	11.72	1	1	17.89	23.40	92 Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls		
LEG	PSP - ROHN 8 EHS	290.36	0.9D + 1.6W 60	50	65	437.40	0	0	0	0.00	0.00	66	Member		
HORIZ		0.00		0	0	0.00	0	0	0	0.00	0.00	0			
DIAG	SAE - 3.5X3.5X0.25	10.56	1.2D + 1.6W 90	50	65	53.79	1	1	0	0.00	23.40	19	Member		
Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		256.41	0.9D + 1.6W 60	0.00	0	0									
Top Compression		292.27	1.2D + 1.6W	0.00	0										
Bot Tension		289.88	0.9D + 1.6W 60	436.16	66	8	1 A325								
Bot Compression		331.50	1.2D + 1.6W	0.00	0										

Section: 4		12N50		Bot Elev (ft): 60.00				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 6" DIA PIPE	-280.66	1.2D + 1.6W	9.77	100	100	100	53.4	50.0	306.88	0	0	0.00	0.00	91 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	-10.57	1.2D + 1.6W 90	19.04	50	50	50	164.6	49.5	14.08	1	1	17.89	23.40	75 Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls		
LEG	PX - 6" DIA PIPE	253.80	1.2D + 1.6W 60	50	65	378.00	0	0	0	0.00	0.00	67	Member		
HORIZ		0.00		0	0	0.00	0	0	0	0.00	0.00	0			
DIAG	SAE - 3.5X3.5X0.25	10.30	1.2D + 1.6W 90	50	65	53.79	1	1	0	0.00	23.40	19	Member		
Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		220.03	0.9D + 1.6W 60	0.00	0	0									
Top Compression		250.24	1.2D + 1.6W	0.00	0										
Bot Tension		256.41	0.9D + 1.6W 60	436.16	59	8	1 A325								
Bot Compression		292.27	1.2D + 1.6W	0.00	0										

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class: II  
 Exposure: B  
 Topo: 1

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### Force/Stress Summary

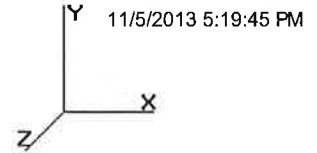
Section: 5		11N223		Bot Elev (ft): 80.00				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 6 EHS	-241.28	1.2D + 1.6W	6.51	100	100	100	35.1	50.0	275.92	0	0	0.00	0.00	87 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	-9.61	1.2D + 1.6W 90	15.90	50	50	50	161.2	50.0	12.52	1	1	17.89	23.40	76 Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls		
LEG	PSP - ROHN 6 EHS	217.92	1.2D + 1.6W 60	50	65	301.95	0	0	0	0.00	0.00	72	Member		
	HORIZ	0.00		0	0	0.00	0	0	0	0.00	0.00	0			
DIAG	SAE - 3X3X0.25	9.41	1.2D + 1.6W 90	50	65	44.65	1	1	1	0.00	23.40	21	Member		
Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		181.05	0.9D + 1.6W 60	0.00	0	0									
Top Compression		205.70	1.2D + 1.6W	0.00	0										
Bot Tension		220.03	0.9D + 1.6W 60	327.12	67	6	1 A325								
Bot Compression		250.24	1.2D + 1.6W	0.00	0										

Section: 6		10N152		Bot Elev (ft): 100.0				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	-197.51	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.98	0	0	0.00	0.00	81 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	-8.18	1.2D + 1.6W 90	14.13	50	50	50	172.8	36.0	9.01	1	1	12.43	17.40	90 Member Z
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls		
LEG	PX - 5" DIA PIPE	179.39	1.2D + 1.6W 60	50	65	274.95	0	0	0	0.00	0.00	65	Member		
	HORIZ	0.00		0	0	0.00	0	0	0	0.00	0.00	0			
DIAG	SAE - 2.5X2.5X0.25	8.21	1.2D + 1.6W 90	36	58	32.71	1	1	1	0.00	17.40	25	Member		
Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		142.79	0.9D + 1.6W 60	0.00	0	0									
Top Compression		162.57	1.2D + 1.6W	0.00	0										
Bot Tension		181.05	0.9D + 1.6W 60	327.12	55	6	1 A325								
Bot Compression		205.70	1.2D + 1.6W	0.00	0										

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class: II  
 Exposure: B  
 Topo: 1

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### Force/Stress Summary

Section: 7		9N216		Bot Elev (ft): 120.0				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	-153.67	1.2D + 1.6W	6.51	100	100	100	42.5	50.0	240.99	0	0	0.00	0.00	63 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	-7.88	1.2D + 1.6W 90	12.33	50	50	50	150.7	36.0	11.83	1	1	12.43	17.40	66 Member Z

Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	PX - 5" DIA PIPE	143.01	0.9D + 1.6W 60	50	65	274.95	0	0	0	0.00	0.00	52	Member
HORIZ		0.00		0	0	0.00	0	0	0	0.00	0.00	0	
DIAG	SAE - 2.5X2.5X0.25	8.02	1.2D + 1.6W 90	36	58	32.71	1	1	1	0.00	17.40	24	Member

Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension		99.98	0.9D + 1.6W 60	0.00	0	0	
Top Compression		115.39	1.2D + 1.6W	0.00	0		
Bot Tension		142.79	0.9D + 1.6W 60	218.08	65	4	1 A325
Bot Compression		162.57	1.2D + 1.6W	0.00	0		

Section: 8		A780252		Bot Elev (ft): 140.0				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			Fy (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	-108.56	1.2D + 1.6W	4.88	100	100	100	39.6	50.0	176.95	0	0	0.00	0.00	61 Member X
HORIZ	SAE - 2X2X0.125	-0.35	1.2D + 1.6W 60	6.760	100	100	100	203.8	36.0	2.61	1	1	12.43	8.70	13 Member Z
DIAG	SAE - 2X2X0.25	-6.62	1.2D + 1.6W 90	9.847	50	50	50	151.1	36.0	9.30	1	1	12.43	17.40	71 Member Z

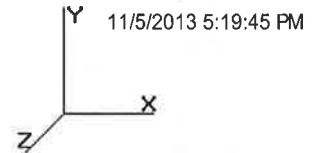
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	PX - 4" DIA PIPE	100.24	0.9D + 1.6W 60	50	65	198.45	0	0	0	0.00	0.00	50	Member
HORIZ	SAE - 2X2X0.125	0.26	1.2D + 1.6W	36	58	12.60	1	1	1	0.00	8.70	2	Member
DIAG	SAE - 2X2X0.25	6.60	1.2D + 1.6W 90	36	58	24.55	1	1	1	0.00	17.40	26	Member

Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension		55.90	0.9D + 1.6W 60	0.00	0	0	
Top Compression		66.52	1.2D + 1.6W	0.00	0		
Bot Tension		99.98	0.9D + 1.6W 60	218.08	46	4	1 A325
Bot Compression		115.39	1.2D + 1.6W	0.00	0		

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class: II  
 Exposure: B  
 Topo: 1

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### Force/Stress Summary

Section: 9		A780178		Bot Elev (ft): 160.0				Height (ft): 20.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	-59.22	1.2D + 1.6W	3.90	100	100	100	41.1	50.0	120.14	0	0	0.00	0.00	49 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 - 2X2X0.1875	-7.15	1.2D + 1.6W 90	7.798	50	50	50	119.1	36.0	10.98	2	1	24.86	26.10	65 Member Z

Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	PX - 3" DIA PIPE	54.78	1.2D + 1.6W 60	50	65	135.90	0	0	0	0.00	0.00	40	Member
	HORIZ	0.00		0	0	0.00	0	0	0	0.00	0.00	0	
DIAG	SAE - 2X2X0.1875	7.06	1.2D + 1.6W 90	36	58	18.74	2	1	0	0.00	26.10	37	Member

Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension		10.11	0.9D + 1.6W 60	0.00	0	0	
Top Compression		14.48	1.2D + 1.6W	0.00	0		
Bot Tension		55.90	0.9D + 1.6W 60	166.24	34	4	7/8 A325
Bot Compression		66.52	1.2D + 1.6W	0.00	0		

Section: 10		A780178		Bot Elev (ft): 180.0				Height (ft): 16.000							
Max Compression Member		Force (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	-14.34	1.2D + 1.6W	0.25	100	100	100	3.2	50.0	76.62	0	0	0.00	0.00	18 Member X
	HORIZ SAE - 2X2X0.125	-0.42	1.2D + 1.6W 90	6.646	100	100	100	200.4	36.0	2.70	1	1	12.43	8.70	15 Member Z
DIAG	SAE - 1.75X1.75X0.18	-2.95	1.2D + 1.6W	7.757	50	50	50	135.7	36.0	7.62	1	1	12.43	13.05	38 Member Z

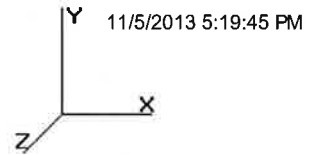
Max Tension Member		Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phi	Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	PST - 2-1/2" DIA PIP	10.21	0.9D + 1.6W 60	50	65	76.68	0	0	0	0.00	0.00	13	Member
	HORIZ SAE - 2X2X0.125	0.45	1.2D + 1.6W 60	36	58	12.60	1	1	1	0.00	8.70	3	Member
DIAG	SAE - 1.75X1.75X0.18	2.85	1.2D + 1.6W 60	36	58	15.67	1	1	1	0.00	13.05	18	Member

Max Splice Forces		Force (kip)	Load Case	Capacity (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		0.37	1.2D + 1.0Di +	0.00	0		
Bot Tension		10.11	0.9D + 1.6W 60	120.40	8	4	3/4 A325
Bot Compression		14.48	1.2D + 1.6W	0.00	0		

Site Number: 302470  
 Location: Ansonia Wakelee, CT  
 Code: ANSI/TIA-222 Rev G  
 Struct Class : II  
 Exposure : B  
 Topo : 1

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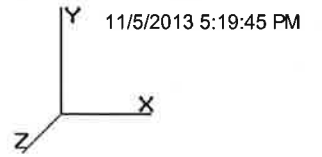
### Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.0D + 1.0W Service 90 deg	1b	-17.96	-184.08	-8.65	
	1a	-19.78	219.56	9.76	
	1	-2.93	17.75	-1.11	
1.0D + 1.0W Service 60 deg	1b	-5.90	-58.90	-3.40	
	1a	-4.82	56.01	1.84	
	1	-0.82	56.11	-5.10	
1.0D + 1.0W Service Normal	1b	-2.17	-21.96	-2.27	
	1a	2.17	-21.96	-2.27	
	1	0.00	97.15	-9.41	
1.2D + 1.0Di + 1.0Wi 90 deg	1b	-8.42	-32.11	-4.07	
	1a	-9.06	152.29	4.45	
	1	-1.36	60.09	-0.38	
1.2D + 1.0Di + 1.0Wi 60 deg	1b	-9.33	-46.01	-5.39	
	1a	-5.73	113.09	1.97	
	1	-1.17	113.18	-5.95	
1.2D + 1.0Di + 1.0Wi Normal	1b	-3.99	6.22	-3.70	
	1a	3.99	6.22	-3.70	
	1	0.00	167.83	-11.72	
0.9D + 1.6W 90 deg	1b	-29.50	-306.78	-14.25	
	1a	-30.89	338.71	15.20	
	1	-4.69	15.98	-0.95	
0.9D + 1.6W 60 deg	1b	-32.43	-353.31	-18.72	
	1a	-19.32	200.36	6.62	
	1	-3.93	200.86	-20.05	
0.9D + 1.6W Normal	1b	-14.39	-176.05	-13.29	
	1a	14.39	-176.05	-13.29	
	1	0.00	400.00	-40.84	
1.2D + 1.6W 90 deg	1b	-29.21	-301.94	-14.09	
	1a	-31.19	344.51	15.38	
	1	-4.68	21.30	-1.29	
1.2D + 1.6W 60 deg	1b	-32.15	-348.53	-18.55	
	1a	-19.61	205.95	6.80	
	1	-3.92	206.45	-20.40	
1.2D + 1.6W Normal	1b	-14.11	-171.01	-13.12	
	1a	14.11	-171.01	-13.12	
	1	0.00	405.89	-41.19	

Max Uplift:	353.31 (kip)	Moment:	7,660.76 (ft-kip)	1.2D + 1.6W Normal
Max Down:	405.89(kip)	Total Down:	63.87 (kip)	
Max Shear:	41.19(kip)	Total Shear:	67.42 (kip)	

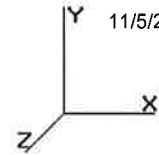
**Site Number:** 302470  
**Location:** Ansonia Wakelee, CT  
**Code:** ANSI/TIA-222 Rev G  
**Struct Class:** II  
**Exposure:** B  
**Topo:** 1

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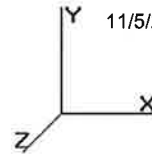
### Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
Serviceability - 60.00 Wind 60 deg	79.75	0.0656	0.0050	0.1060
	80.25	0.0666	0.0050	0.1063
	106.75	0.1203	0.0066	0.1346
	126.75	0.1734	0.0079	0.1642
	150.00	0.2481	0.0094	0.2043
	154.88	0.2656	0.0096	0.2062
	168.05	0.3167	0.0116	0.2324
	175.85	0.3486	0.0126	0.2293
	184.19	0.3836	0.0134	0.2255
	192.06	0.4164	0.0134	0.2394
Serviceability - 60.00 Wind Normal	79.75	0.0681	0.0038	0.1082
	80.25	0.0690	0.0038	0.1090
	106.75	0.1245	0.0048	0.1390
	126.75	0.1793	0.0054	0.1692
	150.00	0.2562	0.0058	0.2109
	154.88	0.2743	0.0056	0.2131
	168.05	0.3270	0.0056	0.2407
	175.85	0.3600	0.0050	0.2527
	184.19	0.3961	0.0046	0.2666
	192.06	0.4301	0.0045	0.2501
105.00 Serviceability - 60.00 Wind 90 deg	79.75	0.1994	0.0094	0.3161
	80.25	0.2022	0.0094	0.3172
	106.75	0.3656	0.0118	0.4099
	126.75	0.5272	0.0138	0.4996
	150.00	0.7546	0.0161	0.6202
	154.88	0.8078	0.0162	0.6311
	168.05	0.9635	0.0190	0.7057
	175.85	1.0605	0.0199	0.6849
	184.19	1.1670	0.0206	0.6507
	192.06	1.2668	0.0205	0.7295
105.00 mph 60 deg with No Ice (Reduced DL)	79.75	0.3167	0.0365	0.5062
	80.25	0.3213	0.0367	0.5085
	106.75	0.5807	0.0534	0.6508
	126.75	0.8373	0.0695	0.7947
	150.00	1.1983	0.0940	0.9888
	154.88	1.2832	0.0996	1.0010
	168.05	1.5303	0.1365	1.1241
	175.85	1.6848	0.1612	1.1115
	184.19	1.8536	0.1838	1.0930
	192.06	2.0127	0.1855	1.1608
105.00 mph 60 deg with No Ice	79.75	0.3172	0.0366	0.5075
	80.25	0.3218	0.0368	0.5096
	106.75	0.5817	0.0535	0.6522
	126.75	0.8389	0.0697	0.7966
	150.00	1.2008	0.0942	0.9913
	154.88	1.2859	0.0999	1.0035
	168.05	1.5337	0.1369	1.1270
	175.85	1.6886	0.1616	1.1144



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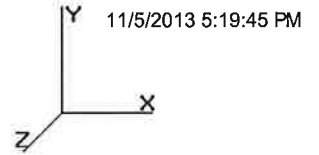
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	184.19	1.8579	0.1843	1.0959
	192.06	2.0174	0.1860	1.1639
105.00 mph 90 deg with No Ice (Reduced DL)	79.75	0.3190	0.0151	0.5051
	80.25	0.3235	0.0152	0.5072
	106.75	0.5848	0.0191	0.6553
	126.75	0.8431	0.0223	0.7987
	150.00	1.2067	0.0261	0.9913
	154.88	1.2918	0.0261	1.0088
	168.05	1.5406	0.0308	1.1281
	175.85	1.6957	0.0323	1.0947
	184.19	1.8656	0.0333	1.0400
	192.06	2.0252	0.0333	1.1661
105.00 mph 90 deg with No Ice	79.75	0.3195	0.0152	0.5058
	80.25	0.3240	0.0152	0.5080
	106.75	0.5859	0.0191	0.6568
	126.75	0.8448	0.0224	0.8006
	150.00	1.2092	0.0261	0.9938
	154.88	1.2945	0.0262	1.0114
	168.05	1.5440	0.0309	1.1311
	175.85	1.6995	0.0324	1.0977
	184.19	1.8699	0.0334	1.0431
	192.06	2.0299	0.0333	1.1693
105.00 mph Normal to Face with No Ice (Reduced)	79.75	0.3284	0.0187	0.5275
	80.25	0.3332	0.0186	0.5306
	106.75	0.6015	0.0235	0.6728
	126.75	0.8667	0.0270	0.8209
	150.00	1.2404	0.0291	1.0237
	154.88	1.3279	0.0288	1.0344
	168.05	1.5848	0.0292	1.1691
	175.85	1.7453	0.0273	1.2281
	184.19	1.9210	0.0256	1.2967
	192.06	2.0865	0.0253	1.2158
105.00 mph Normal to Face with No Ice	79.75	0.3290	0.0187	0.5283
	80.25	0.3337	0.0187	0.5314
	106.75	0.6026	0.0236	0.6743
	126.75	0.8684	0.0271	0.8228
	150.00	1.2430	0.0292	1.0264
	154.88	1.3307	0.0289	1.0370
	168.05	1.5884	0.0293	1.1720
	175.85	1.7493	0.0274	1.2312
	184.19	1.9254	0.0257	1.2998
	192.06	2.0914	0.0254	1.2191
50.00 mph 60 deg with 0.75 in Radial Ice	79.75	0.0921	0.0070	0.1481
	80.25	0.0934	0.0070	0.1482
	106.75	0.1663	0.0091	0.1820
	126.75	0.2376	0.0108	0.2203
	150.00	0.3372	0.0128	0.2706
	154.88	0.3602	0.0130	0.2729
	168.05	0.4277	0.0155	0.3069
	175.85	0.4696	0.0166	0.3032
	184.19	0.5153	0.0176	0.2999
	192.06	0.5584	0.0177	0.3140
50.00 mph 90 deg with 0.75 in Radial Ice	79.75	0.0921	0.0040	0.1464
	80.25	0.0934	0.0040	0.1465

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50.00 mph Normal with 0.75 in Radial Ice

106.75	0.1665	0.0050	0.1829
126.75	0.2381	0.0058	0.2207
150.00	0.3379	0.0066	0.2712
154.88	0.3609	0.0066	0.2751
168.05	0.4286	0.0076	0.3069
175.85	0.4705	0.0078	0.3008
184.19	0.5163	0.0080	0.2913
192.06	0.5594	0.0080	0.3148
79.75	0.0925	0.0057	0.1443
80.25	0.0937	0.0057	0.1456
106.75	0.1677	0.0071	0.1848
126.75	0.2402	0.0080	0.2230
150.00	0.3414	0.0087	0.2755
154.88	0.3646	0.0085	0.2779
168.05	0.4333	0.0088	0.3117
175.85	0.4760	0.0083	0.3225
184.19	0.5225	0.0079	0.3342
192.06	0.5664	0.0078	0.3215
192.06	0.0000	0.0000	0.0000

