STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

October 5, 2012

Eric Dahl
Nexlink Global Services
55 Lynn Road
Ivoryton, CT 06442

RE: **EM-AT&T-001-120919** - AT&T Mobility notice of intent to modify an existing telecommunications facility located at 104 Bunker Hill Road, Andover, Connecticut.

Dear Mr. Dahl:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated September 18, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the

closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

LRoberts

Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Robert Burbank, First Selectman, Town of Andover

EM-AT&T-001-120919

September 18, 2012

ORIGINAL

VIA OVERNIGHT DELIVERY

Ms. Linda Roberts, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RECEIVED
SEP 19 2012
CONNECTICUT
SITING COUNCIL

RE: AT&T Mobility – Notice of Exempt Modification
104 Bunker Hill Road, Andover, CT

Dear Ms. Roberts:

This letter and attachments are submitted on behalf of AT&T Mobility ("AT&T"). AT&T is enhancing the capabilities of its wireless system in Connecticut by implementing LTE technology. In order to do so, AT&T will modify antenna and equipment configurations at a number of existing sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the First Selectman of Andover.

AT&T plans to modify the existing facility at 104 Bunker Hill Road, Andover, owned by American Tower (coordinates 41°44'16.03"N, -72°20'59.42"W). Attached are drawings depicting the planned changes, and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration. Also included is a power density calculation reflecting the modification to AT&T's operations at the site.

The changes to the facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected. AT&T proposes to add three (3) new antennas, six (6) RRU's and one (1) surge arrestor. Additionally,

AT&T will install one (1) fiber cable and two (2) DC control cables within a 3" flex conduit inside the monopole.

2.The proposed changes will not extend the site boundaries. AT&T will install additional equipment within its existing equipment shelter. Thus, there will be no effect on the site compound.

3.The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.

4.The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site. As indicated in the attached power density calculations, AT&T's operations at the site will result in a power density of 1.71%; the combined site operations will result in a total power density of 25.29%.

Please feel free to call me with any questions or concerns regarding this matter. Thank you for your consideration.

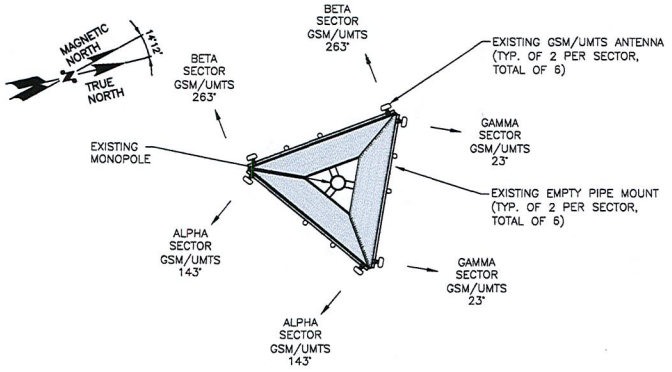
Respectfully submitted,
AT&T Mobility

By: _____

Eric Dahl, Consultant
edahl@comcast.net
860-227-1975

cc: Robert Burbank, First Selectman, Town of Andover

Attachments



EXISTING GSM/UMTS ANTENNA PLAN

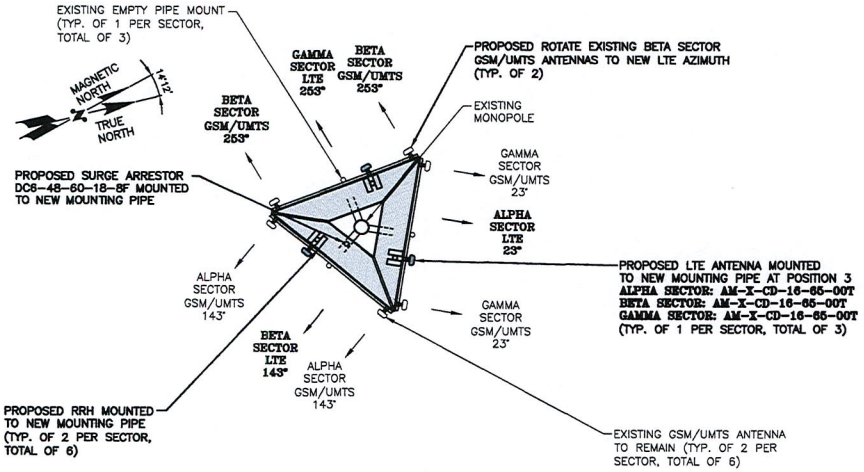
SCALE: N.T.S.

NOTE:

REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

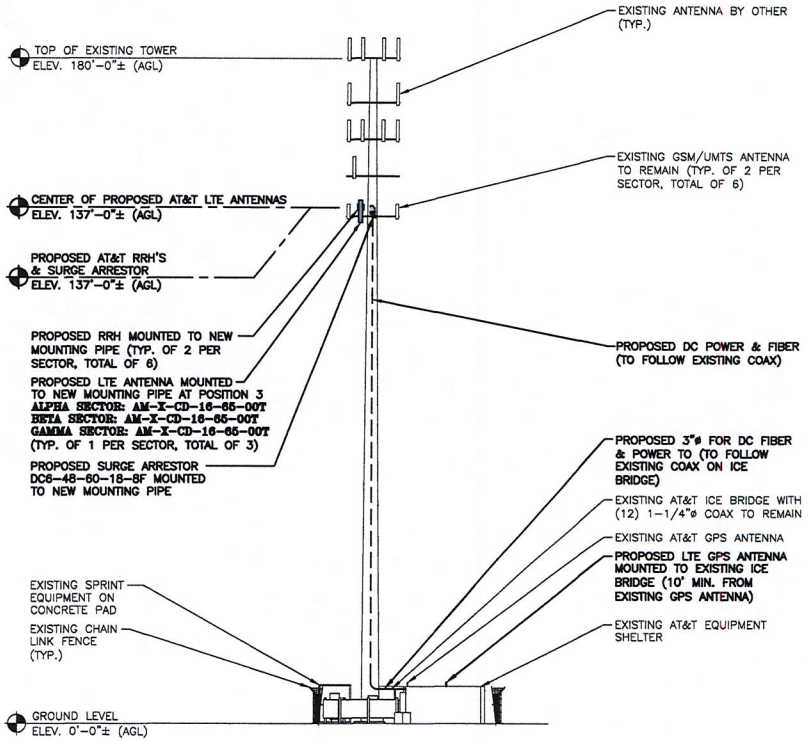
NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



PROPOSED LTE ANTENNA PLAN

SCALE: N.T.S.



EAST ELEVATION

SCALE: 1/16"=1'-0"

0 8'-0" 16'-0" 32'-0" 48'-0"

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

NEXLINK GLOBAL SERVICES
a UniTek GLOBAL SERVICES company
800 MARSHALL PHELPS ROAD UNIT#: 2A
WINDSOR, CT 06095

SITE NUMBER: CT1122
SITE NAME: ANDOVER
BUNKER HILL RD
104 BUNKER HILL ROAD
ANDOVER, CT 06232
TOLLAND COUNTY

at&t
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

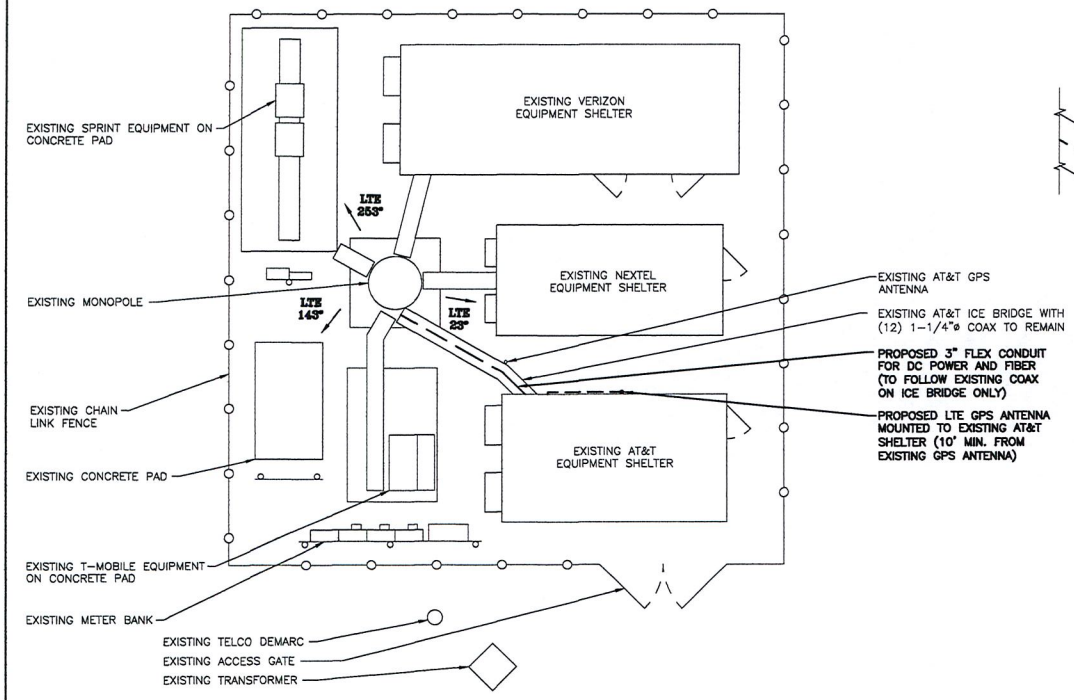
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	07/23/12	ISSUED FOR REVIEW	RS	DC	DPH

SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: RS

AT&T

ANTENNA PLAN & ELEVATION (LTE)

JOB NUMBER	DRAWING NUMBER	REV
1122.01	A-2	0

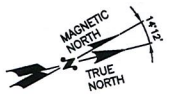


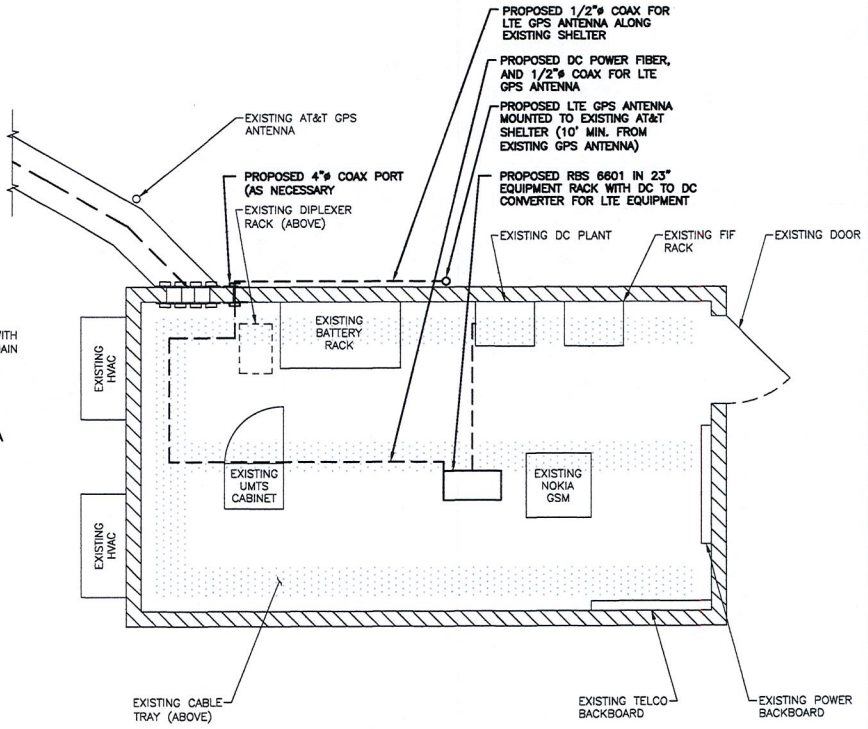
COMPOUND PLAN
SCALE: 3/16"= 1'-0"

0 2'-8" 5'-4" 10'-8" 16'-0"

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.





EQUIPMENT PLAN
SCALE: 1/2"= 1'-0"

0 1'-0" 2'-0" 4'-0" 6'-0"

Hudson Design Groupllc
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 2-101
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

NEXLINK GLOBAL SERVICES
a UniTek GLOBAL SERVICES company
800 MARSHALL PHELPS ROAD UNIT#: 2A
WINDSOR, CT 06095

SITE NUMBER: CT1122
SITE NAME: ANDOVER
BUNKER HILL RD
104 BUNKER HILL ROAD
ANDOVER, CT 06232
TOLLAND COUNTY

at&t
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	07/23/12	ISSUED FOR REVIEW	RS	DC	DPH

SCALE: AS SHOWN | DESIGNED BY: DC | DRAWN BY: RS

AT&T

COMPOUND PLAN & EQUIPMENT PLAN (LTE)

JOB NUMBER	DRAWING NUMBER	REV
1122.01	A-1	0

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**178 ft Monopole**
ATC Site Name	:	**Andover Bunker Hill Road, CT**
ATC Site Number	:	**302472**
Engineering Number	:	**50403121**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Andover Bunker Hill Rd**
Carrier Site Number	:	**10035387/CT1122**
Site Location	:	**104 Bunker Hill Road** **Andover, CT 06232-1301** **41.737786,-72.349839**
County	:	**Tolland**
Date	:	**September 11, 2012**
Max Usage	:	**94%**
Result	:	**Pass**

Madhukar Ozarker
Project Engineer

STATE OF CONNECTICUT
RAPHAEL I. MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

9/12/12

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**178 ft Monopole**
ATC Site Name	:	**Andover Bunker Hill Road, CT**
ATC Site Number	:	**302472**
Engineering Number	:	**50403121**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Andover Bunker Hill Rd**
Carrier Site Number	:	**10035387/CT1122**
Site Location	:	**104 Bunker Hill Road** **Andover, CT 06232-1301** **41.737786,-72.349839**
County	:	**Tolland**
Date	:	**September 11, 2012**
Max Usage	:	**94%**
Result	:	**Pass**

Madhukar Ozarker
Project Engineer

AMERICAN TOWER®
CORPORATION

Eng. Number 50403121
September 11, 2012

Table of Contents

AMERICAN TOWER®
CORPORATION

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 178 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Summit/PJF job #29200-028, dated January 14, 2000
Foundation Drawing	Summit/PJF job #29200-012, dated January 14, 2000
Geotechnical Report	Tectonic Project # 1170.C966, dated November 30, 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/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 (4) & 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 me via email at madhukar.ozarker@americantower.com or call 919-466-5184.

Existing and Reserved Equipment

Mount Elev.[1] (ft)	Qty.	Antenna	Mount Type	Coax (in)	Carrier
178.0	3	72" x 12" Panels	Low Profile Platform	(12) 1 5/8	Sprint Nextel
	9	Allgon 7120.16.05.00			
168.0	6	Decibel DB980H90A-KL	Low Profile Platform	(6) 1 5/8	
158.0	3	Antel BXA-171085-8BF-EDIN-X	Low Profile Platform	(12) 1 5/8	Verizon
	3	Antel BXA-70063/6CF			
	6	Antel LPA-80080/4CF			
	6	RFS FD9R6004/2C-3L			
148.0	4	Allgon 7250.02	Low Profile Platform	(12) 1 5/8	T-Mobile
	2	EMS RR90-17-02DP			
137.0	6	Powerwave 7770.00	Low Profile Platform	(12) 1 1/4	AT&T Mobility
	6	Powerwave LGP21401			
	6	Powerwave LGP21903			
108.0	1	GPS	Standoff	(1) 1/2	Verizon
95.0	1	GPS	Standoff	(1) 1/2	Sprint Nextel
86.0	1	GPS	Standoff	(1) 1/2	

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Coax (in)	Carrier
Mount	RAD					
137.0	137.0	6	Ericsson RRUS 11	Low Profile Platform	(2) 19.7 mm (1) 10 mm	AT&T Mobility
		3	KMW AM-X-CD-16-65-00T-RET			
		1	Raycap DC6-48-60-18-8F			
12.0	12.0	1	GPS-TMG-HR-26N	Standoff	(1) 1/2	

[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 inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	90%	Pass
Shaft	86%	Pass
Base Plate	94%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	4,675.0	4113.4	88%
Shear (Kips)	35.5	32.2	91%

The foundation and connections to the tower have factors of safety exceeding 2.0 with respect to wind.

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

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
137.0	2.164	-1.910

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

AMERICAN TOWER®
CORPORATION

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:

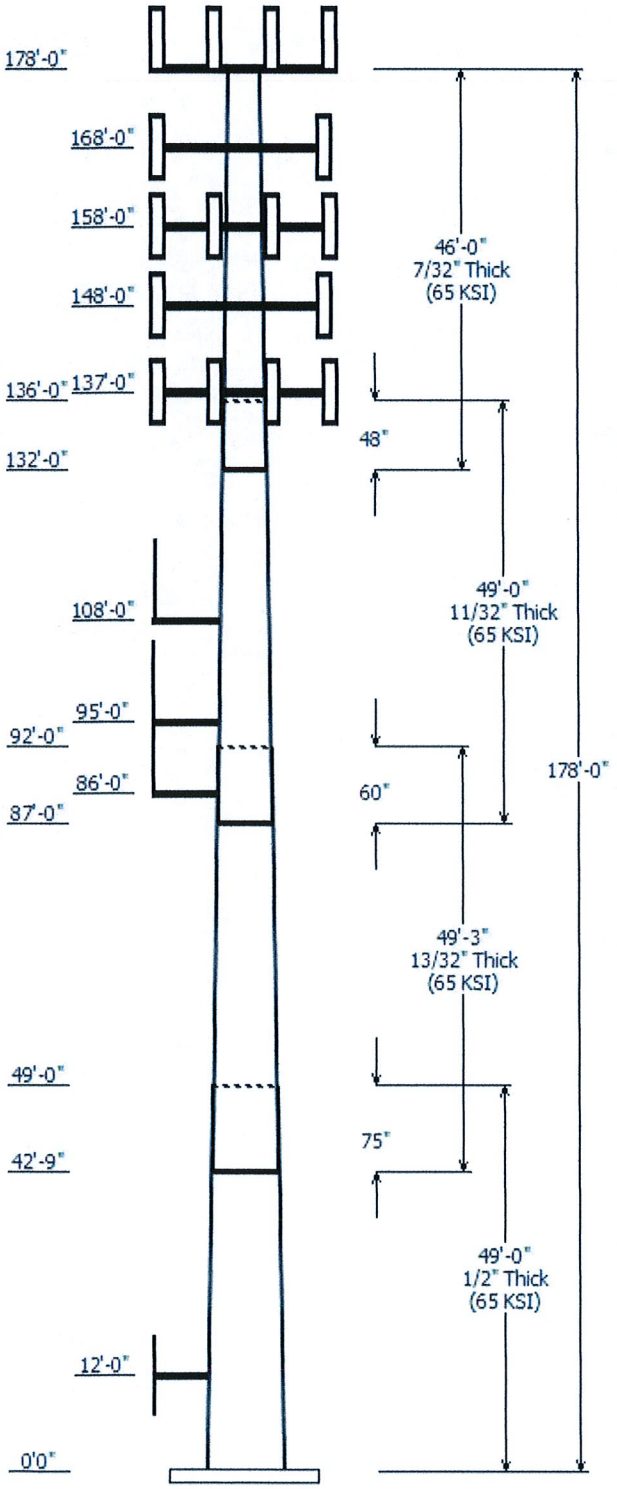
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 Engineering Services 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 Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	302472
Code:	TIA/EIA-222 Rev F
Description :	178' Summit Monopole
Client :	AT&T Mobility
Location :	Andover Bunker Hill Road, CT
Shape :	18 Sides
Height :	178.00 (ft)
Base Elev (ft):	0.00
Taper:	0.20700((in/ft)

Sections Properties

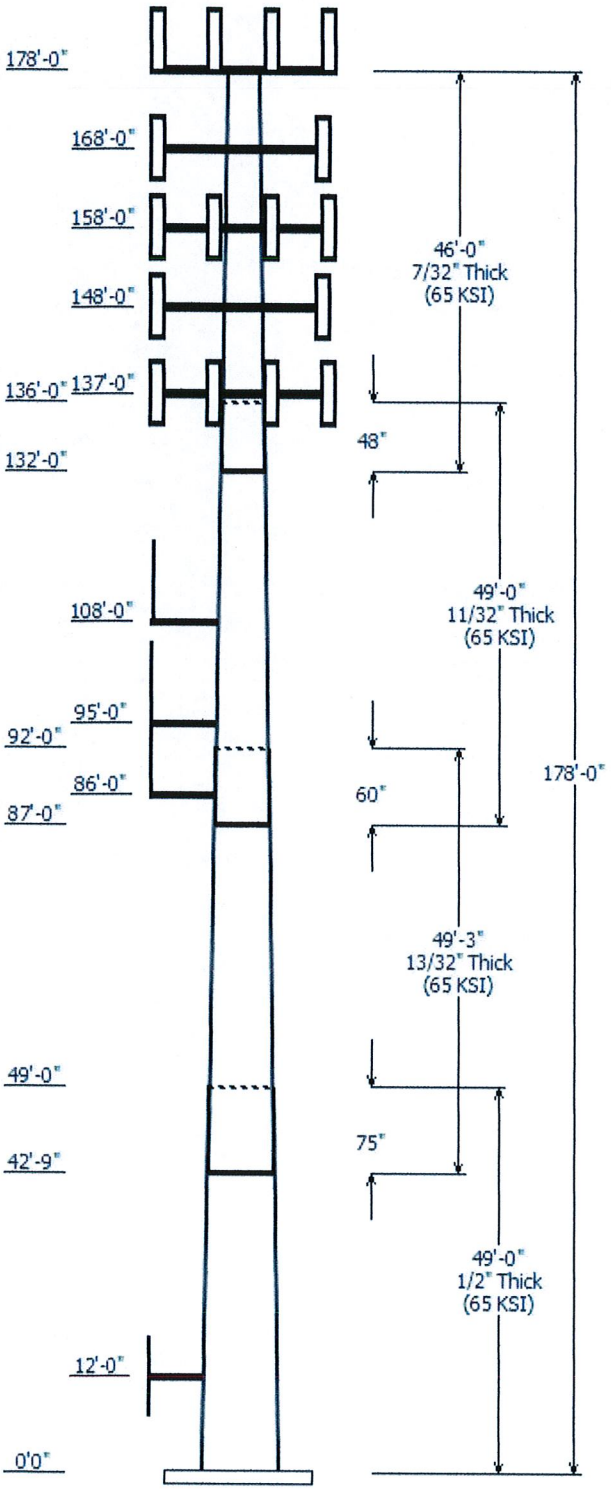
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	49.000	46.76	56.91	0.500		0.000	0.207008	65
2	49.250	38.67	48.87	0.406	Slip Joint	75.000	0.207008	65
3	49.000	30.25	40.40	0.344	Slip Joint	60.000	0.207008	65
4	46.000	22.00	31.52	0.219	Slip Joint	48.000	0.207008	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
178.000	180.000	3	72" x 12" Panels
178.000	180.000	9	Allgon 7120.16.05.00
178.000	178.000	1	Low Profile Platform
168.000	168.000	6	Decibel DB980H90A-KL
168.000	168.000	1	Low Profile Platform
158.000	158.000	6	Antel LPA-80080/4CF
158.000	158.000	6	RFS FD9R6004/2C-3L
158.000	158.000	3	Antel BXA-70063/6CF
158.000	158.000	1	Low Profile Platform
158.000	158.000	3	Antel BXA-171085-8BF-EDIN-X
148.000	148.000	1	Low Profile Platform
148.000	148.000	2	EMS RR90-17-02DP
148.000	148.000	4	Allgon 7250.02
137.000	137.000	1	Raycap DC6-48-60-18-8F
137.000	137.000	6	Ericsson RRUS 11
137.000	137.000	3	KMW AM-X-CD-16-65-00T-RET
137.000	137.000	6	Powerwave 7770.00
137.000	137.000	6	Powerwave LGP21401
137.000	137.000	6	Powerwave LGP21903
137.000	137.000	1	Low Profile Platform
108.000	108.000	1	Standoff
108.000	108.500	1	GPS
95.000	95.000	1	Standoff
95.000	95.500	1	GPS
86.000	86.000	1	Standoff
86.000	86.500	1	GPS
12.000	12.000	1	Standoff
12.000	12.000	1	GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	12.000	1/2" Coax	No
0.000	86.000	1/2" Coax	No
0.000	95.000	1/2" Coax	No
0.000	108.0	1/2" Coax	No
0.000	137.0	1 1/4" Coax	No
0.000	137.0	10 mm Cable	No
0.000	137.0	19.7 mm Cable	No
0.000	148.0	1 5/8 Coax	No



0.000	158.0	1 5/8 Coax	No
0.000	168.0	1 5/8 Coax	No
0.000	178.0	1 5/8" Coax	No

Load Cases

No Ice	85.00 mph Wind with No Ice
Ice	73.61 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	4113.42	32.17	48.66
Ice	3650.10	27.17	55.26
Twist/Sway	1425.44	11.13	48.70

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000

C Squared Systems, LLC
65 Dartmouth Drive, Unit A3
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions

CT1122

(Andover Bunker Hill Rd)

104 Bunker Hill Rd., Andover, CT 06232

September 13, 2012

Table of Contents

List of Tables

List of Figures

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the monopole tower located at 104 Bunker Hill Road in Andover, CT. The coordinates of the tower are 41° 44' 16.03" N, 72° 20' 59.42" W.

AT&T is proposing the following modifications:

1) Install three multi-band (700/850/1900/2100 MHz) antennas (one per sector) for their LTE network.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{1.6^2 \cdot EIRP}{4\pi \cdot R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

4. Calculation Results

Table 1 below outlines the power density information for the site. Because the proposed AT&T antennas are directional in nature, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm^2)	Limit	%MPE
Cingular UMTS	*137*	*880*	*1*	*500*	*0.0096*	*0.5867*	*1.63%*
Cingular GSM	*137*	*880*	*4*	*296*	*0.0227*	*0.5867*	*3.87%*
Cingular GSM	*137*	*1900*	*2*	*427*	*0.0164*	*1.0000*	*1.64%*
Verizon Cellular	158	869	9	260	0.0337	0.5793	5.82%
Verizon PCS	158	1970	7	262	0.0264	1.0000	2.64%
Verizon AWS	158	2145	1	654	0.0094	1.0000	0.94%
Verizon LTE	158	698	2	770	0.0222	0.4653	4.77%
Nextel	178	851	9	100	0.0102	0.5673	1.80%
Sprint	168	1962.5	11	411	0.0576	1.0000	5.76%
VoiceStream	148	1930	4	282	0.0185	1.0000	1.85%
AT&T UMTS	137	880	2	565	0.0022	0.5867	0.37%
AT&T UMTS	137	1900	2	875	0.0034	1.0000	0.34%
AT&T LTE	137	734	1	1313	0.0025	0.4893	0.51%
AT&T GSM	137	880	1	283	0.0005	0.5867	0.09%
AT&T GSM	137	1900	4	525	0.0040	1.0000	0.40%
						Total	**25.29%**

Table 1: Carrier Information[1] [2] [3]

[1] The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 7/26/2012. Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

[2] In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

[3] Antenna height listed for AT&T is in reference to the American Tower Corp. Structural Analysis dated September 11, 2012.

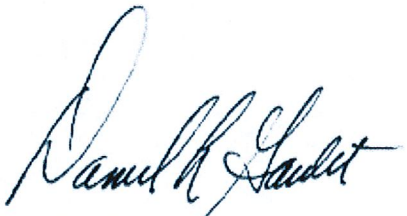
5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **25.29% of the FCC limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished modifications.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

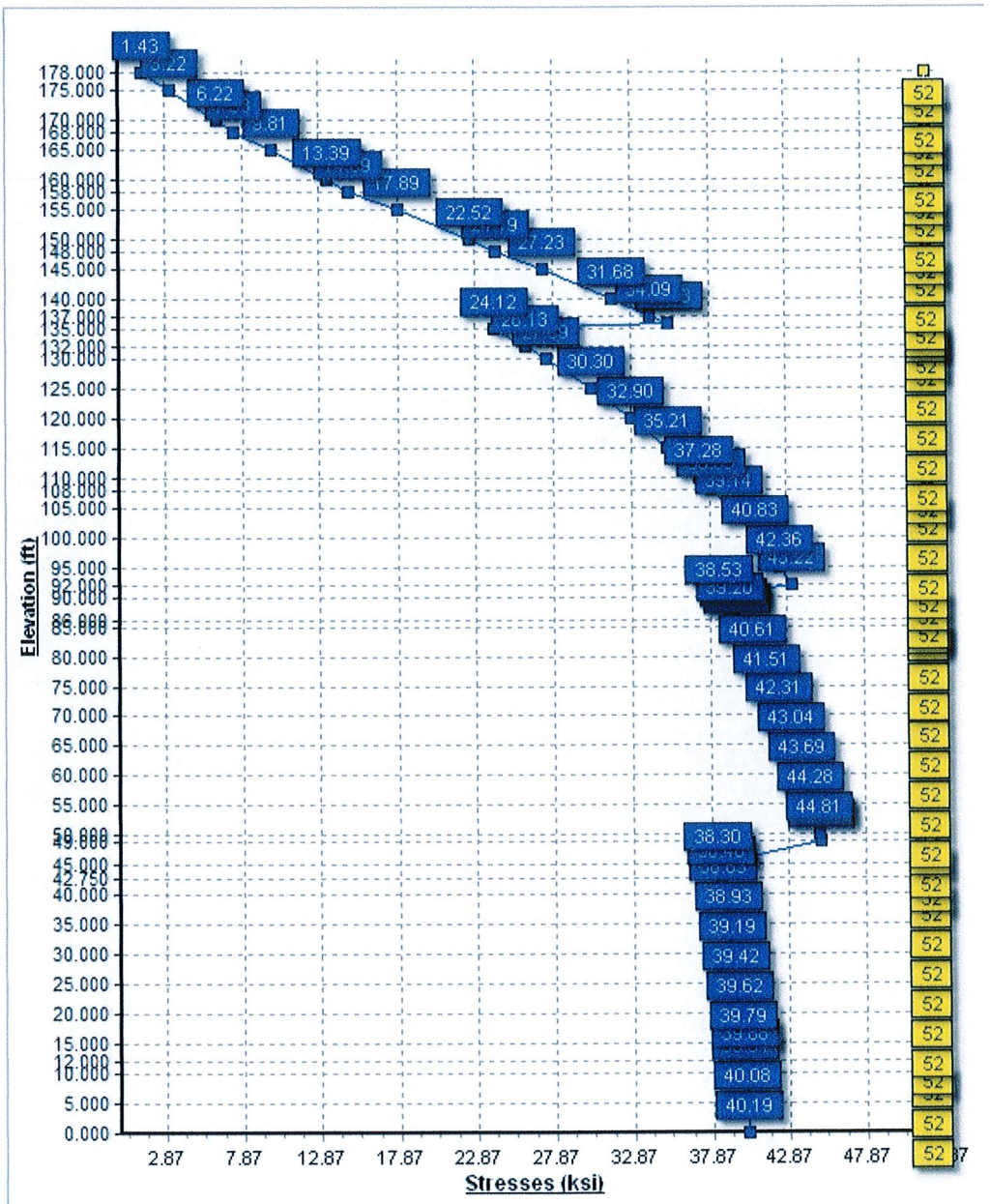
September 13, 2012
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

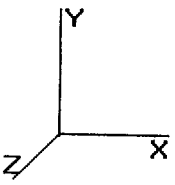
IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board


Elevation (ft)
178.000
175.000
170.000
165.000
160.000
155.000
150.000
145.000
140.000
135.000
130.000
125.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
80.000
75.000
70.000
65.000
60.000
55.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87
Stresses (ksi)
1.43
6.22
13.39
22.52
31.68
24.12
30.30
32.90
35.21
37.28
40.83
42.36
38.53
40.61
41.51
42.31
43.04
43.69
44.28
44.81
38.30
38.93
39.19
39.42
39.62
39.79
40.08
40.19
52

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



9/11/2012 4:18:20 PM
Page: 1

Shaft Section Properties

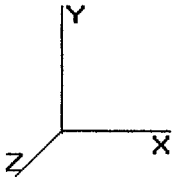
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	49.000	0.5000	65		0.00	13,584	56.91	0.00	89.52	35989.9	18.31	113.82	46.76	49.00	73.42	19857.0	14.73	93.53	0.207008
2-18	49.250	0.4063	65	Slip	75.00	9,371	48.87	42.75	62.49	18546.6	19.45	120.30	38.67	92.00	49.35	9131.9	15.02	95.21	0.207008
3-18	49.000	0.3438	65	Slip	60.00	6,364	40.40	87.00	43.70	8859.4	18.96	117.53	30.25	136.00	32.64	3689.5	13.76	88.02	0.207008
4-18	46.000	0.2188	65	Slip	48.00	2,884	31.52	132.00	21.73	2690.7	23.65	144.10	22.00	178.00	15.12	906.4	15.97	100.57	0.207008
				Shaft Weight		32,204													

Discrete Appurtenance Properties

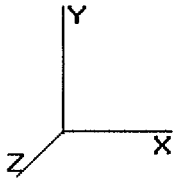
Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
178.00	72" x 12" Panels	3	40.00	8.400	0.75	87.00	9.230	0.75	0.000	2.000
178.00	Allgon 7120.16.05.00	9	15.00	3.990	1.22	53.00	6.390	1.22	0.000	2.000
178.00	Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
168.00	Decibel DB980H90A-KL	6	9.00	3.800	0.79	29.00	4.500	0.79	0.000	0.000
168.00	Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
158.00	Antel BXA-171085-8BF-EDIN-X	3	10.50	2.940	0.87	63.00	6.190	0.87	0.000	0.000
158.00	Antel BXA-70063/6CF	3	17.00	7.730	0.74	58.00	8.540	0.74	0.000	0.000
158.00	Antel LPA-80080/4CF	6	12.00	6.060	0.74	45.12	6.650	0.74	0.000	0.000
158.00	Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
158.00	RFS FD9R6004/2C-3L	6	3.10	0.370	0.50	5.40	0.500	0.50	0.000	0.000
148.00	Allgon 7250.02	4	15.00	3.830	0.72	33.47	4.410	0.72	0.000	0.000
148.00	EMS RR90-17-02DP	2	18.00	4.360	1.00	40.00	4.990	1.00	0.000	0.000
148.00	Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
137.00	Ericsson RRUS 11	6	55.00	2.940	0.50	74.30	3.290	0.50	0.000	0.000
137.00	KMW AM-X-CD-16-65-00T-	3	48.50	8.260	0.79	95.00	9.080	0.79	0.000	0.000
137.00	Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
137.00	Powerwave 7770.00	6	35.00	5.880	0.77	67.63	6.530	0.77	0.000	0.000
137.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.26	1.530	0.50	0.000	0.000
137.00	Powerwave LGP21903	6	5.50	0.270	0.50	7.90	0.380	0.50	0.000	0.000
137.00	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	49.50	1.670	1.00	0.000	0.000
108.00	GPS	1	10.00	1.000	1.00	18.24	1.210	1.00	0.000	0.000
108.00	Standoff	1	200.00	3.500	1.00	300.00	4.500	1.00	0.000	0.500
95.00	GPS	1	10.00	1.000	1.00	0.00	0.000	1.00	0.000	0.000
95.00	Standoff	1	200.00	3.500	1.00	0.00	0.000	1.00	0.000	0.500
86.00	GPS	1	10.00	1.000	1.00	0.00	0.000	1.00	0.000	0.000
86.00	Standoff	1	200.00	3.500	1.00	0.00	0.000	1.00	0.000	0.500
12.00	GPS-TMG-HR-26N	1	0.60	0.090	1.00	1.90	0.140	1.00	0.000	0.000
12.00	Standoff	1	200.00	3.500	1.00	0.00	0.000	1.00	0.000	0.000
	Totals	83	9743.60			11,973.18			Number of Loadings :	28

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	178.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
0.00	168.00	(6) 1 5/8 Coax	4.92	0.00	0.00	0.00	N
0.00	158.00	(12) 1 5/8 Coax	9.84	0.00	0.00	0.00	N
0.00	148.00	(12) 1 5/8 Coax	9.84	0.00	0.00	0.00	N
0.00	137.00	(12) 1 1/4" Coax	7.56	0.00	0.00	0.00	N
0.00	137.00	(1) 10 mm Cable	0.07	0.00	0.00	0.00	N
0.00	137.00	(2) 19.7 mm Cable	0.59	0.00	0.00	0.00	N



0.00	108.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	95.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	86.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
0.00	12.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
		Total Weight	6,760.41 (lb)		0.00 (lb)		



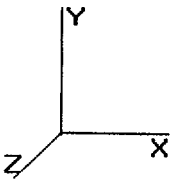
Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.5000	56.910	89.519	35,989.9	18.31	113.82	65	52	0.0
5.00		0.5000	55.875	87.877	34,044.9	17.94	111.75	65	52	1,509.1
10.00		0.5000	54.840	86.234	32,171.3	17.58	109.68	65	52	1,481.2
12.00		0.5000	54.426	85.577	31,441.6	17.43	108.85	65	52	584.6
15.00		0.5000	53.805	84.592	30,367.8	17.21	107.61	65	52	868.6
20.00		0.5000	52.770	82.949	28,632.9	16.85	105.54	65	52	1,425.3
25.00		0.5000	51.735	81.307	26,965.4	16.48	103.47	65	52	1,397.3
30.00		0.5000	50.700	79.664	25,363.9	16.12	101.40	65	52	1,369.4
35.00		0.5000	49.665	78.021	23,827.1	15.75	99.33	65	52	1,341.4
40.00		0.5000	48.630	76.379	22,353.7	15.39	97.26	65	52	1,313.5
42.75	Bot - Section 2	0.5000	48.060	75.475	21,569.9	15.19	96.12	65	52	710.5
45.00		0.5000	47.595	74.736	20,942.4	15.02	95.19	65	52	1,051.2
49.00	Top - Section 1	0.4063	47.579	60.824	17,100.6	18.89	117.12	65	52	1,843.5
50.00		0.4063	47.372	60.557	16,876.4	18.80	116.61	65	52	206.5
55.00		0.4063	46.337	59.223	15,785.1	18.35	114.06	65	52	1,019.0
60.00		0.4063	45.302	57.888	14,741.8	17.90	111.51	65	52	996.3
65.00		0.4063	44.267	56.553	13,745.5	17.45	108.96	65	52	973.5
70.00		0.4063	43.232	55.219	12,795.2	17.00	106.42	65	52	950.8
75.00		0.4063	42.197	53.884	11,889.7	16.55	103.87	65	52	928.1
80.00		0.4063	41.162	52.550	11,028.0	16.10	101.32	65	52	905.4
85.00		0.4063	40.127	51.215	10,208.9	15.65	98.77	65	52	882.7
86.00		0.4063	39.920	50.948	10,050.1	15.56	98.26	65	52	173.8
87.00	Bot - Section 3	0.4063	39.713	50.681	9,893.0	15.47	97.75	65	52	172.9
90.00		0.4063	39.092	49.881	9,431.5	15.20	96.23	65	52	956.0
92.00	Top - Section 2	0.3438	39.365	42.573	8,190.2	18.43	114.52	65	52	628.9
95.00		0.3438	38.744	41.896	7,805.4	18.11	112.71	65	52	431.1
100.0		0.3438	37.709	40.766	7,191.1	17.58	109.70	65	52	703.2
105.0		0.3438	36.674	39.637	6,609.9	17.05	106.69	65	52	684.0
108.0		0.3438	36.053	38.960	6,276.7	16.73	104.88	65	52	401.2
110.0		0.3438	35.639	38.508	6,060.9	16.52	103.68	65	52	263.6
115.0		0.3438	34.604	37.379	5,543.1	15.99	100.67	65	52	645.6
120.0		0.3438	33.569	36.249	5,055.8	15.46	97.65	65	52	626.3
125.0		0.3438	32.534	35.120	4,597.8	14.93	94.64	65	52	607.1
130.0		0.3438	31.499	33.991	4,168.4	14.39	91.63	65	52	587.9
132.0	Bot - Section 4	0.3438	31.085	33.539	4,004.4	14.18	90.43	65	52	229.8
135.0		0.3438	30.464	32.862	3,766.6	13.86	88.62	65	52	558.6
136.0	Top - Section 3	0.2188	30.694	21.159	2,482.8	22.98	140.32	65	52	183.7
137.0		0.2188	30.487	21.015	2,432.6	22.81	139.37	65	52	71.8
140.0		0.2188	29.866	20.584	2,285.9	22.31	136.53	65	52	212.3
145.0		0.2188	28.831	19.865	2,054.7	21.48	131.80	65	52	344.1
148.0		0.2188	28.210	19.434	1,923.8	20.98	128.96	65	52	200.6
150.0		0.2188	27.796	19.147	1,839.7	20.64	127.07	65	52	131.3
155.0		0.2188	26.761	18.428	1,640.3	19.81	122.34	65	52	319.6
158.0		0.2188	26.140	17.997	1,527.8	19.31	119.50	65	52	185.9
160.0		0.2188	25.726	17.709	1,455.7	18.97	117.60	65	52	121.5
165.0		0.2188	24.691	16.991	1,285.6	18.14	112.87	65	52	295.2
168.0		0.2188	24.070	16.560	1,190.2	17.64	110.03	65	52	171.2
170.0		0.2188	23.656	16.272	1,129.3	17.31	108.14	65	52	111.7
175.0		0.2188	22.621	15.554	986.2	16.47	103.41	65	52	270.7
178.0		0.2188	22.000	15.122	906.4	15.97	100.57	65	52	156.6
										32,204.2

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

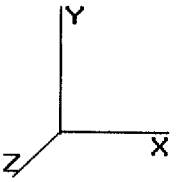


Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.25	403.11 0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	18.496	31.25	395.78 0.650	0.000	5.00	23.497	15.27	477.4	0.0	1,509.1
10.00		0.00	1.00	18.496	31.25	388.44 0.650	0.000	5.00	23.066	14.99	468.6	0.0	1,481.2
12.00	Appertunance(s)	0.00	1.00	18.496	31.25	385.51 0.650	0.000	2.00	9.105	5.92	185.0	0.0	584.6
15.00		0.00	1.00	18.496	31.25	381.11 0.650	0.000	3.00	13.529	8.79	274.9	0.0	868.6
20.00		0.00	1.00	18.496	31.25	373.78 0.650	0.000	5.00	22.203	14.43	451.1	0.0	1,425.3
25.00		0.00	1.00	18.496	31.25	366.45 0.650	0.000	5.00	21.772	14.15	442.4	0.0	1,397.3
30.00		0.00	1.00	18.496	31.25	359.12 0.650	0.000	5.00	21.340	13.87	433.6	0.0	1,369.4
35.00		0.00	1.01	18.810	31.78	354.76 0.650	0.000	5.00	20.909	13.59	432.0	0.0	1,341.4
40.00		0.00	1.05	19.541	33.02	354.05 0.650	0.000	5.00	20.478	13.31	439.6	0.0	1,313.5
42.75	Bot - Section 2	0.00	1.07	19.916	33.65	353.25 0.650	0.000	2.75	11.079	7.20	242.4	0.0	710.5
45.00		0.00	1.09	20.210	34.15	352.40 0.650	0.000	2.25	9.120	5.93	202.5	0.0	1,051.2
49.00	Top - Section 1	0.00	1.12	20.708	34.99	350.50 0.650	0.000	4.00	15.998	10.40	363.9	0.0	1,843.5
50.00		0.00	1.12	20.827	35.19	356.07 0.650	0.000	1.00	3.956	2.57	90.5	0.0	206.5
55.00		0.00	1.15	21.402	36.17	353.06 0.650	0.000	5.00	19.523	12.69	459.0	0.0	1,019.0
60.00		0.00	1.18	21.941	37.08	349.49 0.650	0.000	5.00	19.091	12.41	460.1	0.0	996.3
65.00		0.00	1.21	22.449	37.93	345.44 0.650	0.000	5.00	18.660	12.13	460.2	0.0	973.5
70.00		0.00	1.24	22.929	38.75	340.95 0.650	0.000	5.00	18.229	11.85	459.1	0.0	950.8
75.00		0.00	1.26	23.386	39.52	336.08 0.650	0.000	5.00	17.798	11.57	457.2	0.0	928.1
80.00		0.00	1.28	23.821	40.25	330.88 0.650	0.000	5.00	17.366	11.29	454.4	0.0	905.4
85.00		0.00	1.31	24.237	40.96	325.36 0.650	0.000	5.00	16.935	11.01	450.9	0.0	882.7
86.00	Appertunance(s)	0.00	1.31	24.318	41.09	324.22 0.650	0.000	1.00	3.335	2.17	89.1	0.0	173.8
87.00	Bot - Section 3	0.00	1.31	24.399	41.23	323.08 0.650	0.000	1.00	3.318	2.16	88.9	0.0	172.9
90.00		0.00	1.33	24.636	41.63	319.57 0.650	0.000	3.00	10.022	6.51	271.2	0.0	956.0
92.00	Top - Section 2	0.00	1.34	24.791	41.89	317.18 0.650	0.000	2.00	6.595	4.29	179.6	0.0	628.9
95.00	Appertunance(s)	0.00	1.35	25.020	42.28	319.18 0.650	0.000	3.00	9.764	6.35	268.3	0.0	431.1
100.0		0.00	1.37	25.389	42.90	312.94 0.650	0.000	5.00	15.928	10.35	444.2	0.0	703.2
105.0		0.00	1.39	25.745	43.51	306.48 0.650	0.000	5.00	15.496	10.07	438.3	0.0	684.0
108.0	Appertunance(s)	0.00	1.40	25.953	43.86	302.50 0.650	0.000	3.00	9.091	5.91	259.2	0.0	401.2
110.0		0.00	1.41	26.090	44.09	299.81 0.650	0.000	2.00	5.974	3.88	171.2	0.0	263.6
115.0		0.00	1.42	26.423	44.65	292.96 0.650	0.000	5.00	14.634	9.51	424.8	0.0	645.6
120.0		0.00	1.44	26.747	45.20	285.93 0.650	0.000	5.00	14.203	9.23	417.3	0.0	626.3
125.0		0.00	1.46	27.060	45.73	278.74 0.650	0.000	5.00	13.771	8.95	409.4	0.0	607.1
130.0		0.00	1.48	27.365	46.24	271.39 0.650	0.000	5.00	13.340	8.67	401.0	0.0	587.9
132.0	Bot - Section 4	0.00	1.48	27.485	46.45	268.40 0.650	0.000	2.00	5.215	3.39	157.5	0.0	229.8
135.0		0.00	1.49	27.662	46.74	263.89 0.650	0.000	3.00	7.803	5.07	237.1	0.0	558.6
136.0	Top - Section 3	0.00	1.49	27.720	46.84	262.37 0.650	0.000	1.00	2.566	1.67	78.2	0.0	183.7
137.0	Appertunance(s)	0.00	1.50	27.778	46.94	264.65 0.650	0.000	1.00	2.549	1.66	77.8	0.0	71.8
140.0		0.00	1.51	27.951	47.23	260.06 0.650	0.000	3.00	7.544	4.90	231.6	0.0	212.3
145.0		0.00	1.52	28.233	47.71	252.31 0.650	0.000	5.00	12.229	7.95	379.3	0.0	344.1
148.0	Appertunance(s)	0.00	1.53	28.398	47.99	247.60 0.650	0.000	3.00	7.130	4.63	222.4	0.0	200.6
150.0		0.00	1.54	28.507	48.17	244.43 0.650	0.000	2.00	4.667	3.03	146.2	0.0	131.3
155.0		0.00	1.55	28.776	48.63	236.43 0.650	0.000	5.00	11.366	7.39	359.3	0.0	319.6
158.0	Appertunance(s)	0.00	1.56	28.934	48.89	231.58 0.650	0.000	3.00	6.613	4.30	210.2	0.0	185.9
160.0		0.00	1.57	29.038	49.07	228.32 0.650	0.000	2.00	4.322	2.81	137.9	0.0	121.5
165.0		0.00	1.58	29.294	49.50	220.10 0.650	0.000	5.00	10.504	6.83	338.0	0.0	295.2
168.0	Appertunance(s)	0.00	1.59	29.446	49.76	215.12 0.650	0.000	3.00	6.095	3.96	197.2	0.0	171.2
170.0		0.00	1.59	29.545	49.93	211.77 0.650	0.000	2.00	3.977	2.59	129.1	0.0	111.7
175.0		0.00	1.61	29.791	50.34	203.35 0.650	0.000	5.00	9.641	6.27	315.5	0.0	270.7
178.0	Appertunance(s)	0.00	1.61	29.936	50.59	198.25 0.650	0.000	3.00	5.578	3.63	183.4	0.0	156.6



Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

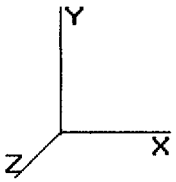
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	14,967.8	0.0	32,204.2

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



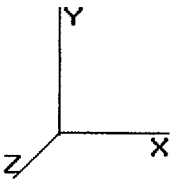
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
12.00	GPS-TMG-HR-26N	1	18.496	31.258	1.00	0.09	0.000	0.000	2.81	0.00	0.00	0.60
12.00	Standoff	1	18.496	31.258	1.00	3.50	0.000	0.000	109.40	0.00	0.00	200.00
86.00	GPS	1	24.358	41.166	1.00	1.00	0.000	0.500	41.17	0.00	20.58	10.00
86.00	Standoff	1	24.318	41.098	1.00	3.50	0.000	0.000	143.84	0.00	0.00	200.00
95.00	GPS	1	25.057	42.347	1.00	1.00	0.000	0.500	42.35	0.00	21.17	10.00
95.00	Standoff	1	25.020	42.283	1.00	3.50	0.000	0.000	147.99	0.00	0.00	200.00
108.0	GPS	1	25.988	43.919	1.00	1.00	0.000	0.500	43.92	0.00	21.96	10.00
108.0	Standoff	1	25.953	43.861	1.00	3.50	0.000	0.000	153.51	0.00	0.00	200.00
137.0	Ericsson RRUS 11	6	27.778	46.946	0.50	8.82	0.000	0.000	414.06	0.00	0.00	330.00
137.0	KMW AM-X-CD-16-65-	3	27.778	46.946	0.79	19.58	0.000	0.000	919.02	0.00	0.00	145.50
137.0	Low Profile Platform	1	27.778	46.946	1.00	26.10	0.000	0.000	1,225.28	0.00	0.00	1,500.00
137.0	Powerwave 7770.00	6	27.778	46.946	0.77	27.17	0.000	0.000	1,275.31	0.00	0.00	210.00
137.0	Powerwave LGP21401	6	27.778	46.946	0.50	3.87	0.000	0.000	181.68	0.00	0.00	84.60
137.0	Powerwave LGP21903	6	27.778	46.946	0.50	0.81	0.000	0.000	38.03	0.00	0.00	33.00
137.0	Raycap DC6-48-60-18-	1	27.778	46.946	1.00	1.47	0.000	0.000	69.01	0.00	0.00	31.80
148.0	Allgon 7250.02	4	28.398	47.993	0.72	11.03	0.000	0.000	529.38	0.00	0.00	60.00
148.0	EMS RR90-17-02DP	2	28.398	47.993	1.00	8.72	0.000	0.000	418.50	0.00	0.00	36.00
148.0	Low Profile Platform	1	28.398	47.993	1.00	21.70	0.000	0.000	1,041.44	0.00	0.00	1,500.00
158.0	Antel BXA-171085-8BF	3	28.934	48.898	0.87	7.67	0.000	0.000	375.21	0.00	0.00	31.50
158.0	Antel BXA-70063/6CF	3	28.934	48.898	0.74	17.16	0.000	0.000	839.12	0.00	0.00	51.00
158.0	Antel LPA-80080/4CF	6	28.934	48.898	0.74	26.91	0.000	0.000	1,315.67	0.00	0.00	72.00
158.0	Low Profile Platform	1	28.934	48.898	1.00	26.10	0.000	0.000	1,276.24	0.00	0.00	1,500.00
158.0	RFS FD9R6004/2C-3L	6	28.934	48.898	0.50	1.11	0.000	0.000	54.28	0.00	0.00	18.60
168.0	Decibel DB980H90A-	6	29.446	49.763	0.79	18.01	0.000	0.000	896.33	0.00	0.00	54.00
168.0	Low Profile Platform	1	29.446	49.763	1.00	21.70	0.000	0.000	1,079.85	0.00	0.00	1,500.00
178.0	72" x 12" Panels	3	30.032	50.754	0.75	18.90	0.000	2.000	959.24	0.00	1,918.49	120.00
178.0	Allgon 7120.16.05.00	9	30.032	50.754	1.22	43.81	0.000	2.000	2,223.53	0.00	4,447.05	135.00
178.0	Low Profile Platform	1	29.936	50.592	1.00	26.10	0.000	0.000	1,320.45	0.00	0.00	1,500.00
									17,136.62			9,743.60

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:20 PM
Location :	Andover Bunker Hill Road, CT		Page: 7
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



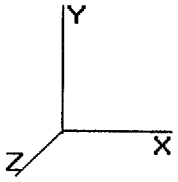
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	477.41	1,725.40	0.00	0.00
10.00	468.64	1,697.45	0.00	0.00
12.00	297.22	871.76	0.00	0.00
15.00	274.88	997.90	0.00	0.00
20.00	451.12	1,640.81	0.00	0.00
25.00	442.36	1,612.86	0.00	0.00
30.00	433.59	1,584.92	0.00	0.00
35.00	432.03	1,556.97	0.00	0.00
40.00	439.58	1,529.02	0.00	0.00
42.75	242.38	829.05	0.00	0.00
45.00	202.47	1,148.18	0.00	0.00
49.00	363.90	2,015.89	0.00	0.00
50.00	90.52	249.63	0.00	0.00
55.00	458.99	1,234.51	0.00	0.00
60.00	460.15	1,211.80	0.00	0.00
65.00	460.16	1,189.10	0.00	0.00
70.00	459.14	1,166.39	0.00	0.00
75.00	457.20	1,143.68	0.00	0.00
80.00	454.43	1,120.98	0.00	0.00
85.00	450.89	1,098.27	0.00	0.00
86.00	274.10	426.93	0.00	20.58
87.00	88.93	215.87	0.00	0.00
90.00	271.23	1,084.84	0.00	0.00
92.00	179.61	714.84	0.00	0.00
95.00	458.68	770.02	0.00	21.17
100.0	444.22	917.25	0.00	0.00
105.0	438.26	898.04	0.00	0.00
108.0	456.61	739.60	0.00	21.96
110.0	171.22	348.92	0.00	0.00
115.0	424.77	858.86	0.00	0.00
120.0	417.29	839.65	0.00	0.00
125.0	409.37	820.44	0.00	0.00
130.0	401.02	801.22	0.00	0.00
132.0	157.46	315.11	0.00	0.00
135.0	237.11	686.56	0.00	0.00
136.0	78.15	226.34	0.00	0.00
137.0	4,200.17	2,449.31	0.00	0.00
140.0	231.64	315.65	0.00	0.00
145.0	379.25	516.30	0.00	0.00
148.0	2,211.75	1,899.91	0.00	0.00
150.0	146.15	180.48	0.00	0.00
155.0	359.28	442.65	0.00	0.00
158.0	4,070.69	1,932.82	0.00	0.00
160.0	137.87	151.02	0.00	0.00
165.0	338.00	368.99	0.00	0.00
168.0	2,173.33	1,769.53	0.00	0.00
170.0	129.08	131.40	0.00	0.00
175.0	315.51	319.94	0.00	0.00
178.0	4,686.63	1,941.10	0.00	6,365.54

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:20 PM
Location :	Andover Bunker Hill Road, CT		Page: 8
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

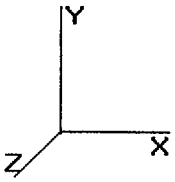
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	32,104.45	48,708.18	0.00	6,429.25

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



9/11/2012 4:18:20 PM
Page: 9

Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

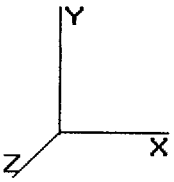
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-32.173	-48.662	0.000	0.000	0.000	-4,113.418	0.000	0.000	0.000	0.000
5.00	-31.824	-46.849	0.000	0.000	0.000	-3,952.557	-0.086	0.000	0.086	-0.159
10.00	-31.438	-45.091	0.000	0.000	0.000	-3,793.439	-0.339	0.000	0.339	-0.321
12.00	-31.200	-44.176	0.000	0.000	0.000	-3,730.564	-0.488	0.000	0.488	-0.388
15.00	-31.018	-43.107	0.000	0.000	0.000	-3,636.966	-0.764	0.000	0.764	-0.488
20.00	-30.672	-41.381	0.000	0.000	0.000	-3,481.879	-1.365	0.000	1.365	-0.655
25.00	-30.327	-39.684	0.000	0.000	0.000	-3,328.522	-2.141	0.000	2.141	-0.824
30.00	-29.983	-38.016	0.000	0.000	0.000	-3,176.890	-3.095	0.000	3.095	-0.995
35.00	-29.633	-36.377	0.000	0.000	0.000	-3,026.977	-4.231	0.000	4.231	-1.169
40.00	-29.243	-34.788	0.000	0.000	0.000	-2,878.815	-5.550	0.000	5.550	-1.346
42.75	-29.035	-33.920	0.000	0.000	0.000	-2,798.397	-6.354	0.000	6.354	-1.445
45.00	-28.868	-32.720	0.000	0.000	0.000	-2,733.071	-7.055	0.000	7.055	-1.527
49.00	-28.496	-30.670	0.000	0.000	0.000	-2,617.602	-8.397	0.000	8.397	-1.672
50.00	-28.465	-30.360	0.000	0.000	0.000	-2,589.107	-8.751	0.000	8.751	-1.710
55.00	-28.075	-29.037	0.000	0.000	0.000	-2,446.784	-10.655	0.000	10.655	-1.922
60.00	-27.677	-27.738	0.000	0.000	0.000	-2,306.409	-12.783	0.000	12.783	-2.136
65.00	-27.271	-26.465	0.000	0.000	0.000	-2,168.027	-15.135	0.000	15.135	-2.352
70.00	-26.858	-25.218	0.000	0.000	0.000	-2,031.675	-17.714	0.000	17.714	-2.569
75.00	-26.440	-23.996	0.000	0.000	0.000	-1,897.387	-20.521	0.000	20.521	-2.788
80.00	-26.017	-22.800	0.000	0.000	0.000	-1,765.190	-23.557	0.000	23.557	-3.007
85.00	-25.556	-21.669	0.000	0.000	0.000	-1,635.109	-26.823	0.000	26.823	-3.226
86.00	-25.275	-21.239	0.000	0.000	0.000	-1,609.533	-27.503	0.000	27.503	-3.271
87.00	-25.207	-20.989	0.000	0.000	0.000	-1,584.258	-28.193	0.000	28.193	-3.316
90.00	-24.911	-19.874	0.000	0.000	0.000	-1,508.638	-30.319	0.000	30.319	-3.450
92.00	-24.725	-19.123	0.000	0.000	0.000	-1,458.818	-31.783	0.000	31.783	-3.539
95.00	-24.279	-18.303	0.000	0.000	0.000	-1,384.622	-34.049	0.000	34.049	-3.672
100.0	-23.848	-17.318	0.000	0.000	0.000	-1,263.228	-38.022	0.000	38.022	-3.914
105.0	-23.402	-16.376	0.000	0.000	0.000	-1,143.989	-42.246	0.000	42.246	-4.152
108.0	-22.925	-15.624	0.000	0.000	0.000	-1,073.763	-44.899	0.000	44.899	-4.295
110.0	-22.771	-15.224	0.000	0.000	0.000	-1,027.914	-46.717	0.000	46.717	-4.390
115.0	-22.336	-14.314	0.000	0.000	0.000	-914.062	-51.434	0.000	51.434	-4.618
120.0	-21.902	-13.430	0.000	0.000	0.000	-802.382	-56.384	0.000	56.384	-4.838
125.0	-21.468	-12.571	0.000	0.000	0.000	-692.875	-61.560	0.000	61.560	-5.049
130.0	-21.025	-11.760	0.000	0.000	0.000	-585.536	-66.948	0.000	66.948	-5.246
132.0	-20.858	-11.426	0.000	0.000	0.000	-543.488	-69.160	0.000	69.160	-5.323
135.0	-20.570	-10.739	0.000	0.000	0.000	-480.916	-72.536	0.000	72.536	-5.433
136.0	-20.478	-10.509	0.000	0.000	0.000	-460.346	-73.677	0.000	73.677	-5.468
137.0	-16.076	-8.447	0.000	0.000	0.000	-439.868	-74.824	0.000	74.824	-5.503
140.0	-15.841	-8.104	0.000	0.000	0.000	-391.641	-78.325	0.000	78.325	-5.649
145.0	-15.434	-7.583	0.000	0.000	0.000	-312.436	-84.352	0.000	84.352	-5.868
148.0	-13.048	-5.900	0.000	0.000	0.000	-266.134	-88.073	0.000	88.073	-5.988
150.0	-12.896	-5.709	0.000	0.000	0.000	-240.038	-90.594	0.000	90.594	-6.063
155.0	-12.502	-5.281	0.000	0.000	0.000	-175.560	-97.022	0.000	97.022	-6.224
158.0	-8.249	-3.795	0.000	0.000	0.000	-138.054	-100.952	0.000	100.952	-6.305
160.0	-8.100	-3.650	0.000	0.000	0.000	-121.557	-103.599	0.000	103.599	-6.353
165.0	-7.727	-3.311	0.000	0.000	0.000	-81.056	-110.296	0.000	110.296	-6.452
168.0	-5.369	-1.795	0.000	0.000	0.000	-57.874	-114.357	0.000	114.357	-6.499
170.0	-5.227	-1.676	0.000	0.000	0.000	-47.136	-117.080	0.000	117.080	-6.524
175.0	-4.878	-1.392	0.000	0.000	0.000	-20.999	-123.923	0.000	123.923	-6.567
178.0	-4.687	0.000	0.000	0.000	0.000	-6.366	-128.045	0.000	128.045	-6.578

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



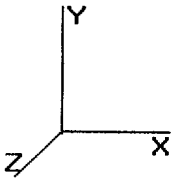
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.54	0.72	0.00	0.00	0.00	39.63	40.19	52.0	0.0	0.773
5.00	0.53	0.73	0.00	0.00	0.00	39.52	40.08	52.0	0.0	0.771
10.00	0.52	0.73	0.00	0.00	0.00	39.40	39.94	52.0	0.0	0.768
12.00	0.52	0.73	0.00	0.00	0.00	39.34	39.88	52.0	0.0	0.767
15.00	0.51	0.74	0.00	0.00	0.00	39.26	39.79	52.0	0.0	0.765
20.00	0.50	0.75	0.00	0.00	0.00	39.10	39.62	52.0	0.0	0.762
25.00	0.49	0.75	0.00	0.00	0.00	38.91	39.42	52.0	0.0	0.758
30.00	0.48	0.76	0.00	0.00	0.00	38.69	39.19	52.0	0.0	0.754
35.00	0.47	0.77	0.00	0.00	0.00	38.44	38.93	52.0	0.0	0.749
40.00	0.46	0.77	0.00	0.00	0.00	38.16	38.63	52.0	0.0	0.743
42.75	0.45	0.78	0.00	0.00	0.00	37.99	38.46	52.0	0.0	0.740
45.00	0.44	0.78	0.00	0.00	0.00	37.84	38.30	52.0	0.0	0.737
49.00	0.50	0.94	0.00	0.00	0.00	44.37	44.91	52.0	0.0	0.864
50.00	0.50	0.95	0.00	0.00	0.00	44.28	44.81	52.0	0.0	0.862
55.00	0.49	0.96	0.00	0.00	0.00	43.76	44.28	52.0	0.0	0.852
60.00	0.48	0.96	0.00	0.00	0.00	43.18	43.69	52.0	0.0	0.841
65.00	0.47	0.97	0.00	0.00	0.00	42.54	43.04	52.0	0.0	0.828
70.00	0.46	0.98	0.00	0.00	0.00	41.82	42.31	52.0	0.0	0.814
75.00	0.45	0.99	0.00	0.00	0.00	41.03	41.51	52.0	0.0	0.799
80.00	0.43	1.00	0.00	0.00	0.00	40.14	40.61	52.0	0.0	0.781
85.00	0.42	1.01	0.00	0.00	0.00	39.16	39.62	52.0	0.0	0.762
86.00	0.42	1.00	0.00	0.00	0.00	38.95	39.41	52.0	0.0	0.758
87.00	0.41	1.00	0.00	0.00	0.00	38.75	39.20	52.0	0.0	0.754
90.00	0.40	1.01	0.00	0.00	0.00	38.10	38.53	52.0	0.0	0.741
92.00	0.45	1.17	0.00	0.00	0.00	42.72	43.22	52.0	0.0	0.831
95.00	0.44	1.17	0.00	0.00	0.00	41.87	42.36	52.0	0.0	0.815
100.00	0.42	1.18	0.00	0.00	0.00	40.36	40.83	52.0	0.0	0.786
105.00	0.41	1.19	0.00	0.00	0.00	38.67	39.14	52.0	0.0	0.753
108.00	0.40	1.19	0.00	0.00	0.00	37.58	38.03	52.0	0.0	0.732
110.00	0.40	1.19	0.00	0.00	0.00	36.83	37.28	52.0	0.0	0.717
115.00	0.38	1.20	0.00	0.00	0.00	34.77	35.21	52.0	0.0	0.677
120.00	0.37	1.22	0.00	0.00	0.00	32.46	32.90	52.0	0.0	0.633
125.00	0.36	1.23	0.00	0.00	0.00	29.87	30.30	52.0	0.0	0.583
130.00	0.35	1.25	0.00	0.00	0.00	26.96	27.39	52.0	0.0	0.527
132.00	0.34	1.25	0.00	0.00	0.00	25.70	26.13	52.0	0.0	0.503
135.00	0.33	1.26	0.00	0.00	0.00	23.70	24.12	52.0	0.0	0.464
136.00	0.50	1.95	0.00	0.00	0.00	34.67	35.33	52.0	0.0	0.680
137.00	0.40	1.54	0.00	0.00	0.00	33.59	34.09	52.0	0.0	0.656
140.00	0.39	1.55	0.00	0.00	0.00	31.18	31.68	52.0	0.0	0.610
145.00	0.38	1.57	0.00	0.00	0.00	26.71	27.23	52.0	0.0	0.524
148.00	0.30	1.35	0.00	0.00	0.00	23.78	24.19	52.0	0.0	0.465
150.00	0.30	1.36	0.00	0.00	0.00	22.10	22.52	52.0	0.0	0.433
155.00	0.29	1.37	0.00	0.00	0.00	17.45	17.89	52.0	0.0	0.344
158.00	0.21	0.92	0.00	0.00	0.00	14.39	14.69	52.0	0.0	0.283
160.00	0.21	0.92	0.00	0.00	0.00	13.09	13.39	52.0	0.0	0.258
165.00	0.19	0.92	0.00	0.00	0.00	9.48	9.81	52.0	0.0	0.189
168.00	0.11	0.65	0.00	0.00	0.00	7.13	7.33	52.0	0.0	0.141
170.00	0.10	0.65	0.00	0.00	0.00	6.02	6.22	52.0	0.0	0.120
175.00	0.09	0.63	0.00	0.00	0.00	2.93	3.22	52.0	0.0	0.062
178.00	0.00	0.62	0.00	0.00	0.00	0.94	1.43	52.0	0.0	0.028

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:20 PM
Location :	Andover Bunker Hill Road, CT		Page: 11
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



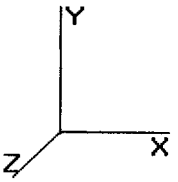
Load Case: No Ice — 85.00 mph Wind with No Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



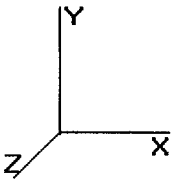
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	349.09 0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	13.871	23.44	342.74 0.650	0.500	5.00	23.913	15.54	364.4	174.0	1,683.1
10.00		0.00	1.00	13.871	23.44	336.39 0.650	0.500	5.00	23.482	15.26	357.8	170.8	1,651.9
12.00	Appertunance(s)	0.00	1.00	13.871	23.44	333.85 0.650	0.500	2.00	9.272	6.03	141.3	67.8	652.4
15.00		0.00	1.00	13.871	23.44	330.04 0.650	0.500	3.00	13.779	8.96	210.0	100.5	969.1
20.00		0.00	1.00	13.871	23.44	323.69 0.650	0.500	5.00	22.620	14.70	344.7	164.4	1,589.6
25.00		0.00	1.00	13.871	23.44	317.34 0.650	0.500	5.00	22.188	14.42	338.1	161.2	1,558.5
30.00		0.00	1.00	13.871	23.44	311.00 0.650	0.500	5.00	21.757	14.14	331.5	158.0	1,527.4
35.00		0.00	1.01	14.106	23.84	307.22 0.650	0.500	5.00	21.326	13.86	330.5	154.8	1,496.2
40.00		0.00	1.05	14.655	24.76	306.61 0.650	0.500	5.00	20.895	13.58	336.4	151.6	1,465.1
42.75	Bot - Section 2	0.00	1.07	14.936	25.24	305.91 0.650	0.500	2.75	11.308	7.35	185.5	82.4	792.9
45.00		0.00	1.09	15.156	25.61	305.17 0.650	0.500	2.25	9.307	6.05	155.0	67.9	1,119.1
49.00	Top - Section 1	0.00	1.12	15.530	26.24	303.54 0.650	0.500	4.00	16.331	10.62	278.6	118.7	1,962.1
50.00		0.00	1.12	15.620	26.39	308.35 0.650	0.500	1.00	4.040	2.63	69.3	29.5	236.1
55.00		0.00	1.15	16.051	27.12	305.75 0.650	0.500	5.00	19.939	12.96	351.6	144.5	1,163.5
60.00		0.00	1.18	16.455	27.80	302.66 0.650	0.500	5.00	19.508	12.68	352.6	141.3	1,137.6
65.00		0.00	1.21	16.836	28.45	299.15 0.650	0.500	5.00	19.077	12.40	352.8	138.1	1,111.7
70.00		0.00	1.24	17.196	29.06	295.26 0.650	0.500	5.00	18.646	12.12	352.2	134.9	1,085.8
75.00		0.00	1.26	17.538	29.64	291.05 0.650	0.500	5.00	18.214	11.84	350.9	131.8	1,059.9
80.00		0.00	1.28	17.865	30.19	286.54 0.650	0.500	5.00	17.783	11.56	349.0	128.6	1,034.0
85.00		0.00	1.31	18.177	30.71	281.76 0.650	0.500	5.00	17.352	11.28	346.5	125.4	1,008.1
86.00	Appertunance(s)	0.00	1.31	18.238	30.82	280.78 0.650	0.500	1.00	3.419	2.22	68.5	24.9	198.8
87.00	Bot - Section 3	0.00	1.31	18.298	30.92	279.78 0.650	0.500	1.00	3.401	2.21	68.4	24.8	197.7
90.00		0.00	1.33	18.476	31.22	276.74 0.650	0.500	3.00	10.272	6.68	208.5	74.6	1,030.5
92.00	Top - Section 2	0.00	1.34	18.592	31.42	274.67 0.650	0.500	2.00	6.762	4.40	138.1	49.2	678.1
95.00	Appertunance(s)	0.00	1.35	18.764	31.71	276.41 0.650	0.500	3.00	10.014	6.51	206.4	72.7	503.8
100.0		0.00	1.37	19.041	32.17	271.01 0.650	0.500	5.00	16.344	10.62	341.9	117.9	821.1
105.0		0.00	1.39	19.308	32.63	265.41 0.650	0.500	5.00	15.913	10.34	337.5	114.7	798.7
108.0	Appertunance(s)	0.00	1.40	19.464	32.89	261.97 0.650	0.500	3.00	9.341	6.07	199.7	67.7	468.8
110.0		0.00	1.41	19.566	33.06	259.64 0.650	0.500	2.00	6.141	3.99	132.0	44.6	308.2
115.0		0.00	1.42	19.816	33.49	253.70 0.650	0.500	5.00	15.051	9.78	327.6	108.3	753.9
120.0		0.00	1.44	20.059	33.89	247.62 0.650	0.500	5.00	14.619	9.50	322.1	105.1	731.5
125.0		0.00	1.46	20.294	34.29	241.39 0.650	0.500	5.00	14.188	9.22	316.3	101.9	709.1
130.0		0.00	1.48	20.523	34.68	235.02 0.650	0.500	5.00	13.757	8.94	310.1	98.7	686.7
132.0	Bot - Section 4	0.00	1.48	20.613	34.83	232.44 0.650	0.500	2.00	5.382	3.50	121.9	39.0	268.8
135.0		0.00	1.49	20.745	35.06	228.52 0.650	0.500	3.00	8.053	5.23	183.5	58.1	616.7
136.0	Top - Section 3	0.00	1.49	20.789	35.13	227.21 0.650	0.500	1.00	2.650	1.72	60.5	19.3	202.9
137.0	Appertunance(s)	0.00	1.50	20.833	35.20	229.18 0.650	0.500	1.00	2.633	1.71	60.2	19.1	90.9
140.0		0.00	1.51	20.962	35.42	225.21 0.650	0.500	3.00	7.794	5.07	179.5	56.2	268.5
145.0		0.00	1.52	21.173	35.78	218.50 0.650	0.500	5.00	12.645	8.22	294.1	90.5	434.6
148.0	Appertunance(s)	0.00	1.53	21.297	35.99	214.42 0.650	0.500	3.00	7.380	4.80	172.7	53.2	253.7
150.0		0.00	1.54	21.379	36.13	211.68 0.650	0.500	2.00	4.834	3.14	113.5	34.9	166.2
155.0		0.00	1.55	21.581	36.47	204.75 0.650	0.500	5.00	11.783	7.66	279.3	84.1	403.8
158.0	Appertunance(s)	0.00	1.56	21.699	36.67	200.55 0.650	0.500	3.00	6.863	4.46	163.6	49.3	235.2
160.0		0.00	1.57	21.777	36.80	197.73 0.650	0.500	2.00	4.489	2.92	107.4	32.4	153.9
165.0		0.00	1.58	21.969	37.12	190.61 0.650	0.500	5.00	10.920	7.10	263.5	77.7	372.9
168.0	Appertunance(s)	0.00	1.59	22.083	37.32	186.29 0.650	0.500	3.00	6.345	4.12	153.9	45.5	216.7
170.0		0.00	1.59	22.158	37.44	183.40 0.650	0.500	2.00	4.144	2.69	100.9	29.8	141.5
175.0		0.00	1.61	22.342	37.75	176.10 0.650	0.500	5.00	10.058	6.54	246.8	71.3	342.1
178.0	Appertunance(s)	0.00	1.61	22.451	37.94	171.68 0.650	0.500	3.00	5.828	3.79	143.7	41.7	198.2

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:20 PM
Location :	Andover Bunker Hill Road, CT		Page: 13
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

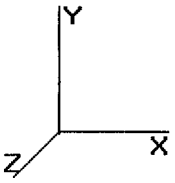
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	11,520.7	4,353.5	36,557.7	

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

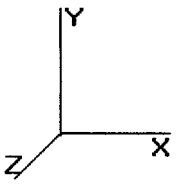


Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
12.00	GPS-TMG-HR-26N	1	13.871	23.442	1.00	0.14	0.000	0.000	3.28	0.00	0.00	1.90
12.00	Standoff	1	13.871	23.442	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
86.00	GPS	1	18.268	30.873	1.00	0.00	0.000	0.500	0.00	0.00	0.00	0.00
86.00	Standoff	1	18.238	30.821	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
95.00	GPS	1	18.792	31.758	1.00	0.00	0.000	0.500	0.00	0.00	0.00	0.00
95.00	Standoff	1	18.764	31.711	1.00	0.00	0.000	0.000	0.00	0.00	0.00	0.00
108.0	GPS	1	19.490	32.937	1.00	1.21	0.000	0.500	39.85	0.00	19.93	18.24
108.0	Standoff	1	19.464	32.894	1.00	4.50	0.000	0.000	148.02	0.00	0.00	300.00
137.0	Ericsson RRUS 11	6	20.833	35.207	0.50	9.87	0.000	0.000	347.49	0.00	0.00	445.80
137.0	KMW AM-X-CD-16-65-	3	20.833	35.207	0.79	21.52	0.000	0.000	757.64	0.00	0.00	285.00
137.0	Low Profile Platform	1	20.833	35.207	1.00	31.60	0.000	0.000	1,112.55	0.00	0.00	1,700.00
137.0	Powerwave 7770.00	6	20.833	35.207	0.77	30.17	0.000	0.000	1,062.15	0.00	0.00	405.78
137.0	Powerwave LGP21401	6	20.833	35.207	0.50	4.59	0.000	0.000	161.60	0.00	0.00	127.56
137.0	Powerwave LGP21903	6	20.833	35.207	0.50	1.14	0.000	0.000	40.14	0.00	0.00	47.40
137.0	Raycap DC6-48-60-18-	1	20.833	35.207	1.00	1.67	0.000	0.000	58.80	0.00	0.00	49.50
148.0	Allgon 7250.02	4	21.297	35.993	0.72	12.70	0.000	0.000	457.14	0.00	0.00	133.88
148.0	EMS RR90-17-02DP	2	21.297	35.993	1.00	9.98	0.000	0.000	359.21	0.00	0.00	80.00
148.0	Low Profile Platform	1	21.297	35.993	1.00	27.20	0.000	0.000	979.00	0.00	0.00	1,700.00
158.0	Antel BXA-171085-8BF	3	21.699	36.671	0.87	16.16	0.000	0.000	592.46	0.00	0.00	189.00
158.0	Antel BXA-70063/6CF	3	21.699	36.671	0.74	18.96	0.000	0.000	695.24	0.00	0.00	174.00
158.0	Antel LPA-80080/4CF	6	21.699	36.671	0.74	29.53	0.000	0.000	1,082.76	0.00	0.00	270.72
158.0	Low Profile Platform	1	21.699	36.671	1.00	31.60	0.000	0.000	1,158.81	0.00	0.00	1,700.00
158.0	RFS FD9R6004/2C-3L	6	21.699	36.671	0.50	1.50	0.000	0.000	55.01	0.00	0.00	32.40
168.0	Decibel DB980H90A-	6	22.083	37.320	0.79	21.33	0.000	0.000	796.04	0.00	0.00	174.00
168.0	Low Profile Platform	1	22.083	37.320	1.00	27.20	0.000	0.000	1,015.10	0.00	0.00	1,700.00
178.0	72" x 12" Panels	3	22.522	38.063	0.75	20.77	0.000	2.000	790.47	0.00	1,580.95	261.00
178.0	Allgon 7120.16.05.00	9	22.522	38.063	1.22	70.16	0.000	2.000	2,670.58	0.00	5,341.17	477.00
178.0	Low Profile Platform	1	22.451	37.942	1.00	31.60	0.000	0.000	1,198.96	0.00	0.00	1,700.00
									15,582.29			11,973.18



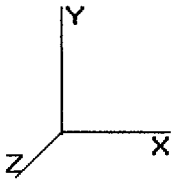
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	364.38	1,899.36	0.00	0.00
10.00	357.81	1,868.21	0.00	0.00
12.00	144.57	740.85	0.00	0.00
15.00	209.95	1,098.44	0.00	0.00
20.00	344.67	1,805.18	0.00	0.00
25.00	338.10	1,774.04	0.00	0.00
30.00	331.52	1,742.90	0.00	0.00
35.00	330.46	1,711.76	0.00	0.00
40.00	336.37	1,680.62	0.00	0.00
42.75	185.54	911.47	0.00	0.00
45.00	154.96	1,216.10	0.00	0.00
49.00	278.60	2,134.58	0.00	0.00
50.00	69.31	279.17	0.00	0.00
55.00	351.57	1,379.04	0.00	0.00
60.00	352.62	1,353.14	0.00	0.00
65.00	352.80	1,327.24	0.00	0.00
70.00	352.21	1,301.34	0.00	0.00
75.00	350.91	1,275.44	0.00	0.00
80.00	348.98	1,249.54	0.00	0.00
85.00	346.46	1,223.63	0.00	0.00
86.00	68.49	241.87	0.00	0.00
87.00	68.37	240.69	0.00	0.00
90.00	208.49	1,159.41	0.00	0.00
92.00	138.11	764.05	0.00	0.00
95.00	206.40	632.68	0.00	0.00
100.0	341.86	1,035.15	0.00	0.00
105.0	337.51	1,012.75	0.00	0.00
108.0	387.60	915.52	0.00	19.93
110.0	131.99	393.53	0.00	0.00
115.0	327.63	967.18	0.00	0.00
120.0	322.13	944.78	0.00	0.00
125.0	316.30	922.37	0.00	0.00
130.0	310.14	899.96	0.00	0.00
132.0	121.86	354.09	0.00	0.00
135.0	183.52	744.70	0.00	0.00
136.0	60.51	245.59	0.00	0.00
137.0	3,600.61	3,194.58	0.00	0.00
140.0	179.47	371.87	0.00	0.00
145.0	294.11	606.81	0.00	0.00
148.0	1,968.00	2,270.95	0.00	0.00
150.0	113.52	215.41	0.00	0.00
155.0	279.32	526.77	0.00	0.00
158.0	3,747.86	2,675.16	0.00	0.00
160.0	107.38	183.39	0.00	0.00
165.0	263.54	446.73	0.00	0.00
168.0	1,965.06	2,135.02	0.00	0.00
170.0	100.86	161.21	0.00	0.00
175.0	246.84	391.28	0.00	0.00
178.0	4,803.73	2,665.75	0.00	6,922.11

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:21 PM
Location :	Andover Bunker Hill Road, CT		Page: 16
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

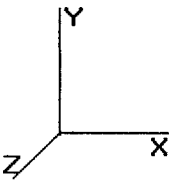
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	27,103.02	55,291.29	0.00	6,942.04

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

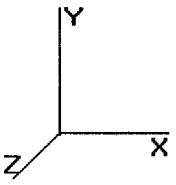
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-27.172	-55.257	0.000	0.000	0.000	-3,650.100	0.000	0.000	0.000	0.000
5.00	-26.938	-53.291	0.000	0.000	0.000	-3,514.244	-0.076	0.000	0.076	-0.142
10.00	-26.664	-51.377	0.000	0.000	0.000	-3,379.557	-0.301	0.000	0.301	-0.286
12.00	-26.581	-50.603	0.000	0.000	0.000	-3,326.230	-0.434	0.000	0.434	-0.345
15.00	-26.467	-49.451	0.000	0.000	0.000	-3,246.488	-0.680	0.000	0.680	-0.434
20.00	-26.231	-47.580	0.000	0.000	0.000	-3,114.157	-1.214	0.000	1.214	-0.583
25.00	-25.994	-45.741	0.000	0.000	0.000	-2,983.006	-1.906	0.000	1.906	-0.735
30.00	-25.757	-43.933	0.000	0.000	0.000	-2,853.036	-2.757	0.000	2.757	-0.888
35.00	-25.514	-42.157	0.000	0.000	0.000	-2,724.253	-3.772	0.000	3.772	-1.045
40.00	-25.232	-40.429	0.000	0.000	0.000	-2,596.685	-4.951	0.000	4.951	-1.204
42.75	-25.083	-39.486	0.000	0.000	0.000	-2,527.298	-5.671	0.000	5.671	-1.293
45.00	-24.969	-38.229	0.000	0.000	0.000	-2,470.862	-6.298	0.000	6.298	-1.368
49.00	-24.689	-36.067	0.000	0.000	0.000	-2,370.988	-7.501	0.000	7.501	-1.499
50.00	-24.683	-35.740	0.000	0.000	0.000	-2,346.300	-7.818	0.000	7.818	-1.533
55.00	-24.409	-34.289	0.000	0.000	0.000	-2,222.885	-9.527	0.000	9.527	-1.725
60.00	-24.126	-32.866	0.000	0.000	0.000	-2,100.844	-11.438	0.000	11.438	-1.920
65.00	-23.835	-31.470	0.000	0.000	0.000	-1,980.217	-13.554	0.000	13.554	-2.117
70.00	-23.538	-30.101	0.000	0.000	0.000	-1,861.043	-15.878	0.000	15.878	-2.316
75.00	-23.235	-28.760	0.000	0.000	0.000	-1,743.356	-18.410	0.000	18.410	-2.516
80.00	-22.926	-27.447	0.000	0.000	0.000	-1,627.185	-21.153	0.000	21.153	-2.718
85.00	-22.575	-26.195	0.000	0.000	0.000	-1,512.558	-24.107	0.000	24.107	-2.920
86.00	-22.513	-25.940	0.000	0.000	0.000	-1,489.983	-24.723	0.000	24.723	-2.962
87.00	-22.470	-25.671	0.000	0.000	0.000	-1,467.471	-25.348	0.000	25.348	-3.004
90.00	-22.244	-24.484	0.000	0.000	0.000	-1,400.063	-27.275	0.000	27.275	-3.128
92.00	-22.106	-23.689	0.000	0.000	0.000	-1,355.577	-28.602	0.000	28.602	-3.211
95.00	-21.935	-23.002	0.000	0.000	0.000	-1,289.259	-30.659	0.000	30.659	-3.335
100.0	-21.617	-21.905	0.000	0.000	0.000	-1,179.588	-34.270	0.000	34.270	-3.560
105.0	-21.280	-20.850	0.000	0.000	0.000	-1,071.505	-38.116	0.000	38.116	-3.782
108.0	-20.871	-19.922	0.000	0.000	0.000	-1,007.646	-40.534	0.000	40.534	-3.916
110.0	-20.764	-19.483	0.000	0.000	0.000	-965.906	-42.193	0.000	42.193	-4.006
115.0	-20.436	-18.467	0.000	0.000	0.000	-862.088	-46.501	0.000	46.501	-4.220
120.0	-20.106	-17.477	0.000	0.000	0.000	-759.909	-51.030	0.000	51.030	-4.429
125.0	-19.774	-16.516	0.000	0.000	0.000	-659.381	-55.772	0.000	55.772	-4.628
130.0	-19.426	-15.601	0.000	0.000	0.000	-560.513	-60.716	0.000	60.716	-4.817
132.0	-19.299	-15.228	0.000	0.000	0.000	-521.661	-62.748	0.000	62.748	-4.891
135.0	-19.069	-14.479	0.000	0.000	0.000	-463.766	-65.852	0.000	65.852	-4.996
136.0	-18.996	-14.228	0.000	0.000	0.000	-444.698	-66.901	0.000	66.901	-5.030
137.0	-15.146	-11.339	0.000	0.000	0.000	-425.702	-67.958	0.000	67.958	-5.064
140.0	-14.968	-10.938	0.000	0.000	0.000	-380.267	-71.182	0.000	71.182	-5.205
145.0	-14.648	-10.320	0.000	0.000	0.000	-305.428	-76.743	0.000	76.743	-5.418
148.0	-12.486	-8.226	0.000	0.000	0.000	-261.484	-80.182	0.000	80.182	-5.536
150.0	-12.369	-7.997	0.000	0.000	0.000	-236.512	-82.514	0.000	82.514	-5.610
155.0	-12.054	-7.476	0.000	0.000	0.000	-174.668	-88.469	0.000	88.469	-5.769
158.0	-8.060	-5.185	0.000	0.000	0.000	-138.506	-92.116	0.000	92.116	-5.850
160.0	-7.942	-5.003	0.000	0.000	0.000	-122.386	-94.573	0.000	94.573	-5.899
165.0	-7.639	-4.577	0.000	0.000	0.000	-82.678	-100.797	0.000	100.797	-5.999
168.0	-5.462	-2.656	0.000	0.000	0.000	-59.762	-104.576	0.000	104.576	-6.046
170.0	-5.347	-2.503	0.000	0.000	0.000	-48.837	-107.110	0.000	107.110	-6.072
175.0	-5.061	-2.138	0.000	0.000	0.000	-22.104	-113.484	0.000	113.484	-6.117
178.0	-4.804	0.000	0.000	0.000	0.000	-6.922	-117.326	0.000	117.326	-6.130

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



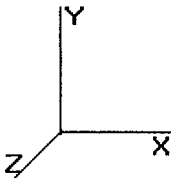
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.62	0.61	0.00	0.00	0.00	35.17	35.80	52.0	0.0	0.689
5.00	0.61	0.62	0.00	0.00	0.00	35.14	35.76	52.0	0.0	0.688
10.00	0.60	0.62	0.00	0.00	0.00	35.10	35.71	52.0	0.0	0.687
12.00	0.59	0.63	0.00	0.00	0.00	35.08	35.69	52.0	0.0	0.687
15.00	0.58	0.63	0.00	0.00	0.00	35.04	35.65	52.0	0.0	0.686
20.00	0.57	0.64	0.00	0.00	0.00	34.97	35.56	52.0	0.0	0.684
25.00	0.56	0.64	0.00	0.00	0.00	34.87	35.45	52.0	0.0	0.682
30.00	0.55	0.65	0.00	0.00	0.00	34.75	35.31	52.0	0.0	0.679
35.00	0.54	0.66	0.00	0.00	0.00	34.60	35.15	52.0	0.0	0.676
40.00	0.53	0.67	0.00	0.00	0.00	34.42	34.97	52.0	0.0	0.673
42.75	0.52	0.67	0.00	0.00	0.00	34.31	34.85	52.0	0.0	0.670
45.00	0.51	0.67	0.00	0.00	0.00	34.21	34.74	52.0	0.0	0.668
49.00	0.59	0.82	0.00	0.00	0.00	40.19	40.81	52.0	0.0	0.785
50.00	0.59	0.82	0.00	0.00	0.00	40.13	40.74	52.0	0.0	0.784
55.00	0.58	0.83	0.00	0.00	0.00	39.76	40.36	52.0	0.0	0.776
60.00	0.57	0.84	0.00	0.00	0.00	39.33	39.93	52.0	0.0	0.768
65.00	0.56	0.85	0.00	0.00	0.00	38.85	39.44	52.0	0.0	0.759
70.00	0.55	0.86	0.00	0.00	0.00	38.31	38.88	52.0	0.0	0.748
75.00	0.53	0.87	0.00	0.00	0.00	37.70	38.26	52.0	0.0	0.736
80.00	0.52	0.88	0.00	0.00	0.00	37.00	37.56	52.0	0.0	0.723
85.00	0.51	0.89	0.00	0.00	0.00	36.22	36.77	52.0	0.0	0.707
86.00	0.51	0.89	0.00	0.00	0.00	36.06	36.60	52.0	0.0	0.704
87.00	0.51	0.89	0.00	0.00	0.00	35.89	36.43	52.0	0.0	0.701
90.00	0.49	0.90	0.00	0.00	0.00	35.36	35.88	52.0	0.0	0.690
92.00	0.56	1.05	0.00	0.00	0.00	39.70	40.29	52.0	0.0	0.775
95.00	0.55	1.06	0.00	0.00	0.00	38.99	39.58	52.0	0.0	0.761
100.00	0.54	1.07	0.00	0.00	0.00	37.69	38.27	52.0	0.0	0.736
105.00	0.53	1.08	0.00	0.00	0.00	36.22	36.79	52.0	0.0	0.708
108.00	0.51	1.08	0.00	0.00	0.00	35.26	35.82	52.0	0.0	0.689
110.00	0.51	1.09	0.00	0.00	0.00	34.60	35.16	52.0	0.0	0.676
115.00	0.49	1.10	0.00	0.00	0.00	32.79	33.34	52.0	0.0	0.641
120.00	0.48	1.12	0.00	0.00	0.00	30.74	31.28	52.0	0.0	0.602
125.00	0.47	1.13	0.00	0.00	0.00	28.43	28.96	52.0	0.0	0.557
130.00	0.46	1.15	0.00	0.00	0.00	25.81	26.34	52.0	0.0	0.507
132.00	0.45	1.16	0.00	0.00	0.00	24.67	25.21	52.0	0.0	0.485
135.00	0.44	1.17	0.00	0.00	0.00	22.85	23.38	52.0	0.0	0.450
136.00	0.67	1.81	0.00	0.00	0.00	33.49	34.31	52.0	0.0	0.660
137.00	0.54	1.45	0.00	0.00	0.00	32.51	33.14	52.0	0.0	0.638
140.00	0.53	1.47	0.00	0.00	0.00	30.27	30.91	52.0	0.0	0.595
145.00	0.52	1.49	0.00	0.00	0.00	26.11	26.75	52.0	0.0	0.515
148.00	0.42	1.29	0.00	0.00	0.00	23.36	23.89	52.0	0.0	0.460
150.00	0.42	1.30	0.00	0.00	0.00	21.77	22.30	52.0	0.0	0.429
155.00	0.41	1.32	0.00	0.00	0.00	17.36	17.91	52.0	0.0	0.345
158.00	0.29	0.90	0.00	0.00	0.00	14.44	14.81	52.0	0.0	0.285
160.00	0.28	0.90	0.00	0.00	0.00	13.18	13.55	52.0	0.0	0.261
165.00	0.27	0.91	0.00	0.00	0.00	9.67	10.07	52.0	0.0	0.194
168.00	0.16	0.66	0.00	0.00	0.00	7.36	7.61	52.0	0.0	0.146
170.00	0.15	0.66	0.00	0.00	0.00	6.23	6.49	52.0	0.0	0.125
175.00	0.14	0.66	0.00	0.00	0.00	3.09	3.42	52.0	0.0	0.066
178.00	0.00	0.64	0.00	0.00	0.00	1.02	1.51	52.0	0.0	0.029

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:21 PM
Location :	Andover Bunker Hill Road, CT		Page: 19
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



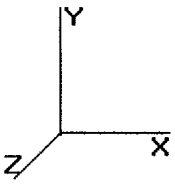
Load Case: Ice — 73.61 mph Wind with Ice — 26 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



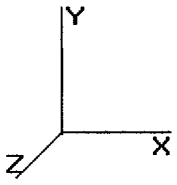
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.81	237.12	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	232.81	0.650	0.000	5.00	23.497	15.27	165.2	0.0	1,509.1
10.00		0.00	1.00	6.400	10.81	228.49	0.650	0.000	5.00	23.066	14.99	162.2	0.0	1,481.2
12.00	Appertunance(s)	0.00	1.00	6.400	10.81	226.77	0.650	0.000	2.00	9.105	5.92	64.0	0.0	584.6
15.00		0.00	1.00	6.400	10.81	224.18	0.650	0.000	3.00	13.529	8.79	95.1	0.0	868.6
20.00		0.00	1.00	6.400	10.81	219.87	0.650	0.000	5.00	22.203	14.43	156.1	0.0	1,425.3
25.00		0.00	1.00	6.400	10.81	215.56	0.650	0.000	5.00	21.772	14.15	153.1	0.0	1,397.3
30.00		0.00	1.00	6.400	10.81	211.24	0.650	0.000	5.00	21.340	13.87	150.0	0.0	1,369.4
35.00		0.00	1.01	6.509	10.99	208.68	0.650	0.000	5.00	20.909	13.59	149.5	0.0	1,341.4
40.00		0.00	1.05	6.762	11.42	208.26	0.650	0.000	5.00	20.478	13.31	152.1	0.0	1,313.5
42.75	Bot - Section 2	0.00	1.07	6.891	11.64	207.79	0.650	0.000	2.75	11.079	7.20	83.9	0.0	710.5
45.00		0.00	1.09	6.993	11.81	207.29	0.650	0.000	2.25	9.120	5.93	70.1	0.0	1,051.2
49.00	Top - Section 1	0.00	1.12	7.165	12.10	206.18	0.650	0.000	4.00	15.998	10.40	125.9	0.0	1,843.5
50.00		0.00	1.12	7.207	12.17	209.45	0.650	0.000	1.00	3.956	2.57	31.3	0.0	206.5
55.00		0.00	1.15	7.406	12.51	207.68	0.650	0.000	5.00	19.523	12.69	158.8	0.0	1,019.0
60.00		0.00	1.18	7.592	12.83	205.58	0.650	0.000	5.00	19.091	12.41	159.2	0.0	996.3
65.00		0.00	1.21	7.768	13.12	203.20	0.650	0.000	5.00	18.660	12.13	159.2	0.0	973.5
70.00		0.00	1.24	7.934	13.40	200.56	0.650	0.000	5.00	18.229	11.85	158.9	0.0	950.8
75.00		0.00	1.26	8.092	13.67	197.69	0.650	0.000	5.00	17.798	11.57	158.2	0.0	928.1
80.00		0.00	1.28	8.242	13.93	194.63	0.650	0.000	5.00	17.366	11.29	157.2	0.0	905.4
85.00		0.00	1.31	8.387	14.17	191.39	0.650	0.000	5.00	16.935	11.01	156.0	0.0	882.7
86.00	Appertunance(s)	0.00	1.31	8.415	14.22	190.72	0.650	0.000	1.00	3.335	2.17	30.8	0.0	173.8
87.00	Bot - Section 3	0.00	1.31	8.442	14.26	190.04	0.650	0.000	1.00	3.318	2.16	30.8	0.0	172.9
90.00		0.00	1.33	8.525	14.40	187.98	0.650	0.000	3.00	10.022	6.51	93.9	0.0	956.0
92.00	Top - Section 2	0.00	1.34	8.578	14.49	186.57	0.650	0.000	2.00	6.595	4.29	62.1	0.0	628.9
95.00	Appertunance(s)	0.00	1.35	8.657	14.63	187.75	0.650	0.000	3.00	9.764	6.35	92.9	0.0	431.1
100.0		0.00	1.37	8.785	14.84	184.08	0.650	0.000	5.00	15.928	10.35	153.7	0.0	703.2
105.0		0.00	1.39	8.908	15.05	180.28	0.650	0.000	5.00	15.496	10.07	151.6	0.0	684.0
108.0	Appertunance(s)	0.00	1.40	8.980	15.17	177.94	0.650	0.000	3.00	9.091	5.91	89.7	0.0	401.2
110.0		0.00	1.41	9.028	15.25	176.36	0.650	0.000	2.00	5.974	3.88	59.2	0.0	263.6
115.0		0.00	1.42	9.143	15.45	172.33	0.650	0.000	5.00	14.634	9.51	147.0	0.0	645.6
120.0		0.00	1.44	9.255	15.64	168.19	0.650	0.000	5.00	14.203	9.23	144.4	0.0	626.3
125.0		0.00	1.46	9.363	15.82	163.96	0.650	0.000	5.00	13.771	8.95	141.6	0.0	607.1
130.0		0.00	1.48	9.469	16.00	159.64	0.650	0.000	5.00	13.340	8.67	138.8	0.0	587.9
132.0	Bot - Section 4	0.00	1.48	9.510	16.07	157.88	0.650	0.000	2.00	5.215	3.39	54.5	0.0	229.8
135.0		0.00	1.49	9.572	16.17	155.23	0.650	0.000	3.00	7.803	5.07	82.0	0.0	558.6
136.0	Top - Section 3	0.00	1.49	9.592	16.21	154.33	0.650	0.000	1.00	2.566	1.67	27.0	0.0	183.7
137.0	Appertunance(s)	0.00	1.50	9.612	16.24	155.67	0.650	0.000	1.00	2.549	1.66	26.9	0.0	71.8
140.0		0.00	1.51	9.672	16.34	152.97	0.650	0.000	3.00	7.544	4.90	80.2	0.0	212.3
145.0		0.00	1.52	9.769	16.51	148.41	0.650	0.000	5.00	12.229	7.95	131.2	0.0	344.1
148.0	Appertunance(s)	0.00	1.53	9.826	16.60	145.64	0.650	0.000	3.00	7.130	4.63	77.0	0.0	200.6
150.0		0.00	1.54	9.864	16.67	143.78	0.650	0.000	2.00	4.667	3.03	50.6	0.0	131.3
155.0		0.00	1.55	9.957	16.82	139.08	0.650	0.000	5.00	11.366	7.39	124.3	0.0	319.6
158.0	Appertunance(s)	0.00	1.56	10.012	16.92	136.22	0.650	0.000	3.00	6.613	4.30	72.7	0.0	185.9
160.0		0.00	1.57	10.048	16.98	134.30	0.650	0.000	2.00	4.322	2.81	47.7	0.0	121.5
165.0		0.00	1.58	10.136	17.13	129.47	0.650	0.000	5.00	10.504	6.83	117.0	0.0	295.2
168.0	Appertunance(s)	0.00	1.59	10.189	17.21	126.54	0.650	0.000	3.00	6.095	3.96	68.2	0.0	171.2
170.0		0.00	1.59	10.223	17.27	124.57	0.650	0.000	2.00	3.977	2.59	44.7	0.0	111.7
175.0		0.00	1.61	10.308	17.42	119.62	0.650	0.000	5.00	9.641	6.27	109.2	0.0	270.7
178.0	Appertunance(s)	0.00	1.61	10.358	17.50	116.61	0.650	0.000	3.00	5.578	3.63	63.5	0.0	156.6

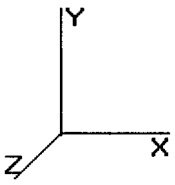
Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:21 PM
Location :	Andover Bunker Hill Road, CT		Page: 21
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	178.00	5,179.2	0.0	32,204.2



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

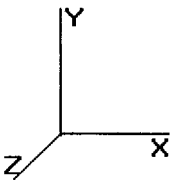
Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
12.00	GPS-TMG-HR-26N	1	6.400	10.816	1.00	0.09	0.000	0.000	0.97	0.00	0.00	0.60
12.00	Standoff	1	6.400	10.816	1.00	3.50	0.000	0.000	37.86	0.00	0.00	200.00
86.00	GPS	1	8.429	14.244	1.00	1.00	0.000	0.500	14.24	0.00	7.12	10.00
86.00	Standoff	1	8.415	14.221	1.00	3.50	0.000	0.000	49.77	0.00	0.00	200.00
95.00	GPS	1	8.670	14.653	1.00	1.00	0.000	0.500	14.65	0.00	7.33	10.00
95.00	Standoff	1	8.657	14.631	1.00	3.50	0.000	0.000	51.21	0.00	0.00	200.00
108.0	GPS	1	8.992	15.197	1.00	1.00	0.000	0.500	15.20	0.00	7.60	10.00
108.0	Standoff	1	8.980	15.177	1.00	3.50	0.000	0.000	53.12	0.00	0.00	200.00
137.0	Ericsson RRUS 11	6	9.612	16.244	0.50	8.82	0.000	0.000	143.27	0.00	0.00	330.00
137.0	KMW AM-X-CD-16-65-	3	9.612	16.244	0.79	19.58	0.000	0.000	318.00	0.00	0.00	145.50
137.0	Low Profile Platform	1	9.612	16.244	1.00	26.10	0.000	0.000	423.97	0.00	0.00	1,500.00
137.0	Powerwave 7770.00	6	9.612	16.244	0.77	27.17	0.000	0.000	441.28	0.00	0.00	210.00
137.0	Powerwave LGP21401	6	9.612	16.244	0.50	3.87	0.000	0.000	62.86	0.00	0.00	84.60
137.0	Powerwave LGP21903	6	9.612	16.244	0.50	0.81	0.000	0.000	13.16	0.00	0.00	33.00
137.0	Raycap DC6-48-60-18-	1	9.612	16.244	1.00	1.47	0.000	0.000	23.88	0.00	0.00	31.80
148.0	Allgon 7250.02	4	9.826	16.607	0.72	11.03	0.000	0.000	183.18	0.00	0.00	60.00
148.0	EMS RR90-17-02DP	2	9.826	16.607	1.00	8.72	0.000	0.000	144.81	0.00	0.00	36.00
148.0	Low Profile Platform	1	9.826	16.607	1.00	21.70	0.000	0.000	360.36	0.00	0.00	1,500.00
158.0	Antel BXA-171085-8BF	3	10.012	16.920	0.87	7.67	0.000	0.000	129.83	0.00	0.00	31.50
158.0	Antel BXA-70063/6CF	3	10.012	16.920	0.74	17.16	0.000	0.000	290.35	0.00	0.00	51.00
158.0	Antel LPA-80080/4CF	6	10.012	16.920	0.74	26.91	0.000	0.000	455.25	0.00	0.00	72.00
158.0	Low Profile Platform	1	10.012	16.920	1.00	26.10	0.000	0.000	441.60	0.00	0.00	1,500.00
158.0	RFS FD9R6004/2C-3L	6	10.012	16.920	0.50	1.11	0.000	0.000	18.78	0.00	0.00	18.60
168.0	Decibel DB980H90A-	6	10.189	17.219	0.79	18.01	0.000	0.000	310.15	0.00	0.00	54.00
168.0	Low Profile Platform	1	10.189	17.219	1.00	21.70	0.000	0.000	373.65	0.00	0.00	1,500.00
178.0	72" x 12" Panels	3	10.392	17.562	0.75	18.90	0.000	2.000	331.92	0.00	663.84	120.00
178.0	Allgon 7120.16.05.00	9	10.392	17.562	1.22	43.81	0.000	2.000	769.39	0.00	1,538.77	135.00
178.0	Low Profile Platform	1	10.358	17.506	1.00	26.10	0.000	0.000	456.90	0.00	0.00	1,500.00
									5,929.62			9,743.60

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



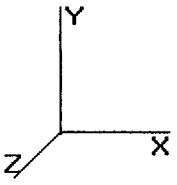
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	165.19	1,725.40	0.00	0.00
10.00	162.16	1,697.45	0.00	0.00
12.00	102.84	871.76	0.00	0.00
15.00	95.11	997.90	0.00	0.00
20.00	156.10	1,640.81	0.00	0.00
25.00	153.06	1,612.86	0.00	0.00
30.00	150.03	1,584.92	0.00	0.00
35.00	149.49	1,556.97	0.00	0.00
40.00	152.10	1,529.02	0.00	0.00
42.75	83.87	829.05	0.00	0.00
45.00	70.06	1,148.18	0.00	0.00
49.00	125.92	2,015.89	0.00	0.00
50.00	31.32	249.63	0.00	0.00
55.00	158.82	1,234.51	0.00	0.00
60.00	159.22	1,211.80	0.00	0.00
65.00	159.22	1,189.10	0.00	0.00
70.00	158.87	1,166.39	0.00	0.00
75.00	158.20	1,143.68	0.00	0.00
80.00	157.24	1,120.98	0.00	0.00
85.00	156.02	1,098.27	0.00	0.00
86.00	94.85	426.93	0.00	7.12
87.00	30.77	215.87	0.00	0.00
90.00	93.85	1,084.84	0.00	0.00
92.00	62.15	714.84	0.00	0.00
95.00	158.71	770.02	0.00	7.33
100.0	153.71	917.25	0.00	0.00
105.0	151.65	898.04	0.00	0.00
108.0	158.00	739.60	0.00	7.60
110.0	59.25	348.92	0.00	0.00
115.0	146.98	858.86	0.00	0.00
120.0	144.39	839.65	0.00	0.00
125.0	141.65	820.44	0.00	0.00
130.0	138.76	801.22	0.00	0.00
132.0	54.48	315.11	0.00	0.00
135.0	82.04	686.56	0.00	0.00
136.0	27.04	226.34	0.00	0.00
137.0	1,453.34	2,449.31	0.00	0.00
140.0	80.15	315.65	0.00	0.00
145.0	131.23	516.30	0.00	0.00
148.0	765.31	1,899.91	0.00	0.00
150.0	50.57	180.48	0.00	0.00
155.0	124.32	442.65	0.00	0.00
158.0	1,408.54	1,932.82	0.00	0.00
160.0	47.71	151.02	0.00	0.00
165.0	116.96	368.99	0.00	0.00
168.0	752.02	1,769.53	0.00	0.00
170.0	44.66	131.40	0.00	0.00
175.0	109.17	319.94	0.00	0.00
178.0	1,621.67	1,941.10	0.00	2,202.61

Pole :	302472	**Code:** TIA/EIA-222 Rev F	9/11/2012 4:18:21 PM
Location :	Andover Bunker Hill Road, CT		**Page:** 24
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	**Base Elev :** 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

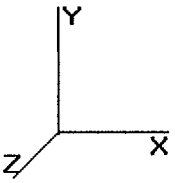
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Totals:	11,108.81	48,708.18	0.00	2,224.66

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

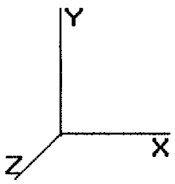
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-11.132	-48.703	0.000	0.000	0.000	-1,425.445	0.000	0.000	0.000	0.000
5.00	-11.011	-46.967	0.000	0.000	0.000	-1,369.788	-0.030	0.000	0.030	-0.055
10.00	-10.878	-45.262	0.000	0.000	0.000	-1,314.733	-0.118	0.000	0.118	-0.111
12.00	-10.795	-44.385	0.000	0.000	0.000	-1,292.978	-0.169	0.000	0.169	-0.134
15.00	-10.733	-43.379	0.000	0.000	0.000	-1,260.592	-0.265	0.000	0.265	-0.169
20.00	-10.613	-41.728	0.000	0.000	0.000	-1,206.929	-0.473	0.000	0.473	-0.227
25.00	-10.494	-40.105	0.000	0.000	0.000	-1,153.863	-0.742	0.000	0.742	-0.285
30.00	-10.376	-38.510	0.000	0.000	0.000	-1,101.392	-1.073	0.000	1.073	-0.345
35.00	-10.255	-36.943	0.000	0.000	0.000	-1,049.513	-1.466	0.000	1.466	-0.405
40.00	-10.121	-35.407	0.000	0.000	0.000	-998.237	-1.924	0.000	1.924	-0.466
42.75	-10.049	-34.573	0.000	0.000	0.000	-970.404	-2.203	0.000	2.203	-0.501
45.00	-9.992	-33.419	0.000	0.000	0.000	-947.794	-2.446	0.000	2.446	-0.529
49.00	-9.864	-31.399	0.000	0.000	0.000	-907.827	-2.911	0.000	2.911	-0.580
50.00	-9.854	-31.142	0.000	0.000	0.000	-897.964	-3.034	0.000	3.034	-0.593
55.00	-9.720	-29.897	0.000	0.000	0.000	-848.696	-3.694	0.000	3.694	-0.666
60.00	-9.583	-28.674	0.000	0.000	0.000	-800.098	-4.431	0.000	4.431	-0.741
65.00	-9.444	-27.475	0.000	0.000	0.000	-752.183	-5.247	0.000	5.247	-0.815
70.00	-9.302	-26.299	0.000	0.000	0.000	-704.965	-6.142	0.000	6.142	-0.891
75.00	-9.159	-25.146	0.000	0.000	0.000	-658.455	-7.115	0.000	7.115	-0.967
80.00	-9.014	-24.016	0.000	0.000	0.000	-612.661	-8.169	0.000	8.169	-1.043
85.00	-8.855	-22.914	0.000	0.000	0.000	-567.592	-9.302	0.000	9.302	-1.119
86.00	-8.758	-22.486	0.000	0.000	0.000	-558.730	-9.538	0.000	9.538	-1.135
87.00	-8.735	-22.266	0.000	0.000	0.000	-549.972	-9.777	0.000	9.777	-1.150
90.00	-8.634	-21.178	0.000	0.000	0.000	-523.766	-10.515	0.000	10.515	-1.197
92.00	-8.570	-20.459	0.000	0.000	0.000	-506.499	-11.023	0.000	11.023	-1.228
95.00	-8.417	-19.683	0.000	0.000	0.000	-480.782	-11.809	0.000	11.809	-1.274
100.0	-8.270	-18.757	0.000	0.000	0.000	-438.696	-13.188	0.000	13.188	-1.358
105.0	-8.117	-17.854	0.000	0.000	0.000	-397.348	-14.655	0.000	14.655	-1.440
108.0	-7.952	-17.113	0.000	0.000	0.000	-372.991	-15.576	0.000	15.576	-1.490
110.0	-7.900	-16.758	0.000	0.000	0.000	-357.086	-16.207	0.000	16.207	-1.523
115.0	-7.752	-15.893	0.000	0.000	0.000	-317.585	-17.845	0.000	17.845	-1.602
120.0	-7.603	-15.048	0.000	0.000	0.000	-278.827	-19.564	0.000	19.564	-1.679
125.0	-7.455	-14.223	0.000	0.000	0.000	-240.812	-21.362	0.000	21.362	-1.752
130.0	-7.302	-13.420	0.000	0.000	0.000	-203.540	-23.234	0.000	23.234	-1.821
132.0	-7.245	-13.103	0.000	0.000	0.000	-188.936	-24.003	0.000	24.003	-1.847
135.0	-7.146	-12.416	0.000	0.000	0.000	-167.202	-25.176	0.000	25.176	-1.885
136.0	-7.114	-12.189	0.000	0.000	0.000	-160.056	-25.572	0.000	25.572	-1.898
137.0	-5.586	-9.787	0.000	0.000	0.000	-152.942	-25.971	0.000	25.971	-1.910
140.0	-5.506	-9.468	0.000	0.000	0.000	-136.186	-27.188	0.000	27.188	-1.960
145.0	-5.365	-8.951	0.000	0.000	0.000	-108.659	-29.283	0.000	29.283	-2.037
148.0	-4.537	-7.077	0.000	0.000	0.000	-92.563	-30.576	0.000	30.576	-2.078
150.0	-4.485	-6.895	0.000	0.000	0.000	-83.490	-31.452	0.000	31.452	-2.105
155.0	-4.349	-6.454	0.000	0.000	0.000	-61.067	-33.688	0.000	33.688	-2.160
158.0	-2.869	-4.575	0.000	0.000	0.000	-48.022	-35.054	0.000	35.054	-2.189
160.0	-2.818	-4.425	0.000	0.000	0.000	-42.283	-35.975	0.000	35.975	-2.206
165.0	-2.689	-4.060	0.000	0.000	0.000	-28.193	-38.304	0.000	38.304	-2.240
168.0	-1.868	-2.321	0.000	0.000	0.000	-20.127	-39.717	0.000	39.717	-2.256
170.0	-1.819	-2.191	0.000	0.000	0.000	-16.391	-40.664	0.000	40.664	-2.265
175.0	-1.698	-1.875	0.000	0.000	0.000	-7.295	-43.044	0.000	43.044	-2.280
178.0	-1.622	0.000	0.000	0.000	0.000	-2.203	-44.478	0.000	44.478	-2.284

Pole : 302472
Location : Andover Bunker Hill Road, CT
Height : 178.0 (ft)
Base Dia : 56.91 (in)
Top Dia : 22.00 (in)
Shape : 18 Sides
Taper : 0.207008 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



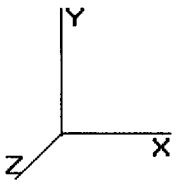
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

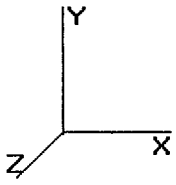
Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)		Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.54	0.25	0.00	0.00	0.00	13.73	14.28	52.0	0.0	0.275
5.00	0.53	0.25	0.00	0.00	0.00	13.70	14.24	52.0	0.0	0.274
10.00	0.52	0.25	0.00	0.00	0.00	13.65	14.19	52.0	0.0	0.273
12.00	0.52	0.25	0.00	0.00	0.00	13.64	14.16	52.0	0.0	0.272
15.00	0.51	0.26	0.00	0.00	0.00	13.61	14.13	52.0	0.0	0.272
20.00	0.50	0.26	0.00	0.00	0.00	13.55	14.06	52.0	0.0	0.271
25.00	0.49	0.26	0.00	0.00	0.00	13.49	13.99	52.0	0.0	0.269
30.00	0.48	0.26	0.00	0.00	0.00	13.41	13.90	52.0	0.0	0.267
35.00	0.47	0.26	0.00	0.00	0.00	13.33	13.81	52.0	0.0	0.266
40.00	0.46	0.27	0.00	0.00	0.00	13.23	13.70	52.0	0.0	0.264
42.75	0.46	0.27	0.00	0.00	0.00	13.17	13.64	52.0	0.0	0.262
45.00	0.45	0.27	0.00	0.00	0.00	13.12	13.58	52.0	0.0	0.261
49.00	0.52	0.33	0.00	0.00	0.00	15.39	15.92	52.0	0.0	0.306
50.00	0.51	0.33	0.00	0.00	0.00	15.36	15.88	52.0	0.0	0.306
55.00	0.50	0.33	0.00	0.00	0.00	15.18	15.69	52.0	0.0	0.302
60.00	0.50	0.33	0.00	0.00	0.00	14.98	15.49	52.0	0.0	0.298
65.00	0.49	0.34	0.00	0.00	0.00	14.76	15.26	52.0	0.0	0.293
70.00	0.48	0.34	0.00	0.00	0.00	14.51	15.00	52.0	0.0	0.289
75.00	0.47	0.34	0.00	0.00	0.00	14.24	14.72	52.0	0.0	0.283
80.00	0.46	0.35	0.00	0.00	0.00	13.93	14.40	52.0	0.0	0.277
85.00	0.45	0.35	0.00	0.00	0.00	13.59	14.05	52.0	0.0	0.270
86.00	0.44	0.35	0.00	0.00	0.00	13.52	13.98	52.0	0.0	0.269
87.00	0.44	0.35	0.00	0.00	0.00	13.45	13.90	52.0	0.0	0.267
90.00	0.42	0.35	0.00	0.00	0.00	13.23	13.66	52.0	0.0	0.263
92.00	0.48	0.41	0.00	0.00	0.00	14.83	15.33	52.0	0.0	0.295
95.00	0.47	0.40	0.00	0.00	0.00	14.54	15.03	52.0	0.0	0.289
100.00	0.46	0.41	0.00	0.00	0.00	14.02	14.49	52.0	0.0	0.279
105.00	0.45	0.41	0.00	0.00	0.00	13.43	13.90	52.0	0.0	0.267
108.00	0.44	0.41	0.00	0.00	0.00	13.05	13.51	52.0	0.0	0.260
110.00	0.44	0.41	0.00	0.00	0.00	12.79	13.25	52.0	0.0	0.255
115.00	0.43	0.42	0.00	0.00	0.00	12.08	12.53	52.0	0.0	0.241
120.00	0.42	0.42	0.00	0.00	0.00	11.28	11.72	52.0	0.0	0.225
125.00	0.40	0.43	0.00	0.00	0.00	10.38	10.81	52.0	0.0	0.208
130.00	0.39	0.43	0.00	0.00	0.00	9.37	9.79	52.0	0.0	0.188
132.00	0.39	0.44	0.00	0.00	0.00	8.94	9.36	52.0	0.0	0.180
135.00	0.38	0.44	0.00	0.00	0.00	8.24	8.65	52.0	0.0	0.166
136.00	0.58	0.68	0.00	0.00	0.00	12.06	12.69	52.0	0.0	0.244
137.00	0.47	0.54	0.00	0.00	0.00	11.68	12.18	52.0	0.0	0.234
140.00	0.46	0.54	0.00	0.00	0.00	10.84	11.34	52.0	0.0	0.218
145.00	0.45	0.54	0.00	0.00	0.00	9.29	9.79	52.0	0.0	0.188
148.00	0.36	0.47	0.00	0.00	0.00	8.27	8.67	52.0	0.0	0.167
150.00	0.36	0.47	0.00	0.00	0.00	7.69	8.09	52.0	0.0	0.156
155.00	0.35	0.48	0.00	0.00	0.00	6.07	6.47	52.0	0.0	0.125
158.00	0.25	0.32	0.00	0.00	0.00	5.01	5.29	52.0	0.0	0.102
160.00	0.25	0.32	0.00	0.00	0.00	4.55	4.83	52.0	0.0	0.093
165.00	0.24	0.32	0.00	0.00	0.00	3.30	3.58	52.0	0.0	0.069
168.00	0.14	0.23	0.00	0.00	0.00	2.48	2.65	52.0	0.0	0.051
170.00	0.13	0.23	0.00	0.00	0.00	2.09	2.26	52.0	0.0	0.043
175.00	0.12	0.22	0.00	0.00	0.00	1.02	1.20	52.0	0.0	0.023
178.00	0.00	0.22	0.00	0.00	0.00	0.33	0.50	52.0	0.0	0.010

Pole :	302472	Code: TIA/EIA-222 Rev F	9/11/2012 4:18:21 PM
Location :	Andover Bunker Hill Road, CT		Page: 27
Height :	178.0 (ft)		
Base Dia :	56.91 (in)		
Top Dia :	22.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.207008 (in/ft)		



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 25 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00



Analysis Summary

	Reactions						Max Stresses			
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	32.2	0.00	48.66	0.00	0.00	4113.42	44.91	52.0	49.00	0.864
Ice	27.2	0.00	55.26	0.00	0.00	3650.10	40.81	52.0	49.00	0.785
Twist/Sway	11.1	0.00	48.70	0.00	0.00	1425.44	15.92	52.0	49.00	0.306

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	56.91	in
	Pole Thickness		in
	Plate Length	64	in
	Plate Thickness	3	in
	Plate Fy	50	ksi
	Weld Length	0.25	in
	Allowable	1654.98	k-in
	Applied	1552.21	k-in
Stiffeners	#	***0***	

Bolts	#	***20***	
	Bolt Circle	64	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
●	Diameter	2.25	in
	Hole Diameter	2.625	in
	Type	A615-75	
	Fy	75	ksi
	Fu	100	ksi
	Allowable	174.95	k
	Applied	156.59	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev.	***F***	**Date**	9/11/2012
A.S.I.	1.33	**Engineer**	MO
		Site #	302472
Moment	4113.4 k-ft	**Carrier**	Verizon
Axial	48.7 k		

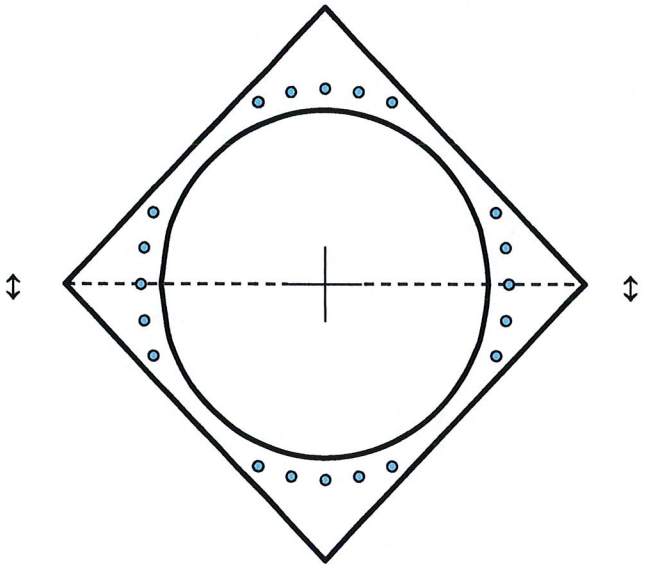


Plate Stress Ratio:
0.94 (Pass)

Bolt Stress Ratio:
0.90 (Pass)

BOLT CALCS

Bolt Areas:

$A_D = \pi * \Phi_{AB}^2 / 4 =$	**3.98 in**	
$A_E = 0.7854 * (\Phi_{AB} - 0.9743 / n) =$	**3.25 in**	ASD, 9th Edition, Threaded Fasteners, p. 4-147
USED =	**3.98 in**	Corresponding to maximum capacity below

Rev F Bolt Capacity:

A.S.I. * 0.5 * fy * A_E =	**162.38 k**	[EQN. 1] Considering Yield Strength & Effective Area
A.S.I. * 0.33 * fu * A_D =	**174.95 k**	[EQN. 2] Considering Ultimate Strength & Gross Area
MAX =	**174.95 k**	

Rev G Bolt Capacity:

{0.75, 0.8} * fu * A_E =	**259.82 k**

PLATE CALCS

Flange Moment Arm (a_f) =	$ABS(B.C. - OD_{pipe})/2 - L_{weld} - D_{hole}/2 - IF(internal):t_{pole}$	=	**1.98 in**
Flange L_{crit} [Radial] 1 =	$\pi \bullet MIN(OD_{pipe}, B.C.) / \#_{bolts}$	=	**8.94 in**
Flange L_{crit} [Radial] 2 =	$(2 \bullet a_f + D_{hole}) \bullet \tan(60°)$	=	**11.41 in**
Flange L_{crit} [Square] 1 =	$\sqrt{2} \bullet OD_{flange} - OD_{pipe} - 2 \bullet L_{weld}$	=	**33.10 in**
Flange L_{crit} [Square] 2 =	$(2 \bullet a_f + D_{hole}) \bullet \tan(60°) + L_{gap} \bullet (\#_{bolts}/4 - 1)$	=	**35.41 in**
Flange L_{crit} [Actual] =	Minimum result from applicable equations above	=	**33.10 in**
S [F] =	$L_{crit} \bullet t_{flange} / 6$	=	**49.65 in**
S [G] =	$L_{crit} \bullet t_{flange} / 4$	=	**74.47 in**
M_{flange} [F] =	$A.S.I. \bullet 0.5 \bullet S \bullet Fy_{flange}$	=	**1654.98 k-in**
M_{flange} [G] =	$0.9 \bullet S \bullet Fy_{flange}$	=	**3351.34 k-in**
Total Moment Capacity =	$M_{flange} + M_{gusset}$ (if applicable)	=	**1654.98 k-in**
Moment Applied [Radial] =	$T_{bolt} \bullet a_f$	=	**310.44 k-in**
Moment Applied [Square] =	$T_{bolt} \bullet a_f \bullet \#_{bolts} / 4$	=	**1552.21 k-in**
Moment Applied [Actual] =	Result from applicable equation above	=	**1552.21 k-in**

TOTAL MoI for all members
40740.2 in^4

$MoI = A / (4 \cdot \pi) + arm \cdot A$

$Load = Axial / \#_{bolts} + Moment \cdot arm \cdot A / MoI\_total$

	Bolts					
Member #	Angle (rads)	X (in)	Moment Arm (in)	I (in^4)	Load (kips)	Stress Ratio
1	-0.38	29.78	-11.72	547.47	58.90	0.34
2	-0.19	31.44	-5.96	142.73	31.17	0.18
3	0.00	32.00	0.00	1.26	2.43	0.01
4	0.19	31.44	5.96	142.73	31.17	0.18
5	0.38	29.78	11.72	547.47	58.90	0.34
6	1.20	11.72	29.78	3526.55	145.88	0.83
7	1.38	5.96	31.44	3931.29	153.89	0.88
8	1.57	0.00	32.00	4072.76	156.59	0.90
9	1.76	-5.96	31.44	3931.29	153.89	0.88
10	1.95	-11.72	29.78	3526.55	145.88	0.83
11	2.77	-29.78	11.72	547.47	58.90	0.34
12	2.95	-31.44	5.96	142.73	31.17	0.18
13	3.14	-32.00	0.00	1.26	2.43	0.01
14	3.33	-31.44	-5.96	142.73	31.17	0.18
15	3.52	-29.78	-11.72	547.47	58.90	0.34
16	4.34	-11.72	-29.78	3526.55	145.88	0.83
17	4.52	-5.96	-31.44	3931.29	153.89	0.88
18	4.71	0.00	-32.00	4072.76	156.59	0.90
19	4.90	5.96	-31.44	3931.29	153.89	0.88
20	5.09	11.72	-29.78	3526.55	145.88	0.83

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[4]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[5]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

[4] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

[5] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

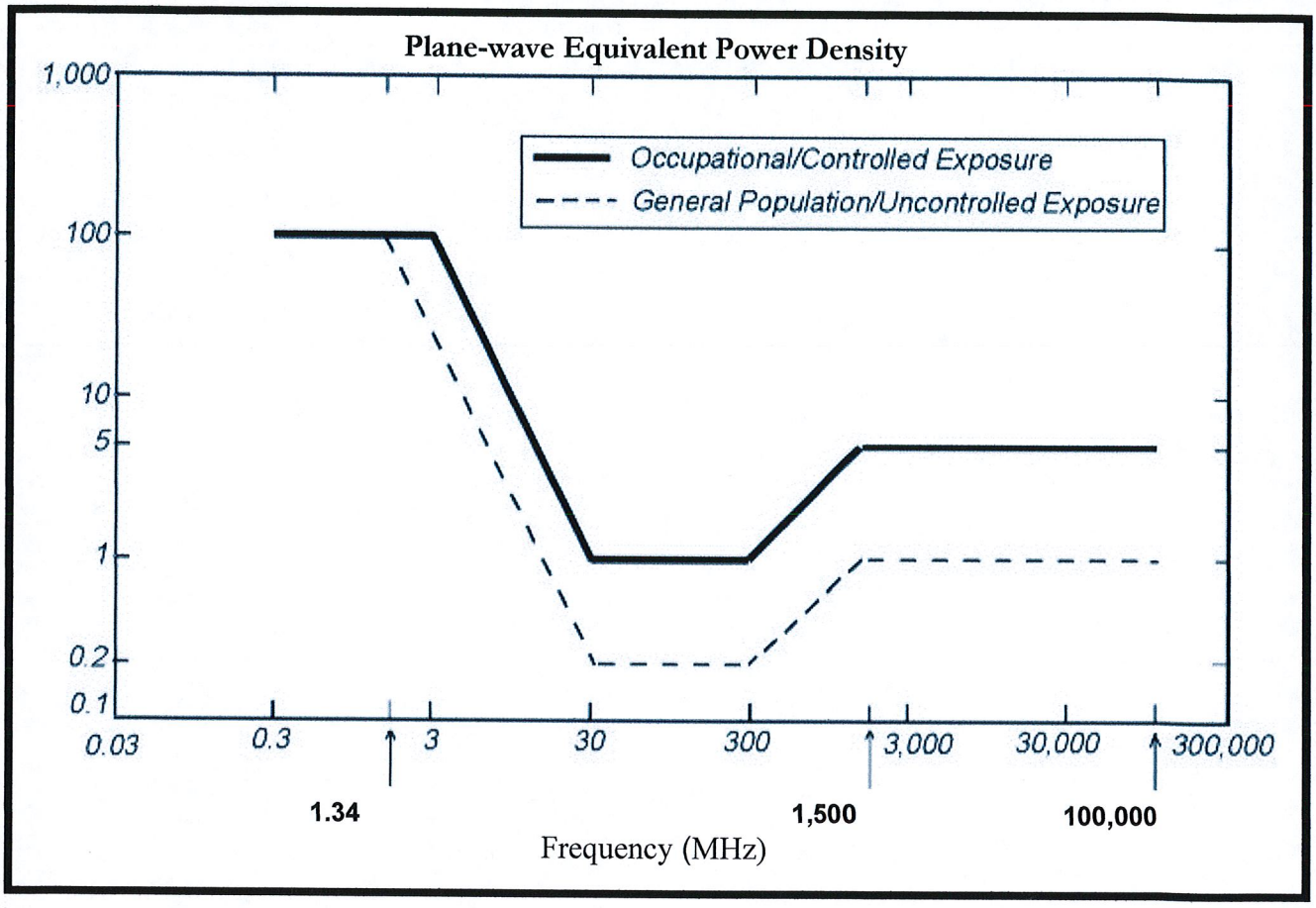
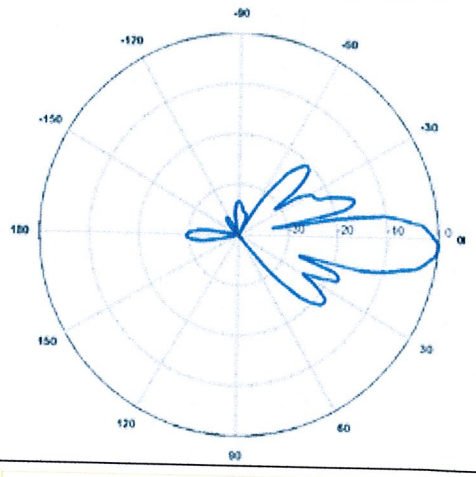


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Data Sheets and Electrical Patterns

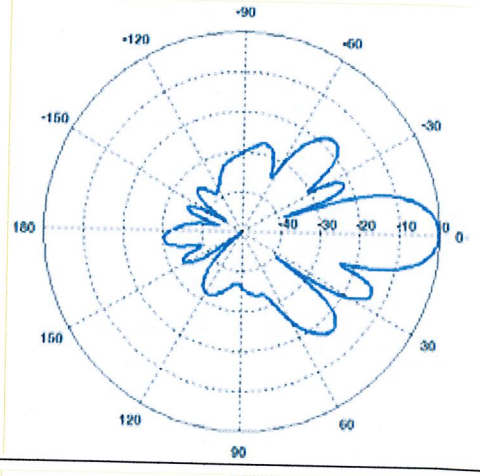
700 MHz

Manufacturer:	KMW
Model #:	AM-X-CD-16-65-00T-RET
Frequency Band:	698-806 MHz
Gain:	13.4 dBd
Vertical Beamwidth:	12.3°
Horizontal Beamwidth:	65°
Polarization:	Dual Slant ± 45°
Size L x W x D:	72.0" x 11.8" x 5.9"



850 MHz

Manufacturer:	Powerwave
Model #:	7770.00
Frequency Band:	824-896 MHz
Gain:	11.5 dBd
Vertical Beamwidth:	15°
Horizontal Beamwidth:	82°
Polarization:	Dual Linear ± 45°
Size L x W x D:	55.0" x 11.0" x 5.0"



1900 MHz

Manufacturer:	Powerwave
Model #:	7770.00
Frequency Band:	1850-1990 MHz
Gain:	13.4 dBd
Vertical Beamwidth:	7°
Horizontal Beamwidth:	86°
Polarization:	Dual Linear ± 45°
Size L x W x D:	55.0" x 11.0" x 5.0"