ROBINSON & COLE LLP

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
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Also admitted in Massachusetts

July 3, 2013



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

Re: **EM-VER-098-120306- 399 Greenswood Road, Norfolk, Connecticut**
**EM-VER-100-120416- 38 Lower Road, North Canaan, Connecticut**
**EM-VER-098-120229- 10 Aspohtag Road, Norfolk, Connecticut**
**EM-VER-120-120214- 35 Lower County Road, Roxbury, Connecticut**
**EM-VER-122-120430- 52 Library Street, Salisbury, Connecticut**
**EM-VER-141-121206- 61 Lowell Davis Road, Thompson, Connecticut**
**EM-VER-143-120214- Burr Mountain Road, Torrington, Connecticut**
**EM-VER-162-120430- 15 Oakdale Avenue, Winchester, Connecticut**
**EM-VER-168-120216- 186 Minortown Road, Woodbury, Connecticut**

**Completion of Construction Activity**

Dear Ms. Bachman:

The purpose of this letter is to notify the Siting Council that construction activity associated with the above-referenced Cellco Partnership d/b/a Verizon Wireless telecommunications facilities has been completed.

If you have any questions or need any additional information regarding this facility please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

Copy to:
Sandy M. Carter

12323912-v1

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

May 21, 2012

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103

RE: **EM-VER-162-120430**- Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Oakdale Avenue, Winchester, Connecticut.

Dear Attorney Baldwin:

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 April 27, 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,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Althea Candy Perez, Mayor, Town of Winchester
Wayne Dove, Town Manager, Town of Winchester
John Winn, Planning and Zoning Chairman, Town of Winchester
American Tower Corporation

ROBINSON & COLE LLP

**EM-VER-162-120430**

KENNETH C. BALDWIN

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April 27, 2012



Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
**Oakdale Avenue, Winchester, Connecticut**

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 125-foot level of the existing 180-foot tower at the above-referenced address. The tower is owned by American Tower Corporation. The Council approved Cellco's use of this tower in 2003. Cellco now intends to modify its installation by replacing six (6) of its existing antennas with two (2) model BXA-171085-12CF PCS antennas; one (1) model BXA-171063-12CF PCS antenna; and three (3) model BXA-70063-6CF LTE antennas, at the same 125-foot level on the tower. Cellco also intends to install six (6) coax cable diplexers behind its antennas. Attached behind Tab 1 are the specifications for the replacement antennas and cable diplexers.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mary Ann Welcome, Mayor of the Town of Winchester. A copy of this letter is also being sent to William P. and Richard D. Stow, the owners of the property on which the tower is located.

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

1. The proposed modifications will not result in an increase in the overall height of the existing tower. Cellco's new antennas and diplexers will be located at the 125-foot level on the existing 180-foot tower.

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

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for Cellco's modified facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower and foundation can support Cellco's proposed modifications. (See Tab 3). Please note that contrary to the note below the Proposed Antenna table on page 2 of the Structural Analysis Report, Cellco does not intend to install any new coax cables.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Mary Ann Welcome, Winchester Mayor
William P. and Richard D. Stow
Sandy M. Carter

Amphenol ANTENNA SOLUTIONS

# BXA-171085-12CF-EDIN-X

Replace 'X' with desired electrical downtilt.

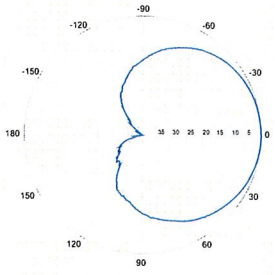
X-Pol | FET Panel | 85° | 18.0 dBi

| Electrical Characteristics | 1710-2170 MHz | | |
|---|---|---|---|
| Frequency bands | 1710-1880 MHz | 1850-1990 MHz | 1920-2170 MHz |
| Polarization | ±45° | ±45° | ±45° |
| Horizontal beamwidth | 88° | 85° | 80° |
| Vertical beamwidth | 4.5° | 4.5° | 4.5° |
| Gain | 15.1 dBd / 17.2 dBi | 15.5 dBd / 17.6 dBi | 15.9 dBd / 18.0 dBi |
| Electrical downtilt (X) | 0, 2, 4 | | |
| Impedance | 50Ω | | |
| VSWR | ≤1.5:1 | | |
| First upper sidelobe | < -17 dB | | |
| Front-to-back ratio | > 30 dB | | |
| In-band isolation | > 28 dB | | |
| IM3 (20W carrier) | < -150 dBc | | |
| Input power | 300 W | | |
| Lightning protection | Direct Ground | | |
| Connector(s) | 2 Ports / EDIN / Female / Center (Back) | | |
| Operating temperature | -40° to +60° C / -40° to +140° F | | |

| Mechanical Characteristics | | |
|---|---|---|
| Dimensions Length x Width x Depth | 1840 x 154 x 105 mm | 72.4 x 6.1 x 4.1 in |
| Depth with z-brackets | 133 mm | 5.2 in |
| Weight without mounting brackets | 6.8 kg | 15 lbs |
| Survival wind speed | > 201 km/hr | > 125 mph |
| Wind area | Front: 0.28 m² Side: 0.19 m² | Front: 3.1 ft² Side: 2.1 ft² |
| Wind load @ 161 km/hr (100 mph) | Front: 460 N Side: 304 N | Front: 103 lbf Side: 68 lbf |

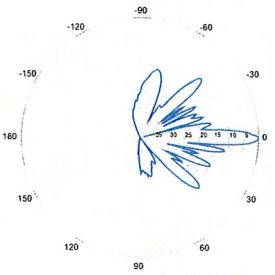
| Mounting Options | Part Number | Fits Pipe Diameter | Weight |
|---|---|---|---|
| 2-Point Mounting Bracket Kit | 26799997 | 50-102 mm 2.0-4.0 in | 2.3 kg 5 lbs |
| 2-Point Mounting & Downtilt Bracket Kit | 26799999 | 50-102 mm 2.0-4.0 in | 3.6 kg 8 lbs |
| Concealment Configurations | For concealment configurations, order BXA-171085-12CF-EDIN-X-FP | | |

**BXA-171085-12CF-EDIN-X**



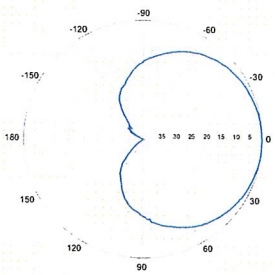
Horizontal | 1710-1880 MHz

**BXA-171085-12CF-EDIN-0**



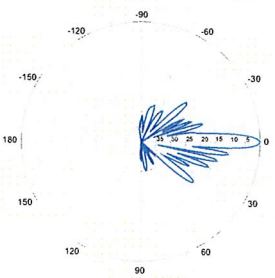
0° | Vertical | 1710-1880 MHz

**BXA-171085-12CF-EDIN-X**



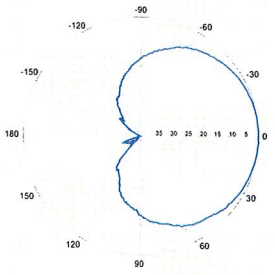
Horizontal | 1850-1990 MHz

**BXA-171085-12CF-EDIN-0**



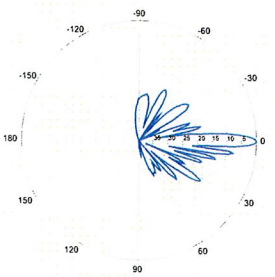
0° | Vertical | 1850-1990 MHz

**BXA-171085-12CF-EDIN-X**



Horizontal | 1920-2170 MHz

**BXA-171085-12CF-EDIN-0**

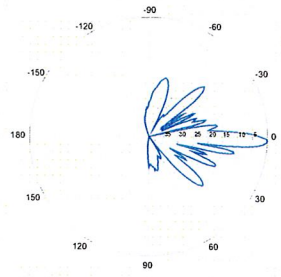


0° | Vertical | 1920-2170 MHz

# BXA-171085-12CF-EDIN-X

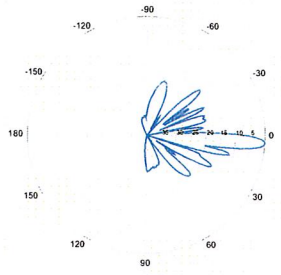
X-Pol | FET Panel | 85° | 18.0 dBi

**BXA-171085-12CF-EDIN-2**



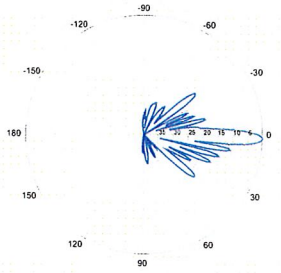

2° | Vertical | 1710-1880 MHz

**BXA-171085-12CF-EDIN-4**



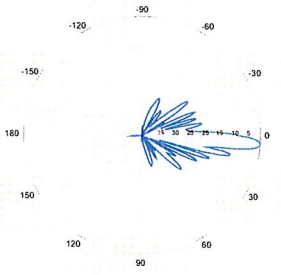

4° | Vertical | 1710-1880 MHz

**BXA-171085-12CF-EDIN-2**



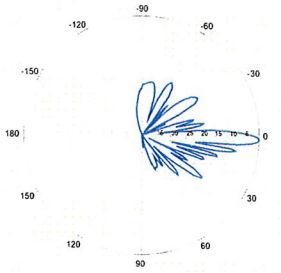

2° | Vertical | 1850-1990 MHz

**BXA-171085-12CF-EDIN-4**



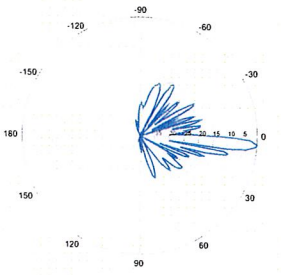

4° | Vertical | 1850-1990 MHz

**BXA-171085-12CF-EDIN-2**




2° | Vertical | 1920-2170 MHz

**BXA-171085-12CF-EDIN-4**




4° | Vertical | 1920-2170 MHz

# BXA-171063-12CF-EDIN-X

Replace "X" with desired electrical downtilt

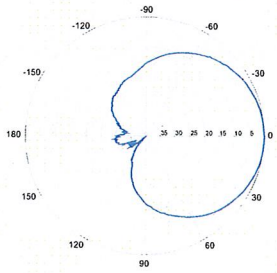
X-Pol | FET Panel | 63° | 19.0 dBi

| Electrical Characteristics | 1710-2170 MHz | | |
|---|---|---|---|
| Frequency bands | 1710-1880 MHz | 1850-1990 MHz | 1920-2170 MHz |
| Polarization | ±45° | ±45° | ±45° |
| Horizontal beamwidth | 68° | 65° | 60° |
| Vertical beamwidth | 4.5° | 4.5° | 4.5° |
| Gain | 16.1 dBd / 18.2 dBi | 16.5 dBd / 18.6 dBi | 16.9 dBd / 19.0 dBi |
| Electrical downtilt (X) | 0, 2, 5 | | |
| Impedance | 50Ω | | |
| VSWR | ≤1.5:1 | | |
| First upper sidelobe | < -17 dB | | |
| Front-to-back ratio | > 30 dB | | |
| In-band isolation | > 28 dB | | |
| IM3 (20W carrier) | < -150 dBc | | |
| Input power | 300 W | | |
| Lightning protection | Direct Ground | | |
| Connector(s) | 2 Ports / EDIN / Female / Center (Back) | | |
| Operating temperature | -40° to +60° C / -40° to +140° F | | |

| Mechanical Characteristics | | |
|---|---|---|
| Dimensions Length x Width x Depth | 1840 x 154 x 105 mm | 72.4 x 6.1 x 4.1 in |
| Depth with z-brackets | 133 mm | 5.2 in |
| Weight without mounting brackets | 6.8 kg | 15 lbs |
| Survival wind speed | > 201 km/hr | > 125 mph |
| Wind area | Front: 0.28 m² Side: 0.19 m² | Front: 3.1 ft² Side: 2.1 ft² |
| Wind load @ 161 km/hr (100 mph) | Front: 460 N Side: 304 N | Front: 103 lbf Side: 68 lbf |

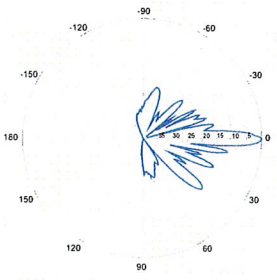
| Mounting Options | Part Number | Fits Pipe Diameter | Weight |
|---|---|---|---|
| 2-Point Mounting Bracket Kit | 26799997 | 50-102 mm 2.0-4.0 in | 2.3 kg 5 lbs |
| 2-Point Mounting & Downtilt Bracket Kit | 26799999 | 50-102 mm 2.0-4.0 in | 3.6 kg 8 lbs |
| Concealment Configurations | For concealment configurations, order BXA-171063-12CF-EDIN-X-FP | | |

**BXA-171063-12CF-EDIN-X**



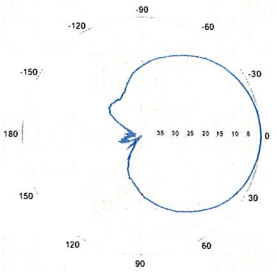
Horizontal | 1710-1880 MHz

**BXA-171063-12CF-EDIN-0**



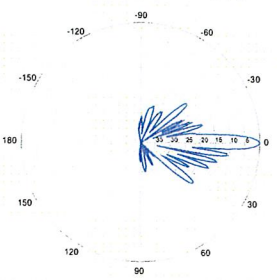
0° | Vertical | 1710-1880 MHz

**BXA-171063-12CF-EDIN-X**



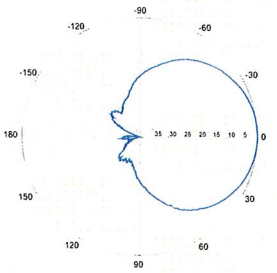
Horizontal | 1850-1990 MHz

**BXA-171063-12CF-EDIN-0**



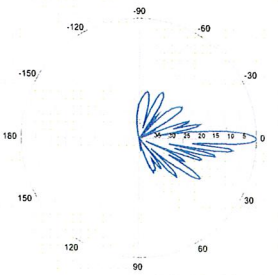
0° | Vertical | 1850-1990 MHz

**BXA-171063-12CF-EDIN-X**



Horizontal | 1920-2170 MHz

**BXA-171063-12CF-EDIN-0**

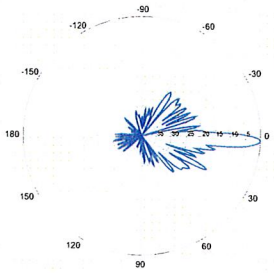


0° | Vertical | 1920-2170 MHz

# BXA-171063-12CF-EDIN-X

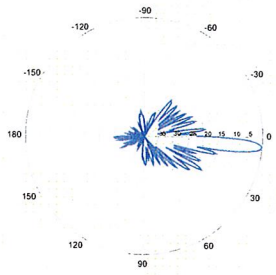
X-Pol | FET Panel | 63° | 19.0 dBi

**BXA-171063-12CF-EDIN-2**



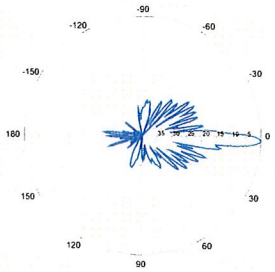

2° | Vertical | 1710-1880 MHz

**BXA-171063-12CF-EDIN-5**



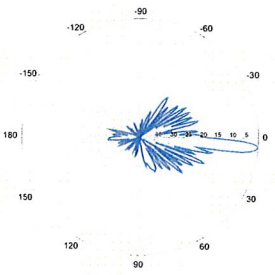

5° | Vertical | 1710-1880 MHz

**BXA-171063-12CF-EDIN-2**



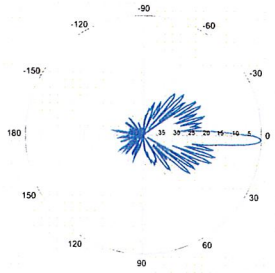

2° | Vertical | 1850-1990 MHz

**BXA-171063-12CF-EDIN-5**



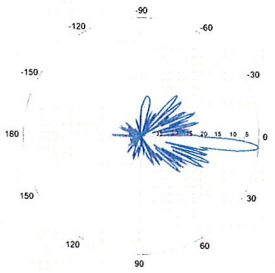

5° | Vertical | 1850-1990 MHz

**BXA-171063-12CF-EDIN-2**




2° | Vertical | 1920-2170 MHz

**BXA-171063-12CF-EDIN-5**




5° | Vertical | 1920-2170 MHz

Amphenol ANTENNA SOLUTIONS

# BXA-70063-6CF-EDIN-X

## X-Pol | FET Panel | 63° | 14.5 dBd

Replace "X" with desired electrical downtilt.

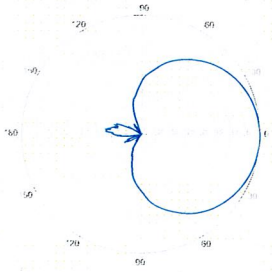
Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

| Electrical Characteristics | 696-900 MHz | |
|---|---|---|
| Frequency bands | 696-806 MHz | 806-900 MHz |
| Polarization | ±45° | |
| Horizontal beamwidth | 65° | 63° |
| Vertical beamwidth | 13° | 11° |
| Gain | 14.0 dBd (16.1 dBi) | 14.5 dBd (16.6 dBi) |
| Electrical downtilt (X) | 0, 2, 3, 4, 5, 6, 8, 10 | |
| Impedance | 50Ω | |
| VSWR | ≤1.35:1 | |
| Upper sidelobe suppression (0°) | -18.3 dB | -18.2 dB |
| Front-to-back ratio (+/-30°) | -33.4 dB | -36.3 dB |
| Null fill | 5% (-26.02 dB) | |
| Isolation between ports | < -25 dB | |
| Input power with EDIN connectors | 500 W | |
| Input power with NE connectors | 300 W | |
| Lightning protection | Direct Ground | |
| Connector(s) | 2 Ports / EDIN or NE / Female / Center (Back) | |

| Mechanical Characteristics | | |
|---|---|---|
| Dimensions Length x Width x Depth | 1804 x 285 x 132 mm | 71.0 x 11.2 x 5.2 in |
| Depth with z-brackets | 172 mm | 6.8 in |
| Weight without mounting brackets | 7.9 kg | 17 lbs |
| Survival wind speed | > 201 km/hr | > 125 mph |
| Wind area | Front: 0.51 m² Side: 0.24 m² | Front: 5.5 ft² Side: 2.6 ft² |
| Wind load @ 161 km/hr (100 mph) | Front: 759 N Side: 391 N | Front: 169 lbf Side: 89 lbf |

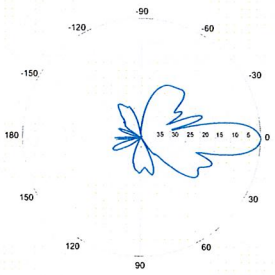
| Mounting Options | Part Number | Fits Pipe Diameter | Weight |
|---|---|---|---|
| 3-Point Mounting & Downtilt Bracket Kit | 36210008 | 40-115 mm 1.57-4.5 in | 6.9 kg 15.2 lbs |
| Concealment Configurations | For concealment configurations, order BXA-70063-6CF-EDIN-X-FP | | |

**BXA-70063-6CF-EDIN-X**



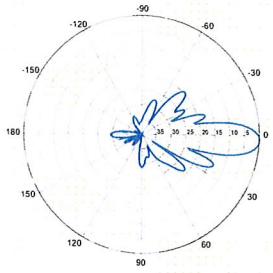
Horizontal | 750 MHz

**BXA-70063-6CF-EDIN-0**

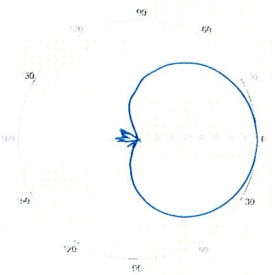


0° | Vertical | 750 MHz

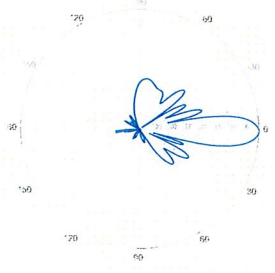
**BXA-70063-6CF-EDIN-2**



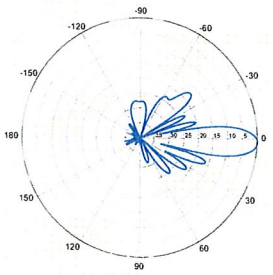
2° | Vertical | 750 MHz



Horizontal | 850 MHz



0° | Vertical | 850 MHz

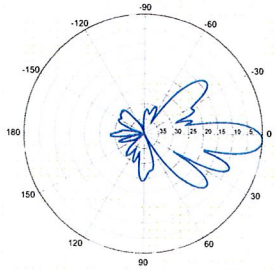


2° | Vertical | 850 MHz

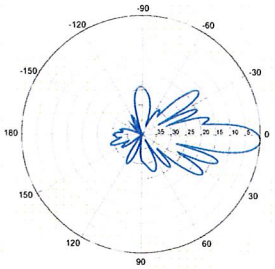
# BXA-70063-6CF-EDIN-X

X-Pol | FET Panel | 63° | 14.5 dBd

**BXA-70063-6CF-EDIN-3**

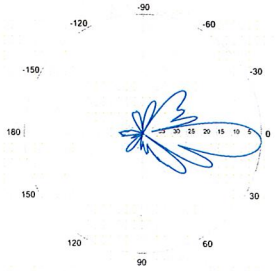


3° | Vertical | 750 MHz

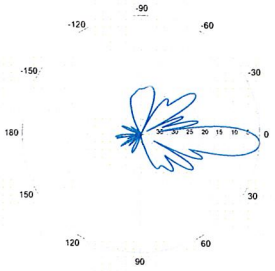


3° | Vertical | 850 MHz

**BXA-70063-6CF-EDIN-4**

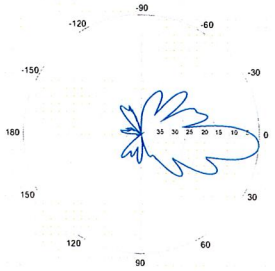


4° | Vertical | 750 MHz

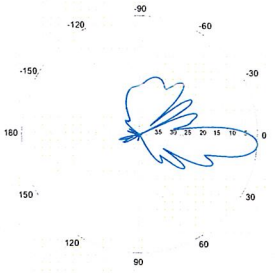


4° | Vertical | 850 MHz

**BXA-70063-6CF-EDIN-5**

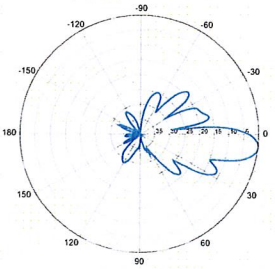


5° | Vertical | 750 MHz

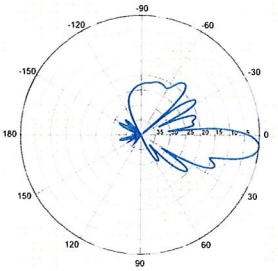


5° | Vertical | 850 MHz

**BXA-70063-6CF-EDIN-6**

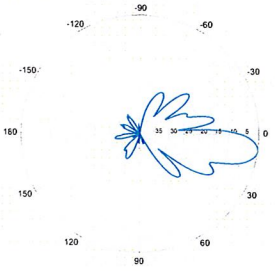


6° | Vertical | 750 MHz

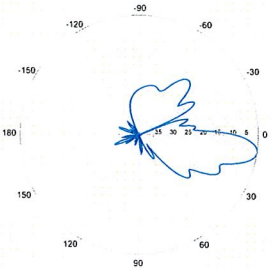


6° | Vertical | 850 MHz

**BXA-70063-6CF-EDIN-8**

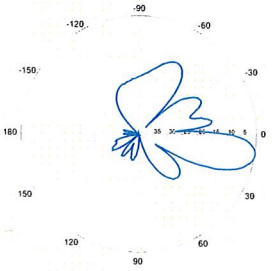


8° | Vertical | 750 MHz

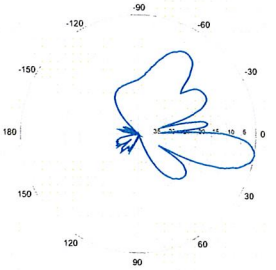


8° | Vertical | 850 MHz

**BXA-70063-6CF-EDIN-10**



10° | Vertical | 750 MHz



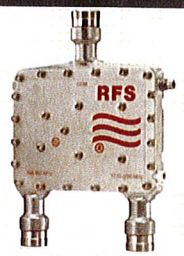
10° | Vertical | 850 MHz

**Product Data Sheet** **FD9R6004/2C-3L**

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

## Product Description

The ShareLite FD9R6004 Series of diplexers are designed to enable feeder sharing between systems in the 698-960 MHz range and in the 1710-2200 MHz range. The diplexer is equipped with in-line connector placement so it can be installed in the BTS cabinet or at the tower top. This is especially valuable in crowded sites or when the feeders are not easily accessible. Due to its wideband design, the FD9R6004 Series can accommodate many combining solutions between 698-960 MHz and 1710-2200 MHz systems such as LTE 700 MHz, Cellular 800 MHz with PCS, GSM900 with GSM1800, or GSM900 with UMTS. This diplexer features a highly selective filter. It provides a high level of isolation between ports, while keeping the insertion loss on both paths at an extremely low level. The FD9R6004 diplexers are available with various DC pass options, helpful in configurations with or without the Tower Mount Amplifiers installed.




## Features/Benefits

- **LTE ready design**
- **Extremely Low Insertion Loss**
- **High level of Rejection between bands – Protection against interferences**
- **Extremely High Power Handling Capability**
- **Integrated DC block/bypass versions available**
- **Very compact & small size design – Easy installation and reduced tower load**
- **In-line long-neck connectors for easy connection & waterproofing**
- **Exceptional reliability & environmental protection (IP 67)**
- **Equipped with 1 * Breathable Vent – Prevent any humidity inside the product**
- **Mounting hardware for Wall and Pole mount provided (P/N SEM2-1A)**
- **Grounding already provided through the mounting bracket**
- **Kit available for easy dual mount**

## Technical Specifications

| | |
|---|---|
| Product Type | Diplexer/Cross Band Coupler |
| Frequency Range 1, MHz | 698-960 |
| Frequency Range 2, MHz | 1710-2200 |
| Application | LTE700, GSM900, UMTS, GSM1800, Cellular 800, PCS |
| Configuration | Sharelite Single diplexer, outdoor, DC pass in the 1710-2170MHz path, with mounting hardware SEM2-1A |
| Mounting | Wall Mounting: With 4 screws (maximum 6mm diameter); Pole Mounting: With included clamp set 40-110mm (1.57-4.33) |
| Return Loss All Ports Min/Typ, dB | 19/23 |
| Power Handling Continuous, Max, W | 1250 at common port; 750 in low frequency path & 500 in high frequency path |
| Power Handling Peak, Max, W | 15000 in low frequency path & 8000 in high frequency path |
| Impedance, Ohms | 50 |
| Insertion Loss, Path 1, dB | 0.07 typ. |
| Insertion Loss, Path 2, dB | 0.13 typ. |
| Rejection Between Bands Min/Typ, dB | 58/64@698-960MHz; 60/70@1710-2200MHz |
| IMP Level at the COM Port, Typ, dBm | -112 @ 2x43 |
| DC Pass in Low Frequency Path | No |
| DC Pass in High Frequency Path | Yes |
| Temperature Range, °C (°F) | -40 to +60 (-40 to +140) |
| Environmental | ETSI 300-019-2-4 Class 4.1E |
| Ingress Protection | IP 67 |
| Lightning Protection | EN/IEC61000-4-5 Level 4 |
| Connectors | In-line long-neck 7-16-Female |
| Weight, kg (lb) | 1.2 (2.6) |
| Shipping Weight, kg (lb) | 3.2 (7) for 2 * single units in 1 * box, 9.8 (21.6) for 6 * units = 3 * Boxes in 1 * overwrap |
| Dimensions, H x W x D, mm (in) | 147 x 164 x 37 (5.8 x 6.5 x 1.5) |
| Shipping Dimensions, H x W x D, mm (in) | 254 x 406 x 82 (10 x 16 x 3.2) for 2 * Single Units in 1 * box, 280 x 406 x 241 (11 x 16 x 9.5) for 6 * units = 3 * Boxes in 1 * overwrap |
| Volume, L | 0.43 |
| Housing | Aluminum |

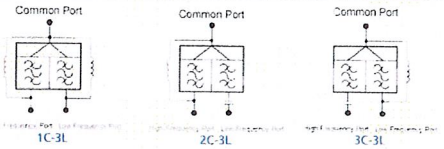
## Notes

# ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

## Other Documentation

FD9R6004/2C-3L Installation Instructions: Wideband_Diplexer_Installation_Rev5.pdf

| Selection Guide Diplexer 698-960 / 1710-2200MHz | | | | | |
|---|---|---|---|---|---|
| | Model Number | Full DC Pass | DC Pass High Band | DC Pass Low Band | Mounting Hardware Included |
| Single | FD9R6004/1C-3L | | | | X |
| | FD9R6004/2C-3L | | | | X |
| | FD9R6004/3C-3L | | | | X |
| Dual | KIT-FD9R6004/1C-DL | | | | X |
| | KIT-FD9R6004/2C-DL | | | | X |
| | KIT-FD9R6004/3C-DL | | | | X |




The FD9R6004 Series is upgradeable to a Dual Diplexer kit by means of 2 diplexers and mounting hardware kits SEM2-1A and SEM2-3

| Mounting Hardware and Ground Cable Ordering Information | | |
|---|---|---|
| **Model Number** | **Description** | |
| SEM2-1A | Mounting Hardware, Pole mount ø40-110mm (Included with the Single and Dual Diplexer) Wall Screws M6 (Not included with the product) |  |
| SEM2-3 | Assembly kit for 2 pcs of FD9R6004/xC-3L (Can be ordered separately but included with the Dual Diplexer Kit) |  |
| CA020-2 | Ground Cable, 2m, includes lugs (Optional) |  |
| CA030-2 | Ground Cable, 2m, includes lugs (Optional) | |
| SEM6 | Mounting Hardware for 6 Diplexers, Tower Base (Optional) | |

| | General | Power | Density | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Site Name: Winchester E** | | | | | | | | |
| **Tower Height:** Verizon @ 125ft | | | | | | | | |
| **CARRIER** | **# OF CHAN.** | **WATTS ERP** | **HEIGHT** | **CALC. POWER DENS** | **FREQ.** | **MAX. PERMISS. EXP.** | **FRACTION MPE** | **Total** |
| *Cingular UMTS | 1 | 500 | 187 | 0.0051 | 880 | 0.5867 | 0.88% | |
| *Cingular GSM | 4 | 296 | 187 | 0.0122 | 880 | 0.5867 | 2.08% | |
| *Cingular GSM | 2 | 427 | 187 | 0.0088 | 1930 | 1.0000 | 0.88% | |
| *Pocket | 3 | 631 | 105 | 0.0617 | 2130 | 1.0000 | 6.17% | |
| *T-Mobile | 8 | 145 | 166 | 0.0151 | 1945 | 1.0000 | 1.51% | |
| *CTPD | 2 | 1080 | 160 | 0.0303 | 866 | 0.5773 | 5.25% | |
| *Sprint | 11 | 395 | 134 | 0.0870 | 1930 | 1.0000 | 8.70% | |
| *Nextel | 9 | 100 | 115 | 0.0245 | 851 | 0.5673 | 4.31% | |
| **Verizon PCS** | **7** | **259** | **125** | **0.0417** | **1970** | **1.0000** | **4.17%** | |
| **Verizon Cellular** | **9** | **263** | **125** | **0.0545** | **869** | **0.5793** | **9.40%** | |
| **Verizon AWS** | **1** | **670** | **125** | **0.0154** | **2145** | **1.0000** | **1.54%** | |
| **Verizon 700** | **1** | **858** | **125** | **0.0197** | **698** | **0.4653** | **4.24%** | |
| | | | | | | | | **49.15%** |
| * Source: Siting Council | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

AMERICAN TOWER®
CORPORATION

# Structural Analysis Report

| | | |
|---|---|---|
| Structure | : | 180 ft EEI Monopole |
| ATC Site Name | : | Winchester CT 3, CT |
| ATC Site Number | : | 302506 |
| Proposed Carrier | : | Verizon |
| Carrier Site Name | : | Winchester East, CT |
| Carrier Site Number | : | N/A |
| County | : | Litchfield |
| Engineering Number | : | 48547122 |
| Date | : | January 12, 2012* |
| Usage | : | 69% |
| Portholes Required | : | No |
| Result | : | Pass |

Submitted by:
Michael B. Davenport
Project Engineer


1/12/12

**American Tower Engineering Services**
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

## Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 180 ft EEI Monopole located at 15 Oakdale Avenue, Winsted, CT 06098, Litchfield County (ATC site #302506). The tower was originally designed and manufactured by EEI (Job #7676, dated August 21, 2000). Modifications recommended in an analysis by ATC (Eng. #42523421, dated October 23, 2008) have been installed and included in this analysis.

## Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software.

| | |
|---|---|
| Basic Wind Speed: | 90 mph (3-Second Gust) |
| Radial Ice: | 40 mph (3-Second Gust) w/ 1 1/4" ice |
| Code: | ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2008 CT Amendments |

## Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

| Elev. (ft) | Qty | Antennas | Mount | Coax | Carrier |
|---|---|---|---|---|---|
| 184.0 | 1 | 10' Omni | Low Profile Platform | (1) 7/8" | USA Mobility |
| 184.0 | 6 | Powerwave 7020.00 Dual Band RET | | (12) 1 5/8" | AT&T Mobility |
| | 6 | Powerwave 7770.00 | | | |
| | 6 | Powerwave LGP21401 | | | |
| | 6 | Powerwave LGP21901 | | | |
| 166.0 | 6 | CCI DTMA-1819-DD-12 | T-Arms | (18) 1 5/8" | T-Mobile |
| | 9 | RFS APX16PV-16PVL-E-00 | | | |
| 142.0 | 2 | 10' Omni | Side Arms | (4) 1 5/8" (1) ½" | CT Police Dept. |
| | 1 | 56" Dipole | | | |
| 134.0 | 9 | Andrew DB980H90E-M | Low Profile Platform | (9) 1 5/8" | Sprint Nextel |
| 114.5 | 12 | Decibel DB844H90E-XY | Low Profile Platform | (12) 1 ¼" | |
| 105.0 | 3 | RFS APXV18-206517S-C | Flush | (6) 1 5/8" | Youghiogheny |
| 78.0 | 1 | GPS | Flush | (1) ½" | Sprint Nextel |

Proposed Antennas

| Elev. (ft) | Qty | Antennas | Mount | Coax | Carrier |
|---|---|---|---|---|---|
| 125.0 | 1 | Antel BXA-171063/12CF | Low Profile Platform | (12) 1 5/8" | Verizon |
| | 2 | Antel BXA-171085-12CF-EDIN-X | | | |
| | 3 | Antel BXA-70063/6CF | | | |
| | 2 | Antel LPA-80063/6CF | | | |
| | 4 | Antel LPA-80080/6CF | | | |
| | 6 | RFS FD9R6004/2C-3L | | | |
| 30.0 | 1 | GPS | Flush | (1) 7/8" | |

Install proposed coax on outside of monopole.

**Results**

The maximum structure usage is: 69%

| Pole Reactions | Original Design Reactions | Factored Design Reactions* | Current Analysis Reactions | % Of Design |
|---|---|---|---|---|
| Moment (ft-kips) | 3,377.9 | 4,560.2 | 3,596.4 | 79 |
| Shear (kips) | 28.4 | 38.3 | 34.1 | 89 |

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

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

**Conclusion**

Based on the analysis results, the structure meets the requirements per ANSI/TIA-222-G and 2003 IBC with 2005 CT Supplement & 2008 Amendments. The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5147.

## 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, the antenna 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.

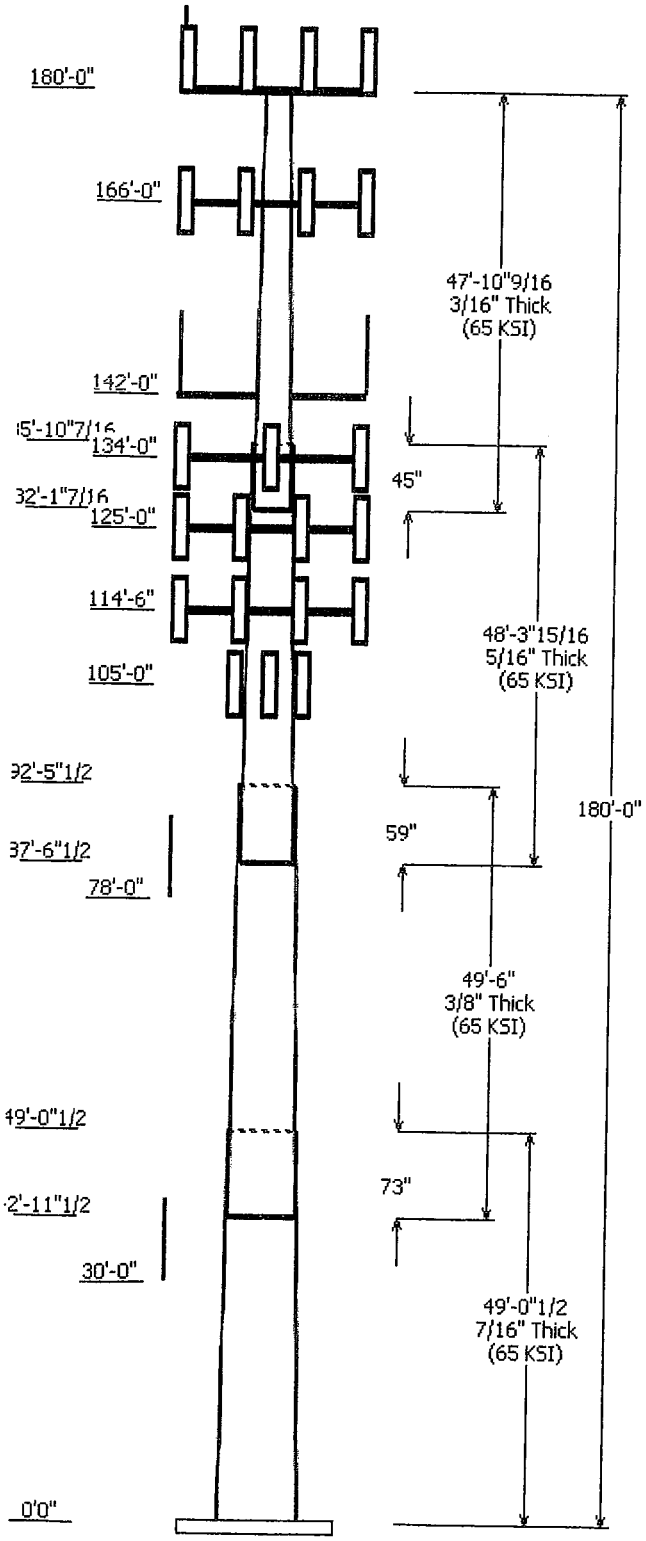
It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

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 : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Description : | 180 ft EEI Monopole | Struct Class : II | |
| Client : | Verizon Wireless | Exposure : B | |
| Location : | Winchester CT 3, CT | Topo : 1 | |
| Shape : | 18 Sides | Base Elev (ft): 0.00 | |
| Height : | 180.00 (ft) | Taper: 0.219444(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 | 49.040 | 41.98 | 52.75 | 0.438 | | 0.000 | 0.219444 | 65 |
| 2 | 49.500 | 33.21 | 44.07 | 0.375 | Slip Joint | 73.000 | 0.219444 | 65 |
| 3 | 48.330 | 24.30 | 34.91 | 0.313 | Slip Joint | 59.000 | 0.219444 | 65 |
| 4 | 47.880 | 15.00 | 25.50 | 0.188 | Slip Joint | 45.000 | 0.219444 | 65 |

## Discrete Appurtenance

| Attach Elev (ft) | Force Elev (ft) | Qty | Description |
|---|---|---|---|
| 180.000 | 184.000 | 6 | Powerwave LGP21901 |
| 180.000 | 184.000 | 6 | Powerwave 7020.00 Dual Band |
| 180.000 | 184.000 | 6 | Powerwave 7770.00 |
| 180.000 | 184.000 | 6 | Powerwave LGP21401 |
| 180.000 | 189.000 | 1 | 10' Omni |
| 180.000 | 180.000 | 1 | Flat Low Profile Platform |
| 166.000 | 166.000 | 3 | T-Arms |
| 166.000 | 166.000 | 6 | CCI DTMA-1819-DD-12 |
| 166.000 | 166.000 | 9 | RFS APX16PV-16PVL-E-00 |
| 142.000 | 142.000 | 2 | Side Arms |
| 142.000 | 142.000 | 1 | 56" Dipole |
| 142.000 | 147.000 | 2 | 10' Omni |
| 134.000 | 134.000 | 1 | Flat Low Profile Platform |
| 134.000 | 134.000 | 9 | Andrew DB980H90E-M |
| 125.000 | 125.000 | 6 | RFS FD9R6004/2C-3L |
| 125.000 | 125.000 | 1 | Antel BXA-171063/12CF |
| 125.000 | 125.000 | 2 | Antel BXA-171085-12CF-EDIN-X |
| 125.000 | 125.000 | 3 | Antel BXA-70063/6CF |
| 125.000 | 125.000 | 1 | Round Low Profile Platform |
| 125.000 | 125.000 | 2 | Antel LPA-80063/6CF |
| 125.000 | 125.000 | 4 | Antel LPA-80080/6CF |
| 114.500 | 114.500 | 1 | Round Low Profile Platform |
| 114.500 | 114.500 | 12 | Decibel DB844H90E-XY |
| 105.000 | 105.000 | 3 | RFS APXV18-206517S-C |
| 78.000 | 78.500 | 1 | GPS |
| 30.000 | 30.500 | 1 | GPS |

## Linear Appurtenance

| Elev (ft) From | To | Description | Exposed To Wind |
|---|---|---|---|
| 0.000 | 30.000 | 7/8" Coax | No |
| 0.000 | 78.000 | 1/2" Coax | No |
| 0.000 | 105.0 | 1 5/8" Coax | Yes |
| 0.000 | 114.5 | 1 1/4" Coax | Yes |
| 0.000 | 125.0 | 1 5/8" Coax | Yes |
| 0.000 | 134.0 | 1 5/8" Coax | No |
| 0.000 | 142.0 | 1 5/8" Coax | No |
| 0.000 | 142.0 | 1/2" Coax | No |
| 0.000 | 166.0 | 1 5/8" Coax | Yes |
| 0.000 | 180.0 | 1 5/8" Coax | No |
| 0.000 | 180.0 | 7/8" Coax | No |

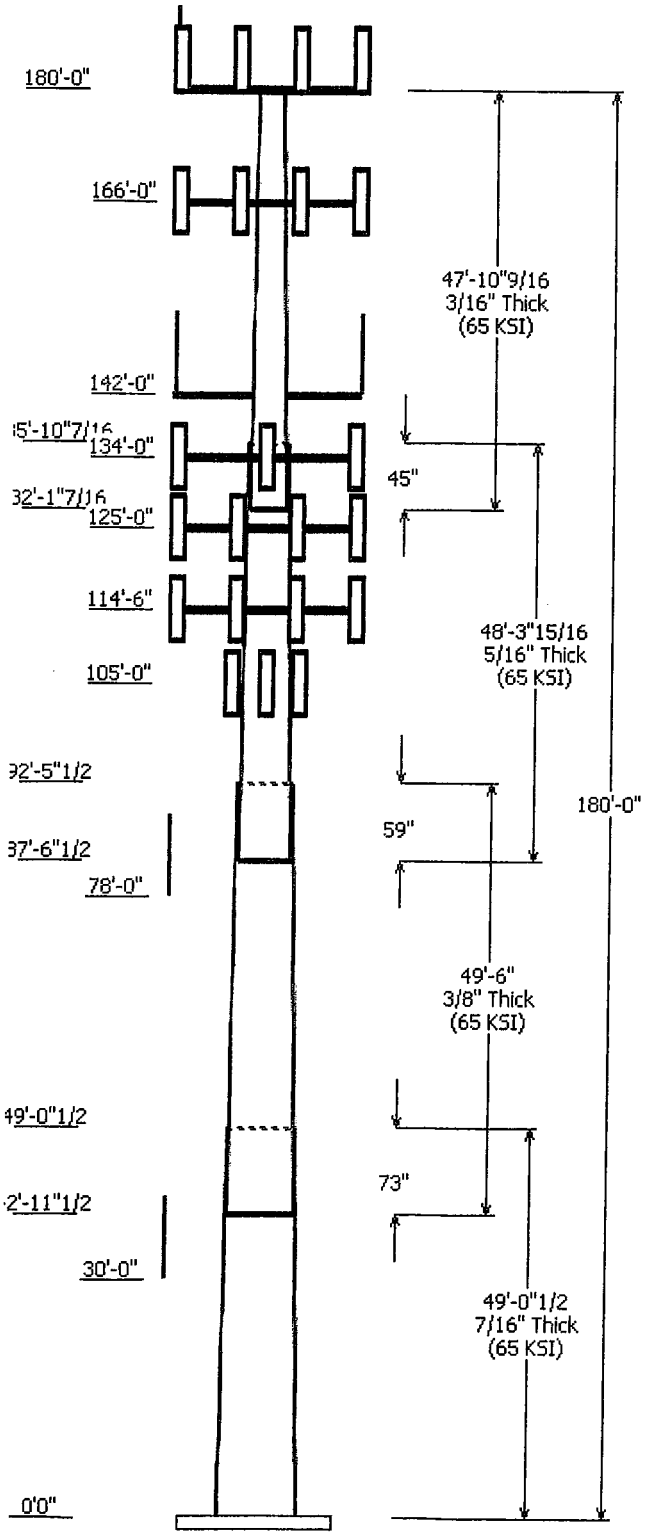
## Load Cases

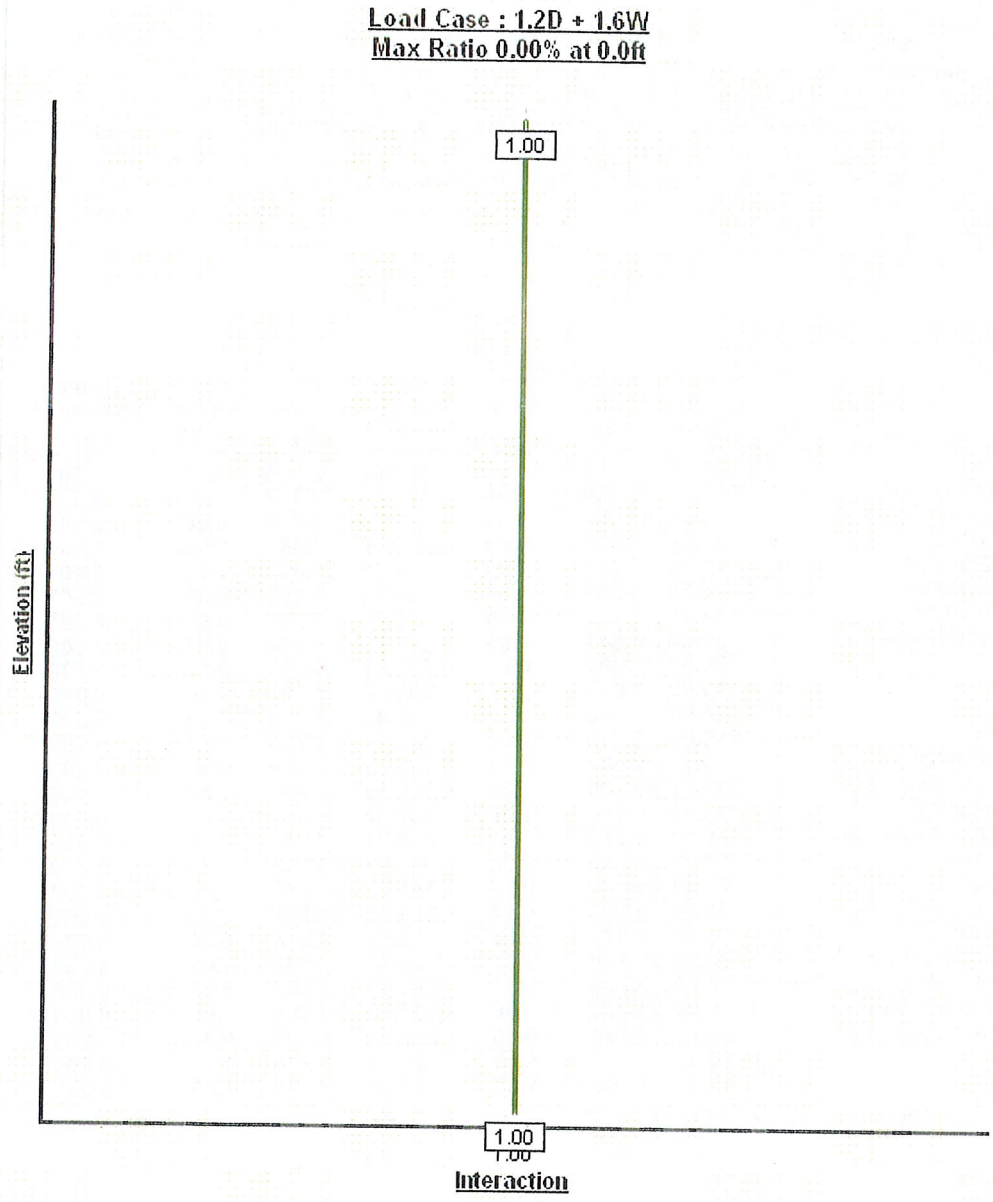
| | |
|---|---|
| 1.2D + 1.6W | 90.00 mph with No Ice |

| | |
|---|---|
| 0.9D + 1.6W | 90.00 mph with No Ice (Reduced DL) |
| 1.2D + 1.0Di + 1.0Wi | 40.00 mph with 1.25 in Radial Ice |

**Reactions**

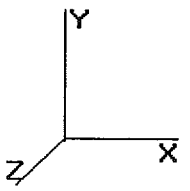
| Load Case | Moment (Kip-ft) | Shear (Kips) | Axial (Kips) |
|---|---|---|---|
| 1.2D + 1.6W | 3596.44 | 34.10 | 50.51 |
| 0.9D + 1.6W | 3493.53 | 33.72 | 37.87 |
| 1.2D + 1.0Di + 1.0Wi | 829.74 | 6.65 | 123.49 |




Load Case : 1.2D + 1.6W
Max Ratio 0.00% at 0.0ft
1.00
Elevation (ft)
1.00
1.00
Interaction

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:42 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | Page: 1 |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






## Shaft Section Properties

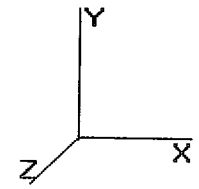
| Sect Info | Length (ft) | Thick (in) | Fy (ksi) | Slip Joint Type | Slip Joint Len (in) | Weight (lb) | Bottom Dia (in) | Bottom Elev (ft) | Bottom Area (sqin) | Bottom Ix (in^4) | Bottom W/t Ratio | Bottom D/t Ratio | Top Dia (in) | Top Elev (ft) | Top Area (sqin) | Top Ix (in^4) | Top W/t Ratio | Top D/t Ratio | Taper (in/ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-18 | 49.040 | 0.4375 | 65 | | 0.00 | 10,875 | 52.75 | 0.00 | 72.64 | 25115.3 | 19.85 | 120.57 | 41.98 | 49.04 | 57.70 | 12585.4 | 15.51 | 95.97 | 0.219444 |
| 2-18 | 49.500 | 0.3750 | 65 | Slip | 73.00 | 7,672 | 44.07 | 42.96 | 52.01 | 12548.0 | 19.31 | 117.53 | 33.21 | 92.46 | 39.08 | 5323.8 | 14.21 | 88.56 | 0.219444 |
| 3-18 | 48.330 | 0.3125 | 65 | Slip | 59.00 | 4,779 | 34.91 | 87.54 | 34.32 | 5191.7 | 18.29 | 111.73 | 24.30 | 135.87 | 23.80 | 1731.6 | 12.31 | 77.79 | 0.219444 |
| 4-18 | 47.880 | 0.1875 | 65 | Slip | 45.00 | 1,946 | 25.50 | 132.12 | 15.07 | 1220.4 | 22.58 | 136.04 | 15.00 | 180.00 | 8.81 | 244.4 | 12.70 | 80.00 | 0.219444 |
| | | | | Shaft Weight | | 25,271 | | | | | | | | | | | | | |

## 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| 180.00 | 10' Omni | 1 | 10.00 | 3.000 | 1.00 | 300.02 | 7.476 | 1.00 | 0.000 | 9.000 |
| 180.00 | Flat Low Profile Platform | 1 | 1500.00 | 26.100 | 1.00 | 2,601.94 | 58.572 | 1.00 | 0.000 | 0.000 |
| 180.00 | Powerwave 7020.00 Dual | 6 | 2.20 | 0.400 | 0.50 | 40.56 | 0.889 | 0.50 | 0.000 | 4.000 |
| 180.00 | Powerwave 7770.00 | 6 | 35.00 | 5.941 | 0.75 | 303.00 | 7.460 | 0.76 | 0.000 | 4.000 |
| 180.00 | Powerwave LGP21401 | 6 | 14.10 | 1.290 | 0.50 | 87.86 | 1.954 | 0.50 | 0.000 | 4.000 |
| 180.00 | Powerwave LGP21901 | 6 | 5.50 | 0.230 | 0.50 | 37.39 | 0.659 | 0.50 | 0.000 | 4.000 |
| 166.00 | CCI DTMA-1819-DD-12 | 6 | 14.30 | 0.710 | 0.50 | 70.61 | 1.307 | 0.50 | 0.000 | 0.000 |
| 166.00 | RFS APX16PV-16PVL-E-00 | 9 | 39.60 | 6.647 | 0.65 | 292.53 | 7.924 | 0.67 | 0.000 | 0.000 |
| 166.00 | T-Arms | 3 | 250.00 | 12.900 | 0.67 | 602.60 | 26.697 | 0.67 | 0.000 | 0.000 |
| 142.00 | 10' Omni | 2 | 10.00 | 3.000 | 1.00 | 289.64 | 7.387 | 1.00 | 0.000 | 5.000 |
| 142.00 | 56" Dipole | 1 | 25.00 | 1.760 | 1.00 | 53.93 | 3.796 | 1.00 | 0.000 | 0.000 |
| 142.00 | Side Arms | 2 | 150.00 | 5.200 | 1.00 | 271.50 | 9.713 | 1.00 | 0.000 | 0.000 |
| 134.00 | Andrew DB980H90E-M | 9 | 8.50 | 3.900 | 0.79 | 196.52 | 5.699 | 0.82 | 0.000 | 0.000 |
| 134.00 | Flat Low Profile Platform | 1 | 1500.00 | 26.100 | 1.00 | 2,569.90 | 57.627 | 1.00 | 0.000 | 0.000 |
| 125.00 | Antel BXA-171063/12CF | 1 | 15.00 | 4.790 | 1.00 | 249.82 | 6.869 | 1.00 | 0.000 | 0.000 |
| 125.00 | Antel BXA-171085-12CF-EDIN- | 2 | 15.00 | 4.770 | 0.91 | 249.71 | 6.884 | 0.91 | 0.000 | 0.000 |
| 125.00 | Antel BXA-70063/6CF | 3 | 17.00 | 7.730 | 0.74 | 330.09 | 9.713 | 0.74 | 0.000 | 0.000 |
| 125.00 | Antel LPA-80063/6CF | 2 | 27.00 | 10.340 | 0.94 | 541.03 | 11.857 | 0.94 | 0.000 | 0.000 |
| 125.00 | Antel LPA-80080/6CF | 4 | 21.00 | 9.100 | 0.74 | 380.76 | 10.867 | 0.75 | 0.000 | 0.000 |
| 125.00 | RFS FD9R6004/2C-3L | 6 | 3.10 | 0.370 | 0.50 | 34.12 | 0.814 | 0.50 | 0.000 | 0.000 |
| 125.00 | Round Low Profile Platform | 1 | 1500.00 | 21.700 | 1.00 | 2,562.48 | 53.185 | 1.00 | 0.000 | 0.000 |
| 114.50 | Decibel DB844H90E-XY | 12 | 14.00 | 3.730 | 0.93 | 222.09 | 5.143 | 0.93 | 0.000 | 0.000 |
| 114.50 | Round Low Profile Platform | 1 | 1500.00 | 21.700 | 1.00 | 2,553.20 | 52.909 | 1.00 | 0.000 | 0.000 |
| 105.00 | RFS APXV18-206517S-C | 3 | 26.40 | 5.160 | 0.80 | 250.81 | 7.225 | 0.82 | 0.000 | 0.000 |
| 78.00 | GPS | 1 | 10.00 | 1.000 | 1.00 | 82.55 | 1.226 | 1.00 | 0.000 | 0.000 |
| 30.00 | GPS | 1 | 10.00 | 1.000 | 1.00 | 72.96 | 1.150 | 1.00 | 0.000 | 0.500 |
| | Totals | 96 | 8484.30 | | | 29,331.76 | | | Number of Loadings : | 0.500 |
| | | | | | | | | | | 26 |

## Linear Appurtenance Properties

| Elev From (ft) | Elev To (ft) | Description | Exposed Width (in) | Exposed To Wind |
|---|---|---|---|---|
| 0.00 | 180.00 | (12) 1 5/8" Coax | 0.00 | N |
| 0.00 | 180.00 | (1) 7/8" Coax | 0.00 | N |
| 0.00 | 166.00 | (18) 1 5/8" Coax | 3.96 | Y |
| 0.00 | 142.00 | (4) 1 5/8" Coax | 0.00 | N |
| 0.00 | 142.00 | (1) 1/2" Coax | 0.00 | N |
| 0.00 | 134.00 | (9) 1 5/8" Coax | 0.00 | N |
| 0.00 | 125.00 | (12) 1 5/8" Coax | 3.96 | Y |

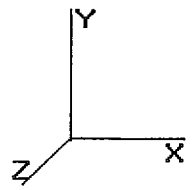





| | | | | |
|---|---|---|---|---|
| 0.00 | 114.50 | (12) 1 1/4" Coax | 3.10 | Y |
| 0.00 | 105.00 | (6) 1 5/8" Coax | 0.00 | Y |
| 0.00 | 78.00 | (1) 1/2" Coax | 0.00 | N |
| 0.00 | 30.00 | (1) 7/8" Coax | 0.00 | N |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:42 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | Page: 3 |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |

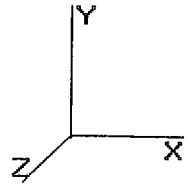





## Segment Properties (Max Len : 5 ft)

| Seg Top Elev (ft) | Description | Thick (in) | Flat Dia (in) | Area (in^2) | Ix (in^4) | W/t Ratio | D/t Ratio | Fy (ksi) | S (in3) | Weight (lb) |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | | 0.4375 | 52.750 | 72.640 | 25,115.3 | 19.85 | 120.57 | 78.1 | 937.8 | 0.0 |
| 5.00 | | 0.4375 | 51.653 | 71.116 | 23,567.9 | 19.41 | 118.06 | 78.6 | 898.7 | 1,222.9 |
| 10.00 | | 0.4375 | 50.556 | 69.593 | 22,085.4 | 18.96 | 115.56 | 79.1 | 860.4 | 1,197.0 |
| 15.00 | | 0.4375 | 49.458 | 68.069 | 20,666.4 | 18.52 | 113.05 | 79.6 | 823.0 | 1,171.1 |
| 20.00 | | 0.4375 | 48.361 | 66.546 | 19,309.5 | 18.08 | 110.54 | 80.1 | 786.4 | 1,145.2 |
| 25.00 | | 0.4375 | 47.264 | 65.022 | 18,013.3 | 17.64 | 108.03 | 80.7 | 750.7 | 1,119.2 |
| 30.00 | | 0.4375 | 46.167 | 63.498 | 16,776.5 | 17.20 | 105.52 | 81.2 | 715.7 | 1,093.3 |
| 35.00 | | 0.4375 | 45.069 | 61.975 | 15,597.7 | 16.75 | 103.02 | 81.7 | 681.6 | 1,067.4 |
| 40.00 | | 0.4375 | 43.972 | 60.451 | 14,475.4 | 16.31 | 100.51 | 82.2 | 648.4 | 1,041.5 |
| 42.96 | Bot - Section 2 | 0.4375 | 43.323 | 59.550 | 13,837.8 | 16.05 | 99.02 | 82.5 | 629.1 | 603.6 |
| 45.00 | | 0.4375 | 42.875 | 58.928 | 13,408.2 | 15.87 | 98.00 | 82.6 | 616.0 | 771.7 |
| 49.04 | Top - Section 1 | 0.3750 | 42.738 | 50.421 | 11,432.7 | 18.69 | 113.97 | 79.4 | 526.9 | 1,502.0 |
| 50.00 | | 0.3750 | 42.528 | 50.171 | 11,263.0 | 18.59 | 113.41 | 79.5 | 521.6 | 164.3 |
| 55.00 | | 0.3750 | 41.431 | 48.865 | 10,406.2 | 18.07 | 110.48 | 80.1 | 494.7 | 842.5 |
| 60.00 | | 0.3750 | 40.333 | 47.559 | 9,594.0 | 17.55 | 107.56 | 80.8 | 468.5 | 820.3 |
| 65.00 | | 0.3750 | 39.236 | 46.253 | 8,825.1 | 17.04 | 104.63 | 81.4 | 443.0 | 798.0 |
| 70.00 | | 0.3750 | 38.139 | 44.947 | 8,098.5 | 16.52 | 101.70 | 82.0 | 418.2 | 775.8 |
| 75.00 | | 0.3750 | 37.042 | 43.641 | 7,412.9 | 16.01 | 98.78 | 82.6 | 394.2 | 753.6 |
| 78.00 | | 0.3750 | 36.383 | 42.857 | 7,020.8 | 15.70 | 97.02 | 82.6 | 380.1 | 441.5 |
| 80.00 | | 0.3750 | 35.944 | 42.335 | 6,767.2 | 15.49 | 95.85 | 82.6 | 370.8 | 289.9 |
| 85.00 | | 0.3750 | 34.847 | 41.029 | 6,160.0 | 14.97 | 92.93 | 82.6 | 348.2 | 709.2 |
| 87.54 | Bot - Section 3 | 0.3750 | 34.290 | 40.366 | 5,866.0 | 14.71 | 91.44 | 82.6 | 336.9 | 351.7 |
| 90.00 | | 0.3750 | 33.750 | 39.723 | 5,590.4 | 14.46 | 90.00 | 82.6 | 326.2 | 620.3 |
| 92.46 | Top - Section 2 | 0.3125 | 33.836 | 33.250 | 4,721.1 | 17.68 | 108.27 | 80.6 | 274.8 | 609.5 |
| 95.00 | | 0.3125 | 33.278 | 32.696 | 4,489.2 | 17.37 | 106.49 | 81.0 | 265.7 | 285.4 |
| 100.0 | | 0.3125 | 32.181 | 31.608 | 4,055.7 | 16.75 | 102.98 | 81.7 | 248.2 | 547.0 |
| 105.0 | | 0.3125 | 31.083 | 30.520 | 3,651.0 | 16.13 | 99.47 | 82.4 | 231.3 | 528.5 |
| 110.0 | | 0.3125 | 29.986 | 29.431 | 3,274.2 | 15.51 | 95.96 | 82.6 | 215.1 | 510.0 |
| 114.5 | | 0.3125 | 28.999 | 28.452 | 2,958.1 | 14.95 | 92.80 | 82.6 | 200.9 | 443.2 |
| 115.0 | | 0.3125 | 28.889 | 28.343 | 2,924.3 | 14.89 | 92.44 | 82.6 | 199.4 | 48.3 |
| 120.0 | | 0.3125 | 27.792 | 27.255 | 2,600.2 | 14.27 | 88.93 | 82.6 | 184.3 | 473.0 |
| 125.0 | | 0.3125 | 26.694 | 26.167 | 2,301.0 | 13.65 | 85.42 | 82.6 | 169.8 | 454.5 |
| 130.0 | | 0.3125 | 25.597 | 25.078 | 2,025.7 | 13.03 | 81.91 | 82.6 | 155.9 | 435.9 |
| 132.1 | Bot - Section 4 | 0.3125 | 25.132 | 24.617 | 1,915.9 | 12.77 | 80.42 | 82.6 | 150.2 | 179.2 |
| 134.0 | | 0.3125 | 24.719 | 24.208 | 1,821.9 | 12.54 | 79.10 | 82.6 | 145.2 | 251.8 |
| 135.0 | | 0.3125 | 24.500 | 23.990 | 1,773.2 | 12.41 | 78.40 | 82.6 | 142.6 | 132.2 |
| 135.8 | Top - Section 3 | 0.1875 | 24.684 | 14.578 | 1,105.3 | 21.80 | 131.65 | 75.8 | 88.2 | 114.0 |
| 140.0 | | 0.1875 | 23.778 | 14.039 | 987.1 | 20.95 | 126.81 | 76.8 | 81.8 | 201.1 |
| 142.0 | | 0.1875 | 23.339 | 13.777 | 933.0 | 20.54 | 124.47 | 77.2 | 78.7 | 94.7 |
| 145.0 | | 0.1875 | 22.681 | 13.386 | 855.6 | 19.92 | 120.96 | 78.0 | 74.3 | 138.6 |
| 150.0 | | 0.1875 | 21.583 | 12.733 | 736.4 | 18.89 | 115.11 | 79.2 | 67.2 | 222.2 |
| 155.0 | | 0.1875 | 20.486 | 12.080 | 628.8 | 17.85 | 109.26 | 80.4 | 60.5 | 211.1 |
| 160.0 | | 0.1875 | 19.389 | 11.427 | 532.3 | 16.82 | 103.41 | 81.6 | 54.1 | 200.0 |
| 165.0 | | 0.1875 | 18.292 | 10.774 | 446.2 | 15.79 | 97.56 | 82.6 | 48.0 | 188.9 |
| 166.0 | | 0.1875 | 18.072 | 10.643 | 430.1 | 15.58 | 96.39 | 82.6 | 46.9 | 36.4 |
| 170.0 | | 0.1875 | 17.194 | 10.121 | 369.8 | 14.76 | 91.70 | 82.6 | 42.4 | 141.3 |
| 175.0 | | 0.1875 | 16.097 | 9.468 | 302.8 | 13.73 | 85.85 | 82.6 | 37.0 | 166.6 |
| 180.0 | | 0.1875 | 15.000 | 8.815 | 244.4 | 12.70 | 80.00 | 82.6 | 32.1 | 155.5 |
| | | | | | | | | | | 25,271.1 |

| | | | |
|---|---|---|---|
| Pole : 302506 | Code: ANSI/TIA-222 Rev G | | 1/12/2012 11:05:42 AM |
| Location : Winchester CT 3, CT | Struct Class : II | | Page: 4 |
| Height : 180.0 (ft) | Exposure Category : B | | |
| Base Dia : 52.75 (in) | Topographic Category : 1 | | |
| Top Dia : 15.00 (in) | Base Elev : 0.000 (ft) | | |
| Shape : 18 Sides | | | |
| Taper : 0.219444 (in/ft) |  | | |




**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

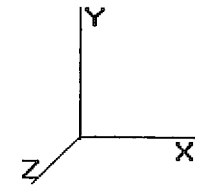
Wind Importance Factor : 1.00

## Shaft Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Kzt | 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 | | 1.00 | 0.70 | 13.789 | 15.16 | 336.11 | 0.650 | | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 329.11 | 1.200 | * | 0.000 | 5.00 | 22.086 | 26.50 | 643.2 | 0.0 | 1,467.5 |
| 10.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 322.12 | 1.200 | * | 0.000 | 5.00 | 21.622 | 25.95 | 629.7 | 0.0 | 1,436.4 |
| 15.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 315.13 | 1.200 | * | 0.000 | 5.00 | 21.158 | 25.39 | 616.2 | 0.0 | 1,405.3 |
| 20.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 308.14 | 1.200 | * | 0.000 | 5.00 | 20.693 | 24.83 | 602.7 | 0.0 | 1,374.2 |
| 25.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 301.15 | 1.200 | * | 0.000 | 5.00 | 20.229 | 24.28 | 589.1 | 0.0 | 1,343.1 |
| 30.00 | Appertunance(s) | 1.00 | 0.70 | 13.801 | 15.18 | 294.28 | 1.200 | * | 0.000 | 5.00 | 19.765 | 23.72 | 576.1 | 0.0 | 1,312.0 |
| 35.00 | | 1.00 | 0.73 | 14.423 | 15.86 | 293.68 | 1.200 | * | 0.000 | 5.00 | 19.301 | 23.16 | 587.9 | 0.0 | 1,280.9 |
| 40.00 | | 1.00 | 0.76 | 14.983 | 16.48 | 292.05 | 1.200 | * | 0.000 | 5.00 | 18.837 | 22.60 | 596.1 | 0.0 | 1,249.8 |
| 42.96 | Bot - Section 2 | 1.00 | 0.77 | 15.292 | 16.82 | 290.69 | 1.200 | * | 0.000 | 2.96 | 10.920 | 13.10 | 352.7 | 0.0 | 724.4 |
| 45.00 | | 1.00 | 0.78 | 15.496 | 17.04 | 289.60 | 1.200 | * | 0.000 | 2.04 | 7.582 | 9.10 | 248.1 | 0.0 | 926.0 |
| 49.04 | Top - Section 1 | 1.00 | 0.80 | 15.882 | 17.47 | 287.11 | 1.200 | * | 0.000 | 4.04 | 14.762 | 17.71 | 495.1 | 0.0 | 1,802.4 |
| 50.00 | | 1.00 | 0.81 | 15.970 | 17.56 | 291.61 | 1.200 | * | 0.000 | 0.96 | 3.464 | 4.16 | 116.8 | 0.0 | 197.2 |
| 55.00 | | 1.00 | 0.83 | 16.411 | 18.05 | 287.98 | 1.200 | * | 0.000 | 5.00 | 17.761 | 21.31 | 615.6 | 0.0 | 1,011.0 |
| 60.00 | | 1.00 | 0.85 | 16.824 | 18.50 | 283.86 | 1.200 | * | 0.000 | 5.00 | 17.297 | 20.76 | 614.6 | 0.0 | 984.3 |
| 65.00 | | 1.00 | 0.87 | 17.213 | 18.93 | 279.31 | 1.200 | * | 0.000 | 5.00 | 16.833 | 20.20 | 611.9 | 0.0 | 957.7 |
| 70.00 | | 1.00 | 0.89 | 17.581 | 19.33 | 274.39 | 1.200 | * | 0.000 | 5.00 | 16.368 | 19.64 | 607.8 | 0.0 | 931.0 |
| 75.00 | | 1.00 | 0.91 | 17.931 | 19.72 | 269.14 | 1.200 | * | 0.000 | 5.00 | 15.904 | 19.09 | 602.3 | 0.0 | 904.3 |
| 78.00 | Appertunance(s) | 1.00 | 0.92 | 18.133 | 19.94 | 265.84 | 1.200 | * | 0.000 | 3.00 | 9.320 | 11.18 | 356.9 | 0.0 | 529.8 |
| 80.00 | | 1.00 | 0.92 | 18.265 | 20.09 | 263.58 | 1.200 | * | 0.000 | 2.00 | 6.120 | 7.34 | 236.1 | 0.0 | 347.9 |
| 85.00 | | 1.00 | 0.94 | 18.584 | 20.44 | 257.76 | 1.200 | * | 0.000 | 5.00 | 14.976 | 17.97 | 587.8 | 0.0 | 851.0 |
| 87.54 | Bot - Section 3 | 1.00 | 0.95 | 18.741 | 20.61 | 254.71 | 1.200 | * | 0.000 | 2.54 | 7.430 | 8.92 | 294.1 | 0.0 | 422.1 |
| 90.00 | | 1.00 | 0.95 | 18.890 | 20.77 | 251.69 | 1.200 | * | 0.000 | 2.46 | 7.212 | 8.65 | 287.7 | 0.0 | 744.3 |
| 92.46 | Top - Section 2 | 1.00 | 0.96 | 19.036 | 20.94 | 248.63 | 1.200 | * | 0.000 | 2.46 | 7.090 | 8.51 | 285.0 | 0.0 | 731.5 |
| 95.00 | | 1.00 | 0.97 | 19.184 | 21.10 | 250.09 | 1.200 | * | 0.000 | 2.54 | 7.222 | 8.67 | 292.6 | 0.0 | 342.4 |
| 100.0 | | 1.00 | 0.98 | 19.467 | 21.41 | 243.63 | 1.200 | * | 0.000 | 5.00 | 13.848 | 16.62 | 569.3 | 0.0 | 656.4 |
| 105.0 | Appertunance(s) | 1.00 | 1.00 | 19.741 | 21.71 | 236.97 | 1.200 | * | 0.000 | 5.00 | 13.383 | 16.06 | 558.0 | 0.0 | 634.2 |
| 110.0 | | 1.00 | 1.01 | 20.005 | 22.00 | 230.13 | 1.200 | * | 0.000 | 5.00 | 12.919 | 15.50 | 545.8 | 0.0 | 612.0 |
| 114.5 | Appertunance(s) | 1.00 | 1.02 | 20.235 | 22.25 | 223.82 | 1.200 | * | 0.000 | 4.50 | 11.230 | 13.48 | 479.9 | 0.0 | 531.8 |
| 115.0 | | 1.00 | 1.02 | 20.260 | 22.28 | 223.12 | 1.200 | * | 0.000 | 0.50 | 1.225 | 1.47 | 52.4 | 0.0 | 58.0 |
| 120.0 | | 1.00 | 1.04 | 20.508 | 22.55 | 215.95 | 1.200 | * | 0.000 | 5.00 | 11.991 | 14.39 | 519.4 | 0.0 | 567.6 |
| 125.0 | Appertunance(s) | 1.00 | 1.05 | 20.749 | 22.82 | 208.64 | 1.200 | * | 0.000 | 5.00 | 11.526 | 13.83 | 505.1 | 0.0 | 545.3 |
| 130.0 | | 1.00 | 1.06 | 20.983 | 23.08 | 201.19 | 0.746 | * | 0.000 | 5.00 | 11.062 | 8.25 | 304.7 | 0.0 | 523.1 |
| 132.1 | Bot - Section 4 | 1.00 | 1.07 | 21.080 | 23.18 | 197.99 | 0.755 | * | 0.000 | 2.12 | 4.550 | 3.43 | 127.4 | 0.0 | 215.1 |
| 134.0 | Appertunance(s) | 1.00 | 1.07 | 21.165 | 23.28 | 195.13 | 0.760 | * | 0.000 | 1.88 | 4.025 | 3.06 | 114.0 | 0.0 | 302.2 |
| 135.0 | | 1.00 | 1.07 | 21.210 | 23.33 | 193.60 | 0.764 | * | 0.000 | 1.00 | 2.114 | 1.62 | 60.3 | 0.0 | 158.7 |
| 135.8 | Top - Section 3 | 1.00 | 1.07 | 21.249 | 23.37 | 192.27 | 0.767 | * | 0.000 | 0.87 | 1.824 | 1.40 | 52.3 | 0.0 | 136.8 |
| 140.0 | | 1.00 | 1.08 | 21.432 | 23.57 | 188.88 | 0.769 | * | 0.000 | 4.13 | 8.469 | 6.51 | 245.6 | 0.0 | 241.3 |
| 142.0 | Appertunance(s) | 1.00 | 1.09 | 21.519 | 23.67 | 185.77 | 0.778 | * | 0.000 | 2.00 | 3.987 | 3.10 | 117.4 | 0.0 | 113.6 |
| 145.0 | | 1.00 | 1.09 | 21.648 | 23.81 | 181.07 | 0.785 | * | 0.000 | 3.00 | 5.841 | 4.59 | 174.8 | 0.0 | 166.4 |
| 150.0 | | 1.00 | 1.11 | 21.858 | 24.04 | 173.14 | 0.799 | * | 0.000 | 5.00 | 9.364 | 7.48 | 287.7 | 0.0 | 266.6 |
| 155.0 | | 1.00 | 1.12 | 22.064 | 24.27 | 165.11 | 0.817 | * | 0.000 | 5.00 | 8.900 | 7.27 | 282.2 | 0.0 | 253.3 |
| 160.0 | | 1.00 | 1.13 | 22.265 | 24.49 | 156.98 | 0.836 | * | 0.000 | 5.00 | 8.435 | 7.06 | 276.5 | 0.0 | 240.0 |
| 165.0 | | 1.00 | 1.14 | 22.462 | 24.70 | 148.75 | 1.200 | * | 0.000 | 5.00 | 7.971 | 9.57 | 378.1 | 0.0 | 226.6 |
| 166.0 | Appertunance(s) | 1.00 | 1.14 | 22.501 | 24.75 | 147.09 | 1.200 | * | 0.000 | 1.00 | 1.539 | 1.85 | 73.1 | 0.0 | 43.7 |
| 170.0 | | 1.00 | 1.15 | 22.654 | 24.92 | 140.42 | 0.650 | | 0.000 | 4.00 | 5.968 | 3.88 | 154.7 | 0.0 | 169.6 |
| 175.0 | | 1.00 | 1.16 | 22.843 | 25.12 | 132.01 | 0.650 | | 0.000 | 5.00 | 7.043 | 4.58 | 184.0 | 0.0 | 200.0 |
| 180.0 | Appertunance(s) | 1.00 | 1.16 | 23.027 | 25.33 | 123.50 | 0.650 | | 0.000 | 5.00 | 6.579 | 4.28 | 173.3 | 0.0 | 186.6 |
| * = Cf Adjusted By Linear Load Ra Effect | | | | | | | Totals: | | | 180.00 | | | 17,682.4 | 0.0 | 30,325.3 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:42 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 5 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

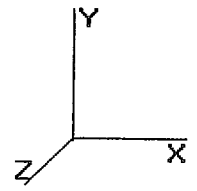
Wind Importance Factor : 1.00

## Discrete Appurtenance Segment Forces (Factored)

| Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Ka | Total CaAa (sf) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.00 | GPS | 1 | 13.866 | 15.253 | 1.00 | 1.00 | 1.00 | 0.000 | 0.500 | 24.40 | 0.00 | 12.20 | 12.00 |
| 78.00 | GPS | 1 | 18.166 | 19.983 | 1.00 | 1.00 | 1.00 | 0.000 | 0.500 | 31.97 | 0.00 | 15.99 | 12.00 |
| 105.0 | RFS APXV18-206517S- | 3 | 19.741 | 21.715 | 0.64 | 0.80 | 9.91 | 0.000 | 0.000 | 344.21 | 0.00 | 0.00 | 95.04 |
| 114.5 | Decibel DB844H90E- | 12 | 20.235 | 22.259 | 0.74 | 0.80 | 33.30 | 0.000 | 0.000 | 1,186.00 | 0.00 | 0.00 | 201.60 |
| 114.5 | Round Low Profile Pl | 1 | 20.235 | 22.259 | 1.00 | 1.00 | 21.70 | 0.000 | 0.000 | 772.82 | 0.00 | 0.00 | 1,800.00 |
| 125.0 | Antel BXA-171063/12C | 1 | 20.749 | 22.824 | 0.80 | 0.80 | 3.83 | 0.000 | 0.000 | 139.94 | 0.00 | 0.00 | 18.00 |
| 125.0 | Antel BXA-171085-12C | 2 | 20.749 | 22.824 | 0.73 | 0.80 | 6.95 | 0.000 | 0.000 | 253.62 | 0.00 | 0.00 | 36.00 |
| 125.0 | Antel BXA-70063/6CF | 3 | 20.749 | 22.824 | 0.59 | 0.80 | 13.73 | 0.000 | 0.000 | 501.34 | 0.00 | 0.00 | 61.20 |
| 125.0 | Antel LPA-80063/6CF | 2 | 20.749 | 22.824 | 0.75 | 0.80 | 15.55 | 0.000 | 0.000 | 567.91 | 0.00 | 0.00 | 64.80 |
| 125.0 | Antel LPA-80080/6CF | 4 | 20.749 | 22.824 | 0.59 | 0.80 | 21.55 | 0.000 | 0.000 | 786.92 | 0.00 | 0.00 | 100.80 |
| 125.0 | RFS FD9R6004/2C-3L | 6 | 20.749 | 22.824 | 0.40 | 0.80 | 0.89 | 0.000 | 0.000 | 32.43 | 0.00 | 0.00 | 22.32 |
| 125.0 | Round Low Profile Pl | 1 | 20.749 | 22.824 | 1.00 | 1.00 | 21.70 | 0.000 | 0.000 | 792.44 | 0.00 | 0.00 | 1,800.00 |
| 134.0 | Andrew DB980H90E-M | 9 | 21.165 | 23.282 | 0.63 | 0.80 | 22.18 | 0.000 | 0.000 | 826.34 | 0.00 | 0.00 | 91.80 |
| 134.0 | Flat Low Profile Pla | 1 | 21.165 | 23.282 | 1.00 | 1.00 | 26.10 | 0.000 | 0.000 | 972.25 | 0.00 | 0.00 | 1,800.00 |
| 142.0 | 10' Omni | 2 | 21.733 | 23.906 | 1.00 | 1.00 | 6.00 | 0.000 | 5.000 | 229.50 | 0.00 | 1,147.48 | 24.00 |
| 142.0 | 56" Dipole | 1 | 21.519 | 23.671 | 1.00 | 1.00 | 1.76 | 0.000 | 0.000 | 66.66 | 0.00 | 0.00 | 30.00 |
| 142.0 | Side Arms | 2 | 21.519 | 23.671 | 1.00 | 1.00 | 10.40 | 0.000 | 0.000 | 393.88 | 0.00 | 0.00 | 360.00 |
| 166.0 | CCI DTMA-1819-DD-12 | 6 | 22.501 | 24.751 | 0.40 | 0.80 | 1.70 | 0.000 | 0.000 | 67.48 | 0.00 | 0.00 | 102.96 |
| 166.0 | RFS APX16PV-16PVL- | 9 | 22.501 | 24.751 | 0.52 | 0.80 | 31.11 | 0.000 | 0.000 | 1,231.91 | 0.00 | 0.00 | 427.68 |
| 166.0 | T-Arms | 3 | 22.501 | 24.751 | 0.50 | 0.75 | 19.45 | 0.000 | 0.000 | 770.11 | 0.00 | 0.00 | 900.00 |
| 180.0 | 10' Omni | 1 | 23.351 | 25.686 | 1.00 | 1.00 | 3.00 | 0.000 | 9.000 | 123.29 | 0.00 | 1,109.62 | 12.00 |
| 180.0 | Flat Low Profile Pla | 1 | 23.027 | 25.330 | 1.00 | 1.00 | 26.10 | 0.000 | 0.000 | 1,057.78 | 0.00 | 0.00 | 1,800.00 |
| 180.0 | Powerwave 7020.00 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 0.96 | 0.000 | 4.000 | 39.15 | 0.00 | 156.61 | 15.84 |
| 180.0 | Powerwave 7770.00 | 6 | 23.172 | 25.490 | 0.60 | 0.80 | 21.39 | 0.000 | 4.000 | 872.26 | 0.00 | 3,489.03 | 252.00 |
| 180.0 | Powerwave LGP21401 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 3.10 | 0.000 | 4.000 | 126.27 | 0.00 | 505.06 | 101.52 |
| 180.0 | Powerwave LGP21901 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 0.55 | 0.000 | 4.000 | 22.51 | 0.00 | 90.05 | 39.60 |
| | | | | | | | | | | 12,233.39 | | | 10,181.16 |

Pole : 302506
Location : Winchester CT 3, CT
Height : 180.0 (ft)
Base Dia : 52.75 (in)
Top Dia : 15.00 (in)
Shape : 18 Sides
Taper : 0.219444 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)








**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

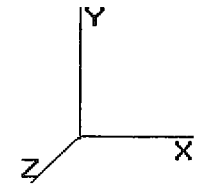
Wind Importance Factor : 1.00

## Linear Appurtenance Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Exposed To Wind | Length (ft) | Ca | Exposed Width (in) | Area (sqft) | CaAa (sqft) | qz (psf) | Ra | Cf Adjust Factor | FX (lb) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.208 | 0.000 | 48.05 | 88.55 |
| 5.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.208 | 0.000 | 48.05 | 59.03 |
| 5.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.208 | 0.000 | 37.62 | 45.35 |
| 5.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.208 | 0.000 | 0.00 | 29.52 |
| 10.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.212 | 0.000 | 48.05 | 88.55 |
| 10.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.212 | 0.000 | 48.05 | 59.03 |
| 10.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.212 | 0.000 | 37.62 | 45.35 |
| 10.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.212 | 0.000 | 0.00 | 29.52 |
| 15.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.217 | 0.000 | 48.05 | 88.55 |
| 15.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.217 | 0.000 | 48.05 | 59.03 |
| 15.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.217 | 0.000 | 37.62 | 45.35 |
| 15.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.217 | 0.000 | 0.00 | 29.52 |
| 20.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.222 | 0.000 | 48.05 | 88.55 |
| 20.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.222 | 0.000 | 48.05 | 59.03 |
| 20.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.222 | 0.000 | 37.62 | 45.35 |
| 20.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.222 | 0.000 | 0.00 | 29.52 |
| 25.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.227 | 0.000 | 48.05 | 88.55 |
| 25.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.227 | 0.000 | 48.05 | 59.03 |
| 25.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.227 | 0.000 | 37.62 | 45.35 |
| 25.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.227 | 0.000 | 0.00 | 29.52 |
| 30.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.801 | 0.232 | 0.000 | 48.09 | 88.55 |
| 30.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.801 | 0.232 | 0.000 | 48.09 | 59.03 |
| 30.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.801 | 0.232 | 0.000 | 37.65 | 45.35 |
| 30.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.801 | 0.232 | 0.000 | 0.00 | 29.52 |
| 35.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.423 | 0.238 | 0.000 | 50.26 | 88.55 |
| 35.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.423 | 0.238 | 0.000 | 50.26 | 59.03 |
| 35.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 14.423 | 0.238 | 0.000 | 39.34 | 45.35 |
| 35.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 14.423 | 0.238 | 0.000 | 0.00 | 29.52 |
| 40.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.983 | 0.244 | 0.000 | 52.21 | 88.55 |
| 40.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.983 | 0.244 | 0.000 | 52.21 | 59.03 |
| 40.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 14.983 | 0.244 | 0.000 | 40.87 | 45.35 |
| 40.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 14.983 | 0.244 | 0.000 | 0.00 | 29.52 |
| 42.96 | (18) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 0.98 | 1.17 | 15.292 | 0.249 | 0.000 | 31.51 | 52.36 |
| 42.96 | (12) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 0.98 | 1.17 | 15.292 | 0.249 | 0.000 | 31.51 | 34.91 |
| 42.96 | (12) 1 1/4" Coax | Yes | 2.96 | 1.200 | 3.10 | 0.76 | 0.92 | 15.292 | 0.249 | 0.000 | 24.67 | 26.82 |
| 42.96 | (6) 1 5/8" Coax | Yes | 2.96 | 0.000 | 0.00 | 0.00 | 0.00 | 15.292 | 0.249 | 0.000 | 0.00 | 17.45 |
| 45.00 | (18) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 0.67 | 0.81 | 15.496 | 0.252 | 0.000 | 22.07 | 36.19 |
| 45.00 | (12) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 0.67 | 0.81 | 15.496 | 0.252 | 0.000 | 22.07 | 24.13 |
| 45.00 | (12) 1 1/4" Coax | Yes | 2.04 | 1.200 | 3.10 | 0.53 | 0.63 | 15.496 | 0.252 | 0.000 | 17.28 | 18.54 |
| 45.00 | (6) 1 5/8" Coax | Yes | 2.04 | 0.000 | 0.00 | 0.00 | 0.00 | 15.496 | 0.252 | 0.000 | 0.00 | 12.06 |
| 49.04 | (18) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 1.33 | 1.60 | 15.882 | 0.256 | 0.000 | 44.72 | 71.55 |
| 49.04 | (12) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 1.33 | 1.60 | 15.882 | 0.256 | 0.000 | 44.72 | 47.70 |
| 49.04 | (12) 1 1/4" Coax | Yes | 4.04 | 1.200 | 3.10 | 1.04 | 1.25 | 15.882 | 0.256 | 0.000 | 35.01 | 36.64 |
| 49.04 | (6) 1 5/8" Coax | Yes | 4.04 | 0.000 | 0.00 | 0.00 | 0.00 | 15.882 | 0.256 | 0.000 | 0.00 | 23.85 |
| 50.00 | (18) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.32 | 0.38 | 15.970 | 0.255 | 0.000 | 10.69 | 17.00 |
| 50.00 | (12) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.32 | 0.38 | 15.970 | 0.255 | 0.000 | 10.69 | 11.34 |
| 50.00 | (12) 1 1/4" Coax | Yes | 0.96 | 1.200 | 3.10 | 0.25 | 0.30 | 15.970 | 0.255 | 0.000 | 8.37 | 8.71 |
| 50.00 | (6) 1 5/8" Coax | Yes | 0.96 | 0.000 | 0.00 | 0.00 | 0.00 | 15.970 | 0.255 | 0.000 | 0.00 | 5.67 |
| 55.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.411 | 0.259 | 0.000 | 57.19 | 88.55 |
| 55.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.411 | 0.259 | 0.000 | 57.19 | 59.03 |
| 55.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 16.411 | 0.259 | 0.000 | 44.77 | 45.35 |

Pole : 302506
Location : Winchester CT 3, CT
Height : 180.0 (ft)
Base Dia : 52.75 (in)
Top Dia : 15.00 (in)
Shape : 18 Sides
Taper : 0.219444 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)




1/12/2012 11:05:42 AM
Page: 7



**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

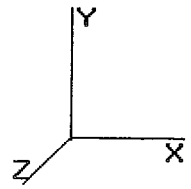
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 16.411 | 0.259 | 0.000 | 0.00 | 29.52 |
| 60.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.824 | 0.265 | 0.000 | 58.63 | 88.55 |
| 60.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.824 | 0.265 | 0.000 | 58.63 | 59.03 |
| 60.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 16.824 | 0.265 | 0.000 | 45.90 | 45.35 |
| 60.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 16.824 | 0.265 | 0.000 | 0.00 | 29.52 |
| 65.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.213 | 0.273 | 0.000 | 59.98 | 88.55 |
| 65.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.213 | 0.273 | 0.000 | 59.98 | 59.03 |
| 65.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.213 | 0.273 | 0.000 | 46.96 | 45.35 |
| 65.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.213 | 0.273 | 0.000 | 0.00 | 29.52 |
| 70.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.581 | 0.281 | 0.000 | 61.27 | 88.55 |
| 70.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.581 | 0.281 | 0.000 | 61.27 | 59.03 |
| 70.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.581 | 0.281 | 0.000 | 47.96 | 45.35 |
| 70.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.581 | 0.281 | 0.000 | 0.00 | 29.52 |
| 75.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.931 | 0.289 | 0.000 | 62.49 | 88.55 |
| 75.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.931 | 0.289 | 0.000 | 62.49 | 59.03 |
| 75.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.931 | 0.289 | 0.000 | 48.92 | 45.35 |
| 75.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.931 | 0.289 | 0.000 | 0.00 | 29.52 |
| 78.00 | (18) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 0.99 | 1.19 | 18.133 | 0.296 | 0.000 | 37.91 | 53.13 |
| 78.00 | (12) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 0.99 | 1.19 | 18.133 | 0.296 | 0.000 | 37.91 | 35.42 |
| 78.00 | (12) 1 1/4" Coax | Yes | 3.00 | 1.200 | 3.10 | 0.77 | 0.93 | 18.133 | 0.296 | 0.000 | 29.68 | 27.21 |
| 78.00 | (6) 1 5/8" Coax | Yes | 3.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.133 | 0.296 | 0.000 | 0.00 | 17.71 |
| 80.00 | (18) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 0.66 | 0.79 | 18.265 | 0.300 | 0.000 | 25.46 | 35.42 |
| 80.00 | (12) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 0.66 | 0.79 | 18.265 | 0.300 | 0.000 | 25.46 | 23.61 |
| 80.00 | (12) 1 1/4" Coax | Yes | 2.00 | 1.200 | 3.10 | 0.52 | 0.62 | 18.265 | 0.300 | 0.000 | 19.93 | 18.14 |
| 80.00 | (6) 1 5/8" Coax | Yes | 2.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.265 | 0.300 | 0.000 | 0.00 | 11.81 |
| 85.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 18.584 | 0.307 | 0.000 | 64.76 | 88.55 |
| 85.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 18.584 | 0.307 | 0.000 | 64.76 | 59.03 |
| 85.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 18.584 | 0.307 | 0.000 | 50.70 | 45.35 |
| 85.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.584 | 0.307 | 0.000 | 0.00 | 29.52 |
| 87.54 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 18.741 | 0.314 | 0.000 | 33.18 | 44.98 |
| 87.54 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 18.741 | 0.314 | 0.000 | 33.18 | 29.99 |
| 87.54 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 0.66 | 0.79 | 18.741 | 0.314 | 0.000 | 25.97 | 23.04 |
| 87.54 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 18.741 | 0.314 | 0.000 | 0.00 | 14.99 |
| 90.00 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 18.890 | 0.319 | 0.000 | 32.39 | 43.57 |
| 90.00 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 18.890 | 0.319 | 0.000 | 32.39 | 29.05 |
| 90.00 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 0.64 | 0.76 | 18.890 | 0.319 | 0.000 | 25.35 | 22.31 |
| 90.00 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 18.890 | 0.319 | 0.000 | 0.00 | 14.52 |
| 92.46 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 19.036 | 0.324 | 0.000 | 32.59 | 43.51 |
| 92.46 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 19.036 | 0.324 | 0.000 | 32.59 | 29.00 |
| 92.46 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 0.63 | 0.76 | 19.036 | 0.324 | 0.000 | 25.51 | 22.28 |
| 92.46 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 19.036 | 0.324 | 0.000 | 0.00 | 14.50 |
| 95.00 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 19.184 | 0.323 | 0.000 | 34.01 | 45.04 |
| 95.00 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 19.184 | 0.323 | 0.000 | 34.01 | 30.03 |
| 95.00 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 0.66 | 0.79 | 19.184 | 0.323 | 0.000 | 26.62 | 23.07 |
| 95.00 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 19.184 | 0.323 | 0.000 | 0.00 | 15.01 |
| 100.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.467 | 0.332 | 0.000 | 67.84 | 88.55 |
| 100.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.467 | 0.332 | 0.000 | 67.84 | 59.03 |
| 100.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 19.467 | 0.332 | 0.000 | 53.11 | 45.35 |
| 100.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 19.467 | 0.332 | 0.000 | 0.00 | 29.52 |
| 105.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.741 | 0.343 | 0.000 | 68.79 | 88.55 |
| 105.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.741 | 0.343 | 0.000 | 68.79 | 59.03 |
| 105.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 19.741 | 0.343 | 0.000 | 53.85 | 45.35 |
| 105.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 19.741 | 0.343 | 0.000 | 0.00 | 29.52 |
| 110.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.005 | 0.355 | 0.000 | 69.71 | 88.55 |
| 110.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.005 | 0.355 | 0.000 | 69.71 | 59.03 |
| 110.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 20.005 | 0.355 | 0.000 | 54.57 | 45.35 |
| 114.5 | (18) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 1.49 | 1.78 | 20.235 | 0.368 | 0.000 | 63.46 | 79.69 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:42 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | Page: 8 |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

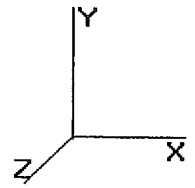
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114.5 | (12) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 1.49 | 1.78 | 20.235 | 0.368 | 0.000 | 63.46 | 53.13 |
| 114.5 | (12) 1 1/4" Coax | Yes | 4.50 | 1.200 | 3.10 | 1.16 | 1.39 | 20.235 | 0.368 | 0.000 | 49.68 | 40.82 |
| 115.0 | (18) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.17 | 0.20 | 20.260 | 0.269 | 0.000 | 7.06 | 8.85 |
| 115.0 | (12) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.17 | 0.20 | 20.260 | 0.269 | 0.000 | 7.06 | 5.90 |
| 120.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.508 | 0.275 | 0.000 | 71.47 | 88.55 |
| 120.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.508 | 0.275 | 0.000 | 71.47 | 59.03 |
| 125.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.749 | 0.286 | 0.000 | 72.31 | 88.55 |
| 125.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.749 | 0.286 | 0.000 | 72.31 | 59.03 |
| 130.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 20.983 | 0.149 | 1.147 | 0.00 | 88.55 |
| 132.1 | (18) 1 5/8" Coax | Yes | 2.12 | 0.000 | 3.96 | 0.70 | 0.00 | 21.080 | 0.154 | 1.161 | 0.00 | 37.54 |
| 134.0 | (18) 1 5/8" Coax | Yes | 1.88 | 0.000 | 3.96 | 0.62 | 0.00 | 21.165 | 0.156 | 1.169 | 0.00 | 33.30 |
| 135.0 | (18) 1 5/8" Coax | Yes | 1.00 | 0.000 | 3.96 | 0.33 | 0.00 | 21.210 | 0.158 | 1.175 | 0.00 | 17.71 |
| 135.8 | (18) 1 5/8" Coax | Yes | 0.87 | 0.000 | 3.96 | 0.29 | 0.00 | 21.249 | 0.160 | 1.179 | 0.00 | 15.40 |
| 140.0 | (18) 1 5/8" Coax | Yes | 4.13 | 0.000 | 3.96 | 1.36 | 0.00 | 21.432 | 0.161 | 1.183 | 0.00 | 73.15 |
| 142.0 | (18) 1 5/8" Coax | Yes | 2.00 | 0.000 | 3.96 | 0.66 | 0.00 | 21.519 | 0.166 | 1.197 | 0.00 | 35.42 |
| 145.0 | (18) 1 5/8" Coax | Yes | 3.00 | 0.000 | 3.96 | 0.99 | 0.00 | 21.648 | 0.169 | 1.208 | 0.00 | 53.13 |
| 150.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 21.858 | 0.176 | 1.229 | 0.00 | 88.55 |
| 155.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 22.064 | 0.185 | 1.256 | 0.00 | 88.55 |
| 160.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 22.265 | 0.196 | 1.287 | 0.00 | 88.55 |
| 165.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 22.462 | 0.207 | 0.000 | 78.28 | 88.55 |
| 166.0 | (18) 1 5/8" Coax | Yes | 1.00 | 1.200 | 3.96 | 0.33 | 0.40 | 22.501 | 0.214 | 0.000 | 15.68 | 17.71 |
| | | | | | | | | | | Totals: | 4,095.34 | 6,074.08 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | 1/12/2012 11:05:42 AM |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 9 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

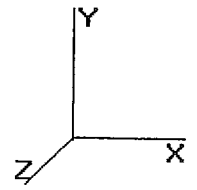
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

## 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 | 776.95 | 1,818.71 | 0.00 | 0.00 |
| 10.00 | 763.43 | 1,787.60 | 0.00 | 0.00 |
| 15.00 | 749.91 | 1,756.49 | 0.00 | 0.00 |
| 20.00 | 736.39 | 1,725.39 | 0.00 | 0.00 |
| 25.00 | 722.87 | 1,694.28 | 0.00 | 0.00 |
| 30.00 | 734.35 | 1,675.17 | 0.00 | 12.20 |
| 35.00 | 727.77 | 1,630.09 | 0.00 | 0.00 |
| 40.00 | 741.38 | 1,598.98 | 0.00 | 0.00 |
| 42.96 | 440.36 | 930.86 | 0.00 | 0.00 |
| 45.00 | 309.56 | 1,068.76 | 0.00 | 0.00 |
| 49.04 | 619.58 | 2,084.56 | 0.00 | 0.00 |
| 50.00 | 146.56 | 264.24 | 0.00 | 0.00 |
| 55.00 | 774.73 | 1,360.20 | 0.00 | 0.00 |
| 60.00 | 777.74 | 1,333.54 | 0.00 | 0.00 |
| 65.00 | 778.85 | 1,306.88 | 0.00 | 0.00 |
| 70.00 | 778.28 | 1,280.21 | 0.00 | 0.00 |
| 75.00 | 776.20 | 1,253.55 | 0.00 | 0.00 |
| 78.00 | 494.40 | 751.33 | 0.00 | 15.99 |
| 80.00 | 306.94 | 487.20 | 0.00 | 0.00 |
| 85.00 | 768.01 | 1,199.32 | 0.00 | 0.00 |
| 87.54 | 386.39 | 599.02 | 0.00 | 0.00 |
| 90.00 | 377.86 | 915.71 | 0.00 | 0.00 |
| 92.46 | 375.73 | 902.59 | 0.00 | 0.00 |
| 95.00 | 387.26 | 519.63 | 0.00 | 0.00 |
| 100.0 | 758.13 | 1,004.76 | 0.00 | 0.00 |
| 105.0 | 1,093.63 | 1,077.58 | 0.00 | 0.00 |
| 110.0 | 739.83 | 930.80 | 0.00 | 0.00 |
| 114.5 | 2,615.38 | 2,820.32 | 0.00 | 0.00 |
| 115.0 | 66.52 | 85.32 | 0.00 | 0.00 |
| 120.0 | 662.29 | 841.01 | 0.00 | 0.00 |
| 125.0 | 3,724.31 | 2,921.91 | 0.00 | 0.00 |
| 130.0 | 304.70 | 737.54 | 0.00 | 0.00 |
| 132.1 | 127.41 | 305.98 | 0.00 | 0.00 |
| 134.0 | 1,912.56 | 2,274.59 | 0.00 | 0.00 |
| 135.0 | 60.30 | 192.69 | 0.00 | 0.00 |
| 135.8 | 52.29 | 166.44 | 0.00 | 0.00 |
| 140.0 | 245.59 | 381.85 | 0.00 | 0.00 |
| 142.0 | 807.48 | 595.64 | 0.00 | 1,147.48 |
| 145.0 | 174.81 | 256.11 | 0.00 | 0.00 |
| 150.0 | 287.69 | 416.19 | 0.00 | 0.00 |
| 155.0 | 282.19 | 402.86 | 0.00 | 0.00 |
| 160.0 | 276.49 | 389.53 | 0.00 | 0.00 |
| 165.0 | 456.42 | 376.19 | 0.00 | 0.00 |
| 166.0 | 2,158.30 | 1,504.28 | 0.00 | 0.00 |
| 170.0 | 154.68 | 218.38 | 0.00 | 0.00 |
| 175.0 | 184.04 | 260.98 | 0.00 | 0.00 |
| 180.0 | 2,414.56 | 2,468.61 | 0.00 | 5,350.36 |
| Totals: | 34,011.10 | 50,573.88 | 0.00 | 6,526.03 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:42 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | Page: 10 |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |





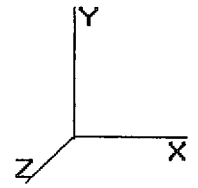

**Load Case:** 1.2D + 1.6W — 90.00 mph with No Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

## Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | -50.51 | -34.10 | 0.00 | -3,596.44 | 0.00 | 3,596.44 | 5,102.86 | 2,551.43 | 10,963.2 | 5,489.79 | 0.00 | 0.00 | 0.665 |
| 5.00 | -48.58 | -33.49 | 0.00 | -3,425.94 | 0.00 | 3,425.94 | 5,029.12 | 2,514.56 | 10,576.3 | 5,296.03 | 0.11 | -0.20 | 0.657 |
| 10.00 | -46.68 | -32.88 | 0.00 | -3,258.49 | 0.00 | 3,258.49 | 4,953.95 | 2,476.98 | 10,193.1 | 5,104.17 | 0.42 | -0.40 | 0.648 |
| 15.00 | -44.81 | -32.28 | 0.00 | -3,094.08 | 0.00 | 3,094.08 | 4,877.36 | 2,438.68 | 9,813.98 | 4,914.28 | 0.95 | -0.61 | 0.639 |
| 20.00 | -42.98 | -31.68 | 0.00 | -2,932.69 | 0.00 | 2,932.69 | 4,799.34 | 2,399.67 | 9,438.93 | 4,726.48 | 1.70 | -0.81 | 0.630 |
| 25.00 | -41.19 | -31.08 | 0.00 | -2,774.30 | 0.00 | 2,774.30 | 4,719.90 | 2,359.95 | 9,068.23 | 4,540.86 | 2.66 | -1.02 | 0.620 |
| 30.00 | -39.41 | -30.46 | 0.00 | -2,618.88 | 0.00 | 2,618.88 | 4,639.03 | 2,319.51 | 8,702.08 | 4,357.51 | 3.85 | -1.24 | 0.610 |
| 35.00 | -37.69 | -29.84 | 0.00 | -2,466.58 | 0.00 | 2,466.58 | 4,556.73 | 2,278.36 | 8,340.67 | 4,176.53 | 5.26 | -1.45 | 0.599 |
| 40.00 | -36.02 | -29.16 | 0.00 | -2,317.39 | 0.00 | 2,317.39 | 4,473.00 | 2,236.50 | 7,984.18 | 3,998.03 | 6.89 | -1.67 | 0.588 |
| 42.96 | -35.05 | -28.76 | 0.00 | -2,231.17 | 0.00 | 2,231.17 | 4,422.82 | 2,211.41 | 7,775.79 | 3,893.68 | 7.97 | -1.80 | 0.581 |
| 45.00 | -33.92 | -28.50 | 0.00 | -2,172.40 | 0.00 | 2,172.40 | 4,378.03 | 2,189.01 | 7,615.75 | 3,813.53 | 8.76 | -1.89 | 0.578 |
| 49.04 | -31.80 | -27.87 | 0.00 | -2,057.26 | 0.00 | 2,057.26 | 3,604.17 | 1,802.08 | 6,267.69 | 3,138.50 | 10.44 | -2.08 | 0.665 |
| 50.00 | -31.47 | -27.80 | 0.00 | -2,030.50 | 0.00 | 2,030.50 | 3,591.50 | 1,795.75 | 6,214.33 | 3,111.78 | 10.87 | -2.12 | 0.662 |
| 55.00 | -30.03 | -27.10 | 0.00 | -1,891.52 | 0.00 | 1,891.52 | 3,524.70 | 1,762.35 | 5,938.60 | 2,973.71 | 13.22 | -2.37 | 0.645 |
| 60.00 | -28.61 | -26.39 | 0.00 | -1,756.02 | 0.00 | 1,756.02 | 3,456.48 | 1,728.24 | 5,666.60 | 2,837.51 | 15.83 | -2.62 | 0.627 |
| 65.00 | -27.23 | -25.67 | 0.00 | -1,624.07 | 0.00 | 1,624.07 | 3,386.83 | 1,693.41 | 5,398.53 | 2,703.28 | 18.71 | -2.87 | 0.609 |
| 70.00 | -25.89 | -24.94 | 0.00 | -1,495.73 | 0.00 | 1,495.73 | 3,315.75 | 1,657.87 | 5,134.58 | 2,571.11 | 21.84 | -3.12 | 0.590 |
| 75.00 | -24.59 | -24.18 | 0.00 | -1,371.03 | 0.00 | 1,371.03 | 3,242.30 | 1,621.15 | 4,873.54 | 2,440.39 | 25.24 | -3.37 | 0.570 |
| 78.00 | -23.82 | -23.69 | 0.00 | -1,298.48 | 0.00 | 1,298.48 | 3,184.09 | 1,592.04 | 4,699.23 | 2,353.11 | 27.41 | -3.52 | 0.560 |
| 80.00 | -23.28 | -23.43 | 0.00 | -1,251.09 | 0.00 | 1,251.09 | 3,145.28 | 1,572.64 | 4,584.79 | 2,295.80 | 28.91 | -3.63 | 0.553 |
| 85.00 | -22.06 | -22.66 | 0.00 | -1,133.94 | 0.00 | 1,133.94 | 3,048.26 | 1,524.13 | 4,304.87 | 2,155.63 | 32.84 | -3.88 | 0.533 |
| 87.54 | -21.44 | -22.28 | 0.00 | -1,076.40 | 0.00 | 1,076.40 | 2,998.97 | 1,499.48 | 4,166.05 | 2,086.12 | 34.94 | -4.01 | 0.523 |
| 90.00 | -20.50 | -21.88 | 0.00 | -1,021.59 | 0.00 | 1,021.59 | 2,951.23 | 1,475.62 | 4,033.76 | 2,019.88 | 37.03 | -4.13 | 0.513 |
| 92.46 | -19.59 | -21.48 | 0.00 | -967.83 | 0.00 | 967.83 | 2,412.07 | 1,206.04 | 3,317.78 | 1,661.36 | 39.19 | -4.26 | 0.591 |
| 95.00 | -19.02 | -21.13 | 0.00 | -913.19 | 0.00 | 913.19 | 2,382.81 | 1,191.41 | 3,222.46 | 1,613.62 | 41.49 | -4.39 | 0.574 |
| 100.00 | -17.98 | -20.38 | 0.00 | -807.56 | 0.00 | 807.56 | 2,324.22 | 1,162.11 | 3,037.61 | 1,521.06 | 46.23 | -4.66 | 0.539 |
| 105.00 | -16.91 | -19.27 | 0.00 | -705.68 | 0.00 | 705.68 | 2,264.20 | 1,132.10 | 2,856.29 | 1,430.27 | 51.24 | -4.92 | 0.501 |
| 110.00 | -15.98 | -18.52 | 0.00 | -609.32 | 0.00 | 609.32 | 2,186.61 | 1,093.30 | 2,659.07 | 1,331.51 | 56.53 | -5.18 | 0.465 |
| 114.50 | -13.38 | -15.68 | 0.00 | -525.98 | 0.00 | 525.98 | 2,113.84 | 1,056.92 | 2,484.15 | 1,243.92 | 61.52 | -5.40 | 0.429 |
| 115.00 | -13.26 | -15.64 | 0.00 | -518.13 | 0.00 | 518.13 | 2,105.76 | 1,052.88 | 2,465.08 | 1,234.37 | 62.08 | -5.43 | 0.426 |
| 120.00 | -12.43 | -14.95 | 0.00 | -439.93 | 0.00 | 439.93 | 2,024.90 | 1,012.45 | 2,278.43 | 1,140.91 | 67.88 | -5.66 | 0.392 |
| 125.00 | -9.86 | -10.99 | 0.00 | -365.18 | 0.00 | 365.18 | 1,944.05 | 972.03 | 2,099.13 | 1,051.12 | 73.92 | -5.88 | 0.353 |
| 130.00 | -9.13 | -10.63 | 0.00 | -310.24 | 0.00 | 310.24 | 1,863.20 | 931.60 | 1,927.17 | 965.02 | 80.18 | -6.09 | 0.327 |
| 132.12 | -8.82 | -10.48 | 0.00 | -287.71 | 0.00 | 287.71 | 1,828.92 | 914.46 | 1,856.49 | 929.63 | 82.90 | -6.18 | 0.314 |
| 134.00 | -6.76 | -8.34 | 0.00 | -268.00 | 0.00 | 268.00 | 1,798.52 | 899.26 | 1,794.90 | 898.78 | 85.34 | -6.26 | 0.302 |
| 135.00 | -6.57 | -8.27 | 0.00 | -259.65 | 0.00 | 259.65 | 1,782.35 | 891.17 | 1,762.57 | 882.59 | 86.66 | -6.30 | 0.298 |
| 135.87 | -6.39 | -8.21 | 0.00 | -252.46 | 0.00 | 252.46 | 993.95 | 496.97 | 1,000.68 | 501.09 | 87.80 | -6.33 | 0.511 |
| 140.00 | -6.02 | -7.94 | 0.00 | -218.56 | 0.00 | 218.56 | 969.84 | 484.92 | 940.01 | 470.70 | 93.34 | -6.49 | 0.471 |
| 142.00 | -5.50 | -7.08 | 0.00 | -201.54 | 0.00 | 201.54 | 957.82 | 478.91 | 910.95 | 456.15 | 96.08 | -6.61 | 0.448 |
| 145.00 | -5.24 | -6.90 | 0.00 | -180.31 | 0.00 | 180.31 | 939.35 | 469.68 | 867.78 | 434.53 | 100.29 | -6.79 | 0.421 |
| 150.00 | -4.83 | -6.58 | 0.00 | -145.82 | 0.00 | 145.82 | 907.44 | 453.72 | 797.07 | 399.13 | 107.52 | -7.06 | 0.371 |
| 155.00 | -4.44 | -6.27 | 0.00 | -112.90 | 0.00 | 112.90 | 874.09 | 437.05 | 728.06 | 364.57 | 115.04 | -7.31 | 0.315 |
| 160.00 | -4.07 | -5.96 | 0.00 | -81.55 | 0.00 | 81.55 | 839.33 | 419.66 | 660.97 | 330.98 | 122.79 | -7.53 | 0.251 |
| 165.00 | -3.75 | -5.47 | 0.00 | -51.74 | 0.00 | 51.74 | 800.44 | 400.22 | 593.98 | 297.43 | 130.75 | -7.71 | 0.179 |
| 166.00 | -2.55 | -3.13 | 0.00 | -46.28 | 0.00 | 46.28 | 790.74 | 395.37 | 579.60 | 290.23 | 132.37 | -7.74 | 0.163 |
| 170.00 | -2.35 | -2.95 | 0.00 | -33.76 | 0.00 | 33.76 | 751.93 | 375.97 | 523.82 | 262.30 | 138.88 | -7.84 | 0.132 |
| 175.00 | -2.11 | -2.73 | 0.00 | -19.02 | 0.00 | 19.02 | 703.42 | 351.71 | 458.07 | 229.37 | 147.13 | -7.95 | 0.086 |
| 180.00 | 0.00 | -2.41 | 0.00 | -5.35 | 0.00 | 5.35 | 654.91 | 327.45 | 396.72 | 198.65 | 155.46 | -8.00 | 0.027 |

| | | | |
|---|---|---|---|
| Pole : 302506 | Code: ANSI/TIA-222 Rev G | | 1/12/2012 11:05:43 AM |
| Location : Winchester CT 3, CT | Struct Class : II | | Page: 11 |
| Height : 180.0 (ft) | Exposure Category : B | | |
| Base Dia : 52.75 (in) | Topographic Category : 1 | | |
| Top Dia : 15.00 (in) | Base Elev : 0.000 (ft) | | |
| Shape : 18 Sides | | | |
| Taper : 0.219444 (in/ft) |  | | |



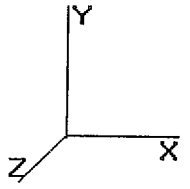

**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

## Shaft Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Kzt | 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 | | 1.00 | 0.70 | 13.789 | 15.16 | 336.11 | 0.650 | | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 329.11 | 1.200 | * | 0.000 | 5.00 | 22.086 | 26.50 | 643.2 | 0.0 | 1,100.6 |
| 10.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 322.12 | 1.200 | * | 0.000 | 5.00 | 21.622 | 25.95 | 629.7 | 0.0 | 1,077.3 |
| 15.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 315.13 | 1.200 | * | 0.000 | 5.00 | 21.158 | 25.39 | 616.2 | 0.0 | 1,054.0 |
| 20.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 308.14 | 1.200 | * | 0.000 | 5.00 | 20.693 | 24.83 | 602.7 | 0.0 | 1,030.6 |
| 25.00 | | 1.00 | 0.70 | 13.789 | 15.16 | 301.15 | 1.200 | * | 0.000 | 5.00 | 20.229 | 24.28 | 589.1 | 0.0 | 1,007.3 |
| 30.00 | Appertunance(s) | 1.00 | 0.70 | 13.801 | 15.18 | 294.28 | 1.200 | * | 0.000 | 5.00 | 19.765 | 23.72 | 576.1 | 0.0 | 984.0 |
| 35.00 | | 1.00 | 0.73 | 14.423 | 15.86 | 293.68 | 1.200 | * | 0.000 | 5.00 | 19.301 | 23.16 | 587.9 | 0.0 | 960.7 |
| 40.00 | | 1.00 | 0.76 | 14.983 | 16.48 | 292.05 | 1.200 | * | 0.000 | 5.00 | 18.837 | 22.60 | 596.1 | 0.0 | 937.3 |
| 42.96 | Bot - Section 2 | 1.00 | 0.77 | 15.292 | 16.82 | 290.69 | 1.200 | * | 0.000 | 2.96 | 10.920 | 13.10 | 352.7 | 0.0 | 543.3 |
| 45.00 | | 1.00 | 0.78 | 15.496 | 17.04 | 289.60 | 1.200 | * | 0.000 | 2.04 | 7.582 | 9.10 | 248.1 | 0.0 | 694.5 |
| 49.04 | Top - Section 1 | 1.00 | 0.80 | 15.882 | 17.47 | 287.11 | 1.200 | * | 0.000 | 4.04 | 14.762 | 17.71 | 495.1 | 0.0 | 1,351.8 |
| 50.00 | | 1.00 | 0.81 | 15.970 | 17.56 | 291.61 | 1.200 | * | 0.000 | 0.96 | 3.464 | 4.16 | 116.8 | 0.0 | 147.9 |
| 55.00 | | 1.00 | 0.83 | 16.411 | 18.05 | 287.98 | 1.200 | * | 0.000 | 5.00 | 17.761 | 21.31 | 615.6 | 0.0 | 758.2 |
| 60.00 | | 1.00 | 0.85 | 16.824 | 18.50 | 283.86 | 1.200 | * | 0.000 | 5.00 | 17.297 | 20.76 | 614.6 | 0.0 | 738.2 |
| 65.00 | | 1.00 | 0.87 | 17.213 | 18.93 | 279.31 | 1.200 | * | 0.000 | 5.00 | 16.833 | 20.20 | 611.9 | 0.0 | 718.2 |
| 70.00 | | 1.00 | 0.89 | 17.581 | 19.33 | 274.39 | 1.200 | * | 0.000 | 5.00 | 16.368 | 19.64 | 607.8 | 0.0 | 698.2 |
| 75.00 | | 1.00 | 0.91 | 17.931 | 19.72 | 269.14 | 1.200 | * | 0.000 | 5.00 | 15.904 | 19.09 | 602.3 | 0.0 | 678.3 |
| 78.00 | Appertunance(s) | 1.00 | 0.92 | 18.133 | 19.94 | 265.84 | 1.200 | * | 0.000 | 3.00 | 9.320 | 11.18 | 356.9 | 0.0 | 397.4 |
| 80.00 | | 1.00 | 0.92 | 18.265 | 20.09 | 263.58 | 1.200 | * | 0.000 | 2.00 | 6.120 | 7.34 | 236.1 | 0.0 | 260.9 |
| 85.00 | | 1.00 | 0.94 | 18.584 | 20.44 | 257.76 | 1.200 | * | 0.000 | 5.00 | 14.976 | 17.97 | 587.8 | 0.0 | 638.3 |
| 87.54 | Bot - Section 3 | 1.00 | 0.95 | 18.741 | 20.61 | 254.71 | 1.200 | * | 0.000 | 2.54 | 7.430 | 8.92 | 294.1 | 0.0 | 316.6 |
| 90.00 | | 1.00 | 0.95 | 18.890 | 20.77 | 251.69 | 1.200 | * | 0.000 | 2.46 | 7.212 | 8.65 | 287.7 | 0.0 | 558.2 |
| 92.46 | Top - Section 2 | 1.00 | 0.96 | 19.036 | 20.94 | 248.63 | 1.200 | * | 0.000 | 2.46 | 7.090 | 8.51 | 285.0 | 0.0 | 548.6 |
| 95.00 | | 1.00 | 0.97 | 19.184 | 21.10 | 250.09 | 1.200 | * | 0.000 | 2.54 | 7.222 | 8.67 | 292.6 | 0.0 | 256.8 |
| 100.0 | | 1.00 | 0.98 | 19.467 | 21.41 | 243.63 | 1.200 | * | 0.000 | 5.00 | 13.848 | 16.62 | 569.3 | 0.0 | 492.3 |
| 105.0 | Appertunance(s) | 1.00 | 1.00 | 19.741 | 21.71 | 236.97 | 1.200 | * | 0.000 | 5.00 | 13.383 | 16.06 | 558.0 | 0.0 | 475.7 |
| 110.0 | | 1.00 | 1.01 | 20.005 | 22.00 | 230.13 | 1.200 | * | 0.000 | 5.00 | 12.919 | 15.50 | 545.8 | 0.0 | 459.0 |
| 114.5 | Appertunance(s) | 1.00 | 1.02 | 20.235 | 22.25 | 223.82 | 1.200 | * | 0.000 | 4.50 | 11.230 | 13.48 | 479.9 | 0.0 | 398.9 |
| 115.0 | | 1.00 | 1.02 | 20.260 | 22.28 | 223.12 | 1.200 | * | 0.000 | 0.50 | 1.225 | 1.47 | 52.4 | 0.0 | 43.5 |
| 120.0 | | 1.00 | 1.04 | 20.508 | 22.55 | 215.95 | 1.200 | * | 0.000 | 5.00 | 11.991 | 14.39 | 519.4 | 0.0 | 425.7 |
| 125.0 | Appertunance(s) | 1.00 | 1.05 | 20.749 | 22.82 | 208.64 | 1.200 | * | 0.000 | 5.00 | 11.526 | 13.83 | 505.1 | 0.0 | 409.0 |
| 130.0 | | 1.00 | 1.06 | 20.983 | 23.08 | 201.19 | 0.650 | * | 0.000 | 5.00 | 11.062 | 7.19 | 265.5 | 0.0 | 392.3 |
| 132.1 | Bot - Section 4 | 1.00 | 1.07 | 21.080 | 23.18 | 197.99 | 0.650 | * | 0.000 | 2.12 | 4.550 | 2.96 | 109.7 | 0.0 | 161.3 |
| 134.0 | Appertunance(s) | 1.00 | 1.07 | 21.165 | 23.28 | 195.13 | 0.650 | * | 0.000 | 1.88 | 4.025 | 2.62 | 97.5 | 0.0 | 226.6 |
| 135.0 | | 1.00 | 1.07 | 21.210 | 23.33 | 193.60 | 0.650 | * | 0.000 | 1.00 | 2.114 | 1.37 | 51.3 | 0.0 | 119.0 |
| 135.8 | Top - Section 3 | 1.00 | 1.07 | 21.249 | 23.37 | 192.27 | 0.650 | * | 0.000 | 0.87 | 1.824 | 1.19 | 44.3 | 0.0 | 102.6 |
| 140.0 | | 1.00 | 1.08 | 21.432 | 23.57 | 188.88 | 0.650 | * | 0.000 | 4.13 | 8.469 | 5.50 | 207.6 | 0.0 | 181.0 |
| 142.0 | Appertunance(s) | 1.00 | 1.09 | 21.519 | 23.67 | 185.77 | 0.650 | * | 0.000 | 2.00 | 3.987 | 2.59 | 98.1 | 0.0 | 85.2 |
| 145.0 | | 1.00 | 1.09 | 21.648 | 23.81 | 181.07 | 0.650 | * | 0.000 | 3.00 | 5.841 | 3.80 | 144.7 | 0.0 | 124.8 |
| 150.0 | | 1.00 | 1.11 | 21.858 | 24.04 | 173.14 | 0.650 | * | 0.000 | 5.00 | 9.364 | 6.09 | 234.2 | 0.0 | 200.0 |
| 155.0 | | 1.00 | 1.12 | 22.064 | 24.27 | 165.11 | 0.650 | * | 0.000 | 5.00 | 8.900 | 5.78 | 224.6 | 0.0 | 190.0 |
| 160.0 | | 1.00 | 1.13 | 22.265 | 24.49 | 156.98 | 0.650 | * | 0.000 | 5.00 | 8.435 | 5.48 | 214.9 | 0.0 | 180.0 |
| 165.0 | | 1.00 | 1.14 | 22.462 | 24.70 | 148.75 | 1.200 | * | 0.000 | 5.00 | 7.971 | 9.57 | 378.1 | 0.0 | 170.0 |
| 166.0 | Appertunance(s) | 1.00 | 1.14 | 22.501 | 24.75 | 147.09 | 1.200 | * | 0.000 | 1.00 | 1.539 | 1.85 | 73.1 | 0.0 | 32.8 |
| 170.0 | | 1.00 | 1.15 | 22.654 | 24.92 | 140.42 | 0.650 | | 0.000 | 4.00 | 5.968 | 3.88 | 154.7 | 0.0 | 127.2 |
| 175.0 | | 1.00 | 1.16 | 22.843 | 25.12 | 132.01 | 0.650 | | 0.000 | 5.00 | 7.043 | 4.58 | 184.0 | 0.0 | 150.0 |
| 180.0 | Appertunance(s) | 1.00 | 1.16 | 23.027 | 25.33 | 123.50 | 0.650 | | 0.000 | 5.00 | 6.579 | 4.28 | 173.3 | 0.0 | 140.0 |
| * = Cf Adjusted By Linear Load Ra Effect | | | | | | | | Totals: | | 180.00 | | | 17,331.9 | 0.0 | 22,744.0 |








**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

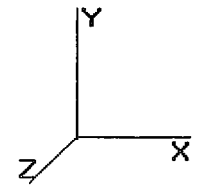
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

## Discrete Appurtenance Segment Forces (Factored)

| Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Ka | Total CaAa (sf) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.00 | GPS | 1 | 13.866 | 15.253 | 1.00 | 1.00 | 1.00 | 0.000 | 0.500 | 24.40 | 0.00 | 12.20 | 9.00 |
| 78.00 | GPS | 1 | 18.166 | 19.983 | 1.00 | 1.00 | 1.00 | 0.000 | 0.500 | 31.97 | 0.00 | 15.99 | 9.00 |
| 105.0 | RFS APXV18-206517S- | 3 | 19.741 | 21.715 | 0.64 | 0.80 | 9.91 | 0.000 | 0.000 | 344.21 | 0.00 | 0.00 | 71.28 |
| 114.5 | Decibel DB844H90E- | 12 | 20.235 | 22.259 | 0.74 | 0.80 | 33.30 | 0.000 | 0.000 | 1,186.00 | 0.00 | 0.00 | 151.20 |
| 114.5 | Round Low Profile Pl | 1 | 20.235 | 22.259 | 1.00 | 1.00 | 21.70 | 0.000 | 0.000 | 772.82 | 0.00 | 0.00 | 1,350.00 |
| 125.0 | Antel BXA-171063/12C | 1 | 20.749 | 22.824 | 0.80 | 0.80 | 3.83 | 0.000 | 0.000 | 139.94 | 0.00 | 0.00 | 13.50 |
| 125.0 | Antel BXA-171085-12C | 2 | 20.749 | 22.824 | 0.73 | 0.80 | 6.95 | 0.000 | 0.000 | 253.62 | 0.00 | 0.00 | 27.00 |
| 125.0 | Antel BXA-70063/6CF | 3 | 20.749 | 22.824 | 0.59 | 0.80 | 13.73 | 0.000 | 0.000 | 501.34 | 0.00 | 0.00 | 45.90 |
| 125.0 | Antel LPA-80063/6CF | 2 | 20.749 | 22.824 | 0.75 | 0.80 | 15.55 | 0.000 | 0.000 | 567.91 | 0.00 | 0.00 | 48.60 |
| 125.0 | Antel LPA-80080/6CF | 4 | 20.749 | 22.824 | 0.59 | 0.80 | 21.55 | 0.000 | 0.000 | 786.92 | 0.00 | 0.00 | 75.60 |
| 125.0 | RFS FD9R6004/2C-3L | 6 | 20.749 | 22.824 | 0.40 | 0.80 | 0.89 | 0.000 | 0.000 | 32.43 | 0.00 | 0.00 | 16.74 |
| 125.0 | Round Low Profile Pl | 1 | 20.749 | 22.824 | 1.00 | 1.00 | 21.70 | 0.000 | 0.000 | 792.44 | 0.00 | 0.00 | 1,350.00 |
| 134.0 | Andrew DB980H90E-M | 9 | 21.165 | 23.282 | 0.63 | 0.80 | 22.18 | 0.000 | 0.000 | 826.34 | 0.00 | 0.00 | 68.85 |
| 134.0 | Flat Low Profile Pla | 1 | 21.165 | 23.282 | 1.00 | 1.00 | 26.10 | 0.000 | 0.000 | 972.25 | 0.00 | 0.00 | 1,350.00 |
| 142.0 | 10' Omni | 2 | 21.733 | 23.906 | 1.00 | 1.00 | 6.00 | 0.000 | 5.000 | 229.50 | 0.00 | 1,147.48 | 18.00 |
| 142.0 | 56" Dipole | 1 | 21.519 | 23.671 | 1.00 | 1.00 | 1.76 | 0.000 | 0.000 | 66.66 | 0.00 | 0.00 | 22.50 |
| 142.0 | Side Arms | 2 | 21.519 | 23.671 | 1.00 | 1.00 | 10.40 | 0.000 | 0.000 | 393.88 | 0.00 | 0.00 | 270.00 |
| 166.0 | CCI DTMA-1819-DD-12 | 6 | 22.501 | 24.751 | 0.40 | 0.80 | 1.70 | 0.000 | 0.000 | 67.48 | 0.00 | 0.00 | 77.22 |
| 166.0 | RFS APX16PV-16PVL- | 9 | 22.501 | 24.751 | 0.52 | 0.80 | 31.11 | 0.000 | 0.000 | 1,231.91 | 0.00 | 0.00 | 320.76 |
| 166.0 | T-Arms | 3 | 22.501 | 24.751 | 0.50 | 0.75 | 19.45 | 0.000 | 0.000 | 770.11 | 0.00 | 0.00 | 675.00 |
| 180.0 | 10' Omni | 1 | 23.351 | 25.686 | 1.00 | 1.00 | 3.00 | 0.000 | 9.000 | 123.29 | 0.00 | 1,109.62 | 9.00 |
| 180.0 | Flat Low Profile Pla | 1 | 23.027 | 25.330 | 1.00 | 1.00 | 26.10 | 0.000 | 0.000 | 1,057.78 | 0.00 | 0.00 | 1,350.00 |
| 180.0 | Powerwave 7020.00 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 0.96 | 0.000 | 4.000 | 39.15 | 0.00 | 156.61 | 11.88 |
| 180.0 | Powerwave 7770.00 | 6 | 23.172 | 25.490 | 0.60 | 0.80 | 21.39 | 0.000 | 4.000 | 872.26 | 0.00 | 3,489.03 | 189.00 |
| 180.0 | Powerwave LGP21401 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 3.10 | 0.000 | 4.000 | 126.27 | 0.00 | 505.06 | 76.14 |
| 180.0 | Powerwave LGP21901 | 6 | 23.172 | 25.490 | 0.40 | 0.80 | 0.55 | 0.000 | 4.000 | 22.51 | 0.00 | 90.05 | 29.70 |
| | | | | | | | | | | 12,233.39 | | | 7,635.87 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | 1/12/2012 11:05:43 AM |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 13 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |



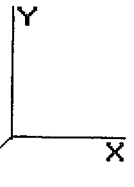



**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

## Linear Appurtenance Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Exposed To Wind | Length (ft) | Ca | Exposed Width (in) | Area (sqft) | CaAa (sqft) | qz (psf) | Ra | Cf Adjust Factor | FX (lb) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.208 | 0.000 | 48.05 | 66.41 |
| 5.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.208 | 0.000 | 48.05 | 44.27 |
| 5.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.208 | 0.000 | 37.62 | 34.01 |
| 5.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.208 | 0.000 | 0.00 | 22.14 |
| 10.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.212 | 0.000 | 48.05 | 66.41 |
| 10.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.212 | 0.000 | 48.05 | 44.27 |
| 10.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.212 | 0.000 | 37.62 | 34.01 |
| 10.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.212 | 0.000 | 0.00 | 22.14 |
| 15.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.217 | 0.000 | 48.05 | 66.41 |
| 15.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.217 | 0.000 | 48.05 | 44.27 |
| 15.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.217 | 0.000 | 37.62 | 34.01 |
| 15.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.217 | 0.000 | 0.00 | 22.14 |
| 20.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.222 | 0.000 | 48.05 | 66.41 |
| 20.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.222 | 0.000 | 48.05 | 44.27 |
| 20.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.222 | 0.000 | 37.62 | 34.01 |
| 20.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.222 | 0.000 | 0.00 | 22.14 |
| 25.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.227 | 0.000 | 48.05 | 66.41 |
| 25.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.789 | 0.227 | 0.000 | 48.05 | 44.27 |
| 25.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.789 | 0.227 | 0.000 | 37.62 | 34.01 |
| 25.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.789 | 0.227 | 0.000 | 0.00 | 22.14 |
| 30.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.801 | 0.232 | 0.000 | 48.09 | 66.41 |
| 30.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 13.801 | 0.232 | 0.000 | 48.09 | 44.27 |
| 30.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 13.801 | 0.232 | 0.000 | 37.65 | 34.01 |
| 30.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 13.801 | 0.232 | 0.000 | 0.00 | 22.14 |
| 35.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.423 | 0.238 | 0.000 | 50.26 | 66.41 |
| 35.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.423 | 0.238 | 0.000 | 50.26 | 44.27 |
| 35.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 14.423 | 0.238 | 0.000 | 39.34 | 34.01 |
| 35.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 14.423 | 0.238 | 0.000 | 0.00 | 22.14 |
| 40.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.983 | 0.244 | 0.000 | 52.21 | 66.41 |
| 40.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 14.983 | 0.244 | 0.000 | 52.21 | 44.27 |
| 40.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 14.983 | 0.244 | 0.000 | 40.87 | 34.01 |
| 40.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 14.983 | 0.244 | 0.000 | 0.00 | 22.14 |
| 42.96 | (18) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 0.98 | 1.17 | 15.292 | 0.249 | 0.000 | 31.51 | 39.27 |
| 42.96 | (12) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 0.98 | 1.17 | 15.292 | 0.249 | 0.000 | 31.51 | 26.18 |
| 42.96 | (12) 1 1/4" Coax | Yes | 2.96 | 1.200 | 3.10 | 0.76 | 0.92 | 15.292 | 0.249 | 0.000 | 24.67 | 20.11 |
| 42.96 | (6) 1 5/8" Coax | Yes | 2.96 | 0.000 | 0.00 | 0.00 | 0.00 | 15.292 | 0.249 | 0.000 | 0.00 | 13.09 |
| 45.00 | (18) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 0.67 | 0.81 | 15.496 | 0.252 | 0.000 | 22.07 | 27.14 |
| 45.00 | (12) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 0.67 | 0.81 | 15.496 | 0.252 | 0.000 | 22.07 | 18.09 |
| 45.00 | (12) 1 1/4" Coax | Yes | 2.04 | 1.200 | 3.10 | 0.53 | 0.63 | 15.496 | 0.252 | 0.000 | 17.28 | 13.90 |
| 45.00 | (6) 1 5/8" Coax | Yes | 2.04 | 0.000 | 0.00 | 0.00 | 0.00 | 15.496 | 0.252 | 0.000 | 0.00 | 9.05 |
| 49.04 | (18) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 1.33 | 1.60 | 15.882 | 0.256 | 0.000 | 44.72 | 53.66 |
| 49.04 | (12) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 1.33 | 1.60 | 15.882 | 0.256 | 0.000 | 44.72 | 35.77 |
| 49.04 | (12) 1 1/4" Coax | Yes | 4.04 | 1.200 | 3.10 | 1.04 | 1.25 | 15.882 | 0.256 | 0.000 | 35.01 | 27.48 |
| 49.04 | (6) 1 5/8" Coax | Yes | 4.04 | 0.000 | 0.00 | 0.00 | 0.00 | 15.882 | 0.256 | 0.000 | 0.00 | 17.89 |
| 50.00 | (18) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.32 | 0.38 | 15.970 | 0.255 | 0.000 | 10.69 | 12.75 |
| 50.00 | (12) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.32 | 0.38 | 15.970 | 0.255 | 0.000 | 10.69 | 8.50 |
| 50.00 | (12) 1 1/4" Coax | Yes | 0.96 | 1.200 | 3.10 | 0.25 | 0.30 | 15.970 | 0.255 | 0.000 | 8.37 | 6.53 |
| 50.00 | (6) 1 5/8" Coax | Yes | 0.96 | 0.000 | 0.00 | 0.00 | 0.00 | 15.970 | 0.255 | 0.000 | 0.00 | 4.25 |
| 55.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.411 | 0.259 | 0.000 | 57.19 | 66.41 |
| 55.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.411 | 0.259 | 0.000 | 57.19 | 44.27 |
| 55.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 16.411 | 0.259 | 0.000 | 44.77 | 34.01 |








**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

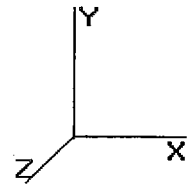
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 16.411 | 0.259 | 0.000 | 0.00 | 22.14 |
| 60.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.824 | 0.265 | 0.000 | 58.63 | 66.41 |
| 60.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 16.824 | 0.265 | 0.000 | 58.63 | 44.27 |
| 60.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 16.824 | 0.265 | 0.000 | 45.90 | 34.01 |
| 60.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 16.824 | 0.265 | 0.000 | 0.00 | 22.14 |
| 65.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.213 | 0.273 | 0.000 | 59.98 | 66.41 |
| 65.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.213 | 0.273 | 0.000 | 59.98 | 44.27 |
| 65.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.213 | 0.273 | 0.000 | 46.96 | 34.01 |
| 65.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.213 | 0.273 | 0.000 | 0.00 | 22.14 |
| 70.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.581 | 0.281 | 0.000 | 61.27 | 66.41 |
| 70.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.581 | 0.281 | 0.000 | 61.27 | 44.27 |
| 70.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.581 | 0.281 | 0.000 | 47.96 | 34.01 |
| 70.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.581 | 0.281 | 0.000 | 0.00 | 22.14 |
| 75.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.931 | 0.289 | 0.000 | 62.49 | 66.41 |
| 75.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 17.931 | 0.289 | 0.000 | 62.49 | 44.27 |
| 75.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 17.931 | 0.289 | 0.000 | 48.92 | 34.01 |
| 75.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 17.931 | 0.289 | 0.000 | 0.00 | 22.14 |
| 78.00 | (18) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 0.99 | 1.19 | 18.133 | 0.296 | 0.000 | 37.91 | 39.85 |
| 78.00 | (12) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 0.99 | 1.19 | 18.133 | 0.296 | 0.000 | 37.91 | 26.56 |
| 78.00 | (12) 1 1/4" Coax | Yes | 3.00 | 1.200 | 3.10 | 0.77 | 0.93 | 18.133 | 0.296 | 0.000 | 29.68 | 20.41 |
| 78.00 | (6) 1 5/8" Coax | Yes | 3.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.133 | 0.296 | 0.000 | 0.00 | 13.28 |
| 80.00 | (18) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 0.66 | 0.79 | 18.265 | 0.300 | 0.000 | 25.46 | 26.56 |
| 80.00 | (12) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 0.66 | 0.79 | 18.265 | 0.300 | 0.000 | 25.46 | 17.71 |
| 80.00 | (12) 1 1/4" Coax | Yes | 2.00 | 1.200 | 3.10 | 0.52 | 0.62 | 18.265 | 0.300 | 0.000 | 19.93 | 13.61 |
| 80.00 | (6) 1 5/8" Coax | Yes | 2.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.265 | 0.300 | 0.000 | 0.00 | 8.85 |
| 85.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 18.584 | 0.307 | 0.000 | 64.76 | 66.41 |
| 85.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 18.584 | 0.307 | 0.000 | 64.76 | 44.27 |
| 85.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 18.584 | 0.307 | 0.000 | 50.70 | 34.01 |
| 85.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 18.584 | 0.307 | 0.000 | 0.00 | 22.14 |
| 87.54 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 18.741 | 0.314 | 0.000 | 33.18 | 33.74 |
| 87.54 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 18.741 | 0.314 | 0.000 | 33.18 | 22.49 |
| 87.54 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 0.66 | 0.79 | 18.741 | 0.314 | 0.000 | 25.97 | 17.28 |
| 87.54 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 18.741 | 0.314 | 0.000 | 0.00 | 11.25 |
| 90.00 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 18.890 | 0.319 | 0.000 | 32.39 | 32.68 |
| 90.00 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 18.890 | 0.319 | 0.000 | 32.39 | 21.78 |
| 90.00 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 0.64 | 0.76 | 18.890 | 0.319 | 0.000 | 25.35 | 16.74 |
| 90.00 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 18.890 | 0.319 | 0.000 | 0.00 | 10.89 |
| 92.46 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 19.036 | 0.324 | 0.000 | 32.59 | 32.63 |
| 92.46 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 0.81 | 0.97 | 19.036 | 0.324 | 0.000 | 32.59 | 21.75 |
| 92.46 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 0.63 | 0.76 | 19.036 | 0.324 | 0.000 | 25.51 | 16.71 |
| 92.46 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 19.036 | 0.324 | 0.000 | 0.00 | 10.88 |
| 95.00 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 19.184 | 0.323 | 0.000 | 34.01 | 33.78 |
| 95.00 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 0.84 | 1.01 | 19.184 | 0.323 | 0.000 | 34.01 | 22.52 |
| 95.00 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 0.66 | 0.79 | 19.184 | 0.323 | 0.000 | 26.62 | 17.30 |
| 95.00 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 19.184 | 0.323 | 0.000 | 0.00 | 11.26 |
| 100.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.467 | 0.332 | 0.000 | 67.84 | 66.41 |
| 100.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.467 | 0.332 | 0.000 | 67.84 | 44.27 |
| 100.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 19.467 | 0.332 | 0.000 | 53.11 | 34.01 |
| 100.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 19.467 | 0.332 | 0.000 | 0.00 | 22.14 |
| 105.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.741 | 0.343 | 0.000 | 68.79 | 66.41 |
| 105.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 19.741 | 0.343 | 0.000 | 68.79 | 44.27 |
| 105.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 19.741 | 0.343 | 0.000 | 53.85 | 34.01 |
| 105.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 19.741 | 0.343 | 0.000 | 0.00 | 22.14 |
| 110.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.005 | 0.355 | 0.000 | 69.71 | 66.41 |
| 110.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.005 | 0.355 | 0.000 | 69.71 | 44.27 |
| 110.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 1.29 | 1.55 | 20.005 | 0.355 | 0.000 | 54.57 | 34.01 |
| 114.5 | (18) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 1.49 | 1.78 | 20.235 | 0.368 | 0.000 | 63.46 | 59.77 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |





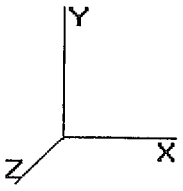



**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114.5 | (12) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 1.49 | 1.78 | 20.235 | 0.368 | 0.000 | 63.46 | 39.85 |
| 114.5 | (12) 1 1/4" Coax | Yes | 4.50 | 1.200 | 3.10 | 1.16 | 1.39 | 20.235 | 0.368 | 0.000 | 49.68 | 30.61 |
| 115.0 | (18) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.17 | 0.20 | 20.260 | 0.269 | 0.000 | 7.06 | 6.64 |
| 115.0 | (12) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.17 | 0.20 | 20.260 | 0.269 | 0.000 | 7.06 | 4.43 |
| 120.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.508 | 0.275 | 0.000 | 71.47 | 66.41 |
| 120.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.508 | 0.275 | 0.000 | 71.47 | 44.27 |
| 125.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.749 | 0.286 | 0.000 | 72.31 | 66.41 |
| 125.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 20.749 | 0.286 | 0.000 | 72.31 | 44.27 |
| 130.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 20.983 | 0.149 | 1.147 | 0.00 | 66.41 |
| 132.1 | (18) 1 5/8" Coax | Yes | 2.12 | 0.000 | 3.96 | 0.70 | 0.00 | 21.080 | 0.154 | 1.161 | 0.00 | 28.16 |
| 134.0 | (18) 1 5/8" Coax | Yes | 1.88 | 0.000 | 3.96 | 0.62 | 0.00 | 21.165 | 0.156 | 1.169 | 0.00 | 24.97 |
| 135.0 | (18) 1 5/8" Coax | Yes | 1.00 | 0.000 | 3.96 | 0.33 | 0.00 | 21.210 | 0.158 | 1.175 | 0.00 | 13.28 |
| 135.8 | (18) 1 5/8" Coax | Yes | 0.87 | 0.000 | 3.96 | 0.29 | 0.00 | 21.249 | 0.160 | 1.179 | 0.00 | 11.55 |
| 140.0 | (18) 1 5/8" Coax | Yes | 4.13 | 0.000 | 3.96 | 1.36 | 0.00 | 21.432 | 0.161 | 1.183 | 0.00 | 54.86 |
| 142.0 | (18) 1 5/8" Coax | Yes | 2.00 | 0.000 | 3.96 | 0.66 | 0.00 | 21.519 | 0.166 | 1.197 | 0.00 | 26.56 |
| 145.0 | (18) 1 5/8" Coax | Yes | 3.00 | 0.000 | 3.96 | 0.99 | 0.00 | 21.648 | 0.169 | 1.208 | 0.00 | 39.85 |
| 150.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 21.858 | 0.176 | 1.229 | 0.00 | 66.41 |
| 155.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 22.064 | 0.185 | 1.256 | 0.00 | 66.41 |
| 160.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 1.65 | 0.00 | 22.265 | 0.196 | 1.287 | 0.00 | 66.41 |
| 165.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 1.65 | 1.98 | 22.462 | 0.207 | 0.000 | 78.28 | 66.41 |
| 166.0 | (18) 1 5/8" Coax | Yes | 1.00 | 1.200 | 3.96 | 0.33 | 0.40 | 22.501 | 0.214 | 0.000 | 15.68 | 13.28 |
| | | | | | | | | | | Totals: | 4,095.34 | 4,555.56 |

| | | | |
|---|---|---|---|
| Pole : 302506 | Code: ANSI/TIA-222 Rev G | | 1/12/2012 11:05:43 AM |
| Location : Winchester CT 3, CT | Struct Class : II | | Page: 16 |
| Height : 180.0 (ft) | Exposure Category : B | | |
| Base Dia : 52.75 (in) | Topographic Category : 1 | | |
| Top Dia : 15.00 (in) | Base Elev : 0.000 (ft) | | |
| Shape : 18 Sides | | | |
| Taper : 0.219444 (in/ft) |  | | |




**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

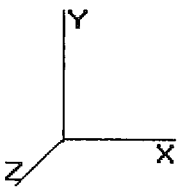
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

## 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 | 776.95 | 1,364.03 | 0.00 | 0.00 |
| 10.00 | 763.43 | 1,340.70 | 0.00 | 0.00 |
| 15.00 | 749.91 | 1,317.37 | 0.00 | 0.00 |
| 20.00 | 736.39 | 1,294.04 | 0.00 | 0.00 |
| 25.00 | 722.87 | 1,270.71 | 0.00 | 0.00 |
| 30.00 | 734.35 | 1,256.38 | 0.00 | 12.20 |
| 35.00 | 727.77 | 1,222.57 | 0.00 | 0.00 |
| 40.00 | 741.38 | 1,199.24 | 0.00 | 0.00 |
| 42.96 | 440.36 | 698.15 | 0.00 | 0.00 |
| 45.00 | 309.56 | 801.57 | 0.00 | 0.00 |
| 49.04 | 619.58 | 1,563.42 | 0.00 | 0.00 |
| 50.00 | 146.56 | 198.18 | 0.00 | 0.00 |
| 55.00 | 774.73 | 1,020.15 | 0.00 | 0.00 |
| 60.00 | 777.74 | 1,000.15 | 0.00 | 0.00 |
| 65.00 | 778.85 | 980.16 | 0.00 | 0.00 |
| 70.00 | 778.28 | 960.16 | 0.00 | 0.00 |
| 75.00 | 776.20 | 940.16 | 0.00 | 0.00 |
| 78.00 | 494.40 | 563.50 | 0.00 | 15.99 |
| 80.00 | 306.94 | 365.40 | 0.00 | 0.00 |
| 85.00 | 768.01 | 899.49 | 0.00 | 0.00 |
| 87.54 | 386.39 | 449.27 | 0.00 | 0.00 |
| 90.00 | 377.86 | 686.78 | 0.00 | 0.00 |
| 92.46 | 375.73 | 676.94 | 0.00 | 0.00 |
| 95.00 | 387.26 | 389.72 | 0.00 | 0.00 |
| 100.0 | 758.13 | 753.57 | 0.00 | 0.00 |
| 105.0 | 1,093.63 | 808.18 | 0.00 | 0.00 |
| 110.0 | 739.83 | 698.10 | 0.00 | 0.00 |
| 114.5 | 2,615.38 | 2,115.24 | 0.00 | 0.00 |
| 115.0 | 66.52 | 63.99 | 0.00 | 0.00 |
| 120.0 | 662.29 | 630.76 | 0.00 | 0.00 |
| 125.0 | 3,724.31 | 2,191.43 | 0.00 | 0.00 |
| 130.0 | 265.54 | 553.16 | 0.00 | 0.00 |
| 132.1 | 109.72 | 229.49 | 0.00 | 0.00 |
| 134.0 | 1,896.05 | 1,705.95 | 0.00 | 0.00 |
| 135.0 | 51.30 | 144.52 | 0.00 | 0.00 |
| 135.8 | 44.34 | 124.83 | 0.00 | 0.00 |
| 140.0 | 207.63 | 286.39 | 0.00 | 0.00 |
| 142.0 | 788.18 | 446.73 | 0.00 | 1,147.48 |
| 145.0 | 144.66 | 192.08 | 0.00 | 0.00 |
| 150.0 | 234.15 | 312.14 | 0.00 | 0.00 |
| 155.0 | 224.64 | 302.14 | 0.00 | 0.00 |
| 160.0 | 214.86 | 292.14 | 0.00 | 0.00 |
| 165.0 | 456.42 | 282.15 | 0.00 | 0.00 |
| 166.0 | 2,158.30 | 1,128.21 | 0.00 | 0.00 |
| 170.0 | 154.68 | 163.79 | 0.00 | 0.00 |
| 175.0 | 184.04 | 195.74 | 0.00 | 0.00 |
| 180.0 | 2,414.56 | 1,851.46 | 0.00 | 5,350.36 |
| Totals: | 33,660.66 | 37,930.41 | 0.00 | 6,526.03 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | 1/12/2012 11:05:43 AM |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 17 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 0.9D + 1.6W — 90.00 mph with No Ice (Reduced DL) — 28 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

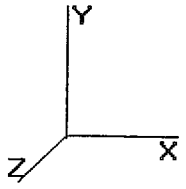
Wind Importance Factor : 1.00

## Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | -37.87 | -33.72 | 0.00 | -3,493.53 | 0.00 | 3,493.53 | 5,102.86 | 2,551.43 | 10,963.2 | 5,489.79 | 0.00 | 0.00 | 0.644 |
| 5.00 | -36.40 | -33.07 | 0.00 | -3,324.91 | 0.00 | 3,324.91 | 5,029.12 | 2,514.56 | 10,576.3 | 5,296.03 | 0.10 | -0.19 | 0.635 |
| 10.00 | -34.95 | -32.42 | 0.00 | -3,159.57 | 0.00 | 3,159.57 | 4,953.95 | 2,476.98 | 10,193.1 | 5,104.17 | 0.41 | -0.39 | 0.626 |
| 15.00 | -33.53 | -31.78 | 0.00 | -2,997.47 | 0.00 | 2,997.47 | 4,877.36 | 2,438.68 | 9,813.98 | 4,914.28 | 0.93 | -0.59 | 0.617 |
| 20.00 | -32.13 | -31.14 | 0.00 | -2,838.60 | 0.00 | 2,838.60 | 4,799.34 | 2,399.67 | 9,438.93 | 4,726.48 | 1.65 | -0.79 | 0.607 |
| 25.00 | -30.77 | -30.50 | 0.00 | -2,682.92 | 0.00 | 2,682.92 | 4,719.90 | 2,359.95 | 9,068.23 | 4,540.86 | 2.58 | -0.99 | 0.598 |
| 30.00 | -29.42 | -29.85 | 0.00 | -2,530.39 | 0.00 | 2,530.39 | 4,639.03 | 2,319.51 | 8,702.08 | 4,357.51 | 3.73 | -1.20 | 0.587 |
| 35.00 | -28.10 | -29.20 | 0.00 | -2,381.12 | 0.00 | 2,381.12 | 4,556.73 | 2,278.36 | 8,340.67 | 4,176.53 | 5.10 | -1.41 | 0.576 |
| 40.00 | -26.84 | -28.51 | 0.00 | -2,235.13 | 0.00 | 2,235.13 | 4,473.00 | 2,236.50 | 7,984.18 | 3,998.03 | 6.68 | -1.62 | 0.565 |
| 42.96 | -26.10 | -28.09 | 0.00 | -2,150.85 | 0.00 | 2,150.85 | 4,422.82 | 2,211.41 | 7,775.79 | 3,893.68 | 7.72 | -1.74 | 0.558 |
| 45.00 | -25.25 | -27.82 | 0.00 | -2,093.44 | 0.00 | 2,093.44 | 4,378.03 | 2,189.01 | 7,615.75 | 3,813.53 | 8.49 | -1.83 | 0.555 |
| 49.04 | -23.65 | -27.19 | 0.00 | -1,981.05 | 0.00 | 1,981.05 | 3,604.17 | 1,802.08 | 6,267.69 | 3,138.50 | 10.12 | -2.01 | 0.638 |
| 50.00 | -23.39 | -27.10 | 0.00 | -1,954.95 | 0.00 | 1,954.95 | 3,591.50 | 1,795.75 | 6,214.33 | 3,111.78 | 10.52 | -2.05 | 0.635 |
| 55.00 | -22.29 | -26.38 | 0.00 | -1,819.47 | 0.00 | 1,819.47 | 3,524.70 | 1,762.35 | 5,938.60 | 2,973.71 | 12.80 | -2.29 | 0.618 |
| 60.00 | -21.22 | -25.65 | 0.00 | -1,687.58 | 0.00 | 1,687.58 | 3,456.48 | 1,728.24 | 5,666.60 | 2,837.51 | 15.32 | -2.53 | 0.601 |
| 65.00 | -20.17 | -24.91 | 0.00 | -1,559.35 | 0.00 | 1,559.35 | 3,386.83 | 1,693.41 | 5,398.53 | 2,703.28 | 18.10 | -2.77 | 0.583 |
| 70.00 | -19.15 | -24.16 | 0.00 | -1,434.81 | 0.00 | 1,434.81 | 3,315.75 | 1,657.87 | 5,134.58 | 2,571.11 | 21.13 | -3.01 | 0.564 |
| 75.00 | -18.18 | -23.40 | 0.00 | -1,313.99 | 0.00 | 1,313.99 | 3,242.30 | 1,621.15 | 4,873.54 | 2,440.39 | 24.41 | -3.25 | 0.544 |
| 78.00 | -17.59 | -22.91 | 0.00 | -1,243.78 | 0.00 | 1,243.78 | 3,184.09 | 1,592.04 | 4,699.23 | 2,353.11 | 26.50 | -3.40 | 0.534 |
| 80.00 | -17.18 | -22.63 | 0.00 | -1,197.96 | 0.00 | 1,197.96 | 3,145.28 | 1,572.64 | 4,584.79 | 2,295.80 | 27.94 | -3.50 | 0.527 |
| 85.00 | -16.26 | -21.86 | 0.00 | -1,084.79 | 0.00 | 1,084.79 | 3,048.26 | 1,524.13 | 4,304.87 | 2,155.63 | 31.73 | -3.74 | 0.509 |
| 87.54 | -15.79 | -21.48 | 0.00 | -1,029.27 | 0.00 | 1,029.27 | 2,998.97 | 1,499.48 | 4,166.05 | 2,086.12 | 33.75 | -3.86 | 0.499 |
| 90.00 | -15.09 | -21.09 | 0.00 | -976.42 | 0.00 | 976.42 | 2,951.23 | 1,475.62 | 4,033.76 | 2,019.88 | 35.77 | -3.98 | 0.489 |
| 92.46 | -14.40 | -20.70 | 0.00 | -924.62 | 0.00 | 924.62 | 2,412.07 | 1,206.04 | 3,317.78 | 1,661.36 | 37.85 | -4.10 | 0.563 |
| 95.00 | -13.97 | -20.33 | 0.00 | -871.99 | 0.00 | 871.99 | 2,382.81 | 1,191.41 | 3,222.46 | 1,613.62 | 40.07 | -4.22 | 0.547 |
| 100.00 | -13.19 | -19.57 | 0.00 | -770.35 | 0.00 | 770.35 | 2,324.22 | 1,162.11 | 3,037.61 | 1,521.06 | 44.63 | -4.48 | 0.512 |
| 105.00 | -12.39 | -18.47 | 0.00 | -672.48 | 0.00 | 672.48 | 2,264.20 | 1,132.10 | 2,856.29 | 1,430.27 | 49.45 | -4.74 | 0.476 |
| 110.00 | -11.69 | -17.72 | 0.00 | -580.12 | 0.00 | 580.12 | 2,186.61 | 1,093.30 | 2,659.07 | 1,331.51 | 54.54 | -4.98 | 0.441 |
| 114.50 | -9.78 | -14.95 | 0.00 | -500.36 | 0.00 | 500.36 | 2,113.84 | 1,056.92 | 2,484.15 | 1,243.92 | 59.33 | -5.19 | 0.407 |
| 115.00 | -9.69 | -14.90 | 0.00 | -492.89 | 0.00 | 492.89 | 2,105.76 | 1,052.88 | 2,465.08 | 1,234.37 | 59.87 | -5.21 | 0.404 |
| 120.00 | -9.07 | -14.22 | 0.00 | -418.39 | 0.00 | 418.39 | 2,024.90 | 1,012.45 | 2,278.43 | 1,140.91 | 65.45 | -5.44 | 0.371 |
| 125.00 | -7.21 | -10.32 | 0.00 | -347.31 | 0.00 | 347.31 | 1,944.05 | 972.03 | 2,099.13 | 1,051.12 | 71.25 | -5.65 | 0.334 |
| 130.00 | -6.66 | -10.02 | 0.00 | -295.70 | 0.00 | 295.70 | 1,863.20 | 931.60 | 1,927.17 | 965.02 | 77.26 | -5.84 | 0.310 |
| 132.12 | -6.43 | -9.90 | 0.00 | -274.46 | 0.00 | 274.46 | 1,828.92 | 914.46 | 1,856.49 | 929.63 | 79.87 | -5.93 | 0.299 |
| 134.00 | -4.93 | -7.84 | 0.00 | -255.86 | 0.00 | 255.86 | 1,798.52 | 899.26 | 1,794.90 | 898.78 | 82.21 | -6.00 | 0.287 |
| 135.00 | -4.78 | -7.77 | 0.00 | -248.02 | 0.00 | 248.02 | 1,782.35 | 891.17 | 1,762.57 | 882.59 | 83.47 | -6.04 | 0.284 |
| 135.87 | -4.65 | -7.72 | 0.00 | -241.26 | 0.00 | 241.26 | 993.95 | 496.97 | 1,000.68 | 501.09 | 84.57 | -6.08 | 0.486 |
| 140.00 | -4.37 | -7.50 | 0.00 | -209.35 | 0.00 | 209.35 | 969.84 | 484.92 | 940.01 | 470.70 | 89.89 | -6.23 | 0.450 |
| 142.00 | -4.00 | -6.68 | 0.00 | -193.21 | 0.00 | 193.21 | 957.82 | 478.91 | 910.95 | 456.15 | 92.52 | -6.35 | 0.428 |
| 145.00 | -3.80 | -6.52 | 0.00 | -173.18 | 0.00 | 173.18 | 939.35 | 469.68 | 867.78 | 434.53 | 96.55 | -6.51 | 0.403 |
| 150.00 | -3.49 | -6.27 | 0.00 | -140.56 | 0.00 | 140.56 | 907.44 | 453.72 | 797.07 | 399.13 | 103.50 | -6.77 | 0.356 |
| 155.00 | -3.19 | -6.02 | 0.00 | -109.20 | 0.00 | 109.20 | 874.09 | 437.05 | 728.06 | 364.57 | 110.71 | -7.02 | 0.303 |
| 160.00 | -2.91 | -5.79 | 0.00 | -79.08 | 0.00 | 79.08 | 839.33 | 419.66 | 660.97 | 330.98 | 118.16 | -7.23 | 0.243 |
| 165.00 | -2.68 | -5.30 | 0.00 | -50.15 | 0.00 | 50.15 | 800.44 | 400.22 | 593.98 | 297.43 | 125.81 | -7.40 | 0.172 |
| 166.00 | -1.83 | -3.02 | 0.00 | -44.85 | 0.00 | 44.85 | 790.74 | 395.37 | 579.60 | 290.23 | 127.35 | -7.43 | 0.157 |
| 170.00 | -1.69 | -2.85 | 0.00 | -32.78 | 0.00 | 32.78 | 751.93 | 375.97 | 523.82 | 262.30 | 133.61 | -7.53 | 0.127 |
| 175.00 | -1.51 | -2.64 | 0.00 | -18.55 | 0.00 | 18.55 | 703.42 | 351.71 | 458.07 | 229.37 | 141.53 | -7.63 | 0.083 |
| 180.00 | 0.00 | -2.41 | 0.00 | -5.35 | 0.00 | 5.35 | 654.91 | 327.45 | 396.72 | 198.65 | 149.54 | -7.69 | 0.027 |

Pole : 302506
Location : Winchester CT 3, CT
Height : 180.0 (ft)
Base Dia : 52.75 (in)
Top Dia : 15.00 (in)
Shape : 18 Sides
Taper : 0.219444 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)




1/12/2012 11:05:44 AM
Page: 18



**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

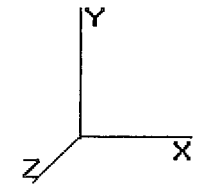
Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

## Shaft Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Kzt | 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 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | * | 2.070 | 5.00 | 23.811 | 28.57 | 85.6 | 696.5 | 2,164.0 |
| 10.00 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | * | 2.219 | 5.00 | 23.471 | 28.16 | 84.4 | 733.3 | 2,169.7 |
| 15.00 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | * | 2.310 | 5.00 | 23.083 | 27.70 | 83.0 | 749.0 | 2,154.3 |
| 20.00 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | * | 2.378 | 5.00 | 22.675 | 27.21 | 81.5 | 755.5 | 2,129.7 |
| 25.00 | | 1.00 | 0.70 | 2.724 | 2.996 | 0.000 | 1.200 | * | 2.432 | 5.00 | 22.255 | 26.71 | 80.0 | 756.7 | 2,099.8 |
| 30.00 | Appertunance(s) | 1.00 | 0.70 | 2.726 | 2.999 | 0.000 | 1.200 | * | 2.476 | 5.00 | 21.829 | 26.19 | 78.6 | 754.3 | 2,066.2 |
| 35.00 | | 1.00 | 0.73 | 2.849 | 3.134 | 0.000 | 1.200 | * | 2.515 | 5.00 | 21.396 | 25.68 | 80.5 | 749.3 | 2,030.2 |
| 40.00 | | 1.00 | 0.76 | 2.960 | 3.256 | 0.000 | 1.200 | * | 2.549 | 5.00 | 20.960 | 25.15 | 81.9 | 742.4 | 1,992.1 |
| 42.96 | Bot - Section 2 | 1.00 | 0.77 | 3.021 | 3.323 | 0.000 | 1.200 | * | 2.567 | 2.96 | 12.185 | 14.62 | 48.6 | 436.1 | 1,160.5 |
| 45.00 | | 1.00 | 0.78 | 3.061 | 3.367 | 0.000 | 1.200 | * | 2.579 | 2.04 | 8.460 | 10.15 | 34.2 | 304.9 | 1,230.9 |
| 49.04 | Top - Section 1 | 1.00 | 0.80 | 3.137 | 3.451 | 0.000 | 1.200 | * | 2.601 | 4.04 | 16.513 | 19.82 | 68.4 | 596.6 | 2,399.0 |
| 50.00 | | 1.00 | 0.81 | 3.155 | 3.470 | 0.000 | 1.200 | * | 2.606 | 0.96 | 3.881 | 4.66 | 16.2 | 141.4 | 338.6 |
| 55.00 | | 1.00 | 0.83 | 3.242 | 3.566 | 0.000 | 1.200 | * | 2.631 | 5.00 | 19.954 | 23.94 | 85.4 | 725.8 | 1,736.8 |
| 60.00 | | 1.00 | 0.85 | 3.323 | 3.656 | 0.000 | 1.200 | * | 2.654 | 5.00 | 19.509 | 23.41 | 85.6 | 714.3 | 1,698.6 |
| 65.00 | | 1.00 | 0.87 | 3.400 | 3.740 | 0.000 | 1.200 | * | 2.675 | 5.00 | 19.062 | 22.87 | 85.6 | 702.0 | 1,659.6 |
| 70.00 | | 1.00 | 0.89 | 3.473 | 3.820 | 0.000 | 1.200 | * | 2.695 | 5.00 | 18.615 | 22.34 | 85.3 | 689.0 | 1,620.0 |
| 75.00 | | 1.00 | 0.91 | 3.542 | 3.896 | 0.000 | 1.200 | * | 2.714 | 5.00 | 18.166 | 21.80 | 84.9 | 675.4 | 1,579.8 |
| 78.00 | Appertunance(s) | 1.00 | 0.92 | 3.582 | 3.940 | 0.000 | 1.200 | * | 2.725 | 3.00 | 10.682 | 12.82 | 50.5 | 400.2 | 930.0 |
| 80.00 | | 1.00 | 0.92 | 3.608 | 3.969 | 0.000 | 1.200 | * | 2.731 | 2.00 | 7.031 | 8.44 | 33.5 | 264.5 | 612.4 |
| 85.00 | | 1.00 | 0.94 | 3.671 | 4.038 | 0.000 | 1.200 | * | 2.748 | 5.00 | 17.266 | 20.72 | 83.7 | 646.7 | 1,497.7 |
| 87.54 | Bot - Section 3 | 1.00 | 0.95 | 3.702 | 4.072 | 0.000 | 1.200 | * | 2.756 | 2.54 | 8.596 | 10.32 | 42.0 | 324.7 | 746.8 |
| 90.00 | | 1.00 | 0.95 | 3.731 | 4.105 | 0.000 | 1.200 | * | 2.764 | 2.46 | 8.345 | 10.01 | 41.1 | 316.1 | 1,060.5 |
| 92.46 | Top - Section 2 | 1.00 | 0.96 | 3.760 | 4.136 | 0.000 | 1.200 | * | 2.771 | 2.46 | 8.224 | 9.87 | 40.8 | 312.0 | 1,043.4 |
| 95.00 | | 1.00 | 0.97 | 3.789 | 4.168 | 0.000 | 1.200 | * | 2.779 | 2.54 | 8.400 | 10.08 | 42.0 | 319.0 | 661.5 |
| 100.0 | | 1.00 | 0.98 | 3.845 | 4.230 | 0.000 | 1.200 | * | 2.793 | 5.00 | 16.175 | 19.41 | 82.1 | 611.4 | 1,267.9 |
| 105.0 | Appertunance(s) | 1.00 | 1.00 | 3.899 | 4.289 | 0.000 | 1.200 | * | 2.807 | 5.00 | 15.722 | 18.87 | 80.9 | 595.3 | 1,229.6 |
| 110.0 | | 1.00 | 1.01 | 3.952 | 4.347 | 0.000 | 1.200 | * | 2.820 | 5.00 | 15.269 | 18.32 | 79.6 | 579.0 | 1,191.0 |
| 114.5 | Appertunance(s) | 1.00 | 1.02 | 3.997 | 4.397 | 0.000 | 1.200 | * | 2.831 | 4.50 | 13.354 | 16.02 | 70.5 | 507.6 | 1,039.4 |
| 115.0 | | 1.00 | 1.02 | 4.002 | 4.402 | 0.000 | 1.200 | * | 2.832 | 0.50 | 1.461 | 1.75 | 7.7 | 56.2 | 114.2 |
| 120.0 | | 1.00 | 1.04 | 4.051 | 4.456 | 0.000 | 1.200 | * | 2.845 | 5.00 | 14.361 | 17.23 | 76.8 | 545.3 | 1,112.9 |
| 125.0 | Appertunance(s) | 1.00 | 1.05 | 4.099 | 4.508 | 0.000 | 1.200 | * | 2.856 | 5.00 | 13.907 | 16.69 | 75.2 | 528.1 | 1,073.5 |
| 130.0 | | 1.00 | 1.06 | 4.145 | 4.559 | 0.000 | 1.200 | * | 2.867 | 5.00 | 13.452 | 16.14 | 73.6 | 510.7 | 1,033.8 |
| 132.1 | Bot - Section 4 | 1.00 | 1.07 | 4.164 | 4.580 | 0.000 | 1.200 | * | 2.872 | 2.12 | 5.564 | 6.68 | 30.6 | 213.3 | 428.4 |
| 134.0 | Appertunance(s) | 1.00 | 1.07 | 4.181 | 4.599 | 0.000 | 1.200 | * | 2.876 | 1.88 | 4.927 | 5.91 | 27.2 | 189.3 | 491.4 |
| 135.0 | | 1.00 | 1.07 | 4.190 | 4.609 | 0.000 | 1.200 | * | 2.878 | 1.00 | 2.594 | 3.11 | 14.3 | 100.0 | 258.6 |
| 135.8 | Top - Section 3 | 1.00 | 1.07 | 4.197 | 4.617 | 0.000 | 1.200 | * | 2.880 | 0.87 | 2.241 | 2.69 | 12.4 | 86.4 | 223.3 |
| 140.0 | | 1.00 | 1.08 | 4.233 | 4.657 | 0.000 | 1.200 | * | 2.889 | 4.13 | 10.457 | 12.55 | 58.4 | 398.1 | 639.4 |
| 142.0 | Appertunance(s) | 1.00 | 1.09 | 4.251 | 4.676 | 0.000 | 1.200 | * | 2.893 | 2.00 | 4.951 | 5.94 | 27.8 | 189.9 | 303.5 |
| 145.0 | | 1.00 | 1.09 | 4.276 | 4.704 | 0.000 | 1.200 | * | 2.899 | 3.00 | 7.291 | 8.75 | 41.2 | 278.3 | 444.7 |
| 150.0 | | 1.00 | 1.11 | 4.318 | 4.749 | 0.000 | 1.200 | * | 2.909 | 5.00 | 11.788 | 14.15 | 67.2 | 445.6 | 712.3 |
| 155.0 | | 1.00 | 1.12 | 4.358 | 4.794 | 0.000 | 1.200 | * | 2.918 | 5.00 | 11.332 | 13.60 | 65.2 | 427.2 | 680.5 |
| 160.0 | | 1.00 | 1.13 | 4.398 | 4.838 | 0.000 | 1.200 | * | 2.928 | 5.00 | 10.875 | 13.05 | 63.1 | 408.6 | 648.6 |
| 165.0 | | 1.00 | 1.14 | 4.437 | 4.881 | 0.000 | 1.200 | * | 2.937 | 5.00 | 10.418 | 12.50 | 61.0 | 389.8 | 616.5 |
| 166.0 | Appertunance(s) | 1.00 | 1.14 | 4.445 | 4.889 | 0.000 | 1.200 | * | 2.938 | 1.00 | 2.028 | 2.43 | 11.9 | 77.2 | 120.9 |
| 170.0 | | 1.00 | 1.15 | 4.475 | 4.922 | 0.000 | 1.200 | | 2.945 | 4.00 | 7.932 | 9.52 | 46.9 | 296.7 | 466.3 |
| 175.0 | | 1.00 | 1.16 | 4.512 | 4.963 | 0.000 | 1.200 | | 2.954 | 5.00 | 9.504 | 11.41 | 56.6 | 351.8 | 551.8 |
| 180.0 | Appertunance(s) | 1.00 | 1.16 | 4.549 | 5.003 | 0.000 | 1.200 | | 2.962 | 5.00 | 9.047 | 10.86 | 54.3 | 332.6 | 519.2 |
| * = Cf Adjusted By Linear Load Ra Effect | | | | | | | | Totals: | | 180.00 | | | 2,767.7 | 21,624.3 | 51,949.6 |

| | | | | | |
|---|---|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | | | 1/12/2012 11:05:44 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | | | |
| Height : | 180.0 (ft) | Exposure Category : B | | | Page: 19 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | | | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | | | |
| Shape : | 18 Sides | | | | |
| Taper : | 0.219444 (in/ft) | | | | |






**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

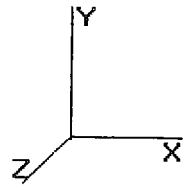
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

## Discrete Appurtenance Segment Forces (Factored)

| Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Ka | Total CaAa (sf) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30.00 | GPS | 1 | 2.739 | 3.013 | 1.00 | 1.00 | 1.15 | 0.000 | 0.500 | 3.46 | 0.00 | 1.73 | 74.96 |
| 78.00 | GPS | 1 | 3.588 | 3.947 | 1.00 | 1.00 | 1.23 | 0.000 | 0.500 | 4.84 | 0.00 | 2.42 | 84.55 |
| 105.0 | RFS APXV18-206517S- | 3 | 3.899 | 4.289 | 0.66 | 0.80 | 14.22 | 0.000 | 0.000 | 60.99 | 0.00 | 0.00 | 768.28 |
| 114.5 | Decibel DB844H90E- | 12 | 3.997 | 4.397 | 0.74 | 0.80 | 45.92 | 0.000 | 0.000 | 201.90 | 0.00 | 0.00 | 2,698.63 |
| 114.5 | Round Low Profile Pl | 1 | 3.997 | 4.397 | 1.00 | 1.00 | 52.91 | 0.000 | 0.000 | 232.63 | 0.00 | 0.00 | 2,653.20 |
| 125.0 | Antel BXA-171063/12C | 1 | 4.099 | 4.508 | 0.80 | 0.80 | 5.50 | 0.000 | 0.000 | 24.77 | 0.00 | 0.00 | 252.82 |
| 125.0 | Antel BXA-171085-12C | 2 | 4.099 | 4.508 | 0.73 | 0.80 | 10.02 | 0.000 | 0.000 | 45.19 | 0.00 | 0.00 | 505.42 |
| 125.0 | Antel BXA-70063/6CF | 3 | 4.099 | 4.508 | 0.59 | 0.80 | 17.25 | 0.000 | 0.000 | 77.77 | 0.00 | 0.00 | 1,000.46 |
| 125.0 | Antel LPA-80063/6CF | 2 | 4.099 | 4.508 | 0.75 | 0.80 | 17.83 | 0.000 | 0.000 | 80.40 | 0.00 | 0.00 | 1,092.87 |
| 125.0 | Antel LPA-80080/6CF | 4 | 4.099 | 4.508 | 0.60 | 0.80 | 26.08 | 0.000 | 0.000 | 117.58 | 0.00 | 0.00 | 1,539.82 |
| 125.0 | RFS FD9R6004/2C-3L | 6 | 4.099 | 4.508 | 0.40 | 0.80 | 1.95 | 0.000 | 0.000 | 8.81 | 0.00 | 0.00 | 208.43 |
| 125.0 | Round Low Profile Pl | 1 | 4.099 | 4.508 | 1.00 | 1.00 | 53.18 | 0.000 | 0.000 | 239.78 | 0.00 | 0.00 | 2,662.48 |
| 134.0 | Andrew DB980H90E-M | 9 | 4.181 | 4.599 | 0.66 | 0.80 | 33.64 | 0.000 | 0.000 | 154.73 | 0.00 | 0.00 | 1,783.95 |
| 134.0 | Flat Low Profile Pla | 1 | 4.181 | 4.599 | 1.00 | 1.00 | 57.63 | 0.000 | 0.000 | 265.02 | 0.00 | 0.00 | 2,669.90 |
| 142.0 | 10' Omni | 2 | 4.293 | 4.722 | 1.00 | 1.00 | 14.77 | 0.000 | 5.000 | 69.77 | 0.00 | 348.84 | 583.28 |
| 142.0 | 56" Dipole | 1 | 4.251 | 4.676 | 1.00 | 1.00 | 3.80 | 0.000 | 0.000 | 17.75 | 0.00 | 0.00 | 45.69 |
| 142.0 | Side Arms | 2 | 4.251 | 4.676 | 1.00 | 1.00 | 19.43 | 0.000 | 0.000 | 90.83 | 0.00 | 0.00 | 552.99 |
| 166.0 | CCI DTMA-1819-DD-12 | 6 | 4.445 | 4.889 | 0.40 | 0.80 | 3.14 | 0.000 | 0.000 | 15.34 | 0.00 | 0.00 | 440.82 |
| 166.0 | RFS APX16PV-16PVL- | 9 | 4.445 | 4.889 | 0.54 | 0.80 | 38.23 | 0.000 | 0.000 | 186.89 | 0.00 | 0.00 | 2,704.07 |
| 166.0 | T-Arms | 3 | 4.445 | 4.889 | 0.50 | 0.75 | 40.25 | 0.000 | 0.000 | 196.76 | 0.00 | 0.00 | 1,765.80 |
| 180.0 | 10' Omni | 1 | 4.612 | 5.074 | 1.00 | 1.00 | 7.48 | 0.000 | 9.000 | 37.93 | 0.00 | 341.40 | 302.02 |
| 180.0 | Flat Low Profile Pla | 1 | 4.549 | 5.003 | 1.00 | 1.00 | 58.57 | 0.000 | 0.000 | 293.06 | 0.00 | 0.00 | 2,701.94 |
| 180.0 | Powerwave 7020.00 | 6 | 4.577 | 5.035 | 0.40 | 0.80 | 2.13 | 0.000 | 4.000 | 10.75 | 0.00 | 42.98 | 246.01 |
| 180.0 | Powerwave 7770.00 | 6 | 4.577 | 5.035 | 0.61 | 0.80 | 27.22 | 0.000 | 4.000 | 137.03 | 0.00 | 548.13 | 1,859.97 |
| 180.0 | Powerwave LGP21401 | 6 | 4.577 | 5.035 | 0.40 | 0.80 | 4.69 | 0.000 | 4.000 | 23.62 | 0.00 | 94.46 | 544.06 |
| 180.0 | Powerwave LGP21901 | 6 | 4.577 | 5.035 | 0.40 | 0.80 | 1.58 | 0.000 | 4.000 | 7.96 | 0.00 | 31.83 | 230.95 |
| | | | | | | | | | | 2,605.56 | | | 29,973.38 |

| | | | |
|---|---|---|---|
| Pole : 302506 | Code: ANSI/TIA-222 Rev G | | 1/12/2012 11:05:44 AM |
| Location : Winchester CT 3, CT | Struct Class : II | | |
| Height : 180.0 (ft) | Exposure Category : B | | Page: 20 |
| Base Dia : 52.75 (in) | Topographic Category : 1 | | |
| Top Dia : 15.00 (in) | Base Elev : 0.000 (ft) | | |
| Shape : 18 Sides | | | |
| Taper : 0.219444 (in/ft) |  | | |




**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

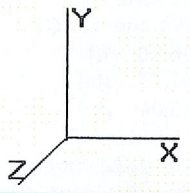
Wind Load Factor : 1.00

## Linear Appurtenance Segment Forces (Factored)

| Seg Top Elev (ft) | Description | Exposed To Wind | Length (ft) | Ca | Exposed Width (in) | Area (sqft) | CaAa (sqft) | qz (psf) | Ra | Cf Adjust Factor | FX (lb) | Dead Load (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.38 | 4.05 | 2.724 | 0.208 | 0.000 | 12.13 | 431.08 |
| 5.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.38 | 4.05 | 2.724 | 0.208 | 0.000 | 12.13 | 296.12 |
| 5.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.02 | 3.62 | 2.724 | 0.208 | 0.000 | 10.85 | 233.28 |
| 5.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.724 | 0.208 | 0.000 | 0.00 | 161.15 |
| 10.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.50 | 4.20 | 2.724 | 0.212 | 0.000 | 12.58 | 455.57 |
| 10.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.50 | 4.20 | 2.724 | 0.212 | 0.000 | 12.58 | 313.74 |
| 10.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.14 | 3.77 | 2.724 | 0.212 | 0.000 | 11.29 | 247.92 |
| 10.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.724 | 0.212 | 0.000 | 0.00 | 171.90 |
| 15.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.58 | 4.29 | 2.724 | 0.217 | 0.000 | 12.86 | 470.83 |
| 15.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.58 | 4.29 | 2.724 | 0.217 | 0.000 | 12.86 | 324.76 |
| 15.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.22 | 3.86 | 2.724 | 0.217 | 0.000 | 11.57 | 257.10 |
| 15.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.724 | 0.217 | 0.000 | 0.00 | 178.68 |
| 20.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.63 | 4.36 | 2.724 | 0.222 | 0.000 | 13.06 | 482.11 |
| 20.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.63 | 4.36 | 2.724 | 0.222 | 0.000 | 13.06 | 332.92 |
| 20.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.27 | 3.93 | 2.724 | 0.222 | 0.000 | 11.77 | 263.91 |
| 20.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.724 | 0.222 | 0.000 | 0.00 | 183.73 |
| 25.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.68 | 4.41 | 2.724 | 0.227 | 0.000 | 13.22 | 491.12 |
| 25.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.68 | 4.41 | 2.724 | 0.227 | 0.000 | 13.22 | 339.46 |
| 25.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.32 | 3.98 | 2.724 | 0.227 | 0.000 | 11.93 | 269.37 |
| 25.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.724 | 0.227 | 0.000 | 0.00 | 187.79 |
| 30.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.71 | 4.46 | 2.726 | 0.232 | 0.000 | 13.36 | 498.67 |
| 30.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.71 | 4.46 | 2.726 | 0.232 | 0.000 | 13.36 | 344.93 |
| 30.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.36 | 4.03 | 2.726 | 0.232 | 0.000 | 12.07 | 273.95 |
| 30.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.726 | 0.232 | 0.000 | 0.00 | 191.19 |
| 35.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.75 | 4.49 | 2.849 | 0.238 | 0.000 | 14.09 | 505.17 |
| 35.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.75 | 4.49 | 2.849 | 0.238 | 0.000 | 14.09 | 349.66 |
| 35.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.39 | 4.06 | 2.849 | 0.238 | 0.000 | 12.74 | 277.90 |
| 35.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.849 | 0.238 | 0.000 | 0.00 | 194.14 |
| 40.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.77 | 4.53 | 2.960 | 0.244 | 0.000 | 14.74 | 510.90 |
| 40.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.77 | 4.53 | 2.960 | 0.244 | 0.000 | 14.74 | 353.83 |
| 40.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.42 | 4.10 | 2.960 | 0.244 | 0.000 | 13.34 | 281.39 |
| 40.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 2.960 | 0.244 | 0.000 | 0.00 | 196.75 |
| 42.96 | (18) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 2.24 | 2.69 | 3.021 | 0.249 | 0.000 | 8.93 | 303.94 |
| 42.96 | (12) 1 5/8" Coax | Yes | 2.96 | 1.200 | 3.96 | 2.24 | 2.69 | 3.021 | 0.249 | 0.000 | 8.93 | 210.56 |
| 42.96 | (12) 1 1/4" Coax | Yes | 2.96 | 1.200 | 3.10 | 2.03 | 2.43 | 3.021 | 0.249 | 0.000 | 8.09 | 167.51 |
| 42.96 | (6) 1 5/8" Coax | Yes | 2.96 | 0.000 | 0.00 | 0.00 | 0.00 | 3.021 | 0.249 | 0.000 | 0.00 | 117.18 |
| 45.00 | (18) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 1.55 | 1.86 | 3.061 | 0.252 | 0.000 | 6.27 | 210.90 |
| 45.00 | (12) 1 5/8" Coax | Yes | 2.04 | 1.200 | 3.96 | 1.55 | 1.86 | 3.061 | 0.252 | 0.000 | 6.27 | 146.13 |
| 45.00 | (12) 1 1/4" Coax | Yes | 2.04 | 1.200 | 3.10 | 1.41 | 1.69 | 3.061 | 0.252 | 0.000 | 5.68 | 116.28 |
| 45.00 | (6) 1 5/8" Coax | Yes | 2.04 | 0.000 | 0.00 | 0.00 | 0.00 | 3.061 | 0.252 | 0.000 | 0.00 | 81.37 |
| 49.04 | (18) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 3.08 | 3.70 | 3.137 | 0.256 | 0.000 | 12.77 | 420.01 |
| 49.04 | (12) 1 5/8" Coax | Yes | 4.04 | 1.200 | 3.96 | 3.08 | 3.70 | 3.137 | 0.256 | 0.000 | 12.77 | 291.14 |
| 49.04 | (12) 1 1/4" Coax | Yes | 4.04 | 1.200 | 3.10 | 2.79 | 3.35 | 3.137 | 0.256 | 0.000 | 11.57 | 231.76 |
| 49.04 | (6) 1 5/8" Coax | Yes | 4.04 | 0.000 | 0.00 | 0.00 | 0.00 | 3.137 | 0.256 | 0.000 | 0.00 | 162.26 |
| 50.00 | (18) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.73 | 0.88 | 3.155 | 0.255 | 0.000 | 3.06 | 99.98 |
| 50.00 | (12) 1 5/8" Coax | Yes | 0.96 | 1.200 | 3.96 | 0.73 | 0.88 | 3.155 | 0.255 | 0.000 | 3.06 | 69.31 |
| 50.00 | (12) 1 1/4" Coax | Yes | 0.96 | 1.200 | 3.10 | 0.67 | 0.80 | 3.155 | 0.255 | 0.000 | 2.77 | 55.18 |
| 50.00 | (6) 1 5/8" Coax | Yes | 0.96 | 0.000 | 0.00 | 0.00 | 0.00 | 3.155 | 0.255 | 0.000 | 0.00 | 38.64 |
| 55.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.84 | 4.61 | 3.242 | 0.259 | 0.000 | 16.44 | 524.94 |
| 55.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.84 | 4.61 | 3.242 | 0.259 | 0.000 | 16.44 | 364.06 |
| 55.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.48 | 4.18 | 3.242 | 0.259 | 0.000 | 14.91 | 289.97 |

Pole : 302506
Location : Winchester CT 3, CT
Height : 180.0 (ft)
Base Dia : 52.75 (in)
Top Dia : 15.00 (in)
Shape : 18 Sides
Taper : 0.219444 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)






1/12/2012 11:05:44 AM


**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

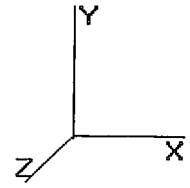
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.242 | 0.259 | 0.000 | 0.00 | 203.17 |
| 60.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.86 | 4.63 | 3.323 | 0.265 | 0.000 | 16.94 | 528.87 |
| 60.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.86 | 4.63 | 3.323 | 0.265 | 0.000 | 16.94 | 366.92 |
| 60.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.50 | 4.20 | 3.323 | 0.265 | 0.000 | 15.37 | 292.37 |
| 60.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.323 | 0.265 | 0.000 | 0.00 | 204.98 |
| 65.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.88 | 4.66 | 3.400 | 0.273 | 0.000 | 17.41 | 532.52 |
| 65.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.88 | 4.66 | 3.400 | 0.273 | 0.000 | 17.41 | 369.59 |
| 65.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.52 | 4.23 | 3.400 | 0.273 | 0.000 | 15.80 | 294.61 |
| 65.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.400 | 0.273 | 0.000 | 0.00 | 206.66 |
| 70.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.90 | 4.68 | 3.473 | 0.281 | 0.000 | 17.86 | 535.93 |
| 70.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.90 | 4.68 | 3.473 | 0.281 | 0.000 | 17.86 | 372.08 |
| 70.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.54 | 4.25 | 3.473 | 0.281 | 0.000 | 16.22 | 296.70 |
| 70.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.473 | 0.281 | 0.000 | 0.00 | 208.23 |
| 75.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.91 | 4.69 | 3.542 | 0.289 | 0.000 | 18.29 | 539.13 |
| 75.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.91 | 4.69 | 3.542 | 0.289 | 0.000 | 18.29 | 374.42 |
| 75.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.55 | 4.26 | 3.542 | 0.289 | 0.000 | 16.61 | 298.67 |
| 75.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.542 | 0.289 | 0.000 | 0.00 | 209.71 |
| 78.00 | (18) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 2.35 | 2.82 | 3.582 | 0.296 | 0.000 | 11.12 | 324.58 |
| 78.00 | (12) 1 5/8" Coax | Yes | 3.00 | 1.200 | 3.96 | 2.35 | 2.82 | 3.582 | 0.296 | 0.000 | 11.12 | 225.46 |
| 78.00 | (12) 1 1/4" Coax | Yes | 3.00 | 1.200 | 3.10 | 2.14 | 2.56 | 3.582 | 0.296 | 0.000 | 10.11 | 179.88 |
| 78.00 | (6) 1 5/8" Coax | Yes | 3.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.582 | 0.296 | 0.000 | 0.00 | 126.33 |
| 80.00 | (18) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 1.57 | 1.88 | 3.608 | 0.300 | 0.000 | 7.48 | 216.86 |
| 80.00 | (12) 1 5/8" Coax | Yes | 2.00 | 1.200 | 3.96 | 1.57 | 1.88 | 3.608 | 0.300 | 0.000 | 7.48 | 150.65 |
| 80.00 | (12) 1 1/4" Coax | Yes | 2.00 | 1.200 | 3.10 | 1.43 | 1.71 | 3.608 | 0.300 | 0.000 | 6.80 | 120.21 |
| 80.00 | (6) 1 5/8" Coax | Yes | 2.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.608 | 0.300 | 0.000 | 0.00 | 84.44 |
| 85.00 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.94 | 4.73 | 3.671 | 0.307 | 0.000 | 19.09 | 545.01 |
| 85.00 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.94 | 4.73 | 3.671 | 0.307 | 0.000 | 19.09 | 378.72 |
| 85.00 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.58 | 4.30 | 3.671 | 0.307 | 0.000 | 17.36 | 302.28 |
| 85.00 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.671 | 0.307 | 0.000 | 0.00 | 212.43 |
| 87.54 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 2.00 | 2.41 | 3.702 | 0.314 | 0.000 | 9.80 | 277.56 |
| 87.54 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 2.00 | 2.41 | 3.702 | 0.314 | 0.000 | 9.80 | 192.90 |
| 87.54 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 1.82 | 2.19 | 3.702 | 0.314 | 0.000 | 8.91 | 153.99 |
| 87.54 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 3.702 | 0.314 | 0.000 | 0.00 | 108.24 |
| 90.00 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 1.95 | 2.33 | 3.731 | 0.319 | 0.000 | 9.58 | 269.49 |
| 90.00 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 1.95 | 2.33 | 3.731 | 0.319 | 0.000 | 9.58 | 187.31 |
| 90.00 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 1.77 | 2.12 | 3.731 | 0.319 | 0.000 | 8.71 | 149.55 |
| 90.00 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 3.731 | 0.319 | 0.000 | 0.00 | 105.14 |
| 92.46 | (18) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 1.95 | 2.33 | 3.760 | 0.324 | 0.000 | 9.66 | 269.74 |
| 92.46 | (12) 1 5/8" Coax | Yes | 2.46 | 1.200 | 3.96 | 1.95 | 2.33 | 3.760 | 0.324 | 0.000 | 9.66 | 187.51 |
| 92.46 | (12) 1 1/4" Coax | Yes | 2.46 | 1.200 | 3.10 | 1.77 | 2.12 | 3.760 | 0.324 | 0.000 | 8.78 | 149.72 |
| 92.46 | (6) 1 5/8" Coax | Yes | 2.46 | 0.000 | 0.00 | 0.00 | 0.00 | 3.760 | 0.324 | 0.000 | 0.00 | 105.28 |
| 95.00 | (18) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 2.02 | 2.42 | 3.789 | 0.323 | 0.000 | 10.09 | 279.94 |
| 95.00 | (12) 1 5/8" Coax | Yes | 2.54 | 1.200 | 3.96 | 2.02 | 2.42 | 3.789 | 0.323 | 0.000 | 10.09 | 194.62 |
| 95.00 | (12) 1 1/4" Coax | Yes | 2.54 | 1.200 | 3.10 | 1.84 | 2.20 | 3.789 | 0.323 | 0.000 | 9.18 | 155.42 |
| 95.00 | (6) 1 5/8" Coax | Yes | 2.54 | 0.000 | 0.00 | 0.00 | 0.00 | 3.789 | 0.323 | 0.000 | 0.00 | 109.31 |
| 100.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.98 | 4.77 | 3.845 | 0.332 | 0.000 | 20.19 | 552.78 |
| 100.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.98 | 4.77 | 3.845 | 0.332 | 0.000 | 20.19 | 384.40 |
| 100.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.62 | 4.34 | 3.845 | 0.332 | 0.000 | 18.37 | 307.06 |
| 100.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.845 | 0.332 | 0.000 | 0.00 | 216.03 |
| 105.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.99 | 4.79 | 3.899 | 0.343 | 0.000 | 20.53 | 555.14 |
| 105.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 3.99 | 4.79 | 3.899 | 0.343 | 0.000 | 20.53 | 386.13 |
| 105.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.63 | 4.36 | 3.899 | 0.343 | 0.000 | 18.69 | 308.52 |
| 105.0 | (6) 1 5/8" Coax | Yes | 5.00 | 0.000 | 0.00 | 0.00 | 0.00 | 3.899 | 0.343 | 0.000 | 0.00 | 217.13 |
| 110.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.00 | 4.80 | 3.952 | 0.355 | 0.000 | 20.86 | 557.40 |
| 110.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.00 | 4.80 | 3.952 | 0.355 | 0.000 | 20.86 | 387.79 |
| 110.0 | (12) 1 1/4" Coax | Yes | 5.00 | 1.200 | 3.10 | 3.64 | 4.37 | 3.952 | 0.355 | 0.000 | 18.99 | 309.91 |
| 114.5 | (18) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 3.61 | 4.33 | 3.997 | 0.368 | 0.000 | 19.04 | 503.43 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:44 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | Page: 22 |
| Height : | 180.0 (ft) | Exposure Category : B | |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

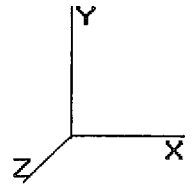
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 114.5 | (12) 1 5/8" Coax | Yes | 4.50 | 1.200 | 3.96 | 3.61 | 4.33 | 3.997 | 0.368 | 0.000 | 19.04 | 350.31 |
| 114.5 | (12) 1 1/4" Coax | Yes | 4.50 | 1.200 | 3.10 | 3.29 | 3.94 | 3.997 | 0.368 | 0.000 | 17.34 | 280.01 |
| 115.0 | (18) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.40 | 0.48 | 4.002 | 0.269 | 0.000 | 2.12 | 55.96 |
| 115.0 | (12) 1 5/8" Coax | Yes | 0.50 | 1.200 | 3.96 | 0.40 | 0.48 | 4.002 | 0.269 | 0.000 | 2.12 | 38.94 |
| 120.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.02 | 4.82 | 4.051 | 0.275 | 0.000 | 21.50 | 561.67 |
| 120.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.02 | 4.82 | 4.051 | 0.275 | 0.000 | 21.50 | 390.92 |
| 125.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.03 | 4.84 | 4.099 | 0.286 | 0.000 | 21.80 | 563.69 |
| 125.0 | (12) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.03 | 4.84 | 4.099 | 0.286 | 0.000 | 21.80 | 392.40 |
| 130.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 4.04 | 0.00 | 4.145 | 0.149 | 1.147 | 0.00 | 565.64 |
| 132.1 | (18) 1 5/8" Coax | Yes | 2.12 | 0.000 | 3.96 | 1.71 | 0.00 | 4.164 | 0.154 | 1.161 | 0.00 | 240.15 |
| 134.0 | (18) 1 5/8" Coax | Yes | 1.88 | 0.000 | 3.96 | 1.52 | 0.00 | 4.181 | 0.156 | 1.169 | 0.00 | 213.27 |
| 135.0 | (18) 1 5/8" Coax | Yes | 1.00 | 0.000 | 3.96 | 0.81 | 0.00 | 4.190 | 0.158 | 1.175 | 0.00 | 113.50 |
| 135.8 | (18) 1 5/8" Coax | Yes | 0.87 | 0.000 | 3.96 | 0.70 | 0.00 | 4.197 | 0.160 | 1.179 | 0.00 | 98.78 |
| 140.0 | (18) 1 5/8" Coax | Yes | 4.13 | 0.000 | 3.96 | 3.35 | 0.00 | 4.233 | 0.161 | 1.183 | 0.00 | 470.30 |
| 142.0 | (18) 1 5/8" Coax | Yes | 2.00 | 0.000 | 3.96 | 1.62 | 0.00 | 4.251 | 0.166 | 1.197 | 0.00 | 228.02 |
| 145.0 | (18) 1 5/8" Coax | Yes | 3.00 | 0.000 | 3.96 | 2.44 | 0.00 | 4.276 | 0.169 | 1.208 | 0.00 | 342.67 |
| 150.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 4.07 | 0.00 | 4.318 | 0.176 | 1.229 | 0.00 | 572.82 |
| 155.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 4.08 | 0.00 | 4.358 | 0.185 | 1.256 | 0.00 | 574.49 |
| 160.0 | (18) 1 5/8" Coax | Yes | 5.00 | 0.000 | 3.96 | 4.09 | 0.00 | 4.398 | 0.196 | 1.287 | 0.00 | 576.10 |
| 165.0 | (18) 1 5/8" Coax | Yes | 5.00 | 1.200 | 3.96 | 4.10 | 4.92 | 4.437 | 0.207 | 0.000 | 24.00 | 577.68 |
| 166.0 | (18) 1 5/8" Coax | Yes | 1.00 | 1.200 | 3.96 | 0.82 | 0.98 | 4.445 | 0.214 | 0.000 | 4.81 | 115.60 |
| | | | | | | | | | | Totals: | 1,228.36 | 37,577.88 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | 1/12/2012 11:05:44 AM |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 23 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

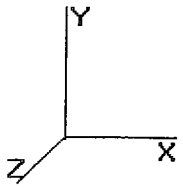
Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

## 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 | 120.73 | 3,414.39 | 0.00 | 0.00 |
| 10.00 | 120.84 | 3,487.56 | 0.00 | 0.00 |
| 15.00 | 120.27 | 3,514.46 | 0.00 | 0.00 |
| 20.00 | 119.41 | 3,521.15 | 0.00 | 0.00 |
| 25.00 | 118.38 | 3,516.24 | 0.00 | 0.00 |
| 30.00 | 120.81 | 3,578.68 | 0.00 | 1.73 |
| 35.00 | 121.37 | 3,483.79 | 0.00 | 0.00 |
| 40.00 | 124.72 | 3,461.77 | 0.00 | 0.00 |
| 42.96 | 74.54 | 2,034.61 | 0.00 | 0.00 |
| 45.00 | 52.41 | 1,837.41 | 0.00 | 0.00 |
| 49.04 | 105.50 | 3,606.58 | 0.00 | 0.00 |
| 50.00 | 25.04 | 626.04 | 0.00 | 0.00 |
| 55.00 | 133.17 | 3,245.70 | 0.00 | 0.00 |
| 60.00 | 134.82 | 3,218.51 | 0.00 | 0.00 |
| 65.00 | 136.18 | 3,189.78 | 0.00 | 0.00 |
| 70.00 | 137.27 | 3,159.70 | 0.00 | 0.00 |
| 75.00 | 138.12 | 3,128.45 | 0.00 | 0.00 |
| 78.00 | 87.69 | 1,946.86 | 0.00 | 2.42 |
| 80.00 | 55.24 | 1,234.90 | 0.00 | 0.00 |
| 85.00 | 139.20 | 3,062.03 | 0.00 | 0.00 |
| 87.54 | 70.51 | 1,543.38 | 0.00 | 0.00 |
| 90.00 | 68.98 | 1,833.88 | 0.00 | 0.00 |
| 92.46 | 68.91 | 1,817.53 | 0.00 | 0.00 |
| 95.00 | 71.38 | 1,464.79 | 0.00 | 0.00 |
| 100.0 | 140.86 | 2,853.99 | 0.00 | 0.00 |
| 105.0 | 201.67 | 3,590.63 | 0.00 | 0.00 |
| 110.0 | 140.37 | 2,571.93 | 0.00 | 0.00 |
| 114.5 | 560.41 | 7,638.22 | 0.00 | 0.00 |
| 115.0 | 11.95 | 221.69 | 0.00 | 0.00 |
| 120.0 | 119.79 | 2,191.36 | 0.00 | 0.00 |
| 125.0 | 713.15 | 9,417.74 | 0.00 | 0.00 |
| 130.0 | 73.59 | 1,725.32 | 0.00 | 0.00 |
| 132.1 | 30.58 | 721.94 | 0.00 | 0.00 |
| 134.0 | 446.93 | 5,205.89 | 0.00 | 0.00 |
| 135.0 | 14.35 | 388.44 | 0.00 | 0.00 |
| 135.8 | 12.42 | 336.23 | 0.00 | 0.00 |
| 140.0 | 58.44 | 1,177.10 | 0.00 | 0.00 |
| 142.0 | 206.13 | 1,746.10 | 0.00 | 348.84 |
| 145.0 | 41.15 | 823.97 | 0.00 | 0.00 |
| 150.0 | 67.18 | 1,346.09 | 0.00 | 0.00 |
| 155.0 | 65.19 | 1,315.99 | 0.00 | 0.00 |
| 160.0 | 63.13 | 1,285.68 | 0.00 | 0.00 |
| 165.0 | 85.01 | 1,255.15 | 0.00 | 0.00 |
| 166.0 | 415.70 | 5,159.43 | 0.00 | 0.00 |
| 170.0 | 46.85 | 515.10 | 0.00 | 0.00 |
| 175.0 | 56.61 | 612.80 | 0.00 | 0.00 |
| 180.0 | 564.67 | 6,465.21 | 0.00 | 1,058.80 |
| Totals: | 6,601.62 | 123,494.2 | 0.00 | 1,411.80 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | 1/12/2012 11:05:44 AM |
| Location : | Winchester CT 3, CT | Struct Class : II | |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 24 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






**Load Case:** 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.25 in Radial Ice — 29 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

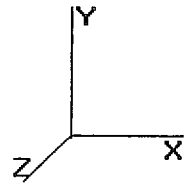
Wind Load Factor : 1.00

## Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | -123.49 | -6.65 | 0.00 | -829.74 | 0.00 | 829.74 | 5,102.86 | 2,551.43 | 10,963.2 | 5,489.79 | 0.00 | 0.00 | 0.175 |
| 5.00 | -120.07 | -6.63 | 0.00 | -796.48 | 0.00 | 796.48 | 5,029.12 | 2,514.56 | 10,576.3 | 5,296.03 | 0.02 | -0.05 | 0.174 |
| 10.00 | -116.58 | -6.60 | 0.00 | -763.34 | 0.00 | 763.34 | 4,953.95 | 2,476.98 | 10,193.1 | 5,104.17 | 0.10 | -0.09 | 0.173 |
| 15.00 | -113.06 | -6.57 | 0.00 | -730.35 | 0.00 | 730.35 | 4,877.36 | 2,438.68 | 9,813.98 | 4,914.28 | 0.22 | -0.14 | 0.172 |
| 20.00 | -109.53 | -6.53 | 0.00 | -697.51 | 0.00 | 697.51 | 4,799.34 | 2,399.67 | 9,438.93 | 4,726.48 | 0.40 | -0.19 | 0.170 |
| 25.00 | -106.01 | -6.50 | 0.00 | -664.85 | 0.00 | 664.85 | 4,719.90 | 2,359.95 | 9,068.23 | 4,540.86 | 0.62 | -0.24 | 0.169 |
| 30.00 | -102.43 | -6.45 | 0.00 | -632.37 | 0.00 | 632.37 | 4,639.03 | 2,319.51 | 8,702.08 | 4,357.51 | 0.90 | -0.29 | 0.167 |
| 35.00 | -98.94 | -6.40 | 0.00 | -600.12 | 0.00 | 600.12 | 4,556.73 | 2,278.36 | 8,340.67 | 4,176.53 | 1.23 | -0.34 | 0.165 |
| 40.00 | -95.47 | -6.32 | 0.00 | -568.12 | 0.00 | 568.12 | 4,473.00 | 2,236.50 | 7,984.18 | 3,998.03 | 1.62 | -0.40 | 0.163 |
| 42.96 | -93.44 | -6.28 | 0.00 | -549.42 | 0.00 | 549.42 | 4,422.82 | 2,211.41 | 7,775.79 | 3,893.68 | 1.88 | -0.43 | 0.162 |
| 45.00 | -91.60 | -6.27 | 0.00 | -536.59 | 0.00 | 536.59 | 4,378.03 | 2,189.01 | 7,615.75 | 3,813.53 | 2.07 | -0.45 | 0.162 |
| 49.04 | -87.99 | -6.18 | 0.00 | -511.26 | 0.00 | 511.26 | 3,604.17 | 1,802.08 | 6,267.69 | 3,138.50 | 2.47 | -0.50 | 0.187 |
| 50.00 | -87.36 | -6.20 | 0.00 | -505.34 | 0.00 | 505.34 | 3,591.50 | 1,795.75 | 6,214.33 | 3,111.78 | 2.57 | -0.51 | 0.187 |
| 55.00 | -84.11 | -6.13 | 0.00 | -474.33 | 0.00 | 474.33 | 3,524.70 | 1,762.35 | 5,938.60 | 2,973.71 | 3.14 | -0.57 | 0.183 |
| 60.00 | -80.88 | -6.05 | 0.00 | -443.69 | 0.00 | 443.69 | 3,456.48 | 1,728.24 | 5,666.60 | 2,837.51 | 3.77 | -0.63 | 0.180 |
| 65.00 | -77.69 | -5.96 | 0.00 | -413.44 | 0.00 | 413.44 | 3,386.83 | 1,693.41 | 5,398.53 | 2,703.28 | 4.47 | -0.70 | 0.176 |
| 70.00 | -74.52 | -5.87 | 0.00 | -383.63 | 0.00 | 383.63 | 3,315.75 | 1,657.87 | 5,134.58 | 2,571.11 | 5.23 | -0.76 | 0.172 |
| 75.00 | -71.39 | -5.75 | 0.00 | -354.28 | 0.00 | 354.28 | 3,242.30 | 1,621.15 | 4,873.54 | 2,440.39 | 6.06 | -0.83 | 0.167 |
| 78.00 | -69.44 | -5.68 | 0.00 | -337.02 | 0.00 | 337.02 | 3,184.09 | 1,592.04 | 4,699.23 | 2,353.11 | 6.59 | -0.87 | 0.165 |
| 80.00 | -68.21 | -5.66 | 0.00 | -325.67 | 0.00 | 325.67 | 3,145.28 | 1,572.64 | 4,584.79 | 2,295.80 | 6.96 | -0.89 | 0.164 |
| 85.00 | -65.14 | -5.53 | 0.00 | -297.38 | 0.00 | 297.38 | 3,048.26 | 1,524.13 | 4,304.87 | 2,155.63 | 7.93 | -0.96 | 0.159 |
| 87.54 | -63.60 | -5.47 | 0.00 | -283.35 | 0.00 | 283.35 | 2,998.97 | 1,499.48 | 4,166.05 | 2,086.12 | 8.45 | -0.99 | 0.157 |
| 90.00 | -61.76 | -5.40 | 0.00 | -269.90 | 0.00 | 269.90 | 2,951.23 | 1,475.62 | 4,033.76 | 2,019.88 | 8.97 | -1.02 | 0.155 |
| 92.46 | -59.94 | -5.33 | 0.00 | -256.64 | 0.00 | 256.64 | 2,412.07 | 1,206.04 | 3,317.78 | 1,661.36 | 9.51 | -1.06 | 0.179 |
| 95.00 | -58.47 | -5.29 | 0.00 | -243.07 | 0.00 | 243.07 | 2,382.81 | 1,191.41 | 3,222.46 | 1,613.62 | 10.08 | -1.09 | 0.175 |
| 100.00 | -55.62 | -5.16 | 0.00 | -216.63 | 0.00 | 216.63 | 2,324.22 | 1,162.11 | 3,037.61 | 1,521.06 | 11.26 | -1.16 | 0.166 |
| 105.00 | -52.02 | -4.95 | 0.00 | -190.81 | 0.00 | 190.81 | 2,264.20 | 1,132.10 | 2,856.29 | 1,430.27 | 12.52 | -1.24 | 0.156 |
| 110.00 | -49.45 | -4.81 | 0.00 | -166.07 | 0.00 | 166.07 | 2,186.61 | 1,093.30 | 2,659.07 | 1,331.51 | 13.85 | -1.31 | 0.147 |
| 114.50 | -41.83 | -4.09 | 0.00 | -144.43 | 0.00 | 144.43 | 2,113.84 | 1,056.92 | 2,484.15 | 1,243.92 | 15.11 | -1.37 | 0.136 |
| 115.00 | -41.60 | -4.10 | 0.00 | -142.38 | 0.00 | 142.38 | 2,105.76 | 1,052.88 | 2,465.08 | 1,234.37 | 15.26 | -1.37 | 0.135 |
| 120.00 | -39.41 | -3.97 | 0.00 | -121.87 | 0.00 | 121.87 | 2,024.90 | 1,012.45 | 2,278.43 | 1,140.91 | 16.73 | -1.44 | 0.126 |
| 125.00 | -30.01 | -3.05 | 0.00 | -102.01 | 0.00 | 102.01 | 1,944.05 | 972.03 | 2,099.13 | 1,051.12 | 18.27 | -1.50 | 0.112 |
| 130.00 | -28.28 | -2.95 | 0.00 | -86.76 | 0.00 | 86.76 | 1,863.20 | 931.60 | 1,927.17 | 965.02 | 19.87 | -1.56 | 0.105 |
| 132.12 | -27.56 | -2.91 | 0.00 | -80.50 | 0.00 | 80.50 | 1,828.92 | 914.46 | 1,856.49 | 929.63 | 20.57 | -1.58 | 0.102 |
| 134.00 | -22.37 | -2.33 | 0.00 | -75.03 | 0.00 | 75.03 | 1,798.52 | 899.26 | 1,794.90 | 898.78 | 21.19 | -1.60 | 0.096 |
| 135.00 | -21.98 | -2.30 | 0.00 | -72.71 | 0.00 | 72.71 | 1,782.35 | 891.17 | 1,762.57 | 882.59 | 21.53 | -1.62 | 0.095 |
| 135.87 | -21.65 | -2.29 | 0.00 | -70.70 | 0.00 | 70.70 | 993.95 | 496.97 | 1,000.68 | 501.09 | 21.83 | -1.63 | 0.163 |
| 140.00 | -20.47 | -2.22 | 0.00 | -61.23 | 0.00 | 61.23 | 969.84 | 484.92 | 940.01 | 470.70 | 23.25 | -1.67 | 0.151 |
| 142.00 | -18.73 | -1.97 | 0.00 | -56.45 | 0.00 | 56.45 | 957.82 | 478.91 | 910.95 | 456.15 | 23.96 | -1.70 | 0.143 |
| 145.00 | -17.90 | -1.93 | 0.00 | -50.53 | 0.00 | 50.53 | 939.35 | 469.68 | 867.78 | 434.53 | 25.05 | -1.75 | 0.135 |
| 150.00 | -16.56 | -1.84 | 0.00 | -40.91 | 0.00 | 40.91 | 907.44 | 453.72 | 797.07 | 399.13 | 26.92 | -1.83 | 0.121 |
| 155.00 | -15.24 | -1.75 | 0.00 | -31.72 | 0.00 | 31.72 | 874.09 | 437.05 | 728.06 | 364.57 | 28.88 | -1.90 | 0.104 |
| 160.00 | -13.96 | -1.65 | 0.00 | -22.99 | 0.00 | 22.99 | 839.33 | 419.66 | 660.97 | 330.98 | 30.90 | -1.96 | 0.086 |
| 165.00 | -12.71 | -1.53 | 0.00 | -14.72 | 0.00 | 14.72 | 800.44 | 400.22 | 593.98 | 297.43 | 32.98 | -2.01 | 0.065 |
| 166.00 | -7.56 | -0.94 | 0.00 | -13.19 | 0.00 | 13.19 | 790.74 | 395.37 | 579.60 | 290.23 | 33.40 | -2.02 | 0.055 |
| 170.00 | -7.05 | -0.88 | 0.00 | -9.44 | 0.00 | 9.44 | 751.93 | 375.97 | 523.82 | 262.30 | 35.11 | -2.05 | 0.045 |
| 175.00 | -6.44 | -0.80 | 0.00 | -5.06 | 0.00 | 5.06 | 703.42 | 351.71 | 458.07 | 229.37 | 37.27 | -2.08 | 0.031 |
| 180.00 | 0.00 | -0.56 | 0.00 | -1.06 | 0.00 | 1.06 | 654.91 | 327.45 | 396.72 | 198.65 | 39.46 | -2.09 | 0.005 |

| | | | |
|---|---|---|---|
| Pole : | 302506 | Code: ANSI/TIA-222 Rev G | |
| Location : | Winchester CT 3, CT | Struct Class : II | 1/12/2012 11:05:45 AM |
| Height : | 180.0 (ft) | Exposure Category : B | Page: 25 |
| Base Dia : | 52.75 (in) | Topographic Category : 1 | |
| Top Dia : | 15.00 (in) | Base Elev : 0.000 (ft) | |
| Shape : | 18 Sides | | |
| Taper : | 0.219444 (in/ft) | | |






## Analysis Summary

| | Reactions | | | | | | Max Usage | |
|---|---|---|---|---|---|---|---|---|
| Load Case | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) | Elev (ft) | Interaction Ratio |
| 1.2D + 1.6W | 34.10 | 0.00 | 50.51 | 0.00 | 0.00 | 3596.44 | 0.00 | 0.67 |
| 0.9D + 1.6W | 33.72 | 0.00 | 37.87 | 0.00 | 0.00 | 3493.53 | 0.00 | 0.64 |
| 1.2D + 1.0Di + 1.0Wi | 6.65 | 0.00 | 123.49 | 0.00 | 0.00 | 829.74 | 49.04 | 0.19 |

| | | | |
|---|---|---|---|
| Base/Flange Plate | Plate Type | ***Baseplate*** | |
| | Pole Diameter | 52.75 | in |
| | Pole Thickness | | in |
| | Plate Diameter | 68 | in |
| | Plate Thickness | 2 | in |
| | Plate Fy | 60 | ksi |
| | Weld Length | 0.3125 | in |
| | $\phi_s$ Resistance | 802.30 | k-in |
| | Applied | 553.38 | k-in |
| Stiffeners | # | ***16*** | ***Show*** |
| | Thickness | 0.5 | in |
| | Length | 6 | in |
| | Height | 6 | in |
| | Chamfer | 0 | in |
| | Offset Angle | 0 | ° |
| | Fy | 36 | ksi |

| | | | |
|---|---|---|---|
| Bolts | # | ***16*** | |
| | Bolt Circle | 62 | in |
| | (R)adial / (S)quare | R | |
| | Diameter | 2.25 | in |
| | Hole Diameter | 2.375 | in |
| | Type | #18J | |
| | Fy | 75 | ksi |
| | Fu | 100 | ksi |
| | $\phi_s$ Resistance | 259.82 | k |
| | Applied | 177.08 | k |
| Reinforcement ● | # | ***0*** | |
| Extra Bolts O | # | ***0*** | |

Code Rev. **G**

Moment 3596.4 k-ft

Axial 50.5 k

**Date** 1/12/2012

**Engineer** BD

**Site #** 305206

**Carrier** Verizon

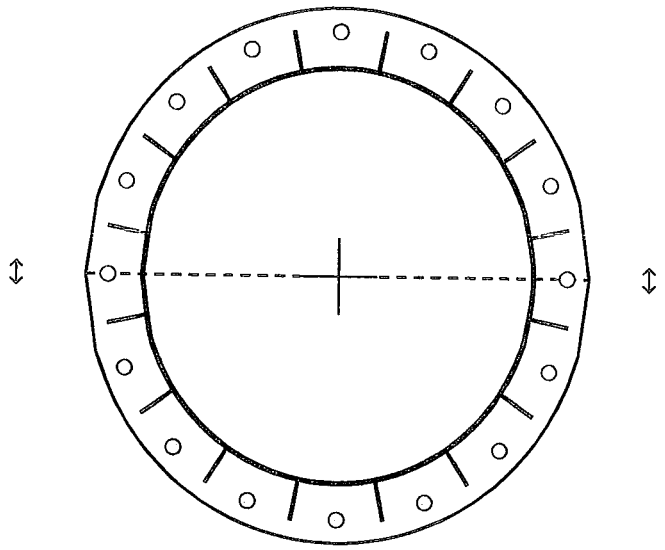


Plate Stress Ratio:

0.69 (Pass)

Bolt Stress Ratio:

0.68 (Pass)