



January 29, 2015

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

Regarding: Notice of Exempt Modification – Addition of 3 radio heads previously approved  
Property Address: 405 Brushy Plain Road, Branford, CT (the “Property”)  
Applicant: AT&T Mobility (“AT&T”)

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 150 foot monopole (“tower”) location on the Property. AT&T’s facility consists of nine (9) wireless telecommunications antenna at 153 feet. The tower is controlled by the American Tower Corporation. The Council approved the previous application on August 10, 2012 reference number EM-CING-014-120720. This application (attached) granted AT&T the use of 6 radio heads at this location. The approval expired one year from the issue date. During that time AT&T made the changes to the site per the approval but only installed three (3) of the six (6) radio heads that they received approval. AT&T would now like to install the additional three (3) radio heads that were originally approved under EM-CING-014-120720.

Please accept this application 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 the first Selectman and the Planning and Zoning Director for the Town of Branford. A copy of this letter is also being sent to AT&T Towers, the owner of the structure that AT&T is located.

The planned modifications to AT&T’s facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The planned modifications will not result in an increase in the height of the existing structure. AT&T’s additional, previously approved 3 radio heads will be installed at 150 foot level of the 150 foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.



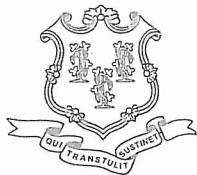
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility was provided in the application which led to the August 10, 2012 Decision.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (Please see attached Structural analysis completed by American Tower Corporation dated July 23, 2012).

For the foregoing reasons AT&T respectfully requests that the proposed addition of 3 radio heads previously approved be allowed within the exempt modifications under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

David P. Cooper  
Director of Site Acquisition  
Empire Telecom

CC: James B. Cosgrove, First Selectman, Town of Branford  
Jose Giner, Director, Planning and Zoning, Town of Branford  
American Tower Corporation



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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

CT 2015

August 10, 2012

Douglas Talmadge  
New Cingular Wireless PCS, LLC  
147 Austin Ryer Lane  
Branford, CT 06405

RE: EM-CING-014-120720 – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 405 Brushy Plain Road, Branford, Connecticut.

Dear Mr. Talmadge:

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 July 19, 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



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

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Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

July 23, 2012

The Honorable Anthony "Unk" DaRos  
First Selectman  
Town of Branford  
Town Hall  
1019 Main Street  
P. O. Box 150  
Branford, CT 06405-0150

RE: **EM-CING-014-120720** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 405 Brushy Plain Road, Branford, Connecticut.

Dear First Selectman DaRos:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by August 6, 2012.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts  
Executive Director

LR/cm

Enclosure: Notice of Intent

c: Diana Ross, Inland Wetland Enforcement Officer, Town of Branford  
Laura Magaraci, Zoning Enforcement Officer, Town of Branford



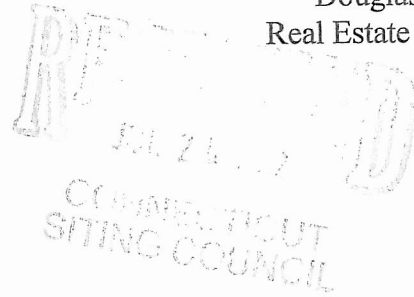
EM-CING-014-120720

Cingular Wireless PCS, LLC  
147 Austin Ryer In  
Branford, CT 06405  
Phone: (203)-410-4531  
Douglas Talmadge  
Real Estate Consultant

July 19, 2012

**Hand Delivered**

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



ORIGINAL

RE: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 405 Brushy Plain Rd, Branford, CT 06405 known to New Cingular Wireless PCS, LLC as CT2015.

Dear Ms. Roberts:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the chief elected official of the municipality in which affected cell site is located.

UMTS offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a new high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

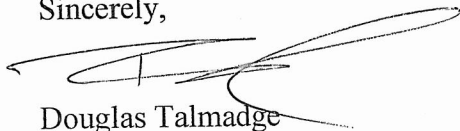
The changes to the facility do not constitute modification as defined Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those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

1. The height of the overall structure will not be affected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound as all proposed equipment will be located in the existing AT&T equipment shelter.
3. The proposed changes will not increase the noise level at the existing facility by 6 decibels or more.
4. Radio Frequency power density may increase due to the use of one or more GSM channels for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons New Cingular Wireless PCS, LLC respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (203)-410-4531 or email [DTalmadge@Transcendwireless.com](mailto:DTalmadge@Transcendwireless.com) with questions concerning this matter.  
Thank you for your consideration.

Sincerely,



Douglas Talmadge  
Real Estate Consultant



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

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Calculated Radio Frequency Emissions



CT2015

(Branford 6)

405 Brushy Plain Rd, Branford, CT 06405

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July 13, 2012

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## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the monopole tower located at 405 Brushy Plain Rd in Branford, CT. The coordinates of the tower are 41-19-0.49 N, 72-49-11.6 W.

AT&T is proposing the following modifications:

- 1) Install three 700 MHz LTE antennas (one per sector).

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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

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

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

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

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

### 3. RF Exposure Prediction Methods

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

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

Where:

EIRP = Effective Isotropic Radiated Power

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

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

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

#### 4. Calculation Results

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

| Carrier              | Antenna Height (Feet) | Operating Frequency (MHz) | Number of Trans. | ERP Per Transmitter (Watts) | Power Density (mw/cm <sup>2</sup> ) | Limit         | %MPE          |
|----------------------|-----------------------|---------------------------|------------------|-----------------------------|-------------------------------------|---------------|---------------|
| <i>Cingular UMTS</i> | <i>153</i>            | <i>880</i>                | <i>1</i>         | <i>560</i>                  | <i>0.0077</i>                       | <i>0.5867</i> | <i>1.31%</i>  |
| <i>Cingular GSM</i>  | <i>153</i>            | <i>880</i>                | <i>3</i>         | <i>296</i>                  | <i>0.0136</i>                       | <i>0.5867</i> | <i>1.12%</i>  |
| <i>Cingular GSM</i>  | <i>153</i>            | <i>1900</i>               | <i>2</i>         | <i>421</i>                  | <i>0.0131</i>                       | <i>1.0000</i> | <i>1.31%</i>  |
| Clearwire            | 130                   | 2496                      | 2                | 153                         | 0.0065                              | 1.0000        | 0.65%         |
| Clearwire            | 130                   | 11000                     | 1                | 211                         | 0.0045                              | 1.0000        | 0.45%         |
| Verizon cellular     | 113                   | 869                       | 9                | 280                         | 0.0710                              | 0.5793        | 12.25%        |
| Verizon PCS          | 113                   | 1970                      | 7                | 190                         | 0.0375                              | 1.0000        | 3.75%         |
| Verizon AWS          | 113                   | 2145                      | 1                | 475                         | 0.0134                              | 1.0000        | 1.34%         |
| Verizon LTE          | 113                   | 698                       | 2                | 821                         | 0.0462                              | 0.4653        | 9.94%         |
| Brant PD             | N/A                   | N/A                       | N/A              | N/A                         | 0.0055                              | 0.2000        | 2.75%         |
| PageNet              | N/A                   | N/A                       | N/A              | N/A                         | 0.0633                              | 0.6210        | 10.19%        |
| T-Mobile UMTS        | 140                   | 2100                      | 2                | 646                         | 0.0237                              | 1.0000        | 2.37%         |
| T-Mobile GSM         | 140                   | 1945                      | 8                | 162                         | 0.0238                              | 1.0000        | 2.38%         |
| AT&T UMTS            | 153                   | 880                       | 2                | 565                         | 0.0017                              | 0.5867        | 0.30%         |
| AT&T UMTS            | 153                   | 1900                      | 2                | 875                         | 0.0027                              | 1.0000        | 0.27%         |
| AT&T LTE             | 153                   | 734                       | 1                | 1313                        | 0.0020                              | 0.4893        | 0.41%         |
| AT&T GSM             | 153                   | 880                       | 1                | 283                         | 0.0004                              | 0.5867        | 0.07%         |
| AT&T GSM             | 153                   | 1900                      | 4                | 525                         | 0.0032                              | 1.0000        | 0.32%         |
|                      |                       |                           |                  |                             |                                     | <b>Total</b>  | <b>47.43%</b> |

**Table 1: Carrier Information<sup>1 2 3</sup>**

<sup>1</sup> The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 3/29/2012. Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

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

<sup>3</sup> Antenna height listed for AT&T is in reference to the American Tower Corp Structural Analysis dated July 2, 2012.

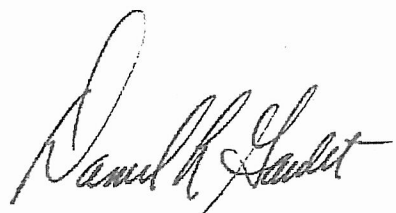
## 5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **47.43% of the FCC limit**.

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

## 6. Statement of Certification

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

A handwritten signature in black ink, appearing to read 'Daniel L. Goulet'.

Daniel L. Goulet  
C Squared Systems, LLC

July 13, 2012

Date

## Attachment A: References

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

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

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

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

**(A) Limits for Occupational/Controlled Exposure<sup>4</sup>**

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

**(B) Limits for General Population/Uncontrolled Exposure<sup>5</sup>**

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

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

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

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

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

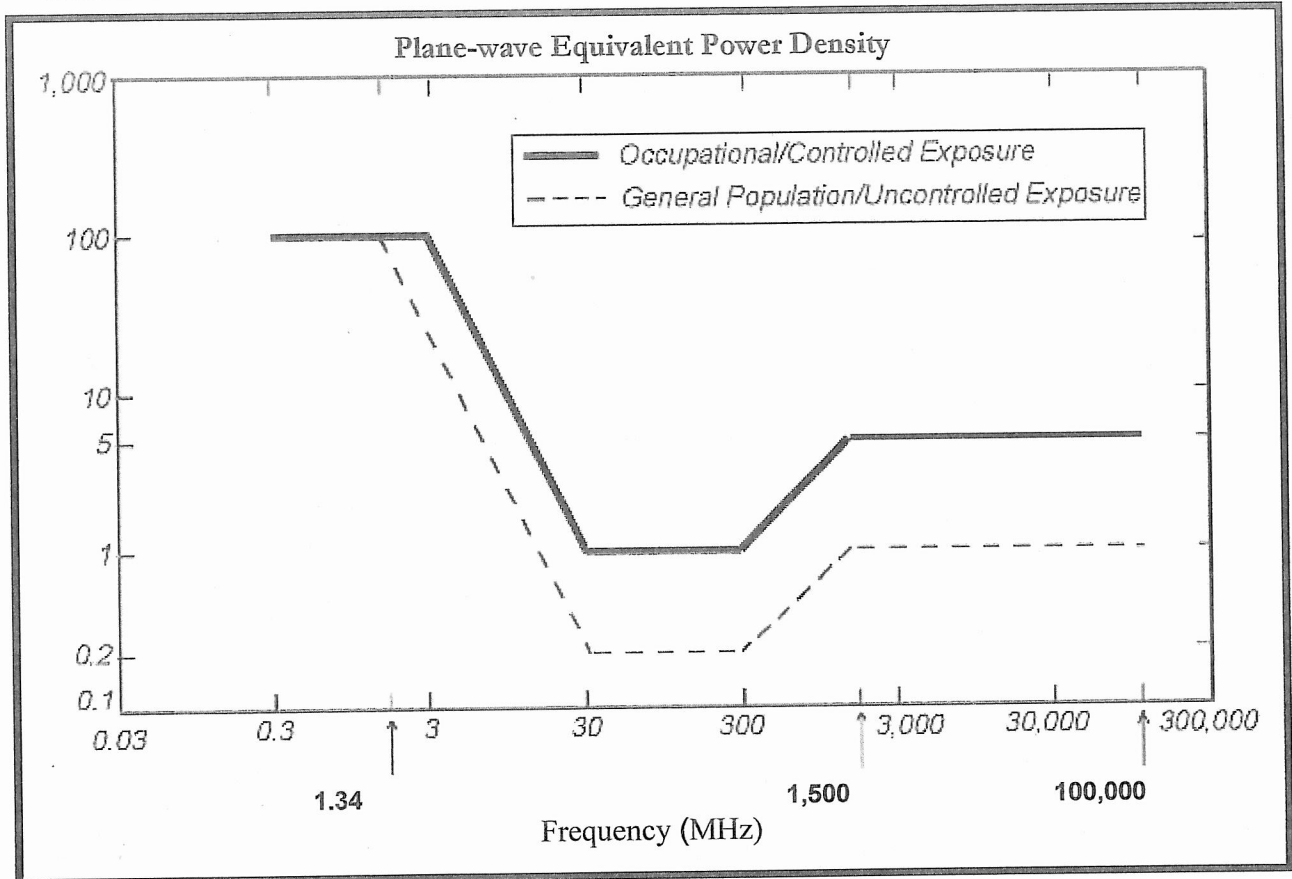
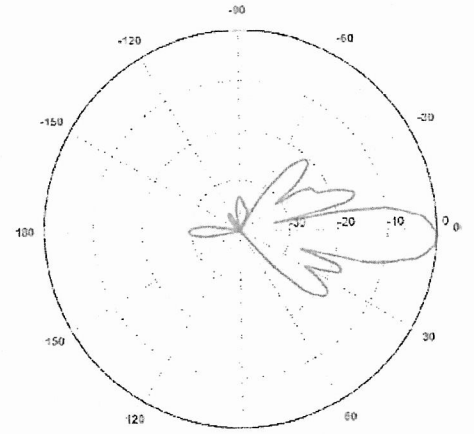
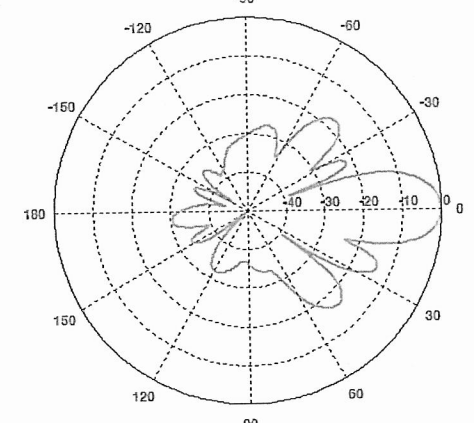
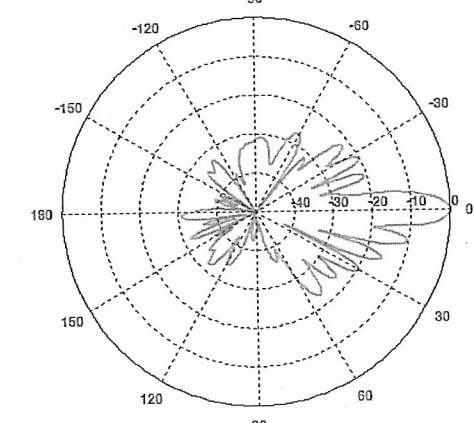


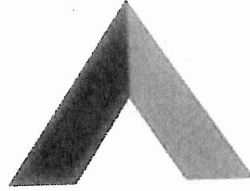
Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

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

|  |  |
|--|--|
| <p><b>700 MHz</b></p> <p>Manufacturer: KMW Communications<br/>           Model #: AM-X-CD-16-65-00T<br/>           Frequency Band: 698-806 MHz<br/>           Gain: 13.4 dBd<br/>           Vertical Beamwidth: 12.3°<br/>           Horizontal Beamwidth: 65°<br/>           Polarization: Dual Slant <math>\pm 45^\circ</math><br/>           Size L x W x D: 72.0" x 11.8" x 5.9"</p> |    |
| <p><b>850 MHz</b></p> <p>Manufacturer: Powerwave<br/>           Model #: 7770.00<br/>           Frequency Band: 824-896 MHz<br/>           Gain: 11.4 dBd<br/>           Vertical Beamwidth: 15°<br/>           Horizontal Beamwidth: 85°<br/>           Polarization: Dual Linear <math>\pm 45^\circ</math><br/>           Size L x W x D: 55.4" x 11.0" x 5.0"</p>                     |   |
| <p><b>1900 MHz</b></p> <p>Manufacturer: Powerwave<br/>           Model #: 7770.00<br/>           Frequency Band: 1850-1990 MHz<br/>           Gain: 13.4 dBd<br/>           Vertical Beamwidth: 7°<br/>           Horizontal Beamwidth: 90°<br/>           Polarization: Dual Linear <math>\pm 45^\circ</math><br/>           Size L x W x D: 55.4" x 11.0" x 5.0"</p>                   |  |



PASSED



**AMERICAN TOWER®**  
CORPORATION

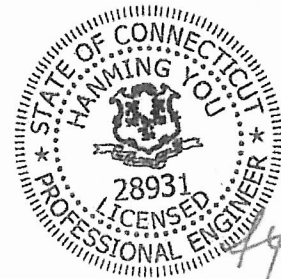
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## Structural Analysis Report

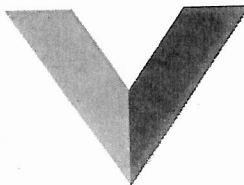
Structure : 150 ft. monopole  
ATC Site Name : Branford CT 6, CT  
ATC Site Number : 302484  
Proposed Carrier : AT&T Mobility  
Carrier Site Name : Branford  
Carrier Site Number : 10034973/CT2015  
County : New Haven  
Eng. Number : 49165724  
Date : July 23, 2012  
Usage : 99% Pole shaft, 67% Anchor bolts, 68%  
Base plate, 95% Shaft reinforcing bars

Submitted by:  
Robert Keith  
Project Engineer

American Tower Engineering Services  
8505 Freeport Parkway  
Suite 135  
Irving, TX 75063  
Phone: 972-999-8900



*[Handwritten signature]*  
7/23/12



**AMERICAN TOWER®**  
CORPORATION

## Structural Analysis Report

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Structure : 150 ft. monopole  
ATC Site Name : Branford CT 6, CT  
ATC Site Number : 302484  
Proposed Carrier : AT&T Mobility  
Carrier Site Name : Branford  
Carrier Site Number : 10034973/CT2015  
County : New Haven  
Eng. Number : 49165724  
Date : July 23, 2012  
Usage : 99% Pole shaft, 67% Anchor bolts, 68%  
Base plate, 95% Shaft reinforcing bars

Submitted by:  
Robert Keith  
Project Engineer

American Tower Engineering Services  
8505 Freeport Parkway  
Suite 135  
Irving, TX 75063  
Phone: 972-999-8900

**Introduction**

The purpose of this report is to summarize results of the structural analysis performed on the 150 ft. monopole named Branford CT 6, CT, located in New Haven County (ATC site# 302484). The tower was originally designed by Paul J. Ford and Company (job# 29297-629, dated Oct 2, 1997) and manufactured by ITT Meyer (Type "B" per AT&T Spec dated April 13, 1984). The pole base has been modified per SpectraSite Modification Drawing CT-0020 MI. The pole shaft has been structurally modified per ATC Modification Job# 26487334 dated 9/15/06.

**Analysis**

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

Basic Wind Speed: 90.0 mph (Fastest Mile)  
 Radial Ice: 77.9 mph (Fastest Mile) w/ 1/2" ice Concurrent  
 Standard/Code: TIA/EIA-222-F / 2003 IBC Section 1609.1.1, Exception (4) and Section 3108.4 / 2005 & 2008 CT Supplement

**Antenna Loads**

The following antenna loads were used in the tower analysis.

| Carrier               | Coax (I/O)    | Mount             | Antennas                   | Qty | Elev. (ft) |       |
|-----------------------|---------------|-------------------|----------------------------|-----|------------|-------|
| AT&T Mobility         | (6) 1 5/8 (I) | Platform w/ Rails | Diplexer                   | 3   | 153.0      |       |
|                       |               |                   | Powerwave 7770.00          | 3   |            |       |
|                       |               |                   | 4' Omni                    | 1   |            |       |
|                       |               |                   | Yagi                       | 1   |            |       |
|                       |               |                   | Decibel DB408              | 2   |            |       |
|                       |               |                   | GPS                        | 1   |            |       |
|                       |               |                   | RFS ATMAP1412D-1A20        | 3   |            | 140.0 |
|                       |               |                   | RFS ATMAA1412D-1A20        | 3   |            |       |
|                       |               |                   | RFS APXV18-206516S-C-A20   | 3   |            |       |
|                       |               |                   | RFS APXV18-206516L-C-00    | 3   |            |       |
| NextNet BTS-2500      | 3             |                   |                            |     |            |       |
| Argus LLPX310R        | 3             |                   |                            |     |            |       |
| Clearwire Corporation | (1) 1/2 (O)   | Clearwire Mount   | DragonWave A-ANT-23G-1-C   | 1   | 130.0      |       |
|                       |               |                   | DragonWave A-ANT-18G-2.5-C | 1   |            |       |
|                       |               |                   | DragonWave Horizon Compact | 2   |            |       |
|                       |               |                   | 12" x 12" Junction Box     | 1   |            |       |
|                       |               |                   | -                          | -   |            |       |
|                       |               |                   | -                          | -   |            |       |
| T-Mobile              | (6) 1 5/8 (O) | (3) T-Arm         | RFS ATMAP1412D-1A20        | 3   | 140.0      |       |
|                       |               |                   | RFS ATMAA1412D-1A20        | 3   |            |       |
|                       |               |                   | RFS APXV18-206516S-C-A20   | 3   |            |       |
|                       |               |                   | RFS APXV18-206516L-C-00    | 3   |            |       |
|                       |               |                   | NextNet BTS-2500           | 3   |            |       |
|                       |               |                   | Argus LLPX310R             | 3   |            |       |
| Verizon Wireless      | (1) 1/2 (I)   | Platform w/ Rails | Diplexer                   | 3   | 153.0      |       |
|                       |               |                   | Powerwave 7770.00          | 3   |            |       |
|                       |               |                   | 4' Omni                    | 1   |            |       |
|                       |               |                   | Yagi                       | 1   |            |       |
|                       |               |                   | Decibel DB408              | 2   |            |       |
|                       |               |                   | GPS                        | 1   |            |       |
| Town of Branford      | (2) 7/8 (I)   | Platform w/ Rails | RFS ATMAP1412D-1A20        | 3   | 140.0      |       |
|                       |               |                   | RFS ATMAA1412D-1A20        | 3   |            |       |
|                       |               |                   | RFS APXV18-206516S-C-A20   | 3   |            |       |
|                       |               |                   | RFS APXV18-206516L-C-00    | 3   |            |       |
|                       |               |                   | NextNet BTS-2500           | 3   |            |       |
|                       |               |                   | Argus LLPX310R             | 3   |            |       |
| USA Mobility          | (1) 1 5/8 (I) | Platform w/ Rails | Diplexer                   | 3   | 153.0      |       |
|                       |               |                   | Powerwave 7770.00          | 3   |            |       |
|                       |               |                   | 4' Omni                    | 1   |            |       |
|                       |               |                   | Yagi                       | 1   |            |       |
|                       |               |                   | Decibel DB408              | 2   |            |       |
|                       |               |                   | GPS                        | 1   |            |       |
| USA Mobility          | (1) 1/2 (I)   | Platform w/ Rails | RFS ATMAP1412D-1A20        | 3   | 140.0      |       |
|                       |               |                   | RFS ATMAA1412D-1A20        | 3   |            |       |
|                       |               |                   | RFS APXV18-206516S-C-A20   | 3   |            |       |
|                       |               |                   | RFS APXV18-206516L-C-00    | 3   |            |       |
|                       |               |                   | NextNet BTS-2500           | 3   |            |       |
|                       |               |                   | Argus LLPX310R             | 3   |            |       |
| Verizon Wireless      | (1) 1/2 (I)   | Platform w/ Rails | Diplexer                   | 3   | 153.0      |       |
|                       |               |                   | Powerwave 7770.00          | 3   |            |       |
|                       |               |                   | 4' Omni                    | 1   |            |       |
|                       |               |                   | Yagi                       | 1   |            |       |
|                       |               |                   | Decibel DB408              | 2   |            |       |
|                       |               |                   | GPS                        | 1   |            |       |
| Verizon Wireless      | (1) 1/2 (I)   | Platform w/ Rails | RFS ATMAP1412D-1A20        | 3   | 140.0      |       |
|                       |               |                   | RFS ATMAA1412D-1A20        | 3   |            |       |
|                       |               |                   | RFS APXV18-206516S-C-A20   | 3   |            |       |
|                       |               |                   | RFS APXV18-206516L-C-00    | 3   |            |       |
|                       |               |                   | NextNet BTS-2500           | 3   |            |       |
|                       |               |                   | Argus LLPX310R             | 3   |            |       |
| Clearwire Corporation | (1) 1/2 (O)   | Clearwire Mount   | DragonWave A-ANT-23G-1-C   | 1   | 130.0      |       |
|                       |               |                   | DragonWave A-ANT-18G-2.5-C | 1   |            |       |
|                       |               |                   | DragonWave Horizon Compact | 2   |            |       |
|                       |               |                   | 12" x 12" Junction Box     | 1   |            |       |
|                       |               |                   | -                          | -   |            |       |
|                       |               |                   | -                          | -   |            |       |

**Antenna Loads (continued)**

| Carrier          | Coax (I/O)  | Mount     | Antennas                    | Elev. (ft)       | Qty         |
|------------------|-------------|-----------|-----------------------------|------------------|-------------|
| Verizon Wireless | (3) 1/4 (I) | (3) T-Arm | Antel BXA-171085-8BF-EDIN-X | 113.0            | 3           |
|                  |             |           | Antel BXA-70063/GCF 4       | 113.0            | 3           |
|                  |             |           | RFS APL866513-42T0          | 113.0            | 2           |
|                  |             |           | RFS APL868013-12T0          | 113.0            | 4           |
|                  |             |           | RFS FDR6004/1C-3L           | 113.0            | 6           |
|                  |             |           | Decibel DB408               | 103.0            | 2           |
|                  |             |           | Decibel DB408               | 103.0            | 2           |
|                  |             |           | (1) Standoff                | 103.0            | (2) 7/8 (I) |
|                  |             |           | (1) 7/8 (I)                 | Town of Branford | (1) 7/8 (I) |
|                  |             |           | USA Mobility                | (1) RG6 (O)      | Dish Mount  |

Existing Antennas

| Carrier       | Coax (I/O)                       | Mount                                   | Antennas                     | Qty | Mount (ft) | RAD (ft) |
|---------------|----------------------------------|---|------------------------------|-----|------------|----------|
| AT&T Mobility | (2) 19.7 mm (I)<br>(1) 10 mm (I) | Platform w/<br>Rails<br>Collar<br>Mount | KMW AM-X-CD-16-65-00T-RET    | 3   | 153.0      | 153.0    |
|               |                                  |   | KMW AWS Twin Dual 700 Bypass | 6   |            |          |
|               |                                  |   | Raycap DC6-48-60-18-8F       | 1   |            |          |
|               |                                  |   | Ericsson RRUS 11             | 6   |            |          |
|               |                                  |   |                              |     |            |          |
|               |                                  |   |                              |     |            |          |

The proposed lines are to be installed inside the pole shaft.

**Results**

The existing 150 ft. ITT Meyer monopole with the existing and the proposed antennas is structurally acceptable per TIA/EIA-222 Rev F standards. The maximum structure usage is: 99% Pole shaft, 67% Anchor bolts, 68% Base plate, and 95% Shaft reinforcing bars.

| Current Analysis | Original Design | Reactions | Reactions |
|------------------|-----------------|-----------|-----------|
| Pole Reactions   | 2,130.7         | 2,749.8   | 27.4      |
| Moment (ft-kips) | 23.3            |           |           |
| Shear (kips)     |                 |           |           |

The structure base reactions resulting from this analysis exceed the ones shown on the original structural drawings. However, upon reviewing the foundation and the soil documents, the existing foundation was found to be adequate to resist the new reactions.

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

The existing tower and its foundations were found to be adequate to support the existing and proposed antennas with the transmission line distribution as described above while meeting the requirements of the code or standard as specified in this report.

If you have any questions or require additional information, please call (972) 999-8900.

**Conclusion**

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 necessarily 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 ANSII/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 : 302484  
 Code : TIA/EA-222 Rev F  
 Description : 150 ft. ITT Meyer - Model verified 10/25/11  
 Client : AT&T Mobility  
 Location : Branford CT 6, CT  
 Shape : 12 Sides  
 Height : 150.00 (ft)  
 Base Elev (ft) : 0.00  
 Taper : 0.15670/(in/ft)

**Sections Properties**

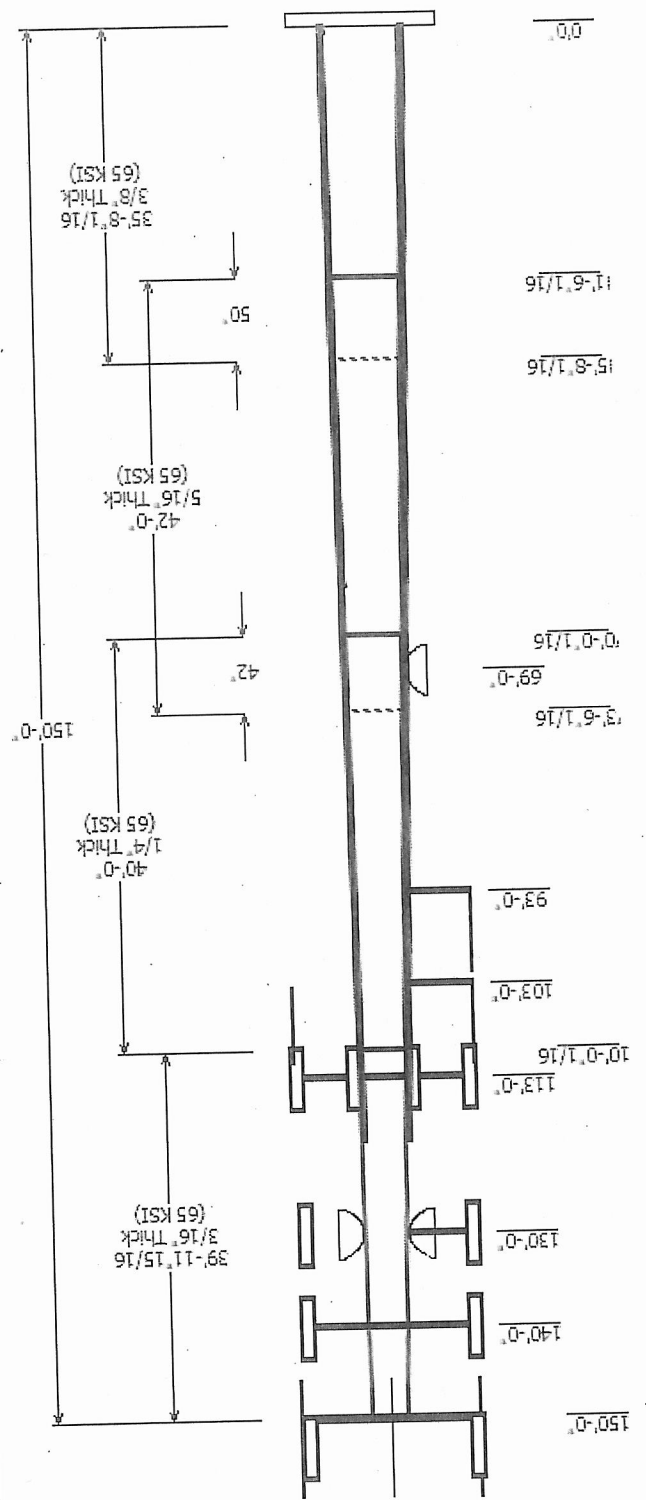
| Section | Diameter (in) | Overlap | Steel | Length | Across Flats | Thick Joint | Type | Top Bottom (in) | Length (in) | Area (in <sup>2</sup> ) | Weight (lb) |       |
|---------|---------------|---------|-------|--------|--------------|-------------|------|-----------------|-------------|-------------------------|-------------|-------|
| 1       | 35.670        | 31.79   | 37.38 | 0.375  | 0.000        | 0.156705    | 65   | 50.000          | 0.156705    | 42.000                  | 26.48       | 33.06 |
| 2       | 40.000        | 21.26   | 27.53 | 0.250  | 0.188        | 0.156705    | 65   | 42.000          | 0.156705    | 42.000                  | 27.53       | 21.26 |
| 3       | 40.000        | 15.00   | 21.26 | 0.188  | 0.000        | 0.156705    | 65   | 39.997          | 0.000       | 15.00                   | 21.26       | 15.00 |

**Discrete Appearance**

| Attach  | Elev (ft) | Force   | Elev (ft) | Qty | Description                 |
|---------|-----------|---------|-----------|-----|-----------------------------|
| 150.000 | 150.000   | 150.000 | 150.000   | 6   | Ericsson RRUS 11            |
| 150.000 | 150.000   | 150.000 | 150.000   | 1   | Raycap DC6-48-60-18-8F      |
| 150.000 | 150.000   | 150.000 | 150.000   | 6   | KMW AWS Twin Dual 700       |
| 150.000 | 150.000   | 150.000 | 150.000   | 3   | KMW AM-X-CD-16-65-00T-RET   |
| 150.000 | 150.000   | 150.000 | 150.000   | 3   | Powerave 7770.00            |
| 150.000 | 150.000   | 150.000 | 150.000   | 3   | Diplexer                    |
| 150.000 | 150.000   | 150.000 | 150.000   | 2   | Decibel DB408               |
| 150.000 | 150.000   | 150.000 | 150.000   | 1   | GPS                         |
| 150.000 | 150.000   | 150.000 | 150.000   | 1   | 4' Omni                     |
| 150.000 | 150.000   | 150.000 | 150.000   | 1   | Platform w/ Rails           |
| 140.000 | 140.000   | 140.000 | 140.000   | 3   | RFS ATMA1412D-1A20          |
| 140.000 | 140.000   | 140.000 | 140.000   | 3   | RFS ATMA1412D-1A20          |
| 140.000 | 140.000   | 140.000 | 140.000   | 3   | RFS APXV18-206516S-C-A20    |
| 140.000 | 140.000   | 140.000 | 140.000   | 3   | RFS APXV18-206516L-C-00     |
| 140.000 | 140.000   | 140.000 | 140.000   | 3   | T-Arm                       |
| 130.000 | 130.000   | 130.000 | 130.000   | 1   | 12" x 12" Junction Box      |
| 130.000 | 130.000   | 130.000 | 130.000   | 1   | Clearwire Mount             |
| 130.000 | 130.000   | 130.000 | 130.000   | 3   | NextNet BTS-2500            |
| 130.000 | 130.000   | 130.000 | 130.000   | 2   | DragonWave Horizon Compact  |
| 130.000 | 130.000   | 130.000 | 130.000   | 1   | DragonWave A-ANT-18G-2.5-C  |
| 130.000 | 130.000   | 130.000 | 130.000   | 1   | DragonWave A-ANT-23G-1-C    |
| 130.000 | 130.000   | 130.000 | 130.000   | 3   | Argus LLPX310R              |
| 130.000 | 130.000   | 130.000 | 130.000   | 6   | RFS FD9R6004/2C-3L          |
| 130.000 | 130.000   | 130.000 | 130.000   | 2   | RFS AP1866513-42T0          |
| 130.000 | 130.000   | 130.000 | 130.000   | 4   | RFS AP1868013-42T0          |
| 130.000 | 130.000   | 130.000 | 130.000   | 3   | Antel BXA-171085-8BF-EDIN-X |
| 130.000 | 130.000   | 130.000 | 130.000   | 3   | Antel BXA-70063/6CF_4       |
| 130.000 | 130.000   | 130.000 | 130.000   | 3   | T-Arm                       |
| 103.000 | 103.000   | 103.000 | 103.000   | 2   | Decibel DB408               |
| 93.000  | 93.000    | 93.000  | 93.000    | 1   | Standoff                    |
| 93.000  | 93.000    | 93.000  | 93.000    | 1   | Decibel DB408               |
| 93.000  | 93.000    | 93.000  | 93.000    | 1   | Standoff                    |
| 93.000  | 93.000    | 93.000  | 93.000    | 1   | Channel Master 1.2 M Dish   |

**Linear Appearance**

| Elev (ft) | From    | To      | Description | To Wind |
|-----------|---------|---------|-------------|---------|
| 150.000   | 150.000 | 140.000 | 1 5/8" Coax | No      |
| 140.000   | 140.000 | 123.0   | 1 5/8" Coax | No      |
| 123.0     | 140.000 | 123.0   | 1 5/8" Coax | No      |
| 123.0     | 140.000 | 123.0   | 1 5/8" Coax | No      |
| 123.0     | 140.000 | 123.0   | 1 5/8" Coax | No      |



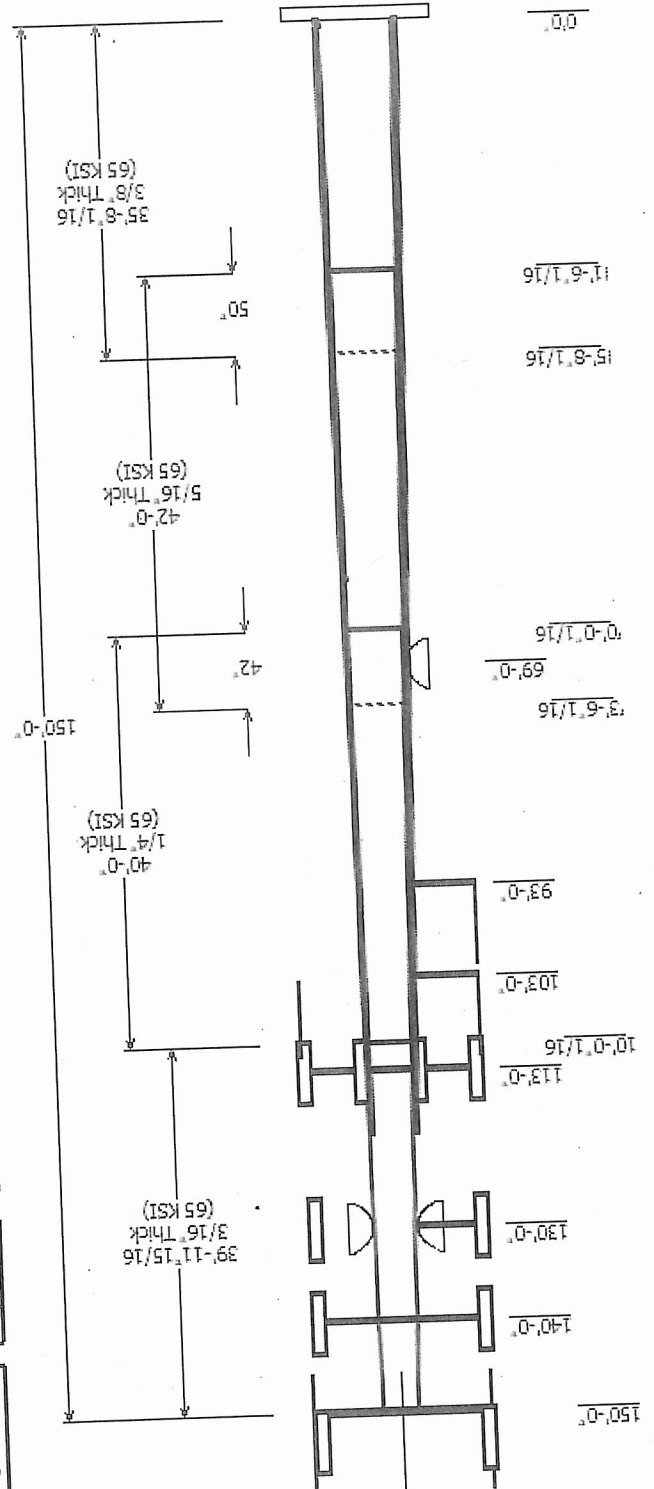
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| Dish Deflections |                  |                 |                |
|------------------|------------------|-----------------|----------------|
| Load Case        | Attach Elev (ft) | Deflection (in) | Rotation (deg) |
| Twist/Sway       | 69.00            | 6.833           | 0.934          |
| Twist/Sway       | 130.00           | 24.130          | 1.754          |
| Twist/Sway       | 130.00           | 24.130          | 1.754          |

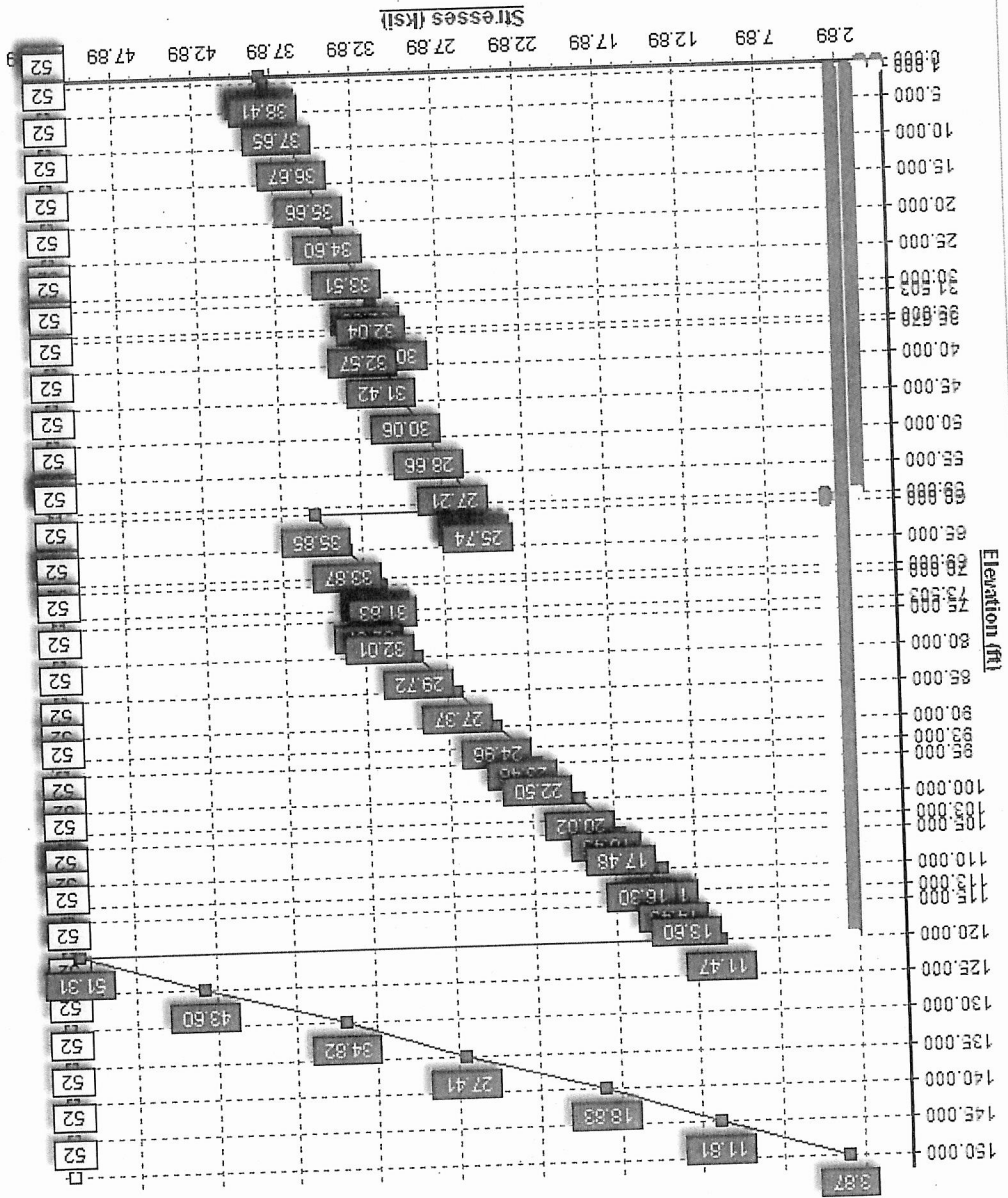
| Reactions  |                 |             |             |
|------------|-----------------|-------------|-------------|
| Load Case  | Moment (kip-ft) | Shear (kip) | Axial (kip) |
| No Ice     | 2749.82         | 27.42       | 31.72       |
| Ice        | 2534.48         | 24.11       | 39.53       |
| Twist/Sway | 849.78          | 8.46        | 31.73       |

| Load Cases |                            | Twist/Sway |
|------------|----------------------------|------------|
| No Ice     | 90.00 mph Wind with No Ice |            |
| Ice        | 77.94 mph Wind with Ice    |            |
|            | 50.00 mph Wind with No Ice |            |

|       |        |                  |     |
|-------|--------|------------------|-----|
| 0.000 | 150.0  | 1/2" Coax        | No  |
| 0.000 | 150.0  | 1/2" Coax        | No  |
| 0.000 | 150.0  | 1/2" Coax        | No  |
| 0.000 | 150.0  | 10 mm Cable      | No  |
| 0.000 | 150.0  | 19.7 mm Cable    | No  |
| 0.000 | 150.0  | 7/8" Coax        | No  |
| 0.000 | 150.0  | RG6              | No  |
| 0.000 | 93.000 | 7/8" Coax        | No  |
| 0.000 | 103.0  | 7/8" Coax        | No  |
| 0.000 | 113.0  | 1 1/4" Coax      | No  |
| 0.000 | 123.0  | #18 Dywidag bars | No  |
| 0.000 | 123.0  | 1 5/8" Coax      | Yes |
| 0.000 | 130.0  | 1/2" Coax        | No  |
| 0.000 | 130.0  | 1/2" Coax        | No  |
| 0.000 | 130.0  | 5/16" Coax       | No  |
| 0.000 | 150.0  | 1 5/8" Coax      | No  |
| 0.000 | 150.0  | 1/2" Coax        | No  |
| 0.000 | 150.0  | 1/2" Coax        | No  |
| 0.000 | 150.0  | 1 5/8" Coax      | No  |

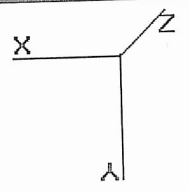






Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Code: T/A/EIA-222 Rev F  
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| Shaft Section Properties |        |        |      |        |          |           |                    |          |           |
|--------------------------|--------|--------|------|--------|----------|-----------|--------------------|----------|-----------|
| Slip                     | Weight | Dia    | Elev | Area   | Wt Ratio | Dia Ratio | Area Ratio         | Wt Ratio | Dia Ratio |
| (in)                     | (lb)   | (in)   | (ft) | (sqin) | (in)     | (in)      | (in <sup>2</sup> ) | (in)     | (in)      |
| 0.00                     | 5.014  | 37.38  | 0.00 | 44.68  | 7810.1   | 24.57     | 99.68              | 31.79    | 35.67     |
| 1-12                     | 35.670 | 0.3750 | 65   | 0.00   | 0.00     | 0.00      | 0.00               | 0.00     | 0.00      |
| 2-12                     | 42.000 | 0.3130 | 65   | 50.00  | 4,244    | 33.06     | 31.50              | 33.01    | 4521.4    |
| 3-12                     | 40.000 | 0.2500 | 65   | Slip   | 2,646    | 27.53     | 70.00              | 21.97    | 2087.4    |
| 4-12                     | 39.997 | 0.1880 | 65   | Butt   | 1,479    | 21.26     | 110.00             | 12.76    | 723.8     |
| Shaft Weight 13,383      |        |        |      |        |          |           |                    |          |           |

Discrete Appearance Properties

| Attach | Elev                        | Description | Qty | No Ice Weight (lb) | CaAa Weight (lb) | Ice Weight (lb) | CaAa Factor | Distance From Face (ft) | Vert Ecc (ft) |
|--------|-----------------------------|-------------|-----|--------------------|------------------|-----------------|-------------|-------------------------|---------------|
| 150.00 | 4' Omni                     |             | 1   | 5.00               | 1.500            | 1.00            | 1.00        | 2.000                   | 0.000         |
| 150.00 | Decibel DB408               |             | 2   | 17.00              | 2.970            | 1.00            | 1.00        | 41.00                   | 9.000         |
| 150.00 | Diplexer                    |             | 3   | 10.00              | 0.500            | 0.67            | 1.00        | 0.700                   | 0.000         |
| 150.00 | Ericsson RRUS 11            |             | 6   | 55.00              | 2.940            | 0.71            | 1.00        | 3.290                   | 0.000         |
| 150.00 | GPS                         |             | 1   | 1.50               | 0.600            | 1.00            | 0.800       | 1.00                    | 0.000         |
| 150.00 | KMW AM-X-CD-16-65-00T       |             | 3   | 48.50              | 8.260            | 0.50            | 0.600       | 0.50                    | 0.000         |
| 150.00 | KMW AWS Twin Dual 700       |             | 6   | 1950.00            | 24.000           | 1.00            | 38.000      | 1.00                    | 0.000         |
| 150.00 | Platform w/ Rails           |             | 1   | 35.00              | 5.880            | 0.73            | 6.530       | 0.73                    | 0.000         |
| 150.00 | Powerwave 7770.00           |             | 3   | 31.80              | 1.470            | 1.00            | 4.950       | 1.670                   | 0.000         |
| 150.00 | Raycap DCG-48-60-18-8F      |             | 1   | 14.00              | 3.400            | 0.67            | 4.070       | 0.67                    | 0.000         |
| 140.00 | RFS APXV18-206516L-C-00     |             | 3   | 18.70              | 3.500            | 0.67            | 4.160       | 0.67                    | 0.000         |
| 140.00 | RFS APXV18-206516S-C-A20    |             | 3   | 13.00              | 1.170            | 0.50            | 20.60       | 1.390                   | 0.000         |
| 140.00 | RFS ATMA1412D-1A20          |             | 3   | 13.00              | 1.170            | 0.50            | 20.60       | 1.390                   | 0.000         |
| 140.00 | RFS ATMAP1412D-1A20         |             | 3   | 13.00              | 1.170            | 0.50            | 20.60       | 1.390                   | 0.000         |
| 140.00 | T-Arm                       |             | 1   | 333.00             | 5.000            | 0.67            | 433.00      | 8.100                   | 0.000         |
| 130.00 | Clearwire Mount             |             | 1   | 40.00              | 8.500            | 1.00            | 97.10       | 8.920                   | 0.000         |
| 130.00 | DragonWave A-ANT-18G-2.5-   |             | 1   | 47.60              | 8.430            | 1.00            | 97.10       | 8.920                   | 0.000         |
| 130.00 | DragonWave A-ANT-23G-1-C    |             | 1   | 15.00              | 1.610            | 1.00            | 25.10       | 1.830                   | 0.000         |
| 130.00 | DragonWave Horizon          |             | 2   | 10.60              | 0.430            | 1.00            | 17.00       | 0.580                   | 0.000         |
| 130.00 | NexNet BTS-2500             |             | 3   | 35.00              | 2.120            | 0.84            | 27.08       | 3.500                   | 0.000         |
| 113.00 | Antel BXA-171085-8BF-EDIN-X |             | 3   | 17.00              | 7.730            | 0.70            | 58.00       | 8.540                   | 0.000         |
| 113.00 | Antel BXA-70063/6CF 4       |             | 3   | 17.00              | 7.730            | 0.70            | 58.00       | 8.540                   | 0.000         |
| 113.00 | RFS APXL866513-42T0         |             | 2   | 18.00              | 4.293            | 0.93            | 39.49       | 4.859                   | 0.000         |
| 113.00 | RFS APXL868013-42T0         |             | 4   | 6.30               | 3.730            | 0.87            | 31.68       | 4.290                   | 0.000         |
| 113.00 | RFS FD9R6004/2C-3L          |             | 6   | 3.10               | 0.370            | 0.50            | 5.40        | 0.500                   | 0.000         |
| 113.00 | T-Arm                       |             | 3   | 333.00             | 5.000            | 0.67            | 433.00      | 8.100                   | 0.000         |
| 103.00 | Decibel DB408               |             | 2   | 17.00              | 2.970            | 1.00            | 41.00       | 5.550                   | 0.000         |
| 103.00 | Standoff                    |             | 1   | 200.00             | 2.500            | 1.00            | 300.00      | 3.500                   | 0.000         |
| 93.00  | Decibel DB408               |             | 1   | 28.00              | 2.700            | 1.00            | 50.00       | 4.860                   | 0.000         |
| 93.00  | Standoff                    |             | 1   | 200.00             | 2.500            | 1.00            | 300.00      | 3.500                   | 0.000         |
| 69.00  | Channel Master 1.2 M Dish   |             | 1   | 188.00             | 20.910           | 1.00            | 277.00      | 21.790                  | 0.000         |

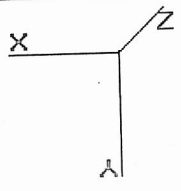
Linear Appearance Properties

| Elev | From | To     | Description     | No Ice Weight (lb/ft) | CaAa Weight (lb/ft) | Ice Weight (lb/ft) | CaAa Weight (lb/ft) | To Wind Exposed |
|------|------|--------|-----------------|-----------------------|---------------------|--------------------|---------------------|-----------------|
| 0.00 | 0.00 | 150.00 | (1) 1 5/8" Coax | 0.82                  | 0.00                | 0.00               | 0.00                | N               |
| 0.00 | 0.00 | 150.00 | (6) 1 5/8" Coax | 0.82                  | 0.00                | 0.00               | 0.00                | N               |

Number of Loadings : 33

Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Code: T1A/EIA-222 Rev F  
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Base Elev : 0.000 (ft)

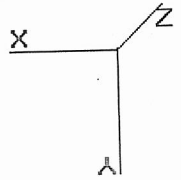
| Qty | Description        | Fy (ksi) | Offset (in) | Description      | Spacing Len (in) | Connectors      | Continuation? |
|-----|--------------------|----------|-------------|------------------|------------------|-----------------|---------------|
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 24.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 24.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |

Additional Steel

| Elev From (ft) | Elev To (ft) | Qty | Description        | Fy (ksi) | Offset (in) | Description      | Spacing Len (in) | Connectors      | Continuation? |
|----------------|--------------|-----|--------------------|----------|-------------|------------------|------------------|-----------------|---------------|
| 0.00           | 1.00         | 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 1.00           | 1.00         | 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |
| 0.00           | 1.00         | 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 1.00           | 59.00        | 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 24.0             | 5/8" A36 U-Bolt | Yes           |
| 1.00           | 120.0        | 4   | SOL #18 All Thread | 75       | 5.15        | 6" Angle Bracket | 30.0             | 5/8" A36 U-Bolt | Yes           |
| 1.00           | 60.00        | 4   | SOL #18 All Thread | 75       | 2.19        | 6" Angle Bracket | 12.0             | 5/8" A36 U-Bolt | No            |

Intermediate Connections

| Total Weight (lb) | Fy (ksi) | Offset (in) | Description          | Spacing Len (in) | Connectors |
|-------------------|----------|-------------|----------------------|------------------|------------|
| 150.00            | 0.15     | 0.00        | (1) 1/2" Coax        | 0.00             | N          |
| 150.00            | 0.15     | 0.00        | (1) 1/2" Coax        | 0.00             | N          |
| 150.00            | 0.07     | 0.00        | (1) 10 mm Cable      | 0.00             | N          |
| 150.00            | 0.59     | 0.00        | (2) 19.7 mm Cable    | 0.00             | N          |
| 150.00            | 0.66     | 0.00        | (2) 7/8" Coax        | 0.00             | N          |
| 140.00            | 0.82     | 0.20        | (4) 1 5/8" Coax      | 0.00             | N          |
| 140.00            | 0.82     | 0.20        | (4) 1 5/8" Coax      | 0.00             | N          |
| 140.00            | 0.82     | 0.20        | (4) 1 5/8" Coax      | 0.00             | N          |
| 140.00            | 0.82     | 0.20        | (4) 1 5/8" Coax      | 0.00             | N          |
| 130.00            | 0.15     | 0.06        | (2) 1/2" Coax        | 0.00             | N          |
| 130.00            | 0.05     | 1.10        | (6) 5/16" Coax       | 0.00             | N          |
| 123.00            | 9.84     | 0.20        | (8) #18 Dywidag bars | 0.30             | Y          |
| 123.00            | 5.67     | 0.00        | (12) 1 1/4" Coax     | 0.00             | N          |
| 113.00            | 0.00     | 0.00        | (2) 7/8" Coax        | 0.00             | N          |
| 103.00            | 0.66     | 0.00        | (2) 7/8" Coax        | 0.00             | N          |
| 93.00             | 0.33     | 0.00        | (1) 7/8" Coax        | 0.00             | N          |
| 69.00             | 0.08     | 0.03        | (1) RG6              | 0.16             | N          |
|                   |          |             |                      | 3,523.91 (lb)    |            |



| Segment Properties |                   | (Max Len : 5 ft) |                    |                    |         |       |        |       |       |        |                    |                    |        |                        |
|--------------------|-------------------|------------------|--------------------|--------------------|---------|-------|--------|-------|-------|--------|--------------------|--------------------|--------|------------------------|
| Seg Top            | Description       | Thick            | Pat                | Area               | Ix      | W/I   | D/I    | Fy    | Fb    | Weight | Area               | Ix                 | Weight | Additional Reinforcing |
| (ft)               |                   | (in)             | (in <sup>2</sup> ) | (in <sup>4</sup> ) | Ratio   | Ratio | Ratio  | (ksi) | (ksi) | (lb)   | (in <sup>2</sup> ) | (in <sup>4</sup> ) | (lb)   | (lb)                   |
| 0.00               | Reinf. Top Reinf. | 0.3750           | 37.223             | 44.494             | 7.711.3 | 24.45 | 99.68  | 65    | 52    | 0.0    | 32.00              | 8,940              | 0.0    | 0.0                    |
| 1.00               | Reinf. Top Reinf. | 0.3750           | 37.223             | 44.494             | 7.711.3 | 24.45 | 99.68  | 65    | 52    | 151.7  | 32.00              | 8,881              | 108.8  | 108.8                  |
| 5.00               |                   | 0.3750           | 36.596             | 43.737             | 7.324.4 | 24.01 | 97.59  | 65    | 52    | 600.5  | 32.00              | 8,647              | 435.2  | 435.2                  |
| 10.00              |                   | 0.3750           | 35.813             | 42.791             | 6.859.3 | 23.45 | 95.50  | 65    | 52    | 736.1  | 32.00              | 8,359              | 544.0  | 544.0                  |
| 15.00              |                   | 0.3750           | 35.029             | 41.845             | 6.414.3 | 22.89 | 93.41  | 65    | 52    | 720.0  | 32.00              | 8,075              | 544.0  | 544.0                  |
| 20.00              |                   | 0.3750           | 34.246             | 40.899             | 5.989.0 | 22.33 | 91.32  | 65    | 52    | 687.8  | 32.00              | 7,523              | 544.0  | 544.0                  |
| 25.00              |                   | 0.3750           | 33.462             | 39.953             | 5.582.9 | 21.77 | 89.23  | 65    | 52    | 671.7  | 32.00              | 7,255              | 544.0  | 544.0                  |
| 30.00              | Bot - Section 2   | 0.3750           | 32.679             | 39.007             | 5.195.6 | 21.21 | 87.14  | 65    | 52    | 648.8  | 32.00              | 6,937              | 544.0  | 544.0                  |
| 31.50              | Bot - Section 2   | 0.3750           | 32.443             | 38.722             | 5.082.8 | 21.04 | 86.52  | 65    | 52    | 646.3  | 32.00              | 6,937              | 544.0  | 544.0                  |
| 35.00              |                   | 0.3750           | 31.895             | 38.061             | 4.826.6 | 20.65 | 85.05  | 65    | 52    | 628.8  | 32.00              | 6,681              | 544.0  | 544.0                  |
| 35.67              | Top - Section 1   | 0.3130           | 32.416             | 32.356             | 4,256.3 | 25.61 | 103.57 | 65    | 52    | 471.7  | 32.00              | 6,939              | 471.1  | 471.1                  |
| 40.00              |                   | 0.3130           | 31.738             | 31.672             | 3,992.1 | 25.03 | 101.40 | 65    | 52    | 478.4  | 32.00              | 6,937              | 478.0  | 478.0                  |
| 45.00              |                   | 0.3130           | 30.954             | 30.882             | 3,700.9 | 24.36 | 98.90  | 65    | 52    | 473.0  | 32.00              | 6,937              | 473.0  | 473.0                  |
| 50.00              |                   | 0.3130           | 30.171             | 30.092             | 3,424.2 | 23.68 | 96.39  | 65    | 52    | 468.1  | 32.00              | 6,937              | 468.1  | 468.1                  |
| 55.00              |                   | 0.3130           | 29.387             | 29.303             | 3,161.6 | 23.01 | 93.89  | 65    | 52    | 463.2  | 32.00              | 6,937              | 463.2  | 463.2                  |
| 59.00              | Reinf. Top Reinf. | 0.3130           | 28.760             | 28.671             | 2,961.5 | 22.48 | 91.89  | 65    | 52    | 458.3  | 32.00              | 6,937              | 458.3  | 458.3                  |
| 60.00              | Reinf. Top Reinf. | 0.3130           | 28.604             | 28.513             | 2,912.8 | 22.34 | 91.39  | 65    | 52    | 453.4  | 32.00              | 6,937              | 453.4  | 453.4                  |
| 65.00              |                   | 0.3130           | 27.820             | 27.723             | 2,677.5 | 21.67 | 88.88  | 65    | 52    | 448.5  | 32.00              | 6,937              | 448.5  | 448.5                  |
| 69.00              |                   | 0.3130           | 27.037             | 26.934             | 2,455.1 | 21.00 | 86.38  | 65    | 52    | 443.6  | 32.00              | 6,937              | 443.6  | 443.6                  |
| 70.00              | Bot - Section 3   | 0.3130           | 27.036             | 26.933             | 2,455.0 | 21.00 | 86.38  | 65    | 52    | 438.7  | 32.00              | 6,937              | 438.7  | 438.7                  |
| 73.50              | Top - Section 2   | 0.2500           | 26.988             | 21.524             | 1,964.0 | 26.78 | 107.01 | 65    | 52    | 433.8  | 32.00              | 6,937              | 433.8  | 433.8                  |
| 75.00              |                   | 0.2500           | 26.753             | 21.335             | 1,912.8 | 26.53 | 107.95 | 65    | 52    | 428.9  | 32.00              | 6,937              | 428.9  | 428.9                  |
| 80.00              |                   | 0.2500           | 25.970             | 20.704             | 1,748.1 | 25.69 | 103.88 | 65    | 52    | 424.0  | 32.00              | 6,937              | 424.0  | 424.0                  |
| 85.00              |                   | 0.2500           | 25.186             | 20.074             | 1,593.2 | 24.85 | 100.74 | 65    | 52    | 419.1  | 32.00              | 6,937              | 419.1  | 419.1                  |
| 90.00              |                   | 0.2500           | 24.403             | 19.443             | 1,447.7 | 24.01 | 97.61  | 65    | 52    | 414.2  | 32.00              | 6,937              | 414.2  | 414.2                  |
| 93.00              |                   | 0.2500           | 23.932             | 19.064             | 1,364.8 | 23.51 | 95.73  | 65    | 52    | 409.3  | 32.00              | 6,937              | 409.3  | 409.3                  |
| 95.00              |                   | 0.2500           | 23.619             | 18.812             | 1,311.3 | 23.17 | 94.48  | 65    | 52    | 404.4  | 32.00              | 6,937              | 404.4  | 404.4                  |
| 100.00             |                   | 0.2500           | 22.365             | 17.803             | 1,111.4 | 21.83 | 89.46  | 65    | 52    | 399.5  | 32.00              | 6,937              | 399.5  | 399.5                  |
| 103.00             |                   | 0.2500           | 22.052             | 17.551             | 1,064.8 | 21.49 | 88.21  | 65    | 52    | 394.6  | 32.00              | 6,937              | 394.6  | 394.6                  |
| 105.00             |                   | 0.2500           | 21.268             | 16.920             | 954.1   | 20.65 | 85.07  | 65    | 52    | 389.7  | 32.00              | 6,937              | 389.7  | 389.7                  |
| 110.00             | Top - Section 3   | 0.2500           | 21.268             | 16.919             | 954.0   | 20.65 | 85.07  | 65    | 52    | 384.8  | 32.00              | 6,937              | 384.8  | 384.8                  |
| 110.00             | Bot - Section 4   | 0.1880           | 21.268             | 12.761             | 723.8   | 28.17 | 113.13 | 65    | 52    | 379.9  | 32.00              | 6,937              | 379.9  | 379.9                  |
| 113.00             |                   | 0.1880           | 20.798             | 12.477             | 676.5   | 27.50 | 108.96 | 65    | 52    | 375.0  | 32.00              | 6,937              | 375.0  | 375.0                  |
| 115.00             |                   | 0.1880           | 20.485             | 12.287             | 646.1   | 27.05 | 107.79 | 65    | 52    | 370.1  | 32.00              | 6,937              | 370.1  | 370.1                  |
| 120.00             | Reinf. Top        | 0.1880           | 19.701             | 11.813             | 574.1   | 25.94 | 104.79 | 65    | 52    | 365.2  | 32.00              | 6,937              | 365.2  | 365.2                  |
| 125.00             |                   | 0.1880           | 18.918             | 11.338             | 507.7   | 24.82 | 100.63 | 65    | 52    | 360.3  | 32.00              | 6,937              | 360.3  | 360.3                  |
| 130.00             |                   | 0.1880           | 18.134             | 10.864             | 446.6   | 23.70 | 96.46  | 65    | 52    | 355.4  | 32.00              | 6,937              | 355.4  | 355.4                  |
| 135.00             |                   | 0.1880           | 17.351             | 10.390             | 390.6   | 22.59 | 92.29  | 65    | 52    | 350.5  | 32.00              | 6,937              | 350.5  | 350.5                  |
| 140.00             |                   | 0.1880           | 16.567             | 9.915              | 339.5   | 21.47 | 88.12  | 65    | 52    | 345.6  | 32.00              | 6,937              | 345.6  | 345.6                  |
| 145.00             |                   | 0.1880           | 15.784             | 9.441              | 293.1   | 20.35 | 83.96  | 65    | 52    | 340.7  | 32.00              | 6,937              | 340.7  | 340.7                  |
| 150.00             |                   | 0.1880           | 15.000             | 8.967              | 251.1   | 19.24 | 79.79  | 65    | 52    | 335.8  | 32.00              | 6,937              | 335.8  | 335.8                  |

9,792.0

13,383.0



Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

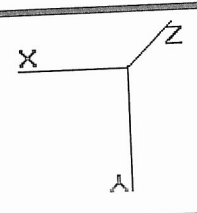
90.00 mph Wind with No Ice

Load Case: No Ice  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

24 Iterations

Code: TIA/EIA-222 Rev F

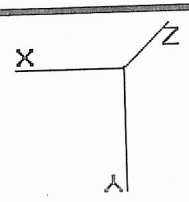
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### Discrete Apurtenance Segment Forces

| Elev (ft) | Description          | Qty | qz (pst) | qzgh (pst) | Caqa Factor | Total (st) | Horiz (ft) | Ecc (ft) | Vert (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) | Dead Load (lb) |
|-----------|----------------------|-----|----------|------------|-------------|------------|------------|----------|-----------|--------------|---------------|---------------|----------------|
| 69.00     | Channel Master 1.2 M | 1   | 25.601   | 43.265     | 1.00        | 20.91      | 0.000      | 0.000    | 0.000     | 904.67       | 0.00          | 0.00          | 188.00         |
| 93.00     | Decibel DB408        | 1   | 27.880   | 47.786     | 1.00        | 2.50       | 0.000      | 0.000    | 0.000     | 117.79       | 0.00          | 0.00          | 200.00         |
| 93.00     | Decibel DB408        | 1   | 27.880   | 47.786     | 1.00        | 2.50       | 0.000      | 0.000    | 0.000     | 117.79       | 0.00          | 0.00          | 200.00         |
| 93.00     | Standoff             | 2   | 29.074   | 49.135     | 1.00        | 5.94       | 0.000      | 0.000    | 0.000     | 121.28       | 0.00          | 0.00          | 200.00         |
| 103.0     | Decibel DB408        | 2   | 29.074   | 49.135     | 1.00        | 11.88      | 0.000      | 0.000    | 0.000     | 242.56       | 0.00          | 0.00          | 400.00         |
| 103.0     | Standoff             | 1   | 28.705   | 48.512     | 1.00        | 7.42       | 0.000      | 0.000    | 0.000     | 369.56       | 0.00          | 0.00          | 30.00          |
| 113.0     | Antel BXA-171085-8BF | 3   | 29.475   | 49.813     | 0.70        | 16.23      | 0.000      | 0.000    | 0.000     | 808.62       | 0.00          | 0.00          | 51.00          |
| 113.0     | Antel BXA-70063/6CF  | 3   | 29.475   | 49.813     | 0.93        | 12.98      | 0.000      | 0.000    | 0.000     | 397.76       | 0.00          | 0.00          | 36.00          |
| 113.0     | RFS APL866513-42T0   | 2   | 29.475   | 49.813     | 0.87        | 7.98       | 0.000      | 0.000    | 0.000     | 159.56       | 0.00          | 0.00          | 18.60          |
| 113.0     | RFS APL868013-42T0   | 4   | 29.475   | 49.813     | 0.50        | 11.11      | 0.000      | 0.000    | 0.000     | 446.60       | 0.00          | 0.00          | 25.20          |
| 113.0     | RFS FD9R6004/2C-3L   | 6   | 29.475   | 49.813     | 0.67        | 10.05      | 0.000      | 0.000    | 0.000     | 500.62       | 0.00          | 0.00          | 999.00         |
| 113.0     | T-Arm                | 1   | 30.679   | 51.848     | 1.00        | 1.40       | 0.000      | 0.000    | 0.000     | 72.59        | 0.00          | 0.00          | 10.00          |
| 130.0     | 12" x 12" Junction B | 3   | 30.679   | 51.848     | 0.69        | 10.00      | 0.000      | 0.000    | 0.000     | 518.38       | 0.00          | 0.00          | 85.80          |
| 130.0     | Argus LLPX310R       | 1   | 30.679   | 51.848     | 1.00        | 8.50       | 0.000      | 0.000    | 0.000     | 440.71       | 0.00          | 0.00          | 40.00          |
| 130.0     | Clearwire Mount      | 1   | 30.679   | 51.848     | 1.00        | 8.43       | 0.000      | 0.000    | 0.000     | 437.08       | 0.00          | 0.00          | 47.60          |
| 130.0     | DragonWave A-ANT-    | 1   | 30.679   | 51.848     | 1.00        | 1.61       | 0.000      | 0.000    | 0.000     | 83.48        | 0.00          | 0.00          | 15.00          |
| 130.0     | DragonWave A-ANT-    | 1   | 30.679   | 51.848     | 1.00        | 0.86       | 0.000      | 0.000    | 0.000     | 44.59        | 0.00          | 0.00          | 21.20          |
| 130.0     | DragonWave Horizon   | 2   | 30.679   | 51.848     | 1.00        | 1.75       | 0.000      | 0.000    | 0.000     | 237.42       | 0.00          | 0.00          | 105.00         |
| 130.0     | NextNet BTS-2500     | 3   | 31.336   | 52.958     | 0.67        | 6.83       | 0.000      | 0.000    | 0.000     | 361.91       | 0.00          | 0.00          | 42.00          |
| 140.0     | RFS APXV18-206516L-  | 3   | 31.336   | 52.958     | 0.67        | 7.04       | 0.000      | 0.000    | 0.000     | 372.56       | 0.00          | 0.00          | 56.10          |
| 140.0     | RFS APXV18-206516S-  | 3   | 31.336   | 52.958     | 0.67        | 1.75       | 0.000      | 0.000    | 0.000     | 92.94        | 0.00          | 0.00          | 39.00          |
| 140.0     | RFS ATMAA14142D-     | 3   | 31.336   | 52.958     | 0.50        | 1.75       | 0.000      | 0.000    | 0.000     | 92.94        | 0.00          | 0.00          | 39.00          |
| 140.0     | RFS ATMAA14142D-     | 3   | 31.336   | 52.958     | 0.50        | 1.75       | 0.000      | 0.000    | 0.000     | 92.94        | 0.00          | 0.00          | 39.00          |
| 140.0     | RFS ATMAP14142D-     | 3   | 31.336   | 52.958     | 0.67        | 10.05      | 0.000      | 0.000    | 0.000     | 532.23       | 0.00          | 0.00          | 999.00         |
| 140.0     | RFS ATMAA14142D-     | 3   | 31.336   | 52.958     | 0.67        | 1.50       | 0.000      | 0.000    | 0.000     | 82.38        | 0.00          | 0.00          | 5.00           |
| 140.0     | T-Arm                | 1   | 32.496   | 54.919     | 1.00        | 1.50       | 0.000      | 0.000    | 0.000     | 326.22       | 0.00          | 0.00          | 34.00          |
| 150.0     | 4' Omni              | 1   | 32.496   | 54.919     | 1.00        | 5.94       | 0.000      | 0.000    | 0.000     | 326.22       | 0.00          | 0.00          | 30.00          |
| 150.0     | Decibel DB408        | 2   | 32.496   | 54.919     | 1.00        | 1.50       | 0.000      | 0.000    | 0.000     | 54.59        | 0.00          | 0.00          | 30.00          |
| 150.0     | Diplexer             | 3   | 32.141   | 54.319     | 0.67        | 1.00       | 0.000      | 0.000    | 0.000     | 676.47       | 0.00          | 0.00          | 330.00         |
| 150.0     | Ericsson RRUS 11     | 6   | 31.960   | 54.012     | 1.00        | 12.52      | 0.000      | 0.000    | 0.000     | 676.47       | 0.00          | 0.00          | 330.00         |
| 150.0     | GPS                  | 1   | 31.960   | 54.012     | 1.00        | 0.60       | 0.000      | 0.000    | 0.000     | 32.41        | 0.00          | 0.00          | 1.50           |
| 150.0     | KMW AM-X-CD-16-65-   | 3   | 32.141   | 54.319     | 0.75        | 18.59      | 0.000      | 0.000    | 0.000     | 1,009.51     | 0.00          | 0.00          | 145.50         |
| 150.0     | KMW AWS Twin Dual    | 6   | 32.141   | 54.319     | 0.50        | 12.29      | 0.000      | 0.000    | 0.000     | 70.07        | 0.00          | 0.00          | 104.40         |
| 150.0     | KMW AWS Twin Dual    | 6   | 31.960   | 54.012     | 1.00        | 24.00      | 0.000      | 0.000    | 0.000     | 1,296.29     | 0.00          | 0.00          | 145.50         |
| 150.0     | Platform w/ Rails    | 1   | 31.960   | 54.012     | 1.00        | 12.88      | 0.000      | 0.000    | 0.000     | 699.47       | 0.00          | 0.00          | 105.00         |
| 150.0     | Powerwave 7770.00    | 3   | 32.141   | 54.319     | 0.73        | 12.88      | 0.000      | 0.000    | 0.000     | 699.47       | 0.00          | 0.00          | 105.00         |
| 150.0     | Raycap DC6-48-60-18- | 1   | 31.960   | 54.012     | 1.00        | 1.47       | 0.000      | 0.000    | 0.000     | 79.40        | 0.00          | 0.00          | 31.80          |



Base Elev: 0.000 (ft)

Pole: 302484  
 Location: Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia: 37.38 (in)  
 Top Dia: 15.00 (in)  
 Shape: 12 Sides  
 Taper: 0.156705 (in/ft)

24 Iterations

90.00 mph Wind with No Ice

Load Case: No Ice

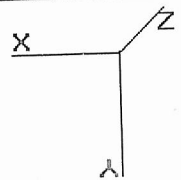
Gust Response Factor: 1.69

Dead Load Factor: 1.00

Wind Load Factor: 1.00

Linear Appurtenance Segment Forces

| Seg Top | Elev (ft) | Description      | To Wind | Exposed Length (ft) | Weight (lb/ft) | CaAa (st/ft) | qz (psf) | FX (lb)  | Dead Load (lb) |
|---------|-----------|------------------|---------|---------------------|----------------|--------------|----------|----------|----------------|
| 1.00    | 1.00      | (12) 1 5/8" Coax | Yes     | 1.00                | 9.84           | 0.20         | 20.736   | 7.01     | 9.84           |
| 5.00    | 5.00      | (12) 1 5/8" Coax | Yes     | 4.00                | 9.84           | 0.20         | 20.736   | 28.04    | 39.36          |
| 10.00   | 10.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 20.736   | 35.04    | 49.20          |
| 15.00   | 15.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 20.736   | 35.04    | 49.20          |
| 20.00   | 20.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 20.736   | 35.04    | 49.20          |
| 25.00   | 25.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 20.736   | 35.04    | 49.20          |
| 30.00   | 30.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 20.736   | 35.04    | 49.20          |
| 35.00   | 35.00     | (12) 1 5/8" Coax | Yes     | 3.50                | 9.84           | 0.20         | 21.022   | 4.80     | 6.59           |
| 35.67   | 35.67     | (12) 1 5/8" Coax | Yes     | 0.67                | 9.84           | 0.20         | 21.202   | 8.31     | 9.84           |
| 40.00   | 40.00     | (12) 1 5/8" Coax | Yes     | 4.33                | 9.84           | 0.20         | 21.908   | 32.06    | 42.61          |
| 45.00   | 45.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 22.657   | 38.29    | 49.20          |
| 50.00   | 50.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 23.350   | 39.46    | 49.20          |
| 55.00   | 55.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 23.994   | 40.55    | 49.20          |
| 59.00   | 59.00     | (12) 1 5/8" Coax | Yes     | 4.00                | 9.84           | 0.20         | 24.481   | 33.10    | 39.36          |
| 60.00   | 60.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 9.84           | 0.20         | 24.598   | 8.31     | 9.84           |
| 65.00   | 65.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 25.167   | 42.53    | 49.20          |
| 69.00   | 69.00     | (12) 1 5/8" Coax | Yes     | 4.00                | 9.84           | 0.20         | 25.601   | 34.61    | 39.36          |
| 70.00   | 70.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 9.84           | 0.20         | 25.706   | 8.69     | 9.84           |
| 70.00   | 70.00     | (12) 1 5/8" Coax | Yes     | 0.00                | 9.84           | 0.20         | 25.706   | 0.03     | 0.03           |
| 73.50   | 73.50     | (12) 1 5/8" Coax | Yes     | 3.50                | 9.84           | 0.20         | 26.067   | 30.84    | 34.44          |
| 75.00   | 75.00     | (12) 1 5/8" Coax | Yes     | 1.50                | 9.84           | 0.20         | 26.218   | 13.26    | 14.73          |
| 75.00   | 75.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 26.706   | 45.13    | 49.20          |
| 80.00   | 80.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 27.172   | 49.20    | 49.20          |
| 85.00   | 85.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 27.620   | 46.68    | 49.20          |
| 90.00   | 90.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 27.880   | 28.27    | 29.52          |
| 93.00   | 93.00     | (12) 1 5/8" Coax | Yes     | 3.00                | 9.84           | 0.20         | 28.050   | 18.96    | 19.68          |
| 100.00  | 100.00    | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 28.464   | 29.11    | 29.52          |
| 103.00  | 103.00    | (12) 1 5/8" Coax | Yes     | 3.00                | 9.84           | 0.20         | 28.705   | 19.51    | 19.68          |
| 105.00  | 105.00    | (12) 1 5/8" Coax | Yes     | 2.00                | 9.84           | 0.20         | 28.863   | 13.26    | 14.73          |
| 110.00  | 110.00    | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 29.250   | 49.20    | 49.20          |
| 110.00  | 110.00    | (12) 1 5/8" Coax | Yes     | 0.00                | 9.84           | 0.20         | 29.475   | 0.03     | 0.03           |
| 113.00  | 113.00    | (12) 1 5/8" Coax | Yes     | 3.00                | 9.84           | 0.20         | 29.623   | 20.03    | 19.68          |
| 115.00  | 115.00    | (12) 1 5/8" Coax | Yes     | 2.00                | 9.84           | 0.20         | 29.623   | 13.26    | 14.73          |
| 120.00  | 120.00    | (12) 1 5/8" Coax | Yes     | 5.00                | 9.84           | 0.20         | 29.986   | 50.68    | 49.20          |
| 125.00  | 125.00    | (12) 1 5/8" Coax | Yes     | 3.00                | 9.84           | 0.20         | 30.338   | 30.76    | 29.52          |
| Totals: | 1,034.73  |                  |         |                     |                |              |          | 1,210.32 |                |



Base Elev : 0.000 (ft)

Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

90.00 mph Wind with No Ice

24 Iterations

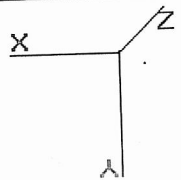
Load Case: No Ice  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

Applied Segment Forces Summary

| Seg     | Elev (ft) | Lateral (lb) | Axial (lb) | Torsion (lb-ft) | Moment (lb-ft) |
|---------|-----------|--------------|------------|-----------------|----------------|
| 0.00    | 0.00      | 0.00         | 0.00       | 0.00            | 0.00           |
| 1.00    | 119.21    | 280.56       | 1115.80    | 0.00            | 0.00           |
| 5.00    | 472.12    | 1380.27      | 1364.17    | 0.00            | 0.00           |
| 10.00   | 567.77    | 1364.17      | 1348.07    | 0.00            | 0.00           |
| 15.00   | 555.98    | 1348.07      | 1331.98    | 0.00            | 0.00           |
| 20.00   | 544.20    | 1331.98      | 1315.88    | 0.00            | 0.00           |
| 30.00   | 532.41    | 1315.88      | 1299.81    | 0.00            | 0.00           |
| 31.50   | 157.78    | 392.49       | 375.70     | 0.00            | 0.00           |
| 35.67   | 71.71     | 246.83       | 71.71      | 0.00            | 0.00           |
| 35.00   | 473.45    | 1029.55      | 1176.32    | 0.00            | 0.00           |
| 40.00   | 553.41    | 1176.32      | 1162.88    | 0.00            | 0.00           |
| 45.00   | 557.05    | 1162.88      | 1149.44    | 0.00            | 0.00           |
| 50.00   | 558.79    | 1149.44      | 1149.44    | 0.00            | 0.00           |
| 55.00   | 558.79    | 1149.44      | 1149.44    | 0.00            | 0.00           |
| 59.00   | 446.08    | 909.88       | 909.88     | 0.00            | 0.00           |
| 60.00   | 110.66    | 226.13       | 850.57     | 0.00            | 0.00           |
| 65.00   | 1347.87   | 858.79       | 858.79     | 0.00            | 0.00           |
| 69.00   | 109.80    | 166.27       | 166.27     | 0.00            | 0.00           |
| 70.00   | 0.37      | 0.55         | 0.55       | 0.00            | 0.00           |
| 70.00   | 391.63    | 836.69       | 220.42     | 0.00            | 0.00           |
| 73.50   | 166.21    | 220.42       | 166.21     | 0.00            | 0.00           |
| 75.00   | 555.74    | 729.40       | 718.67     | 0.00            | 0.00           |
| 80.00   | 550.01    | 718.67       | 707.94     | 0.00            | 0.00           |
| 85.00   | 543.37    | 707.94       | 647.61     | 0.00            | 0.00           |
| 90.00   | 568.30    | 647.61       | 276.93     | 0.00            | 0.00           |
| 93.00   | 212.44    | 276.93       | 684.82     | 0.00            | 0.00           |
| 95.00   | 527.62    | 684.82       | 639.74     | 0.00            | 0.00           |
| 100.00  | 724.57    | 267.03       | 267.03     | 0.00            | 0.00           |
| 103.00  | 205.48    | 660.06       | 660.06     | 0.00            | 0.00           |
| 105.00  | 0.33      | 0.44         | 0.44       | 0.00            | 0.00           |
| 110.00  | 3,077.79  | 1,508.32     | 219.65     | 0.00            | 0.00           |
| 113.00  | 197.42    | 219.65       | 197.42     | 0.00            | 0.00           |
| 115.00  | 487.67    | 543.49       | 543.49     | 0.00            | 0.00           |
| 120.00  | 455.64    | 248.66       | 248.66     | 0.00            | 0.00           |
| 125.00  | 2,246.49  | 543.05       | 543.05     | 0.00            | 0.00           |
| 130.00  | 399.08    | 209.40       | 209.40     | 0.00            | 0.00           |
| 135.00  | 1,838.01  | 1,376.43     | 1,376.43   | 0.00            | 0.00           |
| 140.00  | 371.34    | 180.96       | 180.96     | 0.00            | 0.00           |
| 145.00  | 4,683.59  | 2,910.09     | 2,910.09   | 0.00            | 0.00           |
| 150.00  | 27,403.08 | 31,733.08    | 31,733.08  | 0.00            | 0.00           |
| Totals: |           |              |            |                 | 11,160.67      |
|         |           |              |            |                 | 9,178.29       |
|         |           |              |            |                 | 1,374.68       |
|         |           |              |            |                 | 607.70         |







Code: TIA/EIA-222 Rev F

Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

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**Load Case: No Ice**  
 90.00 mph Wind with No Ice  
 24 Iterations

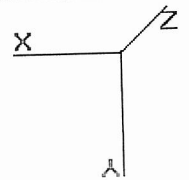
Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

**Calculated Stresses**

| Seg    | Elev (ft) | Axial (Y) (ksi) | Shear (X) (ksi) | Shear (Z) (ksi) | Torsion (ksi) | Bending (X) (ksi) | Bending (Z) (ksi) | Combined (ksi) | Allowable Stress (Fb) (ksi) | Stress Ratio |
|--------|-----------|-----------------|-----------------|-----------------|---------------|-------------------|-------------------|----------------|-----------------------------|--------------|
| 0.00   | 0.00      | 0.41            | 1.25            | 1.25            | 0.00          | 0.00              | 38.12             | 38.59          | 52.0                        | 0.0          |
| 1.00   | 1.00      | 0.41            | 1.25            | 1.25            | 0.00          | 0.00              | 37.94             | 38.41          | 52.0                        | 0.0          |
| 1.00   | 1.00      | 0.40            | 1.25            | 1.25            | 0.00          | 0.00              | 37.19             | 37.67          | 52.0                        | 0.0          |
| 5.00   | 5.00      | 0.40            | 1.26            | 1.26            | 0.00          | 0.00              | 36.22             | 36.67          | 52.0                        | 0.0          |
| 10.00  | 10.00     | 0.38            | 1.26            | 1.26            | 0.00          | 0.00              | 35.22             | 35.66          | 52.0                        | 0.0          |
| 15.00  | 15.00     | 0.37            | 1.26            | 1.26            | 0.00          | 0.00              | 34.18             | 34.60          | 52.0                        | 0.0          |
| 20.00  | 20.00     | 0.35            | 1.27            | 1.27            | 0.00          | 0.00              | 33.10             | 33.51          | 52.0                        | 0.0          |
| 25.00  | 25.00     | 0.34            | 1.28            | 1.28            | 0.00          | 0.00              | 31.98             | 32.38          | 52.0                        | 0.0          |
| 30.00  | 30.00     | 0.32            | 1.28            | 1.28            | 0.00          | 0.00              | 31.65             | 32.04          | 52.0                        | 0.0          |
| 31.50  | 31.50     | 0.32            | 1.28            | 1.28            | 0.00          | 0.00              | 30.30             | 30.68          | 52.0                        | 0.0          |
| 35.00  | 35.00     | 0.30            | 1.29            | 1.29            | 0.00          | 0.00              | 32.14             | 32.57          | 52.0                        | 0.0          |
| 35.67  | 35.67     | 0.33            | 1.51            | 1.51            | 0.00          | 0.00              | 31.00             | 31.42          | 52.0                        | 0.0          |
| 40.00  | 40.00     | 0.31            | 1.52            | 1.52            | 0.00          | 0.00              | 29.65             | 30.06          | 52.0                        | 0.0          |
| 45.00  | 45.00     | 0.30            | 1.52            | 1.52            | 0.00          | 0.00              | 28.25             | 28.66          | 52.0                        | 0.0          |
| 50.00  | 50.00     | 0.28            | 1.52            | 1.52            | 0.00          | 0.00              | 26.82             | 27.21          | 52.0                        | 0.0          |
| 55.00  | 55.00     | 0.26            | 1.53            | 1.53            | 0.00          | 0.00              | 25.65             | 26.04          | 52.0                        | 0.0          |
| 59.00  | 59.00     | 0.25            | 1.53            | 1.53            | 0.00          | 0.00              | 25.65             | 26.04          | 52.0                        | 0.0          |
| 59.00  | 59.00     | 0.25            | 1.53            | 1.53            | 0.00          | 0.00              | 25.36             | 25.74          | 52.0                        | 0.0          |
| 60.00  | 60.00     | 0.25            | 1.53            | 1.53            | 0.00          | 0.00              | 35.42             | 35.85          | 52.0                        | 0.0          |
| 60.00  | 60.00     | 0.34            | 1.53            | 1.53            | 0.00          | 0.00              | 33.87             | 33.87          | 52.0                        | 0.0          |
| 65.00  | 65.00     | 0.32            | 1.53            | 1.53            | 0.00          | 0.00              | 31.81             | 32.22          | 52.0                        | 0.0          |
| 69.00  | 69.00     | 0.31            | 1.47            | 1.47            | 0.00          | 0.00              | 31.43             | 31.84          | 52.0                        | 0.0          |
| 70.00  | 70.00     | 0.31            | 1.47            | 1.47            | 0.00          | 0.00              | 31.43             | 31.83          | 52.0                        | 0.0          |
| 70.00  | 70.00     | 0.30            | 1.47            | 1.47            | 0.00          | 0.00              | 32.20             | 32.67          | 52.0                        | 0.0          |
| 70.00  | 70.00     | 0.33            | 1.80            | 1.80            | 0.00          | 0.00              | 31.54             | 32.01          | 52.0                        | 0.0          |
| 73.50  | 73.50     | 0.33            | 1.80            | 1.80            | 0.00          | 0.00              | 31.54             | 32.01          | 52.0                        | 0.0          |
| 75.00  | 75.00     | 0.32            | 1.80            | 1.80            | 0.00          | 0.00              | 29.25             | 29.72          | 52.0                        | 0.0          |
| 80.00  | 80.00     | 0.30            | 1.80            | 1.80            | 0.00          | 0.00              | 26.90             | 27.37          | 52.0                        | 0.0          |
| 85.00  | 85.00     | 0.29            | 1.80            | 1.80            | 0.00          | 0.00              | 24.96             | 24.96          | 52.0                        | 0.0          |
| 90.00  | 90.00     | 0.27            | 1.80            | 1.80            | 0.00          | 0.00              | 23.00             | 23.46          | 52.0                        | 0.0          |
| 93.00  | 93.00     | 0.26            | 1.77            | 1.77            | 0.00          | 0.00              | 22.04             | 22.50          | 52.0                        | 0.0          |
| 95.00  | 95.00     | 0.25            | 1.78            | 1.78            | 0.00          | 0.00              | 19.55             | 20.02          | 52.0                        | 0.0          |
| 100.00 | 100.00    | 0.24            | 1.73            | 1.73            | 0.00          | 0.00              | 17.01             | 17.48          | 52.0                        | 0.0          |
| 103.00 | 103.00    | 0.22            | 1.73            | 1.73            | 0.00          | 0.00              | 17.98             | 18.45          | 52.0                        | 0.0          |
| 105.00 | 105.00    | 0.21            | 1.73            | 1.73            | 0.00          | 0.00              | 14.49             | 14.99          | 52.0                        | 0.0          |
| 110.00 | 110.00    | 0.20            | 1.72            | 1.72            | 0.00          | 0.00              | 14.48             | 14.98          | 52.0                        | 0.0          |
| 110.00 | 110.00    | 0.23            | 2.29            | 2.29            | 0.00          | 0.00              | 15.30             | 16.30          | 52.0                        | 0.0          |
| 113.00 | 113.00    | 0.19            | 1.82            | 1.82            | 0.00          | 0.00              | 13.06             | 13.60          | 52.0                        | 0.0          |
| 115.00 | 115.00    | 0.18            | 1.81            | 1.81            | 0.00          | 0.00              | 10.87             | 11.47          | 52.0                        | 0.0          |
| 120.00 | 120.00    | 0.16            | 1.80            | 1.80            | 0.00          | 0.00              | 50.83             | 51.31          | 52.0                        | 0.0          |
| 120.00 | 120.00    | 0.38            | 1.79            | 1.79            | 0.00          | 0.00              | 43.11             | 43.60          | 52.0                        | 0.0          |
| 125.00 | 125.00    | 0.36            | 1.45            | 1.45            | 0.00          | 0.00              | 26.94             | 27.41          | 52.0                        | 0.0          |
| 130.00 | 130.00    | 0.36            | 1.43            | 1.43            | 0.00          | 0.00              | 18.48             | 18.83          | 52.0                        | 0.0          |
| 135.00 | 135.00    | 0.25            | 1.10            | 1.10            | 0.00          | 0.00              | 11.41             | 11.81          | 52.0                        | 0.0          |
| 145.00 | 145.00    | 0.25            | 1.07            | 1.07            | 0.00          | 0.00              | 3.41              | 3.87           | 52.0                        | 0.0          |
| 150.00 | 150.00    | 0.00            | 1.06            | 1.06            | 0.00          | 0.00              | 0.00              | 0.00           | 52.0                        | 0.0          |

Pole: 302484  
 Location: Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia: 37.38 (in)  
 Top Dia: 15.00 (in)  
 Shape: 12 Sides  
 Taper: 0.156705 (in/ft)

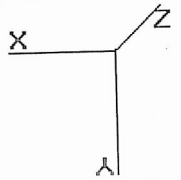
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**Load Case: Ice**  
 Gust Response Factor: 1.69  
 Dead Load Factor: 1.00  
 Wind Load Factor: 1.00

24 Iterations

| Seg Top | Elev (ft) | Description           | Kz (psf) | qz (psf) | qzGh C (psf) | Cf (mph-ft) | Ice (in) | Thick Tributary (ft) | Aa (sf) | CFAa (sf) | Wind Force X (lb) | Dead Load (lb) | Tot Dead Load (lb) |
|---------|-----------|-----------------------|----------|----------|--------------|-------------|----------|----------------------|---------|-----------|-------------------|----------------|--------------------|
| 1.00    | 150.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 241.76       | 1.030       | 0.500    | 1.00                 | 3.192   | 0.00      | 86.4              | 23.6           | 284.1              |
| 5.00    | 145.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 237.69       | 1.030       | 0.500    | 4.00                 | 12.637  | 13.02     | 342.1             | 92.9           | 1,128.6            |
| 10.00   | 140.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 232.60       | 1.030       | 0.500    | 5.00                 | 15.502  | 15.97     | 419.6             | 113.7          | 1,393.8            |
| 15.00   | 135.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 227.51       | 1.030       | 0.500    | 5.00                 | 15.175  | 15.63     | 410.8             | 111.2          | 1,375.2            |
| 20.00   | 130.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 222.42       | 1.030       | 0.500    | 5.00                 | 14.849  | 15.29     | 402.0             | 108.8          | 1,356.7            |
| 25.00   | 125.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 217.33       | 1.030       | 0.500    | 5.00                 | 14.523  | 14.96     | 393.1             | 106.3          | 1,338.1            |
| 30.00   | 120.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 212.24       | 1.030       | 0.500    | 5.00                 | 14.196  | 14.62     | 384.3             | 103.9          | 1,319.6            |
| 35.00   | 115.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 207.15       | 1.030       | 0.500    | 5.00                 | 13.870  | 14.28     | 375.5             | 101.4          | 1,301.1            |
| 40.00   | 110.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 202.06       | 1.030       | 0.500    | 5.00                 | 13.544  | 13.93     | 366.7             | 98.9           | 1,282.6            |
| 45.00   | 105.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 196.97       | 1.030       | 0.500    | 5.00                 | 13.218  | 13.58     | 357.9             | 96.4           | 1,264.1            |
| 50.00   | 100.0     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 191.88       | 1.030       | 0.500    | 5.00                 | 12.892  | 13.23     | 349.1             | 93.9           | 1,245.6            |
| 55.00   | 95.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 186.79       | 1.030       | 0.500    | 5.00                 | 12.566  | 12.88     | 340.3             | 91.4           | 1,227.1            |
| 60.00   | 90.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 181.70       | 1.030       | 0.500    | 5.00                 | 12.240  | 12.52     | 331.5             | 88.9           | 1,208.6            |
| 65.00   | 85.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 176.61       | 1.030       | 0.500    | 5.00                 | 11.914  | 12.17     | 322.7             | 86.4           | 1,190.1            |
| 70.00   | 80.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 171.52       | 1.030       | 0.500    | 5.00                 | 11.588  | 11.81     | 313.9             | 83.9           | 1,171.6            |
| 75.00   | 75.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 166.43       | 1.030       | 0.500    | 5.00                 | 11.262  | 11.45     | 305.1             | 81.4           | 1,153.1            |
| 80.00   | 70.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 161.34       | 1.030       | 0.500    | 5.00                 | 10.936  | 11.09     | 296.3             | 78.9           | 1,134.6            |
| 85.00   | 65.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 156.25       | 1.030       | 0.500    | 5.00                 | 10.610  | 10.73     | 287.5             | 76.4           | 1,116.1            |
| 90.00   | 60.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 151.16       | 1.030       | 0.500    | 5.00                 | 10.284  | 10.37     | 278.7             | 73.9           | 1,097.6            |
| 93.00   | 55.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 146.07       | 1.030       | 0.500    | 5.00                 | 9.958   | 10.01     | 269.9             | 71.4           | 1,079.1            |
| 95.00   | 50.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 140.98       | 1.030       | 0.500    | 5.00                 | 9.632   | 9.65      | 261.1             | 68.9           | 1,060.6            |
| 98.00   | 45.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 135.89       | 1.030       | 0.500    | 5.00                 | 9.306   | 9.29      | 252.3             | 66.4           | 1,042.1            |
| 100.00  | 40.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 130.80       | 1.030       | 0.500    | 5.00                 | 8.980   | 8.93      | 243.5             | 63.9           | 1,023.6            |
| 103.00  | 35.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 125.71       | 1.030       | 0.500    | 5.00                 | 8.654   | 8.57      | 234.7             | 61.4           | 1,005.1            |
| 105.00  | 30.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 120.62       | 1.030       | 0.500    | 5.00                 | 8.328   | 8.21      | 225.9             | 58.9           | 986.6              |
| 108.00  | 25.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 115.53       | 1.030       | 0.500    | 5.00                 | 8.002   | 7.85      | 217.1             | 56.4           | 968.1              |
| 110.00  | 20.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 110.44       | 1.030       | 0.500    | 5.00                 | 7.676   | 7.49      | 208.3             | 53.9           | 949.6              |
| 113.00  | 15.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 105.35       | 1.030       | 0.500    | 5.00                 | 7.350   | 7.13      | 199.5             | 51.4           | 931.1              |
| 115.00  | 10.00     | Reinf. Top Reinf. Top | 0.00     | 26.28    | 100.26       | 1.030       | 0.500    | 5.00                 | 7.024   | 6.77      | 190.7             | 48.9           | 912.6              |
| 118.00  | 5.00      | Reinf. Top Reinf. Top | 0.00     | 26.28    | 95.17        | 1.030       | 0.500    | 5.00                 | 6.698   | 6.41      | 181.9             | 46.4           | 894.1              |
| 120.00  | 0.00      | Reinf. Top Reinf. Top | 0.00     | 26.28    | 90.08        | 1.030       | 0.500    | 5.00                 | 6.372   | 6.05      | 173.1             | 43.9           | 875.6              |
| 125.00  | 150.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 84.99        | 1.030       | 0.500    | 5.00                 | 6.046   | 5.69      | 164.3             | 41.4           | 857.1              |
| 130.00  | 145.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 79.90        | 1.030       | 0.500    | 5.00                 | 5.720   | 5.33      | 155.5             | 38.9           | 838.6              |
| 135.00  | 140.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 74.81        | 1.030       | 0.500    | 5.00                 | 5.394   | 5.07      | 146.7             | 36.4           | 820.1              |
| 140.00  | 135.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 69.72        | 1.030       | 0.500    | 5.00                 | 5.068   | 4.71      | 138.1             | 33.9           | 801.6              |
| 145.00  | 130.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 64.63        | 1.030       | 0.500    | 5.00                 | 4.742   | 4.35      | 129.5             | 31.4           | 783.1              |
| 150.00  | 125.00    | Reinf. Top Reinf. Top | 0.00     | 26.28    | 59.54        | 1.030       | 0.500    | 5.00                 | 4.416   | 4.00      | 120.9             | 28.9           | 764.6              |
| Totals: |           |                       |          |          |              |             |          |                      |         |           |                   |                |                    |
|         |           |                       |          |          |              |             |          |                      | 150.00  |           | 11,232.9          | 2,492.7        | 25,667.8           |



Base Elev : 0.000 (ft)  
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Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

**Load Case: Ice**  
 77.94 mph Wind with Ice  
 24 Iterations  
 Gust Response Factor : 1.69  
 Dead Load Factor : 1.00  
 Wind Load Factor : 1.00

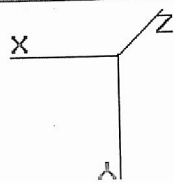
**Discrete Appurtenance Segment Forces**

| Elev (ft) | Description          | Qty | qz (psf) | qzgh (psf) | CaA Factor | Total CaA (sf) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) | Dead Load (lb) |
|-----------|----------------------|-----|----------|------------|------------|----------------|----------------|---------------|--------------|---------------|---------------|----------------|
| 69.00     | Channel Master 1.2 M | 1   | 19.199   | 32.447     | 1.00       | 21.79          | 0.000          | 0.000         | 707.01       | 0.00          | 0.00          | 277.00         |
| 93.00     | Decibel DB408        | 1   | 21.206   | 35.838     | 1.00       | 4.86           | 0.000          | 4.710         | 174.17       | 0.00          | 820.34        | 50.00          |
| 93.00     | Standoff             | 1   | 20.908   | 35.335     | 1.00       | 3.50           | 0.000          | 4.710         | 123.67       | 0.00          | 1,926.52      | 300.00         |
| 103.0     | Decibel DB408        | 2   | 21.804   | 36.849     | 1.00       | 11.10          | 0.000          | 4.710         | 409.03       | 0.00          | 1,926.52      | 82.00          |
| 103.0     | Standoff             | 1   | 21.528   | 36.382     | 1.00       | 3.50           | 0.000          | 0.000         | 127.34       | 0.00          | 0.00          | 300.00         |
| 113.0     | Antel BXA-171085-8BF | 3   | 22.105   | 37.358     | 0.84       | 8.82           | 0.000          | 0.000         | 329.49       | 0.00          | 0.00          | 174.00         |
| 113.0     | Antel BXA-70063/6CF  | 3   | 22.105   | 37.358     | 0.70       | 17.93          | 0.000          | 0.000         | 669.96       | 0.00          | 0.00          | 78.97          |
| 113.0     | RFS APL866513-42T0   | 4   | 22.105   | 37.358     | 0.93       | 9.04           | 0.000          | 0.000         | 337.63       | 0.00          | 0.00          | 126.72         |
| 113.0     | RFS APL868013-42T0   | 2   | 22.105   | 37.358     | 0.87       | 14.93          | 0.000          | 0.000         | 557.72       | 0.00          | 0.00          | 32.40          |
| 113.0     | RFS FD9R6004/2C-3L   | 6   | 22.105   | 37.358     | 0.50       | 1.50           | 0.000          | 0.000         | 56.04        | 0.00          | 0.00          | 1,299.00       |
| 113.0     | T-Arm                | 3   | 22.105   | 37.358     | 0.67       | 16.21          | 0.000          | 0.000         | 605.50       | 0.00          | 0.00          | 21.90          |
| 130.0     | 12" x 12" Junction B | 3   | 23.008   | 38.884     | 1.00       | 16.08          | 0.000          | 0.000         | 625.25       | 0.00          | 0.00          | 163.50         |
| 130.0     | Argus LLPX310R       | 1   | 23.008   | 38.884     | 1.00       | 10.50          | 0.000          | 0.000         | 408.28       | 0.00          | 0.00          | 50.00          |
| 130.0     | Clearwire Mount      | 1   | 23.008   | 38.884     | 1.00       | 8.92           | 0.000          | 0.000         | 346.84       | 0.00          | 0.00          | 61.80          |
| 130.0     | DragonWave A-ANT-    | 1   | 23.008   | 38.884     | 1.00       | 1.83           | 0.000          | 0.000         | 71.16        | 0.00          | 0.00          | 25.10          |
| 130.0     | DragonWave A-ANT-    | 1   | 23.008   | 38.884     | 1.00       | 1.16           | 0.000          | 0.000         | 45.11        | 0.00          | 0.00          | 34.00          |
| 130.0     | DragonWave Horizon   | 2   | 23.008   | 38.884     | 1.00       | 7.29           | 0.000          | 0.000         | 283.46       | 0.00          | 0.00          | 144.90         |
| 130.0     | NextNet BTS-2500     | 3   | 23.008   | 38.884     | 1.00       | 8.36           | 0.000          | 0.000         | 324.90       | 0.00          | 0.00          | 105.00         |
| 140.0     | RFS APXV18-206516L-  | 3   | 23.501   | 39.716     | 0.67       | 8.18           | 0.000          | 0.000         | 322.09       | 0.00          | 0.00          | 116.10         |
| 140.0     | RFS APXV18-206516S-  | 3   | 23.501   | 39.716     | 0.67       | 2.09           | 0.000          | 0.000         | 82.81        | 0.00          | 0.00          | 61.80          |
| 140.0     | RFS ATMA1412D-       | 3   | 23.501   | 39.716     | 0.50       | 2.08           | 0.000          | 0.000         | 82.80        | 0.00          | 0.00          | 61.80          |
| 140.0     | RFS ATMAP1412D-      | 3   | 23.501   | 39.716     | 0.50       | 2.08           | 0.000          | 0.000         | 82.80        | 0.00          | 0.00          | 61.80          |
| 140.0     | T-Arm                | 3   | 23.501   | 39.716     | 0.67       | 16.28          | 0.000          | 0.000         | 646.62       | 0.00          | 0.00          | 1,299.00       |
| 140.0     | T-Arm                | 3   | 23.501   | 39.716     | 0.67       | 2.00           | 0.000          | 0.000         | 82.37        | 0.00          | 0.00          | 12.00          |
| 150.0     | 4' Omni              | 1   | 24.371   | 41.187     | 1.00       | 11.10          | 0.000          | 0.000         | 457.17       | 0.00          | 0.00          | 82.00          |
| 150.0     | Decibel DB408        | 2   | 24.371   | 41.187     | 1.00       | 11.10          | 0.000          | 0.000         | 457.17       | 0.00          | 0.00          | 82.00          |
| 150.0     | Diplexer             | 3   | 24.104   | 40.736     | 0.67       | 14.02          | 0.000          | 0.000         | 567.72       | 0.00          | 0.00          | 445.80         |
| 150.0     | Ericsson RRUS 11     | 6   | 23.968   | 40.507     | 0.71       | 0.80           | 0.000          | 0.000         | 32.41        | 0.00          | 0.00          | 3.50           |
| 150.0     | GPS                  | 1   | 23.968   | 40.507     | 1.00       | 0.80           | 0.000          | 0.000         | 32.41        | 0.00          | 0.00          | 3.50           |
| 150.0     | KMMW AMX-CD-16-65-   | 3   | 24.104   | 40.736     | 0.75       | 20.43          | 0.000          | 0.000         | 832.25       | 0.00          | 0.00          | 285.00         |
| 150.0     | KMMW AWS Twin Dual   | 6   | 24.104   | 40.736     | 0.50       | 1.80           | 0.000          | 0.000         | 73.33        | 0.00          | 0.00          | 147.60         |
| 150.0     | Platform w/ Rails    | 1   | 23.968   | 40.507     | 1.00       | 38.00          | 0.000          | 0.000         | 1,539.25     | 0.00          | 0.00          | 2,800.00       |
| 150.0     | Powerwave 7770.00    | 3   | 24.104   | 40.736     | 0.73       | 14.30          | 0.000          | 0.000         | 582.56       | 0.00          | 0.00          | 202.89         |
| 150.0     | Raycap DC6-48-60-18- | 1   | 23.968   | 40.507     | 1.00       | 1.67           | 0.000          | 0.000         | 67.65        | 0.00          | 0.00          | 49.50          |

11,702.65

9,054.82

Code: TIA/EIA-222 Rev F



Base Elev : 0.000 (ft)

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Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

**Load Case: Ice**

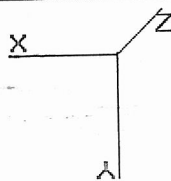
77.94 mph Wind with Ice

24 Iterations

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

**Linear Appurtenance Segment Forces**

| Seg Top | Elev (ft) | Description (ft) | To Wind | Exposed Length (ft) | Weight (lb/ft) | CaAa (st/ft) | qz (psf) | Fx (lb) | Dead Load (lb) |
|---------|-----------|------------------|---------|---------------------|----------------|--------------|----------|---------|----------------|
| 1.00    | 1.00      | (12) 1 5/8" Coax | Yes     | 1.00                | 28.56          | 0.30         | 15.551   | 7.88    | 28.56          |
| 5.00    | 5.00      | (12) 1 5/8" Coax | Yes     | 4.00                | 28.56          | 0.30         | 15.551   | 31.54   | 114.24         |
| 10.00   | 10.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 15.551   | 39.42   | 142.80         |
| 15.00   | 15.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 15.551   | 39.42   | 142.80         |
| 20.00   | 20.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 15.551   | 39.42   | 142.80         |
| 25.00   | 25.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 15.551   | 39.42   | 142.80         |
| 30.00   | 30.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 15.551   | 39.42   | 142.80         |
| 31.50   | 31.50     | (12) 1 5/8" Coax | Yes     | 1.50                | 28.56          | 0.30         | 15.551   | 11.85   | 42.94          |
| 35.00   | 35.00     | (12) 1 5/8" Coax | Yes     | 3.50                | 28.56          | 0.30         | 15.551   | 28.04   | 99.86          |
| 35.67   | 35.67     | (12) 1 5/8" Coax | Yes     | 0.67                | 28.56          | 0.30         | 15.901   | 5.40    | 19.14          |
| 40.00   | 40.00     | (12) 1 5/8" Coax | Yes     | 4.33                | 28.56          | 0.30         | 16.430   | 36.07   | 123.66         |
| 45.00   | 45.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 16.992   | 43.07   | 142.80         |
| 45.00   | 45.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 17.511   | 44.39   | 142.80         |
| 50.00   | 50.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 17.995   | 45.62   | 142.80         |
| 55.00   | 55.00     | (12) 1 5/8" Coax | Yes     | 4.00                | 28.56          | 0.30         | 18.359   | 37.23   | 114.24         |
| 59.00   | 59.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 28.56          | 0.30         | 18.448   | 9.35    | 28.56          |
| 60.00   | 60.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 28.56          | 0.30         | 18.874   | 47.85   | 142.80         |
| 65.00   | 65.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 19.199   | 38.94   | 114.24         |
| 69.00   | 69.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 28.56          | 0.30         | 19.278   | 9.77    | 28.56          |
| 70.00   | 70.00     | (12) 1 5/8" Coax | Yes     | 1.00                | 28.56          | 0.30         | 19.279   | 0.03    | 0.10           |
| 70.00   | 70.00     | (12) 1 5/8" Coax | Yes     | 0.00                | 28.56          | 0.30         | 19.279   | 34.69   | 99.96          |
| 73.50   | 73.50     | (12) 1 5/8" Coax | Yes     | 3.50                | 28.56          | 0.30         | 19.549   | 42.74   | 142.80         |
| 75.00   | 75.00     | (12) 1 5/8" Coax | Yes     | 1.50                | 28.56          | 0.30         | 19.662   | 14.92   | 42.74          |
| 80.00   | 80.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 20.028   | 50.77   | 142.80         |
| 85.00   | 85.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 20.378   | 51.66   | 142.80         |
| 85.00   | 85.00     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 20.714   | 52.51   | 142.80         |
| 90.00   | 90.00     | (12) 1 5/8" Coax | Yes     | 3.00                | 28.56          | 0.30         | 20.908   | 31.80   | 85.68          |
| 93.00   | 93.00     | (12) 1 5/8" Coax | Yes     | 2.00                | 28.56          | 0.30         | 21.036   | 21.33   | 57.12          |
| 95.00   | 95.00     | (12) 1 5/8" Coax | Yes     | 2.00                | 28.56          | 0.30         | 21.347   | 54.11   | 142.80         |
| 100.00  | 100.00    | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 21.528   | 32.74   | 85.68          |
| 103.0   | 103.0     | (12) 1 5/8" Coax | Yes     | 3.00                | 28.56          | 0.30         | 21.646   | 21.95   | 57.12          |
| 105.0   | 105.0     | (12) 1 5/8" Coax | Yes     | 2.00                | 28.56          | 0.30         | 21.936   | 55.61   | 142.80         |
| 110.0   | 110.0     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 21.936   | 0.04    | 0.10           |
| 110.0   | 110.0     | (12) 1 5/8" Coax | Yes     | 0.00                | 28.56          | 0.30         | 21.936   | 33.58   | 85.58          |
| 113.0   | 113.0     | (12) 1 5/8" Coax | Yes     | 3.00                | 28.56          | 0.30         | 22.105   | 22.53   | 57.12          |
| 115.0   | 115.0     | (12) 1 5/8" Coax | Yes     | 2.00                | 28.56          | 0.30         | 22.216   | 57.01   | 142.80         |
| 120.0   | 120.0     | (12) 1 5/8" Coax | Yes     | 5.00                | 28.56          | 0.30         | 22.488   | 34.61   | 85.68          |
| 125.0   | 125.0     | (12) 1 5/8" Coax | Yes     | 3.00                | 28.56          | 0.30         | 22.752   | 85.68   | 3,512.87       |
| Totals: |           |                  |         |                     |                |              |          |         | 1,164.00       |



Code: TIA/EIA-222 Rev F

Base Elev: 0.000 (ft)

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Pole: 302484  
 Location: Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia: 37.38 (in)  
 Top Dia: 15.00 (in)  
 Shape: 12 Sides  
 Taper: 0.156705 (in/ft)

**Load Case: Ice**

77.94 mph Wind with Ice

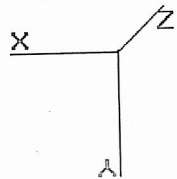
24 Iterations

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

**Applied Segment Forces Summary**

| Seg     | Elev (ft) | Lateral (lb) | Axial (lb) | Torsion (lb-ft) | Moment (lb-ft) |
|---------|-----------|--------------|------------|-----------------|----------------|
| 0.00    | 0.00      | 0.00         | 0.00       | 0.00            | 0.00           |
| 1.00    | 1.00      | 94.29        | 322.90     | 0.00            | 0.00           |
| 5.00    | 5.00      | 373.61       | 1,283.59   | 0.00            | 0.00           |
| 10.00   | 10.00     | 459.06       | 1,587.55   | 0.00            | 0.00           |
| 15.00   | 15.00     | 450.22       | 1,569.00   | 0.00            | 0.00           |
| 20.00   | 20.00     | 441.38       | 1,550.45   | 0.00            | 0.00           |
| 25.00   | 25.00     | 432.54       | 1,531.90   | 0.00            | 0.00           |
| 30.00   | 30.00     | 423.71       | 1,513.35   | 0.00            | 0.00           |
| 31.50   | 31.50     | 125.67       | 451.64     | 0.00            | 0.00           |
| 35.00   | 35.00     | 299.13       | 1,434.57   | 0.00            | 0.00           |
| 35.67   | 35.67     | 57.12        | 273.18     | 0.00            | 0.00           |
| 40.00   | 40.00     | 377.41       | 1,198.00   | 0.00            | 0.00           |
| 40.00   | 40.00     | 441.71       | 1,368.39   | 0.00            | 0.00           |
| 45.00   | 45.00     | 445.26       | 1,352.50   | 0.00            | 0.00           |
| 45.00   | 45.00     | 447.33       | 1,336.61   | 0.00            | 0.00           |
| 50.00   | 50.00     | 357.60       | 1,058.04   | 0.00            | 0.00           |
| 50.00   | 50.00     | 88.78        | 263.07     | 0.00            | 0.00           |
| 60.00   | 60.00     | 447.74       | 1,032.83   | 0.00            | 0.00           |
| 65.00   | 65.00     | 1,063.51     | 1,092.02   | 0.00            | 0.00           |
| 70.00   | 70.00     | 88.40        | 202.23     | 0.00            | 0.00           |
| 70.00   | 70.00     | 0.29         | 0.67       | 0.00            | 0.00           |
| 73.50   | 73.50     | 315.20       | 962.44     | 0.00            | 0.00           |
| 75.00   | 75.00     | 133.89       | 273.98     | 0.00            | 0.00           |
| 80.00   | 80.00     | 448.23       | 905.86     | 0.00            | 0.00           |
| 80.00   | 80.00     | 444.48       | 892.68     | 0.00            | 0.00           |
| 85.00   | 85.00     | 440.03       | 879.50     | 0.00            | 0.00           |
| 90.00   | 90.00     | 558.64       | 871.66     | 0.00            | 0.00           |
| 93.00   | 93.00     | 172.53       | 344.58     | 0.00            | 0.00           |
| 95.00   | 95.00     | 429.21       | 851.48     | 0.00            | 0.00           |
| 100.00  | 100.00    | 790.20       | 886.85     | 0.00            | 0.00           |
| 103.00  | 103.00    | 167.70       | 332.71     | 0.00            | 0.00           |
| 105.00  | 105.00    | 416.13       | 821.81     | 0.00            | 0.00           |
| 110.00  | 110.00    | 0.27         | 0.54       | 0.00            | 0.00           |
| 110.00  | 110.00    | 2,801.64     | 2,236.91   | 0.00            | 0.00           |
| 113.00  | 113.00    | 162.01       | 283.37     | 0.00            | 0.00           |
| 115.00  | 115.00    | 401.04       | 700.33     | 0.00            | 0.00           |
| 120.00  | 120.00    | 369.75       | 365.61     | 0.00            | 0.00           |
| 125.00  | 125.00    | 2,169.72     | 813.28     | 0.00            | 0.00           |
| 130.00  | 130.00    | 316.16       | 265.28     | 0.00            | 0.00           |
| 135.00  | 135.00    | 1,775.33     | 1,898.46   | 0.00            | 0.00           |
| 140.00  | 140.00    | 295.70       | 231.94     | 0.00            | 0.00           |
| 145.00  | 145.00    | 4,576.97     | 4,294.71   | 0.00            | 0.00           |
| 150.00  | 150.00    | 24,099.57    | 39,536.48  | 0.00            | 0.00           |
| Totals: |           |              |            |                 |                |
|         |           | 24,099.57    | 39,536.48  | 0.00            | 12,239.10      |
|         |           | 4,576.97     | 4,294.71   | 0.00            | 9,492.24       |
|         |           | 2,169.72     | 813.28     | 0.00            | 0.00           |
|         |           | 1,775.33     | 1,898.46   | 0.00            | 0.00           |
|         |           | 316.16       | 265.28     | 0.00            | 0.00           |
|         |           | 401.04       | 700.33     | 0.00            | 0.00           |
|         |           | 369.75       | 365.61     | 0.00            | 0.00           |
|         |           | 2,801.64     | 2,236.91   | 0.00            | 0.00           |
|         |           | 162.01       | 283.37     | 0.00            | 0.00           |
|         |           | 416.13       | 821.81     | 0.00            | 0.00           |
|         |           | 0.27         | 0.54       | 0.00            | 0.00           |
|         |           | 167.70       | 332.71     | 0.00            | 0.00           |
|         |           | 790.20       | 886.85     | 0.00            | 1,926.52       |
|         |           | 429.21       | 851.48     | 0.00            | 0.00           |
|         |           | 172.53       | 344.58     | 0.00            | 0.00           |
|         |           | 558.64       | 871.66     | 0.00            | 820.34         |
|         |           | 440.03       | 879.50     | 0.00            | 0.00           |
|         |           | 444.48       | 892.68     | 0.00            | 0.00           |
|         |           | 905.86       | 905.86     | 0.00            | 0.00           |
|         |           | 273.98       | 273.98     | 0.00            | 0.00           |
|         |           | 133.89       | 133.89     | 0.00            | 0.00           |
|         |           | 315.20       | 962.44     | 0.00            | 0.00           |
|         |           | 0.29         | 0.67       | 0.00            | 0.00           |
|         |           | 88.40        | 202.23     | 0.00            | 0.00           |
|         |           | 1,063.51     | 1,092.02   | 0.00            | 0.00           |
|         |           | 447.74       | 1,032.83   | 0.00            | 0.00           |
|         |           | 88.78        | 263.07     | 0.00            | 0.00           |
|         |           | 357.60       | 1,058.04   | 0.00            | 0.00           |
|         |           | 447.33       | 1,336.61   | 0.00            | 0.00           |
|         |           | 445.26       | 1,352.50   | 0.00            | 0.00           |
|         |           | 441.71       | 1,368.39   | 0.00            | 0.00           |
|         |           | 377.41       | 1,198.00   | 0.00            | 0.00           |
|         |           | 57.12        | 273.18     | 0.00            | 0.00           |
|         |           | 299.13       | 1,434.57   | 0.00            | 0.00           |
|         |           | 125.67       | 451.64     | 0.00            | 0.00           |
|         |           | 423.71       | 1,513.35   | 0.00            | 0.00           |
|         |           | 432.54       | 1,531.90   | 0.00            | 0.00           |
|         |           | 441.38       | 1,550.45   | 0.00            | 0.00           |
|         |           | 450.22       | 1,569.00   | 0.00            | 0.00           |
|         |           | 459.06       | 1,587.55   | 0.00            | 0.00           |
|         |           | 373.61       | 1,283.59   | 0.00            | 0.00           |
|         |           | 94.29        | 322.90     | 0.00            | 0.00           |
|         |           | 0.00         | 0.00       | 0.00            | 0.00           |





Code: TIA/EIA-222 Rev F

Pole : 302484  
 Location : Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

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**Load Case: Ice**

77.94 mph Wind with Ice

24 Iterations

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

**Calculated Stresses**

| Seg    | Elev (ft) | Axial (Y) (ksi) | Shear (X) (ksi) | Shear (Z) (ksi) | Torsion (ksi) | Bending (X) (ksi) | Bending (Z) (ksi) | Combined (ksi) | Allowable Stress (Fb) (ksi) | Stress Ratio |
|--------|-----------|-----------------|-----------------|-----------------|---------------|-------------------|-------------------|----------------|-----------------------------|--------------|
| 0.00   | 0.00      | 0.52            | 1.10            | 0.00            | 0.00          | 0.00              | 0.00              | 35.13          | 52.0                        | 0.687        |
| 1.00   | 1.00      | 0.51            | 1.10            | 0.00            | 0.00          | 0.00              | 0.00              | 34.98          | 52.0                        | 0.684        |
| 1.00   | 1.00      | 0.51            | 1.11            | 0.00            | 0.00          | 0.00              | 0.00              | 34.36          | 52.0                        | 0.671        |
| 5.00   | 10.00     | 0.50            | 1.12            | 0.00            | 0.00          | 0.00              | 0.00              | 33.54          | 52.0                        | 0.655        |
| 15.00  | 15.00     | 0.47            | 1.12            | 0.00            | 0.00          | 0.00              | 0.00              | 32.69          | 52.0                        | 0.639        |
| 20.00  | 20.00     | 0.45            | 1.13            | 0.00            | 0.00          | 0.00              | 0.00              | 31.81          | 52.0                        | 0.622        |
| 25.00  | 25.00     | 0.43            | 1.14            | 0.00            | 0.00          | 0.00              | 0.00              | 30.88          | 52.0                        | 0.603        |
| 30.00  | 30.00     | 0.42            | 1.15            | 0.00            | 0.00          | 0.00              | 0.00              | 29.91          | 52.0                        | 0.585        |
| 31.50  | 31.50     | 0.41            | 1.15            | 0.00            | 0.00          | 0.00              | 0.00              | 29.62          | 52.0                        | 0.579        |
| 35.00  | 35.00     | 0.40            | 1.16            | 0.00            | 0.00          | 0.00              | 0.00              | 28.41          | 52.0                        | 0.555        |
| 35.67  | 35.67     | 0.43            | 1.36            | 0.00            | 0.00          | 0.00              | 0.00              | 30.15          | 52.0                        | 0.590        |
| 40.00  | 40.00     | 0.41            | 1.37            | 0.00            | 0.00          | 0.00              | 0.00              | 29.15          | 52.0                        | 0.570        |
| 45.00  | 45.00     | 0.39            | 1.38            | 0.00            | 0.00          | 0.00              | 0.00              | 27.95          | 52.0                        | 0.547        |
| 45.00  | 45.00     | 0.36            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 26.71          | 52.0                        | 0.523        |
| 50.00  | 50.00     | 0.38            | 1.39            | 0.00            | 0.00          | 0.00              | 0.00              | 25.43          | 52.0                        | 0.498        |
| 55.00  | 55.00     | 0.36            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.38          | 52.0                        | 0.478        |
| 59.00  | 59.00     | 0.34            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.84          | 52.0                        | 0.478        |
| 59.00  | 59.00     | 0.34            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.38          | 52.0                        | 0.473        |
| 60.00  | 60.00     | 0.34            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.84          | 52.0                        | 0.473        |
| 60.00  | 60.00     | 0.34            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.84          | 52.0                        | 0.473        |
| 60.00  | 60.00     | 0.34            | 1.40            | 0.00            | 0.00          | 0.00              | 0.00              | 24.84          | 52.0                        | 0.473        |
| 65.00  | 65.00     | 0.45            | 1.41            | 0.00            | 0.00          | 0.00              | 0.00              | 31.90          | 52.0                        | 0.624        |
| 69.00  | 69.00     | 0.43            | 1.37            | 0.00            | 0.00          | 0.00              | 0.00              | 30.59          | 52.0                        | 0.588        |
| 70.00  | 70.00     | 0.42            | 1.37            | 0.00            | 0.00          | 0.00              | 0.00              | 30.08          | 52.0                        | 0.588        |
| 70.00  | 70.00     | 0.42            | 1.37            | 0.00            | 0.00          | 0.00              | 0.00              | 30.08          | 52.0                        | 0.588        |
| 70.00  | 70.00     | 0.42            | 1.37            | 0.00            | 0.00          | 0.00              | 0.00              | 30.08          | 52.0                        | 0.588        |
| 73.50  | 73.50     | 0.46            | 1.68            | 0.00            | 0.00          | 0.00              | 0.00              | 30.85          | 52.0                        | 0.593        |
| 75.00  | 75.00     | 0.45            | 1.69            | 0.00            | 0.00          | 0.00              | 0.00              | 30.25          | 52.0                        | 0.552        |
| 80.00  | 80.00     | 0.43            | 1.70            | 0.00            | 0.00          | 0.00              | 0.00              | 28.72          | 52.0                        | 0.524        |
| 85.00  | 85.00     | 0.42            | 1.71            | 0.00            | 0.00          | 0.00              | 0.00              | 26.52          | 52.0                        | 0.466        |
| 90.00  | 90.00     | 0.40            | 1.71            | 0.00            | 0.00          | 0.00              | 0.00              | 24.25          | 52.0                        | 0.439        |
| 93.00  | 93.00     | 0.38            | 1.68            | 0.00            | 0.00          | 0.00              | 0.00              | 22.82          | 52.0                        | 0.421        |
| 95.00  | 95.00     | 0.37            | 1.69            | 0.00            | 0.00          | 0.00              | 0.00              | 22.25          | 52.0                        | 0.376        |
| 100.00 | 100.00    | 0.35            | 1.70            | 0.00            | 0.00          | 0.00              | 0.00              | 19.56          | 52.0                        | 0.347        |
| 103.00 | 103.00    | 0.33            | 1.64            | 0.00            | 0.00          | 0.00              | 0.00              | 17.47          | 52.0                        | 0.329        |
| 105.00 | 105.00    | 0.32            | 1.64            | 0.00            | 0.00          | 0.00              | 0.00              | 16.55          | 52.0                        | 0.284        |
| 110.00 | 110.00    | 0.30            | 1.65            | 0.00            | 0.00          | 0.00              | 0.00              | 14.74          | 52.0                        | 0.284        |
| 110.00 | 110.00    | 0.30            | 1.65            | 0.00            | 0.00          | 0.00              | 0.00              | 14.74          | 52.0                        | 0.284        |
| 110.00 | 110.00    | 0.30            | 1.65            | 0.00            | 0.00          | 0.00              | 0.00              | 14.74          | 52.0                        | 0.284        |
| 110.00 | 110.00    | 0.30            | 1.65            | 0.00            | 0.00          | 0.00              | 0.00              | 14.74          | 52.0                        | 0.284        |
| 115.00 | 115.00    | 0.27            | 1.75            | 0.00            | 0.00          | 0.00              | 0.00              | 10.72          | 52.0                        | 0.219        |
| 120.00 | 120.00    | 0.25            | 1.74            | 0.00            | 0.00          | 0.00              | 0.00              | 50.12          | 52.0                        | 0.977        |
| 125.00 | 125.00    | 0.59            | 1.75            | 0.00            | 0.00          | 0.00              | 0.00              | 42.69          | 52.0                        | 0.834        |
| 130.00 | 130.00    | 0.55            | 1.42            | 0.00            | 0.00          | 0.00              | 0.00              | 34.19          | 52.0                        | 0.670        |
| 135.00 | 135.00    | 0.55            | 1.42            | 0.00            | 0.00          | 0.00              | 0.00              | 26.94          | 52.0                        | 0.531        |
| 140.00 | 140.00    | 0.40            | 1.09            | 0.00            | 0.00          | 0.00              | 0.00              | 18.57          | 52.0                        | 0.367        |
| 145.00 | 145.00    | 0.40            | 1.08            | 0.00            | 0.00          | 0.00              | 0.00              | 12.12          | 52.0                        | 0.233        |
| 150.00 | 150.00    | 0.00            | 1.04            | 0.00            | 0.00          | 0.00              | 0.00              | 3.95           | 52.0                        | 0.076        |

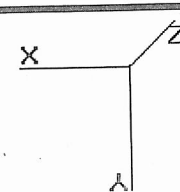


Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Load Case: TwistSway  
 50.00 mph Wind with No Ice  
 23 Iterations

Shaft Segment Forces

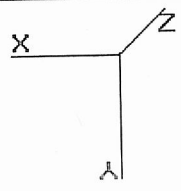
| Seg Top | Description              | Elev (ft) | qz (psf) | qzqh (psf) | Cf (mph-ft) | Thick (in) | Tributary (ft) | Aa (sf) | CFAa (sf) | Force (lb) | Wind (lb) | Dead (lb) | Tot Dead Load (lb) |
|---------|--------------------------|-----------|----------|------------|-------------|------------|----------------|---------|-----------|------------|-----------|-----------|--------------------|
| 1.00    | Reinf. Top Reinf. Top    | 0.00      | 6.400    | 10.81      | 155.09      | 1.030      | 0.000          | 4.00    | 3.108     | 3.20       | 34.6      | 0.0       | 260.5              |
| 5.00    |                          | 0.00      | 6.400    | 10.81      | 152.48      | 1.030      | 0.000          | 4.00    | 12.303    | 12.67      | 168.1     | 0.0       | 1,280.1            |
| 10.00   |                          | 0.00      | 6.400    | 10.81      | 145.95      | 1.030      | 0.000          | 5.00    | 14.759    | 15.20      | 164.4     | 0.0       | 1,264.0            |
| 15.00   |                          | 0.00      | 6.400    | 10.81      | 142.69      | 1.030      | 0.000          | 5.00    | 14.432    | 14.87      | 160.8     | 0.0       | 1,247.9            |
| 20.00   |                          | 0.00      | 6.400    | 10.81      | 139.42      | 1.030      | 0.000          | 5.00    | 14.106    | 14.53      | 157.1     | 0.0       | 1,231.8            |
| 25.00   |                          | 0.00      | 6.400    | 10.81      | 136.16      | 1.030      | 0.000          | 5.00    | 13.779    | 14.19      | 153.5     | 0.0       | 1,215.7            |
| 30.00   |                          | 0.00      | 6.400    | 10.81      | 132.91      | 1.030      | 0.000          | 5.00    | 13.452    | 13.82      | 149.7     | 0.0       | 1,200.0            |
| 35.00   | Bot - Section 2          | 1.00      | 6.400    | 10.81      | 129.66      | 1.030      | 0.000          | 1.50    | 4.079     | 4.20       | 45.4      | 0.0       | 362.4              |
| 35.00   | Top - Section 1          | 0.00      | 6.544    | 11.05      | 133.94      | 1.030      | 0.000          | 3.50    | 9.556     | 9.84       | 108.3     | 0.0       | 1,226.8            |
| 35.67   | Top - Section 1          | 0.00      | 6.762    | 11.42      | 135.92      | 1.030      | 0.000          | 4.33    | 11.574    | 11.92      | 136.2     | 0.0       | 942.8              |
| 40.00   |                          | 0.00      | 6.993    | 11.81      | 134.81      | 1.030      | 0.000          | 5.00    | 13.061    | 13.45      | 159.0     | 0.0       | 1,076.1            |
| 45.00   |                          | 0.00      | 7.207    | 12.17      | 133.40      | 1.030      | 0.000          | 5.00    | 12.734    | 13.12      | 160.0     | 0.0       | 1,062.7            |
| 50.00   |                          | 0.00      | 7.406    | 12.51      | 131.71      | 1.030      | 0.000          | 4.00    | 11.755    | 12.11      | 158.9     | 0.0       | 1,049.3            |
| 55.00   | Reinf. Top Reinf. Bottom | 0.00      | 7.556    | 12.76      | 130.20      | 1.030      | 0.000          | 4.00    | 9.691     | 9.98       | 127.5     | 0.0       | 829.7              |
| 59.00   | Reinf. Top Reinf. Bottom | 0.00      | 7.592    | 12.83      | 129.80      | 1.030      | 0.000          | 1.00    | 2.390     | 2.46       | 31.6      | 0.0       | 206.1              |
| 60.00   | Reinf. Top Reinf. Bottom | 0.00      | 7.592    | 12.83      | 129.80      | 1.030      | 0.000          | 1.00    | 2.390     | 2.46       | 31.6      | 0.0       | 206.1              |
| 65.00   |                          | 0.00      | 7.768    | 13.12      | 127.70      | 1.030      | 0.000          | 5.00    | 11.755    | 12.11      | 158.9     | 0.0       | 1,049.3            |
| 69.00   | Appertunance(s)          | 0.00      | 7.901    | 13.35      | 125.89      | 1.030      | 0.000          | 4.00    | 9.169     | 9.44       | 126.1     | 0.0       | 590.6              |
| 70.00   | Bot - Section 3          | 0.00      | 7.934    | 13.40      | 125.42      | 1.030      | 0.000          | 1.00    | 2.260     | 2.33       | 31.2      | 0.0       | 146.3              |
| 70.00   | Bot - Section 3          | 0.00      | 7.934    | 13.40      | 125.42      | 1.030      | 0.000          | 1.00    | 2.260     | 2.33       | 31.2      | 0.0       | 146.3              |
| 73.50   | Top - Section 2          | 0.00      | 8.045    | 13.59      | 123.74      | 1.030      | 0.000          | 3.50    | 7.951     | 8.19       | 111.4     | 0.0       | 766.8              |
| 75.00   |                          | 0.00      | 8.092    | 13.67      | 123.79      | 1.030      | 0.000          | 1.50    | 3.351     | 3.45       | 47.2      | 0.0       | 190.6              |
| 80.00   |                          | 0.00      | 8.242    | 13.93      | 122.79      | 1.030      | 0.000          | 5.00    | 10.984    | 11.31      | 157.6     | 0.0       | 629.6              |
| 85.00   |                          | 0.00      | 8.387    | 14.17      | 120.13      | 1.030      | 0.000          | 5.00    | 10.657    | 10.98      | 155.6     | 0.0       | 618.9              |
| 90.00   |                          | 0.00      | 8.525    | 14.40      | 117.34      | 1.030      | 0.000          | 5.00    | 10.331    | 10.64      | 153.3     | 0.0       | 608.2              |
| 93.00   | Appertunance(s)          | 0.00      | 8.605    | 14.54      | 115.46      | 1.030      | 0.000          | 3.00    | 6.042     | 6.22       | 90.5      | 0.0       | 359.7              |
| 95.00   |                          | 0.00      | 8.657    | 14.63      | 114.46      | 1.030      | 0.000          | 2.00    | 3.963     | 4.08       | 59.7      | 0.0       | 237.7              |
| 100.00  |                          | 0.00      | 8.785    | 14.84      | 111.47      | 1.030      | 0.000          | 5.00    | 9.678     | 9.97       | 148.0     | 0.0       | 586.7              |
| 103.00  | Appertunance(s)          | 0.00      | 8.860    | 14.97      | 109.64      | 1.030      | 0.000          | 3.00    | 5.650     | 5.82       | 87.1      | 0.0       | 346.9              |
| 105.00  |                          | 0.00      | 8.908    | 15.05      | 108.40      | 1.030      | 0.000          | 2.00    | 3.701     | 3.81       | 57.4      | 0.0       | 229.1              |
| 110.00  | Top - Section 3          | 0.00      | 9.028    | 15.25      | 105.25      | 1.030      | 0.000          | 5.00    | 9.025     | 9.30       | 141.8     | 0.0       | 565.2              |
| 110.00  | Top - Section 3          | 0.00      | 9.028    | 15.25      | 105.25      | 1.030      | 0.000          | 5.00    | 9.025     | 9.30       | 141.8     | 0.0       | 565.2              |
| 113.00  | Appertunance(s)          | 0.00      | 9.097    | 15.37      | 103.32      | 1.030      | 0.000          | 3.00    | 5.252     | 5.41       | 83.2      | 0.0       | 291.7              |
| 115.00  |                          | 0.00      | 9.143    | 15.45      | 102.01      | 1.030      | 0.000          | 2.00    | 3.440     | 3.54       | 54.8      | 0.0       | 193.1              |
| 120.00  | Reinf. Top               | 0.00      | 9.255    | 15.64      | 98.715      | 1.030      | 0.000          | 5.00    | 8.372     | 8.62       | 134.9     | 0.0       | 477.0              |
| 125.00  |                          | 0.00      | 9.363    | 15.82      | 95.343      | 1.030      | 0.000          | 5.00    | 8.046     | 8.29       | 131.1     | 0.0       | 196.9              |
| 130.00  | Appertunance(s)          | 0.00      | 9.469    | 16.00      | 91.908      | 1.030      | 0.000          | 5.00    | 7.719     | 7.95       | 127.2     | 0.0       | 188.9              |
| 135.00  |                          | 0.00      | 9.572    | 16.17      | 88.412      | 1.030      | 0.000          | 5.00    | 7.393     | 7.61       | 123.2     | 0.0       | 180.8              |
| 140.00  | Appertunance(s)          | 0.00      | 9.672    | 16.34      | 84.859      | 1.030      | 0.000          | 5.00    | 7.066     | 7.28       | 119.0     | 0.0       | 172.7              |
| 145.00  |                          | 0.00      | 9.769    | 16.51      | 81.252      | 1.030      | 0.000          | 5.00    | 6.740     | 6.94       | 114.6     | 0.0       | 164.7              |
| 150.00  | Appertunance(s)          | 0.00      | 9.864    | 16.67      | 77.594      | 1.030      | 0.000          | 5.00    | 6.413     | 6.61       | 110.1     | 0.0       | 156.6              |
| Totals: |                          |           | 150.00   |            |             |            |                |         |           |            | 4,448.0   |           | 23,175.0           |



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Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F



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**Load Case: Twist/Sway**  
 50.00 mph Wind with No Ice  
 23 Iterations  
 Gust Response Factor: 1.69  
 Dead Load Factor: 1.00  
 Wind Load Factor: 1.00

**Discrete Appurtenance Segment Forces**

| Elev (ft) | Description          | Qty | qz (psf) | qzGh (psf) | Caa Factor | Total Caa (st) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Y Mom (lb-ft) | Z Mom (lb-ft) | Dead Load (lb) |
|-----------|----------------------|-----|----------|------------|------------|----------------|----------------|---------------|--------------|---------------|---------------|----------------|
| 69.00     | Channel Master 1.2 M | 1   | 7.901    | 13.353     | 1.00       | 20.91          | 0.000          | 0.000         | 279.22       | 0.00          | 0.00          | 188.00         |
| 93.00     | Decibel DB408        | 1   | 8.727    | 14.749     | 1.00       | 2.70           | 0.000          | 4.710         | 39.82        | 0.00          | 187.56        | 28.00          |
| 93.00     | Standoff             | 1   | 8.605    | 14.542     | 1.00       | 2.50           | 0.000          | 0.000         | 36.36        | 0.00          | 0.00          | 200.00         |
| 103.0     | Decibel DB408        | 2   | 8.974    | 15.165     | 1.00       | 5.94           | 0.000          | 4.710         | 90.08        | 0.00          | 424.28        | 34.00          |
| 103.0     | Standoff             | 1   | 8.860    | 14.973     | 1.00       | 2.50           | 0.000          | 0.000         | 37.43        | 0.00          | 0.00          | 200.00         |
| 113.0     | Antel BXA-171085-8BF | 3   | 9.097    | 15.374     | 0.84       | 7.42           | 0.000          | 0.000         | 114.06       | 0.00          | 0.00          | 30.00          |
| 113.0     | Antel BXA-70063/6CF  | 3   | 9.097    | 15.374     | 0.70       | 16.23          | 0.000          | 0.000         | 249.57       | 0.00          | 0.00          | 51.00          |
| 113.0     | RFS APL866513-42T0   | 2   | 9.097    | 15.374     | 0.93       | 7.98           | 0.000          | 0.000         | 122.76       | 0.00          | 0.00          | 36.00          |
| 113.0     | RFS APL868013-42T0   | 4   | 9.097    | 15.374     | 0.87       | 12.98          | 0.000          | 0.000         | 199.57       | 0.00          | 0.00          | 25.20          |
| 113.0     | RFS FD9R6004/2C-3L   | 6   | 9.097    | 15.374     | 0.50       | 1.11           | 0.000          | 0.000         | 17.07        | 0.00          | 0.00          | 18.60          |
| 113.0     | T-Arm                | 3   | 9.097    | 15.374     | 0.67       | 10.05          | 0.000          | 0.000         | 154.51       | 0.00          | 0.00          | 999.00         |
| 130.0     | 12" x 12" Junction B | 1   | 9.469    | 16.003     | 1.00       | 1.40           | 0.000          | 0.000         | 22.40        | 0.00          | 0.00          | 10.00          |
| 130.0     | Argus LLPX310R       | 3   | 9.469    | 16.003     | 0.69       | 10.00          | 0.000          | 0.000         | 160.00       | 0.00          | 0.00          | 85.80          |
| 130.0     | Clearwire Mount      | 1   | 9.469    | 16.003     | 1.00       | 8.50           | 0.000          | 0.000         | 136.02       | 0.00          | 0.00          | 40.00          |
| 130.0     | DragonWave A-ANT-    | 1   | 9.469    | 16.003     | 1.00       | 1.61           | 0.000          | 0.000         | 134.90       | 0.00          | 0.00          | 47.60          |
| 130.0     | DragonWave A-ANT-    | 1   | 9.469    | 16.003     | 1.00       | 1.61           | 0.000          | 0.000         | 25.76        | 0.00          | 0.00          | 15.00          |
| 130.0     | DragonWave Horizon   | 2   | 9.469    | 16.003     | 1.00       | 0.86           | 0.000          | 0.000         | 13.76        | 0.00          | 0.00          | 21.20          |
| 130.0     | NextNet BTS-2500     | 3   | 9.469    | 16.003     | 0.72       | 4.58           | 0.000          | 0.000         | 73.28        | 0.00          | 0.00          | 105.00         |
| 140.0     | RFS APXV18-206516L-  | 3   | 9.672    | 16.345     | 0.67       | 6.83           | 0.000          | 0.000         | 111.70       | 0.00          | 0.00          | 42.00          |
| 140.0     | RFS APXV18-206516S-  | 3   | 9.672    | 16.345     | 0.67       | 7.04           | 0.000          | 0.000         | 114.99       | 0.00          | 0.00          | 56.10          |
| 140.0     | RFS ATM/A1412D-      | 3   | 9.672    | 16.345     | 0.50       | 1.75           | 0.000          | 0.000         | 28.69        | 0.00          | 0.00          | 39.00          |
| 140.0     | RFS ATM/A1412D-      | 3   | 9.672    | 16.345     | 0.50       | 1.75           | 0.000          | 0.000         | 28.68        | 0.00          | 0.00          | 39.00          |
| 140.0     | T-Arm                | 3   | 9.672    | 16.345     | 0.67       | 10.05          | 0.000          | 0.000         | 164.27       | 0.00          | 0.00          | 999.00         |
| 140.0     | 4 Omni               | 1   | 10.030   | 16.950     | 1.00       | 1.50           | 0.000          | 0.000         | 25.43        | 0.00          | 0.00          | 5.00           |
| 150.0     | Decibel DB408        | 2   | 10.030   | 16.950     | 1.00       | 5.94           | 0.000          | 0.000         | 100.68       | 0.00          | 0.00          | 34.00          |
| 150.0     | Diplexer             | 3   | 9.920    | 16.765     | 0.67       | 1.00           | 0.000          | 0.000         | 16.85        | 0.00          | 0.00          | 30.00          |
| 150.0     | Ericsson RRUS 11     | 6   | 9.864    | 16.670     | 0.71       | 12.52          | 0.000          | 0.000         | 208.79       | 0.00          | 0.00          | 330.00         |
| 150.0     | GPS                  | 1   | 9.864    | 16.670     | 1.00       | 0.60           | 0.000          | 0.000         | 10.00        | 0.00          | 0.00          | 1.50           |
| 150.0     | KMW AM-X-CD-16-65-   | 3   | 9.920    | 16.765     | 0.75       | 18.59          | 0.000          | 0.000         | 311.58       | 0.00          | 0.00          | 145.50         |
| 150.0     | KMW AWS Twin Dual    | 6   | 9.920    | 16.765     | 0.50       | 1.29           | 0.000          | 0.000         | 21.63        | 0.00          | 0.00          | 104.40         |
| 150.0     | Platform w/ Rails    | 1   | 9.864    | 16.670     | 1.00       | 24.00          | 0.000          | 0.000         | 400.09       | 0.00          | 0.00          | 1,950.00       |
| 150.0     | PowerWave 7770.00    | 3   | 9.920    | 16.765     | 0.73       | 12.88          | 0.000          | 0.000         | 215.89       | 0.00          | 0.00          | 105.00         |
| 150.0     | Raycap DC6-48-60-18- | 1   | 9.864    | 16.670     | 1.00       | 1.47           | 0.000          | 0.000         | 24.51        | 0.00          | 0.00          | 31.80          |

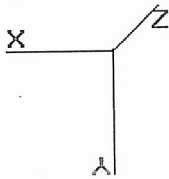
6,046.70

Code: TIA/EIA-222 Rev F

Pole: 302484  
 Location: Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia: 37.38 (in)  
 Top Dia: 15.00 (in)  
 Shape: 12 Sides  
 Taper: 0.156705 (in/ft)

Base Elev: 0.000 (ft)

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23 Iterations

50.00 mph Wind with No Ice

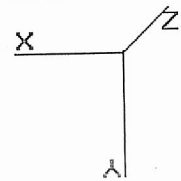
Load Case: Twist/Sway  
 Gust Response Factor: 1.69  
 Dead Load Factor: 1.00  
 Wind Load Factor: 1.00

Linear Appurtenance Segment Forces

| Seg Top Elev (ft) | Description      | To Wind (ft) | Exposed Length (ft) | Weight (lb/ft) | CaA (st/ft) | qz (psf) | Fx (lb) | Dead Load (lb) |
|-------------------|------------------|--------------|---------------------|----------------|-------------|----------|---------|----------------|
| 1.00              | (12) 1 5/8" Coax | Yes          | 4.00                | 9.84           | 0.20        | 6.400    | 2.16    | 9.84           |
| 5.00              | (12) 1 5/8" Coax | Yes          | 4.00                | 9.84           | 0.20        | 6.400    | 8.65    | 39.36          |
| 10.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.400    | 10.82   | 49.20          |
| 15.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.400    | 10.82   | 49.20          |
| 20.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.400    | 10.82   | 49.20          |
| 25.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.400    | 10.82   | 49.20          |
| 30.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.400    | 10.82   | 49.20          |
| 35.00             | (12) 1 5/8" Coax | Yes          | 1.50                | 9.84           | 0.20        | 6.400    | 3.25    | 14.79          |
| 31.50             | (12) 1 5/8" Coax | Yes          | 3.50                | 9.84           | 0.20        | 6.509    | 7.69    | 34.41          |
| 35.67             | (12) 1 5/8" Coax | Yes          | 0.67                | 9.84           | 0.20        | 6.544    | 1.48    | 6.59           |
| 40.00             | (12) 1 5/8" Coax | Yes          | 4.33                | 9.84           | 0.20        | 6.762    | 9.90    | 42.61          |
| 45.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 6.993    | 11.82   | 49.20          |
| 50.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 7.207    | 12.18   | 49.20          |
| 55.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 7.406    | 12.52   | 49.20          |
| 59.00             | (12) 1 5/8" Coax | Yes          | 4.00                | 9.84           | 0.20        | 7.556    | 10.22   | 39.36          |
| 60.00             | (12) 1 5/8" Coax | Yes          | 1.00                | 9.84           | 0.20        | 7.592    | 2.57    | 9.84           |
| 65.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 7.768    | 13.13   | 49.20          |
| 69.00             | (12) 1 5/8" Coax | Yes          | 4.00                | 9.84           | 0.20        | 7.901    | 10.68   | 39.36          |
| 70.00             | (12) 1 5/8" Coax | Yes          | 1.00                | 9.84           | 0.20        | 7.934    | 2.68    | 9.84           |
| 70.00             | (12) 1 5/8" Coax | Yes          | 0.00                | 9.84           | 0.20        | 7.934    | 0.01    | 0.03           |
| 70.00             | (12) 1 5/8" Coax | Yes          | 3.50                | 9.84           | 0.20        | 8.045    | 9.52    | 34.44          |
| 73.50             | (12) 1 5/8" Coax | Yes          | 1.50                | 9.84           | 0.20        | 8.092    | 4.09    | 14.73          |
| 75.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 8.242    | 13.93   | 49.20          |
| 80.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 8.387    | 14.17   | 49.20          |
| 85.00             | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 8.525    | 14.41   | 49.20          |
| 90.00             | (12) 1 5/8" Coax | Yes          | 3.00                | 9.84           | 0.20        | 8.605    | 8.73    | 29.52          |
| 93.00             | (12) 1 5/8" Coax | Yes          | 2.00                | 9.84           | 0.20        | 8.657    | 5.85    | 19.68          |
| 95.00             | (12) 1 5/8" Coax | Yes          | 2.00                | 9.84           | 0.20        | 8.785    | 14.85   | 49.20          |
| 100.00            | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 8.860    | 14.85   | 49.20          |
| 103.00            | (12) 1 5/8" Coax | Yes          | 3.00                | 9.84           | 0.20        | 8.908    | 6.02    | 19.68          |
| 105.00            | (12) 1 5/8" Coax | Yes          | 2.00                | 9.84           | 0.20        | 9.028    | 6.02    | 19.68          |
| 110.00            | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 9.028    | 15.26   | 49.20          |
| 110.00            | (12) 1 5/8" Coax | Yes          | 0.00                | 9.84           | 0.20        | 9.028    | 0.01    | 0.03           |
| 113.00            | (12) 1 5/8" Coax | Yes          | 3.00                | 9.84           | 0.20        | 9.097    | 9.21    | 29.49          |
| 115.00            | (12) 1 5/8" Coax | Yes          | 2.00                | 9.84           | 0.20        | 9.143    | 6.18    | 19.68          |
| 120.00            | (12) 1 5/8" Coax | Yes          | 5.00                | 9.84           | 0.20        | 9.255    | 15.64   | 49.20          |
| 125.00            | (12) 1 5/8" Coax | Yes          | 3.00                | 9.84           | 0.20        | 9.363    | 9.49    | 29.52          |
| Totals:           |                  |              |                     |                |             |          | 319.36  | 1,210.32       |

Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F



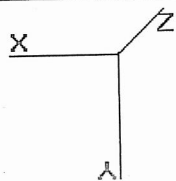
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**Load Case: TwistSway** 50.00 mph Wind with No Ice 23 Iterations

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

**Applied Segment Forces Summary**

| Seg     | Elev (ft) | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|---------|-----------|---------------------|-------------------|--------------------|-------------------|
| 0.00    | 0.00      | 0.00                | 280.56            | 0.00               | 0.00              |
| 1.00    | 1.00      | 36.79               | 145.72            | 0.00               | 0.00              |
| 5.00    | 5.00      | 145.72              | 1,115.80          | 0.00               | 0.00              |
| 10.00   | 10.00     | 178.87              | 1,380.27          | 0.00               | 0.00              |
| 15.00   | 15.00     | 175.24              | 1,364.17          | 0.00               | 0.00              |
| 20.00   | 20.00     | 171.60              | 1,348.07          | 0.00               | 0.00              |
| 25.00   | 25.00     | 167.96              | 1,331.98          | 0.00               | 0.00              |
| 30.00   | 30.00     | 164.33              | 1,315.88          | 0.00               | 0.00              |
| 31.50   | 31.50     | 48.70               | 392.49            | 0.00               | 0.00              |
| 35.00   | 35.00     | 115.96              | 1,296.81          | 0.00               | 0.00              |
| 35.67   | 35.67     | 22.13               | 246.83            | 0.00               | 0.00              |
| 40.00   | 40.00     | 146.13              | 1,029.55          | 0.00               | 0.00              |
| 45.00   | 45.00     | 170.80              | 1,176.32          | 0.00               | 0.00              |
| 45.00   | 45.00     | 171.93              | 1,162.88          | 0.00               | 0.00              |
| 50.00   | 50.00     | 172.47              | 1,149.44          | 0.00               | 0.00              |
| 55.00   | 55.00     | 137.68              | 909.88            | 0.00               | 0.00              |
| 60.00   | 60.00     | 34.15               | 226.13            | 0.00               | 0.00              |
| 60.00   | 60.00     | 172.07              | 850.57            | 0.00               | 0.00              |
| 69.00   | 69.00     | 416.01              | 858.79            | 0.00               | 0.00              |
| 70.00   | 70.00     | 33.89               | 166.27            | 0.00               | 0.00              |
| 70.00   | 70.00     | 0.11                | 0.55              | 0.00               | 0.00              |
| 73.50   | 73.50     | 120.87              | 836.69            | 0.00               | 0.00              |
| 75.00   | 75.00     | 51.30               | 220.42            | 0.00               | 0.00              |
| 80.00   | 80.00     | 171.52              | 729.40            | 0.00               | 0.00              |
| 85.00   | 85.00     | 169.75              | 718.67            | 0.00               | 0.00              |
| 90.00   | 90.00     | 167.71              | 707.94            | 0.00               | 0.00              |
| 93.00   | 93.00     | 175.40              | 647.61            | 0.00               | 187.56            |
| 95.00   | 95.00     | 65.57               | 276.93            | 0.00               | 0.00              |
| 100.00  | 100.00    | 162.85              | 684.82            | 0.00               | 0.00              |
| 103.00  | 103.00    | 223.63              | 639.74            | 0.00               | 424.28            |
| 105.00  | 105.00    | 63.42               | 267.03            | 0.00               | 0.00              |
| 110.00  | 110.00    | 157.08              | 660.06            | 0.00               | 0.00              |
| 110.00  | 110.00    | 0.10                | 0.44              | 0.00               | 0.00              |
| 113.00  | 113.00    | 949.93              | 1,508.32          | 0.00               | 0.00              |
| 115.00  | 115.00    | 60.93               | 219.65            | 0.00               | 0.00              |
| 120.00  | 120.00    | 150.52              | 543.49            | 0.00               | 0.00              |
| 125.00  | 125.00    | 140.63              | 248.66            | 0.00               | 0.00              |
| 130.00  | 130.00    | 693.36              | 543.05            | 0.00               | 0.00              |
| 135.00  | 135.00    | 123.17              | 209.40            | 0.00               | 0.00              |
| 140.00  | 140.00    | 567.29              | 1,376.43          | 0.00               | 0.00              |
| 145.00  | 145.00    | 114.61              | 180.96            | 0.00               | 0.00              |
| 150.00  | 150.00    | 1,445.55            | 2,910.09          | 0.00               | 2,832.81          |
| Totals: |           | 8,457.74            | 31,733.08         | 0.00               | 3,444.65          |



Code: TIA/EIA-222 Rev F

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Pole: 302484  
 Location: Branford CT 6, CT  
 Height: 150.0 (ft)  
 Base Dia: 37.38 (in)  
 Top Dia: 15.00 (in)  
 Shape: 12 Sides  
 Taper: 0.156705 (in/ft)

50.00 mph Wind with No Ice

Load Case: TwistSway

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

23 Iterations

Calculated Shaft Forces and Deflections

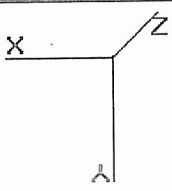
| Seg    | Elev   | Laterl  | Axial  | FY (-) | Laterl | Moment    | Torsion   | Moment    | X       | Z     | Total | Rotation |
|--------|--------|---------|--------|--------|--------|-----------|-----------|-----------|---------|-------|-------|----------|
|        | (ft)   | (kips)  | (kips) | (kips) | (kips) | (ft-kips) | (ft-kips) | (ft-kips) | (in)    | (in)  | (in)  | (deg)    |
| 0.00   | -8.461 | -31.732 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -849.777  | 0.000   | 0.000 | 0.000 | 0.000    |
| 1.00   | -8.444 | -31.446 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -841.316  | -0.002  | 0.000 | 0.002 | -0.014   |
| 5.00   | -8.331 | -30.321 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -807.542  | -0.038  | 0.000 | 0.002 | -0.071   |
| 10.00  | -8.184 | -28.931 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -765.890  | -0.150  | 0.000 | 0.002 | -0.141   |
| 15.00  | -8.038 | -27.558 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -724.969  | -0.335  | 0.000 | 0.002 | -0.211   |
| 20.00  | -7.893 | -26.201 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -684.777  | -0.593  | 0.000 | 0.002 | -0.280   |
| 25.00  | -7.747 | -24.861 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -645.315  | -0.924  | 0.000 | 0.002 | -0.348   |
| 30.00  | -7.592 | -23.540 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -606.582  | -1.325  | 0.000 | 0.002 | -0.416   |
| 31.50  | -7.554 | -23.144 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -595.169  | -1.460  | 0.000 | 0.002 | -0.437   |
| 35.00  | -7.438 | -21.844 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -568.755  | -1.798  | 0.000 | 0.002 | -0.484   |
| 35.67  | -7.426 | -21.593 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -563.772  | -1.867  | 0.000 | 0.002 | -0.493   |
| 40.00  | -7.293 | -20.557 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -531.616  | -2.340  | 0.000 | 0.002 | -0.550   |
| 45.00  | -7.133 | -19.375 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -495.151  | -2.952  | 0.000 | 0.002 | -0.617   |
| 50.00  | -6.968 | -18.206 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -459.488  | -3.634  | 0.000 | 0.002 | -0.682   |
| 55.00  | -6.798 | -17.052 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -424.648  | -4.383  | 0.000 | 0.002 | -0.746   |
| 59.00  | -6.657 | -16.140 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -397.455  | -5.029  | 0.000 | 0.002 | -0.796   |
| 60.00  | -6.630 | -15.910 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -390.798  | -5.197  | 0.000 | 0.002 | -0.808   |
| 65.00  | -6.462 | -15.055 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -357.649  | -6.077  | 0.000 | 0.002 | -0.869   |
| 69.00  | -6.043 | -14.199 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -331.801  | -6.833  | 0.000 | 0.002 | -0.934   |
| 70.00  | -6.008 | -14.033 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -325.758  | -7.031  | 0.000 | 0.002 | -0.951   |
| 70.00  | -6.015 | -14.029 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -325.738  | -7.031  | 0.000 | 0.002 | -0.951   |
| 73.50  | -5.889 | -13.190 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -304.687  | -7.749  | 0.000 | 0.002 | -1.006   |
| 75.00  | -5.845 | -12.966 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -295.873  | -8.069  | 0.000 | 0.002 | -1.030   |
| 80.00  | -5.677 | -12.232 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -266.647  | -9.191  | 0.000 | 0.002 | -1.109   |
| 85.00  | -5.508 | -11.510 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -238.263  | -10.394 | 0.000 | 0.002 | -1.185   |
| 90.00  | -5.335 | -10.800 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -210.725  | -11.674 | 0.000 | 0.002 | -1.256   |
| 93.00  | -5.152 | -10.154 | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -194.532  | -12.477 | 0.000 | 0.002 | -1.297   |
| 95.00  | -5.087 | -9.874  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -184.229  | -13.026 | 0.000 | 0.002 | -1.324   |
| 100.00 | -4.916 | -9.190  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -158.792  | -14.447 | 0.000 | 0.002 | -1.386   |
| 103.00 | -4.681 | -8.553  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -143.620  | -15.329 | 0.000 | 0.002 | -1.420   |
| 105.00 | -4.616 | -8.285  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -134.258  | -15.929 | 0.000 | 0.002 | -1.442   |
| 110.00 | -4.447 | -7.627  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -111.177  | -17.467 | 0.000 | 0.002 | -1.492   |
| 110.00 | -4.446 | -7.626  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -111.162  | -17.468 | 0.000 | 0.002 | -1.492   |
| 113.00 | -3.461 | -6.141  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -97.834   | -18.414 | 0.000 | 0.002 | -1.520   |
| 115.00 | -3.397 | -5.922  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -90.913   | -19.055 | 0.000 | 0.002 | -1.538   |
| 120.00 | -3.235 | -5.380  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -73.928   | -20.689 | 0.000 | 0.002 | -1.579   |
| 125.00 | -3.096 | -5.131  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -57.751   | -22.362 | 0.000 | 0.002 | -1.614   |
| 130.00 | -2.397 | -4.603  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -42.270   | -24.130 | 0.000 | 0.002 | -1.754   |
| 135.00 | -2.276 | -4.394  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -30.284   | -26.031 | 0.000 | 0.002 | -1.870   |
| 140.00 | -1.667 | -3.035  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -18.906   | -28.040 | 0.000 | 0.002 | -1.959   |
| 145.00 | -1.548 | -2.857  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -10.574   | -30.127 | 0.000 | 0.002 | -2.021   |
| 150.00 | -1.445 | -1.445  | 0.000  | 0.000  | 0.000  | 0.000     | 0.000     | -2.833    | -32.264 | 0.000 | 0.002 | -2.053   |



Pole : 302484  
 Location : Branford CT 6, CT  
 Height : 150.0 (ft)  
 Base Dia : 37.38 (in)  
 Top Dia : 15.00 (in)  
 Shape : 12 Sides  
 Taper : 0.156705 (in/ft)

Base Elev : 0.000 (ft)

Code: T1A/EIA-222 Rev F



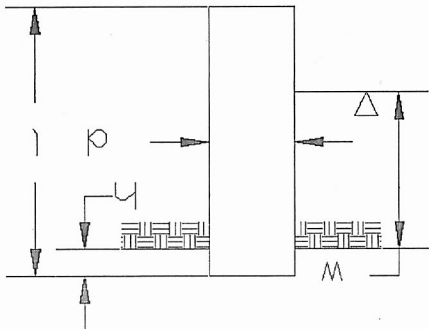
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### Analysis Summary

| Max Stresses | Reactions |       |       | Moment |      |         | Combined Stress |        |        | Max Stresses |       |  |
|--------------|-----------|-------|-------|--------|------|---------|-----------------|--------|--------|--------------|-------|--|
|              | Shear     | Axial | Shear | FX     | FZ   | MZ      | Stress          | Stress | Stress | Elev         | Ratio |  |
| No Ice       | 27.4      | 0.00  | 31.72 | 0.00   | 0.00 | 2749.82 | 51.31           | 52.0   | 52.0   | 120.00       | 0.987 |  |
| Ice          | 24.1      | 0.00  | 39.53 | 0.00   | 0.00 | 2534.48 | 50.81           | 52.0   | 52.0   | 120.00       | 0.977 |  |
| Twist/Sway   | 8.5       | 0.00  | 31.73 | 0.00   | 0.00 | 849.78  | 16.24           | 52.0   | 52.0   | 120.00       | 0.312 |  |

### Additional Steel Summary

| Elev | From To                   | Intermediate Connectors |     | Upper Termination |     | Lower Termination |     | Max Member | From To | (ft) | (ft) Member     |
|------|---------------------------|-------------------------|-----|-------------------|-----|-------------------|-----|------------|---------|------|-----------------|
|      |                           | Shear                   | VQI | MQI               | MQI | MQI               | MQI |            |         |      |                 |
| 1.00 | 1.00 (4) SOL-#18 All Thre | 145.2                   | 1.7 | 12.9              | 8.1 | 0.0               | 8.1 | 0          | 0       | 0    | 46.3 58.0 0.800 |
| 1.00 | 1.00 (4) SOL-#18 All Thre | 164.8                   | 2.0 | 12.9              | 8.1 | 0.0               | 8.1 | 0          | 0       | 0    | 52.2 58.0 0.900 |
| 1.00 | 59.0 (4) SOL-#18 All Thre | 171.4                   | 5.1 | 12.9              | 8.1 | 0.0               | 8.1 | 0          | 0       | 0    | 46.2 53.6 0.861 |
| 1.00 | 120. (4) SOL-#18 All Thre | 304.2                   | 7.3 | 12.9              | 8.1 | 9                 | 10  | 0          | 0       | 0    | 52.7 55.2 0.954 |
| 59.0 | 60.0 (4) SOL-#18 All Thre | 171.8                   | 2.1 | 12.9              | 8.1 | 15                | 18  | 0.0        | 8.1     | 0    | 33.0 58.0 0.569 |



**Design Base Loads (Unfactored) - Analysis per TIA-222-F Standards**

Foundation Mapped: Y  
 Moment (M): 2749.8 k-ft  
 Shear/Leg (V): 27.4 k  
 Compression/Leg (P): 31.7 k  
 Uplift/Leg (U): 0.0 k  
 Tower Type (GT / SST / MP): MP

Site Name: Branford CT 6, CT  
 Site Number: 302484  
 Engineer: R. Keith  
 Engineering Number: 49165724  
 Date: 7/23/2012

**Soil Mechanical Properties**

| Depth (ft) | $\gamma_{soil}$ (pcf) | Cohesion (psf) | $\phi$ (degree) | Allowable Skin Friction (psf) | Allowable Bearing Pressure (psf) |
|------------|-----------------------|----------------|-----------------|-------------------------------|----------------------------------|
| Top        | 0.0                   | 0              | 30              | 100                           | 2000                             |
| Bottom     | 5.0                   | 125            | 33              | 100                           | 2000                             |
|            | 7.0                   | 0              | 40              | 100                           | 4000                             |
|            | 23.0                  | 8000           | 40              | 100                           | 4000                             |
|            | 28.0                  | 125            | 40              | 100                           | 4000                             |
|            | 23.0                  | 8000           | 40              | 100                           | 4000                             |
|            | 7.0                   | 125            | 33              | 100                           | 2000                             |
|            | 5.0                   | 0              | 30              | 100                           | 2000                             |
|            | 23.0                  | 125            | 40              | 100                           | 4000                             |
|            | 28.0                  | 125            | 40              | 100                           | 4000                             |

Required Embedment: 14.4 ft - OK, Caisson Embedment Satisfactori  
 Volume of Concrete: 441.8 ft<sup>3</sup> = 16.4 yd<sup>3</sup>  
 Weight of Concrete (Buoyancy Effect Considered): 44.2 k  
 Average Soil Unit Weight: 73.9 pcf  
 Skin Friction Resistance: 34.6 k  
 Compressive Bearing Resistance: 78.5 k  
 Pullout Weight (Minus Concrete Weight): 437.1 k  
 Allowable Uplift Capacity ( $U_{allow}$ ): 69.9 k  
 Allowable Compressive Capacity ( $P_{allow}$ ): 113.1 k  
 Compressive Design Load (P): 42.5 k  
 $U / U_{allow}$ : 0.00 Result: OK  
 $P / P_{allow}$ : 0.38 Result: OK  
 Total Lateral Resistance: 8682.2 k  
 Inflection Point (Below Ground Surface): 15.1 ft  
 Design Overturning Moment At Inflection Point ( $M_D$ ): 3178.0 k-ft  
 Nominal Moment Capacity ( $M_{allow}$ ): 30823.4 k-ft  
 $M_{allow} / M_D$  Factor of Safety: 9.70 Result: OK





# WIRELESS COMMUNICATIONS FACILITY

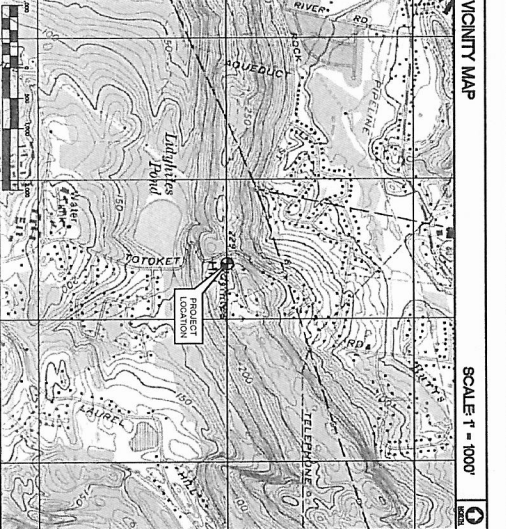
## CT2015 BRANFORD 405 BRUSHY PLAIN ROAD BRANFORD, CT 06405

### GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2005 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE 2009 CONNECTICUT SUPERINTENDENT OF CONSTRUCTION. THE 2005 INTERNATIONAL BUILDING CODE SHALL BE APPLIED TO THE CONNECTICUT SAFETY CODE AND 2009 AMENDMENTS, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, FRAMEWORK, RISE, ELECTRICAL, MECHANICAL, AND PLUMBING SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL CORRECTIVE ALL WORK SHOWN COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS OR IN THE VARIOUS SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL OTHER NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF THE CONTRACT DOCUMENT SET TO ALL SUBCONTRACTORS AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
8. LOCATION OF EQUIPMENT AND WORK SHIPPED BY OTHERS THAT IS DETERMINED BY THE CONTRACTOR'S SITE SURVEY SHALL BE DETERMINED BY THE CONTRACTOR'S SITE SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE EXISTING FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS REGARDING THE WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REGULATIONS AND SPECIFICATIONS.
12. ALL EXISTING AND PROPOSED SUBCONTRACTORS TO BE REMOVED BY THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
13. NOT BE RESPONSIBLE FOR THE PROTECTION OF THE ASSET CONSTRUCTION MANAGER DURING THE BUILDING PROCESS. THE CONTRACTOR, ALL SUBCONTRACTORS, AND ALL RELATED PARTIES SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BE THE PROPERTY OF THE CONTRACTOR AND NOT BE REPRODUCED OR COPIED WITHOUT THE WRITTEN PERMISSION OF THE CONTRACTOR MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE PRIOR TO THE COMMENCEMENT OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION LABOR, FINISHING AND INSTALLATION OF CONDUIT AND ALL APPOINTMENTS REQUIRED FOR PROPER INSTALLATION OF EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CODES SHALL BE OBTAINED FROM THE CONTRACT MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT THE OWNER AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-422-4455. ALL EXCAVATIONS SHALL BE CLEARLY MARKED PRIOR TO ANY WORK BEING PERFORMED THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH ALL EXCAVATION ACTIVITIES AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL COMPLY WITH ALL EXCAVATION ACTIVITIES AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL COMPLY WITH ALL EXCAVATION ACTIVITIES AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES.

### SITE DIRECTIONS

- FROM:** 500 ENTERPRISE DRIVE  
ROCKY HILL, CONNECTICUT
- TO:** 405 BRUSHY PLAIN ROAD  
BRANFORD, CT 06405
1. Take ramp left for 1-1/2 South
  2. At exit 8, take ramp right for Middletown Ave toward North Branford
  3. Turn right onto Toward Rd
  4. Keep left onto CT-749 / Brushy Plain Rd
  5. Keep left onto 405 Brushy Plain Rd, Branford, CT 06405
- 28.4 mi  
0.3 mi  
0.7 mi  
0.3 mi



### PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK GENERALLY CONSISTS OF THE INSTALLATION OF ONE (1) LTE ANTENNA PER SECTOR FOR A TOTAL OF (3) LTE ANTENNAS PER SECTOR. THE ANTENNAS WILL BE INSTALLED WITHIN THE EXISTING EXISTING EQUIPMENT SHELTER.
2. ADDITIONALLY (2) REMOTE RADIO UNITS (RRU) PER SECTOR WILL BE INSTALLED. SITE ACCESSORIES WILL BE INSTALLED AT THE PROJECT LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AUTHORITIES.

### PROJECT INFORMATION

**AT&T SITE NUMBER:** CT2015  
**AT&T SITE NAME:** BRANFORD  
**SITE ADDRESS:** 405 BRUSHY PLAIN ROAD  
BRANFORD, CT 06405

**LESSOR/APPLICANT:** AT&T MOBILITY  
ROCKY HILL, CT 06087

**ENGINEER:** CENTER ENGINEERING, INC.  
1000 ROUTE 100  
BRANFORD, CT 06405

**PROJECT COORDINATOR:** LAMBERT, 41°-9'-0.64"N  
LONGITUDE: 72°-49'-11"W  
GROUND ELEVATION: 230' MSL

### SHEET INDEX

| SHEET NO. | DESCRIPTION                  | REV. |
|-----------|------------------------------|------|
| T-1       | TITLE SHEET                  | 1    |
| N-1       | NOTES AND SPECIFICATIONS     | 1    |
| C-1       | PLANS, ELEVATION AND DETAIL  | 1    |
| C-2       | ITE EQUIPMENT DETAILS        | 1    |
| E-1       | ELECTRICAL DETAILS AND NOTES | 1    |
| E-2       | ELECTRICAL DETAILS           | 1    |

**AT&T MOBILITY**  
WIRELESS COMMUNICATIONS FACILITY SITE UPGRADE  
**CT2015**  
**BRANFORD**

405 BRUSHY PLAIN ROAD  
BRANFORD, CT 06405

DATE: 07/26/12  
SCALE: AS SHOWN  
JOB NO.: 11111008

**TITLE SHEET**

Sheet No. 1 of 2

DESIGNED BY: [Blank]  
DRAWN BY: [Blank]  
CHECK BY: [Blank]  
DATE: 7/19/12  
DATE: 4/28/12

CONSTRUCTION - CLIENT REVIEW

CONSTRUCTION - CLIENT REVIEW

DATE: 7/19/12  
DATE: 4/28/12

CONSTRUCTION - CLIENT REVIEW

CONSTRUCTION - CLIENT REVIEW

## STRUCTURAL SPECIFICATIONS

### DESIGN BASIS

COVERING CODES: 2004 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2005  
AND 2009 AMENDMENTS. STATE BUILDING CODE AND 2009 AMENDMENTS.

### 1. DESIGN CRITERIA:

- WIND LOADS PER ENR 7/14 221 F-36 (MINIMUM HEIGHT); 90 MPH (EXISTING HEIGHT) EQUIVALENT TO 110 MPH (3 SECOND GUST)
- DEQ WIND SPEED (OTHER STRUCTURES: 110 MPH (3 SECOND GUST) (CONFORMING TO PERFORMANCE PERFORMING CONTRACT AND 2009 AMENDMENTS)
- SEISMIC LOAD DOES NOT CONTROL; PER ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

### GENERAL NOTES

1. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEER AND SHALL PROCEED WITH APPROVED WORK AFTER CONSULTATION WITH THE ENGINEER AND SHALL PROCEED WITH APPROVED WORK AFTER CONSULTATION WITH THE ENGINEER AND SHALL PROCEED WITH APPROVED WORK AFTER CONSULTATION WITH THE ENGINEER AND SHALL PROCEED WITH APPROVED WORK AFTER CONSULTATION WITH THE ENGINEER.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY AND CORRECT THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
4. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

### STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)
2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, PENETRATIONS, AND DIMENSIONS. SIZE AND TYPE OF FASTENERS AND ACCESSORIES, INCLUDE DETAIL DRAWINGS, EXHIBITIONS AND DETAILS.
3. STRUCTURAL STEEL SHALL BE DELIVERED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRIKE ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
5. FIT AND SHOP ASSEMBLY FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 55% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 768.
8. ALL STEEL MATERIAL (EXCEPT TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 ZINC (HOT DIPPED GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.
9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
10. CONTRACTOR SHALL COMPLY WITH AISC CODE FOR PROTECTIVE APPEARANCE AND QUALITY OF WELDS. PROCEDURES FOR WELDING SHALL BE DETERMINED BY THE CONTRACTOR. WELDING SHALL CONFORM TO AISC AND D11 WHEARE FLAT WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE 4.2 OF THE AISC CODE. ALL WELDS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER. ALL WELDS SHALL BE GALVANIZED AFTER ERECTION AT THE DISCRETION OF THE ENGINEER.
11. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE UNSUITABLE OR NON-COMPLYING MATERIALS OR CONDITIONS TO REMEDY OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL RESOLVE DEFECTS, IF ANY.
12. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
13. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER UNLESS OTHERWISE SPECIFIED.
14. CONNECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION, ERECTION AND SHOP DRAWINGS OF STEEL BUILT UP JOINTS AND BOLTS - LATEST EDITION.
15. LOCK WASHERS ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
16. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
17. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
18. FABRICATE BEAMS WITH MILL CAMBER UP.
19. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1/100, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
20. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PROCEEDING WORK.
21. INSPECTION AND TESTING OF WELDS AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY.
22. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

DESIGNED BY: CSB  
DRAWN BY: YMC  
CHECK BY: CFC

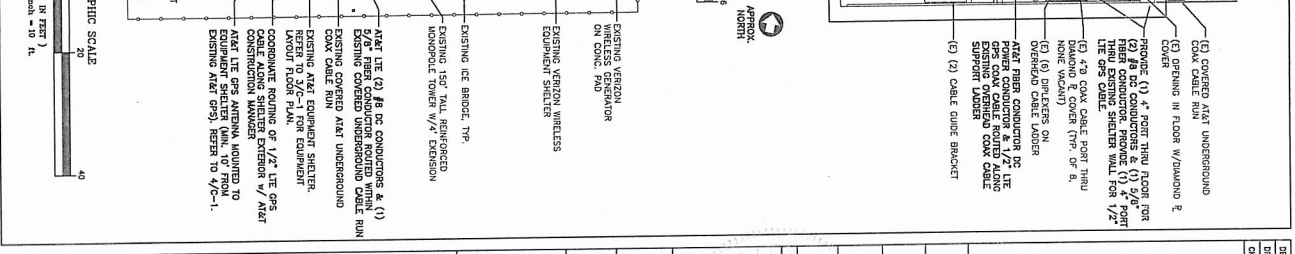
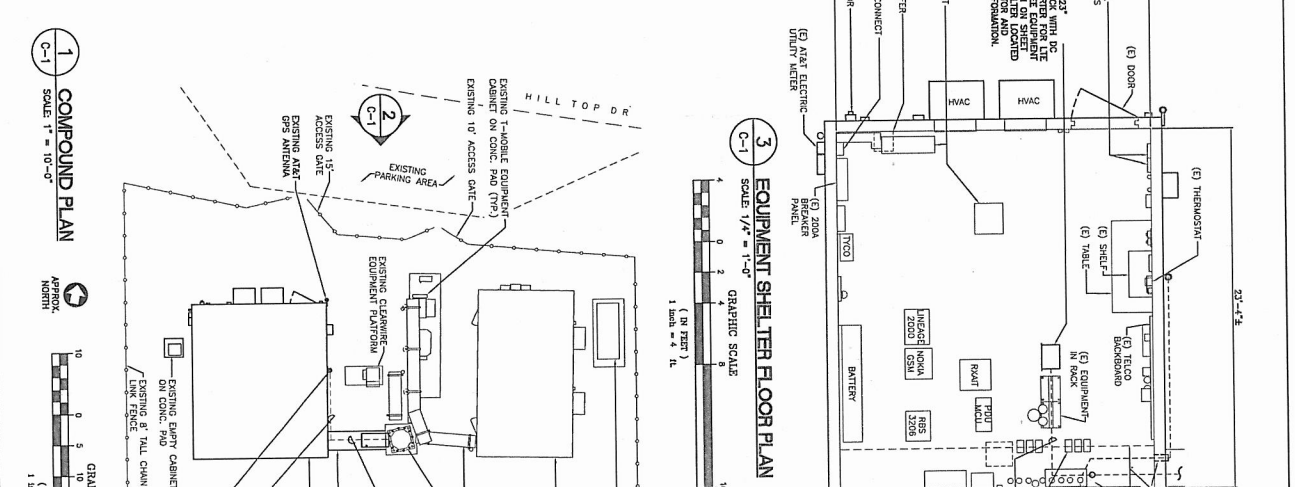
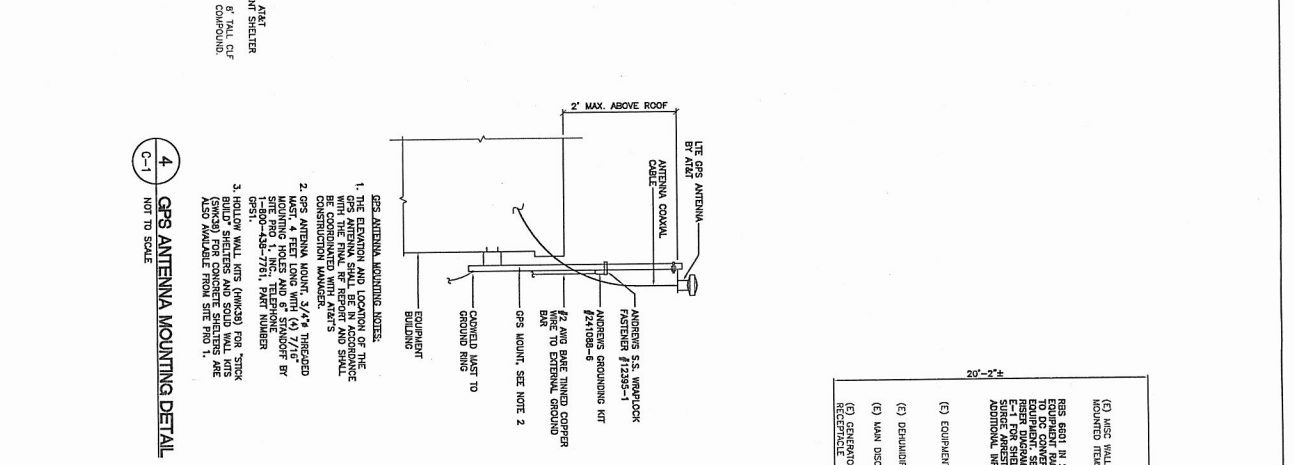
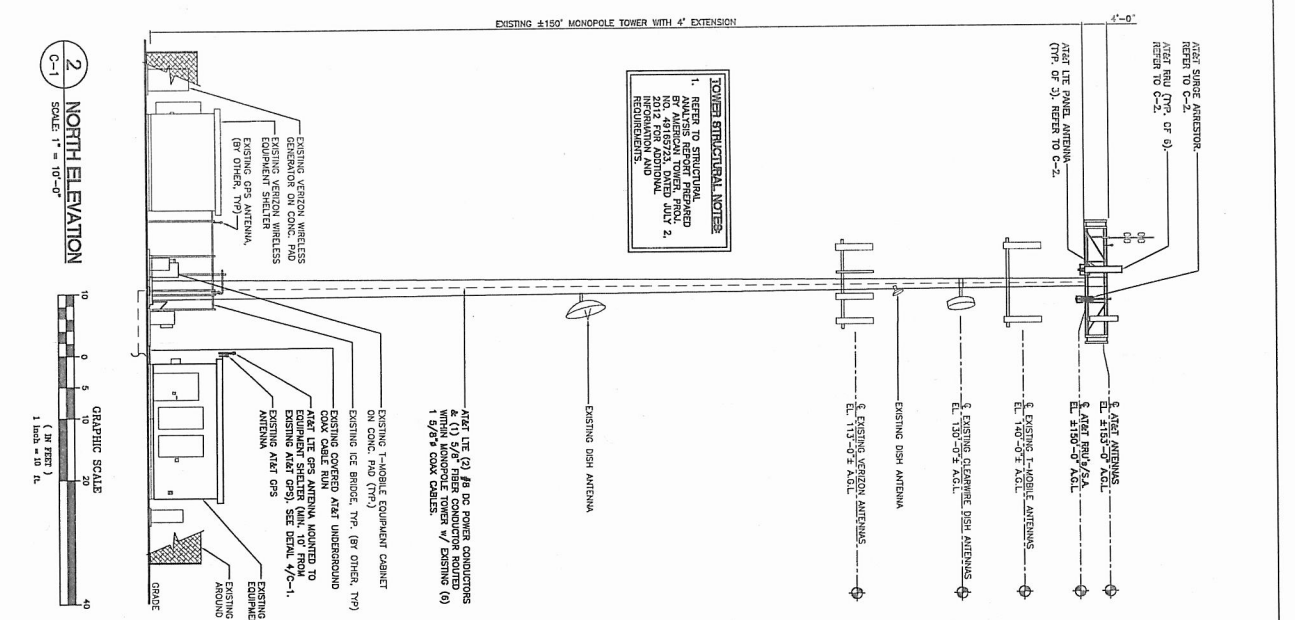
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| 1    | 7/18/12 | HRH | DBB   | CONSTRUCTION                 |
| 2    | 4/28/12 | HRH | DBB   | CONSTRUCTION - CLIENT REVIEW |



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Contract Solutions  
2001 45th Street  
Cincinnati, OH 45244  
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www.Centerlink.com

**AT&T MOBILITY**  
WIRELESS COMMUNICATIONS FACILITY LTE UPGRADE  
**CT2015**  
BRANFORD  
405 BRUSHY PLAIN ROAD  
BRANFORD, CT 06405

|         |          |
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| DATE    | 07/18/12 |
| SCALE   | AS NOTED |
| JOB NO. | 1111E005 |

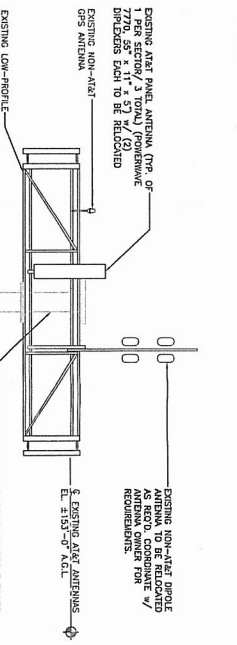


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| DESIGNED BY:  | DRAWN BY: | CHECK BY:    |
| DATE:   | SCALE:    | PROJECT NO.: |
| <b>AT&amp;T MOBILITY</b><br>WIRELESS COMMUNICATIONS FACILITY/LTE UPGRADE<br><b>CT2015 BRANFORD</b><br>455 BRUSHY PLAIN ROAD<br>BRANFORD, CT 06405 |           |              |
|   |           |              |
| PROFESSIONAL DESIGNER SEAL<br>DATE: 7/10/12<br>DRAWN BY: HNR<br>CHECKED BY: JED<br>CONSTRUCTION - CLIENT REVIEW                                   |           |              |

| SITE TYPE | ABSORBER MAKE/MODEL                  | QTY REQUIRED | ABSORBER LOCATION                      | WEIGHT  |
|-----------|--------------------------------------|--------------|--|---------|
| TOWER     | RAYCAP (SOUND) MODEL: RC-46-46-18-4F | (1) PER SITE | ANTENNA MOUNT AND RAIL (WITHOUT MOUNT) | 20 LBS. |

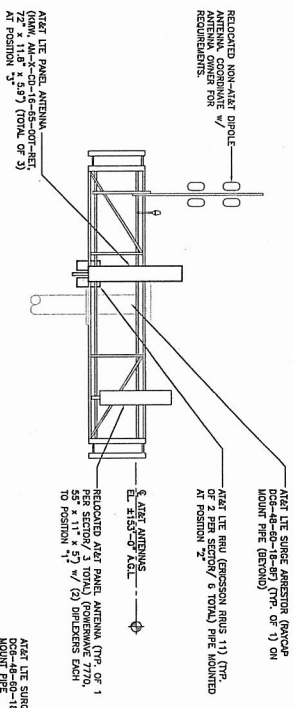
**NOTES:**

- CONTRACTOR TO COORDINATE FINAL SURGE ABSORBER MODEL SELECTION(S) WITH ALL APPLICABLE CODES AND REGULATIONS.
- CONTRACTOR TO INSTALL ABSORBER IN CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS.

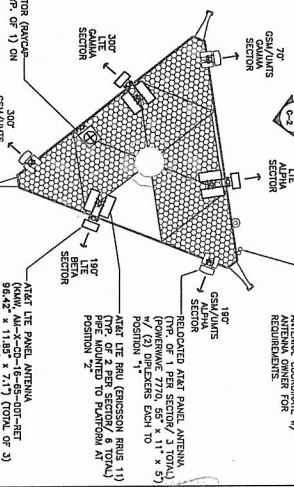


**1** EXISTING ANTENNA SECTOR ELEVATION  
SCALE: 1/4" = 1'-0"

**NOTE:** IN FIELD PLATFOM USE LOCATION OF EXISTING NON-HAT DROPLE & OPS ANTENNA.



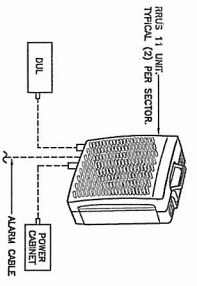
**2** PROPOSED ANTENNA SECTOR ELEVATION  
SCALE: 1/4" = 1'-0"



**3** PROPOSED ANTENNA PLAN  
SCALE: 1/4" = 1'-0"

APPROX. NORTH

**7** SURGE ABSORBER DETAIL  
NOT TO SCALE

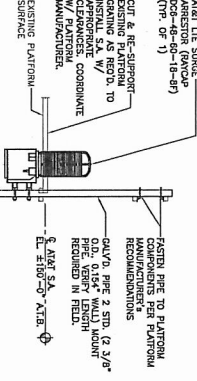


| EQUIPMENT                    | DIMENSIONS                 | WEIGHT   | CLEARANCES                     |
|------------------------------|----------------------------|--|--------------------------------|
| NAME: ERRESON MODEL: RRU5 11 | 17.0" L x 17.3" W x 7.2" D | BAND 4: 44 LBS. BAND 12: 50 LBS. SIZE: 0" MIN. | ABOVE: 15" MIN. BELOW: 0" MIN. |

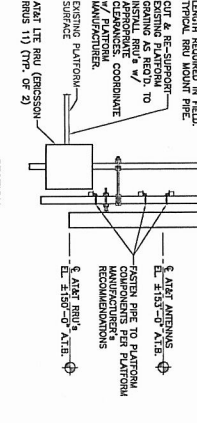
**8** RRU DETAIL  
NOT TO SCALE

**NOTES:**

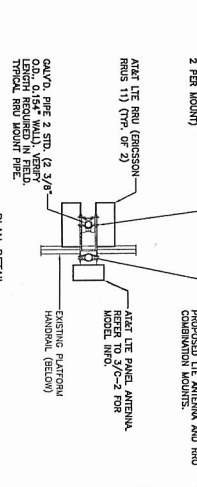
- REMOVE EXISTING ANTENNA PLATFOM AS REQUIRED TO ACCOMMODATE PROPOSED ANTENNA.
- COORDINATE LOCATION OF LTE ANTENNA & RRU/ SURGE ABSORBER MOUNTS WITH ALL APPLICABLE CODES AND REGULATIONS.
- PROVIDE LIGHTNING PROTECT, CROSSBARS & ASSOCIATED HARDWARE TO COMPLETE THE PROPOSED SURFACE.
- FIELD AND STRING FROM ALL MANUFACTURERS AND INSTALLATION OF ANTENNAS AND COAX.



**6** LTE SURGE ABSORBER MOUNT DETAIL  
SCALE: 1/2" = 1'-0"



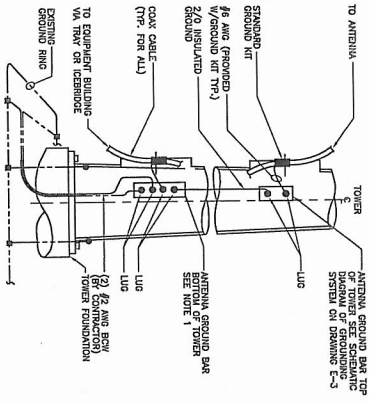
**4** PROPOSED ANTENNA SECTOR ELEVATION  
SCALE: 1/4" = 1'-0"



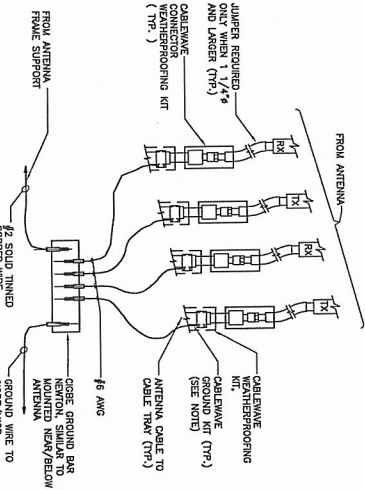
**5** LTE ANTENNA/RRU MOUNT DETAILS  
SCALE: 1/2" = 1'-0"

| <p>WIRELESS COMMUNICATIONS FACILITY/LTE UPGRADE<br/><b>CT2015 BRANFORD</b></p> <p>465 BRUSHY PLAIN ROAD<br/>BRANFORD, CT 06465</p> | <p>Contract No. C-1000-13-0001<br/>1001 464000<br/>1002 464000<br/>1003 464000<br/>1004 464000<br/>1005 464000<br/>1006 464000<br/>1007 464000<br/>1008 464000<br/>1009 464000<br/>1010 464000<br/>1011 464000<br/>1012 464000<br/>1013 464000<br/>1014 464000<br/>1015 464000<br/>1016 464000<br/>1017 464000<br/>1018 464000<br/>1019 464000<br/>1020 464000</p> | <p>Contract No. C-1000-13-0001<br/>1001 464000<br/>1002 464000<br/>1003 464000<br/>1004 464000<br/>1005 464000<br/>1006 464000<br/>1007 464000<br/>1008 464000<br/>1009 464000<br/>1010 464000<br/>1011 464000<br/>1012 464000<br/>1013 464000<br/>1014 464000<br/>1015 464000<br/>1016 464000<br/>1017 464000<br/>1018 464000<br/>1019 464000<br/>1020 464000</p> |         | <table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>CHKD BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>7/19/12</td> <td>HR</td> <td>DB</td> <td>CONSTRUCTION - CLIENT REVIEW</td> </tr> <tr> <td>2</td> <td>4/25/12</td> <td>FLD</td> <td>DB</td> <td>CONSTRUCTION - CLIENT REVIEW</td> </tr> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | REV. | DATE | BY | CHKD BY | DESCRIPTION | 1 | 7/19/12 | HR | DB | CONSTRUCTION - CLIENT REVIEW | 2 | 4/25/12 | FLD | DB | CONSTRUCTION - CLIENT REVIEW | 0 |  |  |  |  | <table border="1"> <tr> <td>ISSUED BY:</td> <td>DATE:</td> </tr> <tr> <td>DESIGNED BY:</td> <td>DATE:</td> </tr> <tr> <td>DRAWN BY:</td> <td>DATE:</td> </tr> <tr> <td>CHECKED BY:</td> <td>DATE:</td> </tr> </table> | ISSUED BY: | DATE: | DESIGNED BY: | DATE: | DRAWN BY: | DATE: | CHECKED BY: | DATE: |
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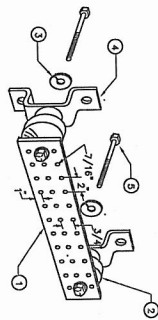




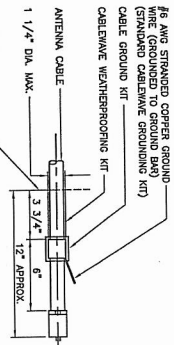
- NOTES:**
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER.
  2. LOCATION AND CONNECTION ORIENTATION, PROVIDE AS REQUIRED.
- 1 ANTENNA CABLE GROUNDING - TOWER**  
E-2 NOT TO SCALE



- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CABLE.
- 2 CONNECTION OF GROUND WIRES TO GROUND BAR**  
E-2 NOT TO SCALE



- LEGEND**
1. TINED COPPER GROUND BAR, 1/4", 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG.
  2. INSULATORS, NEWTON INSTRUMENT CO. NO. 2, 3001-4.
  3. 3/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 2013-05.
  4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. 4-0038.
  5. STAINLESS STEEL SECURITY SCREENS.
- 1 GROUND BAR DETAIL**  
E-2 NOT TO SCALE



- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- 3 ANTENNA CABLE GROUNDING DETAIL**  
E-2 NOT TO SCALE

DESIGNED BY: CMO  
DRAWN BY: TSB  
CHECKED BY: CMO

| REV. | DATE    | BY  | CHK'D | DESCRIPTION  |
|------|---------|-----|-------|--------------|
| 1    | 7/10/12 | HMR | SLP   | CONSTRUCTION |
| 2    | 7/10/12 | SLP | SLP   | CONSTRUCTION |
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| 63   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 64   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 65   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 66   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 67   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 68   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 69   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 70   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 71   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 72   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 73   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 74   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 75   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 76   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 77   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 78   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 79   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 80   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 81   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 82   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 83   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 84   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 85   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 86   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 87   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 88   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 89   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 90   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 91   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 92   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 93   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 94   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 95   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 96   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 97   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 98   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 99   | 7/10/12 | SLP | SLP   | CONSTRUCTION |
| 100  | 7/10/12 | SLP | SLP   | CONSTRUCTION |



2011 AT&T Mobility  
450 North Bedford Road  
Bedford, CT 06021  
www.Centrelink.com

AT&T MOBILITY  
WIRELESS COMMUNICATIONS FACILITY LTE UPGRADE  
**CT2015**  
**BRANFORD**  
405 BRUSHY PLAIN ROAD  
BRANFORD, CT 06405

DATE: 07/10/12  
SCALE: AS NOTED  
JOB NO.: 11118.009

ELECTRICAL  
DETAILS

E-2  
Sheet No. 2 of 2



February 27, 2015

Mr. John Igoe  
American Tower  
10 Presidential Way  
Woburn, MA 01801

Dear Mr. Igoe:

This letter is to inform you that an application for modification to the cell tower located at 159 Weingart Road, Harwinton CT has been sent to the Connecticut Siting Council for review and also to AT&T Mobility, the owner of the structure.

Thank you,

A handwritten signature in blue ink that reads "Kerry Sethares".

Kerry Sethares  
Site Acquisition Coordinator  
Empire Telecom

cc: Mr. Michael Criss  
First Selectman, Town of Harwinton



March 3, 2015

Mr. Edward F. Jaconette, Jr.  
Ms. Kristen L. Jaconette  
405 Brushy Plain Road  
Branford, CT 06405

Dear Mr. and Ms. Jaconette:

This letter is to inform you that an application for modification to the cell tower located at 405 Brushy Plain Road, Branford CT has been sent to the Connecticut Siting Council for review and also to AT&T Mobility, the owner of the structure.

Thank you,

A handwritten signature in blue ink that reads "Kerry Sethares". The signature is written in a cursive, flowing style.

Kerry Sethares  
Site Acquisition Coordinator  
Empire Telecom

cc: Mayor, James B. Cosgrove, Town of Branford  
Mr. Jose Giner, Director, Planning and Zoning Town of Branford  
Mr. John Igoe, American Tower





February 27, 2015

Candid Associates, LLC  
110 Washington Avenue  
North Haven, CT 06473

To Whom It May Concern:

This letter is to inform you that an application for modification to the cell site located at 125 Washington Avenue, North Haven, CT has been sent to the Connecticut Siting Council for review and also to AT&T Mobility, the owner of the structure.

Thank you,

A handwritten signature in blue ink that reads "Kerry Sethares". The signature is written in a cursive, flowing style.

Kerry Sethares  
Site Acquisition Coordinator  
Empire Telecom

cc: Michael Freda  
First Selectman, Town of North Haven



February 27, 2015

Mr. Stephen B. Tripp  
23 Wayne Road  
Wallingford, CT 06492

Dear Mr. Tripp:

This letter is to inform you that an application for modification to the cell site located at 23 Wayne Road, Wallingford CT has been sent to the Connecticut Siting Council for review and also to AT&T Mobility, the owner of the structure.

Thank you,

A handwritten signature in blue ink that reads "Kerry Sethares".

Kerry Sethares  
Site Acquisition Coordinator  
Empire Telecom

cc: William W. Dickinson, Mayor, Town of Wallingford  
Kacie Costello, Town Planner



March 3, 2015

Mr. Charles Dunn  
69 Wheeler Street  
New Haven, CT 06512

Dear Mr Dunn:

This letter is to inform you that an application for modification to the cell tower located at 69 Wheeler Street, New Haven, CT has been sent to the Connecticut Siting Council for review and also to AT&T Mobility, the owner of the structure.

Thank you,

A handwritten signature in blue ink that reads "Kerry Sethares".

Kerry Sethares  
Site Acquisition Coordinator  
Empire Telecom

cc: Toni Harp, Mayor, City of New Haven  
Ms. Karyn Gilvarg, A.I.A. Executive Director, City of New Haven