



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

www.ct.gov/csc

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



the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,



Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Anthony "Unk" DaRos, First Selectman, Town of Branford
Diana Ross, Inland Wetland Enforcement Officer, Town of Branford
Laura Magaraci, Zoning Enforcement Officer, Town of Branford



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

www.ct.gov/csc

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

RECEIVED
JUL 20 2012

CONNECTICUT
SITING COUNCIL

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.

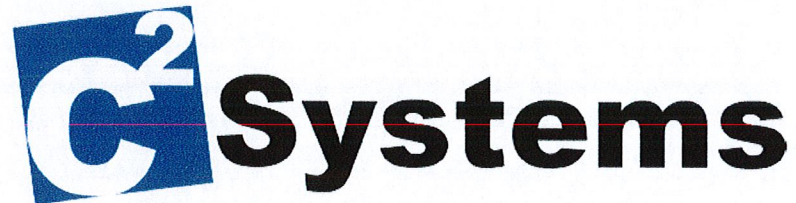
For the foregoing reasons New Cingular Wireless PCS, LLC respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (203)-410-4531 or email DTalmadge@Transcendwireless.com 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

Calculated Radio Frequency Emissions



CT2015

(Branford 6)

405 Brushy Plain Rd, Branford, CT 06405

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 (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

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

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

3. RF Exposure Prediction Methods

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

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

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 ²)	Limit	%MPE
<i>Cingular UMTS</i>	153	880	1	500	0.0077	0.5867	1.31%
<i>Cingular GSM</i>	153	880	3	296	0.0136	0.5867	2.32%
<i>Cingular GSM</i>	153	1900	2	427	0.0131	1.0000	1.31%
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%
Branf 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%
						Total	47.43%

Table 1: Carrier Information^{1 2 3}

¹ The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 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.

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

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

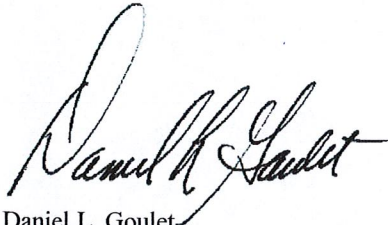
5. Conclusion

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 Exposure⁴

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

(B) Limits for General Population/Uncontrolled Exposure⁵

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

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

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

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

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

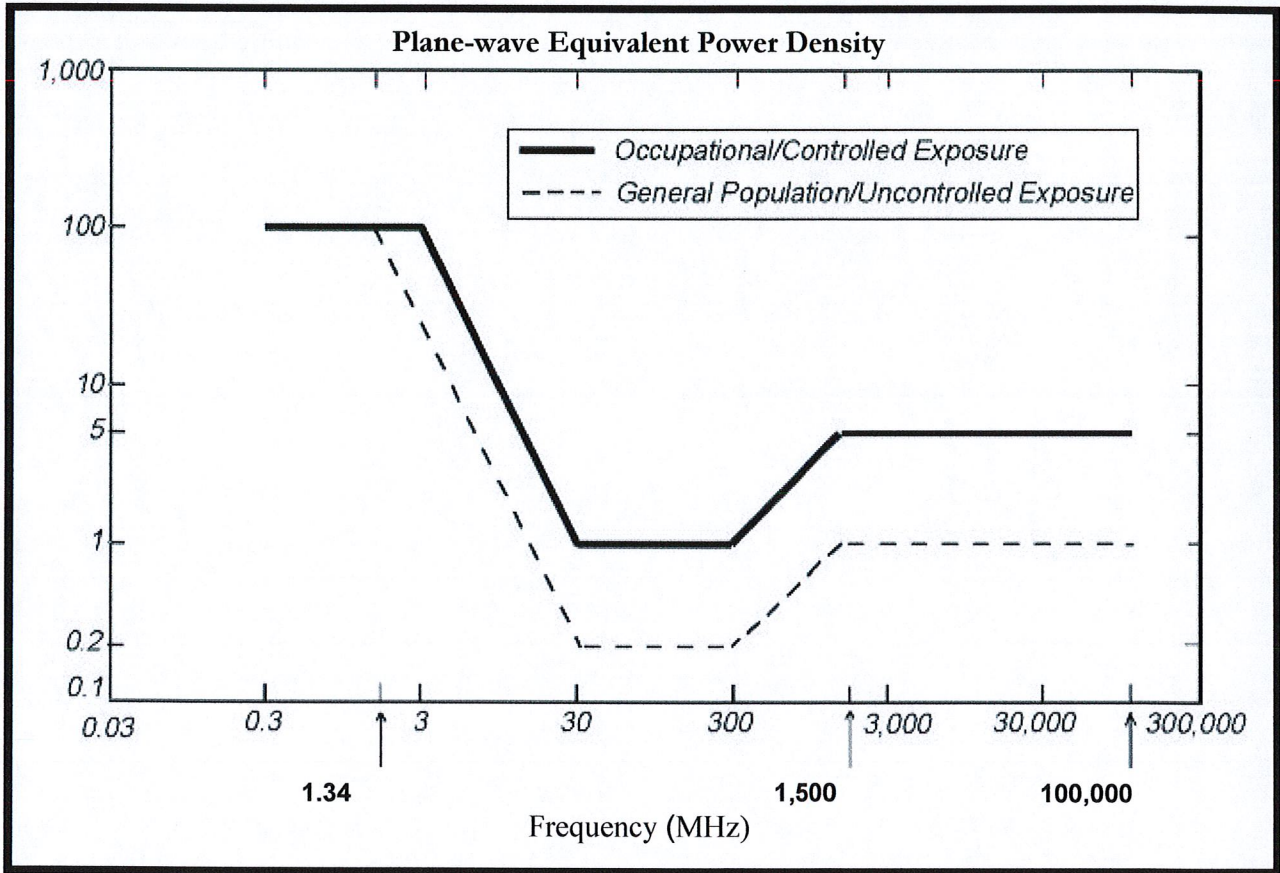
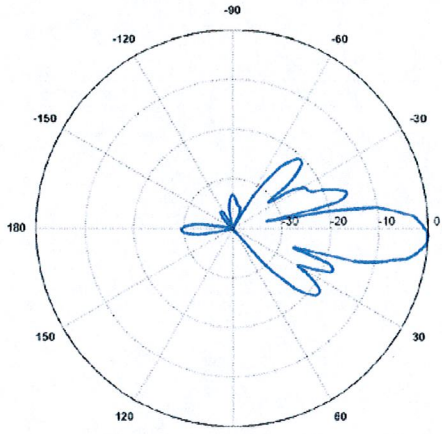
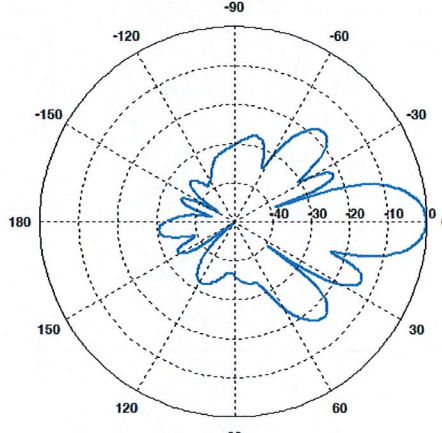
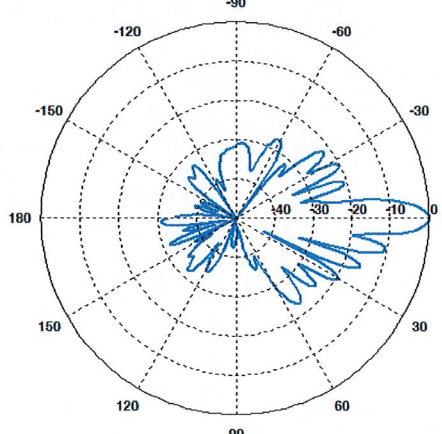


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

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

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



PASSED

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

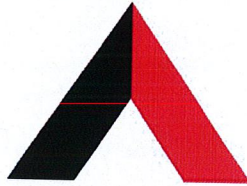
Structure : 150 ft. monopole
ATC Site Name : Branford CT 6, CT
ATC Site Number : 302484
Proposed Carrier : AT&T Mobility
Carrier Site Name : Branford
Carrier Site Number : 10034973/CT2015
County : New Haven
Eng. Number : 49165724
Date : July 23, 2012
Usage : 99% Pole shaft, 67% Anchor bolts, 68%
Base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



7/23/12



AMERICAN TOWER®
CORPORATION

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
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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 M1. 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.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (I/O)	Carrier
153.0	3	Diplexer	Platform w/ Rails	-	AT&T Mobility
	3	Powerwave 7770.00		(6) 1 5/8 (I)	
150.0	1	4' Omni		(1) 1 5/8 (I)	USA Mobility
	1	Yagi		(1) 1/2 (I)	
	2	Decibel DB408		(2) 7/8 (I)	Town of Branford
	1	GPS		(1) 1/2 (I)	Verizon Wireless
140.0	3	RFS ATMAP1412D-1A20	(3) T-Arm	-	T-Mobile
	3	RFS ATMAA1412D-1A20		-	
	3	RFS APXV18-206516S-C-A20		(6) 1 5/8 (O)	
	3	RFS APXV18-206516L-C-00		(6) 1 5/8 (O)	
130.0	3	NextNet BTS-2500	Clearwire Mount	-	Clearwire Corporation
	3	Argus LLPX310R		(6) 5/16 (O)	
	1	DragonWave A-ANT-23G-1-C		(1) 1/2 (O)	
	1	DragonWave A-ANT-18G-2.5-C		(1) 1/2 (O)	
	2	DragonWave Horizon Compact		-	
	1	12" x 12" Junction Box		-	

Antenna Loads (continued)

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (I/O)	Carrier
113.0	3	Antel BXA-171085-8BF-EDIN-X	(3) T-Arm	(3) 1 1/4 (I)	Verizon Wireless
	3	Antel BXA-70063/6CF 4		(3) 1 1/4 (I)	
	2	RFS APL866513-42T0		(2) 1 1/4 (I)	
	4	RFS APL868013-12T0		(4) 1 1/4 (I)	
	6	RFS FD9R6004/1C-3L		-	
103.0	2	Decibel DB408	(1) Standoff	(2) 7/8 (I)	Town of Branford
93.0	1	Decibel DB408	(1) Standoff	(1) 7/8 (I)	
69.0	1	Channel Master 1.2 M Dish	Dish Mount	(1) RG6 (O)	

Proposed Antennas

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

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.

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

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.

Conclusion

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.

Standard Conditions

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

- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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

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

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

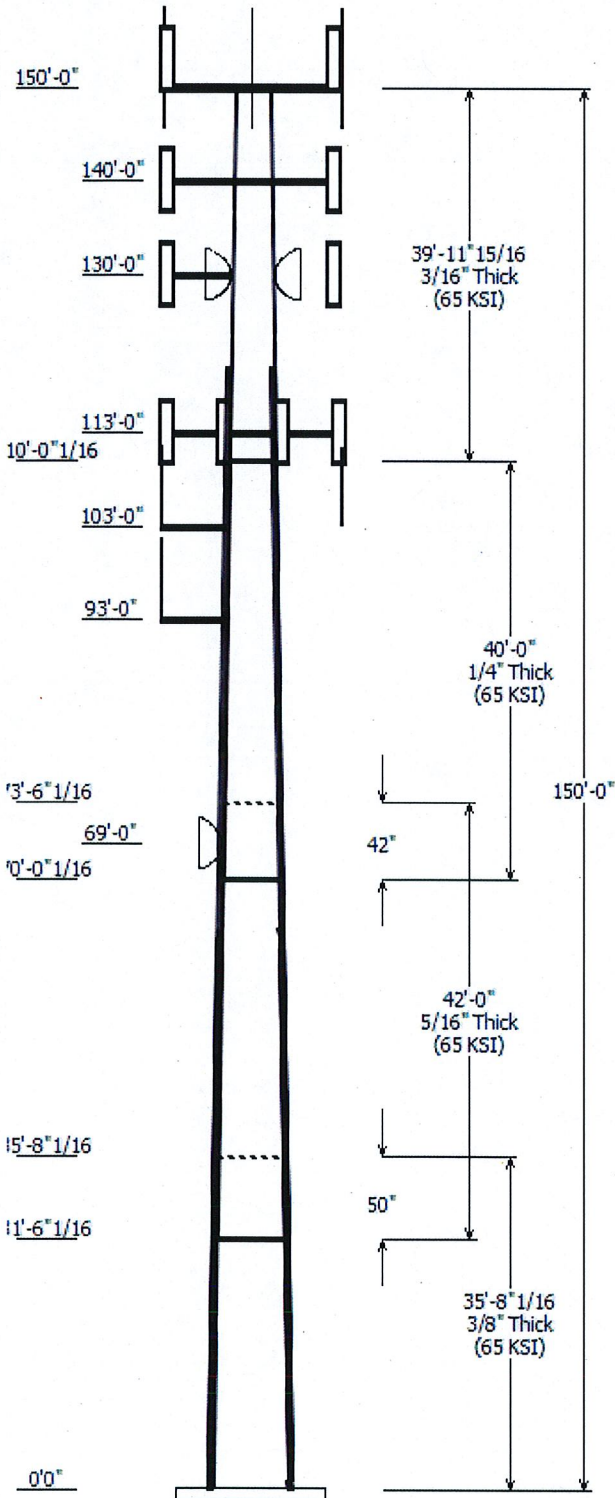
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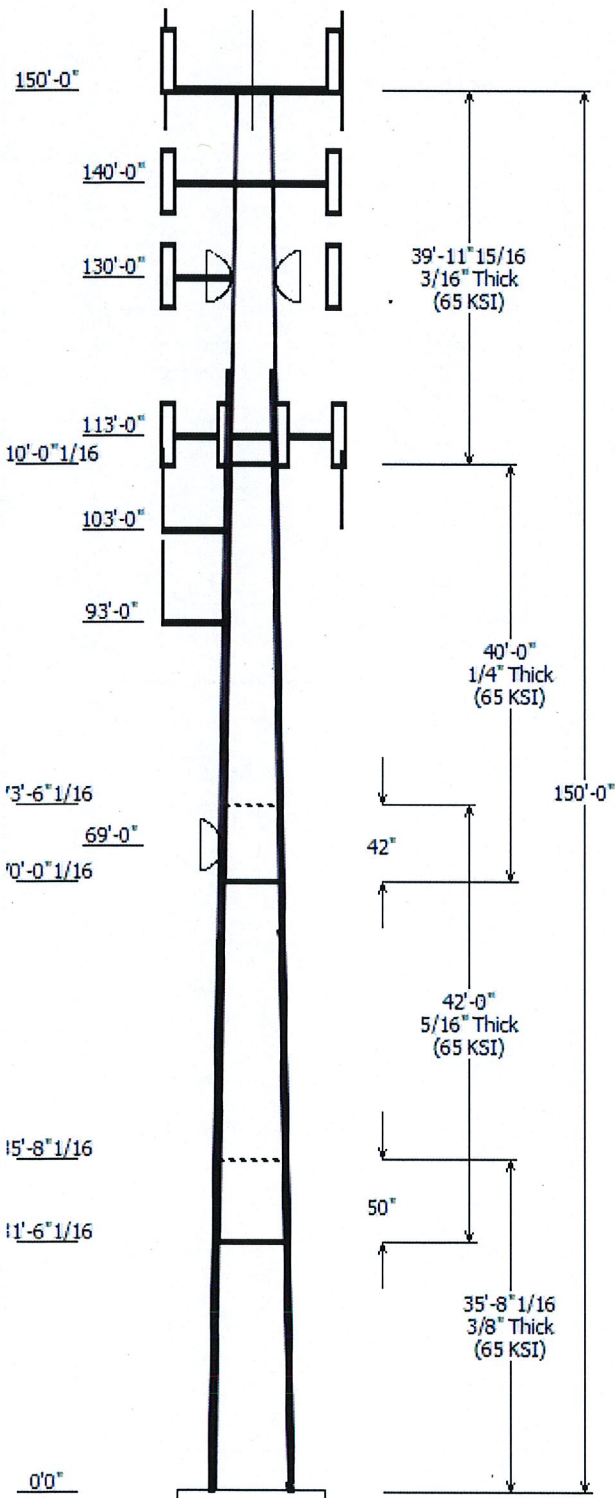
Job Information	
Pole :	302484
Code :	TIA/EIA-222 Rev F
Description :	150 ft. ITT Meyer - Model verified 10/25/11
Client :	AT&T Mobility
Location :	Branford CT 6, CT
Shape :	12 Sides
Height :	150.00 (ft)
Base Elev (ft) :	0.00
Taper :	0.15670(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap		Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom			Length (in)	Taper (in/ft)	
1	35.670	31.79	37.38	0.375		0.000	0.156705	65
2	42.000	26.48	33.06	0.313	Slip Joint	50.000	0.156705	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	0.156705	65
4	39.997	15.00	21.26	0.188	Butt Joint	0.000	0.156705	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
150.000	150.000	6	Ericsson RRUS 11	
150.000	150.000	1	Raycap DC6-48-60-18-8F	
150.000	153.000	6	KMW AWS Twin Dual 700	
150.000	153.000	3	KMW AM-X-CD-16-65-00T-RET	
150.000	153.000	3	Powerwave 7770.00	
150.000	153.000	3	Diplexer	
150.000	159.000	2	Decibel DB408	
150.000	150.000	1	GPS	
150.000	159.000	1	4' Omni	
150.000	150.000	1	Platform w/ Rails	
140.000	140.000	3	RFS ATMAP1412D-1A20	
140.000	140.000	3	RFS ATMAA1412D-1A20	
140.000	140.000	3	RFS APXV18-206516S-C-A20	
140.000	140.000	3	RFS APXV18-206516L-C-00	
140.000	140.000	3	T-Arm	
130.000	130.000	1	12" x 12" Junction Box	
130.000	130.000	1	Clearwire Mount	
130.000	130.000	3	NextNet BTS-2500	
130.000	130.000	2	DragonWave Horizon Compact	
130.000	130.000	1	DragonWave A-ANT-18G-2.5-C	
130.000	130.000	1	DragonWave A-ANT-23G-1-C	
130.000	130.000	3	Argus LLPX310R	
113.000	113.000	6	RFS FD9R6004/2C-3L	
113.000	113.000	2	RFS APL866513-42T0	
113.000	113.000	4	RFS APL868013-42T0	
113.000	113.000	3	Antel BXA-171085-8BF-EDIN-X	
113.000	113.000	3	Antel BXA-70063/6CF_4	
113.000	113.000	3	T-Arm	
103.000	103.000	1	Standoff	
103.000	107.710	2	Decibel DB408	
93.000	93.000	1	Standoff	
93.000	97.710	1	Decibel DB408	
69.000	69.000	1	Channel Master 1.2 M Dish	

Linear Appurtenance				
Elev (ft)		Description	Exposed To Wind	
From	To			
123.0	140.0	1 5/8" Coax	No	
123.0	140.0	1 5/8" Coax	No	
123.0	140.0	1 5/8" Coax	No	
0.000	150.0	1 5/8" Coax	No	



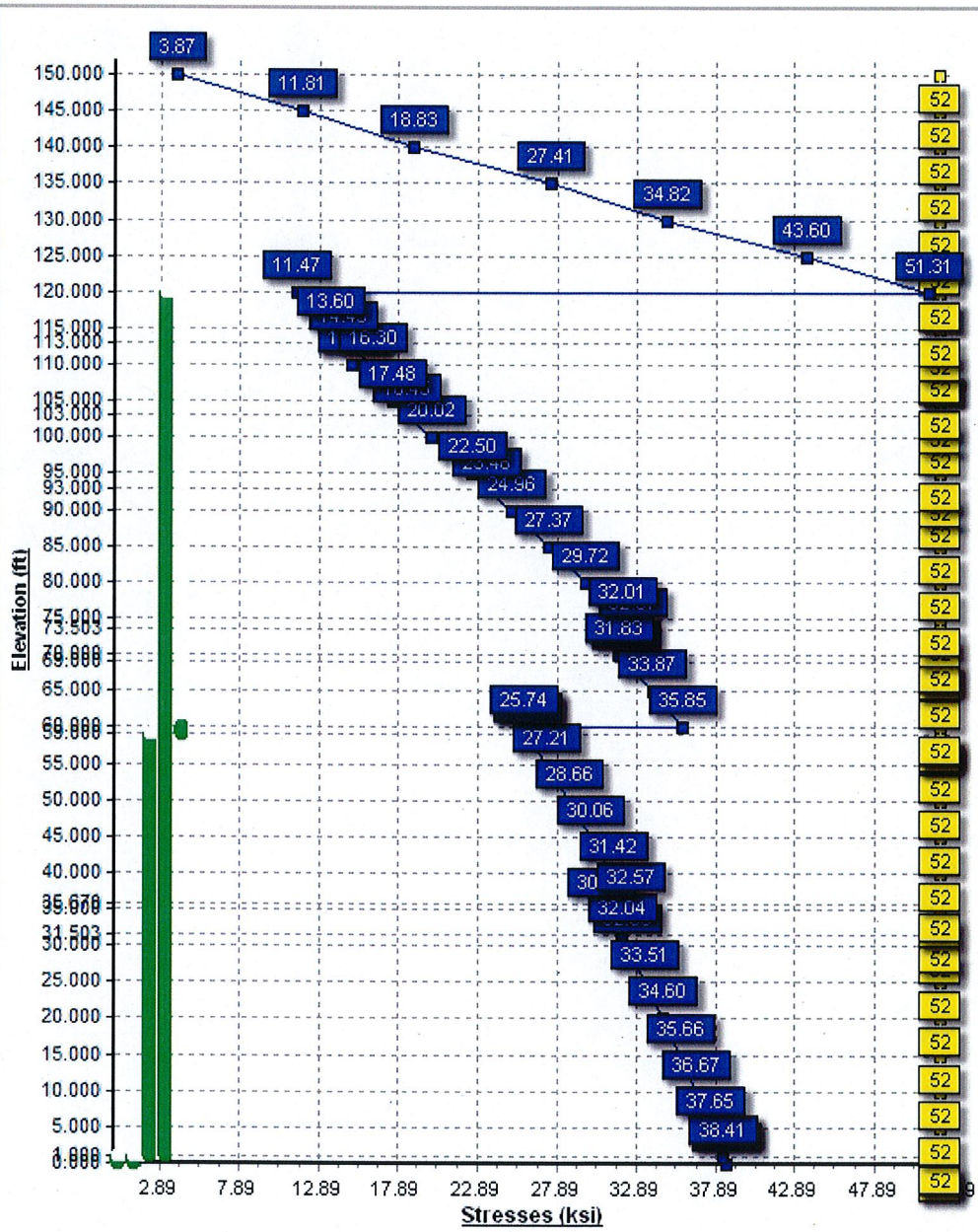


0.000	150.0	1 5/8" Coax	No
0.000	150.0	1/2" Coax	No
0.000	150.0	1/2" Coax	No
0.000	150.0	10 mm Cable	No
0.000	150.0	19.7 mm Cable	No
0.000	150.0	7/8" Coax	No
0.000	69.000	RG6	No
0.000	93.000	7/8" Coax	No
0.000	103.0	7/8" Coax	No
0.000	113.0	1 1/4" Coax	No
0.000	123.0	#18 Dywidag bars	No
0.000	123.0	1 5/8" Coax	Yes
0.000	130.0	1/2" Coax	No
0.000	130.0	5/16" Coax	No

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

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

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



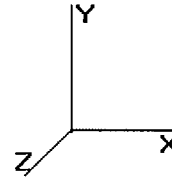
Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
 Base Dia : 37.38 (in)
 Top Dia : 15.00 (in)
 Shape : 12 Sides
 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F

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Base Elev : 0.000 (ft)

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Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip		Weight (lb)	Bottom				Top				Taper (in/ft)				
				Joint Type	Joint Len (in)		Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)		Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio
1-12	35.670	0.3750	65		0.00	5,014	37.38	0.00	44.68	7810.1	24.57	99.68	31.79	35.67	37.93	4778.6	20.57	84.77	0.156705
2-12	42.000	0.3130	65	Slip	50.00	4,244	33.06	31.50	33.01	4521.4	26.17	105.65	26.48	73.50	26.38	2306.9	20.53	84.62	0.156705
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.97	2087.4	27.37	110.14	21.26	110.00	16.92	954.0	20.65	85.07	0.156705
4-12	39.997	0.1880	65	Butt	0.00	1,479	21.26	110.00	12.76	723.8	28.17	113.13	15.00	150.00	8.97	251.1	19.24	79.79	0.156705
Shaft Weight						13,383													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
150.00	4' Omni	1	5.00	1.500	1.00	12.00	2.000	1.00	0.000	9.000
150.00	Decibel DB408	2	17.00	2.970	1.00	41.00	5.550	1.00	0.000	9.000
150.00	Diplexer	3	10.00	0.500	0.67	15.00	0.700	0.67	0.000	3.000
150.00	Ericsson RRUS 11	6	55.00	2.940	0.71	74.30	3.290	0.71	0.000	0.000
150.00	GPS	1	1.50	0.600	1.00	3.50	0.800	1.00	0.000	0.000
150.00	KMW AM-X-CD-16-65-00T-	3	48.50	8.260	0.75	95.00	9.080	0.75	0.000	3.000
150.00	KMW AWS Twin Dual 700	6	17.40	0.430	0.50	24.60	0.600	0.50	0.000	3.000
150.00	Platform w/ Rails	1	1950.00	24.000	1.00	2,800.00	38.000	1.00	0.000	0.000
150.00	Powerwave 7770.00	3	35.00	5.880	0.73	67.63	6.530	0.73	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	49.50	1.670	1.00	0.000	0.000
140.00	RFS APXV18-206516L-C-00	3	14.00	3.400	0.67	35.00	4.070	0.67	0.000	0.000
140.00	RFS APXV18-206516S-C-A20	3	18.70	3.500	0.67	38.70	4.160	0.67	0.000	0.000
140.00	RFS ATMAA1412D-1A20	3	13.00	1.170	0.50	20.60	1.390	0.50	0.000	0.000
140.00	RFS ATMAP1412D-1A20	3	13.00	1.170	0.50	20.60	1.390	0.50	0.000	0.000
140.00	T-Arm	3	333.00	5.000	0.67	433.00	8.100	0.67	0.000	0.000
130.00	12" x 12" Junction Box	1	10.00	1.400	1.00	21.90	1.640	1.00	0.000	0.000
130.00	Argus LLPX310R	3	28.60	4.830	0.69	54.50	5.360	1.00	0.000	0.000
130.00	Clearwire Mount	1	40.00	8.500	1.00	50.00	10.500	1.00	0.000	0.000
130.00	DragonWave A-ANT-18G-2.5-	1	47.60	8.430	1.00	97.10	8.920	1.00	0.000	0.000
130.00	DragonWave A-ANT-23G-1-C	1	15.00	1.610	1.00	25.10	1.830	1.00	0.000	0.000
130.00	DragonWave Horizon	2	10.60	0.430	1.00	17.00	0.580	1.00	0.000	0.000
130.00	NextNet BTS-2500	3	35.00	2.120	0.72	48.30	2.430	1.00	0.000	0.000
113.00	Antel BXA-171085-8BF-EDIN-X	3	10.00	2.944	0.84	27.08	3.500	0.84	0.000	0.000
113.00	Antel BXA-70063/6CF_4	3	17.00	7.730	0.70	58.00	8.540	0.70	0.000	0.000
113.00	RFS APL866513-42T0	2	18.00	4.293	0.93	39.49	4.859	0.93	0.000	0.000
113.00	RFS APL868013-42T0	4	6.30	3.730	0.87	31.68	4.290	0.87	0.000	0.000
113.00	RFS FD9R6004/2C-3L	6	3.10	0.370	0.50	5.40	0.500	0.50	0.000	0.000
113.00	T-Arm	3	333.00	5.000	0.67	433.00	8.100	0.67	0.000	0.000
103.00	Decibel DB408	2	17.00	2.970	1.00	41.00	5.550	1.00	0.000	4.710
103.00	Standoff	1	200.00	2.500	1.00	300.00	3.500	1.00	0.000	0.000
93.00	Decibel DB408	1	28.00	2.700	1.00	50.00	4.860	1.00	0.000	4.710
93.00	Standoff	1	200.00	2.500	1.00	300.00	3.500	1.00	0.000	0.000
69.00	Channel Master 1.2 M Dish	1	188.00	20.910	1.00	277.00	21.790	1.00	0.000	0.000
Totals		81	6046.70			9,054.82			Number of Loadings :	33

Linear Appurtenance Properties

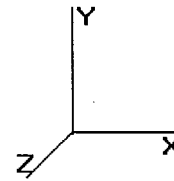
Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	150.00	(1) 1 5/8" Coax	0.82	0.00	0.00	0.00	N
0.00	150.00	(6) 1 5/8" Coax	0.82	0.00	0.00	0.00	N

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

Base Elev : 0.000 (ft)

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Elev	From	To	Qty	Description	Fy (ksi)	Offset (in)	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	150.00		(1)	1/2" Coax	0.15	0.00	0.00	0.00	N	
0.00	150.00		(1)	1/2" Coax	0.15	0.00	0.00	0.00	N	
0.00	150.00		(1)	10 mm Cable	0.07	0.00	0.00	0.00	N	
0.00	150.00		(2)	19.7 mm Cable	0.59	0.00	0.00	0.00	N	
0.00	150.00		(2)	7/8" Coax	0.66	0.00	0.00	0.00	N	
123.00	140.00		(4)	1 5/8" Coax	0.82	0.20	0.00	0.00	N	
123.00	140.00		(4)	1 5/8" Coax	0.82	0.20	0.00	0.00	N	
123.00	140.00		(4)	1 5/8" Coax	0.82	0.20	0.00	0.00	N	
0.00	130.00		(2)	1/2" Coax	0.15	0.06	0.00	0.00	N	
0.00	130.00		(6)	5/16" Coax	0.05	0.06	0.00	0.00	N	
0.00	123.00		(8)	#18 Dywidag bars	0.00	1.10	0.00	0.00	N	
0.00	123.00		(12)	1 5/8" Coax	9.84	0.20	28.56	0.30	Y	
0.00	113.00		(12)	1 1/4" Coax	5.67	0.00	0.00	0.00	N	
0.00	103.00		(2)	7/8" Coax	0.66	0.00	0.00	0.00	N	
0.00	93.00		(1)	7/8" Coax	0.33	0.00	0.00	0.00	N	
0.00	69.00		(1)	RG6	0.08	0.03	0.16	0.14	N	
Total Weight					2,511.35 (lb)		3,523.91 (lb)			

Additional Steel

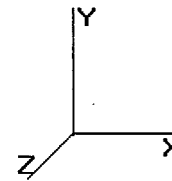
— Intermediate Connections —										
Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	1.00	4	SOL #18 All Thread	75	2.19	6" Angle Bracket	12.0	3.50	5/8" A36 U-Bolt	No
0.00	1.00	4	SOL #18 All Thread	75	5.15	6" Angle Bracket	12.0	3.50	5/8" A36 U-Bolt	No
1.00	59.00	4	SOL #18 All Thread	75	2.19	6" Angle Bracket	30.0	3.50	5/8" A36 U-Bolt	Yes
1.00	120.0	4	SOL #18 All Thread	75	5.15	6" Angle Bracket	24.0	3.50	5/8" A36 U-Bolt	Yes
59.00	60.00	4	SOL #18 All Thread	75	2.19	6" Angle Bracket	12.0	3.50	5/8" A36 U-Bolt	Yes

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

Base Elev : 0.000 (ft)

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Segment Properties (Max Len : 5 ft)

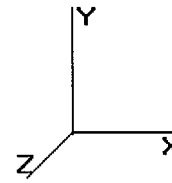
Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing		
											Area (in^2)	Ix (in^4)	Weight (lb)
0.00		0.3750	37.380	44.684	7,810.1	24.57	99.68	65	52	0.0	32.00	8,940	0.0
1.00	Reinf. Top Reinf.	0.3750	37.223	44.494	7,711.3	24.45	99.26	65	52	151.7	32.00	8,881	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
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
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
20.00		0.3750	34.246	40.899	5,989.0	22.33	91.32	65	52	703.9	32.00	7,797	544.0
25.00		0.3750	33.462	39.953	5,582.9	21.77	89.23	65	52	687.8	32.00	7,523	544.0
30.00		0.3750	32.679	39.007	5,195.6	21.21	87.14	65	52	671.7	32.00	7,255	544.0
31.50	Bot - Section 2	0.3750	32.443	38.722	5,082.8	21.04	86.52	65	52	198.8	32.00	7,175	163.6
35.00		0.3750	31.895	38.061	4,826.6	20.65	85.05	65	52	846.3	32.00	7,202	380.4
35.67	Top - Section 1	0.3130	32.416	32.356	4,256.3	25.61	103.57	65	52	160.5	32.00	7,166	72.9
40.00		0.3130	31.738	31.672	3,992.1	25.03	101.40	65	52	471.7	32.00	6,939	471.1
45.00		0.3130	30.954	30.882	3,700.9	24.36	98.90	65	52	532.1	32.00	6,681	544.0
50.00		0.3130	30.171	30.092	3,424.2	23.68	96.39	65	52	518.7	32.00	6,428	544.0
55.00		0.3130	29.387	29.303	3,161.6	23.01	93.89	65	52	505.3	32.00	6,180	544.0
59.00	Reinf. Top Reinf	0.3130	28.760	28.671	2,961.5	22.48	91.89	65	52	394.5	32.00	5,985	435.2
60.00	Reinf. Top	0.3130	28.604	28.513	2,912.8	22.34	91.39	65	52	97.3	32.00	5,937	108.8
65.00		0.3130	27.820	27.723	2,677.5	21.67	88.88	65	52	478.4	16.00	3,294	272.0
69.00		0.3130	27.193	27.092	2,498.6	21.14	86.88	65	52	373.0	16.00	3,194	217.6
70.00		0.3130	27.037	26.934	2,455.1	21.00	86.38	65	52	91.9	16.00	3,169	54.4
70.00	Bot - Section 3	0.3130	27.036	26.933	2,455.0	21.00	86.38	65	52	0.3	16.00	3,169	0.2
73.50	Top - Section 2	0.2500	26.988	21.524	1,964.0	26.78	107.95	65	52	576.4	16.00	3,161	190.4
75.00		0.2500	26.753	21.335	1,912.8	26.53	107.01	65	52	109.1	16.00	3,124	81.4
80.00		0.2500	25.970	20.704	1,748.1	25.69	103.88	65	52	357.6	16.00	3,001	272.0
85.00		0.2500	25.186	20.074	1,593.2	24.85	100.74	65	52	346.9	16.00	2,881	272.0
90.00		0.2500	24.403	19.443	1,447.7	24.01	97.61	65	52	336.2	16.00	2,763	272.0
93.00		0.2500	23.932	19.064	1,364.8	23.51	95.73	65	52	196.5	16.00	2,694	163.2
95.00		0.2500	23.619	18.812	1,311.3	23.17	94.48	65	52	128.9	16.00	2,648	108.8
100.0		0.2500	22.836	18.181	1,183.8	22.33	91.34	65	52	314.7	16.00	2,535	272.0
103.0		0.2500	22.365	17.803	1,111.4	21.83	89.46	65	52	183.7	16.00	2,469	163.2
105.0		0.2500	22.052	17.551	1,064.8	21.49	88.21	65	52	120.3	16.00	2,425	108.8
110.0		0.2500	21.268	16.920	954.1	20.65	85.07	65	52	293.2	16.00	2,317	272.0
110.0	Top - Section 3	0.2500	21.268	16.919	954.0	20.65	85.07	65	52	0.2	16.00	2,317	0.2
110.0	Bot - Section 4	0.1880	21.268	12.761	723.8	28.17	113.13	65	52		16.00	2,317	
113.0		0.1880	20.798	12.477	676.5	27.50	110.63	65	52	128.7	16.00	2,254	163.0
115.0		0.1880	20.485	12.287	646.1	27.05	108.96	65	52	84.3	16.00	2,212	108.8
120.0	Reinf. Top	0.1880	19.701	11.813	574.1	25.94	104.79	65	52	205.0	16.00	2,109	272.0
125.0		0.1880	18.918	11.338	507.7	24.82	100.63	65	52	196.9			
130.0		0.1880	18.134	10.864	446.6	23.70	96.46	65	52	188.9			
135.0		0.1880	17.351	10.390	390.6	22.59	92.29	65	52	180.8			
140.0		0.1880	16.567	9.915	339.5	21.47	88.12	65	52	172.7			
145.0		0.1880	15.784	9.441	293.1	20.35	83.96	65	52	164.7			
150.0		0.1880	15.000	8.967	251.1	19.24	79.79	65	52	156.6			
										13,383.0	9,792.0		

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)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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		

Shaft Segment Forces

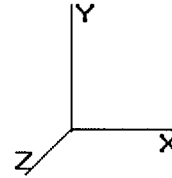
Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00	20.736	35.04	280.35	1.030	0.000	0.00	0.000	0.00	0.0	0.0	
1.00	Reinf. Top Reinf. Top	0.00	1.00	20.736	35.04	279.17	1.030	0.000	1.00	3.108	3.20	112.2	0.0	260.5
5.00		0.00	1.00	20.736	35.04	274.47	1.030	0.000	4.00	12.303	12.67	444.1	0.0	1,035.7
10.00		0.00	1.00	20.736	35.04	268.59	1.030	0.000	5.00	15.085	15.54	544.5	0.0	1,280.1
15.00		0.00	1.00	20.736	35.04	262.72	1.030	0.000	5.00	14.759	15.20	532.7	0.0	1,264.0
20.00		0.00	1.00	20.736	35.04	256.84	1.030	0.000	5.00	14.432	14.87	520.9	0.0	1,247.9
25.00		0.00	1.00	20.736	35.04	250.96	1.030	0.000	5.00	14.106	14.53	509.2	0.0	1,231.8
30.00		0.00	1.00	20.736	35.04	245.09	1.030	0.000	5.00	13.779	14.19	497.4	0.0	1,215.7
31.50	Bot - Section 2	0.00	1.00	20.736	35.04	243.32	1.030	0.000	1.50	4.079	4.20	147.2	0.0	362.4
35.00		0.00	1.01	21.088	35.63	241.23	1.030	0.000	3.50	9.556	9.84	350.8	0.0	1,226.8
35.67	Top - Section 1	0.00	1.02	21.202	35.83	241.09	1.030	0.000	0.67	1.813	1.87	66.9	0.0	233.4
40.00		0.00	1.05	21.908	37.02	244.66	1.030	0.000	4.33	11.574	11.92	441.4	0.0	942.8
45.00		0.00	1.09	22.657	38.29	242.67	1.030	0.000	5.00	13.061	13.45	515.1	0.0	1,076.1
50.00		0.00	1.12	23.350	39.46	240.11	1.030	0.000	5.00	12.734	13.12	517.6	0.0	1,062.7
55.00		0.00	1.15	23.994	40.55	237.09	1.030	0.000	5.00	12.408	12.78	518.2	0.0	1,049.3
59.00	Reinf. Top Reinf Bottom	0.00	1.18	24.481	41.37	234.37	1.030	0.000	4.00	9.691	9.98	413.0	0.0	829.7
60.00	Reinf. Top	0.00	1.18	24.598	41.57	233.65	1.030	0.000	1.00	2.390	2.46	102.3	0.0	206.1
65.00		0.00	1.21	25.167	42.53	229.86	1.030	0.000	5.00	11.755	12.11	515.0	0.0	750.4
69.00	Appertunance(s)	0.00	1.23	25.601	43.26	226.61	1.030	0.000	4.00	9.169	9.44	408.6	0.0	590.6
70.00		0.00	1.24	25.706	43.44	225.77	1.030	0.000	1.00	2.260	2.33	101.1	0.0	146.3
70.00	Bot - Section 3	0.00	1.24	25.706	43.44	225.76	1.030	0.000	0.00	0.008	0.01	0.3	0.0	0.5
73.50	Top - Section 2	0.00	1.25	26.067	44.05	222.73	1.030	0.000	3.50	7.951	8.19	360.8	0.0	766.8
75.00		0.00	1.26	26.218	44.30	225.61	1.030	0.000	1.50	3.351	3.45	152.9	0.0	190.6
80.00		0.00	1.28	26.706	45.13	221.03	1.030	0.000	5.00	10.984	11.31	510.6	0.0	629.6
85.00		0.00	1.31	27.172	45.92	216.23	1.030	0.000	5.00	10.657	10.98	504.1	0.0	618.9
90.00		0.00	1.33	27.620	46.67	211.22	1.030	0.000	5.00	10.331	10.64	496.7	0.0	608.2
93.00	Appertunance(s)	0.00	1.34	27.880	47.11	208.12	1.030	0.000	3.00	6.042	6.22	293.2	0.0	359.7
95.00		0.00	1.35	28.050	47.40	206.02	1.030	0.000	2.00	3.963	4.08	193.5	0.0	237.7
100.00		0.00	1.37	28.464	48.10	200.65	1.030	0.000	5.00	9.678	9.97	479.5	0.0	586.7
103.00	Appertunance(s)	0.00	1.38	28.705	48.51	197.35	1.030	0.000	3.00	5.650	5.82	282.3	0.0	346.9
105.00		0.00	1.39	28.863	48.77	195.12	1.030	0.000	2.00	3.701	3.81	186.0	0.0	229.1
110.00		0.00	1.41	29.250	49.43	189.45	1.030	0.000	5.00	9.025	9.30	459.5	0.0	565.2
110.00	Top - Section 3	0.00	1.41	29.250	49.43	189.44	1.030	0.000	0.00	0.006	0.01	0.3	0.0	0.4
113.00	Appertunance(s)	0.00	1.42	29.475	49.81	185.97	1.030	0.000	3.00	5.252	5.41	269.5	0.0	291.7
115.00		0.00	1.42	29.623	50.06	183.63	1.030	0.000	2.00	3.440	3.54	177.4	0.0	193.1
120.00	Reinf. Top	0.00	1.44	29.986	50.67	177.68	1.030	0.000	5.00	8.372	8.62	437.0	0.0	477.0
125.00		0.00	1.46	30.338	51.27	171.61	1.030	0.000	5.00	8.046	8.29	424.9	0.0	196.9
130.00	Appertunance(s)	0.00	1.48	30.679	51.84	165.43	1.030	0.000	5.00	7.719	7.95	412.2	0.0	188.9
135.00		0.00	1.49	31.012	52.41	159.14	1.030	0.000	5.00	7.393	7.61	399.1	0.0	180.8
140.00	Appertunance(s)	0.00	1.51	31.336	52.95	152.74	1.030	0.000	5.00	7.066	7.28	385.4	0.0	172.7
145.00		0.00	1.52	31.652	53.49	146.25	1.030	0.000	5.00	6.740	6.94	371.3	0.0	164.7
150.00	Appertunance(s)	0.00	1.54	31.960	54.01	139.66	1.030	0.000	5.00	6.413	6.61	356.8	0.0	156.6
Totals:								150.00				14,411.6	0.0	23,175.0

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)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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		

Discrete Appurtenance Segment Forces

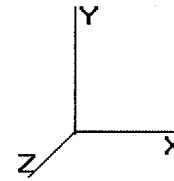
Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	25.601	43.265	1.00	20.91	0.000	0.000	904.67	0.00	0.00	188.00
93.00	Decibel DB408	1	28.276	47.786	1.00	2.70	0.000	4.710	129.02	0.00	607.70	28.00
93.00	Standoff	1	27.880	47.117	1.00	2.50	0.000	0.000	117.79	0.00	0.00	200.00
103.00	Decibel DB408	2	29.074	49.135	1.00	5.94	0.000	4.710	291.86	0.00	1,374.68	34.00
103.00	Standoff	1	28.705	48.512	1.00	2.50	0.000	0.000	121.28	0.00	0.00	200.00
113.00	Antel BXA-171085-8BF	3	29.475	49.813	0.84	7.42	0.000	0.000	369.56	0.00	0.00	30.00
113.00	Antel BXA-70063/6CF	3	29.475	49.813	0.70	16.23	0.000	0.000	808.62	0.00	0.00	51.00
113.00	RFS APL866513-42T0	2	29.475	49.813	0.93	7.98	0.000	0.000	397.76	0.00	0.00	36.00
113.00	RFS APL868013-42T0	4	29.475	49.813	0.87	12.98	0.000	0.000	646.60	0.00	0.00	25.20
113.00	RFS FD9R6004/2C-3L	6	29.475	49.813	0.50	1.11	0.000	0.000	55.29	0.00	0.00	18.60
113.00	T-Arm	3	29.475	49.813	0.67	10.05	0.000	0.000	500.62	0.00	0.00	999.00
130.00	12" x 12" Junction B	1	30.679	51.848	1.00	1.40	0.000	0.000	72.59	0.00	0.00	10.00
130.00	Argus LLPX310R	3	30.679	51.848	0.69	10.00	0.000	0.000	518.38	0.00	0.00	85.80
130.00	Clearwire Mount	1	30.679	51.848	1.00	8.50	0.000	0.000	440.71	0.00	0.00	40.00
130.00	DragonWave A-ANT-	1	30.679	51.848	1.00	8.43	0.000	0.000	437.08	0.00	0.00	47.60
130.00	DragonWave A-ANT-	1	30.679	51.848	1.00	1.61	0.000	0.000	83.48	0.00	0.00	15.00
130.00	DragonWave Horizon	2	30.679	51.848	1.00	0.86	0.000	0.000	44.59	0.00	0.00	21.20
130.00	NextNet BTS-2500	3	30.679	51.848	0.72	4.58	0.000	0.000	237.42	0.00	0.00	105.00
140.00	RFS APXV18-206516L-	3	31.336	52.958	0.67	6.83	0.000	0.000	361.91	0.00	0.00	42.00
140.00	RFS APXV18-206516S-	3	31.336	52.958	0.67	7.04	0.000	0.000	372.56	0.00	0.00	56.10
140.00	RFS ATMAA1412D-	3	31.336	52.958	0.50	1.75	0.000	0.000	92.94	0.00	0.00	39.00
140.00	RFS ATMAP1412D-	3	31.336	52.958	0.50	1.75	0.000	0.000	92.93	0.00	0.00	39.00
140.00	T-Arm	3	31.336	52.958	0.67	10.05	0.000	0.000	532.23	0.00	0.00	999.00
150.00	4' Omni	1	32.496	54.919	1.00	1.50	0.000	9.000	82.38	0.00	741.40	5.00
150.00	Decibel DB408	2	32.496	54.919	1.00	5.94	0.000	9.000	326.22	0.00	2,935.96	34.00
150.00	Diplexer	3	32.141	54.319	0.67	1.00	0.000	3.000	54.59	0.00	163.77	30.00
150.00	Ericsson RRUS 11	6	31.960	54.012	0.71	12.52	0.000	0.000	676.47	0.00	0.00	330.00
150.00	GPS	1	31.960	54.012	1.00	0.60	0.000	0.000	32.41	0.00	0.00	1.50
150.00	KMW AM-X-CD-16-65-	3	32.141	54.319	0.75	18.59	0.000	3.000	1,009.51	0.00	3,028.53	145.50
150.00	KMW AWS Twin Dual	6	32.141	54.319	0.50	1.29	0.000	3.000	70.07	0.00	210.21	104.40
150.00	Platform w/ Rails	1	31.960	54.012	1.00	24.00	0.000	0.000	1,296.29	0.00	0.00	1,950.00
150.00	Powerwave 7770.00	3	32.141	54.319	0.73	12.88	0.000	3.000	699.47	0.00	2,098.41	105.00
150.00	Raycap DC6-48-60-18-	1	31.960	54.012	1.00	1.47	0.000	0.000	79.40	0.00	0.00	31.80
									11,956.69			6,046.70

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

Base Elev : 0.000 (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		

Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (st/ft)	qz (psf)	FX (lb)	Dead Load (lb)
1.00	(12) 1 5/8" Coax	Yes	1.00	9.84	0.20	20.736	7.01	9.84
5.00	(12) 1 5/8" Coax	Yes	4.00	9.84	0.20	20.736	28.04	39.36
10.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	20.736	35.04	49.20
15.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	20.736	35.04	49.20
20.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	20.736	35.04	49.20
25.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	20.736	35.04	49.20
30.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	20.736	35.04	49.20
31.50	(12) 1 5/8" Coax	Yes	1.50	9.84	0.20	20.736	10.54	14.79
35.00	(12) 1 5/8" Coax	Yes	3.50	9.84	0.20	21.088	24.92	34.41
35.67	(12) 1 5/8" Coax	Yes	0.67	9.84	0.20	21.202	4.80	6.59
40.00	(12) 1 5/8" Coax	Yes	4.33	9.84	0.20	21.908	32.06	42.61
45.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	22.657	38.29	49.20
50.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	23.350	39.46	49.20
55.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	23.994	40.55	49.20
59.00	(12) 1 5/8" Coax	Yes	4.00	9.84	0.20	24.481	33.10	39.36
60.00	(12) 1 5/8" Coax	Yes	1.00	9.84	0.20	24.598	8.31	9.84
65.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	25.167	42.53	49.20
69.00	(12) 1 5/8" Coax	Yes	4.00	9.84	0.20	25.601	34.61	39.36
70.00	(12) 1 5/8" Coax	Yes	1.00	9.84	0.20	25.706	8.69	9.84
70.00	(12) 1 5/8" Coax	Yes	0.00	9.84	0.20	25.706	0.03	0.03
73.50	(12) 1 5/8" Coax	Yes	3.50	9.84	0.20	26.067	30.84	34.44
75.00	(12) 1 5/8" Coax	Yes	1.50	9.84	0.20	26.218	13.26	14.73
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	26.706	45.13	49.20
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	27.172	45.92	49.20
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	27.620	46.68	49.20
93.00	(12) 1 5/8" Coax	Yes	3.00	9.84	0.20	27.880	28.27	29.52
95.00	(12) 1 5/8" Coax	Yes	2.00	9.84	0.20	28.050	18.96	19.68
100.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	28.464	48.10	49.20
103.00	(12) 1 5/8" Coax	Yes	3.00	9.84	0.20	28.705	29.11	29.52
105.00	(12) 1 5/8" Coax	Yes	2.00	9.84	0.20	28.863	19.51	19.68
110.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	29.250	49.43	49.20
110.00	(12) 1 5/8" Coax	Yes	0.00	9.84	0.20	29.250	0.03	0.03
113.00	(12) 1 5/8" Coax	Yes	3.00	9.84	0.20	29.475	29.85	29.49
115.00	(12) 1 5/8" Coax	Yes	2.00	9.84	0.20	29.623	20.03	19.68
120.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	29.986	50.68	49.20
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

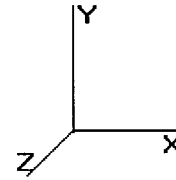
Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
 Base Dia : 37.38 (in)
 Top Dia : 15.00 (in)
 Shape : 12 Sides
 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F

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Base Elev : 0.000 (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		

Applied Segment Forces Summary

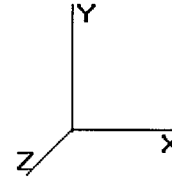
Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
1.00	119.21	280.56	0.00	0.00
5.00	472.12	1,115.80	0.00	0.00
10.00	579.55	1,380.27	0.00	0.00
15.00	567.77	1,364.17	0.00	0.00
20.00	555.98	1,348.07	0.00	0.00
25.00	544.20	1,331.98	0.00	0.00
30.00	532.41	1,315.88	0.00	0.00
31.50	157.78	392.49	0.00	0.00
35.00	375.70	1,296.81	0.00	0.00
35.67	71.71	246.83	0.00	0.00
40.00	473.45	1,029.55	0.00	0.00
45.00	553.41	1,176.32	0.00	0.00
50.00	557.05	1,162.88	0.00	0.00
55.00	558.79	1,149.44	0.00	0.00
59.00	446.08	909.88	0.00	0.00
60.00	110.66	226.13	0.00	0.00
65.00	557.51	850.57	0.00	0.00
69.00	1,347.87	858.79	0.00	0.00
70.00	109.80	166.27	0.00	0.00
70.00	0.37	0.55	0.00	0.00
73.50	391.63	836.69	0.00	0.00
75.00	166.21	220.42	0.00	0.00
80.00	555.74	729.40	0.00	0.00
85.00	550.01	718.67	0.00	0.00
90.00	543.37	707.94	0.00	0.00
93.00	568.30	647.61	0.00	607.70
95.00	212.44	276.93	0.00	0.00
100.0	527.62	684.82	0.00	0.00
103.0	724.57	639.74	0.00	1,374.68
105.0	205.48	267.03	0.00	0.00
110.0	508.94	660.06	0.00	0.00
110.0	0.33	0.44	0.00	0.00
113.0	3,077.79	1,508.32	0.00	0.00
115.0	197.42	219.65	0.00	0.00
120.0	487.67	543.49	0.00	0.00
125.0	455.64	248.66	0.00	0.00
130.0	2,246.49	543.05	0.00	0.00
135.0	399.08	209.40	0.00	0.00
140.0	1,838.01	1,376.43	0.00	0.00
145.0	371.34	180.96	0.00	0.00
150.0	4,683.59	2,910.09	0.00	9,178.29
Totals:	27,403.08	31,733.08	0.00	11,160.67

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

Base Elev : 0.000 (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 Shaft Forces and Deflections

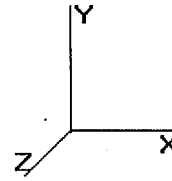
Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-27.416	-31.721	0.000	0.000	0.000	-2,749.820	0.000	0.000	0.000	0.000
1.00	-27.360	-31.385	0.000	0.000	0.000	-2,722.404	-0.005	0.000	0.005	-0.046
5.00	-26.993	-30.174	0.000	0.000	0.000	-2,612.966	-0.124	0.000	0.124	-0.229
10.00	-26.519	-28.693	0.000	0.000	0.000	-2,478.001	-0.486	0.000	0.486	-0.456
15.00	-26.044	-27.233	0.000	0.000	0.000	-2,345.409	-1.085	0.000	1.085	-0.682
20.00	-25.570	-25.793	0.000	0.000	0.000	-2,215.189	-1.920	0.000	1.920	-0.905
25.00	-25.097	-24.374	0.000	0.000	0.000	-2,087.338	-2.988	0.000	2.988	-1.127
30.00	-24.593	-23.009	0.000	0.000	0.000	-1,961.856	-4.287	0.000	4.287	-1.347
31.50	-24.469	-22.574	0.000	0.000	0.000	-1,924.885	-4.723	0.000	4.723	-1.414
35.00	-24.094	-21.249	0.000	0.000	0.000	-1,839.325	-5.816	0.000	5.816	-1.567
35.67	-24.054	-20.960	0.000	0.000	0.000	-1,823.182	-6.039	0.000	6.039	-1.596
40.00	-23.620	-19.862	0.000	0.000	0.000	-1,719.029	-7.571	0.000	7.571	-1.778
45.00	-23.098	-18.619	0.000	0.000	0.000	-1,600.930	-9.551	0.000	9.551	-1.994
50.00	-22.562	-17.395	0.000	0.000	0.000	-1,485.442	-11.754	0.000	11.754	-2.206
55.00	-22.009	-16.199	0.000	0.000	0.000	-1,372.634	-14.176	0.000	14.176	-2.412
59.00	-21.551	-15.271	0.000	0.000	0.000	-1,284.597	-16.267	0.000	16.267	-2.574
60.00	-21.461	-15.006	0.000	0.000	0.000	-1,263.047	-16.810	0.000	16.810	-2.614
65.00	-20.914	-14.109	0.000	0.000	0.000	-1,155.742	-19.654	0.000	19.654	-2.809
69.00	-19.555	-13.275	0.000	0.000	0.000	-1,072.086	-22.098	0.000	22.098	-3.021
70.00	-19.442	-13.106	0.000	0.000	0.000	-1,052.531	-22.737	0.000	22.737	-3.074
70.00	-19.463	-13.074	0.000	0.000	0.000	-1,052.466	-22.739	0.000	22.739	-3.074
73.50	-19.053	-12.218	0.000	0.000	0.000	-984.347	-25.060	0.000	25.060	-3.255
75.00	-18.910	-11.952	0.000	0.000	0.000	-955.832	-26.093	0.000	26.093	-3.330
80.00	-18.360	-11.177	0.000	0.000	0.000	-861.285	-29.718	0.000	29.718	-3.587
85.00	-17.808	-10.422	0.000	0.000	0.000	-769.487	-33.605	0.000	33.605	-3.831
90.00	-17.247	-9.699	0.000	0.000	0.000	-680.450	-37.741	0.000	37.741	-4.061
93.00	-16.651	-9.063	0.000	0.000	0.000	-628.100	-40.335	0.000	40.335	-4.194
95.00	-16.441	-8.761	0.000	0.000	0.000	-594.798	-42.109	0.000	42.109	-4.280
100.00	-15.884	-8.076	0.000	0.000	0.000	-512.594	-46.697	0.000	46.697	-4.479
103.00	-15.123	-7.471	0.000	0.000	0.000	-463.566	-49.546	0.000	49.546	-4.591
105.00	-14.912	-7.191	0.000	0.000	0.000	-433.320	-51.483	0.000	51.483	-4.662
110.00	-14.359	-6.556	0.000	0.000	0.000	-358.760	-56.451	0.000	56.451	-4.824
110.00	-14.364	-6.544	0.000	0.000	0.000	-358.712	-56.454	0.000	56.454	-4.824
113.00	-11.176	-5.288	0.000	0.000	0.000	-315.668	-59.508	0.000	59.508	-4.912
115.00	-10.969	-5.068	0.000	0.000	0.000	-293.316	-61.577	0.000	61.577	-4.971
120.00	-10.445	-4.547	0.000	0.000	0.000	-238.471	-66.850	0.000	66.850	-5.103
125.00	-9.991	-4.289	0.000	0.000	0.000	-186.244	-72.252	0.000	72.252	-5.215
130.00	-7.732	-3.907	0.000	0.000	0.000	-136.289	-77.957	0.000	77.957	-5.667
135.00	-7.335	-3.697	0.000	0.000	0.000	-97.632	-84.090	0.000	84.090	-6.040
140.00	-5.370	-2.505	0.000	0.000	0.000	-60.959	-90.568	0.000	90.568	-6.329
145.00	-4.987	-2.353	0.000	0.000	0.000	-34.111	-97.297	0.000	97.297	-6.528
150.00	-4.683	0.000	0.000	0.000	0.000	-9.178	-104.186	0.000	104.186	-6.633

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

Base Elev : 0.000 (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)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.41	1.25	0.00	0.00	0.00	38.12	38.59	52.0	0.0	0.742
1.00	0.41	1.25	0.00	0.00	0.00	37.94	38.41	52.0	0.0	0.739
1.00	0.41	1.25	0.00	0.00	0.00	37.94	38.41	52.0	0.0	0.739
5.00	0.40	1.25	0.00	0.00	0.00	37.19	37.65	52.0	0.0	0.724
10.00	0.38	1.26	0.00	0.00	0.00	36.22	36.67	52.0	0.0	0.705
15.00	0.37	1.26	0.00	0.00	0.00	35.22	35.66	52.0	0.0	0.686
20.00	0.35	1.27	0.00	0.00	0.00	34.18	34.60	52.0	0.0	0.666
25.00	0.34	1.28	0.00	0.00	0.00	33.10	33.51	52.0	0.0	0.645
30.00	0.32	1.28	0.00	0.00	0.00	31.98	32.38	52.0	0.0	0.623
31.50	0.32	1.28	0.00	0.00	0.00	31.65	32.04	52.0	0.0	0.616
35.00	0.30	1.29	0.00	0.00	0.00	30.30	30.68	52.0	0.0	0.590
35.67	0.33	1.51	0.00	0.00	0.00	32.14	32.57	52.0	0.0	0.626
40.00	0.31	1.52	0.00	0.00	0.00	31.00	31.42	52.0	0.0	0.604
45.00	0.30	1.52	0.00	0.00	0.00	29.65	30.06	52.0	0.0	0.578
50.00	0.28	1.52	0.00	0.00	0.00	28.25	28.66	52.0	0.0	0.551
55.00	0.26	1.53	0.00	0.00	0.00	26.82	27.21	52.0	0.0	0.523
59.00	0.25	1.53	0.00	0.00	0.00	25.65	26.04	52.0	0.0	0.501
59.00	0.25	1.53	0.00	0.00	0.00	25.65	26.04	52.0	0.0	0.501
60.00	0.25	1.53	0.00	0.00	0.00	25.36	25.74	52.0	0.0	0.495
60.00	0.34	1.53	0.00	0.00	0.00	35.42	35.85	52.0	0.0	0.690
65.00	0.32	1.53	0.00	0.00	0.00	33.44	33.87	52.0	0.0	0.651
69.00	0.31	1.47	0.00	0.00	0.00	31.81	32.22	52.0	0.0	0.620
70.00	0.31	1.47	0.00	0.00	0.00	31.43	31.84	52.0	0.0	0.612
70.00	0.30	1.47	0.00	0.00	0.00	31.43	31.83	52.0	0.0	0.612
73.50	0.33	1.80	0.00	0.00	0.00	32.20	32.67	52.0	0.0	0.628
75.00	0.32	1.80	0.00	0.00	0.00	31.54	32.01	52.0	0.0	0.616
80.00	0.30	1.80	0.00	0.00	0.00	29.25	29.72	52.0	0.0	0.572
85.00	0.29	1.80	0.00	0.00	0.00	26.90	27.37	52.0	0.0	0.526
90.00	0.27	1.80	0.00	0.00	0.00	24.49	24.96	52.0	0.0	0.480
93.00	0.26	1.77	0.00	0.00	0.00	23.00	23.46	52.0	0.0	0.451
95.00	0.25	1.78	0.00	0.00	0.00	22.04	22.50	52.0	0.0	0.433
100.00	0.24	1.78	0.00	0.00	0.00	19.55	20.02	52.0	0.0	0.385
103.00	0.22	1.73	0.00	0.00	0.00	17.98	18.45	52.0	0.0	0.355
105.00	0.21	1.73	0.00	0.00	0.00	17.01	17.48	52.0	0.0	0.336
110.00	0.20	1.72	0.00	0.00	0.00	14.49	14.99	52.0	0.0	0.288
110.00	0.20	1.72	0.00	0.00	0.00	14.48	14.98	52.0	0.0	0.288
110.00	0.23	2.29	0.00	0.00	0.00	15.58	16.30	52.0	0.0	0.313
113.00	0.19	1.82	0.00	0.00	0.00	13.91	14.45	52.0	0.0	0.278
115.00	0.18	1.81	0.00	0.00	0.00	13.06	13.60	52.0	0.0	0.262
120.00	0.16	1.80	0.00	0.00	0.00	10.87	11.47	52.0	0.0	0.221
120.00	0.38	1.80	0.00	0.00	0.00	50.83	51.31	52.0	0.0	0.987
125.00	0.38	1.79	0.00	0.00	0.00	43.11	43.60	52.0	0.0	0.838
130.00	0.36	1.45	0.00	0.00	0.00	34.37	34.82	52.0	0.0	0.670
135.00	0.36	1.43	0.00	0.00	0.00	26.94	27.41	52.0	0.0	0.527
140.00	0.25	1.10	0.00	0.00	0.00	18.48	18.83	52.0	0.0	0.362
145.00	0.25	1.07	0.00	0.00	0.00	11.41	11.81	52.0	0.0	0.227
150.00	0.00	1.06	0.00	0.00	0.00	3.41	3.87	52.0	0.0	0.074

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)

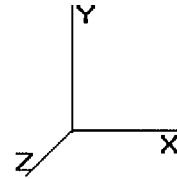
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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		

Shaft Segment Forces

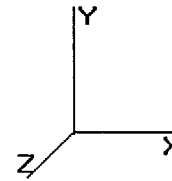
Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00	15.551	26.28	242.78	1.030	0.500	0.00	0.000	0.00	0.0	0.0	
1.00	Reinf. Top Reinf. Top	0.00	1.00	15.551	26.28	241.76	1.030	0.500	1.00	3.192	3.29	86.4	23.6	284.1
5.00		0.00	1.00	15.551	26.28	237.69	1.030	0.500	4.00	12.637	13.02	342.1	92.9	1,128.6
10.00		0.00	1.00	15.551	26.28	232.60	1.030	0.500	5.00	15.502	15.97	419.6	113.7	1,393.8
15.00		0.00	1.00	15.551	26.28	227.51	1.030	0.500	5.00	15.175	15.63	410.8	111.2	1,375.2
20.00		0.00	1.00	15.551	26.28	222.42	1.030	0.500	5.00	14.849	15.29	402.0	108.8	1,356.7
25.00		0.00	1.00	15.551	26.28	217.33	1.030	0.500	5.00	14.523	14.96	393.1	106.3	1,338.1
30.00		0.00	1.00	15.551	26.28	212.24	1.030	0.500	5.00	14.196	14.62	384.3	103.9	1,319.6
31.50	Bot - Section 2	0.00	1.00	15.551	26.28	210.71	1.030	0.500	1.50	4.204	4.33	113.8	31.0	393.4
35.00		0.00	1.01	15.815	26.72	208.90	1.030	0.500	3.50	9.848	10.14	271.1	72.3	1,299.1
35.67	Top - Section 1	0.00	1.02	15.901	26.87	208.78	1.030	0.500	0.67	1.869	1.92	51.7	13.8	247.2
40.00		0.00	1.05	16.430	27.76	211.88	1.030	0.500	4.33	11.935	12.29	341.3	87.4	1,030.2
45.00		0.00	1.09	16.992	28.71	210.15	1.030	0.500	5.00	13.478	13.88	398.6	98.5	1,174.6
50.00		0.00	1.12	17.511	29.59	207.94	1.030	0.500	5.00	13.151	13.55	400.9	96.0	1,158.7
55.00		0.00	1.15	17.995	30.41	205.31	1.030	0.500	5.00	12.825	13.21	401.7	93.6	1,142.8
59.00	Reinf. Top Reinf Bottom	0.00	1.18	18.359	31.02	202.96	1.030	0.500	4.00	10.025	10.33	320.4	73.3	903.0
60.00	Reinf. Top	0.00	1.18	18.448	31.17	202.34	1.030	0.500	1.00	2.474	2.55	79.4	18.2	224.3
65.00		0.00	1.21	18.874	31.89	199.06	1.030	0.500	5.00	12.172	12.54	399.9	88.7	839.1
69.00	Appertunance(s)	0.00	1.23	19.199	32.44	196.24	1.030	0.500	4.00	9.502	9.79	317.6	69.4	660.0
70.00		0.00	1.24	19.278	32.58	195.51	1.030	0.500	1.00	2.343	2.41	78.6	17.2	163.6
70.00	Bot - Section 3	0.00	1.24	19.279	32.58	195.51	1.030	0.500	0.00	0.008	0.01	0.3	0.1	0.5
73.50	Top - Section 2	0.00	1.25	19.549	33.03	192.88	1.030	0.500	3.50	8.243	8.49	280.5	60.2	827.1
75.00		0.00	1.26	19.662	33.22	195.38	1.030	0.500	1.50	3.476	3.58	119.0	25.5	216.1
80.00		0.00	1.28	20.028	33.84	191.41	1.030	0.500	5.00	11.401	11.74	397.5	82.9	712.5
85.00		0.00	1.31	20.378	34.43	187.25	1.030	0.500	5.00	11.074	11.41	392.8	80.4	699.3
90.00		0.00	1.33	20.714	35.00	182.92	1.030	0.500	5.00	10.748	11.07	387.5	78.0	686.1
93.00	Appertunance(s)	0.00	1.34	20.908	35.33	180.23	1.030	0.500	3.00	6.292	6.48	229.0	45.9	405.6
95.00		0.00	1.35	21.036	35.55	178.41	1.030	0.500	2.00	4.129	4.25	151.2	30.2	267.9
100.00		0.00	1.37	21.347	36.07	173.76	1.030	0.500	5.00	10.095	10.40	375.1	73.1	659.8
103.00	Appertunance(s)	0.00	1.38	21.528	36.38	170.91	1.030	0.500	3.00	5.900	6.08	221.1	42.9	389.8
105.00		0.00	1.39	21.646	36.58	168.98	1.030	0.500	2.00	3.868	3.98	145.7	28.2	257.3
110.00		0.00	1.41	21.936	37.07	164.06	1.030	0.500	5.00	9.442	9.73	360.5	68.1	633.4
110.00	Top - Section 3	0.00	1.41	21.936	37.07	164.06	1.030	0.500	0.00	0.006	0.01	0.2	0.0	0.4
113.00	Appertunance(s)	0.00	1.42	22.105	37.35	161.05	1.030	0.500	3.00	5.502	5.67	211.7	40.0	331.7
115.00		0.00	1.42	22.216	37.54	159.02	1.030	0.500	2.00	3.607	3.72	139.5	26.3	219.3
120.00	Reinf. Top	0.00	1.44	22.488	38.00	153.87	1.030	0.500	5.00	8.789	9.05	344.0	63.2	540.3
125.00		0.00	1.46	22.752	38.45	148.62	1.030	0.500	5.00	8.462	8.72	335.1	60.8	257.7
130.00	Appertunance(s)	0.00	1.48	23.008	38.88	143.26	1.030	0.500	5.00	8.136	8.38	325.8	58.3	247.2
135.00		0.00	1.49	23.258	39.30	137.81	1.030	0.500	5.00	7.809	8.04	316.2	55.9	236.7
140.00	Appertunance(s)	0.00	1.51	23.501	39.71	132.27	1.030	0.500	5.00	7.483	7.71	306.1	53.4	226.2
145.00		0.00	1.52	23.737	40.11	126.65	1.030	0.500	5.00	7.156	7.37	295.7	51.0	215.6
150.00	Appertunance(s)	0.00	1.54	23.968	40.50	120.95	1.030	0.500	5.00	6.830	7.03	285.0	48.5	205.1
Totals:								150.00				11,232.9	2,492.7	25,667.8

Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
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 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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		

Discrete Appurtenance Segment Forces

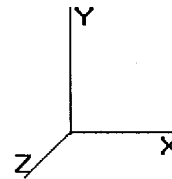
Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	19.199	32.447	1.00	21.79	0.000	0.000	707.01	0.00	0.00	277.00
93.00	Decibel DB408	1	21.206	35.838	1.00	4.86	0.000	4.710	174.17	0.00	820.34	50.00
93.00	Standoff	1	20.908	35.335	1.00	3.50	0.000	0.000	123.67	0.00	0.00	300.00
103.00	Decibel DB408	2	21.804	36.849	1.00	11.10	0.000	4.710	409.03	0.00	1,926.52	82.00
103.00	Standoff	1	21.528	36.382	1.00	3.50	0.000	0.000	127.34	0.00	0.00	300.00
113.00	Antel BXA-171085-8BF	3	22.105	37.358	0.84	8.82	0.000	0.000	329.49	0.00	0.00	81.24
113.00	Antel BXA-70063/6CF	3	22.105	37.358	0.70	17.93	0.000	0.000	669.96	0.00	0.00	174.00
113.00	RFS APL866513-42T0	2	22.105	37.358	0.93	9.04	0.000	0.000	337.63	0.00	0.00	78.97
113.00	RFS APL868013-42T0	4	22.105	37.358	0.87	14.93	0.000	0.000	557.72	0.00	0.00	126.72
113.00	RFS FD9R6004/2C-3L	6	22.105	37.358	0.50	1.50	0.000	0.000	56.04	0.00	0.00	32.40
113.00	T-Arm	3	22.105	37.358	0.67	16.21	0.000	0.000	605.50	0.00	0.00	1,299.00
130.00	12" x 12" Junction B	1	23.008	38.884	1.00	1.64	0.000	0.000	63.77	0.00	0.00	21.90
130.00	Argus LLPX310R	3	23.008	38.884	1.00	16.08	0.000	0.000	625.25	0.00	0.00	163.50
130.00	Clearwire Mount	1	23.008	38.884	1.00	10.50	0.000	0.000	408.28	0.00	0.00	50.00
130.00	DragonWave A-ANT-	1	23.008	38.884	1.00	8.92	0.000	0.000	346.84	0.00	0.00	97.10
130.00	DragonWave A-ANT-	1	23.008	38.884	1.00	1.83	0.000	0.000	71.16	0.00	0.00	25.10
130.00	DragonWave Horizon	2	23.008	38.884	1.00	1.16	0.000	0.000	45.11	0.00	0.00	34.00
130.00	NextNet BTS-2500	3	23.008	38.884	1.00	7.29	0.000	0.000	283.46	0.00	0.00	144.90
140.00	RFS APXV18-206516L-	3	23.501	39.716	0.67	8.18	0.000	0.000	324.90	0.00	0.00	105.00
140.00	RFS APXV18-206516S-	3	23.501	39.716	0.67	8.36	0.000	0.000	332.09	0.00	0.00	116.10
140.00	RFS ATMAA1412D-	3	23.501	39.716	0.50	2.09	0.000	0.000	82.81	0.00	0.00	61.80
140.00	RFS ATMAP1412D-	3	23.501	39.716	0.50	2.08	0.000	0.000	82.80	0.00	0.00	61.80
140.00	T-Arm	3	23.501	39.716	0.67	16.28	0.000	0.000	646.62	0.00	0.00	1,299.00
150.00	4' Omni	1	24.371	41.187	1.00	2.00	0.000	9.000	82.37	0.00	741.36	12.00
150.00	Decibel DB408	2	24.371	41.187	1.00	11.10	0.000	9.000	457.17	0.00	4,114.54	82.00
150.00	Diplexer	3	24.104	40.736	0.67	1.41	0.000	3.000	57.32	0.00	171.95	45.00
150.00	Ericsson RRUS 11	6	23.968	40.507	0.71	14.02	0.000	0.000	567.72	0.00	0.00	445.80
150.00	GPS	1	23.968	40.507	1.00	0.80	0.000	0.000	32.41	0.00	0.00	3.50
150.00	KMW AM-X-CD-16-65-	3	24.104	40.736	0.75	20.43	0.000	3.000	832.25	0.00	2,496.74	285.00
150.00	KMW AWS Twin Dual	6	24.104	40.736	0.50	1.80	0.000	3.000	73.33	0.00	219.98	147.60
150.00	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
150.00	Powerwave 7770.00	3	24.104	40.736	0.73	14.30	0.000	3.000	582.56	0.00	1,747.68	202.89
150.00	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

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

Base Elev : 0.000 (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		

Linear Appurtenance Segment Forces

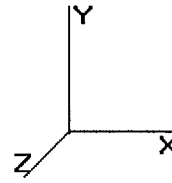
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
1.00	(12) 1 5/8" Coax	Yes	1.00	28.56	0.30	15.551	7.88	28.56
5.00	(12) 1 5/8" Coax	Yes	4.00	28.56	0.30	15.551	31.54	114.24
10.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	15.551	39.42	142.80
15.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	15.551	39.42	142.80
20.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	15.551	39.42	142.80
25.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	15.551	39.42	142.80
30.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	15.551	39.42	142.80
31.50	(12) 1 5/8" Coax	Yes	1.50	28.56	0.30	15.551	11.85	42.94
35.00	(12) 1 5/8" Coax	Yes	3.50	28.56	0.30	15.815	28.04	99.86
35.67	(12) 1 5/8" Coax	Yes	0.67	28.56	0.30	15.901	5.40	19.14
40.00	(12) 1 5/8" Coax	Yes	4.33	28.56	0.30	16.430	36.07	123.66
45.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	16.992	43.07	142.80
50.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	17.511	44.39	142.80
55.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	17.995	45.62	142.80
59.00	(12) 1 5/8" Coax	Yes	4.00	28.56	0.30	18.359	37.23	114.24
60.00	(12) 1 5/8" Coax	Yes	1.00	28.56	0.30	18.448	9.35	28.56
65.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	18.874	47.85	142.80
69.00	(12) 1 5/8" Coax	Yes	4.00	28.56	0.30	19.199	38.94	114.24
70.00	(12) 1 5/8" Coax	Yes	1.00	28.56	0.30	19.278	9.77	28.56
70.00	(12) 1 5/8" Coax	Yes	0.00	28.56	0.30	19.279	0.03	0.10
73.50	(12) 1 5/8" Coax	Yes	3.50	28.56	0.30	19.549	34.69	99.96
75.00	(12) 1 5/8" Coax	Yes	1.50	28.56	0.30	19.662	14.92	42.74
80.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	20.028	50.77	142.80
85.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	20.378	51.66	142.80
90.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	20.714	52.51	142.80
93.00	(12) 1 5/8" Coax	Yes	3.00	28.56	0.30	20.908	31.80	85.68
95.00	(12) 1 5/8" Coax	Yes	2.00	28.56	0.30	21.036	21.33	57.12
100.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	21.347	54.11	142.80
103.00	(12) 1 5/8" Coax	Yes	3.00	28.56	0.30	21.528	32.74	85.68
105.00	(12) 1 5/8" Coax	Yes	2.00	28.56	0.30	21.646	21.95	57.12
110.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	21.936	55.61	142.80
110.00	(12) 1 5/8" Coax	Yes	0.00	28.56	0.30	21.936	0.04	0.10
113.00	(12) 1 5/8" Coax	Yes	3.00	28.56	0.30	22.105	33.58	85.58
115.00	(12) 1 5/8" Coax	Yes	2.00	28.56	0.30	22.216	22.53	57.12
120.00	(12) 1 5/8" Coax	Yes	5.00	28.56	0.30	22.488	57.01	142.80
125.00	(12) 1 5/8" Coax	Yes	3.00	28.56	0.30	22.752	34.61	85.68
Totals:							1,164.00	3,512.87

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

Base Elev : 0.000 (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		

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
1.00	94.29	322.90	0.00	0.00
5.00	373.61	1,283.59	0.00	0.00
10.00	459.06	1,587.55	0.00	0.00
15.00	450.22	1,569.00	0.00	0.00
20.00	441.38	1,550.45	0.00	0.00
25.00	432.54	1,531.90	0.00	0.00
30.00	423.71	1,513.35	0.00	0.00
31.50	125.67	451.64	0.00	0.00
35.00	299.13	1,434.57	0.00	0.00
35.67	57.12	273.18	0.00	0.00
40.00	377.41	1,198.00	0.00	0.00
45.00	441.71	1,368.39	0.00	0.00
50.00	445.26	1,352.50	0.00	0.00
55.00	447.33	1,336.61	0.00	0.00
59.00	357.60	1,058.04	0.00	0.00
60.00	88.78	263.07	0.00	0.00
65.00	447.74	1,032.83	0.00	0.00
69.00	1,063.51	1,092.02	0.00	0.00
70.00	88.40	202.23	0.00	0.00
70.00	0.29	0.67	0.00	0.00
73.50	315.20	962.44	0.00	0.00
75.00	133.89	273.98	0.00	0.00
80.00	448.23	905.86	0.00	0.00
85.00	444.48	892.68	0.00	0.00
90.00	440.03	879.50	0.00	0.00
93.00	558.64	871.66	0.00	820.34
95.00	172.53	344.58	0.00	0.00
100.0	429.21	851.48	0.00	0.00
103.0	790.20	886.85	0.00	1,926.52
105.0	167.70	332.71	0.00	0.00
110.0	416.13	821.81	0.00	0.00
110.0	0.27	0.54	0.00	0.00
113.0	2,801.64	2,236.91	0.00	0.00
115.0	162.01	283.37	0.00	0.00
120.0	401.04	700.33	0.00	0.00
125.0	369.75	365.61	0.00	0.00
130.0	2,169.72	813.28	0.00	0.00
135.0	316.16	265.28	0.00	0.00
140.0	1,775.33	1,898.46	0.00	0.00
145.0	295.70	231.94	0.00	0.00
150.0	4,576.97	4,294.71	0.00	9,492.24
Totals:	24,099.57	39,536.48	0.00	12,239.10

Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
 Base Dia : 37.38 (in)
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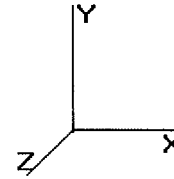
Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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 Shaft Forces and Deflections

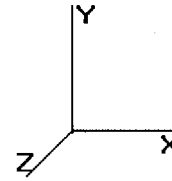
Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-24.115	-39.526	0.000	0.000	0.000	-2,534.479	0.000	0.000	0.000	0.000
1.00	-24.093	-39.159	0.000	0.000	0.000	-2,510.365	-0.005	0.000	0.005	-0.043
5.00	-23.842	-37.798	0.000	0.000	0.000	-2,413.996	-0.114	0.000	0.114	-0.212
10.00	-23.506	-36.127	0.000	0.000	0.000	-2,294.790	-0.448	0.000	0.448	-0.421
15.00	-23.167	-34.478	0.000	0.000	0.000	-2,177.263	-1.002	0.000	1.002	-0.630
20.00	-22.825	-32.851	0.000	0.000	0.000	-2,061.431	-1.775	0.000	1.775	-0.838
25.00	-22.479	-31.246	0.000	0.000	0.000	-1,947.309	-2.764	0.000	2.764	-1.045
30.00	-22.094	-29.690	0.000	0.000	0.000	-1,834.914	-3.970	0.000	3.970	-1.251
31.50	-22.011	-29.202	0.000	0.000	0.000	-1,801.699	-4.374	0.000	4.374	-1.313
35.00	-21.719	-27.743	0.000	0.000	0.000	-1,724.735	-5.390	0.000	5.390	-1.456
35.67	-21.702	-27.433	0.000	0.000	0.000	-1,710.183	-5.596	0.000	5.596	-1.483
40.00	-21.378	-26.176	0.000	0.000	0.000	-1,616.213	-7.022	0.000	7.022	-1.655
45.00	-20.982	-24.748	0.000	0.000	0.000	-1,509.323	-8.865	0.000	8.865	-1.858
50.00	-20.571	-23.341	0.000	0.000	0.000	-1,404.415	-10.919	0.000	10.919	-2.058
55.00	-20.141	-21.961	0.000	0.000	0.000	-1,301.560	-13.180	0.000	13.180	-2.253
59.00	-19.775	-20.886	0.000	0.000	0.000	-1,220.998	-15.134	0.000	15.134	-2.407
60.00	-19.716	-20.588	0.000	0.000	0.000	-1,201.223	-15.643	0.000	15.643	-2.445
65.00	-19.289	-19.510	0.000	0.000	0.000	-1,102.644	-18.304	0.000	18.304	-2.630
69.00	-18.215	-18.431	0.000	0.000	0.000	-1,025.489	-20.595	0.000	20.595	-2.833
70.00	-18.125	-18.225	0.000	0.000	0.000	-1,007.274	-21.194	0.000	21.194	-2.884
70.00	-18.152	-18.197	0.000	0.000	0.000	-1,007.214	-21.196	0.000	21.196	-2.884
73.50	-17.824	-17.214	0.000	0.000	0.000	-943.682	-23.375	0.000	23.375	-3.057
75.00	-17.724	-16.898	0.000	0.000	0.000	-917.006	-24.345	0.000	24.345	-3.129
80.00	-17.292	-15.946	0.000	0.000	0.000	-828.389	-27.755	0.000	27.755	-3.376
85.00	-16.854	-15.015	0.000	0.000	0.000	-741.931	-31.416	0.000	31.416	-3.611
90.00	-16.401	-14.116	0.000	0.000	0.000	-657.663	-35.317	0.000	35.317	-3.833
93.00	-15.808	-13.256	0.000	0.000	0.000	-607.642	-37.767	0.000	37.767	-3.962
95.00	-15.644	-12.886	0.000	0.000	0.000	-576.026	-39.444	0.000	39.444	-4.045
100.00	-15.185	-12.028	0.000	0.000	0.000	-497.809	-43.782	0.000	43.782	-4.238
103.00	-14.348	-11.181	0.000	0.000	0.000	-450.327	-46.479	0.000	46.479	-4.347
105.00	-14.178	-10.833	0.000	0.000	0.000	-421.630	-48.314	0.000	48.314	-4.416
110.00	-13.712	-10.028	0.000	0.000	0.000	-350.743	-53.022	0.000	53.022	-4.573
110.00	-13.719	-10.017	0.000	0.000	0.000	-350.697	-53.025	0.000	53.025	-4.573
113.00	-10.757	-8.000	0.000	0.000	0.000	-309.586	-55.921	0.000	55.921	-4.659
115.00	-10.585	-7.713	0.000	0.000	0.000	-288.073	-57.885	0.000	57.885	-4.717
120.00	-10.142	-7.027	0.000	0.000	0.000	-235.149	-62.893	0.000	62.893	-4.848
125.00	-9.776	-6.645	0.000	0.000	0.000	-184.442	-68.027	0.000	68.027	-4.959
130.00	-7.584	-5.978	0.000	0.000	0.000	-135.564	-73.462	0.000	73.462	-5.407
135.00	-7.277	-5.703	0.000	0.000	0.000	-97.645	-79.323	0.000	79.323	-5.778
140.00	-5.331	-3.976	0.000	0.000	0.000	-61.263	-85.529	0.000	85.529	-6.068
145.00	-5.023	-3.764	0.000	0.000	0.000	-34.606	-91.988	0.000	91.988	-6.269
150.00	-4.577	0.000	0.000	0.000	0.000	-9.492	-98.607	0.000	98.607	-6.376

Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
 Base Dia : 37.38 (in)
 Top Dia : 15.00 (in)
 Shape : 12 Sides
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Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (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

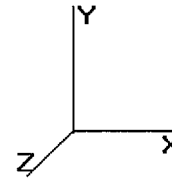
Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.52	1.10	0.00	0.00	0.00	35.13	35.70	52.0	0.0	0.687
1.00	0.51	1.10	0.00	0.00	0.00	34.98	35.54	52.0	0.0	0.684
1.00	0.51	1.10	0.00	0.00	0.00	34.98	35.54	52.0	0.0	0.684
5.00	0.50	1.11	0.00	0.00	0.00	34.36	34.91	52.0	0.0	0.671
10.00	0.48	1.12	0.00	0.00	0.00	33.54	34.08	52.0	0.0	0.655
15.00	0.47	1.12	0.00	0.00	0.00	32.69	33.22	52.0	0.0	0.639
20.00	0.45	1.13	0.00	0.00	0.00	31.81	32.32	52.0	0.0	0.622
25.00	0.43	1.14	0.00	0.00	0.00	30.88	31.38	52.0	0.0	0.603
30.00	0.42	1.15	0.00	0.00	0.00	29.91	30.40	52.0	0.0	0.585
31.50	0.41	1.15	0.00	0.00	0.00	29.62	30.10	52.0	0.0	0.579
35.00	0.40	1.16	0.00	0.00	0.00	28.41	28.87	52.0	0.0	0.555
35.67	0.43	1.36	0.00	0.00	0.00	30.15	30.66	52.0	0.0	0.590
40.00	0.41	1.37	0.00	0.00	0.00	29.15	29.65	52.0	0.0	0.570
45.00	0.39	1.38	0.00	0.00	0.00	27.95	28.45	52.0	0.0	0.547
50.00	0.38	1.39	0.00	0.00	0.00	26.71	27.20	52.0	0.0	0.523
55.00	0.36	1.40	0.00	0.00	0.00	25.43	25.90	52.0	0.0	0.498
59.00	0.34	1.40	0.00	0.00	0.00	24.38	24.84	52.0	0.0	0.478
59.00	0.34	1.40	0.00	0.00	0.00	24.38	24.84	52.0	0.0	0.478
60.00	0.34	1.40	0.00	0.00	0.00	24.11	24.58	52.0	0.0	0.473
60.00	0.46	1.40	0.00	0.00	0.00	33.68	34.23	52.0	0.0	0.658
65.00	0.45	1.41	0.00	0.00	0.00	31.90	32.44	52.0	0.0	0.624
69.00	0.43	1.37	0.00	0.00	0.00	30.43	30.95	52.0	0.0	0.595
70.00	0.42	1.37	0.00	0.00	0.00	30.08	30.59	52.0	0.0	0.588
70.00	0.42	1.37	0.00	0.00	0.00	30.08	30.59	52.0	0.0	0.588
73.50	0.46	1.68	0.00	0.00	0.00	30.87	31.46	52.0	0.0	0.605
75.00	0.45	1.69	0.00	0.00	0.00	30.25	30.85	52.0	0.0	0.593
80.00	0.43	1.70	0.00	0.00	0.00	28.13	28.72	52.0	0.0	0.552
85.00	0.42	1.71	0.00	0.00	0.00	25.94	26.52	52.0	0.0	0.510
90.00	0.40	1.71	0.00	0.00	0.00	23.67	24.25	52.0	0.0	0.466
93.00	0.38	1.68	0.00	0.00	0.00	22.25	22.82	52.0	0.0	0.439
95.00	0.37	1.69	0.00	0.00	0.00	21.34	21.91	52.0	0.0	0.421
100.00	0.35	1.70	0.00	0.00	0.00	18.98	19.56	52.0	0.0	0.376
103.00	0.33	1.64	0.00	0.00	0.00	17.47	18.03	52.0	0.0	0.347
105.00	0.32	1.64	0.00	0.00	0.00	16.55	17.11	52.0	0.0	0.329
110.00	0.30	1.65	0.00	0.00	0.00	14.16	14.75	52.0	0.0	0.284
110.00	0.30	1.65	0.00	0.00	0.00	14.16	14.74	52.0	0.0	0.284
110.00	0.35	2.18	0.00	0.00	0.00	15.23	16.03	52.0	0.0	0.308
113.00	0.28	1.75	0.00	0.00	0.00	13.65	14.25	52.0	0.0	0.274
115.00	0.27	1.75	0.00	0.00	0.00	12.82	13.44	52.0	0.0	0.259
120.00	0.25	1.74	0.00	0.00	0.00	10.72	11.38	52.0	0.0	0.219
120.00	0.59	1.74	0.00	0.00	0.00	50.12	50.81	52.0	0.0	0.977
125.00	0.59	1.75	0.00	0.00	0.00	42.69	43.38	52.0	0.0	0.834
130.00	0.55	1.42	0.00	0.00	0.00	34.19	34.83	52.0	0.0	0.670
135.00	0.55	1.42	0.00	0.00	0.00	26.94	27.60	52.0	0.0	0.531
140.00	0.40	1.09	0.00	0.00	0.00	18.57	19.06	52.0	0.0	0.367
145.00	0.40	1.08	0.00	0.00	0.00	11.58	12.12	52.0	0.0	0.233
150.00	0.00	1.04	0.00	0.00	0.00	3.52	3.95	52.0	0.0	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)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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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		

Shaft Segment Forces

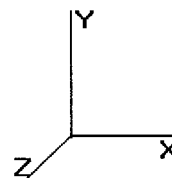
Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)	
0.00		0.00	1.00	6.400	10.81	155.75	1.030	0.000	0.00	0.000	0.00	0.0	0.0	
1.00	Reinf. Top Reinf. Top	0.00	1.00	6.400	10.81	155.09	1.030	0.000	1.00	3.108	3.20	34.6	0.0	260.5
5.00		0.00	1.00	6.400	10.81	152.48	1.030	0.000	4.00	12.303	12.67	137.1	0.0	1,035.7
10.00		0.00	1.00	6.400	10.81	149.22	1.030	0.000	5.00	15.085	15.54	168.1	0.0	1,280.1
15.00		0.00	1.00	6.400	10.81	145.95	1.030	0.000	5.00	14.759	15.20	164.4	0.0	1,264.0
20.00		0.00	1.00	6.400	10.81	142.69	1.030	0.000	5.00	14.432	14.87	160.8	0.0	1,247.9
25.00		0.00	1.00	6.400	10.81	139.42	1.030	0.000	5.00	14.106	14.53	157.1	0.0	1,231.8
30.00		0.00	1.00	6.400	10.81	136.16	1.030	0.000	5.00	13.779	14.19	153.5	0.0	1,215.7
31.50	Bot - Section 2	0.00	1.00	6.400	10.81	135.18	1.030	0.000	1.50	4.079	4.20	45.4	0.0	362.4
35.00		0.00	1.01	6.509	10.99	134.01	1.030	0.000	3.50	9.556	9.84	108.3	0.0	1,226.8
35.67	Top - Section 1	0.00	1.02	6.544	11.05	133.94	1.030	0.000	0.67	1.813	1.87	20.6	0.0	233.4
40.00		0.00	1.05	6.762	11.42	135.92	1.030	0.000	4.33	11.574	11.92	136.2	0.0	942.8
45.00		0.00	1.09	6.993	11.81	134.81	1.030	0.000	5.00	13.061	13.45	159.0	0.0	1,076.1
50.00		0.00	1.12	7.207	12.17	133.40	1.030	0.000	5.00	12.734	13.12	159.7	0.0	1,062.7
55.00		0.00	1.15	7.406	12.51	131.71	1.030	0.000	5.00	12.408	12.78	160.0	0.0	1,049.3
59.00	Reinf. Top Reinf Bottom	0.00	1.18	7.556	12.76	130.20	1.030	0.000	4.00	9.691	9.98	127.5	0.0	829.7
60.00	Reinf. Top	0.00	1.18	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	1.21	7.768	13.12	127.70	1.030	0.000	5.00	11.755	12.11	158.9	0.0	750.4
69.00	Appertunance(s)	0.00	1.23	7.901	13.35	125.89	1.030	0.000	4.00	9.169	9.44	126.1	0.0	590.6
70.00		0.00	1.24	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	1.24	7.934	13.40	125.42	1.030	0.000	0.00	0.008	0.01	0.1	0.0	0.5
73.50	Top - Section 2	0.00	1.25	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	1.26	8.092	13.67	125.34	1.030	0.000	1.50	3.351	3.45	47.2	0.0	190.6
80.00		0.00	1.28	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	1.31	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	1.33	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	1.34	8.605	14.54	115.62	1.030	0.000	3.00	6.042	6.22	90.5	0.0	359.7
95.00		0.00	1.35	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	1.37	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	1.38	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	1.39	8.908	15.05	108.40	1.030	0.000	2.00	3.701	3.81	57.4	0.0	229.1
110.00		0.00	1.41	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	1.41	9.028	15.25	105.24	1.030	0.000	0.00	0.006	0.01	0.1	0.0	0.4
113.00	Appertunance(s)	0.00	1.42	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	1.42	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	1.44	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	1.46	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	1.48	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	1.49	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	1.51	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	1.52	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	1.54	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	0.0	23,175.0		

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)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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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

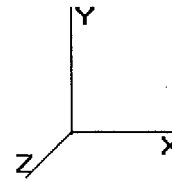
Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	7.901	13.353	1.00	20.91	0.000	0.000	279.22	0.00	0.00	188.00
93.00	Decibel DB408	1	8.727	14.749	1.00	2.70	0.000	4.710	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	8.43	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 ATMAA1412D-	3	9.672	16.345	0.50	1.75	0.000	0.000	28.69	0.00	0.00	39.00
140.0	RFS ATMAP1412D-	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
150.0	4' Omni	1	10.030	16.950	1.00	1.50	0.000	9.000	25.43	0.00	228.83	5.00
150.0	Decibel DB408	2	10.030	16.950	1.00	5.94	0.000	9.000	100.68	0.00	906.16	34.00
150.0	Diplexer	3	9.920	16.765	0.67	1.00	0.000	3.000	16.85	0.00	50.55	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	3.000	311.58	0.00	934.73	145.50
150.0	KMW AWS Twin Dual	6	9.920	16.765	0.50	1.29	0.000	3.000	21.63	0.00	64.88	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	3.000	215.89	0.00	647.66	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
									3,690.34			6,046.70

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

Base Elev : 0.000 (ft)

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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		

Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
1.00	(12) 1 5/8" Coax	Yes	1.00	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
31.50	(12) 1 5/8" Coax	Yes	1.50	9.84	0.20	6.400	3.25	14.79
35.00	(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
73.50	(12) 1 5/8" Coax	Yes	3.50	9.84	0.20	8.045	9.52	34.44
75.00	(12) 1 5/8" Coax	Yes	1.50	9.84	0.20	8.092	4.09	14.73
80.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	8.242	13.93	49.20
85.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	8.387	14.17	49.20
90.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	8.525	14.41	49.20
93.00	(12) 1 5/8" Coax	Yes	3.00	9.84	0.20	8.605	8.73	29.52
95.00	(12) 1 5/8" Coax	Yes	2.00	9.84	0.20	8.657	5.85	19.68
100.00	(12) 1 5/8" Coax	Yes	5.00	9.84	0.20	8.785	14.85	49.20
103.00	(12) 1 5/8" Coax	Yes	3.00	9.84	0.20	8.860	8.98	29.52
105.00	(12) 1 5/8" Coax	Yes	2.00	9.84	0.20	8.908	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

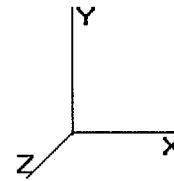
Pole : 302484
 Location : Branford CT 6, CT
 Height : 150.0 (ft)
 Base Dia : 37.38 (in)
 Top Dia : 15.00 (in)
 Shape : 12 Sides
 Taper : 0.156705 (in/ft)

Code: TIA/EIA-222 Rev F

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Base Elev: 0.000 (ft)

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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		

Applied Segment Forces Summary

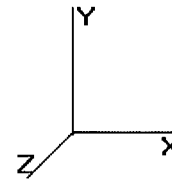
Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
1.00	36.79	280.56	0.00	0.00
5.00	145.72	1,115.80	0.00	0.00
10.00	178.87	1,380.27	0.00	0.00
15.00	175.24	1,364.17	0.00	0.00
20.00	171.60	1,348.07	0.00	0.00
25.00	167.96	1,331.98	0.00	0.00
30.00	164.33	1,315.88	0.00	0.00
31.50	48.70	392.49	0.00	0.00
35.00	115.96	1,296.81	0.00	0.00
35.67	22.13	246.83	0.00	0.00
40.00	146.13	1,029.55	0.00	0.00
45.00	170.80	1,176.32	0.00	0.00
50.00	171.93	1,162.88	0.00	0.00
55.00	172.47	1,149.44	0.00	0.00
59.00	137.68	909.88	0.00	0.00
60.00	34.15	226.13	0.00	0.00
65.00	172.07	850.57	0.00	0.00
69.00	416.01	858.79	0.00	0.00
70.00	33.89	166.27	0.00	0.00
70.00	0.11	0.55	0.00	0.00
73.50	120.87	836.69	0.00	0.00
75.00	51.30	220.42	0.00	0.00
80.00	171.52	729.40	0.00	0.00
85.00	169.75	718.67	0.00	0.00
90.00	167.71	707.94	0.00	0.00
93.00	175.40	647.61	0.00	187.56
95.00	65.57	276.93	0.00	0.00
100.0	162.85	684.82	0.00	0.00
103.0	223.63	639.74	0.00	424.28
105.0	63.42	267.03	0.00	0.00
110.0	157.08	660.06	0.00	0.00
110.0	0.10	0.44	0.00	0.00
113.0	949.93	1,508.32	0.00	0.00
115.0	60.93	219.65	0.00	0.00
120.0	150.52	543.49	0.00	0.00
125.0	140.63	248.66	0.00	0.00
130.0	693.36	543.05	0.00	0.00
135.0	123.17	209.40	0.00	0.00
140.0	567.29	1,376.43	0.00	0.00
145.0	114.61	180.96	0.00	0.00
150.0	1,445.55	2,910.09	0.00	2,832.81
Totals:	8,457.74	31,733.08	0.00	3,444.65

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

Base Elev : 0.000 (ft)

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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		

Calculated Shaft Forces and Deflections

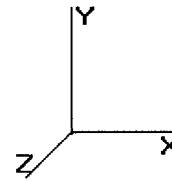
Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-8.461	-31.732	0.000	0.000	0.000	-849.777	0.000	0.000	0.000	0.000
1.00	-8.444	-31.446	0.000	0.000	0.000	-841.316	-0.002	0.000	0.002	-0.014
5.00	-8.331	-30.321	0.000	0.000	0.000	-807.542	-0.038	0.000	0.038	-0.071
10.00	-8.184	-28.931	0.000	0.000	0.000	-765.890	-0.150	0.000	0.150	-0.141
15.00	-8.038	-27.558	0.000	0.000	0.000	-724.969	-0.335	0.000	0.335	-0.211
20.00	-7.893	-26.201	0.000	0.000	0.000	-684.777	-0.593	0.000	0.593	-0.280
25.00	-7.747	-24.861	0.000	0.000	0.000	-645.315	-0.924	0.000	0.924	-0.348
30.00	-7.592	-23.540	0.000	0.000	0.000	-606.582	-1.325	0.000	1.325	-0.416
31.50	-7.554	-23.144	0.000	0.000	0.000	-595.169	-1.460	0.000	1.460	-0.437
35.00	-7.438	-21.844	0.000	0.000	0.000	-568.755	-1.798	0.000	1.798	-0.484
35.67	-7.426	-21.593	0.000	0.000	0.000	-563.772	-1.867	0.000	1.867	-0.493
40.00	-7.293	-20.557	0.000	0.000	0.000	-531.616	-2.340	0.000	2.340	-0.550
45.00	-7.133	-19.375	0.000	0.000	0.000	-495.151	-2.952	0.000	2.952	-0.617
50.00	-6.968	-18.206	0.000	0.000	0.000	-459.488	-3.634	0.000	3.634	-0.682
55.00	-6.798	-17.052	0.000	0.000	0.000	-424.648	-4.383	0.000	4.383	-0.746
59.00	-6.657	-16.140	0.000	0.000	0.000	-397.455	-5.029	0.000	5.029	-0.796
60.00	-6.630	-15.910	0.000	0.000	0.000	-390.798	-5.197	0.000	5.197	-0.808
65.00	-6.462	-15.055	0.000	0.000	0.000	-357.649	-6.077	0.000	6.077	-0.869
69.00	-6.043	-14.199	0.000	0.000	0.000	-331.801	-6.833	0.000	6.833	-0.934
70.00	-6.008	-14.033	0.000	0.000	0.000	-325.758	-7.031	0.000	7.031	-0.951
70.00	-6.015	-14.029	0.000	0.000	0.000	-325.738	-7.031	0.000	7.031	-0.951
73.50	-5.889	-13.190	0.000	0.000	0.000	-304.687	-7.749	0.000	7.749	-1.006
75.00	-5.845	-12.966	0.000	0.000	0.000	-295.873	-8.069	0.000	8.069	-1.030
80.00	-5.677	-12.232	0.000	0.000	0.000	-266.647	-9.191	0.000	9.191	-1.109
85.00	-5.508	-11.510	0.000	0.000	0.000	-238.263	-10.394	0.000	10.394	-1.185
90.00	-5.335	-10.800	0.000	0.000	0.000	-210.725	-11.674	0.000	11.674	-1.256
93.00	-5.152	-10.154	0.000	0.000	0.000	-194.532	-12.477	0.000	12.477	-1.297
95.00	-5.087	-9.874	0.000	0.000	0.000	-184.229	-13.026	0.000	13.026	-1.324
100.0	-4.916	-9.190	0.000	0.000	0.000	-158.792	-14.447	0.000	14.447	-1.386
103.0	-4.681	-8.553	0.000	0.000	0.000	-143.620	-15.329	0.000	15.329	-1.420
105.0	-4.616	-8.285	0.000	0.000	0.000	-134.258	-15.929	0.000	15.929	-1.442
110.0	-4.446	-7.627	0.000	0.000	0.000	-111.177	-17.467	0.000	17.467	-1.492
110.0	-4.447	-7.626	0.000	0.000	0.000	-111.162	-17.468	0.000	17.468	-1.492
113.0	-3.461	-6.141	0.000	0.000	0.000	-97.834	-18.414	0.000	18.414	-1.520
115.0	-3.397	-5.922	0.000	0.000	0.000	-90.913	-19.055	0.000	19.055	-1.538
120.0	-3.235	-5.380	0.000	0.000	0.000	-73.928	-20.689	0.000	20.689	-1.579
125.0	-3.096	-5.131	0.000	0.000	0.000	-57.751	-22.362	0.000	22.362	-1.614
130.0	-2.397	-4.603	0.000	0.000	0.000	-42.270	-24.130	0.000	24.130	-1.754
135.0	-2.276	-4.394	0.000	0.000	0.000	-30.284	-26.031	0.000	26.031	-1.870
140.0	-1.667	-3.035	0.000	0.000	0.000	-18.906	-28.040	0.000	28.040	-1.959
145.0	-1.548	-2.857	0.000	0.000	0.000	-10.574	-30.127	0.000	30.127	-2.021
150.0	-1.445	0.000	0.000	0.000	0.000	-2.833	-32.264	0.000	32.264	-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)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

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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

Calculated Stresses

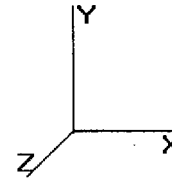
Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio	
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.41	0.38	0.00	0.00	0.00	11.78	12.21	52.0	0.0	0.235
1.00	0.41	0.39	0.00	0.00	0.00	11.72	12.15	52.0	0.0	0.234
1.00	0.41	0.39	0.00	0.00	0.00	11.72	12.15	52.0	0.0	0.234
5.00	0.40	0.39	0.00	0.00	0.00	11.49	11.91	52.0	0.0	0.229
10.00	0.39	0.39	0.00	0.00	0.00	11.20	11.60	52.0	0.0	0.223
15.00	0.37	0.39	0.00	0.00	0.00	10.89	11.28	52.0	0.0	0.217
20.00	0.36	0.39	0.00	0.00	0.00	10.57	10.95	52.0	0.0	0.211
25.00	0.35	0.39	0.00	0.00	0.00	10.23	10.60	52.0	0.0	0.204
30.00	0.33	0.40	0.00	0.00	0.00	9.89	10.24	52.0	0.0	0.197
31.50	0.33	0.40	0.00	0.00	0.00	9.78	10.14	52.0	0.0	0.195
35.00	0.31	0.40	0.00	0.00	0.00	9.37	9.70	52.0	0.0	0.187
35.67	0.34	0.47	0.00	0.00	0.00	9.94	10.31	52.0	0.0	0.198
40.00	0.32	0.47	0.00	0.00	0.00	9.59	9.94	52.0	0.0	0.191
45.00	0.31	0.47	0.00	0.00	0.00	9.17	9.51	52.0	0.0	0.183
50.00	0.29	0.47	0.00	0.00	0.00	8.74	9.07	52.0	0.0	0.174
55.00	0.28	0.47	0.00	0.00	0.00	8.30	8.61	52.0	0.0	0.166
59.00	0.27	0.47	0.00	0.00	0.00	7.94	8.24	52.0	0.0	0.159
59.00	0.27	0.47	0.00	0.00	0.00	7.94	8.24	52.0	0.0	0.159
60.00	0.26	0.47	0.00	0.00	0.00	7.85	8.15	52.0	0.0	0.157
60.00	0.36	0.47	0.00	0.00	0.00	10.96	11.35	52.0	0.0	0.218
65.00	0.34	0.47	0.00	0.00	0.00	10.35	10.72	52.0	0.0	0.206
69.00	0.33	0.45	0.00	0.00	0.00	9.85	10.21	52.0	0.0	0.196
70.00	0.33	0.45	0.00	0.00	0.00	9.73	10.08	52.0	0.0	0.194
70.00	0.33	0.45	0.00	0.00	0.00	9.73	10.08	52.0	0.0	0.194
73.50	0.35	0.56	0.00	0.00	0.00	9.97	10.36	52.0	0.0	0.199
75.00	0.35	0.56	0.00	0.00	0.00	9.76	10.15	52.0	0.0	0.195
80.00	0.33	0.56	0.00	0.00	0.00	9.06	9.44	52.0	0.0	0.182
85.00	0.32	0.56	0.00	0.00	0.00	8.33	8.70	52.0	0.0	0.167
90.00	0.30	0.56	0.00	0.00	0.00	7.58	7.95	52.0	0.0	0.153
93.00	0.29	0.55	0.00	0.00	0.00	7.12	7.47	52.0	0.0	0.144
95.00	0.28	0.55	0.00	0.00	0.00	6.83	7.17	52.0	0.0	0.138
100.00	0.27	0.55	0.00	0.00	0.00	6.06	6.40	52.0	0.0	0.123
103.00	0.25	0.53	0.00	0.00	0.00	5.57	5.90	52.0	0.0	0.113
105.00	0.25	0.53	0.00	0.00	0.00	5.27	5.59	52.0	0.0	0.108
110.00	0.23	0.53	0.00	0.00	0.00	4.49	4.81	52.0	0.0	0.093
110.00	0.23	0.53	0.00	0.00	0.00	4.49	4.81	52.0	0.0	0.093
110.00	0.27	0.71	0.00	0.00	0.00	4.83	5.24	52.0	0.0	0.101
113.00	0.22	0.56	0.00	0.00	0.00	4.31	4.63	52.0	0.0	0.089
115.00	0.21	0.56	0.00	0.00	0.00	4.05	4.37	52.0	0.0	0.084
120.00	0.19	0.56	0.00	0.00	0.00	3.37	3.69	52.0	0.0	0.071
120.00	0.46	0.56	0.00	0.00	0.00	15.76	16.24	52.0	0.0	0.312
125.00	0.45	0.55	0.00	0.00	0.00	13.37	13.85	52.0	0.0	0.266
130.00	0.42	0.45	0.00	0.00	0.00	10.66	11.11	52.0	0.0	0.214
135.00	0.42	0.45	0.00	0.00	0.00	8.36	8.81	52.0	0.0	0.169
140.00	0.31	0.34	0.00	0.00	0.00	5.73	6.07	52.0	0.0	0.117
145.00	0.30	0.33	0.00	0.00	0.00	3.54	3.88	52.0	0.0	0.075
150.00	0.00	0.33	0.00	0.00	0.00	1.05	1.19	52.0	0.0	0.023

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

Base Elev : 0.000 (ft)

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Analysis Summary

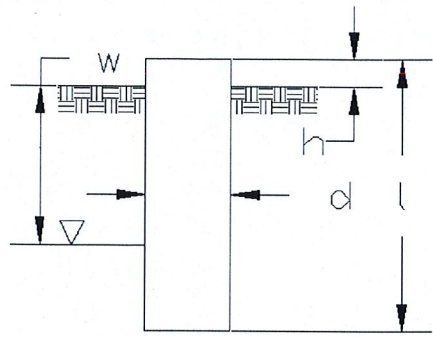
Load Case	Reactions						Max Stresses			
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	27.4	0.00	31.72	0.00	0.00	2749.82	51.31	52.0	120.00	0.987
Ice	24.1	0.00	39.53	0.00	0.00	2534.48	50.81	52.0	120.00	0.977
Twist/Sway	8.5	0.00	31.73	0.00	0.00	849.78	16.24	52.0	120.00	0.312

Additional Steel Summary

Elev From (ft)	Elev To (ft)	(4) Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I (lb/in)	Applied (kips)	Allow (kips)	MQ/I (kips)	Allow (kips)	Num Reqd	Num Actual	MQ/I (kips)	Allow (kips)	Num Reqd	Num Actual	fb (ksi)	Fb (ksi)	Ratio
0.00	1.00	(4) SOL-#18 All Thre	145.2	1.7	12.9	0.0	8.1	0	0	0.0	8.1	0	0	46.3	58.0	0.800
0.00	1.00	(4) SOL-#18 All Thre	164.8	2.0	12.9	0.0	8.1	0	0	0.0	8.1	0	0	52.2	58.0	0.900
1.00	59.0	(4) SOL-#18 All Thre	171.4	5.1	12.9	0.0	8.1	0	0	0.0	8.1	0	0	46.2	53.6	0.861
1.00	120.	(4) SOL-#18 All Thre	304.2	7.3	12.9	69.2	8.1	9	10	0.0	8.1	0	0	52.7	55.2	0.954
59.0	60.0	(4) SOL-#18 All Thre	171.8	2.1	12.9	121.3	8.1	15	18	0.0	8.1	0	0	33.0	58.0	0.569

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

Program Last 5/26/2010
 American Tower Corporation



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

Diameter of Caisson (d): 5.0 ft
 Caisson Embedment (L-h): 22.0 ft
 Caisson Height Above Ground (h): 0.5 ft
 Depth Below Ground Surface to Water Table (w): 4.0 ft
 Unit Weight of Concrete: 150.0 pcf
 Unit Weight of Water: 62.4 pcf
 Tension Skin Friction/Compression Skin Friction: 1.00
 Pullout Angle: 30.0 degrees

Soil Mechanical Properties

Depth (ft)		γ_{Soil}	Cohesion	ϕ	Allowable Skin	Allowable Bearing
Top	Bottom	(pcf)	(psf)	(degree)	Friction (psf)	Pressure (psf)
0.0	5.0	125	0	30	100	2000
5.0	7.0	125	0	33	100	2000
7.0	23.0	125	8000	40	100	4000
23.0	28.0	125	8000	40	100	4000

Required Embedment: 14.4 ft - OK, Caisson Embedment Satisfactory
 Volume of Concrete: 441.8 ft³ = 16.4 yd³
 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

STRUCTURAL SPECIFICATIONS

DESIGN BASIS

GOVERNING CODE: 2003 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2005 CONNECTICUT STATE BUILDING CODE AND 2009 AMENDMENTS.

1. DESIGN CRITERIA:

- WIND LOAD: PER EIA/TIA 222 F-96 (ANTENNA MOUNTS): 90 MPH (FASTEST MILE), EQUIVALENT TO 110 MPH (3 SECOND GUST).
- BASIC WIND SPEED (OTHER STRUCTURE): 110 MPH (3 SECOND GUST) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-02) PER 2003 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2005 CONNECTICUT SUPPLEMENT AND 2009 AMMENDMENT.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-95 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

GENERAL NOTES

1. IF ANY FIELD CONDITIONS EXIST WHICH PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL PROCEED WITH AFFECTED WORK AFTER CONFLICT IS SATISFACTORILY RESOLVED.
2. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST THE PRE MANUFACTURED EQUIPMENT BUILDING SHOP DRAWINGS.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE 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)

- A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
 - B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
 - C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
 - D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
 - E. PIPE---ASTM A53 (FY = 35 KSI)
 - F. CONNECTION BOLTS---ASTM A325-N
 - G. U-BOLTS---ASTM A36
 - H. ANCHOR RODS---ASTM F 1554
 - I. WELDING ELECTRODE---ASTM E 70XX
2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
 3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
 4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
 5. FIT AND SHOP ASSEMBLE 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 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
 8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS 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 AWS CODE FOR PROCEDURES APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLET J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION" 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
 11. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
 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 MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
 14. CONNECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR SHELTERS", LATEST EDITION, AND THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.
 15. LOCK WASHER 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 1:500, 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 PRECEDING WORK.
 21. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
 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:	DEB
DRAWN BY:	HMR
CHK'D BY:	CFC

NO.	DATE	REV.	BY	CHK'D BY
1	7/18/12		HMR	DEB
2	7/28/12		FLD	DEB
3	7/28/12		FLD	DEB
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100	7/28/12		FLD	DEB



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BRANFORD

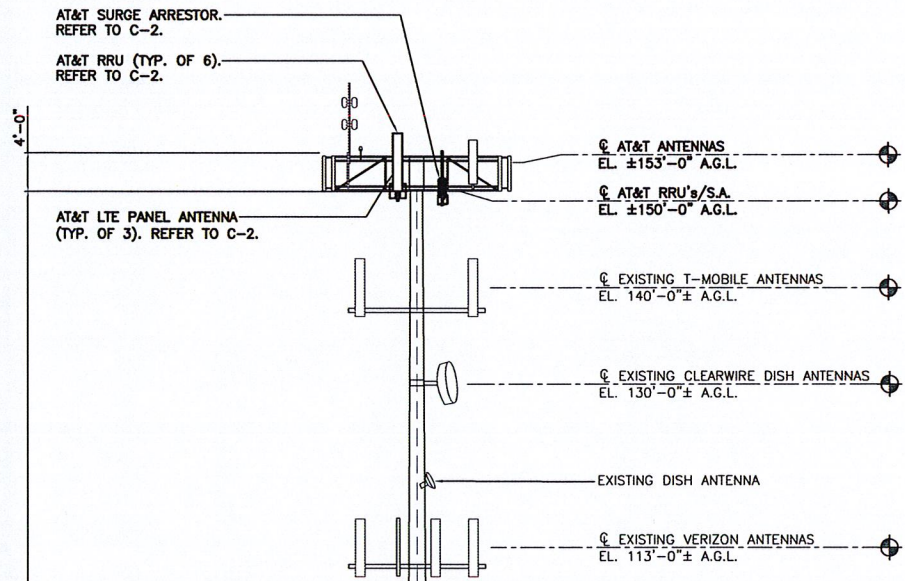
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

DATE: 07/18/12
SCALE: AS NOTED
JOB NO. 11118.C06

NOTES AND SPECIFICATIONS

N-1

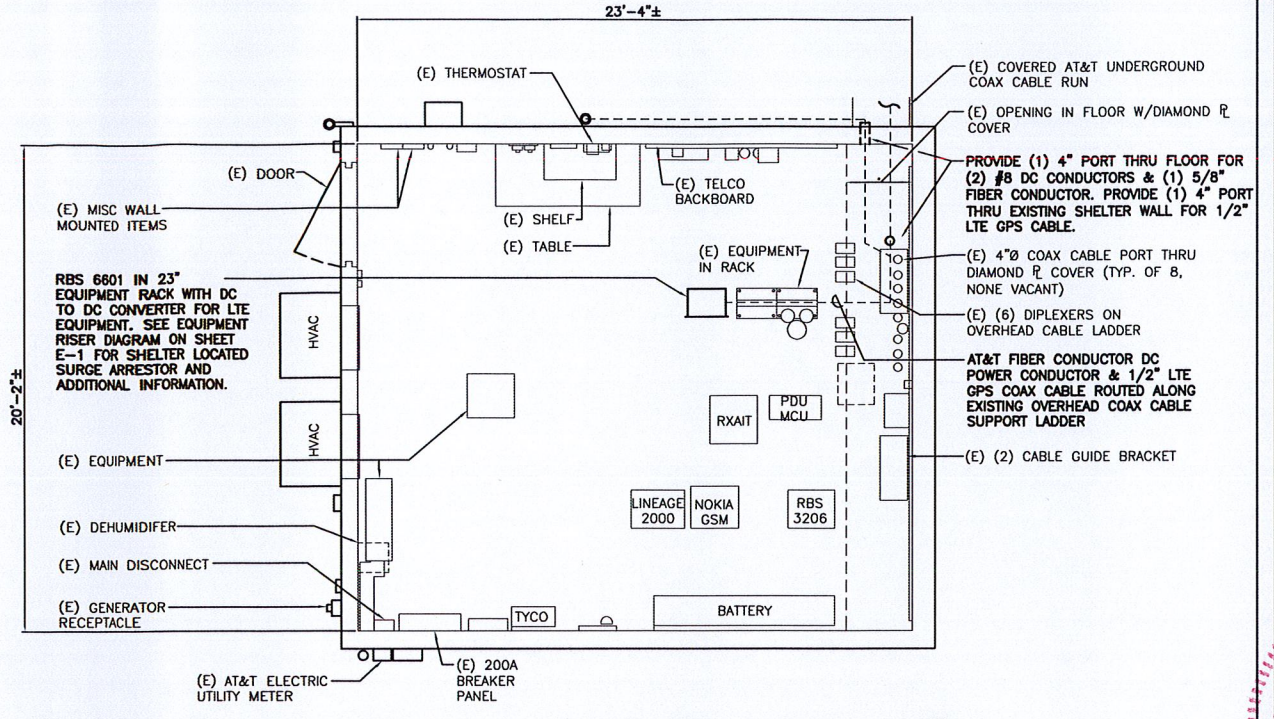
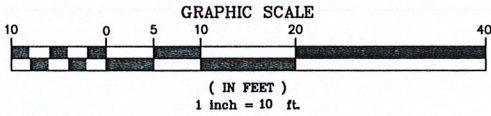
Sheet No. 2 of 8



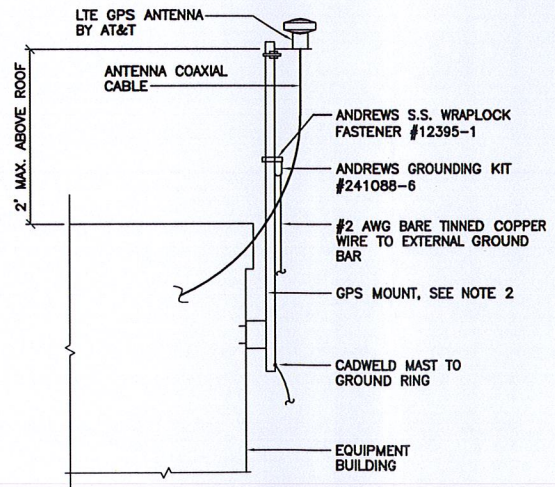
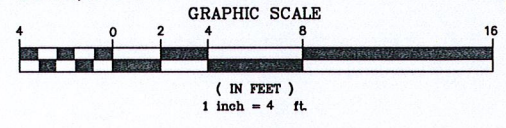
TOWER STRUCTURAL NOTES:
 1. REFER TO STRUCTURAL ANALYSIS REPORT PREPARED BY AMERICAN TOWER, PROJ. NO. 49165723, DATED JULY 2, 2012 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

EXISTING ±150' MONOPOLE TOWER WITH 4' EXTENSION

2 NORTH ELEVATION
 C-1 SCALE: 1" = 10'-0"

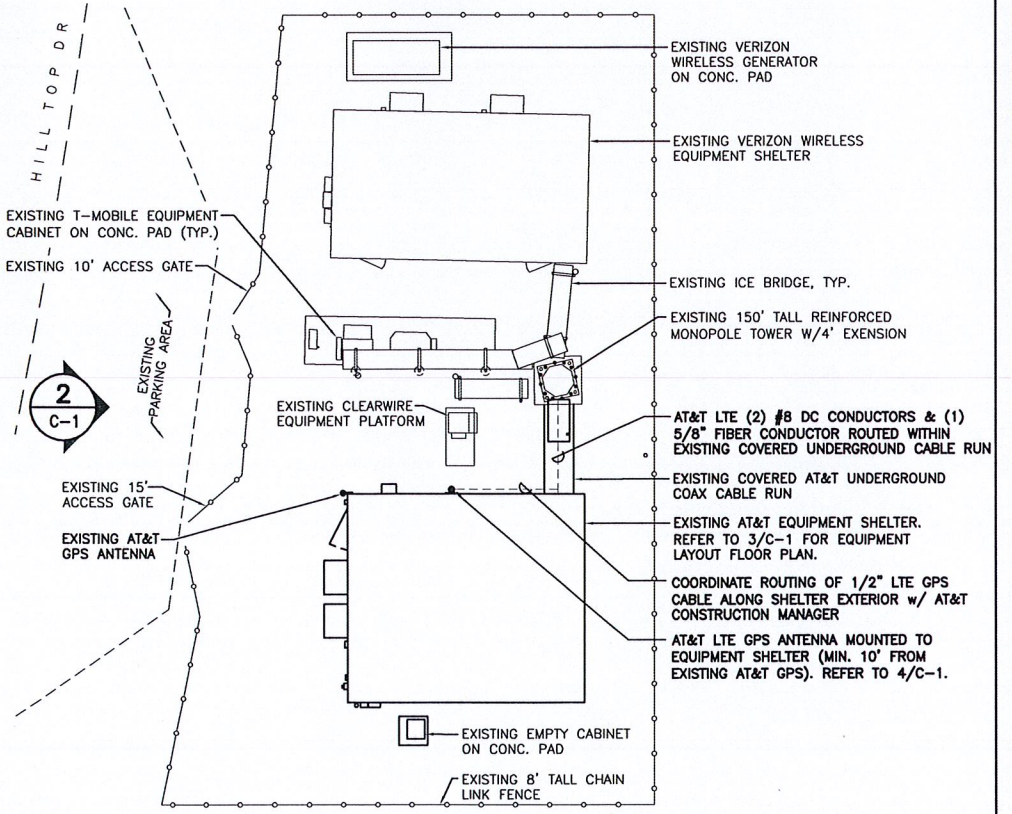


3 EQUIPMENT SHELTER FLOOR PLAN
 C-1 SCALE: 1/4" = 1'-0"

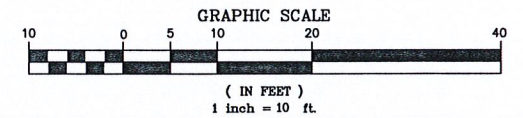


- GPS ANTENNA MOUNTING NOTES:**
1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT AND SHALL BE COORDINATED WITH AT&T'S CONSTRUCTION MANAGER.
 2. GPS ANTENNA MOUNT, 3/4" THREADED MAST, 4 FEET LONG WITH (4) 7/16" MOUNTING HOLES AND 6" STANDOFF BY SITE PRO 1, INC., TELEPHONE 1-800-438-7761, PART NUMBER GPS1.
 3. HOLLOW WALL KITS (HWK38) FOR "STICK BUILD" SHELTERS AND SOLID WALL KITS (SWK38) FOR CONCRETE SHELTERS ARE ALSO AVAILABLE FROM SITE PRO 1.

4 GPS ANTENNA MOUNTING DETAIL
 C-1 NOT TO SCALE



1 COMPOUND PLAN
 C-1 SCALE: 1" = 10'-0"



DESIGNED BY: DEB
 DRAWN BY: HMR
 CHK'D BY: CFC

CONSTRUCTION - CLIENT REVIEW	DEB	DATE	17/18/12
CONSTRUCTION	DEB	DATE	07/25/12
DRAWN BY	HMR	DATE	07/25/12
CHK'D BY	CFC	DATE	07/25/12

STATE OF CONNECTICUT PROFESSIONAL ENGINEER SEAL
 CARLO F. CANTONE LICENSE NO. 10118

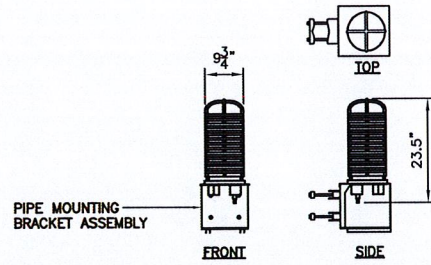
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 BRANFORD, CT 06405

DATE: 07/18/12
 SCALE: AS NOTED
 JOB NO. 11118.C06

PLANS, ELEVATION AND DETAIL

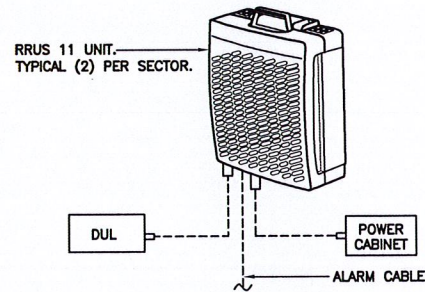
C-1
 Sheet No. 3 of 8



SURGE ARRESTOR				
SITE TYPE	ARRESTOR MAKE/MODEL	QTY REQUIRED	ARRESTOR LOCATION	WEIGHT
TOWER	MAKE: RAYCAP (SQUID) MODEL: DC6-48-60-18-BF	(1) PER SITE	TOWER, ADJACENT TO AT&T ANTENNAS AND RRUs.	20 LBS. (WITHOUT MOUNT)

NOTES:
 1. CONTRACTOR TO COORDINATE FINAL SURGE ARRESTOR MODEL SELECTION(S) WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.
 2. CONTRACTOR TO INSTALL ARRESTOR IN CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS.

7 SURGE ARRESTOR DETAIL
 C-2 NOT TO SCALE

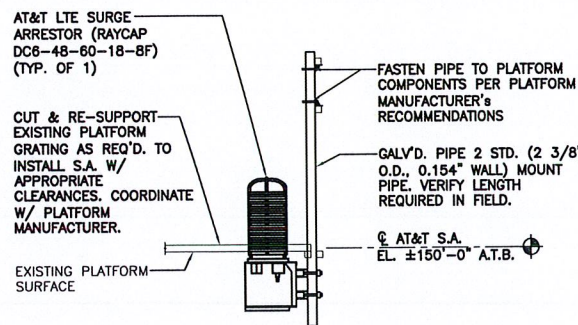


RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 11	17.8"L x 17.3"W x 7.2"D	BAND 4: 44 LBS. BAND 12: 50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. SIDE: 0" MIN.

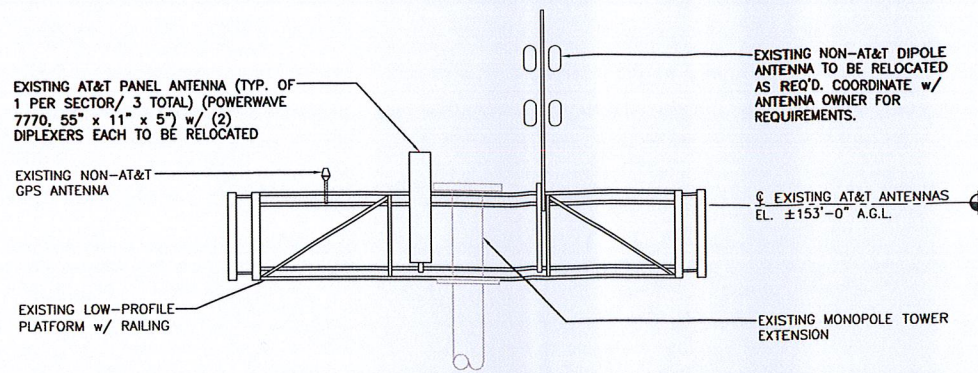
NOTES:
 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

8 RRU DETAIL
 C-2 NOT TO SCALE

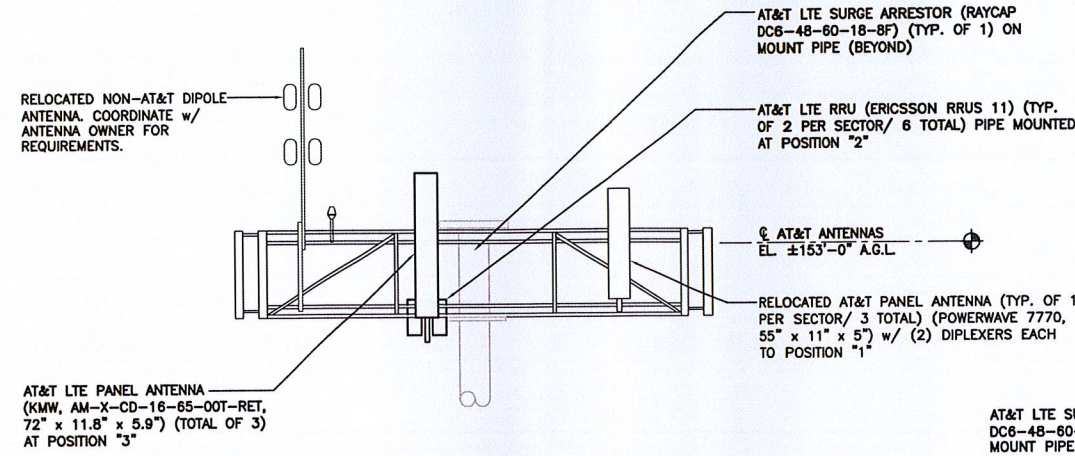
- NOTES:
- ROTATE EXISTING ANTENNA PLATFORM AS REQUIRED TO ACCOMMODATE PROPOSED AZIMUTHS.
 - COORDINATE LOCATION OF LTE ANTENNA & RRU/ SURGE ARRESTOR MOUNTS AND RELOCATION OF EXISTING NON-AT&T ANTENNAS WITH ANTENNA OWNER.
 - PROVIDE MOUNTING PIPES, CROSSOVERS & ASSOCIATED HARDWARE TO COMPLETE THE PROPOSED UPGRADE.
 - REFER TO STRUCTURAL ANALYSIS AND FINAL AT&T RFDS PRIOR TO INSTALLATION OF ANTENNAS AND COAX.



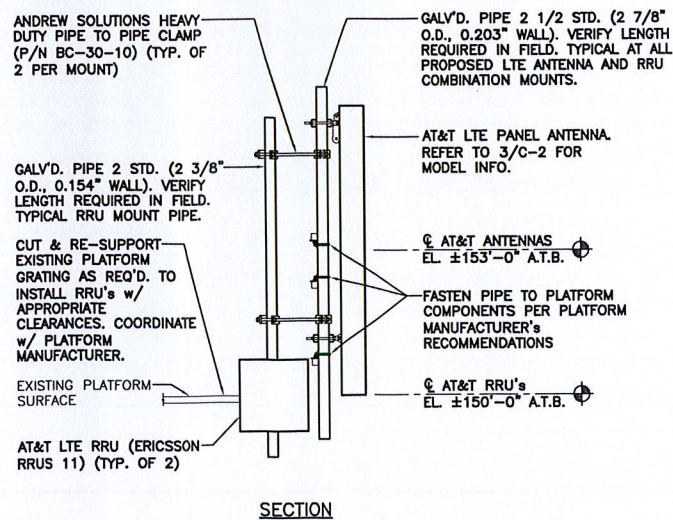
6 LTE SURGE ARRESTOR MOUNT DETAIL
 C-2 SCALE: 1/2" = 1'-0"



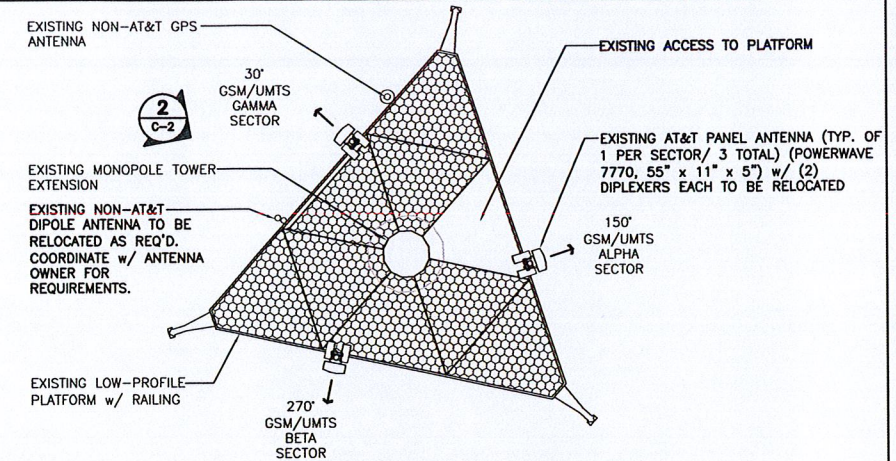
2 EXISTING ANTENNA SECTOR ELEVATION
 C-2 SCALE: 1/4" = 1'-0"



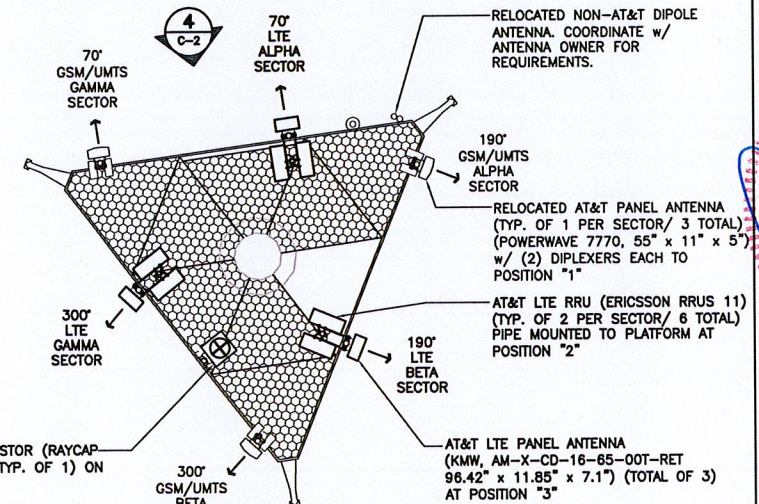
4 PROPOSED ANTENNA SECTOR ELEVATION
 C-2 SCALE: 1/4" = 1'-0"



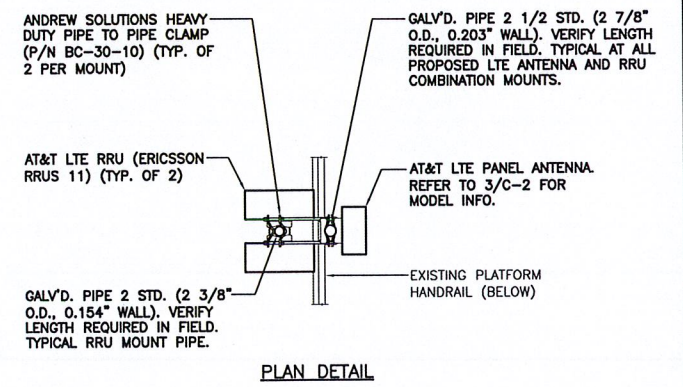
5 LTE ANTENNA/RRU MOUNT DETAILS
 C-2 SCALE: 1/2" = 1'-0"



1 EXISTING ANTENNA PLAN
 C-2 SCALE: 1/4" = 1'-0"



3 PROPOSED ANTENNA PLAN
 C-2 SCALE: 1/4" = 1'-0"



PLAN DETAIL

DESIGNED BY: DEB
 DRAWN BY: HMR
 CHK'D BY: CFC

CONSTRUCTION - CLIENT REVIEW
 DEB
 HMR
 CFC

DATE: 07/18/12
 SCALE: AS NOTED
 JOB NO. 11118.C06

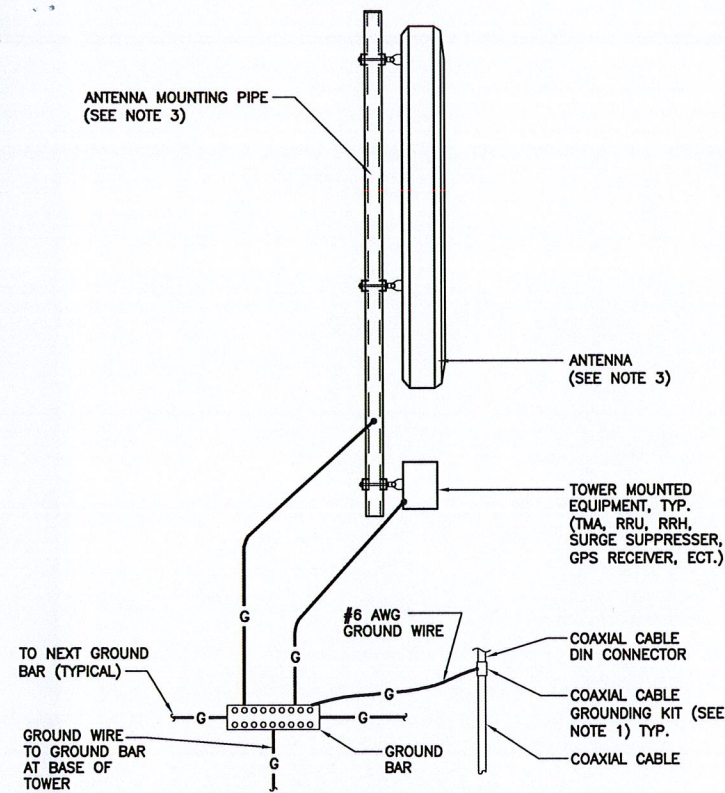
LTE EQUIPMENT DETAILS

C-2
 Sheet No. 4 of 6

AT&T MOBILITY
 WIRELESS COMMUNICATIONS FACILITY, LTE UPGRADE
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STATE OF CONNECTICUT
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 DEB
 LICENSE NO. 10000

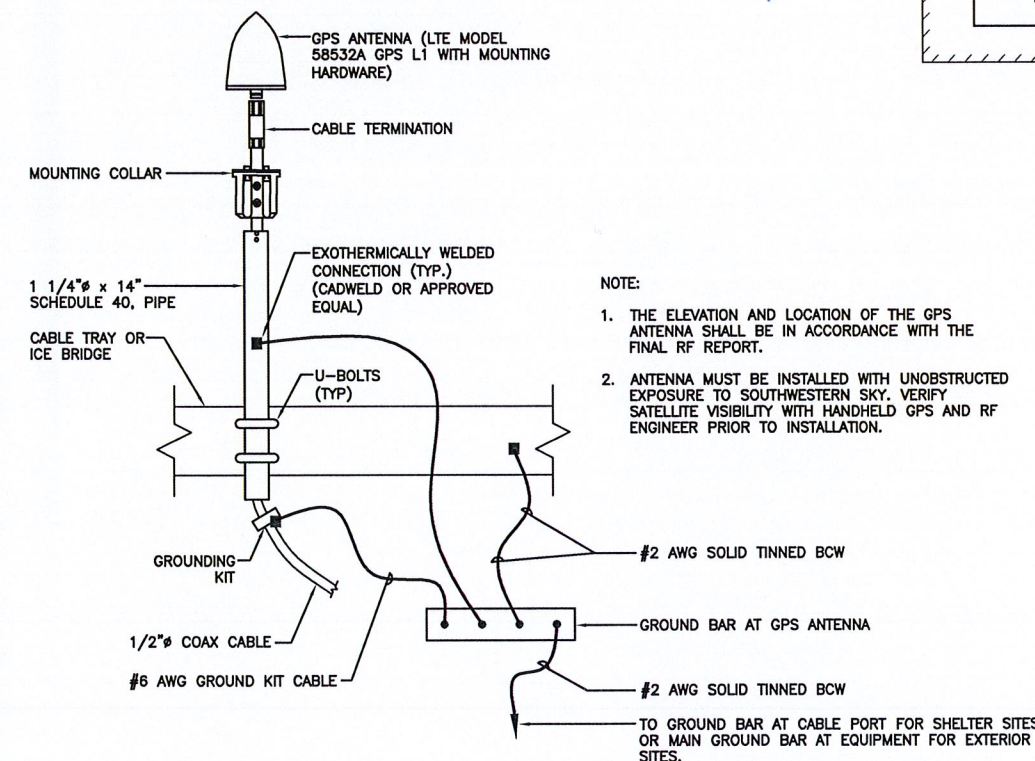
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NOTES:

- BOND COAXIAL CABLE GROUND KITS TO EACH OWNER'S GROUND BAR ALONG ENTIRE COAX RUN FROM ANTENNA TO SHELTER.
- BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURERS SPECIFICATIONS.
- DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

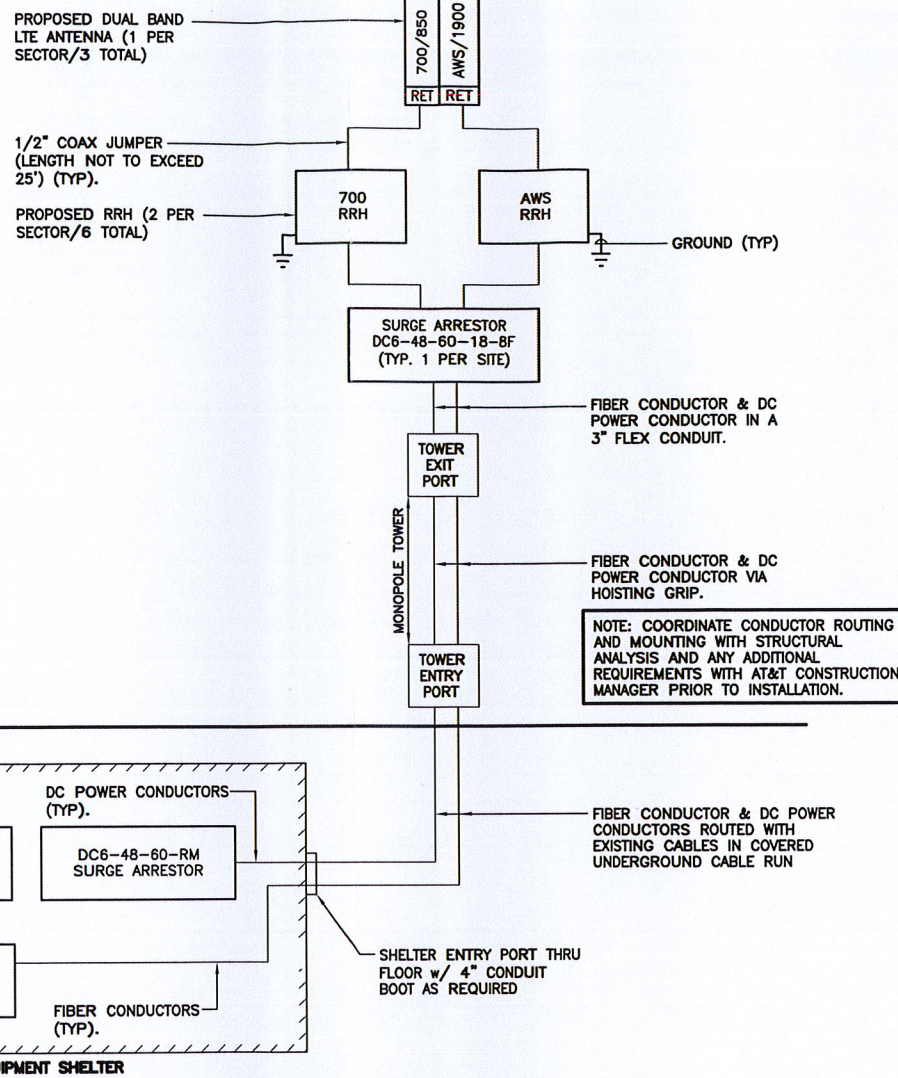
1 TYPICAL ANTENNA GROUNDING DETAIL
E-1 NOT TO SCALE



NOTE:

- THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
- ANTENNA MUST BE INSTALLED WITH UNOBSTRUCTED EXPOSURE TO SOUTHWESTERN SKY. VERIFY SATELLITE VISIBILITY WITH HANDHELD GPS AND RF ENGINEER PRIOR TO INSTALLATION.

3 GPS MOUNTED TO CABLE TRAY / ICE BRIDGE
E-1 NOT TO SCALE



NOTES:

- CONTRACTOR TO CONFIRM ALL PARTS.
- INSTALL ALL EQUIPMENT TO MANUFACTURERS RECOMMENDATIONS.

2 LTE SCHEMATIC DIAGRAM
E-1 NOT TO SCALE

ELECTRICAL NOTES

- PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
- CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
- MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
- PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
- CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNERS REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
- ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
- PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
- ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION.
- MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
- THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
- THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
- DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
- ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
- GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
- EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
- CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

- CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:
 - TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.
 THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:
 - TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
 - CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
 - GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
- TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
- THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.
- CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

DESIGNED BY: CKD
DRAWN BY: TJB
CHK'D BY: CKD

CONSTRUCTION	CLIENT REVIEW
DES	CHK'D BY
DEB	DATE
DMR	DATE
FLD	DATE
REV	DATE

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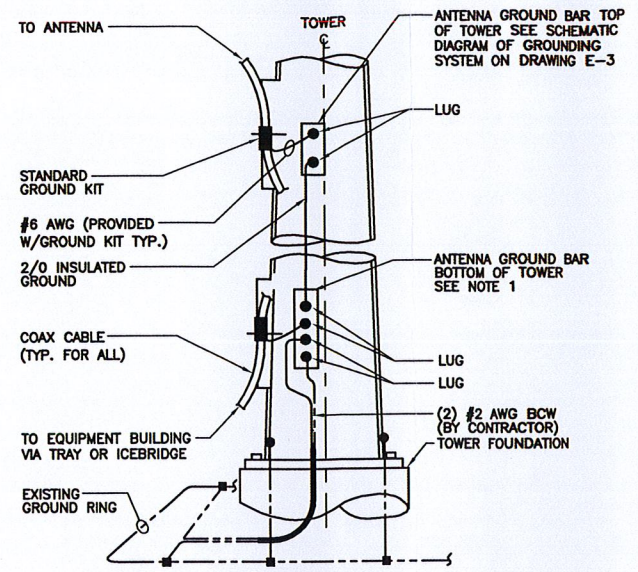
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CT2015
BRANFORD
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

DATE: 07/18/12
SCALE: AS NOTED
JOB NO. 11118.C06

ELECTRICAL
DETAILS AND
NOTES

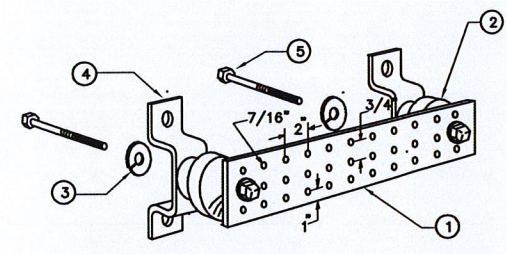
E-1
Sheet No. 5 of 8

DESIGNED BY: CKD
 DRAWN BY: TJB
 CHK'D BY: CKD



- NOTES:**
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

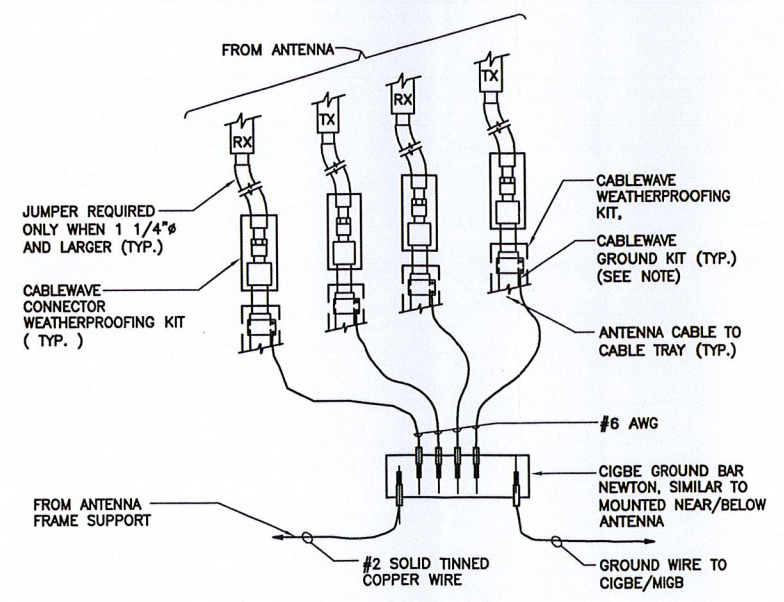
1 ANTENNA CABLE GROUNDING - TOWER
 E-2 NOT TO SCALE



LEGEND

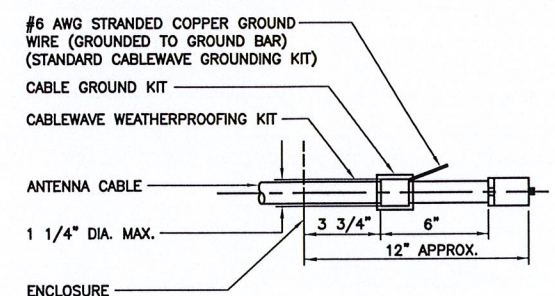
1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG .
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 2. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. 4. CAT NO. A-6056.
5. STAINLESS STEEL SECURITY SCREWS.

3 ANTENNA CABLE GROUNDING DETAIL
 E-2 NOT TO SCALE



- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

2 CONNECTION OF GROUND WIRES TO GROUND BAR
 E-2 NOT TO SCALE



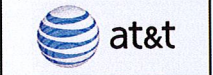
- NOTE:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 ANTENNA CABLE GROUNDING DETAIL
 E-2 NOT TO SCALE

CONSTRUCTION - CLIENT REVIEW

CONSTRUCTION	CHK'D BY	DATE
DESIGN	CKD	07/18/12
DRAWING	TJB	07/18/12
REVIEW	CKD	07/18/12
APPROVAL		

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DATE: 07/18/12
 SCALE: AS NOTED
 JOB NO. 11118.C08

ELECTRICAL
 DETAILS

E-2
 Sheet No. 2 of 2