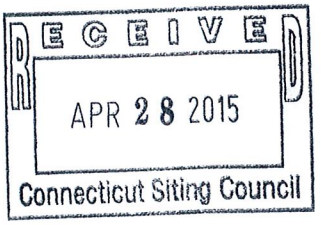
COHEN and WOLF P.C.
ATTORNEYS AT LAW

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

April 27, 2015



Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

ORIGINAL

Re: EM-T-MOBILE-014-130724
T-Mobile Site ID CTNH102C
405 Brushy Plains Road, Branford, CT
Notice of Compliance with Conditions and Construction Completion

Dear Attorney Bachman:

The Connecticut Siting Council ("Council") acknowledged the above referenced T-Mobile Northeast LLC ("T-Mobile") notice of exempt modification on August 13, 2013.

The Council imposed the following condition in its acknowledgment:

- Prior to antenna installation, the tower modification depicted in drawings entitled *302484-Branford CT 6, CT Modification for a 150' Monopole* prepared by American Tower Corporation dated May 2, 2013, and stamped by Jaime Reyes shall be implemented; and

- Within 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the documents of the Structural Analysis Report prepared by American Tower Corporation dated May 31, 2013.

The attached PE Closeout Letter, dated April 24, 2015, provides evidence of compliance with the conditions outlined by the Council.

In addition, T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of August 12, 2014.

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

320 Post Road West
Westport, CT 06880
Tel: (203) 222-1034
Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

Please don't hesitate to contact me with any questions.

Sincerely,

Rachel A. Schwartzman, Esq.

cc: Samuel Simons, T-Mobile
Mark Richard, T-Mobile
Rob Stanford, Vertical Development LLC
Julie Kohler, Esq.

TECTONIC
Practical Solutions, Exceptional Service

CORPORATE OFFICE:
Mountainville, NY (800) 829-6531

1279 Route 300
Newburgh, NY 12550

(845) 567-6656 FAX: (845) 567-8703
www.tectonicengineering.com

Sam Simons
Engineering Development - Connecticut
T-Mobile
35 Griffin Road South
Bloomfield, CT 06002
sam.simons@t-mobile.com

April 24, 2015

RE: PE Close Out Letter
EM-T-MOBILE # 014-130724 /T-Mobile Site ID # CTNH102C

Dear Mr. Simons:

Tectonic Engineering & Surveying Consultants, P.C. ("Tectonic") has completed its post-construction review of the above-referenced site to determine whether T-Mobile complied with conditions imposed by the Connecticut Siting Council's (the "Council") acknowledgment letter, dated August 13, 2013 ("the Acknowledgment Letter"). Our compliance review included the following: the Acknowledgment Letter, the approved tower structural analysis report by American Tower Corporation dated May 31, 2013 (the "Structural Analysis"), the approved design plans by Infinigy dated April 23, 2013 ("the Construction Drawings"), and the post modification certification letter by American Tower Corporation dated April 16, 2015 and stamped by Scott Wirgau (the "Certification Letter").

On behalf of Tectonic, based on my review of the information, I, Edward N. Iamiceli, licensed professional engineer number 28473, certify that to the best of my knowledge, the T-Mobile work complied with the recommendations of the approved Structural Analysis.

Specifically, as required by the Acknowledgment Letter, I have reviewed the T-Mobile work for compliance with the following structural conditions imposed by the Council as detailed by the Certification Letter:

- The tower modifications depicted in the drawings entitled 302484 – *Branford CT 6, CT Modification for a 150' Monopole* prepared by American Tower Corporation dated May 2, 2013, and stamped by Jamie Reyes.

Should you have any questions regarding the foregoing review, please contact me directly at 845-567-6656 ext. 2811.

Very truly yours,

Edward N. Iamiceli, P.E.
Sr. Project Manager

STATE OF CONNECTICUT
EDWARD N. IAMICELI
28473
LICENSED
PROFESSIONAL ENGINEER

Cc: Rob Stanford (Vertical Development LLC)

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

VIA ELECTRONIC AND FIRST CLASS MAIL

March 2, 2015

Rachel A. Schwartzman, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604

RE: EM-T-MOBILE-049-130724, 1Ecology Drive, Enfield
EM-T-MOBILE-014-130724405, Brushy Plains Road, Branford
EM-T-MOBILE-080-130903, 11West Peak Drive, Meriden
EM-T-MOBILE-034-130531A, 41Padnaram Road, Danbury
EM-T-MOBILE-091-130531A, 302 Ball Pond Road, New Fairfield
EM-T-MOBILE-009-130611, 38 Spring Hill Road, Bethel
EM-T-MOBILE-017-130611, 2 Willis Street, Bristol
EM-T-MOBILE-034-130726, 7 West View, Danbury
EM-T-MOBILE-166-130816, Route 322 aka Meriden Road aka 347 East Street, Wolcott
EM-T-MOBILE-004-130531, 81 Montevideo Road, Avon
EM-T-MOBILE-033-130719, 179 Shunpike Road, Cromwell
EM-T-MOBILE-166-130726, Andrew Road, Wolcott

Dear Attorney Schwartzman:

The Connecticut Siting Council (Council) is in receipt of your letter dated February 27, 2015, submitted on behalf of T-Mobile Northeast, LLC, requesting an extension of time to submit a notice of completion of construction and associated post modification inspection reports for the above-referenced exempt modifications.

The Council hereby grants a 60-day extension of time, until May 2, 2015, to submit a notice of completion of construction and associated post modification inspection reports for the above-referenced exempt modifications.

This extension is granted with the understanding that the Council will be notified should T-Mobile Northeast, LLC need additional time beyond 60 days to submit a notice of completion and associated post modification inspection reports or decide not to proceed with construction.

Thank you for your attention to this matter.

Sincerely,

Melanie A. Bachman
Acting Executive Director

MAB/cm

COHEN and WOLF P.C.
ATTORNEYS AT LAW

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

February 27, 2015

Via Electronic and Overnight Mail

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

Re: T-Mobile Notice of Completion Filings (Third Quarter Audit)
Connecticut Siting Council Letters, dated November 3, 2014 and February 20, 2015
Request for Extension of Time

Dear Attorney Bachman:

T-Mobile Northeast, LLC ("T-Mobile") respectfully requests an additional two-month extension of time to respond to the Council's request for notice of completion of construction and associated post-modification inspection reports for the following sites:

EM-T-MOBILE-049-130724, 1 Ecology Drive, Enfield (Site ID CT11534A)
EM-T-MOBILE-014-130724 405, Brushy Plains Road, Branford (Site ID NH102C)
EM-T-MOBILE-080-130903, 11 West Peak Drive, Meriden (Site ID11132B)
EM-T-MOBILE-034-130531A, 41 Padnaram Road, Danbury (CT11896A)
EM-T-MOBILE-091-130531A, 302 Ball Pond Road, New Fairfield (CT11797A)
EM-T-MOBILE-009-130611, 38 Spring Hill Road, Bethel (CT11115F)
EM-T-MOBILE-017-130611, 2 Willis Street, Bristol (CT11270C)
EM-T-MOBILE-034-130726, 7 West View, Danbury (CT11923C)
EM-T-MOBILE-166-130816, Route 322 aka Meridan Road aka 347 East Street, Wolcott (CT11494B)
EM-T-MOBILE-004-130531, 81 Montevideo Road, Avon (CT11284A)
EM-T-MOBILE-033-130719, 179 Shunpike Road, Cromwell (CT11059C)
EM-T-MOBILE-166-130726, Andrew Road, Wolcott (CT11403A)

T-Mobile has filed the appropriate compliance filings for several third quarter sites, but needs additional time to provide the requested information for the above-referenced sites. T-Mobile has diligently obtained much of the required documentation, and is working with its vendors and engineers to obtain the proper closeout records. T-Mobile continues to actively compile the requested information, but needs additional time to do so.

COHEN and WOLF P.C.
ATTORNEYS AT LAW

Please do not hesitate to let me know if you have any questions.

Sincerely,

Rachel A. Schwartzman

RAS/lcc

cc: Samuel Simons, T-Mobile Northeast, LLC (via electronic mail)
Mark Richard, T-Mobile Northeast, LLC (via electronic mail)
Robert Stanford, Vertical Development, LLC (via electronic mail)
Julie Kohler, Esq. (via electronic mail)

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

320 Post Road West
Westport, CT 06880
Tel: (203) 222-1034
Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

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

December 24, 2014

Rachel A. Schwartzman, Esq.
Cohen and Wolf, P.C.
P.O. Box 1821
Bridgeport, CT 06601

RE:

EM-T-MOBILE-004-130531	81 Montevideo Road	Avon
EM-T-MOBILE-009-130611	38 Spring Hill Lane	Bethel
EM-T-MOBILE-014-130724	405 Brushy Plain Road	Branford
EM-T-MOBILE-017-130611	2 Willis Street	Bristol
EM-T-MOBILE-017-130729	985 Farmington Avenue	Bristol
EM-T-MOBILE-033-130719	179 Shunpike Road	Cromwell
EM-T-MOBILE-034-130531A	41 Padanaram Road	Danbury
EM-T-MOBILE-034-130531B	303 Boxwood Lane	Danbury
EM-T-MOBILE-034-130726	7 West View Drive	Danbury
EM-T-MOBILE-043-130222	1455 Forbes Street	East Hartford
EM-T-MOBILE-049-130718	1 Ecology Drive	Enfield
EM-T-MOBILE-057-130220	150 Butternut Hollow Road	Greenwich
EM-T-MOBILE-080-130903	11 West Peak Drive	Meriden
EM-T-MOBILE-091-130531A	302 Ball Pond Road	New Fairfield
EM-T-MOBILE-091-130531B	37 Titicus Mountain Road	New Fairfield
EM-T-MOBILE-101-130611	125 Washington Avenue	North Haven
EM-T-MOBILE-110-130621	335 S. Washington Street	Plainville
EM-T-MOBILE-135-130318	555 Main Street	Stamford
EM-T-MOBILE-148-130531	90 N. Plains Industrial Road	Wallingford
EM-T-MOBILE-166-130726	Andrews Road	Wolcott
EM-T-MOBILE-166-130816	Route 322/Meridian Road	Wolcott

Dear Attorney Schwartzman:

The Connecticut Siting Council (Council) is in receipt of your letter dated December 23, 2014, submitted on behalf of T-Mobile, requesting an extension of time to submit a notice of completion of construction and associated post modification inspection reports for the above-referenced exempt modifications.

The Council hereby grants a 60-day extension of time to submit a notice of completion of construction and associated post modification inspection reports for the above-referenced exempt modifications to March 2, 2015.

This extension is granted with the understanding that the Council will be notified should T-Mobile need additional time beyond 60 days to submit a notice of completion and associated post modification inspection reports or decide not to proceed with construction.

Thank you for your attention to this matter.

Sincerley,

Melanie A. Bachman
Acting Executive Director

MAB/cm

COHEN and WOLF P.C.
ATTORNEYS AT LAW

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

December 23, 2014

Via Electronic and Overnight Mail

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

Re: T-Mobile Exempt Modification Compliance Filings
Connecticut Siting Council Audit Letter dated November 3, 2014
Request For Extension of Time

Dear Attorney Bachman:

T-Mobile Northeast, LLC ("T-Mobile") respectfully requests a 60-day extension of time to March 2, 2015 to respond to the Council's request, dated November 3, 2014, for exempt modification compliance data. The attached spreadsheet provides a list of the sites for which T-Mobile seeks a requested extension.

T-Mobile is actively compiling all of the requested information but needs additional time to provide the necessary documentation.

Please do not hesitate to let me know if you have any questions.

Sincerely,

Rachel A. Schwartzman, Esq.

RAS/lcc
Enclosure

cc: Samuel Simons, T-Mobile Northeast, LLC (via electronic mail)
Mark Richard, T-Mobile Northeast, LLC (via electronic mail)
Robert Stanford, Vertical Development, LLC (via electronic mail)
Julie Kohler, Esq.

EM/TS #	Address	Town	Council Additional Conditions	Compliance with Council Additional Conditions Received	Notice of Completion Received	Decision Date
EM-T-MOBILE-043-130222	1455 Forbes Street	East Hartford	Yes	No	No	3/12/2013
EM-T-MOBILE-057-130220	150 Butternut Hollow Road	Greenwich	N/A	N/A	No	3/12/2013
EM-T-MOBILE-135-130318	555 Main Street	Stamford	Yes	No	No	4/9/2013
EM-T-MOBILE-006-130528	60 Rice Lane	Beacon Falls	Yes	No	No	6/26/2013
EM-T-MOBILE-002-130529	401 Wakelee Avenue	Ansonia	N/A	N/A	No	6/27/2013
EM-T-MOBILE-004-130531	81 Montevideo Road	Avon	N/A	N/A	No	7/9/2013
EM-T-MOBILE-034-130531A	41 Padanaram Road	Danbury	Yes	No	No	7/9/2013
EM-T-MOBILE-034-130531B	303 Boxwood Lane	Danbury	N/A	N/A	No	7/9/2013
EM-T-MOBILE-091-130531A	302 Ball Pond Road	New Fairfield	N/A	N/A	No	7/9/2013
EM-T-MOBILE-091-130531B	37 Titicus Mountain Road	New Fairfield	N/A	N/A	No	7/9/2013
EM-T-MOBILE-148-130531	90 N. Plains Industrial Road	Wallingford	N/A	N/A	No	7/9/2013
EM-T-MOBILE-101-130611	125 Washington Avenue	North Haven	N/A	N/A	No	7/10/2013
EM-T-MOBILE-009-130611	38 Spring Hill Lane	Bethel	Yes	No	No	7/11/2013
EM-T-MOBILE-017-130611	2 Willis Street	Bristol	Yes	No	No	7/12/2013
EM-T-MOBILE-110-130621	335 S. Washington Street	Plainville	N/A	N/A	No	7/12/2013
EM-T-MOBILE-033-130719	179 Shunpike Road	Cromwell	Yes	No	No	8/7/2013
EM-T-MOBILE-049-130718	1 Ecology Drive	Enfield	N/A	N/A	No	8/7/2013
EM-T-MOBILE-014-130724	405 Brushy Plain Road	Branford	Yes	No	No	8/13/2013
EM-T-MOBILE-017-130729	985 Farmington Avenue	Bristol	N/A	N/A	No	8/20/2013
EM-T-MOBILE-034-130726	7 West View Drive	Danbury	N/A	N/A	No	8/20/2013
EM-T-MOBILE-166-130726	Andrews Road	Wolcott	Yes	No	No	8/20/2013
EM-T-MOBILE-166-130816	Route 322/Meridian Road	Wolcott	N/A	N/A	No	9/3/2013
EM-T-MOBILE-080-130903	11 West Peak Drive	Meriden	Yes	No	No	9/18/2013

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 13, 2013

Chris Bisson
Real Estate Consultant
Transcend Wireless
48 Spruce Street
Oakland, NJ 07436

RE: **EM-T-MOBILE-014-130724** – T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 405 Brushy Plain Road, Branford, Connecticut.

Dear Mr. Bisson:

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:

- Prior to antenna installation, the tower modifications depicted in the drawings entitled *302484 – Branford CT 6, CT Modification for a 150' Monopole* prepared by American Tower Corporation dated May 2, 2013, and stamped by Jaime Reyes shall be implemented;
- Within 45 days following completion of the antenna installation, T-Mobile shall provide documentation certified by a professional engineer that its installation complied with the requirements of the Structural Analysis Report prepared by American Tower Corporation dated May 31, 2013 and stamped by Hanming You;
- Any deviation from the proposed modification as specified in this notice and supporting materials with the 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;
- Within 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 May 15, 2013. 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.

CSC
CONNECTICUT SITING COUNCIL

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,

Melanie A. Bachman
Acting Executive Director

MAB/CDM/jb

c: The Honorable Anthony "Unk" DaRos, First Selectman, Town of Branford
Daniel Shapiro, Chm, Inland Wetland Commission, Town of Branford
Laura Magaraci, Zoning Enforcement Officer, Town of Branford
American Tower

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 29, 2013

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-T-MOBILE-014-130724** – T-Mobile Northeast 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 a request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72, a copy of which has already been provided to you.

If you have any questions or comments regarding the proposal, please call me or inform the Council by August 12, 2013.

Thank you for your cooperation and consideration.

Very truly yours,

Melanie Bachman
Acting Executive Director

MB/jb

c: Daniel Shapiro, Chm, Inland Wetland Commission, Town of Branford
Laura Magaraci, Zoning Enforcement Officer, Town of Branford

TMO CTNH102C

Transcend Wireless
48 Spruce Street
Oakland, NJ 07436
Phone: (203) 217-6200
Chris Bisson
Real Estate Consultant

EM-T-MOBILE-014-130724

05/15/2013

ORIGINAL

Hand Delivered

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

RE: T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 405 Brushy Plain Road, Branford, CT. Known to T-Mobile Northeast LLC as site CTNH102C.

Dear Ms. Roberts:

In order to accommodate technological changes, implement Global System for Mobile Communications Access ("GSM") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, T-Mobile Northeast LLC 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.

GSM employs Spread-Spectrum technology and special coding scheme to allow multiple users to be multiplexed over the same physical channel. 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.

As part of the project the new multi-mode 800/1900 antenna will replace existing antennas. These antennas will provide more flexibility for optimization by allowing fast and easy electrical tilt adjustment from remote location and will enable the transmission of multiple technologies from a single antenna. As T-Mobile Northeast LLC network evolves to meet the demands of its customers, it is essential for T-Mobile Northeast LLC to install modern equipment and antennas in order to provide reliable wireless voice and data services. The proposed equipment will include multi-mode radios that will allow T-Mobile Northeast LLC to transmit at different frequencies using different technologies, including LTE technology. Likewise, the proposed antennas are quad-pole multi-band

high gain antennas that will allow T-Mobile Northeast LLC to operate using its multiple frequency bands and technologies, including LTE technology. The proposed equipment and antennas will improve the reliability, coverage and capacity of T-Mobile Northeast LLC voice and data networks across T-Mobile Northeast LLC various FCC licensed frequency bands and significantly increase the data speeds of T-Mobile Northeast LLC 's network by utilizing the latest LTE technology. Without the proposed modifications T-Mobile Northeast LLC will be unable to provide reliable wireless voice and data service using the latest technologies.

T-Mobile Northeast LLC will have an interim (testing) period during the modification/installation prior to the final configuration. This antenna configuration is shown on the attached drawings of the planned modifications. Also included is the power density calculation reflecting the change in T-Mobile Northeast LLC operations at the site and 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 Statues ("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.
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 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 T-Mobile Northeast 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) 217-6200 or email cbisson@transcendwireless.com with questions concerning this matter.
Thank you for your consideration.

Sincerely,

Chris Bisson
(203) 217-6200

TMOCTNH102e

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Branford CT 6, CT**
ATC Site Number	:	**302484**
Engineering Number	:	**53055824**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**N/A**
Carrier Site Number	:	**CTNH102C**
Site Location	:	**405 Brushy Plain Rd** **Branford, CT 06405-2308** **41.316806,-72.819700**
County	:	**New Haven**
Date	:	**May 31, 2013**
Max Usage	:	**100%**
Result	:	**Pass - Pending Modifications**

Robert Keith
Project Engineer

STATE OF CONNECTICUT
HANMING YOU
28931
LICENSED
PROFESSIONAL ENGINEER

5/31/13

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Branford CT 6, CT**
ATC Site Number	:	**302484**
Engineering Number	:	**53055824**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**N/A**
Carrier Site Number	:	**CTNH102C**
Site Location	:	**405 Brushy Plain Rd** **Branford, CT 06405-2308** **41.316806,-72.819700**
County	:	**New Haven**
Date	:	**May 31, 2013**
Max Usage	:	**100%**
Result	:	**Pass - Pending Modifications**

Robert Keith
Project Engineer

AMERICAN TOWER®
CORPORATION

Eng. Number 53055824
May 31, 2013

Table of Contents

AMERICAN TOWER®
CORPORATION

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	PJF Job # 29297-629 dated 10/2/97
Foundation Drawing	ATC mapping dated 2/13/09
Geotechnical Report	Clarence Welti Geotechnical Engineering report dated 10/8/96
Modifications	SpectraSite Drawing CT-0020 M1 dated 3/26/04, ATC Job # 26487334 dated 9/15/06, ATC Job # 53055832 dated 5/2/13 (Pending)

Analysis

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

Basic Wind Speed:	115 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1"1/4 radial ice concurrent
Code:	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
Structure Class:	II
Exposure Category:	B
Topographic Category:	1

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report once the pending modifications have been installed. Failure to install the modifications listed will void the results of this analysis.

If you have any questions or require additional information, please contact me via email at robert.keith@americantower.com or call 972-999-8923.

Existing and Reserved Equipment

Mount Elev.[1] (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
150.0	1	4' Omni	Platform w/ Rails	(1) 1 5/8" Coax (1) 1/2" Coax	USA Mobility
	2	Decibel DB408		(2) 7/8" Coax	Town of Branford
	3	Diplexer		(6) 1 5/8" Coax (2) 19.7 mm Cable (1) 10 mm Cable	AT&T Mobility
	6	Ericsson RRUS 11			
	3	KMW AM-X-CD-16-65-00T-RET			
	6	KMW AWS Twin Dual 700 Bypass			
	3	Powerwave 7770.00			
	1	Raycap DC6-48-60-18-8F			
	1	GPS		-	Verizon Wireless
	-	-		(1) 1/2" Coax	Verizon
140.0	-	-	T-Arms	(12) 1 5/8" Coax	T-Mobile
130.0	1	12" x 12" Junction Box	Clearwire Mount	(6) 5/16" Coax (2) 1/2" Coax	Clearwire Corporation
	3	Argus LLPX310R			
	1	DragonWave A-ANT-18G-2.5-C			
	1	DragonWave A-ANT-23G-1-C			
	2	DragonWave Horizon Compact			
	3	NextNet BTS-2500			
123.0	-	-	-	(19) 1 5/8" Coax	T-Mobile
113.0	3	Antel BXA-171085-8BF-EDIN-X	T-Arms	(12) 1 1/4" Coax	Verizon Wireless
	3	Antel BXA-70063/6CF_4			
	2	RFS APL866513-42T0			
	4	RFS APL868013-42T0			
	6	RFS FD9R6004/2C-3L			
103.0	2	Decibel DB408	Standoff	(2) 7/8" Coax	Town of Branford
93.0	1	Decibel DB408	Standoff	(1) 7/8" Coax	
69.0	1	Channel Master 1.2 M Dish	Pipe	(1) RG6	USA Mobility

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
140.0	140.0	3	Ericsson AIR 21, 1.3M, B2A B4P	T-Arms	(1) 1 1/4" Hybriflex	T-Mobile
		3	Ericsson AIR 21, 1.3M, B4A B2P			
		3	Ericsson KRY 112 144/1			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Double stack proposed line on top of the existing T-Mobile coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	72%	Pass
Shaft	85%	Pass
Base Plate	72%	Pass
Reinforcement	100%	Pass

Foundations

Reaction Component	Analysis Reactions
Moment (Kips-Ft)	3,781.6
Axial (Kips)	96.0
Shear (Kips)	40.7

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information. Therefore, no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
140.0	1.587	1.299

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

AMERICAN TOWER®
CORPORATION

Standard Conditions

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

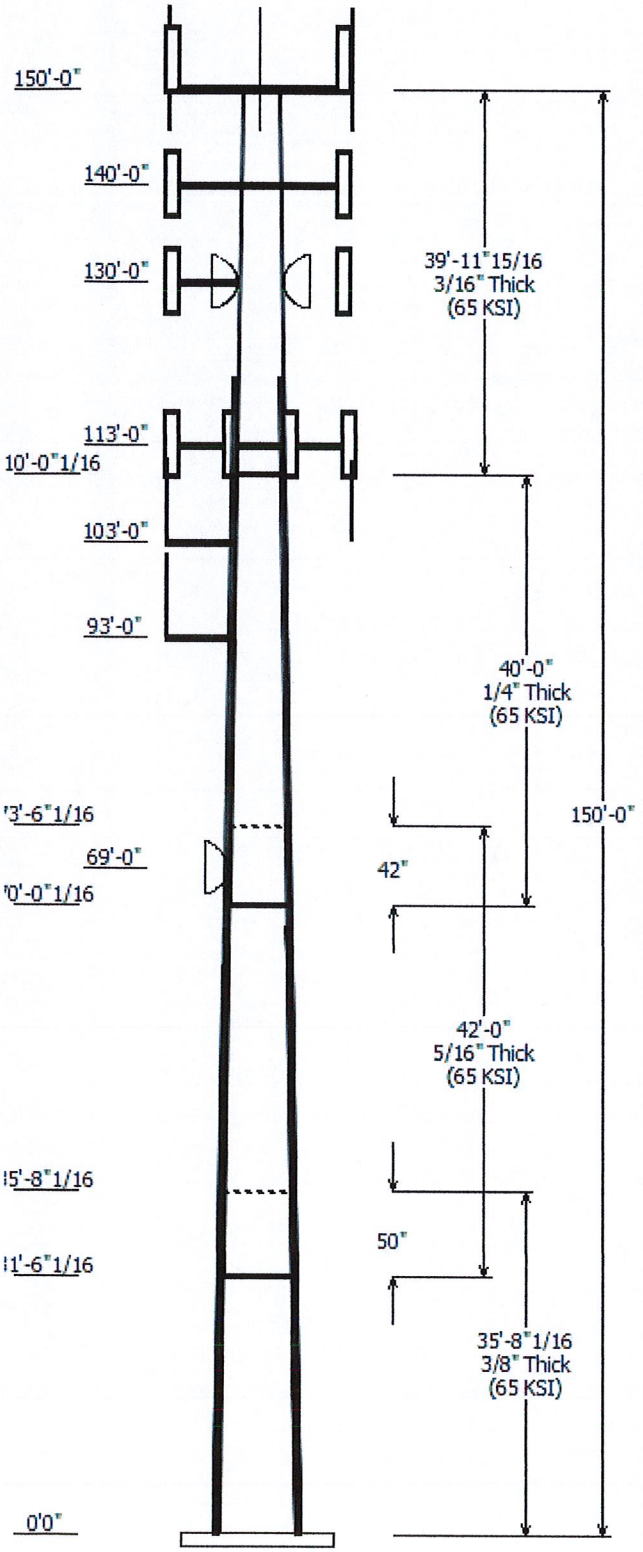
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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



Job Information

Pole :	302484
Code:	ANSI/TIA-222 Rev G
Description :	150 ft. ITT Meyer - Model verified 10/25/11
Client :	T-Mobile
Struct Class :	II
Location :	Branford CT 6, CT
Shape :	12 Sides
Exposure :	B
Height :	150.00 (ft)
Topo :	1
Base Elev (ft):	0.00
Taper:	0.15670(in/ft)

Sections Properties

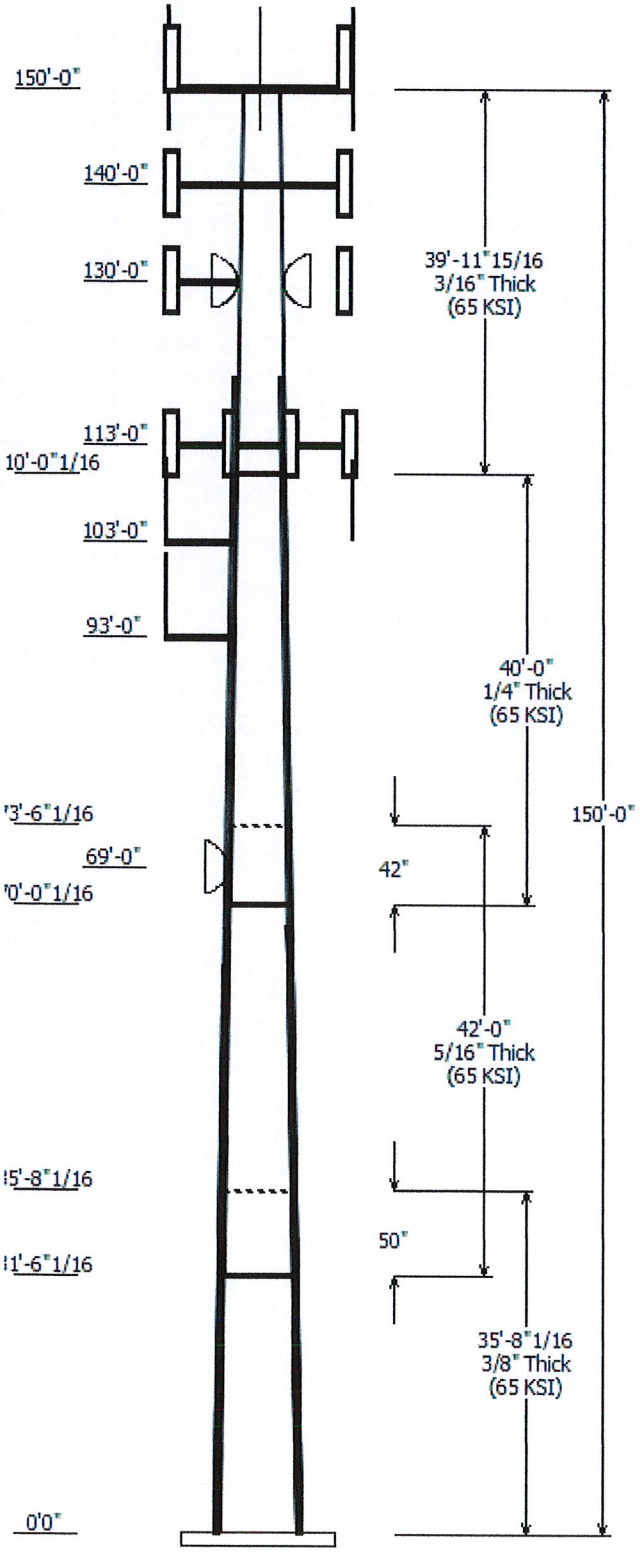
Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	35.670	31.79	37.38	0.375		0.000	0.156700	65
2	42.000	26.48	33.06	0.313	Slip Joint	50.000	0.156700	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	0.156700	65
4	39.997	15.00	21.26	0.188	Butt Joint	0.000	0.156700	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	150.000	1	Raycap DC6-48-60-18-8F
150.000	153.000	3	Powerwave 7770.00
150.000	150.000	1	Platform w/ Rails
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	150.000	1	GPS
150.000	150.000	6	Ericsson RRUS 11
150.000	153.000	3	Diplexer
150.000	159.000	2	Decibel DB408
150.000	159.000	1	4' Omni
140.000	140.000	3	T-Arm
140.000	140.000	3	Ericsson KRY 112 144/1
140.000	140.000	3	Ericsson AIR 21, 1.3M, B4A B2P
140.000	140.000	3	Ericsson AIR 21, 1.3M, B2A B4P
130.000	130.000	3	NextNet BTS-2500
130.000	130.000	2	DragonWave Horizon Compact
130.000	130.000	1	DragonWave A-ANT-23G-1-C
130.000	130.000	1	DragonWave A-ANT-18G-2.5-C
130.000	130.000	1	Clearwire Mount
130.000	130.000	3	Argus LLPX310R
130.000	130.000	1	12" x 12" Junction Box
113.000	113.000	3	T-Arm
113.000	113.000	6	RFS FD9R6004/2C-3L
113.000	113.000	4	RFS APL868013-42T0
113.000	113.000	2	RFS APL866513-42T0
113.000	113.000	3	Antel BXA-70063/6CF_4
113.000	113.000	3	Antel BXA-171085-8BF-EDIN-X
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) From	To	Description	Exposed To Wind
123.0	140.0	1 5/8" Coax	Yes
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	Yes
0.000	123.0	#18 Dywidag bars	Yes
0.000	123.0	1 5/8" Coax	Yes
0.000	123.0	1 5/8" Coax	Yes
0.000	123.0	Angle brackets	Yes
0.000	130.0	1/2" Coax	No
0.000	130.0	5/16" Coax	No
0.000	140.0	1 1/4" Hybriflex	Yes
0.000	140.0	1 5/8" Coax	Yes

Load Cases

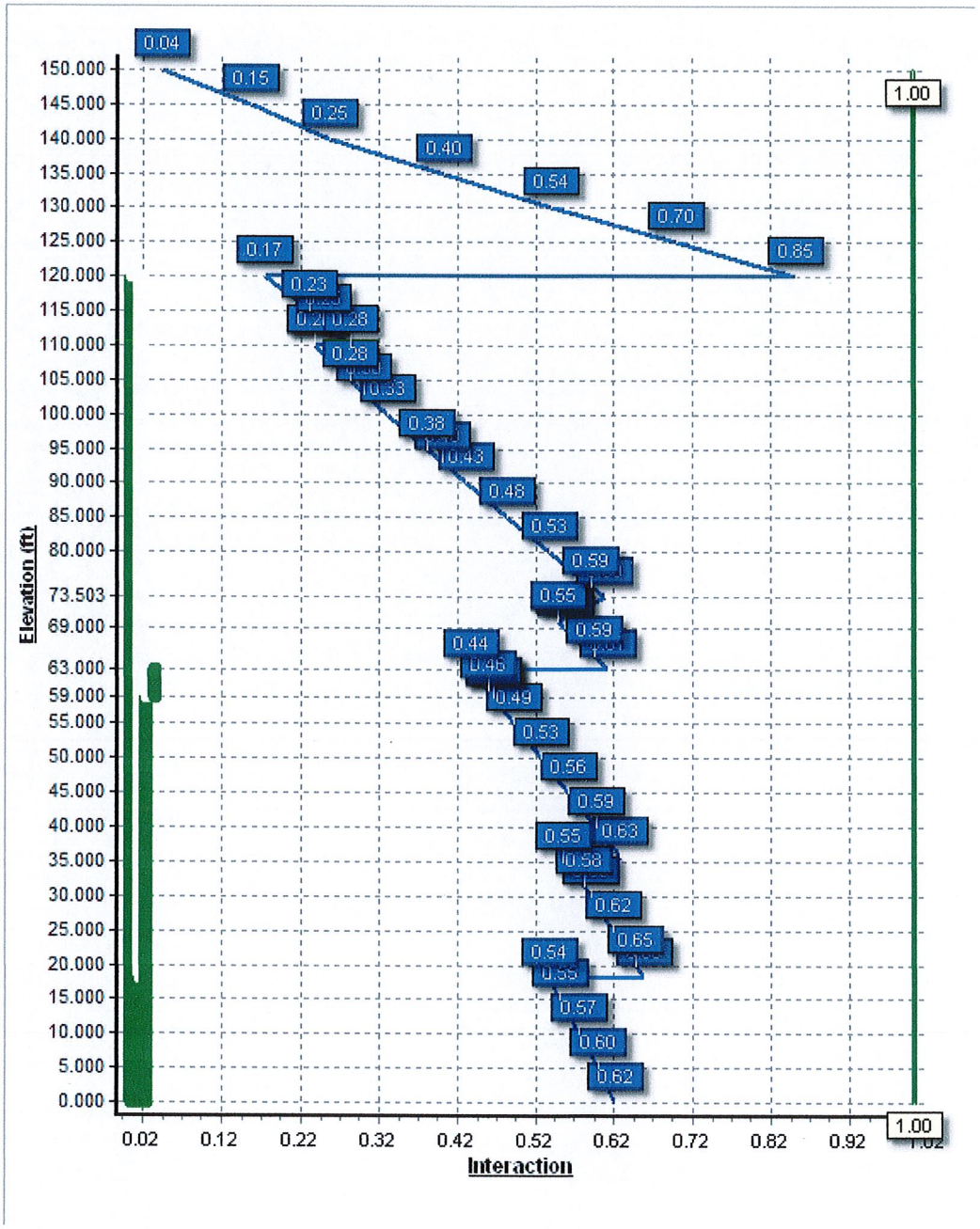
1.2D + 1.6W	115.00 mph with No Ice
0.9D + 1.6W	115.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50.00 mph with 1.25 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

Reactions

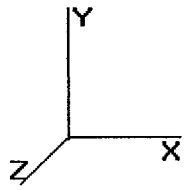
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3781.61	40.74	40.49
0.9D + 1.6W	3750.41	40.72	33.07
1.2D + 1.0Di + 1.0Wi	871.93	8.76	95.98
1.0D + 1.0W	642.99	6.94	35.64

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	69.00	4.586	0.645
1.0D + 1.0W	130.00	16.436	1.181
1.0D + 1.0W	130.00	16.436	1.181


0.04
0.15
0.25
0.40
0.54
0.70
0.85
1.00
0.17
0.23
0.21
0.28
0.28
0.33
0.38
0.43
0.48
0.53
0.59
0.55
0.59
0.44
0.46
0.49
0.53
0.56
0.59
0.55
0.63
0.58
0.62
0.65
0.54
0.55
0.57
0.60
0.62
1.00
150.000
145.000
140.000
135.000
130.000
125.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
73.503
69.000
63.000
59.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:04:59 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 1
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	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	4778.7	20.57	84.77	0.156700
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	2307.0	20.53	84.63	0.156700
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.97	2087.5	27.37	110.15	21.26	110.00	16.92	954.1	20.65	85.07	0.156700
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	0.156700
				Shaft Weight		13,383													

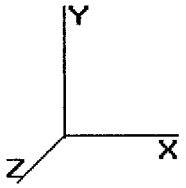
Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
150.00	4' Omni	1	5.00	1.500	1.00	10.82	3.245	1.00	0.000	9.000
150.00	Decibel DB408	2	17.00	2.970	1.00	36.78	6.425	1.00	0.000	9.000
150.00	Diplexer	3	10.00	0.500	0.67	21.63	1.082	0.67	0.000	3.000
150.00	Ericsson RRUS 11	6	55.00	2.940	0.71	211.50	3.664	0.71	0.000	0.000
150.00	GPS	1	1.50	0.600	1.00	3.25	1.298	1.00	0.000	0.000
150.00	KMW AM-X-CD-16-65-00T-	3	48.50	8.260	0.75	406.64	10.271	0.75	0.000	3.000
150.00	KMW AWS Twin Dual 700	6	17.40	0.430	0.50	88.49	1.001	0.50	0.000	3.000
150.00	Platform w/ Rails	1	1950.00	24.000	1.00	4,218.78	51.923	1.00	0.000	0.000
150.00	Powerwave 7770.00	3	35.00	5.880	0.73	295.52	7.353	0.73	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	31.80	1.470	1.00	210.98	3.354	1.00	0.000	0.000
140.00	Ericsson AIR 21, 1.3M, B2A	3	83.00	6.530	0.83	399.32	7.944	0.83	0.000	0.000
140.00	Ericsson AIR 21, 1.3M, B4A	3	81.50	6.580	0.83	397.75	7.990	0.83	0.000	0.000
140.00	Ericsson KRY 112 144/1	3	11.00	0.410	0.50	48.85	0.883	0.50	0.000	0.000
140.00	T-Arm	3	333.00	5.000	0.67	717.77	10.777	0.67	0.000	0.000
130.00	12" x 12" Junction Box	1	10.00	1.400	1.00	112.66	2.029	1.00	0.000	0.000
130.00	Argus LLPX310R	3	28.60	4.830	0.69	233.95	5.835	1.00	0.000	0.000
130.00	Clearwire Mount	1	40.00	8.500	1.00	95.05	20.199	1.00	0.000	0.000
130.00	DragonWave A-ANT-18G-2.5-	1	47.60	8.430	1.00	331.22	11.234	1.00	0.000	0.000
130.00	DragonWave A-ANT-23G-1-C	1	15.00	1.610	1.00	73.17	2.856	1.00	0.000	0.000
130.00	DragonWave Horizon	2	10.60	0.430	1.00	73.88	0.915	1.00	0.000	0.000
130.00	NextNet BTS-2500	3	35.00	2.120	0.72	147.46	2.794	1.00	0.000	0.000
113.00	Antel BXA-171085-8BF-EDIN-X	3	10.00	2.944	0.84	172.23	4.433	0.84	0.000	0.000
113.00	Antel BXA-70063/6CF_4	3	17.00	7.730	0.70	325.91	9.689	0.70	0.000	0.000
113.00	RFS APL866513-42T0	2	18.00	4.293	0.93	256.22	5.620	0.93	0.000	0.000
113.00	RFS APL868013-42T0	4	6.30	3.730	0.87	208.36	5.141	0.87	0.000	0.000
113.00	RFS FD9R6004/2C-3L	6	3.10	0.370	0.50	33.54	0.807	0.50	0.000	0.000
113.00	T-Arm	3	333.00	5.000	0.67	709.62	10.655	0.67	0.000	0.000
103.00	Decibel DB408	2	17.00	2.970	1.00	36.05	6.298	1.00	0.000	4.710
103.00	Standoff	1	200.00	2.500	1.00	424.11	5.301	1.00	0.000	0.000
93.00	Decibel DB408	1	28.00	2.700	1.00	59.06	5.695	1.00	0.000	4.710
93.00	Standoff	1	200.00	2.500	1.00	421.83	5.273	1.00	0.000	0.000
69.00	Channel Master 1.2 M Dish	1	188.00	20.910	1.00	390.39	43.420	1.00	0.000	0.000
	Totals	78	6397.10			21,621.80			Number of Loadings :	32

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
0.00	150.00	(1) 1 5/8" Coax	0.00	N
0.00	150.00	(6) 1 5/8" Coax	0.00	N

Pole :	302484	Code: ANSI/TIA-222 Rev G	
Location :	Branford CT 6, CT	Struct Class : II	
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		

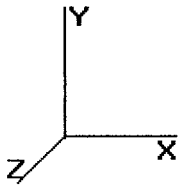


0.00	150.00	(1) 1/2" Coax	0.00	N
0.00	150.00	(1) 1/2" Coax	0.00	N
0.00	150.00	(1) 10 mm Cable	0.00	N
0.00	150.00	(2) 19.7 mm Cable	0.00	N
0.00	150.00	(2) 7/8" Coax	0.00	N
0.00	140.00	(1) 1 1/4" Hybriflex	0.00	Y
0.00	140.00	(5) 1 5/8" Coax	1.98	Y
123.00	140.00	(7) 1 5/8" Coax	4.00	Y
0.00	130.00	(2) 1/2" Coax	0.60	N
0.00	130.00	(6) 5/16" Coax	0.50	N
0.00	123.00	(4) #18 Dywidag bars	2.50	Y
0.00	123.00	(4) #18 Dywidag bars	2.50	Y
0.00	123.00	(12) 1 5/8" Coax	1.98	Y
0.00	123.00	(7) 1 5/8" Coax	1.98	Y
0.00	123.00	(0) Angle brackets	2.00	Y
0.00	113.00	(12) 1 1/4" Coax	0.00	N
0.00	103.00	(2) 7/8" Coax	0.00	N
0.00	93.00	(1) 7/8" Coax	0.00	N
0.00	69.00	(1) RG6	0.00	N

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	— Intermediate Connections — Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	120.0	4	SOL #18 All Thread	75	5.15	6" Angle Bracket	30.0	3.50	5/8" A36 U-Bolt	No
0.00	18.00	4	PL PL 5" x 1"	50	0.00	5/8" Hollo Bolt	12.0	3.00	5/8" Hollo Bolt	No
0.00	59.00	4	SOL #18 All Thread	75	2.19	6" Angle Bracket	30.0	3.50	5/8" Hollo Bolt	No
59.00	63.00	4	SOL #18 All Thread	75	2.19	6" Angle Bracket	12.0	3.50	5/8" A36 U-Bolt	Yes

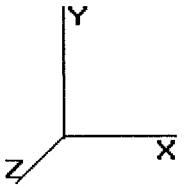
Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:04:59 PM
Location :	Branford CT 6, CT	Struct Class : II	
Height :	150.0 (ft)	Exposure Category : B	Page: 3
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in3)	Weight (lb)	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	77.9	403.6	0.0	52.00	12,63	0.0
5.00		0.3750	36.597	43.737	7,324.4	24.01	97.59	78.5	386.6	752.2	52.00	12,19	884.2
10.00		0.3750	35.813	42.791	6,859.3	23.45	95.50	79.1	370.0	736.1	52.00	11,76	884.2
15.00		0.3750	35.030	41.845	6,414.3	22.89	93.41	79.8	353.7	720.0	52.00	11,33	884.2
18.00	Reinf. Top	0.3750	34.559	41.278	6,156.8	22.55	92.16	80.1	344.2	424.3	52.00	11,08	530.5
20.00		0.3750	34.246	40.899	5,989.0	22.33	91.32	80.4	337.8	279.6	32.00	7,797	217.6
25.00		0.3750	33.463	39.953	5,583.0	21.77	89.23	81.0	322.3	687.8	32.00	7,524	544.0
30.00		0.3750	32.679	39.007	5,195.7	21.21	87.14	81.6	307.1	671.7	32.00	7,255	544.0
31.50	Bot - Section 2	0.3750	32.443	38.723	5,082.8	21.04	86.52	81.8	302.7	198.8	32.00	7,175	163.6
35.00		0.3750	31.896	38.061	4,826.7	20.65	85.05	81.9	292.3	846.3	32.00	7,202	380.4
35.67	Top - Section 1	0.3130	32.417	32.356	4,256.4	25.61	103.57	76.8	253.7	160.5	32.00	7,166	72.9
40.00		0.3130	31.738	31.672	3,992.2	25.03	101.40	77.4	243.0	471.7	32.00	6,939	471.1
45.00		0.3130	30.955	30.882	3,701.0	24.36	98.90	78.2	231.0	532.1	32.00	6,681	544.0
50.00		0.3130	30.171	30.093	3,424.3	23.68	96.39	78.9	219.3	518.7	32.00	6,428	544.0
55.00		0.3130	29.388	29.303	3,161.7	23.01	93.89	79.6	207.8	505.3	32.00	6,180	544.0
59.00	Reinf. Top Reinf	0.3130	28.761	28.671	2,961.6	22.48	91.89	80.2	198.9	394.5	32.00	5,986	435.2
60.00		0.3130	28.604	28.513	2,912.9	22.34	91.39	80.3	196.7	97.3	32.00	5,937	108.8
63.00	Reinf. Top	0.3130	28.134	28.040	2,770.1	21.94	89.88	80.8	190.2	288.7	32.00	5,794	326.4
65.00		0.3130	27.820	27.724	2,677.6	21.67	88.88	81.1	185.9	189.8	16.00	3,295	108.8
69.00		0.3130	27.194	27.092	2,498.7	21.14	86.88	81.7	177.5	373.1	16.00	3,194	217.6
70.00		0.3130	27.037	26.934	2,455.2	21.00	86.38	81.8	175.4	91.9	16.00	3,169	54.4
70.00	Bot - Section 3	0.3130	27.036	26.934	2,455.1	21.00	86.38	81.8	175.4	0.3	16.00	3,169	0.2
73.50	Top - Section 2	0.2500	26.988	21.524	1,964.1	26.78	107.95	75.5	140.6	576.5	16.00	3,161	190.4
75.00		0.2500	26.753	21.335	1,912.9	26.53	107.01	75.8	138.1	109.1	16.00	3,124	81.4
80.00		0.2500	25.970	20.705	1,748.2	25.69	103.88	76.7	130.0	357.6	16.00	3,001	272.0
85.00		0.2500	25.187	20.074	1,593.3	24.85	100.75	77.6	122.2	346.9	16.00	2,881	272.0
90.00		0.2500	24.403	19.443	1,447.8	24.01	97.61	78.5	114.6	336.2	16.00	2,763	272.0
93.00		0.2500	23.933	19.065	1,364.9	23.51	95.73	79.1	110.2	196.6	16.00	2,694	163.2
95.00		0.2500	23.620	18.812	1,311.4	23.17	94.48	79.4	107.3	128.9	16.00	2,648	108.8
100.0		0.2500	22.836	18.182	1,183.9	22.33	91.34	80.4	100.2	314.7	16.00	2,536	272.0
103.0		0.2500	22.366	17.803	1,111.5	21.83	89.46	80.9	96.0	183.7	16.00	2,469	163.2
105.0		0.2500	22.052	17.551	1,064.9	21.49	88.21	81.3	93.3	120.3	16.00	2,425	108.8
110.0		0.2500	21.269	16.920	954.2	20.65	85.08	81.9	86.7	293.2	16.00	2,318	272.0
110.0	Top - Section 3	0.2500	21.268	16.920	954.1	20.65	85.07	81.9	86.7	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	74.0	65.7		16.00	2,317	
113.0		0.1880	20.799	12.477	676.5	27.50	110.63	74.7	62.8	128.7	16.00	2,254	163.0
115.0		0.1880	20.486	12.287	646.1	27.05	108.97	75.2	60.9	84.3	16.00	2,212	108.8
120.0	Reinf. Top	0.1880	19.702	11.813	574.2	25.94	104.80	76.4	56.3	205.0	16.00	2,317	0.2
125.0		0.1880	18.919	11.339	507.7	24.82	100.63	77.6	51.8	197.0			
130.0		0.1880	18.135	10.864	446.7	23.70	96.46	78.9	47.6	188.9			
135.0		0.1880	17.352	10.390	390.7	22.59	92.30	80.1	43.5	180.8			
140.0		0.1880	16.568	9.916	339.6	21.47	88.13	81.3	39.6	172.7			
145.0		0.1880	15.785	9.441	293.1	20.35	83.96	81.9	35.9	164.7			
150.0		0.1880	15.001	8.967	251.1	19.24	79.79	81.9	32.3	156.6			
										13,383.2			10,908.

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:04:59 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 4
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



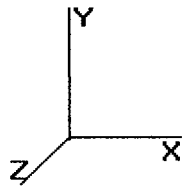
Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

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

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	22.514	24.76	310.28	1.000		0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	22.514	24.76	303.78	1.200	*	0.000	5.00	15.955	19.15	758.7	0.0	1,786.8
10.00		1.00	0.70	22.514	24.76	297.27	1.200	*	0.000	5.00	15.617	18.74	742.6	0.0	1,767.5
15.00		1.00	0.70	22.514	24.76	290.77	1.200	*	0.000	5.00	15.279	18.34	726.5	0.0	1,748.2
18.00	Reinf. Top	1.00	0.70	22.514	24.76	286.87	1.200	*	0.000	3.00	9.005	10.81	428.2	0.0	1,039.6
20.00		1.00	0.70	22.514	24.76	284.27	1.200	*	0.000	2.00	5.936	7.12	282.3	0.0	553.2
25.00		1.00	0.70	22.514	24.76	277.76	1.200	*	0.000	5.00	14.604	17.52	694.4	0.0	1,369.4
30.00		1.00	0.70	22.533	24.78	271.37	1.200	*	0.000	5.00	14.266	17.12	678.9	0.0	1,350.1
31.50	Bot - Section 2	1.00	0.71	22.850	25.13	271.31	1.200	*	0.000	1.50	4.223	5.07	203.8	0.0	402.1
35.00		1.00	0.73	23.548	25.90	270.76	1.200	*	0.000	3.50	9.893	11.87	492.0	0.0	1,396.0
35.67	Top - Section 1	1.00	0.73	23.676	26.04	270.60	1.200	*	0.000	0.67	1.877	2.25	93.8	0.0	265.5
40.00		1.00	0.76	24.464	26.91	274.62	1.200	*	0.000	4.33	11.983	14.38	619.1	0.0	1,037.1
45.00		1.00	0.78	25.301	27.83	272.38	1.200	*	0.000	5.00	13.522	16.23	722.5	0.0	1,182.6
50.00		1.00	0.81	26.074	28.68	269.51	1.200	*	0.000	5.00	13.184	15.82	726.0	0.0	1,166.5
55.00		1.00	0.83	26.794	29.47	266.11	1.200	*	0.000	5.00	12.846	15.41	726.9	0.0	1,150.3
59.00	Reinf. Top Reinf Bottom	1.00	0.85	27.337	30.07	263.06	1.200	*	0.000	4.00	10.033	12.04	579.3	0.0	908.7
60.00		1.00	0.85	27.468	30.21	262.26	1.200	*	0.000	1.00	2.475	2.97	143.6	0.0	225.6
63.00	Reinf. Top	1.00	0.86	27.854	30.63	259.75	1.200	*	0.000	3.00	7.342	8.81	431.9	0.0	672.8
65.00		1.00	0.87	28.104	30.91	258.01	1.200	*	0.000	2.00	4.827	5.79	286.5	0.0	336.5
69.00	Appertunance(s)	1.00	0.88	28.587	31.44	254.36	1.200	*	0.000	4.00	9.492	11.39	573.1	0.0	665.3
70.00		1.00	0.89	28.705	31.57	253.41	1.200	*	0.000	1.00	2.339	2.81	141.8	0.0	164.7
70.00	Bot - Section 3	1.00	0.89	28.706	31.57	253.41	1.200	*	0.000	0.00	0.008	0.01	0.5	0.0	0.5
73.50	Top - Section 2	1.00	0.90	29.108	32.01	250.00	1.200	*	0.000	3.50	8.232	9.88	506.1	0.0	882.1
75.00		1.00	0.91	29.277	32.20	253.24	1.200	*	0.000	1.50	3.470	4.16	214.5	0.0	212.4
80.00		1.00	0.92	29.821	32.80	248.10	1.200	*	0.000	5.00	11.372	13.65	716.2	0.0	701.2
85.00		1.00	0.94	30.343	33.37	242.71	1.200	*	0.000	5.00	11.034	13.24	707.1	0.0	688.3
90.00		1.00	0.95	30.842	33.92	237.08	1.200	*	0.000	5.00	10.696	12.83	696.7	0.0	675.4
93.00	Appertunance(s)	1.00	0.96	31.132	34.24	233.61	1.200	*	0.000	3.00	6.255	7.51	411.3	0.0	399.1
95.00		1.00	0.97	31.322	34.45	231.25	1.200	*	0.000	2.00	4.102	4.92	271.4	0.0	263.5
100.0		1.00	0.98	31.785	34.96	225.22	1.200	*	0.000	5.00	10.020	12.02	672.6	0.0	649.6
103.0	Appertunance(s)	1.00	0.99	32.054	35.26	221.52	1.200	*	0.000	3.00	5.850	7.02	396.0	0.0	383.6
105.0		1.00	1.00	32.231	35.45	219.02	1.200	*	0.000	2.00	3.832	4.60	260.9	0.0	253.2
110.0		1.00	1.01	32.662	35.92	212.64	1.200	*	0.000	5.00	9.344	11.21	644.6	0.0	623.9
110.0	Top - Section 3	1.00	1.01	32.662	35.92	212.64	1.200	*	0.000	0.00	0.006	0.01	0.4	0.0	0.4
113.0	Appertunance(s)	1.00	1.02	32.914	36.20	208.74	1.200	*	0.000	3.00	5.438	6.53	378.0	0.0	317.4
115.0		1.00	1.02	33.080	36.38	206.12	1.200	*	0.000	2.00	3.562	4.27	248.8	0.0	209.9
120.0	Reinf. Top	1.00	1.04	33.484	36.83	199.44	1.200	*	0.000	5.00	8.668	10.40	613.0	0.0	246.2
125.0		1.00	1.05	33.877	37.26	192.63	1.200	*	0.000	5.00	8.330	10.00	596.0	0.0	236.3
130.0	Appertunance(s)	1.00	1.06	34.259	37.68	185.69	1.200	*	0.000	5.00	7.992	9.59	578.2	0.0	226.7
135.0		1.00	1.07	34.630	38.09	178.63	1.200	*	0.000	5.00	7.654	9.18	559.8	0.0	217.0
140.0	Appertunance(s)	1.00	1.08	34.992	38.49	171.45	1.200	*	0.000	5.00	7.316	8.78	540.7	0.0	207.3
145.0		1.00	1.09	35.345	38.87	164.16	1.000		0.000	5.00	6.978	6.98	434.1	0.0	197.6
150.0	Appertunance(s)	1.00	1.11	35.689	39.25	156.77	1.000		0.000	5.00	6.640	6.64	417.1	0.0	187.9
* = Cf Adjusted By Linear Load Ra Effect								Totals:		150.00			19,915.9	0.0	26,967.9

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:04:59 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 5
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

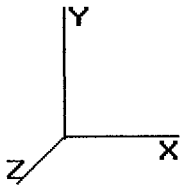
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	28.587	31.446	1.00	1.00	20.91	0.000	0.000	1,052.06	0.00	0.00	225.60
93.00	Decibel DB408	1	31.575	34.732	1.00	1.00	2.70	0.000	4.710	150.04	0.00	706.71	33.60
93.00	Standoff	1	31.132	34.246	1.00	1.00	2.50	0.000	0.000	136.98	0.00	0.00	240.00
103.0	Decibel DB408	2	32.466	35.713	1.00	1.00	5.94	0.000	4.710	339.42	0.00	1,598.65	40.80
103.0	Standoff	1	32.054	35.260	1.00	1.00	2.50	0.000	0.000	141.04	0.00	0.00	240.00
113.0	Antel BXA-171085-8BF	3	32.914	36.206	0.67	0.80	5.94	0.000	0.000	343.81	0.00	0.00	36.00
113.0	Antel BXA-70063/6CF_	3	32.914	36.206	0.56	0.80	12.99	0.000	0.000	752.29	0.00	0.00	61.20
113.0	RFS APL866513-42T0	2	32.914	36.206	0.74	0.80	6.39	0.000	0.000	370.05	0.00	0.00	43.20
113.0	RFS APL868013-42T0	4	32.914	36.206	0.70	0.80	10.38	0.000	0.000	601.55	0.00	0.00	30.24
113.0	RFS FD9R6004/2C-3L	6	32.914	36.206	0.40	0.80	0.89	0.000	0.000	51.44	0.00	0.00	22.32
113.0	T-Arm	3	32.914	36.206	0.50	0.75	7.54	0.000	0.000	436.64	0.00	0.00	1,198.80
130.0	12" x 12" Junction B	1	34.259	37.685	0.80	0.80	1.12	0.000	0.000	67.53	0.00	0.00	12.00
130.0	Argus LLPX310R	3	34.259	37.685	0.55	0.80	8.00	0.000	0.000	482.27	0.00	0.00	102.96
130.0	Clearwire Mount	1	34.259	37.685	0.80	0.80	6.80	0.000	0.000	410.01	0.00	0.00	48.00
130.0	DragonWave A-ANT-	1	34.259	37.685	1.00	1.00	8.43	0.000	0.000	508.29	0.00	0.00	57.12
130.0	DragonWave A-ANT-	1	34.259	37.685	1.00	1.00	1.61	0.000	0.000	97.08	0.00	0.00	18.00
130.0	DragonWave Horizon	2	34.259	37.685	0.80	0.80	0.69	0.000	0.000	41.48	0.00	0.00	25.44
130.0	NextNet BTS-2500	3	34.259	37.685	0.58	0.80	3.66	0.000	0.000	220.88	0.00	0.00	126.00
140.0	Ericsson AIR 21, 1.3	3	34.992	38.491	0.66	0.80	13.01	0.000	0.000	801.09	0.00	0.00	298.80
140.0	Ericsson AIR 21, 1.3	3	34.992	38.491	0.66	0.80	13.11	0.000	0.000	807.23	0.00	0.00	293.40
140.0	Ericsson KRY 112 144	3	34.992	38.491	0.40	0.80	0.49	0.000	0.000	30.30	0.00	0.00	39.60
140.0	T-Arm	3	34.992	38.491	0.50	0.75	7.54	0.000	0.000	464.20	0.00	0.00	1,198.80
150.0	4' Omni	1	36.288	39.917	0.75	0.75	1.13	0.000	9.000	71.85	0.00	646.65	6.00
150.0	Decibel DB408	2	36.288	39.917	0.75	0.75	4.45	0.000	9.000	284.52	0.00	2,560.72	40.80
150.0	Diplexer	3	35.891	39.480	0.50	0.75	0.75	0.000	3.000	47.61	0.00	142.84	36.00
150.0	Ericsson RRUS 11	6	35.689	39.257	0.53	0.75	9.39	0.000	0.000	590.01	0.00	0.00	396.00
150.0	GPS	1	35.689	39.257	0.75	0.75	0.45	0.000	0.000	28.27	0.00	0.00	1.80
150.0	KMW AM-X-CD-16-65-	3	35.891	39.480	0.56	0.75	13.94	0.000	3.000	880.49	0.00	2,641.46	174.60
150.0	KMW AWS Twin Dual	6	35.891	39.480	0.38	0.75	0.97	0.000	3.000	61.12	0.00	183.35	125.28
150.0	Platform w/ Rails	1	35.689	39.257	1.00	1.00	24.00	0.000	0.000	1,507.49	0.00	0.00	2,340.00
150.0	Powerwave 7770.00	3	35.891	39.480	0.55	0.75	9.66	0.000	3.000	610.07	0.00	1,830.22	126.00
150.0	Raycap DC6-48-60-18-	1	35.689	39.257	0.75	0.75	1.10	0.000	0.000	69.25	0.00	0.00	38.16
										12,456.38			7,676.52

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:04:59 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 6
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



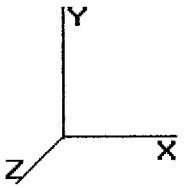
Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

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

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.338	0.000	0.00	6.00
5.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	24.60
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.338	0.000	49.53	0.00
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.338	0.000	49.53	0.00
5.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	59.03
5.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	34.44
5.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.338	0.000	39.63	0.00
10.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.345	0.000	0.00	6.00
10.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	24.60
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.345	0.000	49.53	0.00
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.345	0.000	49.53	0.00
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	59.03
10.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	34.44
10.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.345	0.000	39.63	0.00
15.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.353	0.000	0.00	6.00
15.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	24.60
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.353	0.000	49.53	0.00
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.353	0.000	49.53	0.00
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	59.03
15.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	34.44
15.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.353	0.000	39.63	0.00
18.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	22.514	0.359	0.000	0.00	3.60
18.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	14.76
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	22.514	0.359	0.000	29.72	0.00
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	22.514	0.359	0.000	29.72	0.00
18.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	35.42
18.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	20.66
18.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	22.514	0.359	0.000	23.78	0.00
20.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	22.514	0.363	0.000	0.00	2.40
20.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	9.84
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	22.514	0.363	0.000	19.81	0.00
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	22.514	0.363	0.000	19.81	0.00
20.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	23.61
20.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	13.77
20.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	22.514	0.363	0.000	15.85	0.00
25.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.369	0.000	0.00	6.00
25.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	24.60
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.369	0.000	49.53	0.00
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.369	0.000	49.53	0.00
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	59.03
25.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	34.44
25.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.369	0.000	39.63	0.00
30.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.533	0.378	0.000	0.00	6.00
30.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	24.60
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.533	0.378	0.000	49.57	0.00
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.533	0.378	0.000	49.57	0.00
30.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	59.03
30.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	34.44
30.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.533	0.378	0.000	39.66	0.00
31.50	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	22.850	0.384	0.000	0.00	1.80
31.50	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	7.40

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:04:59 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 7
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



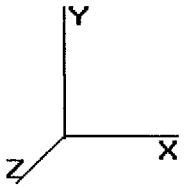
Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

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

Wind Importance Factor : 1.00

31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	22.850	0.384	0.000	15.11	0.00
31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	22.850	0.384	0.000	15.11	0.00
31.50	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	17.75
31.50	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	10.35
31.50	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	22.850	0.384	0.000	12.09	0.00
35.00	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	23.548	0.389	0.000	0.00	4.20
35.00	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	17.20
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	23.548	0.389	0.000	36.23	0.00
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	23.548	0.389	0.000	36.23	0.00
35.00	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	41.28
35.00	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	24.08
35.00	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	23.548	0.389	0.000	28.98	0.00
35.67	(1) 1 1/4" Hybriflex	Yes	0.67	0.000	0.00	0.00	0.00	23.676	0.393	0.000	0.00	0.80
35.67	(5) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	3.30
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	23.676	0.393	0.000	6.98	0.00
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	23.676	0.393	0.000	6.98	0.00
35.67	(12) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	7.91
35.67	(7) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	4.61
35.67	(0) Angle brackets	Yes	0.67	1.200	2.00	0.11	0.13	23.676	0.393	0.000	5.58	0.00
40.00	(1) 1 1/4" Hybriflex	Yes	4.33	0.000	0.00	0.00	0.00	24.464	0.390	0.000	0.00	5.20
40.00	(5) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	21.30
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	24.464	0.390	0.000	46.61	0.00
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	24.464	0.390	0.000	46.61	0.00
40.00	(12) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	51.12
40.00	(7) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	29.82
40.00	(0) Angle brackets	Yes	4.33	1.200	2.00	0.72	0.87	24.464	0.390	0.000	37.29	0.00
45.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	25.301	0.399	0.000	0.00	6.00
45.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	24.60
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	25.301	0.399	0.000	55.66	0.00
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	25.301	0.399	0.000	55.66	0.00
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	59.03
45.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	34.44
45.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	25.301	0.399	0.000	44.53	0.00
50.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	26.074	0.409	0.000	0.00	6.00
50.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	24.60
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.074	0.409	0.000	57.36	0.00
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.074	0.409	0.000	57.36	0.00
50.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	59.03
50.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	34.44
50.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	26.074	0.409	0.000	45.89	0.00
55.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	26.794	0.420	0.000	0.00	6.00
55.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	24.60
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.794	0.420	0.000	58.95	0.00
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.794	0.420	0.000	58.95	0.00
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	59.03
55.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	34.44
55.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	26.794	0.420	0.000	47.16	0.00
59.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	27.337	0.430	0.000	0.00	4.80
59.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	19.68
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	27.337	0.430	0.000	48.11	0.00
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	27.337	0.430	0.000	48.11	0.00
59.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	47.23
59.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	27.55
59.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	27.337	0.430	0.000	38.49	0.00
60.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	27.468	0.436	0.000	0.00	1.20
60.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	4.92
60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	27.468	0.436	0.000	12.09	0.00

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:00 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 8
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				

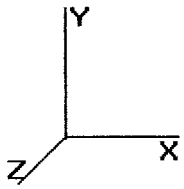


Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

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

60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	27.468	0.436	0.000	12.09	0.00
60.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	11.81
60.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	6.89
60.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	27.468	0.436	0.000	9.67	0.00
63.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	27.854	0.441	0.000	0.00	3.60
63.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	14.76
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	27.854	0.441	0.000	36.77	0.00
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	27.854	0.441	0.000	36.77	0.00
63.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	35.42
63.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	20.66
63.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	27.854	0.441	0.000	29.41	0.00
65.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	28.104	0.447	0.000	0.00	2.40
65.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	9.84
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	28.104	0.447	0.000	24.73	0.00
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	28.104	0.447	0.000	24.73	0.00
65.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	23.61
65.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	13.77
65.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	28.104	0.447	0.000	19.79	0.00
69.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	28.587	0.454	0.000	0.00	4.80
69.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	19.68
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	28.587	0.454	0.000	50.31	0.00
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	28.587	0.454	0.000	50.31	0.00
69.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	47.23
69.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	27.55
69.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	28.587	0.454	0.000	40.25	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	28.705	0.461	0.000	0.00	1.20
70.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	4.92
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	28.705	0.461	0.000	12.63	0.00
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	28.705	0.461	0.000	12.63	0.00
70.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	11.81
70.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	6.89
70.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	28.705	0.461	0.000	10.10	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	28.706	0.462	0.000	0.00	0.00
70.00	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.02
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	28.706	0.462	0.000	0.04	0.00
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	28.706	0.462	0.000	0.04	0.00
70.00	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.04
70.00	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.02
70.00	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	28.706	0.462	0.000	0.03	0.00
73.50	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	29.108	0.467	0.000	0.00	4.20
73.50	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	17.22
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	29.108	0.467	0.000	44.83	0.00
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	29.108	0.467	0.000	44.83	0.00
73.50	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	41.32
73.50	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	24.11
73.50	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	29.108	0.467	0.000	35.86	0.00
75.00	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	29.277	0.465	0.000	0.00	1.80
75.00	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	7.36
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	29.277	0.465	0.000	19.28	0.00
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	29.277	0.465	0.000	19.28	0.00
75.00	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	17.67
75.00	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	10.31
75.00	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	29.277	0.465	0.000	15.42	0.00
80.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	29.821	0.474	0.000	0.00	6.00
80.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	24.60
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	29.821	0.474	0.000	65.61	0.00
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	29.821	0.474	0.000	65.61	0.00

Pole :	302484			Code: ANSI/TIA-222 Rev G							5/31/2013 3:05:00 PM	
Location :	Branford CT 6, CT			Struct Class : II							Page: 9	
Height :	150.0 (ft)			Exposure Category : B								
Base Dia :	37.38 (in)			Topographic Category : 1								
Top Dia :	15.00 (in)			Base Elev : 0.000 (ft)								
Shape :	12 Sides											
Taper :	0.156700 (in/ft)											



Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

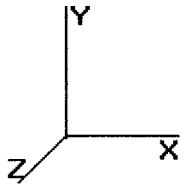
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

80.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	59.03
80.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	34.44
80.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	29.821	0.474	0.000	52.49	0.00
85.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	30.343	0.489	0.000	0.00	6.00
85.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	24.60
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.343	0.489	0.000	66.75	0.00
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.343	0.489	0.000	66.75	0.00
85.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	59.03
85.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	34.44
85.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	30.343	0.489	0.000	53.40	0.00
90.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	30.842	0.504	0.000	0.00	6.00
90.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	24.60
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.842	0.504	0.000	67.85	0.00
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.842	0.504	0.000	67.85	0.00
90.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	59.03
90.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	34.44
90.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	30.842	0.504	0.000	54.28	0.00
93.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	31.132	0.517	0.000	0.00	3.60
93.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	14.76
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	31.132	0.517	0.000	41.09	0.00
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	31.132	0.517	0.000	41.09	0.00
93.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	35.42
93.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	20.66
93.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	31.132	0.517	0.000	32.88	0.00
95.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	31.322	0.526	0.000	0.00	2.40
95.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	9.84
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	31.322	0.526	0.000	27.56	0.00
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	31.322	0.526	0.000	27.56	0.00
95.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	23.61
95.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	13.77
95.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	31.322	0.526	0.000	22.05	0.00
100.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	31.785	0.538	0.000	0.00	6.00
100.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	24.60
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	31.785	0.538	0.000	69.93	0.00
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	31.785	0.538	0.000	69.93	0.00
100.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	59.03
100.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	34.44
100.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	31.785	0.538	0.000	55.94	0.00
103.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	32.054	0.553	0.000	0.00	3.60
103.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	14.76
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	32.054	0.553	0.000	42.31	0.00
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	32.054	0.553	0.000	42.31	0.00
103.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	35.42
103.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	20.66
103.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	32.054	0.553	0.000	33.85	0.00
105.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	32.231	0.563	0.000	0.00	2.40
105.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	9.84
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	32.231	0.563	0.000	28.36	0.00
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	32.231	0.563	0.000	28.36	0.00
105.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	23.61
105.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	13.77
105.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	32.231	0.563	0.000	22.69	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	32.662	0.577	0.000	0.00	6.00
110.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	24.60
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	32.662	0.577	0.000	71.86	0.00
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	32.662	0.577	0.000	71.86	0.00
110.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	59.03

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 : 0.156700 (in/ft)

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



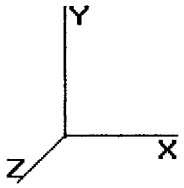
Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

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

Wind Importance Factor : 1.00

110.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	34.44
110.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	32.662	0.577	0.000	57.49	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	32.662	0.588	0.000	0.00	0.00
110.0	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.02
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	32.662	0.588	0.000	0.05	0.00
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	32.662	0.588	0.000	0.05	0.00
110.0	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.04
110.0	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.02
110.0	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	32.662	0.588	0.000	0.04	0.00
113.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	32.914	0.594	0.000	0.00	3.60
113.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	14.74
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	32.914	0.594	0.000	43.40	0.00
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	32.914	0.594	0.000	43.40	0.00
113.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	35.38
113.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	20.64
113.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	32.914	0.594	0.000	34.72	0.00
115.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	33.080	0.606	0.000	0.00	2.40
115.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	9.84
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	33.080	0.606	0.000	29.11	0.00
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	33.080	0.606	0.000	29.11	0.00
115.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	23.61
115.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	13.77
115.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	33.080	0.606	0.000	23.29	0.00
120.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	33.484	0.622	0.000	0.00	6.00
120.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	24.60
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	33.484	0.622	0.000	73.67	0.00
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	33.484	0.622	0.000	73.67	0.00
120.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	59.03
120.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	34.44
120.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	33.484	0.622	0.000	58.93	0.00
125.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	33.877	0.508	0.000	0.00	6.00
125.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.877	0.508	0.000	59.03	24.60
125.0	(7) 1 5/8" Coax	Yes	2.00	0.976	4.00	0.67	0.65	33.877	0.508	0.000	38.80	13.77
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	33.877	0.508	0.000	44.72	0.00
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	33.877	0.508	0.000	44.72	0.00
125.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	33.877	0.508	0.000	35.42	35.42
125.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	33.877	0.508	0.000	35.42	20.66
125.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	33.877	0.508	0.000	35.77	0.00
130.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.259	0.312	0.000	0.00	6.00
130.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.259	0.312	0.000	59.69	24.60
130.0	(7) 1 5/8" Coax	Yes	5.00	0.971	4.00	1.67	1.62	34.259	0.312	0.000	97.54	34.44
135.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.630	0.326	0.000	0.00	6.00
135.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.630	0.326	0.000	60.34	24.60
135.0	(7) 1 5/8" Coax	Yes	5.00	0.965	4.00	1.67	1.61	34.630	0.326	0.000	98.07	34.44
140.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.992	0.341	0.000	0.00	6.00
140.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.992	0.341	0.000	60.97	24.60
140.0	(7) 1 5/8" Coax	Yes	5.00	0.960	4.00	1.67	1.60	34.992	0.341	0.000	98.58	34.44
										Totals:	8,276.71	3,273.13

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:00 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 11
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

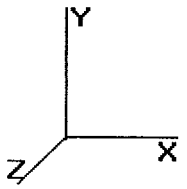
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)		Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		1,015.06	2,013.78	0.00	0.00
10.00		998.99	1,994.47	0.00	0.00
15.00		982.92	1,975.15	0.00	0.00
18.00		582.04	1,175.82	0.00	0.00
20.00		384.81	643.94	0.00	0.00
25.00		950.77	1,596.32	0.00	0.00
30.00		935.49	1,577.01	0.00	0.00
31.50		282.04	470.38	0.00	0.00
35.00		679.55	1,554.75	0.00	0.00
35.67		129.97	295.93	0.00	0.00
40.00		860.36	1,233.68	0.00	0.00
45.00		1,010.64	1,409.53	0.00	0.00
50.00		1,022.92	1,393.41	0.00	0.00
55.00		1,032.03	1,377.28	0.00	0.00
59.00		828.30	1,090.22	0.00	0.00
60.00		206.11	270.94	0.00	0.00
63.00		622.24	808.96	0.00	0.00
65.00		414.54	427.28	0.00	0.00
69.00		1,885.61	1,072.42	0.00	0.00
70.00		207.20	210.00	0.00	0.00
70.00		0.69	0.70	0.00	0.00
73.50		738.10	1,040.68	0.00	0.00
75.00		314.32	280.18	0.00	0.00
80.00		1,055.80	927.63	0.00	0.00
85.00		1,052.59	914.75	0.00	0.00
90.00		1,047.90	901.88	0.00	0.00
93.00		911.02	808.55	0.00	706.71
95.00		414.06	353.26	0.00	0.00
100.0		1,034.55	874.14	0.00	0.00
103.0		1,095.47	799.10	0.00	1,598.65
105.0		407.67	341.38	0.00	0.00
110.0		1,016.48	844.43	0.00	0.00
110.0		0.67	0.56	0.00	0.00
113.0		3,158.43	1,841.37	0.00	0.00
115.0		399.51	279.99	0.00	0.00
120.0		994.26	421.39	0.00	0.00
125.0		889.85	387.91	0.00	0.00
130.0		2,563.03	732.33	0.00	0.00
135.0		718.20	329.70	0.00	0.00
140.0		2,803.04	2,150.62	0.00	0.00
145.0		434.07	245.30	0.00	0.00
150.0		4,567.74	3,520.26	0.00	8,005.24
	Totals:	40,649.02	40,587.36	0.00	10,310.60

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:00 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 12
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.6W — 115.00 mph with No Ice — 24 Iterations

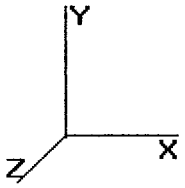
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.49	-40.74	0.00	-3,781.61	0.00	3,781.61	3,133.66	1,566.83	4,776.46	2,358.91	0.00	0.00	0.619
5.00	-38.30	-39.89	0.00	-3,577.90	0.00	3,577.90	3,091.35	1,545.67	4,611.19	2,277.30	0.14	-0.26	0.596
10.00	-36.15	-39.04	0.00	-3,378.44	0.00	3,378.44	3,047.99	1,524.00	4,447.17	2,196.29	0.54	-0.51	0.573
15.00	-34.05	-38.15	0.00	-3,183.25	0.00	3,183.25	3,003.60	1,501.80	4,284.50	2,115.95	1.21	-0.76	0.549
18.00	-32.80	-37.63	0.00	-3,068.79	0.00	3,068.79	2,976.47	1,488.23	4,187.58	2,068.09	1.74	-0.91	0.535
18.00	-32.80	-37.63	0.00	-3,068.79	0.00	3,068.79	2,976.47	1,488.23	4,187.58	2,068.09	1.74	-0.91	0.656
20.00	-32.03	-37.34	0.00	-2,993.54	0.00	2,993.54	2,958.17	1,479.08	4,123.27	2,036.33	2.15	-1.01	0.645
25.00	-30.27	-36.52	0.00	-2,806.82	0.00	2,806.82	2,911.70	1,455.85	3,963.58	1,957.46	3.37	-1.31	0.617
30.00	-28.59	-35.64	0.00	-2,624.24	0.00	2,624.24	2,864.18	1,432.09	3,805.55	1,879.42	4.90	-1.60	0.589
31.50	-28.04	-35.41	0.00	-2,570.66	0.00	2,570.66	2,849.69	1,424.85	3,758.37	1,856.12	5.42	-1.69	0.580
35.00	-26.44	-34.74	0.00	-2,446.84	0.00	2,446.84	2,805.48	1,402.74	3,636.10	1,795.73	6.74	-1.90	0.552
35.67	-26.06	-34.67	0.00	-2,423.56	0.00	2,423.56	2,236.04	1,118.02	2,957.95	1,460.82	7.01	-1.94	0.625
40.00	-24.70	-33.88	0.00	-2,273.46	0.00	2,273.46	2,206.84	1,103.42	2,857.02	1,410.98	8.87	-2.18	0.595
45.00	-23.17	-32.92	0.00	-2,104.08	0.00	2,104.08	2,172.15	1,086.07	2,741.31	1,353.83	11.31	-2.46	0.560
50.00	-21.68	-31.94	0.00	-1,939.46	0.00	1,939.46	2,136.42	1,068.21	2,626.58	1,297.17	14.04	-2.74	0.525
55.00	-20.22	-30.93	0.00	-1,779.76	0.00	1,779.76	2,099.65	1,049.82	2,512.93	1,241.04	17.05	-3.01	0.491
59.00	-19.11	-30.08	0.00	-1,656.05	0.00	1,656.05	2,069.49	1,034.74	2,422.87	1,196.56	19.67	-3.22	0.463
59.00	-19.11	-30.08	0.00	-1,656.05	0.00	1,656.05	2,069.49	1,034.74	2,422.87	1,196.56	19.67	-3.22	0.463
60.00	-18.80	-29.90	0.00	-1,625.97	0.00	1,625.97	2,061.84	1,030.92	2,400.48	1,185.51	20.35	-3.27	0.457
63.00	-17.96	-29.27	0.00	-1,536.28	0.00	1,536.28	2,038.66	1,019.33	2,333.61	1,152.48	22.45	-3.42	0.436
63.00	-17.96	-29.27	0.00	-1,536.28	0.00	1,536.28	2,038.66	1,019.33	2,333.61	1,152.48	22.45	-3.42	0.610
65.00	-17.47	-28.88	0.00	-1,477.75	0.00	1,477.75	2,022.99	1,011.50	2,289.31	1,130.60	23.91	-3.52	0.592
69.00	-16.44	-26.98	0.00	-1,362.21	0.00	1,362.21	1,991.17	995.58	2,201.37	1,087.17	26.97	-3.79	0.556
70.00	-16.23	-26.77	0.00	-1,335.23	0.00	1,335.23	1,983.10	991.55	2,179.53	1,076.39	27.77	-3.86	0.547
70.00	-16.17	-26.80	0.00	-1,335.14	0.00	1,335.14	1,983.08	991.54	2,179.46	1,076.35	27.78	-3.86	0.547
73.50	-15.11	-26.04	0.00	-1,241.34	0.00	1,241.34	1,462.66	731.33	1,612.14	796.18	30.69	-4.09	0.605
75.00	-14.76	-25.76	0.00	-1,202.37	0.00	1,202.37	1,455.09	727.55	1,589.60	785.05	31.99	-4.18	0.589
80.00	-13.78	-24.71	0.00	-1,073.58	0.00	1,073.58	1,429.14	714.57	1,514.67	748.04	36.54	-4.51	0.535
85.00	-12.84	-23.65	0.00	-950.03	0.00	950.03	1,402.15	701.08	1,440.36	711.34	41.42	-4.81	0.482
90.00	-11.94	-22.58	0.00	-831.77	0.00	831.77	1,374.13	687.06	1,366.78	675.00	46.61	-5.09	0.429
93.00	-11.17	-21.62	0.00	-763.33	0.00	763.33	1,356.81	678.41	1,323.02	653.39	49.86	-5.25	0.398
95.00	-10.79	-21.21	0.00	-720.09	0.00	720.09	1,345.06	672.53	1,294.02	639.07	52.08	-5.36	0.378
100.00	-9.95	-20.13	0.00	-614.04	0.00	614.04	1,314.95	657.47	1,222.19	603.60	57.81	-5.60	0.329
103.00	-9.23	-18.98	0.00	-552.05	0.00	552.05	1,296.39	648.19	1,179.59	582.55	61.37	-5.73	0.299
105.00	-8.89	-18.56	0.00	-514.09	0.00	514.09	1,283.80	641.90	1,151.40	568.63	63.78	-5.82	0.280
110.00	-8.12	-17.47	0.00	-421.30	0.00	421.30	1,247.19	623.60	1,077.91	532.34	69.97	-6.01	0.235
110.00	-8.11	-17.48	0.00	-421.24	0.00	421.24	1,247.16	623.58	1,077.86	532.31	69.97	-6.01	0.235
110.00	-8.11	-17.48	0.00	-421.24	0.00	421.24	849.80	424.90	738.78	364.86	69.97	-6.01	0.281
113.00	-6.59	-14.16	0.00	-368.85	0.00	368.85	839.07	419.54	713.06	352.15	73.77	-6.11	0.246
115.00	-6.33	-13.74	0.00	-340.54	0.00	340.54	831.70	415.85	695.95	343.70	76.34	-6.18	0.228
120.00	-5.99	-12.72	0.00	-271.83	0.00	271.83	812.54	406.27	653.43	322.71	82.89	-6.33	0.171
120.00	-5.99	-12.72	0.00	-271.83	0.00	271.83	812.54	406.27	653.43	322.71	82.89	-6.33	0.851
125.00	-5.63	-11.83	0.00	-208.23	0.00	208.23	792.35	396.17	611.37	301.93	89.57	-6.45	0.698
130.00	-5.13	-9.24	0.00	-149.10	0.00	149.10	771.11	385.56	569.85	281.43	96.59	-6.95	0.537
135.00	-4.84	-8.51	0.00	-102.92	0.00	102.92	748.84	374.42	528.98	261.24	104.07	-7.35	0.401
140.00	-3.06	-5.46	0.00	-60.37	0.00	60.37	725.52	362.76	488.86	241.43	111.92	-7.65	0.254
145.00	-2.86	-5.01	0.00	-33.05	0.00	33.05	695.93	347.97	446.23	220.38	120.02	-7.84	0.154
150.00	0.00	-4.57	0.00	-8.01	0.00	8.01	660.97	330.49	402.27	198.67	128.27	-7.94	0.040

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:00 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 13
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

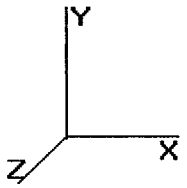
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)		Cf	Ice Thick (in)	Tributary (ft)		Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	22.514	24.76	310.28		1.000	0.000	0.00		0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	22.514	24.76	303.78		1.200 *	0.000	5.00		15.955	19.15	758.7	0.0	1,561.2
10.00		1.00	0.70	22.514	24.76	297.27		1.200 *	0.000	5.00		15.617	18.74	742.6	0.0	1,546.7
15.00		1.00	0.70	22.514	24.76	290.77		1.200 *	0.000	5.00		15.279	18.34	726.5	0.0	1,532.2
18.00	Reinf. Top	1.00	0.70	22.514	24.76	286.87		1.200 *	0.000	3.00		9.005	10.81	428.2	0.0	912.4
20.00		1.00	0.70	22.514	24.76	284.27		1.200 *	0.000	2.00		5.936	7.12	282.3	0.0	469.3
25.00		1.00	0.70	22.514	24.76	277.76		1.200 *	0.000	5.00		14.604	17.52	694.4	0.0	1,163.0
30.00		1.00	0.70	22.533	24.78	271.37		1.200 *	0.000	5.00		14.266	17.12	678.9	0.0	1,148.5
31.50	Bot - Section 2	1.00	0.71	22.850	25.13	271.31		1.200 *	0.000	1.50		4.223	5.07	203.8	0.0	342.5
35.00		1.00	0.73	23.548	25.90	270.76		1.200 *	0.000	3.50		9.893	11.87	492.0	0.0	1,142.1
35.67	Top - Section 1	1.00	0.73	23.676	26.04	270.60		1.200 *	0.000	0.67		1.877	2.25	93.8	0.0	217.4
40.00		1.00	0.76	24.464	26.91	274.62		1.200 *	0.000	4.33		11.983	14.38	619.1	0.0	895.6
45.00		1.00	0.78	25.301	27.83	272.38		1.200 *	0.000	5.00		13.522	16.23	722.5	0.0	1,022.9
50.00		1.00	0.81	26.074	28.68	269.51		1.200 *	0.000	5.00		13.184	15.82	726.0	0.0	1,010.8
55.00		1.00	0.83	26.794	29.47	266.11		1.200 *	0.000	5.00		12.846	15.41	726.9	0.0	998.7
59.00	Reinf. Top Reinf Bottom	1.00	0.85	27.337	30.07	263.06		1.200 *	0.000	4.00		10.033	12.04	579.3	0.0	790.3
60.00		1.00	0.85	27.468	30.21	262.26		1.200 *	0.000	1.00		2.475	2.97	143.6	0.0	196.4
63.00	Reinf. Top	1.00	0.86	27.854	30.63	259.75		1.200 *	0.000	3.00		7.342	8.81	431.9	0.0	586.2
65.00		1.00	0.87	28.104	30.91	258.01		1.200 *	0.000	2.00		4.827	5.79	286.5	0.0	279.6
69.00	Appertunance(s)	1.00	0.88	28.587	31.44	254.36		1.200 *	0.000	4.00		9.492	11.39	573.1	0.0	553.3
70.00		1.00	0.89	28.705	31.57	253.41		1.200 *	0.000	1.00		2.339	2.81	141.8	0.0	137.1
70.00	Bot - Section 3	1.00	0.89	28.706	31.57	253.41		1.200 *	0.000	0.00		0.008	0.01	0.5	0.0	0.5
73.50	Top - Section 2	1.00	0.90	29.108	32.01	250.00		1.200 *	0.000	3.50		8.232	9.88	506.1	0.0	709.2
75.00		1.00	0.91	29.277	32.20	253.24		1.200 *	0.000	1.50		3.470	4.16	214.5	0.0	179.6
80.00		1.00	0.92	29.821	32.80	248.10		1.200 *	0.000	5.00		11.372	13.65	716.2	0.0	593.9
85.00		1.00	0.94	30.343	33.37	242.71		1.200 *	0.000	5.00		11.034	13.24	707.1	0.0	584.2
90.00		1.00	0.95	30.842	33.92	237.08		1.200 *	0.000	5.00		10.696	12.83	696.7	0.0	574.6
93.00	Appertunance(s)	1.00	0.96	31.132	34.24	233.61		1.200 *	0.000	3.00		6.255	7.51	411.3	0.0	340.1
95.00		1.00	0.97	31.322	34.45	231.25		1.200 *	0.000	2.00		4.102	4.92	271.4	0.0	224.8
100.0		1.00	0.98	31.785	34.96	225.22		1.200 *	0.000	5.00		10.020	12.02	672.6	0.0	555.2
103.0	Appertunance(s)	1.00	0.99	32.054	35.26	221.52		1.200 *	0.000	3.00		5.850	7.02	396.0	0.0	328.5
105.0		1.00	1.00	32.231	35.45	219.02		1.200 *	0.000	2.00		3.832	4.60	260.9	0.0	217.1
110.0		1.00	1.01	32.662	35.92	212.64		1.200 *	0.000	5.00		9.344	11.21	644.6	0.0	535.9
110.0	Top - Section 3	1.00	1.01	32.662	35.92	212.64		1.200 *	0.000	0.00		0.006	0.01	0.4	0.0	0.4
113.0	Appertunance(s)	1.00	1.02	32.914	36.20	208.74		1.200 *	0.000	3.00		5.438	6.53	378.0	0.0	278.8
115.0		1.00	1.02	33.080	36.38	206.12		1.200 *	0.000	2.00		3.562	4.27	248.8	0.0	184.6
120.0	Reinf. Top	1.00	1.04	33.484	36.83	199.44		1.200 *	0.000	5.00		8.668	10.40	613.0	0.0	184.7
125.0		1.00	1.05	33.877	37.26	192.63		1.200 *	0.000	5.00		8.330	10.00	596.0	0.0	177.3
130.0	Appertunance(s)	1.00	1.06	34.259	37.68	185.69		1.200 *	0.000	5.00		7.992	9.59	578.2	0.0	170.0
135.0		1.00	1.07	34.630	38.09	178.63		1.200 *	0.000	5.00		7.654	9.18	559.8	0.0	162.7
140.0	Appertunance(s)	1.00	1.08	34.992	38.49	171.45		1.200 *	0.000	5.00		7.316	8.78	540.7	0.0	155.5
145.0		1.00	1.09	35.345	38.87	164.16		1.000	0.000	5.00		6.978	6.98	434.1	0.0	148.2
150.0	Appertunance(s)	1.00	1.11	35.689	39.25	156.77		1.000	0.000	5.00		6.640	6.64	417.1	0.0	140.9
* = Cf Adjusted By Linear Load Ra Effect							Totals:			150.00				19,915.9	0.0	22,953.0

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:01 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 14
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

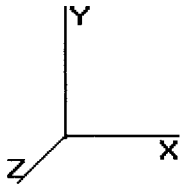
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	28.587	31.446	1.00	1.00	20.91	0.000	0.000	1,052.06	0.00	0.00	169.20
93.00	Decibel DB408	1	31.575	34.732	1.00	1.00	2.70	0.000	4.710	150.04	0.00	706.71	25.20
93.00	Standoff	1	31.132	34.246	1.00	1.00	2.50	0.000	0.000	136.98	0.00	0.00	180.00
103.0	Decibel DB408	2	32.466	35.713	1.00	1.00	5.94	0.000	4.710	339.42	0.00	1,598.65	30.60
103.0	Standoff	1	32.054	35.260	1.00	1.00	2.50	0.000	0.000	141.04	0.00	0.00	180.00
113.0	Antel BXA-171085-8BF	3	32.914	36.206	0.67	0.80	5.94	0.000	0.000	343.81	0.00	0.00	27.00
113.0	Antel BXA-70063/6CF_	3	32.914	36.206	0.56	0.80	12.99	0.000	0.000	752.29	0.00	0.00	45.90
113.0	RFS APL866513-42T0	2	32.914	36.206	0.74	0.80	6.39	0.000	0.000	370.05	0.00	0.00	32.40
113.0	RFS APL868013-42T0	4	32.914	36.206	0.70	0.80	10.38	0.000	0.000	601.55	0.00	0.00	22.68
113.0	RFS FD9R6004/2C-3L	6	32.914	36.206	0.40	0.80	0.89	0.000	0.000	51.44	0.00	0.00	16.74
113.0	T-Arm	3	32.914	36.206	0.50	0.75	7.54	0.000	0.000	436.64	0.00	0.00	899.10
130.0	12" x 12" Junction B	1	34.259	37.685	0.80	0.80	1.12	0.000	0.000	67.53	0.00	0.00	9.00
130.0	Argus LLPX310R	3	34.259	37.685	0.55	0.80	8.00	0.000	0.000	482.27	0.00	0.00	77.22
130.0	Clearwire Mount	1	34.259	37.685	0.80	0.80	6.80	0.000	0.000	410.01	0.00	0.00	36.00
130.0	DragonWave A-ANT-	1	34.259	37.685	1.00	1.00	8.43	0.000	0.000	508.29	0.00	0.00	42.84
130.0	DragonWave A-ANT-	1	34.259	37.685	1.00	1.00	1.61	0.000	0.000	97.08	0.00	0.00	13.50
130.0	DragonWave Horizon	2	34.259	37.685	0.80	0.80	0.69	0.000	0.000	41.48	0.00	0.00	19.08
130.0	NextNet BTS-2500	3	34.259	37.685	0.58	0.80	3.66	0.000	0.000	220.88	0.00	0.00	94.50
140.0	Ericsson AIR 21, 1.3	3	34.992	38.491	0.66	0.80	13.01	0.000	0.000	801.09	0.00	0.00	224.10
140.0	Ericsson AIR 21, 1.3	3	34.992	38.491	0.66	0.80	13.11	0.000	0.000	807.23	0.00	0.00	220.05
140.0	Ericsson KRY 112 144	3	34.992	38.491	0.40	0.80	0.49	0.000	0.000	30.30	0.00	0.00	29.70
140.0	T-Arm	3	34.992	38.491	0.50	0.75	7.54	0.000	0.000	464.20	0.00	0.00	899.10
150.0	4' Omni	1	36.288	39.917	0.75	0.75	1.13	0.000	9.000	71.85	0.00	646.65	4.50
150.0	Decibel DB408	2	36.288	39.917	0.75	0.75	4.45	0.000	9.000	284.52	0.00	2,560.72	30.60
150.0	Diplexer	3	35.891	39.480	0.50	0.75	0.75	0.000	3.000	47.61	0.00	142.84	27.00
150.0	Ericsson RRUS 11	6	35.689	39.257	0.53	0.75	9.39	0.000	0.000	590.01	0.00	0.00	297.00
150.0	GPS	1	35.689	39.257	0.75	0.75	0.45	0.000	0.000	28.27	0.00	0.00	1.35
150.0	KMW AM-X-CD-16-65-	3	35.891	39.480	0.56	0.75	13.94	0.000	3.000	880.49	0.00	2,641.46	130.95
150.0	KMW AWS Twin Dual	6	35.891	39.480	0.38	0.75	0.97	0.000	3.000	61.12	0.00	183.35	93.96
150.0	Platform w/ Rails	1	35.689	39.257	1.00	1.00	24.00	0.000	0.000	1,507.49	0.00	0.00	1,755.00
150.0	Powerwave 7770.00	3	35.891	39.480	0.55	0.75	9.66	0.000	3.000	610.07	0.00	1,830.22	94.50
150.0	Raycap DC6-48-60-18-	1	35.689	39.257	0.75	0.75	1.10	0.000	0.000	69.25	0.00	0.00	28.62
										12,456.38			5,757.39

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 : 0.156700 (in/ft)

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



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

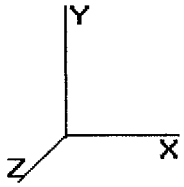
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.338	0.000	0.00	4.50
5.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	18.45
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.338	0.000	49.53	0.00
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.338	0.000	49.53	0.00
5.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	44.27
5.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.338	0.000	39.23	25.83
5.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.338	0.000	39.63	0.00
10.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.345	0.000	0.00	4.50
10.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	18.45
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.345	0.000	49.53	0.00
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.345	0.000	49.53	0.00
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	44.27
10.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.345	0.000	39.23	25.83
10.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.345	0.000	39.63	0.00
15.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.353	0.000	0.00	4.50
15.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	18.45
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.353	0.000	49.53	0.00
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.353	0.000	49.53	0.00
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	44.27
15.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.353	0.000	39.23	25.83
15.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.353	0.000	39.63	0.00
18.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	22.514	0.359	0.000	0.00	2.70
18.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	11.07
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	22.514	0.359	0.000	29.72	0.00
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	22.514	0.359	0.000	29.72	0.00
18.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	26.56
18.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	22.514	0.359	0.000	23.54	15.50
18.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	22.514	0.359	0.000	23.78	0.00
20.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	22.514	0.363	0.000	0.00	1.80
20.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	7.38
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	22.514	0.363	0.000	19.81	0.00
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	22.514	0.363	0.000	19.81	0.00
20.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	17.71
20.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	22.514	0.363	0.000	15.69	10.33
20.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	22.514	0.363	0.000	15.85	0.00
25.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.514	0.369	0.000	0.00	4.50
25.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	18.45
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.369	0.000	49.53	0.00
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.514	0.369	0.000	49.53	0.00
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	44.27
25.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.514	0.369	0.000	39.23	25.83
25.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.514	0.369	0.000	39.63	0.00
30.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	22.533	0.378	0.000	0.00	4.50
30.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	18.45
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.533	0.378	0.000	49.57	0.00
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	22.533	0.378	0.000	49.57	0.00
30.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	44.27
30.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	22.533	0.378	0.000	39.26	25.83
30.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	22.533	0.378	0.000	39.66	0.00
31.50	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	22.850	0.384	0.000	0.00	1.35
31.50	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	5.55

Pole :	302484			Code: ANSI/TIA-222 Rev G							5/31/2013 3:05:01 PM	
Location :	Branford CT 6, CT			Struct Class : II							Page: 16	
Height :	150.0 (ft)			Exposure Category : B								
Base Dia :	37.38 (in)			Topographic Category : 1								
Top Dia :	15.00 (in)			Base Elev : 0.000 (ft)								
Shape :	12 Sides											
Taper :	0.156700 (in/ft)											



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

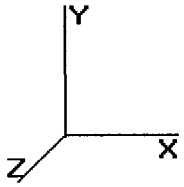
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	22.850	0.384	0.000	15.11	0.00
31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	22.850	0.384	0.000	15.11	0.00
31.50	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	13.31
31.50	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	22.850	0.384	0.000	11.97	7.77
31.50	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	22.850	0.384	0.000	12.09	0.00
35.00	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	23.548	0.389	0.000	0.00	3.15
35.00	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	12.90
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	23.548	0.389	0.000	36.23	0.00
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	23.548	0.389	0.000	36.23	0.00
35.00	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	30.96
35.00	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	23.548	0.389	0.000	28.69	18.06
35.00	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	23.548	0.389	0.000	28.98	0.00
35.67	(1) 1 1/4" Hybriflex	Yes	0.67	0.000	0.00	0.00	0.00	23.676	0.393	0.000	0.00	0.60
35.67	(5) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	2.47
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	23.676	0.393	0.000	6.98	0.00
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	23.676	0.393	0.000	6.98	0.00
35.67	(12) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	5.93
35.67	(7) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	23.676	0.393	0.000	5.53	3.46
35.67	(0) Angle brackets	Yes	0.67	1.200	2.00	0.11	0.13	23.676	0.393	0.000	5.58	0.00
40.00	(1) 1 1/4" Hybriflex	Yes	4.33	0.000	0.00	0.00	0.00	24.464	0.390	0.000	0.00	3.90
40.00	(5) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	15.98
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	24.464	0.390	0.000	46.61	0.00
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	24.464	0.390	0.000	46.61	0.00
40.00	(12) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	38.34
40.00	(7) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	24.464	0.390	0.000	36.91	22.37
40.00	(0) Angle brackets	Yes	4.33	1.200	2.00	0.72	0.87	24.464	0.390	0.000	37.29	0.00
45.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	25.301	0.399	0.000	0.00	4.50
45.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	18.45
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	25.301	0.399	0.000	55.66	0.00
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	25.301	0.399	0.000	55.66	0.00
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	44.27
45.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	25.301	0.399	0.000	44.08	25.83
45.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	25.301	0.399	0.000	44.53	0.00
50.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	26.074	0.409	0.000	0.00	4.50
50.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	18.45
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.074	0.409	0.000	57.36	0.00
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.074	0.409	0.000	57.36	0.00
50.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	44.27
50.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.074	0.409	0.000	45.43	25.83
50.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	26.074	0.409	0.000	45.89	0.00
55.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	26.794	0.420	0.000	0.00	4.50
55.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	18.45
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.794	0.420	0.000	58.95	0.00
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	26.794	0.420	0.000	58.95	0.00
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	44.27
55.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	26.794	0.420	0.000	46.69	25.83
55.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	26.794	0.420	0.000	47.16	0.00
59.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	27.337	0.430	0.000	0.00	3.60
59.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	14.76
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	27.337	0.430	0.000	48.11	0.00
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	27.337	0.430	0.000	48.11	0.00
59.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	35.42
59.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	27.337	0.430	0.000	38.11	20.66
59.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	27.337	0.430	0.000	38.49	0.00
60.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	27.468	0.436	0.000	0.00	0.90
60.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	3.69
60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	27.468	0.436	0.000	12.09	0.00

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:01 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 17
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

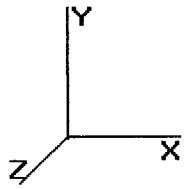
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	27.468	0.436	0.000	12.09	0.00
60.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	8.85
60.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	27.468	0.436	0.000	9.57	5.17
60.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	27.468	0.436	0.000	9.67	0.00
63.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	27.854	0.441	0.000	0.00	2.70
63.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	11.07
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	27.854	0.441	0.000	36.77	0.00
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	27.854	0.441	0.000	36.77	0.00
63.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	26.56
63.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	27.854	0.441	0.000	29.12	15.50
63.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	27.854	0.441	0.000	29.41	0.00
65.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	28.104	0.447	0.000	0.00	1.80
65.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	7.38
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	28.104	0.447	0.000	24.73	0.00
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	28.104	0.447	0.000	24.73	0.00
65.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	17.71
65.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	28.104	0.447	0.000	19.59	10.33
65.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	28.104	0.447	0.000	19.79	0.00
69.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	28.587	0.454	0.000	0.00	3.60
69.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	14.76
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	28.587	0.454	0.000	50.31	0.00
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	28.587	0.454	0.000	50.31	0.00
69.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	35.42
69.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	28.587	0.454	0.000	39.85	20.66
69.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	28.587	0.454	0.000	40.25	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	28.705	0.461	0.000	0.00	0.90
70.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	3.69
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	28.705	0.461	0.000	12.63	0.00
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	28.705	0.461	0.000	12.63	0.00
70.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	8.85
70.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	28.705	0.461	0.000	10.00	5.17
70.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	28.705	0.461	0.000	10.10	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	28.706	0.462	0.000	0.00	0.00
70.00	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.01
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	28.706	0.462	0.000	0.04	0.00
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	28.706	0.462	0.000	0.04	0.00
70.00	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.03
70.00	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	28.706	0.462	0.000	0.03	0.02
70.00	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	28.706	0.462	0.000	0.03	0.00
73.50	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	29.108	0.467	0.000	0.00	3.15
73.50	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	12.91
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	29.108	0.467	0.000	44.83	0.00
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	29.108	0.467	0.000	44.83	0.00
73.50	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	30.99
73.50	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	29.108	0.467	0.000	35.50	18.08
73.50	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	29.108	0.467	0.000	35.86	0.00
75.00	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	29.277	0.465	0.000	0.00	1.35
75.00	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	5.52
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	29.277	0.465	0.000	19.28	0.00
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	29.277	0.465	0.000	19.28	0.00
75.00	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	13.25
75.00	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	29.277	0.465	0.000	15.27	7.73
75.00	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	29.277	0.465	0.000	15.42	0.00
80.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	29.821	0.474	0.000	0.00	4.50
80.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	18.45
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	29.821	0.474	0.000	65.61	0.00
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	29.821	0.474	0.000	65.61	0.00

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:01 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 18
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

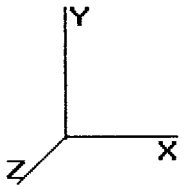
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

80.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	44.27
80.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	29.821	0.474	0.000	51.96	25.83
80.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	29.821	0.474	0.000	52.49	0.00
85.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	30.343	0.489	0.000	0.00	4.50
85.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	18.45
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.343	0.489	0.000	66.75	0.00
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.343	0.489	0.000	66.75	0.00
85.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	44.27
85.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.343	0.489	0.000	52.87	25.83
85.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	30.343	0.489	0.000	53.40	0.00
90.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	30.842	0.504	0.000	0.00	4.50
90.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	18.45
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.842	0.504	0.000	67.85	0.00
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	30.842	0.504	0.000	67.85	0.00
90.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	44.27
90.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	30.842	0.504	0.000	53.74	25.83
90.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	30.842	0.504	0.000	54.28	0.00
93.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	31.132	0.517	0.000	0.00	2.70
93.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	11.07
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	31.132	0.517	0.000	41.09	0.00
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	31.132	0.517	0.000	41.09	0.00
93.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	26.56
93.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	31.132	0.517	0.000	32.55	15.50
93.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	31.132	0.517	0.000	32.88	0.00
95.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	31.322	0.526	0.000	0.00	1.80
95.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	7.38
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	31.322	0.526	0.000	27.56	0.00
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	31.322	0.526	0.000	27.56	0.00
95.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	17.71
95.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	31.322	0.526	0.000	21.83	10.33
95.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	31.322	0.526	0.000	22.05	0.00
100.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	31.785	0.538	0.000	0.00	4.50
100.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	18.45
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	31.785	0.538	0.000	69.93	0.00
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	31.785	0.538	0.000	69.93	0.00
100.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	44.27
100.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	31.785	0.538	0.000	55.38	25.83
100.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	31.785	0.538	0.000	55.94	0.00
103.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	32.054	0.553	0.000	0.00	2.70
103.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	11.07
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	32.054	0.553	0.000	42.31	0.00
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	32.054	0.553	0.000	42.31	0.00
103.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	26.56
103.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	32.054	0.553	0.000	33.51	15.50
103.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	32.054	0.553	0.000	33.85	0.00
105.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	32.231	0.563	0.000	0.00	1.80
105.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	7.38
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	32.231	0.563	0.000	28.36	0.00
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	32.231	0.563	0.000	28.36	0.00
105.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	17.71
105.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	32.231	0.563	0.000	22.46	10.33
105.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	32.231	0.563	0.000	22.69	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	32.662	0.577	0.000	0.00	4.50
110.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	18.45
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	32.662	0.577	0.000	71.86	0.00
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	32.662	0.577	0.000	71.86	0.00
110.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	44.27

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:01 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 19
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				

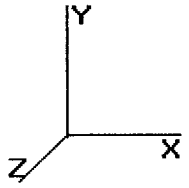


Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

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

110.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	32.662	0.577	0.000	56.91	25.83
110.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	32.662	0.577	0.000	57.49	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	32.662	0.588	0.000	0.00	0.00
110.0	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.01
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	32.662	0.588	0.000	0.05	0.00
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	32.662	0.588	0.000	0.05	0.00
110.0	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.03
110.0	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	32.662	0.588	0.000	0.04	0.02
110.0	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	32.662	0.588	0.000	0.04	0.00
113.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	32.914	0.594	0.000	0.00	2.70
113.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	11.06
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	32.914	0.594	0.000	43.40	0.00
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	32.914	0.594	0.000	43.40	0.00
113.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	26.54
113.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	32.914	0.594	0.000	34.37	15.48
113.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	32.914	0.594	0.000	34.72	0.00
115.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	33.080	0.606	0.000	0.00	1.80
115.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	7.38
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	33.080	0.606	0.000	29.11	0.00
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	33.080	0.606	0.000	29.11	0.00
115.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	17.71
115.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	33.080	0.606	0.000	23.06	10.33
115.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	33.080	0.606	0.000	23.29	0.00
120.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	33.484	0.622	0.000	0.00	4.50
120.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	18.45
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	33.484	0.622	0.000	73.67	0.00
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	33.484	0.622	0.000	73.67	0.00
120.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	44.27
120.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.484	0.622	0.000	58.34	25.83
120.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	33.484	0.622	0.000	58.93	0.00
125.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	33.877	0.508	0.000	0.00	4.50
125.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	33.877	0.508	0.000	59.03	18.45
125.0	(7) 1 5/8" Coax	Yes	2.00	0.976	4.00	0.67	0.65	33.877	0.508	0.000	38.80	10.33
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	33.877	0.508	0.000	44.72	0.00
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	33.877	0.508	0.000	44.72	0.00
125.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	33.877	0.508	0.000	35.42	26.56
125.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	33.877	0.508	0.000	35.42	15.50
125.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	33.877	0.508	0.000	35.77	0.00
130.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.259	0.312	0.000	0.00	4.50
130.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.259	0.312	0.000	59.69	18.45
130.0	(7) 1 5/8" Coax	Yes	5.00	0.971	4.00	1.67	1.62	34.259	0.312	0.000	97.54	25.83
135.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.630	0.326	0.000	0.00	4.50
135.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.630	0.326	0.000	60.34	18.45
135.0	(7) 1 5/8" Coax	Yes	5.00	0.965	4.00	1.67	1.61	34.630	0.326	0.000	98.07	25.83
140.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	34.992	0.341	0.000	0.00	4.50
140.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	34.992	0.341	0.000	60.97	18.45
140.0	(7) 1 5/8" Coax	Yes	5.00	0.960	4.00	1.67	1.60	34.992	0.341	0.000	98.58	25.83
										Totals:	8,276.71	2,454.84

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 20
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

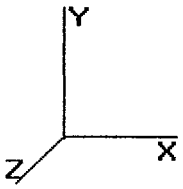
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	1,015.06	1,731.39	0.00	0.00
10.00	998.99	1,716.90	0.00	0.00
15.00	982.92	1,702.42	0.00	0.00
18.00	582.04	1,014.50	0.00	0.00
20.00	384.81	537.35	0.00	0.00
25.00	950.77	1,333.24	0.00	0.00
30.00	935.49	1,318.75	0.00	0.00
31.50	282.04	393.67	0.00	0.00
35.00	679.55	1,261.17	0.00	0.00
35.67	129.97	240.17	0.00	0.00
40.00	860.36	1,043.04	0.00	0.00
45.00	1,010.64	1,193.15	0.00	0.00
50.00	1,022.92	1,181.06	0.00	0.00
55.00	1,032.03	1,168.96	0.00	0.00
59.00	828.30	926.46	0.00	0.00
60.00	206.11	230.41	0.00	0.00
63.00	622.24	688.32	0.00	0.00
65.00	414.54	347.66	0.00	0.00
69.00	1,885.61	858.72	0.00	0.00
70.00	207.20	171.10	0.00	0.00
70.00	0.69	0.57	0.00	0.00
73.50	738.10	828.11	0.00	0.00
75.00	314.32	230.49	0.00	0.00
80.00	1,055.80	763.72	0.00	0.00
85.00	1,052.59	754.07	0.00	0.00
90.00	1,047.90	744.41	0.00	0.00
93.00	911.02	647.21	0.00	706.71
95.00	414.06	292.15	0.00	0.00
100.0	1,034.55	723.61	0.00	0.00
103.0	1,095.47	640.13	0.00	1,598.65
105.0	407.67	283.23	0.00	0.00
110.0	1,016.48	701.32	0.00	0.00
110.0	0.67	0.46	0.00	0.00
113.0	3,158.43	1,421.78	0.00	0.00
115.0	399.51	237.20	0.00	0.00
120.0	994.26	316.09	0.00	0.00
125.0	889.85	290.93	0.00	0.00
130.0	2,563.03	549.24	0.00	0.00
135.0	718.20	247.28	0.00	0.00
140.0	2,803.04	1,612.96	0.00	0.00
145.0	434.07	183.98	0.00	0.00
150.0	4,567.74	2,640.19	0.00	8,005.24
Totals:	40,649.02	33,167.55	0.00	10,310.60

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 21
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



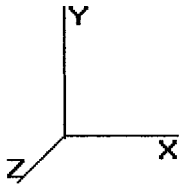
Load Case: 0.9D + 1.6W — 115.00 mph with No Ice (Reduced DL) — 24 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-33.07	-40.72	0.00	-3,750.41	0.00	3,750.41	3,133.66	1,566.83	4,776.46	2,358.91	0.00	0.00	0.613
5.00	-31.17	-39.84	0.00	-3,546.80	0.00	3,546.80	3,091.35	1,545.67	4,611.19	2,277.30	0.14	-0.25	0.590
10.00	-29.29	-38.96	0.00	-3,347.58	0.00	3,347.58	3,047.99	1,524.00	4,447.17	2,196.29	0.54	-0.51	0.566
15.00	-27.47	-38.05	0.00	-3,152.78	0.00	3,152.78	3,003.60	1,501.80	4,284.50	2,115.95	1.20	-0.75	0.543
18.00	-26.38	-37.51	0.00	-3,038.62	0.00	3,038.62	2,976.47	1,488.23	4,187.58	2,068.09	1.73	-0.90	0.529
18.00	-26.38	-37.51	0.00	-3,038.62	0.00	3,038.62	2,976.47	1,488.23	4,187.58	2,068.09	1.73	-0.90	0.649
20.00	-25.72	-37.21	0.00	-2,963.60	0.00	2,963.60	2,958.17	1,479.08	4,123.27	2,036.33	2.13	-1.00	0.638
25.00	-24.22	-36.36	0.00	-2,777.55	0.00	2,777.55	2,911.70	1,455.85	3,963.58	1,957.46	3.34	-1.30	0.610
30.00	-22.81	-35.46	0.00	-2,595.77	0.00	2,595.77	2,864.18	1,432.09	3,805.55	1,879.42	4.85	-1.59	0.581
31.50	-22.33	-35.23	0.00	-2,542.45	0.00	2,542.45	2,849.69	1,424.85	3,758.37	1,856.12	5.37	-1.68	0.573
35.00	-21.02	-34.55	0.00	-2,419.28	0.00	2,419.28	2,805.48	1,402.74	3,636.10	1,795.73	6.67	-1.88	0.545
35.67	-20.70	-34.47	0.00	-2,396.13	0.00	2,396.13	2,236.04	1,118.02	2,957.95	1,460.82	6.94	-1.92	0.617
40.00	-19.54	-33.66	0.00	-2,246.89	0.00	2,246.89	2,206.84	1,103.42	2,857.02	1,410.98	8.79	-2.16	0.587
45.00	-18.23	-32.69	0.00	-2,078.60	0.00	2,078.60	2,172.15	1,086.07	2,741.31	1,353.83	11.20	-2.44	0.552
50.00	-16.95	-31.69	0.00	-1,915.16	0.00	1,915.16	2,136.42	1,068.21	2,626.58	1,297.17	13.90	-2.71	0.518
55.00	-15.70	-30.67	0.00	-1,756.69	0.00	1,756.69	2,099.65	1,049.82	2,512.93	1,241.04	16.89	-2.98	0.483
59.00	-14.76	-29.83	0.00	-1,634.01	0.00	1,634.01	2,069.49	1,034.74	2,422.87	1,196.56	19.47	-3.18	0.456
59.00	-14.76	-29.83	0.00	-1,634.01	0.00	1,634.01	2,069.49	1,034.74	2,422.87	1,196.56	19.47	-3.18	0.456
60.00	-14.49	-29.63	0.00	-1,604.19	0.00	1,604.19	2,061.84	1,030.92	2,400.48	1,185.51	20.14	-3.23	0.449
63.00	-13.77	-29.00	0.00	-1,515.29	0.00	1,515.29	2,038.66	1,019.33	2,333.61	1,152.48	22.22	-3.38	0.429
63.00	-13.77	-29.00	0.00	-1,515.29	0.00	1,515.29	2,038.66	1,019.33	2,333.61	1,152.48	22.22	-3.38	0.601
65.00	-13.36	-28.61	0.00	-1,457.29	0.00	1,457.29	2,022.99	1,011.50	2,289.31	1,130.60	23.66	-3.48	0.583
69.00	-12.54	-26.71	0.00	-1,342.85	0.00	1,342.85	1,991.17	995.58	2,201.37	1,087.17	26.70	-3.75	0.547
70.00	-12.37	-26.50	0.00	-1,316.13	0.00	1,316.13	1,983.10	991.55	2,179.53	1,076.39	27.49	-3.82	0.538
70.00	-12.32	-26.52	0.00	-1,316.05	0.00	1,316.05	1,983.08	991.54	2,179.46	1,076.35	27.49	-3.82	0.538
73.50	-11.47	-25.76	0.00	-1,223.22	0.00	1,223.22	1,462.66	731.33	1,612.14	796.18	30.37	-4.04	0.594
75.00	-11.17	-25.47	0.00	-1,184.66	0.00	1,184.66	1,455.09	727.55	1,589.60	785.05	31.65	-4.14	0.579
80.00	-10.36	-24.42	0.00	-1,057.30	0.00	1,057.30	1,429.14	714.57	1,514.67	748.04	36.15	-4.45	0.525
85.00	-9.57	-23.36	0.00	-935.20	0.00	935.20	1,402.15	701.08	1,440.36	711.34	40.98	-4.75	0.473
90.00	-8.84	-22.28	0.00	-818.42	0.00	818.42	1,374.13	687.06	1,366.78	675.00	46.10	-5.03	0.421
93.00	-8.22	-21.34	0.00	-750.86	0.00	750.86	1,356.81	678.41	1,323.02	653.39	49.31	-5.19	0.391
95.00	-7.91	-20.92	0.00	-708.18	0.00	708.18	1,345.06	672.53	1,294.02	639.07	51.50	-5.29	0.371
100.00	-7.22	-19.85	0.00	-603.58	0.00	603.58	1,314.95	657.47	1,222.19	603.60	57.16	-5.53	0.322
103.00	-6.66	-18.71	0.00	-542.44	0.00	542.44	1,296.39	648.19	1,179.59	582.55	60.67	-5.66	0.293
105.00	-6.37	-18.29	0.00	-505.02	0.00	505.02	1,283.80	641.90	1,151.40	568.63	63.06	-5.74	0.274
110.00	-5.75	-17.21	0.00	-413.58	0.00	413.58	1,247.19	623.60	1,077.91	532.34	69.17	-5.93	0.230
110.00	-5.74	-17.22	0.00	-413.53	0.00	413.53	1,247.16	623.58	1,077.86	532.31	69.17	-5.93	0.230
110.00	-5.74	-17.22	0.00	-413.53	0.00	413.53	849.80	424.90	738.78	364.86	69.17	-5.93	0.274
113.00	-4.63	-13.94	0.00	-361.93	0.00	361.93	839.07	419.54	713.06	352.15	72.92	-6.03	0.241
115.00	-4.41	-13.52	0.00	-334.05	0.00	334.05	831.70	415.85	695.95	343.70	75.46	-6.10	0.223
120.00	-4.17	-12.51	0.00	-266.44	0.00	266.44	812.54	406.27	653.43	322.71	81.91	-6.25	0.167
120.00	-4.17	-12.51	0.00	-266.44	0.00	266.44	812.54	406.27	653.43	322.71	81.91	-6.25	0.832
125.00	-3.92	-11.62	0.00	-203.89	0.00	203.89	792.35	396.17	611.37	301.93	88.51	-6.36	0.681
130.00	-3.60	-9.03	0.00	-145.81	0.00	145.81	771.11	385.56	569.85	281.43	95.43	-6.85	0.523
135.00	-3.39	-8.31	0.00	-100.64	0.00	100.64	748.84	374.42	528.98	261.24	102.81	-7.24	0.390
140.00	-2.13	-5.33	0.00	-59.09	0.00	59.09	725.52	362.76	488.86	241.43	110.54	-7.53	0.248
145.00	-2.00	-4.88	0.00	-32.42	0.00	32.42	695.93	347.97	446.23	220.38	118.52	-7.73	0.150
150.00	0.00	-4.57	0.00	-8.01	0.00	8.01	660.97	330.49	402.27	198.67	126.65	-7.82	0.040

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:02 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 22
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

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

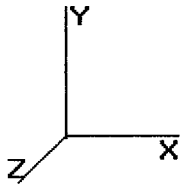
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.682	0.000	1.200		0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.070	5.00	17.681	21.22	99.3	517.9	2,304.7
10.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.219	5.00	17.466	20.96	98.1	545.9	2,313.4
15.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.310	5.00	17.205	20.65	96.7	558.0	2,306.2
18.00	Reinf. Top	1.00	0.70	4.256	4.682	0.000	1.200	*	2.353	3.00	10.182	12.22	57.2	337.1	1,376.7
20.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.378	2.00	6.729	8.07	37.8	225.3	778.5
25.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.432	5.00	16.630	19.96	93.4	564.4	1,933.8
30.00		1.00	0.70	4.260	4.686	0.000	1.200	*	2.476	5.00	16.329	19.59	91.8	562.9	1,913.0
31.50	Bot - Section 2	1.00	0.71	4.320	4.751	0.000	1.200	*	2.488	1.50	4.847	5.82	27.6	169.0	571.1
35.00		1.00	0.73	4.451	4.897	0.000	1.200	*	2.515	3.50	11.359	13.63	66.7	398.4	1,794.4
35.67	Top - Section 1	1.00	0.73	4.476	4.923	0.000	1.200	*	2.520	0.67	2.158	2.59	12.7	76.3	341.8
40.00		1.00	0.76	4.625	5.087	0.000	1.200	*	2.549	4.33	13.822	16.59	84.4	489.3	1,526.4
45.00		1.00	0.78	4.783	5.261	0.000	1.200	*	2.579	5.00	15.671	18.80	98.9	559.1	1,741.6
50.00		1.00	0.81	4.929	5.422	0.000	1.200	*	2.606	5.00	15.355	18.43	99.9	552.2	1,718.6
55.00		1.00	0.83	5.065	5.572	0.000	1.200	*	2.631	5.00	15.038	18.05	100.5	544.5	1,694.9
59.00	Reinf. Top Reinf Bottom	1.00	0.85	5.168	5.684	0.000	1.200	*	2.650	4.00	11.800	14.16	80.5	430.3	1,339.0
60.00		1.00	0.85	5.193	5.712	0.000	1.200	*	2.654	1.00	2.917	3.50	20.0	107.2	332.8
63.00	Reinf. Top	1.00	0.86	5.265	5.792	0.000	1.200	*	2.667	3.00	8.676	10.41	60.3	318.5	991.3
65.00		1.00	0.87	5.313	5.844	0.000	1.200	*	2.675	2.00	5.719	6.86	40.1	210.9	547.4
69.00	Appertunance(s)	1.00	0.88	5.404	5.944	0.000	1.200	*	2.691	4.00	11.287	13.54	80.5	415.8	1,081.1
70.00		1.00	0.89	5.426	5.969	0.000	1.200	*	2.695	1.00	2.789	3.35	20.0	103.6	268.3
70.00	Bot - Section 3	1.00	0.89	5.426	5.969	0.000	1.200	*	2.695	0.00	0.009	0.01	0.1	0.3	0.9
73.50	Top - Section 2	1.00	0.90	5.503	6.053	0.000	1.200	*	2.708	3.50	9.812	11.77	71.3	363.8	1,246.0
75.00		1.00	0.91	5.534	6.088	0.000	1.200	*	2.714	1.50	4.147	4.98	30.3	154.7	367.1
80.00		1.00	0.92	5.637	6.201	0.000	1.200	*	2.731	5.00	13.648	16.38	101.6	506.5	1,207.7
85.00		1.00	0.94	5.736	6.309	0.000	1.200	*	2.748	5.00	13.324	15.99	100.9	495.9	1,184.2
90.00		1.00	0.95	5.830	6.413	0.000	1.200	*	2.764	5.00	12.999	15.60	100.0	485.0	1,160.4
93.00	Appertunance(s)	1.00	0.96	5.885	6.474	0.000	1.200	*	2.773	3.00	7.642	9.17	59.4	287.0	686.0
95.00		1.00	0.97	5.921	6.513	0.000	1.200	*	2.779	2.00	5.029	6.03	39.3	189.5	453.0
100.0		1.00	0.98	6.008	6.609	0.000	1.200	*	2.793	5.00	12.347	14.82	97.9	462.3	1,111.9
103.0	Appertunance(s)	1.00	0.99	6.059	6.665	0.000	1.200	*	2.801	3.00	7.250	8.70	58.0	273.2	656.8
105.0		1.00	1.00	6.093	6.702	0.000	1.200	*	2.807	2.00	4.768	5.72	38.3	180.2	433.4
110.0		1.00	1.01	6.174	6.792	0.000	1.200	*	2.820	5.00	11.694	14.03	95.3	438.5	1,062.4
110.0	Top - Section 3	1.00	1.01	6.174	6.792	0.000	1.200	*	2.820	0.00	0.008	0.01	0.1	0.3	0.7
113.0	Appertunance(s)	1.00	1.02	6.222	6.844	0.000	1.200	*	2.827	3.00	6.850	8.22	56.3	258.5	575.9
115.0		1.00	1.02	6.253	6.879	0.000	1.200	*	2.832	2.00	4.506	5.41	37.2	170.5	380.5
120.0	Reinf. Top	1.00	1.04	6.330	6.963	0.000	1.200	*	2.845	5.00	11.038	13.25	92.2	413.9	660.1
125.0		1.00	1.05	6.404	7.044	0.000	1.200	*	2.856	5.00	10.710	12.85	90.5	401.3	637.7
130.0	Appertunance(s)	1.00	1.06	6.476	7.124	0.000	1.200	*	2.867	5.00	10.381	12.46	88.7	388.5	615.2
135.0		1.00	1.07	6.546	7.201	0.000	1.200	*	2.878	5.00	10.052	12.06	86.9	375.6	592.6
140.0	Appertunance(s)	1.00	1.08	6.615	7.276	0.000	1.200	*	2.889	5.00	9.723	11.67	84.9	362.5	569.8
145.0		1.00	1.09	6.681	7.350	0.000	1.200		2.899	5.00	9.394	11.27	82.8	349.2	546.8
150.0	Appertunance(s)	1.00	1.11	6.746	7.421	0.000	1.200		2.909	5.00	9.064	10.88	80.7	335.8	523.7
* = Cf Adjusted By Linear Load Ra Effect								Totals:		150.00			2,859.3	14,579.7	41,547.7

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 23
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

Gust Response Factor : 1.10 | Ice Dead Load Factor : 1.00 | Wind Importance Factor : 1.00
Dead Load Factor : 1.20 | Ice Importance Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	5.404	5.944	1.00	1.00	43.42	0.000	0.000	258.11	0.00	0.00	338.99
93.00	Decibel DB408	1	5.969	6.566	1.00	1.00	5.69	0.000	4.710	37.39	0.00	176.11	42.66
93.00	Standoff	1	5.885	6.474	1.00	1.00	5.27	0.000	0.000	34.14	0.00	0.00	361.83
103.0	Decibel DB408	2	6.137	6.751	1.00	1.00	12.60	0.000	4.710	85.04	0.00	400.52	30.90
103.0	Standoff	1	6.059	6.665	1.00	1.00	5.30	0.000	0.000	35.34	0.00	0.00	364.11
113.0	Antel BXA-171085-8BF	3	6.222	6.844	0.67	0.80	8.94	0.000	0.000	61.16	0.00	0.00	522.70
113.0	Antel BXA-70063/6CF_	3	6.222	6.844	0.56	0.80	16.28	0.000	0.000	111.41	0.00	0.00	987.94
113.0	RFS APL866513-42T0	2	6.222	6.844	0.74	0.80	8.36	0.000	0.000	57.24	0.00	0.00	519.63
113.0	RFS APL868013-42T0	4	6.222	6.844	0.70	0.80	14.31	0.000	0.000	97.96	0.00	0.00	838.48
113.0	RFS FD9R6004/2C-3L	6	6.222	6.844	0.40	0.80	1.94	0.000	0.000	13.26	0.00	0.00	204.97
113.0	T-Arm	3	6.222	6.844	0.50	0.75	15.99	0.000	0.000	109.44	0.00	0.00	2,028.65
130.0	12" x 12" Junction B	1	6.476	7.124	0.80	0.80	1.62	0.000	0.000	11.56	0.00	0.00	114.66
130.0	Argus LLPX310R	3	6.476	7.124	0.80	0.80	14.00	0.000	0.000	99.77	0.00	0.00	719.00
130.0	Clearwire Mount	1	6.476	7.124	0.80	0.80	16.16	0.000	0.000	115.11	0.00	0.00	93.05
130.0	DragonWave A-ANT-	1	6.476	7.124	1.00	1.00	11.23	0.000	0.000	80.03	0.00	0.00	291.24
130.0	DragonWave A-ANT-	1	6.476	7.124	1.00	1.00	2.86	0.000	0.000	20.35	0.00	0.00	66.07
130.0	DragonWave Horizon	2	6.476	7.124	0.80	0.80	1.46	0.000	0.000	10.43	0.00	0.00	152.01
130.0	NextNet BTS-2500	3	6.476	7.124	0.80	0.80	6.70	0.000	0.000	47.76	0.00	0.00	463.38
140.0	Ericsson AIR 21, 1.3	3	6.615	7.276	0.66	0.80	15.83	0.000	0.000	115.15	0.00	0.00	1,247.77
140.0	Ericsson AIR 21, 1.3	3	6.615	7.276	0.66	0.80	15.92	0.000	0.000	115.81	0.00	0.00	1,242.14
140.0	Ericsson KRY 112 144	3	6.615	7.276	0.40	0.80	1.06	0.000	0.000	7.71	0.00	0.00	153.14
140.0	T-Arm	3	6.615	7.276	0.50	0.75	16.25	0.000	0.000	118.22	0.00	0.00	2,053.12
150.0	4' Omni	1	6.860	7.546	0.75	0.75	2.43	0.000	9.000	18.37	0.00	165.29	4.82
150.0	Decibel DB408	2	6.860	7.546	0.75	0.75	9.64	0.000	9.000	72.73	0.00	654.54	32.36
150.0	Diplexer	3	6.785	7.463	0.50	0.75	1.63	0.000	3.000	12.17	0.00	36.51	55.90
150.0	Ericsson RRUS 11	6	6.746	7.421	0.53	0.75	11.70	0.000	0.000	86.86	0.00	0.00	1,335.01
150.0	GPS	1	6.746	7.421	0.75	0.75	0.97	0.000	0.000	7.22	0.00	0.00	1.55
150.0	KMW AM-X-CD-16-65-	3	6.785	7.463	0.56	0.75	17.33	0.000	3.000	129.36	0.00	388.07	1,249.02
150.0	KMW AWS Twin Dual	6	6.785	7.463	0.38	0.75	2.25	0.000	3.000	16.81	0.00	50.43	551.83
150.0	Platform w/ Rails	1	6.746	7.421	1.00	1.00	51.92	0.000	0.000	385.33	0.00	0.00	3,758.78
150.0	Powerwave 7770.00	3	6.785	7.463	0.55	0.75	12.08	0.000	3.000	90.13	0.00	270.40	907.56
150.0	Raycap DC6-48-60-18-	1	6.746	7.421	0.75	0.75	2.52	0.000	0.000	18.67	0.00	0.00	217.34
										2,480.03			20,950.62

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II	
Height :	150.0 (ft)	Exposure Category : B	Page: 24
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
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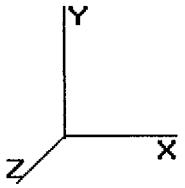


Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

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

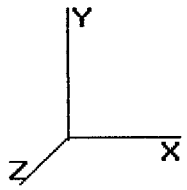
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.256	0.338	0.000	0.00	45.56
5.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.55	3.06	4.256	0.338	0.000	14.33	138.65
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.77	3.32	4.256	0.338	0.000	15.54	117.11
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.77	3.32	4.256	0.338	0.000	15.54	117.11
5.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.55	3.06	4.256	0.338	0.000	14.33	296.12
5.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.55	3.06	4.256	0.338	0.000	14.33	183.64
5.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.56	3.07	4.256	0.338	0.000	14.37	26.18
10.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.256	0.345	0.000	0.00	50.35
10.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.67	3.21	4.256	0.345	0.000	15.02	148.26
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.89	3.47	4.256	0.345	0.000	16.24	126.78
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.89	3.47	4.256	0.345	0.000	16.24	126.78
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.67	3.21	4.256	0.345	0.000	15.02	313.74
10.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.67	3.21	4.256	0.345	0.000	15.02	195.54
10.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.68	3.22	4.256	0.345	0.000	15.07	30.07
15.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.256	0.353	0.000	0.00	53.44
15.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.75	3.30	4.256	0.353	0.000	15.45	154.34
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.97	3.56	4.256	0.353	0.000	16.67	132.89
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	2.97	3.56	4.256	0.353	0.000	16.67	132.89
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.75	3.30	4.256	0.353	0.000	15.45	324.76
15.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.75	3.30	4.256	0.353	0.000	15.45	203.03
15.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.76	3.31	4.256	0.353	0.000	15.50	32.61
18.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	4.256	0.359	0.000	0.00	32.94
18.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.67	2.01	4.256	0.359	0.000	9.39	94.31
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	1.80	2.16	4.256	0.359	0.000	10.12	81.45
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	1.80	2.16	4.256	0.359	0.000	10.12	81.45
18.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.67	2.01	4.256	0.359	0.000	9.39	197.94
18.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.67	2.01	4.256	0.359	0.000	9.39	123.92
18.00	(0) Angle brackets	Yes	3.00	1.200	2.00	1.68	2.01	4.256	0.359	0.000	9.42	20.29
20.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	4.256	0.363	0.000	0.00	22.31
20.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.12	1.35	4.256	0.363	0.000	6.31	63.55
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.21	1.45	4.256	0.363	0.000	6.79	54.98
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.21	1.45	4.256	0.363	0.000	6.79	54.98
20.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.12	1.35	4.256	0.363	0.000	6.31	133.17
20.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.12	1.35	4.256	0.363	0.000	6.31	83.44
20.00	(0) Angle brackets	Yes	2.00	1.200	2.00	1.13	1.35	4.256	0.363	0.000	6.33	13.82
25.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.256	0.369	0.000	0.00	57.67
25.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.85	3.42	4.256	0.369	0.000	16.02	162.51
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.07	3.68	4.256	0.369	0.000	17.24	141.11
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.07	3.68	4.256	0.369	0.000	17.24	141.11
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.85	3.42	4.256	0.369	0.000	16.02	339.46
25.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.85	3.42	4.256	0.369	0.000	16.02	213.06
25.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.86	3.43	4.256	0.369	0.000	16.07	36.12
30.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.260	0.378	0.000	0.00	59.28
30.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.89	3.47	4.260	0.378	0.000	16.24	165.57
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.11	3.73	4.260	0.378	0.000	17.46	144.19
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.11	3.73	4.260	0.378	0.000	17.46	144.19
30.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.89	3.47	4.260	0.378	0.000	16.24	344.93
30.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.89	3.47	4.260	0.378	0.000	16.24	216.82
30.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.90	3.48	4.260	0.378	0.000	16.29	37.46
31.50	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	4.320	0.384	0.000	0.00	17.96
31.50	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.87	1.05	4.320	0.384	0.000	4.97	50.03

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II	
Height :	150.0 (ft)	Exposure Category : B	Page: 25
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

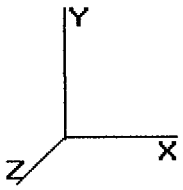
Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.94	1.12	4.320	0.384	0.000	5.34	43.61
31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.94	1.12	4.320	0.384	0.000	5.34	43.61
31.50	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.87	1.05	4.320	0.384	0.000	4.97	104.16
31.50	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.87	1.05	4.320	0.384	0.000	4.97	65.50
31.50	(0) Angle brackets	Yes	1.50	1.200	2.00	0.87	1.05	4.320	0.384	0.000	4.98	11.37
35.00	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	4.451	0.389	0.000	0.00	42.44
35.00	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.04	2.45	4.451	0.389	0.000	12.00	117.65
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	2.19	2.63	4.451	0.389	0.000	12.89	102.70
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	2.19	2.63	4.451	0.389	0.000	12.89	102.70
35.00	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.04	2.45	4.451	0.389	0.000	12.00	244.53
35.00	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.04	2.45	4.451	0.389	0.000	12.00	153.90
35.00	(0) Angle brackets	Yes	3.50	1.200	2.00	2.05	2.46	4.451	0.389	0.000	12.04	27.02
35.67	(1) 1 1/4" Hybriflex	Yes	0.67	0.000	0.00	0.00	0.00	4.476	0.393	0.000	0.00	8.15
35.67	(5) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.39	0.47	4.476	0.393	0.000	2.32	22.59
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.42	0.51	4.476	0.393	0.000	2.49	19.72
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.42	0.51	4.476	0.393	0.000	2.49	19.72
35.67	(12) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.39	0.47	4.476	0.393	0.000	2.32	46.93
35.67	(7) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.39	0.47	4.476	0.393	0.000	2.32	29.54
35.67	(0) Angle brackets	Yes	0.67	1.200	2.00	0.39	0.47	4.476	0.393	0.000	2.32	5.20
40.00	(1) 1 1/4" Hybriflex	Yes	4.33	0.000	0.00	0.00	0.00	4.625	0.390	0.000	0.00	53.63
40.00	(5) 1 5/8" Coax	Yes	4.33	1.200	1.98	2.55	3.06	4.625	0.390	0.000	15.59	147.72
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	2.74	3.29	4.625	0.390	0.000	16.73	129.22
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	2.74	3.29	4.625	0.390	0.000	16.73	129.22
40.00	(12) 1 5/8" Coax	Yes	4.33	1.200	1.98	2.55	3.06	4.625	0.390	0.000	15.59	306.41
40.00	(7) 1 5/8" Coax	Yes	4.33	1.200	1.98	2.55	3.06	4.625	0.390	0.000	15.59	193.06
40.00	(0) Angle brackets	Yes	4.33	1.200	2.00	2.56	3.07	4.625	0.390	0.000	15.63	34.36
45.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.783	0.399	0.000	0.00	63.06
45.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.97	3.57	4.783	0.399	0.000	18.78	172.68
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.19	3.83	4.783	0.399	0.000	20.14	151.34
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.19	3.83	4.783	0.399	0.000	20.14	151.34
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.97	3.57	4.783	0.399	0.000	18.78	357.56
45.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.97	3.57	4.783	0.399	0.000	18.78	225.50
45.00	(0) Angle brackets	Yes	5.00	1.200	2.00	2.98	3.58	4.783	0.399	0.000	18.83	40.62
50.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	4.929	0.409	0.000	0.00	64.08
50.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.00	3.60	4.929	0.409	0.000	19.50	174.60
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.21	3.86	4.929	0.409	0.000	20.91	153.27
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.21	3.86	4.929	0.409	0.000	20.91	153.27
50.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.00	3.60	4.929	0.409	0.000	19.50	360.95
50.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.00	3.60	4.929	0.409	0.000	19.50	227.84
50.00	(0) Angle brackets	Yes	5.00	1.200	2.00	3.01	3.61	4.929	0.409	0.000	19.55	41.49
55.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	5.065	0.420	0.000	0.00	65.03
55.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.02	3.62	5.065	0.420	0.000	20.17	176.36
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.23	3.88	5.065	0.420	0.000	21.62	155.04
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.23	3.88	5.065	0.420	0.000	21.62	155.04
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.02	3.62	5.065	0.420	0.000	20.17	364.06
55.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.02	3.62	5.065	0.420	0.000	20.17	229.99
55.00	(0) Angle brackets	Yes	5.00	1.200	2.00	3.03	3.63	5.065	0.420	0.000	20.23	42.29
59.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	5.168	0.430	0.000	0.00	52.59
59.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.43	2.91	5.168	0.430	0.000	16.55	142.13
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	2.60	3.12	5.168	0.430	0.000	17.73	125.08
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	2.60	3.12	5.168	0.430	0.000	17.73	125.08
59.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.43	2.91	5.168	0.430	0.000	16.55	293.09
59.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.43	2.91	5.168	0.430	0.000	16.55	185.27
59.00	(0) Angle brackets	Yes	4.00	1.200	2.00	2.43	2.92	5.168	0.430	0.000	16.60	34.31
60.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	5.193	0.436	0.000	0.00	13.18
60.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.73	5.193	0.436	0.000	4.16	35.60
60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.65	0.78	5.193	0.436	0.000	4.46	31.33

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:02 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 26
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

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

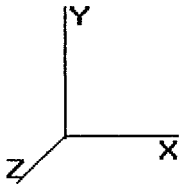
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.65	0.78	5.193	0.436	0.000	4.46	31.33
60.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.73	5.193	0.436	0.000	4.16	73.38
60.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.73	5.193	0.436	0.000	4.16	46.39
60.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.61	0.73	5.193	0.436	0.000	4.17	8.61
63.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	5.265	0.441	0.000	0.00	39.85
63.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.83	2.19	5.265	0.441	0.000	12.71	107.34
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	1.96	2.35	5.265	0.441	0.000	13.61	94.56
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	1.96	2.35	5.265	0.441	0.000	13.61	94.56
63.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.83	2.19	5.265	0.441	0.000	12.71	221.13
63.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.83	2.19	5.265	0.441	0.000	12.71	139.85
63.00	(0) Angle brackets	Yes	3.00	1.200	2.00	1.83	2.20	5.265	0.441	0.000	12.74	26.07
65.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	5.313	0.447	0.000	0.00	26.69
65.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.22	1.47	5.313	0.447	0.000	8.57	71.80
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.31	1.57	5.313	0.447	0.000	9.18	63.28
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.31	1.57	5.313	0.447	0.000	9.18	63.28
65.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.22	1.47	5.313	0.447	0.000	8.57	147.84
65.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.22	1.47	5.313	0.447	0.000	8.57	93.52
65.00	(0) Angle brackets	Yes	2.00	1.200	2.00	1.23	1.47	5.313	0.447	0.000	8.59	17.49
69.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	5.404	0.454	0.000	0.00	53.88
69.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.45	2.95	5.404	0.454	0.000	17.51	144.51
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	2.63	3.15	5.404	0.454	0.000	18.74	127.48
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	2.63	3.15	5.404	0.454	0.000	18.74	127.48
69.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.45	2.95	5.404	0.454	0.000	17.51	297.28
69.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	2.45	2.95	5.404	0.454	0.000	17.51	188.16
69.00	(0) Angle brackets	Yes	4.00	1.200	2.00	2.46	2.95	5.404	0.454	0.000	17.55	35.40
70.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	5.426	0.461	0.000	0.00	13.50
70.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.74	5.426	0.461	0.000	4.40	36.18
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.66	0.79	5.426	0.461	0.000	4.71	31.92
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.66	0.79	5.426	0.461	0.000	4.71	31.92
70.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.74	5.426	0.461	0.000	4.40	74.42
70.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.61	0.74	5.426	0.461	0.000	4.40	47.11
70.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.62	0.74	5.426	0.461	0.000	4.41	8.88
70.00	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	5.426	0.462	0.000	0.00	0.05
70.00	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	5.426	0.462	0.000	0.01	0.12
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	5.426	0.462	0.000	0.02	0.11
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	5.426	0.462	0.000	0.02	0.11
70.00	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	5.426	0.462	0.000	0.01	0.25
70.00	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	5.426	0.462	0.000	0.01	0.16
70.00	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	5.426	0.462	0.000	0.01	0.03
73.50	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	5.503	0.467	0.000	0.00	47.61
73.50	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.16	2.59	5.503	0.467	0.000	15.67	127.30
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	2.31	2.77	5.503	0.467	0.000	16.77	112.40
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	2.31	2.77	5.503	0.467	0.000	16.77	112.40
73.50	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.16	2.59	5.503	0.467	0.000	15.67	261.61
73.50	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	2.16	2.59	5.503	0.467	0.000	15.67	165.68
73.50	(0) Angle brackets	Yes	3.50	1.200	2.00	2.16	2.60	5.503	0.467	0.000	15.71	31.37
75.00	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	5.534	0.465	0.000	0.00	20.42
75.00	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.92	1.11	5.534	0.465	0.000	6.75	54.55
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.99	1.19	5.534	0.465	0.000	7.22	48.18
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.99	1.19	5.534	0.465	0.000	7.22	48.18
75.00	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.92	1.11	5.534	0.465	0.000	6.75	112.08
75.00	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.92	1.11	5.534	0.465	0.000	6.75	70.99
75.00	(0) Angle brackets	Yes	1.50	1.200	2.00	0.93	1.11	5.534	0.465	0.000	6.77	13.47
80.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	5.637	0.474	0.000	0.00	68.92
80.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.10	3.72	5.637	0.474	0.000	23.08	183.51
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.32	3.98	5.637	0.474	0.000	24.69	162.23
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.32	3.98	5.637	0.474	0.000	24.69	162.23

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 : 0.156700 (in/ft)

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



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

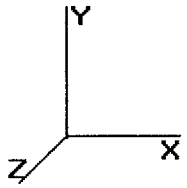
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.00

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

80.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.10	3.72	5.637	0.474	0.000	23.08	376.63
80.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.10	3.72	5.637	0.474	0.000	23.08	238.69
80.00	(0) Angle brackets	Yes	5.00	1.200	2.00	3.11	3.73	5.637	0.474	0.000	23.14	45.58
85.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	5.736	0.489	0.000	0.00	69.58
85.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.12	3.74	5.736	0.489	0.000	23.59	184.71
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.33	4.00	5.736	0.489	0.000	25.23	163.43
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.33	4.00	5.736	0.489	0.000	25.23	163.43
85.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.12	3.74	5.736	0.489	0.000	23.59	378.72
85.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.12	3.74	5.736	0.489	0.000	23.59	240.14
85.00	(0) Angle brackets	Yes	5.00	1.200	2.00	3.12	3.75	5.736	0.489	0.000	23.65	46.13
90.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	5.830	0.504	0.000	0.00	70.20
90.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.13	3.75	5.830	0.504	0.000	24.07	185.85
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.34	4.01	5.830	0.504	0.000	25.74	164.58
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.34	4.01	5.830	0.504	0.000	25.74	164.58
90.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.13	3.75	5.830	0.504	0.000	24.07	380.71
90.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.13	3.75	5.830	0.504	0.000	24.07	241.52
90.00	(0) Angle brackets	Yes	5.00	1.200	2.00	3.14	3.76	5.830	0.504	0.000	24.14	46.66
93.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	5.885	0.517	0.000	0.00	42.34
93.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.88	2.26	5.885	0.517	0.000	14.62	111.90
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.01	2.41	5.885	0.517	0.000	15.63	99.14
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.01	2.41	5.885	0.517	0.000	15.63	99.14
93.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.88	2.26	5.885	0.517	0.000	14.62	229.11
93.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.88	2.26	5.885	0.517	0.000	14.62	145.39
93.00	(0) Angle brackets	Yes	3.00	1.200	2.00	1.89	2.26	5.885	0.517	0.000	14.65	28.18
95.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	5.921	0.526	0.000	0.00	28.32
95.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.26	1.51	5.921	0.526	0.000	9.82	74.77
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.34	1.61	5.921	0.526	0.000	10.50	66.27
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.34	1.61	5.921	0.526	0.000	10.50	66.27
95.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.26	1.51	5.921	0.526	0.000	9.82	153.04
95.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.26	1.51	5.921	0.526	0.000	9.82	97.13
95.00	(0) Angle brackets	Yes	2.00	1.200	2.00	1.26	1.51	5.921	0.526	0.000	9.84	18.87
100.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.008	0.538	0.000	0.00	71.37
100.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.15	3.78	6.008	0.538	0.000	25.00	187.97
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.37	4.04	6.008	0.538	0.000	26.72	166.71
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.37	4.04	6.008	0.538	0.000	26.72	166.71
100.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.15	3.78	6.008	0.538	0.000	25.00	384.40
100.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.15	3.78	6.008	0.538	0.000	25.00	244.09
100.0	(0) Angle brackets	Yes	5.00	1.200	2.00	3.16	3.79	6.008	0.538	0.000	25.07	47.66
103.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	6.059	0.553	0.000	0.00	43.02
103.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.90	2.27	6.059	0.553	0.000	15.16	113.14
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.03	2.43	6.059	0.553	0.000	16.20	100.39
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.03	2.43	6.059	0.553	0.000	16.20	100.39
103.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.90	2.27	6.059	0.553	0.000	15.16	231.27
103.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.90	2.27	6.059	0.553	0.000	15.16	146.89
103.0	(0) Angle brackets	Yes	3.00	1.200	2.00	1.90	2.28	6.059	0.553	0.000	15.20	28.76
105.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	6.093	0.563	0.000	0.00	28.77
105.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.52	6.093	0.563	0.000	10.18	75.58
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.35	1.62	6.093	0.563	0.000	10.88	67.08
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.35	1.62	6.093	0.563	0.000	10.88	67.08
105.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.52	6.093	0.563	0.000	10.18	154.45
105.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.52	6.093	0.563	0.000	10.18	98.12
105.0	(0) Angle brackets	Yes	2.00	1.200	2.00	1.27	1.52	6.093	0.563	0.000	10.21	19.25
110.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.174	0.577	0.000	0.00	72.45
110.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.17	3.81	6.174	0.577	0.000	25.88	189.91
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.39	4.07	6.174	0.577	0.000	27.64	168.67
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.39	4.07	6.174	0.577	0.000	27.64	168.67
110.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.17	3.81	6.174	0.577	0.000	25.88	387.79

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:03 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 28
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

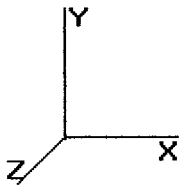
Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

110.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.17	3.81	6.174	0.577	0.000	25.88	246.45
110.0	(0) Angle brackets	Yes	5.00	1.200	2.00	3.18	3.82	6.174	0.577	0.000	25.94	48.57
110.0	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	6.174	0.588	0.000	0.00	0.05
110.0	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	6.174	0.588	0.000	0.02	0.13
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	6.174	0.588	0.000	0.02	0.11
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	6.174	0.588	0.000	0.02	0.11
110.0	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	6.174	0.588	0.000	0.02	0.26
110.0	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	6.174	0.588	0.000	0.02	0.16
110.0	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	6.174	0.588	0.000	0.02	0.03
113.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	6.222	0.594	0.000	0.00	43.61
113.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.91	2.29	6.222	0.594	0.000	15.66	114.15
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.04	2.44	6.222	0.594	0.000	16.73	101.42
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.04	2.44	6.222	0.594	0.000	16.73	101.42
113.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.91	2.29	6.222	0.594	0.000	15.66	232.99
113.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.91	2.29	6.222	0.594	0.000	15.66	148.11
113.0	(0) Angle brackets	Yes	3.00	1.200	2.00	1.91	2.29	6.222	0.594	0.000	15.70	29.27
115.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	6.253	0.606	0.000	0.00	29.18
115.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.53	6.253	0.606	0.000	10.52	76.33
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.36	1.63	6.253	0.606	0.000	11.23	67.84
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	1.36	1.63	6.253	0.606	0.000	11.23	67.84
115.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.53	6.253	0.606	0.000	10.52	155.75
115.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.27	1.53	6.253	0.606	0.000	10.52	99.02
115.0	(0) Angle brackets	Yes	2.00	1.200	2.00	1.28	1.53	6.253	0.606	0.000	10.54	19.60
120.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.330	0.622	0.000	0.00	73.45
120.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.20	3.83	6.330	0.622	0.000	26.70	191.72
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.41	4.09	6.330	0.622	0.000	28.51	170.48
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	3.41	4.09	6.330	0.622	0.000	28.51	170.48
120.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.20	3.83	6.330	0.622	0.000	26.70	390.92
120.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.20	3.83	6.330	0.622	0.000	26.70	248.63
120.0	(0) Angle brackets	Yes	5.00	1.200	2.00	3.20	3.84	6.330	0.622	0.000	26.77	49.43
125.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.404	0.508	0.000	0.00	73.93
125.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.21	3.85	6.404	0.508	0.000	27.09	192.57
125.0	(7) 1 5/8" Coax	Yes	2.00	1.200	4.00	1.62	1.94	6.404	0.508	0.000	13.68	99.87
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.05	2.46	6.404	0.508	0.000	17.36	102.80
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	2.05	2.46	6.404	0.508	0.000	17.36	102.80
125.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.92	2.31	6.404	0.508	0.000	16.26	235.44
125.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.92	2.31	6.404	0.508	0.000	16.26	149.80
125.0	(0) Angle brackets	Yes	3.00	1.200	2.00	1.93	2.31	6.404	0.508	0.000	16.30	29.90
130.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.476	0.312	0.000	0.00	74.39
130.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.21	3.86	6.476	0.312	0.000	27.48	193.39
130.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	4.06	4.87	6.476	0.312	0.000	34.67	250.66
135.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.546	0.326	0.000	0.00	74.83
135.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.22	3.87	6.546	0.326	0.000	27.85	194.19
135.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	4.07	4.88	6.546	0.326	0.000	35.13	251.63
140.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.615	0.341	0.000	0.00	75.26
140.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.23	3.88	6.615	0.341	0.000	28.22	194.97
140.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	4.07	4.89	6.615	0.341	0.000	35.57	252.56
										Totals:	3,366.04	30,814.80

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:03 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 29
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

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

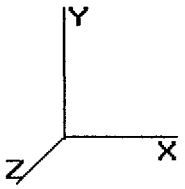
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	187.77	3,331.98	0.00	0.00
10.00	190.74	3,407.78	0.00	0.00
15.00	191.85	3,443.08	0.00	0.00
18.00	115.03	2,070.75	0.00	0.00
20.00	76.63	1,245.85	0.00	0.00
25.00	192.02	3,127.72	0.00	0.00
30.00	191.75	3,128.31	0.00	0.00
31.50	58.21	938.30	0.00	0.00
35.00	140.57	2,657.33	0.00	0.00
35.67	26.99	507.43	0.00	0.00
40.00	180.24	2,609.13	0.00	0.00
45.00	214.37	3,006.62	0.00	0.00
50.00	219.76	2,997.02	0.00	0.00
55.00	224.54	2,985.53	0.00	0.00
59.00	182.20	2,378.85	0.00	0.00
60.00	45.57	593.20	0.00	0.00
63.00	138.39	1,776.42	0.00	0.00
65.00	92.75	1,072.46	0.00	0.00
69.00	446.18	2,476.55	0.00	0.00
70.00	47.00	532.68	0.00	0.00
70.00	0.16	1.77	0.00	0.00
73.50	167.53	2,176.02	0.00	0.00
75.00	71.75	765.60	0.00	0.00
80.00	243.31	2,547.89	0.00	0.00
85.00	245.73	2,532.77	0.00	0.00
90.00	247.88	2,516.92	0.00	0.00
93.00	220.64	1,907.19	0.00	176.11
95.00	99.60	997.82	0.00	0.00
100.0	251.45	2,481.28	0.00	0.00
103.0	271.46	1,875.90	0.00	400.52
105.0	100.84	982.31	0.00	0.00
110.0	254.16	2,441.43	0.00	0.00
110.0	0.17	1.62	0.00	0.00
113.0	602.86	6,507.07	0.00	0.00
115.0	101.75	916.47	0.00	0.00
120.0	256.11	2,006.35	0.00	0.00
125.0	214.83	1,675.88	0.00	0.00
130.0	535.91	3,084.16	0.00	0.00
135.0	149.85	1,160.90	0.00	0.00
140.0	505.57	5,836.43	0.00	0.00
145.0	82.85	594.51	0.00	0.00
150.0	918.37	8,685.58	0.00	1,565.25
Totals:	8,705.34	95,982.88	0.00	2,141.88

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:03 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 30
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 24 Iterations

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

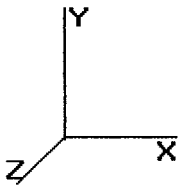
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-95.98	-8.76	0.00	-871.93	0.00	871.93	3,133.66	1,566.83	4,776.46	2,358.91	0.00	0.00	0.155
5.00	-92.64	-8.66	0.00	-828.15	0.00	828.15	3,091.35	1,545.67	4,611.19	2,277.30	0.03	-0.06	0.150
10.00	-89.22	-8.56	0.00	-784.85	0.00	784.85	3,047.99	1,524.00	4,447.17	2,196.29	0.13	-0.12	0.145
15.00	-85.77	-8.43	0.00	-742.06	0.00	742.06	3,003.60	1,501.80	4,284.50	2,115.95	0.28	-0.18	0.140
18.00	-83.70	-8.35	0.00	-716.79	0.00	716.79	2,976.47	1,488.23	4,187.58	2,068.09	0.40	-0.21	0.136
18.00	-83.70	-8.35	0.00	-716.79	0.00	716.79	2,976.47	1,488.23	4,187.58	2,068.09	0.40	-0.21	0.168
20.00	-82.44	-8.33	0.00	-700.09	0.00	700.09	2,958.17	1,479.08	4,123.27	2,036.33	0.50	-0.23	0.165
25.00	-79.31	-8.22	0.00	-658.43	0.00	658.43	2,911.70	1,455.85	3,963.58	1,957.46	0.78	-0.30	0.158
30.00	-76.17	-8.07	0.00	-617.32	0.00	617.32	2,864.18	1,432.09	3,805.55	1,879.42	1.14	-0.37	0.152
31.50	-75.23	-8.05	0.00	-605.19	0.00	605.19	2,849.69	1,424.85	3,758.37	1,856.12	1.26	-0.40	0.150
35.00	-72.57	-7.93	0.00	-577.03	0.00	577.03	2,805.48	1,402.74	3,636.10	1,795.73	1.57	-0.44	0.143
35.67	-72.06	-7.94	0.00	-571.72	0.00	571.72	2,236.04	1,118.02	2,957.95	1,460.82	1.63	-0.45	0.162
40.00	-69.44	-7.81	0.00	-537.34	0.00	537.34	2,206.84	1,103.42	2,857.02	1,410.98	2.07	-0.51	0.155
45.00	-66.43	-7.65	0.00	-498.28	0.00	498.28	2,172.15	1,086.07	2,741.31	1,353.83	2.64	-0.58	0.146
50.00	-63.43	-7.47	0.00	-460.04	0.00	460.04	2,136.42	1,068.21	2,626.58	1,297.17	3.28	-0.64	0.138
55.00	-60.44	-7.27	0.00	-422.71	0.00	422.71	2,099.65	1,049.82	2,512.93	1,241.04	3.98	-0.71	0.129
59.00	-58.06	-7.09	0.00	-393.64	0.00	393.64	2,069.49	1,034.74	2,422.87	1,196.56	4.60	-0.76	0.122
59.00	-58.06	-7.09	0.00	-393.64	0.00	393.64	2,069.49	1,034.74	2,422.87	1,196.56	4.60	-0.76	0.122
60.00	-57.46	-7.06	0.00	-386.55	0.00	386.55	2,061.84	1,030.92	2,400.48	1,185.51	4.76	-0.77	0.120
63.00	-55.68	-6.92	0.00	-365.38	0.00	365.38	2,038.66	1,019.33	2,333.61	1,152.48	5.25	-0.80	0.115
63.00	-55.68	-6.92	0.00	-365.38	0.00	365.38	2,038.66	1,019.33	2,333.61	1,152.48	5.25	-0.80	0.161
65.00	-54.61	-6.86	0.00	-351.54	0.00	351.54	2,022.99	1,011.50	2,289.31	1,130.60	5.59	-0.83	0.157
69.00	-52.13	-6.41	0.00	-324.11	0.00	324.11	1,991.17	995.58	2,201.37	1,087.17	6.32	-0.89	0.147
70.00	-51.60	-6.36	0.00	-317.70	0.00	317.70	1,983.10	991.55	2,179.53	1,076.39	6.50	-0.91	0.145
70.00	-51.60	-6.39	0.00	-317.68	0.00	317.68	1,983.08	991.54	2,179.46	1,076.35	6.50	-0.91	0.145
73.50	-49.42	-6.22	0.00	-295.32	0.00	295.32	1,462.66	731.33	1,612.14	796.18	7.19	-0.96	0.162
75.00	-48.65	-6.17	0.00	-286.02	0.00	286.02	1,455.09	727.55	1,589.60	785.05	7.50	-0.99	0.158
80.00	-46.10	-5.95	0.00	-255.15	0.00	255.15	1,429.14	714.57	1,514.67	748.04	8.57	-1.06	0.144
85.00	-43.56	-5.70	0.00	-225.42	0.00	225.42	1,402.15	701.08	1,440.36	711.34	9.72	-1.13	0.130
90.00	-41.05	-5.44	0.00	-196.90	0.00	196.90	1,374.13	687.06	1,366.78	675.00	10.95	-1.20	0.117
93.00	-39.14	-5.20	0.00	-180.40	0.00	180.40	1,356.81	678.41	1,323.02	653.39	11.71	-1.24	0.109
95.00	-38.14	-5.11	0.00	-169.99	0.00	169.99	1,345.06	672.53	1,294.02	639.07	12.24	-1.26	0.103
100.00	-35.67	-4.83	0.00	-144.45	0.00	144.45	1,314.95	657.47	1,222.19	603.60	13.59	-1.32	0.091
103.00	-33.79	-4.53	0.00	-129.57	0.00	129.57	1,296.39	648.19	1,179.59	582.55	14.43	-1.35	0.083
105.00	-32.81	-4.42	0.00	-120.51	0.00	120.51	1,283.80	641.90	1,151.40	568.63	15.01	-1.37	0.078
110.00	-30.38	-4.12	0.00	-98.40	0.00	98.40	1,247.19	623.60	1,077.91	532.34	16.47	-1.42	0.066
110.00	-30.37	-4.13	0.00	-98.38	0.00	98.38	1,247.16	623.58	1,077.86	532.31	16.47	-1.42	0.066
110.00	-30.37	-4.13	0.00	-98.38	0.00	98.38	849.80	424.90	738.78	364.86	16.47	-1.42	0.080
113.00	-23.88	-3.37	0.00	-86.02	0.00	86.02	839.07	419.54	713.06	352.15	17.37	-1.44	0.069
115.00	-22.97	-3.26	0.00	-79.28	0.00	79.28	831.70	415.85	695.95	343.70	17.97	-1.46	0.064
120.00	-20.97	-2.96	0.00	-63.00	0.00	63.00	812.54	406.27	653.43	322.71	19.52	-1.49	0.050
120.00	-20.97	-2.96	0.00	-63.00	0.00	63.00	812.54	406.27	653.43	322.71	19.52	-1.49	0.221
125.00	-19.29	-2.73	0.00	-48.20	0.00	48.20	792.35	396.17	611.37	301.93	21.10	-1.52	0.184
130.00	-16.22	-2.13	0.00	-34.57	0.00	34.57	771.11	385.56	569.85	281.43	22.75	-1.64	0.144
135.00	-15.06	-1.97	0.00	-23.90	0.00	23.90	748.84	374.42	528.98	261.24	24.52	-1.73	0.112
140.00	-9.24	-1.30	0.00	-14.04	0.00	14.04	725.52	362.76	488.86	241.43	26.36	-1.80	0.071
145.00	-8.65	-1.20	0.00	-7.56	0.00	7.56	695.93	347.97	446.23	220.38	28.27	-1.84	0.047
150.00	0.00	-0.92	0.00	-1.57	0.00	1.57	660.97	330.49	402.27	198.67	30.22	-1.86	0.008

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:03 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 31
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



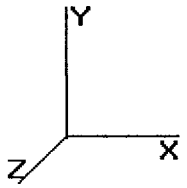
Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

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

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	161.88	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.742	158.49	1.200 *	0.000	5.00	15.955	19.15	129.1	0.0	1,636.4
10.00		1.00	0.70	6.129	6.742	155.10	1.200 *	0.000	5.00	15.617	18.74	126.3	0.0	1,620.3
15.00		1.00	0.70	6.129	6.742	151.70	1.200 *	0.000	5.00	15.279	18.34	123.6	0.0	1,604.2
18.00	Reinf. Top	1.00	0.70	6.129	6.742	149.67	1.200 *	0.000	3.00	9.005	10.81	72.9	0.0	954.8
20.00		1.00	0.70	6.129	6.742	148.31	1.200 *	0.000	2.00	5.936	7.12	48.0	0.0	497.2
25.00		1.00	0.70	6.129	6.742	144.92	1.200 *	0.000	5.00	14.604	17.52	118.1	0.0	1,231.8
30.00		1.00	0.70	6.134	6.747	141.58	1.200 *	0.000	5.00	14.266	17.12	115.5	0.0	1,215.7
31.50	Bot - Section 2	1.00	0.71	6.220	6.842	141.55	1.200 *	0.000	1.50	4.223	5.07	34.7	0.0	362.4
35.00		1.00	0.73	6.410	7.051	141.27	1.200 *	0.000	3.50	9.893	11.87	83.7	0.0	1,226.8
35.67	Top - Section 1	1.00	0.73	6.445	7.089	141.18	1.200 *	0.000	0.67	1.877	2.25	16.0	0.0	233.4
40.00		1.00	0.76	6.659	7.325	143.28	1.200 *	0.000	4.33	11.983	14.38	105.3	0.0	942.8
45.00		1.00	0.78	6.887	7.576	142.11	1.200 *	0.000	5.00	13.522	16.23	122.9	0.0	1,076.1
50.00		1.00	0.81	7.098	7.807	140.61	1.200 *	0.000	5.00	13.184	15.82	123.5	0.0	1,062.7
55.00		1.00	0.83	7.294	8.023	138.84	1.200 *	0.000	5.00	12.846	15.41	123.7	0.0	1,049.3
59.00	Reinf. Top Reinf Bottom	1.00	0.85	7.441	8.186	137.25	1.200 *	0.000	4.00	10.033	12.04	98.6	0.0	829.7
60.00		1.00	0.85	7.477	8.225	136.83	1.200 *	0.000	1.00	2.475	2.97	24.4	0.0	206.1
63.00	Reinf. Top	1.00	0.86	7.582	8.340	135.52	1.200 *	0.000	3.00	7.342	8.81	73.5	0.0	615.1
65.00		1.00	0.87	7.650	8.415	134.61	1.200 *	0.000	2.00	4.827	5.79	48.7	0.0	298.6
69.00	Appertunance(s)	1.00	0.88	7.782	8.560	132.71	1.200 *	0.000	4.00	9.492	11.39	97.5	0.0	590.7
70.00		1.00	0.89	7.814	8.595	132.21	1.200 *	0.000	1.00	2.339	2.81	24.1	0.0	146.3
70.00	Bot - Section 3	1.00	0.89	7.814	8.595	132.21	1.200 *	0.000	0.00	0.008	0.01	0.1	0.0	0.5
73.50	Top - Section 2	1.00	0.90	7.924	8.716	130.43	1.200 *	0.000	3.50	8.232	9.88	86.1	0.0	766.9
75.00		1.00	0.91	7.969	8.766	132.12	1.200 *	0.000	1.50	3.470	4.16	36.5	0.0	190.6
80.00		1.00	0.92	8.118	8.930	129.44	1.200 *	0.000	5.00	11.372	13.65	121.9	0.0	629.6
85.00		1.00	0.94	8.260	9.086	126.63	1.200 *	0.000	5.00	11.034	13.24	120.3	0.0	618.9
90.00		1.00	0.95	8.396	9.235	123.69	1.200 *	0.000	5.00	10.696	12.83	118.5	0.0	608.2
93.00	Appertunance(s)	1.00	0.96	8.475	9.322	121.88	1.200 *	0.000	3.00	6.255	7.51	70.0	0.0	359.8
95.00		1.00	0.97	8.526	9.379	120.65	1.200 *	0.000	2.00	4.102	4.92	46.2	0.0	237.7
100.0		1.00	0.98	8.652	9.517	117.51	1.200 *	0.000	5.00	10.020	12.02	114.4	0.0	586.7
103.0	Appertunance(s)	1.00	0.99	8.726	9.598	115.57	1.200 *	0.000	3.00	5.850	7.02	67.4	0.0	346.9
105.0		1.00	1.00	8.774	9.651	114.27	1.200 *	0.000	2.00	3.832	4.60	44.4	0.0	229.1
110.0		1.00	1.01	8.891	9.780	110.94	1.200 *	0.000	5.00	9.344	11.21	109.7	0.0	565.2
110.0	Top - Section 3	1.00	1.01	8.891	9.780	110.94	1.200 *	0.000	0.00	0.006	0.01	0.1	0.0	0.4
113.0	Appertunance(s)	1.00	1.02	8.960	9.856	108.91	1.200 *	0.000	3.00	5.438	6.53	64.3	0.0	291.7
115.0		1.00	1.02	9.005	9.905	107.54	1.200 *	0.000	2.00	3.562	4.27	42.3	0.0	193.1
120.0	Reinf. Top	1.00	1.04	9.115	10.02	104.05	1.200 *	0.000	5.00	8.668	10.40	104.3	0.0	205.2
125.0		1.00	1.05	9.222	10.14	100.50	1.200 *	0.000	5.00	8.330	10.00	101.4	0.0	197.0
130.0	Appertunance(s)	1.00	1.06	9.326	10.25	96.884	1.200 *	0.000	5.00	7.992	9.59	98.4	0.0	188.9
135.0		1.00	1.07	9.427	10.36	93.199	1.200 *	0.000	5.00	7.654	9.18	95.2	0.0	180.8
140.0	Appertunance(s)	1.00	1.08	9.525	10.47	89.454	1.200 *	0.000	5.00	7.316	8.78	92.0	0.0	172.7
145.0		1.00	1.09	9.621	10.58	85.652	1.000	0.000	5.00	6.978	6.98	73.8	0.0	164.7
150.0	Appertunance(s)	1.00	1.11	9.715	10.68	81.796	1.000	0.000	5.00	6.640	6.64	71.0	0.0	156.6
* = Cf Adjusted By Linear Load Ra Effect							Totals:		150.00			3,388.3	0.0	24,291.3

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:03 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 32
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



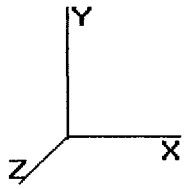
Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

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

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
69.00	Channel Master 1.2 M	1	7.782	8.560	1.00	1.00	20.91	0.000	0.000	178.99	0.00	0.00	188.00
93.00	Decibel DB408	1	8.595	9.455	1.00	1.00	2.70	0.000	4.710	25.53	0.00	120.23	28.00
93.00	Standoff	1	8.475	9.322	1.00	1.00	2.50	0.000	0.000	23.31	0.00	0.00	200.00
103.0	Decibel DB408	2	8.838	9.722	1.00	1.00	5.94	0.000	4.710	57.75	0.00	271.98	34.00
103.0	Standoff	1	8.726	9.598	1.00	1.00	2.50	0.000	0.000	24.00	0.00	0.00	200.00
113.0	Antel BXA-171085-8BF	3	8.960	9.856	0.67	0.80	5.94	0.000	0.000	58.49	0.00	0.00	30.00
113.0	Antel BXA-70063/6CF_	3	8.960	9.856	0.56	0.80	12.99	0.000	0.000	127.99	0.00	0.00	51.00
113.0	RFS APL866513-42T0	2	8.960	9.856	0.74	0.80	6.39	0.000	0.000	62.96	0.00	0.00	36.00
113.0	RFS APL868013-42T0	4	8.960	9.856	0.70	0.80	10.38	0.000	0.000	102.34	0.00	0.00	25.20
113.0	RFS FD9R6004/2C-3L	6	8.960	9.856	0.40	0.80	0.89	0.000	0.000	8.75	0.00	0.00	18.60
113.0	T-Arm	3	8.960	9.856	0.50	0.75	7.54	0.000	0.000	74.29	0.00	0.00	999.00
130.0	12" x 12" Junction B	1	9.326	10.258	0.80	0.80	1.12	0.000	0.000	11.49	0.00	0.00	10.00
130.0	Argus LLPX310R	3	9.326	10.258	0.55	0.80	8.00	0.000	0.000	82.05	0.00	0.00	85.80
130.0	Clearwire Mount	1	9.326	10.258	0.80	0.80	6.80	0.000	0.000	69.76	0.00	0.00	40.00
130.0	DragonWave A-ANT-	1	9.326	10.258	1.00	1.00	8.43	0.000	0.000	86.48	0.00	0.00	47.60
130.0	DragonWave A-ANT-	1	9.326	10.258	1.00	1.00	1.61	0.000	0.000	16.52	0.00	0.00	15.00
130.0	DragonWave Horizon	2	9.326	10.258	0.80	0.80	0.69	0.000	0.000	7.06	0.00	0.00	21.20
130.0	NextNet BTS-2500	3	9.326	10.258	0.58	0.80	3.66	0.000	0.000	37.58	0.00	0.00	105.00
140.0	Ericsson AIR 21, 1.3	3	9.525	10.478	0.66	0.80	13.01	0.000	0.000	136.29	0.00	0.00	249.00
140.0	Ericsson AIR 21, 1.3	3	9.525	10.478	0.66	0.80	13.11	0.000	0.000	137.34	0.00	0.00	244.50
140.0	Ericsson KRY 112 144	3	9.525	10.478	0.40	0.80	0.49	0.000	0.000	5.16	0.00	0.00	33.00
140.0	T-Arm	3	9.525	10.478	0.50	0.75	7.54	0.000	0.000	78.98	0.00	0.00	999.00
150.0	4' Omni	1	9.878	10.866	0.75	0.75	1.13	0.000	9.000	12.22	0.00	110.02	5.00
150.0	Decibel DB408	2	9.878	10.866	0.75	0.75	4.45	0.000	9.000	48.41	0.00	435.66	34.00
150.0	Diplexer	3	9.770	10.747	0.50	0.75	0.75	0.000	3.000	8.10	0.00	24.30	30.00
150.0	Ericsson RRUS 11	6	9.715	10.686	0.53	0.75	9.39	0.000	0.000	100.38	0.00	0.00	330.00
150.0	GPS	1	9.715	10.686	0.75	0.75	0.45	0.000	0.000	4.81	0.00	0.00	1.50
150.0	KMW AM-X-CD-16-65-	3	9.770	10.747	0.56	0.75	13.94	0.000	3.000	149.80	0.00	449.40	145.50
150.0	KMW AWS Twin Dual	6	9.770	10.747	0.38	0.75	0.97	0.000	3.000	10.40	0.00	31.19	104.40
150.0	Platform w/ Rails	1	9.715	10.686	1.00	1.00	24.00	0.000	0.000	256.47	0.00	0.00	1,950.00
150.0	Powerwave 7770.00	3	9.770	10.747	0.55	0.75	9.66	0.000	3.000	103.79	0.00	311.38	105.00
150.0	Raycap DC6-48-60-18-	1	9.715	10.686	0.75	0.75	1.10	0.000	0.000	11.78	0.00	0.00	31.80
										2,119.23			6,397.10

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:03 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 33
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

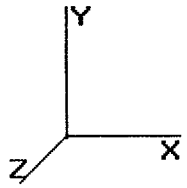
Dead Load Factor : 1.00

Wind Load Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	FX (lb)	Dead Load (lb)
5.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.338	0.000	0.00	5.00
5.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.338	0.000	6.67	20.50
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.338	0.000	8.43	0.00
5.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.338	0.000	8.43	0.00
5.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.338	0.000	6.67	49.19
5.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.338	0.000	6.67	28.70
5.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.338	0.000	6.74	0.00
10.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.345	0.000	0.00	5.00
10.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.345	0.000	6.67	20.50
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.345	0.000	8.43	0.00
10.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.345	0.000	8.43	0.00
10.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.345	0.000	6.67	49.19
10.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.345	0.000	6.67	28.70
10.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.345	0.000	6.74	0.00
15.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.353	0.000	0.00	5.00
15.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.353	0.000	6.67	20.50
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.353	0.000	8.43	0.00
15.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.353	0.000	8.43	0.00
15.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.353	0.000	6.67	49.19
15.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.353	0.000	6.67	28.70
15.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.353	0.000	6.74	0.00
18.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	6.129	0.359	0.000	0.00	3.00
18.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	6.129	0.359	0.000	4.00	12.30
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	6.129	0.359	0.000	5.06	0.00
18.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	6.129	0.359	0.000	5.06	0.00
18.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	6.129	0.359	0.000	4.00	29.52
18.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	6.129	0.359	0.000	4.00	17.22
18.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	6.129	0.359	0.000	4.04	0.00
20.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	6.129	0.363	0.000	0.00	2.00
20.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	6.129	0.363	0.000	2.67	8.20
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	6.129	0.363	0.000	3.37	0.00
20.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	6.129	0.363	0.000	3.37	0.00
20.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	6.129	0.363	0.000	2.67	19.68
20.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	6.129	0.363	0.000	2.67	11.48
20.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	6.129	0.363	0.000	2.70	0.00
25.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.369	0.000	0.00	5.00
25.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.369	0.000	6.67	20.50
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.369	0.000	8.43	0.00
25.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.129	0.369	0.000	8.43	0.00
25.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.369	0.000	6.67	49.19
25.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.369	0.000	6.67	28.70
25.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.129	0.369	0.000	6.74	0.00
30.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.134	0.378	0.000	0.00	5.00
30.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.134	0.378	0.000	6.68	20.50
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.134	0.378	0.000	8.43	0.00
30.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.134	0.378	0.000	8.43	0.00
30.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.134	0.378	0.000	6.68	49.19
30.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.134	0.378	0.000	6.68	28.70
30.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.134	0.378	0.000	6.75	0.00
31.50	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	6.220	0.384	0.000	0.00	1.50
31.50	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	6.220	0.384	0.000	2.04	6.16

Pole :	302484	Code: ANSI/TIA-222 Rev G			5/31/2013 3:05:04 PM
Location :	Branford CT 6, CT	Struct Class : II			Page: 34
Height :	150.0 (ft)	Exposure Category : B			
Base Dia :	37.38 (in)	Topographic Category : 1			
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.156700 (in/ft)				



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

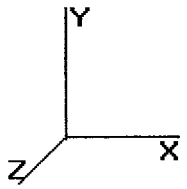
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	6.220	0.384	0.000	2.57	0.00
31.50	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.38	6.220	0.384	0.000	2.57	0.00
31.50	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	6.220	0.384	0.000	2.04	14.79
31.50	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	6.220	0.384	0.000	2.04	8.63
31.50	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	6.220	0.384	0.000	2.06	0.00
35.00	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	6.410	0.389	0.000	0.00	3.50
35.00	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	6.410	0.389	0.000	4.88	14.33
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	6.410	0.389	0.000	6.16	0.00
35.00	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.87	6.410	0.389	0.000	6.16	0.00
35.00	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	6.410	0.389	0.000	4.88	34.40
35.00	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	6.410	0.389	0.000	4.88	20.07
35.00	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	6.410	0.389	0.000	4.93	0.00
35.67	(1) 1 1/4" Hybriflex	Yes	0.67	0.000	0.00	0.00	0.00	6.445	0.393	0.000	0.00	0.67
35.67	(5) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	6.445	0.393	0.000	0.94	2.75
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	6.445	0.393	0.000	1.19	0.00
35.67	(4) #18 Dywidag bars	Yes	0.67	1.200	2.50	0.14	0.17	6.445	0.393	0.000	1.19	0.00
35.67	(12) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	6.445	0.393	0.000	0.94	6.59
35.67	(7) 1 5/8" Coax	Yes	0.67	1.200	1.98	0.11	0.13	6.445	0.393	0.000	0.94	3.85
35.67	(0) Angle brackets	Yes	0.67	1.200	2.00	0.11	0.13	6.445	0.393	0.000	0.95	0.00
40.00	(1) 1 1/4" Hybriflex	Yes	4.33	0.000	0.00	0.00	0.00	6.659	0.390	0.000	0.00	4.33
40.00	(5) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	6.659	0.390	0.000	6.28	17.75
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	6.659	0.390	0.000	7.93	0.00
40.00	(4) #18 Dywidag bars	Yes	4.33	1.200	2.50	0.90	1.08	6.659	0.390	0.000	7.93	0.00
40.00	(12) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	6.659	0.390	0.000	6.28	42.60
40.00	(7) 1 5/8" Coax	Yes	4.33	1.200	1.98	0.71	0.86	6.659	0.390	0.000	6.28	24.85
40.00	(0) Angle brackets	Yes	4.33	1.200	2.00	0.72	0.87	6.659	0.390	0.000	6.34	0.00
45.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	6.887	0.399	0.000	0.00	5.00
45.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.887	0.399	0.000	7.50	20.50
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.887	0.399	0.000	9.47	0.00
45.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	6.887	0.399	0.000	9.47	0.00
45.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.887	0.399	0.000	7.50	49.19
45.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.887	0.399	0.000	7.50	28.70
45.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	6.887	0.399	0.000	7.58	0.00
50.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	7.098	0.409	0.000	0.00	5.00
50.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.098	0.409	0.000	7.73	20.50
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	7.098	0.409	0.000	9.76	0.00
50.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	7.098	0.409	0.000	9.76	0.00
50.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.098	0.409	0.000	7.73	49.19
50.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.098	0.409	0.000	7.73	28.70
50.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	7.098	0.409	0.000	7.81	0.00
55.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	7.294	0.420	0.000	0.00	5.00
55.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.294	0.420	0.000	7.94	20.50
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	7.294	0.420	0.000	10.03	0.00
55.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	7.294	0.420	0.000	10.03	0.00
55.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.294	0.420	0.000	7.94	49.19
55.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.294	0.420	0.000	7.94	28.70
55.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	7.294	0.420	0.000	8.02	0.00
59.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	7.441	0.430	0.000	0.00	4.00
59.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.441	0.430	0.000	6.48	16.40
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	7.441	0.430	0.000	8.19	0.00
59.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	7.441	0.430	0.000	8.19	0.00
59.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.441	0.430	0.000	6.48	39.36
59.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.441	0.430	0.000	6.48	22.96
59.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	7.441	0.430	0.000	6.55	0.00
60.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	7.477	0.436	0.000	0.00	1.00
60.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.477	0.436	0.000	1.63	4.10
60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	7.477	0.436	0.000	2.06	0.00

Pole : 302484	Code: ANSI/TIA-222 Rev G		5/31/2013 3:05:04 PM
Location : Branford CT 6, CT	Struct Class : II		Page: 35
Height : 150.0 (ft)	Exposure Category : B		
Base Dia : 37.38 (in)	Topographic Category : 1		
Top Dia : 15.00 (in)	Base Elev : 0.000 (ft)		
Shape : 12 Sides			
Taper : 0.156700 (in/ft)			



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

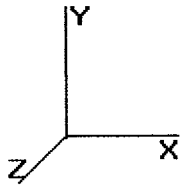
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

60.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	7.477	0.436	0.000	2.06	0.00
60.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.477	0.436	0.000	1.63	9.84
60.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.477	0.436	0.000	1.63	5.74
60.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	7.477	0.436	0.000	1.64	0.00
63.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	7.582	0.441	0.000	0.00	3.00
63.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	7.582	0.441	0.000	4.95	12.30
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	7.582	0.441	0.000	6.26	0.00
63.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	7.582	0.441	0.000	6.26	0.00
63.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	7.582	0.441	0.000	4.95	29.52
63.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	7.582	0.441	0.000	4.95	17.22
63.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	7.582	0.441	0.000	5.00	0.00
65.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	7.650	0.447	0.000	0.00	2.00
65.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	7.650	0.447	0.000	3.33	8.20
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	7.650	0.447	0.000	4.21	0.00
65.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	7.650	0.447	0.000	4.21	0.00
65.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	7.650	0.447	0.000	3.33	19.68
65.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	7.650	0.447	0.000	3.33	11.48
65.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	7.650	0.447	0.000	3.37	0.00
69.00	(1) 1 1/4" Hybriflex	Yes	4.00	0.000	0.00	0.00	0.00	7.782	0.454	0.000	0.00	4.00
69.00	(5) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.782	0.454	0.000	6.78	16.40
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	7.782	0.454	0.000	8.56	0.00
69.00	(4) #18 Dywidag bars	Yes	4.00	1.200	2.50	0.83	1.00	7.782	0.454	0.000	8.56	0.00
69.00	(12) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.782	0.454	0.000	6.78	39.36
69.00	(7) 1 5/8" Coax	Yes	4.00	1.200	1.98	0.66	0.79	7.782	0.454	0.000	6.78	22.96
69.00	(0) Angle brackets	Yes	4.00	1.200	2.00	0.67	0.80	7.782	0.454	0.000	6.85	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	1.00	0.000	0.00	0.00	0.00	7.814	0.461	0.000	0.00	1.00
70.00	(5) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.814	0.461	0.000	1.70	4.10
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	7.814	0.461	0.000	2.15	0.00
70.00	(4) #18 Dywidag bars	Yes	1.00	1.200	2.50	0.21	0.25	7.814	0.461	0.000	2.15	0.00
70.00	(12) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.814	0.461	0.000	1.70	9.84
70.00	(7) 1 5/8" Coax	Yes	1.00	1.200	1.98	0.17	0.20	7.814	0.461	0.000	1.70	5.74
70.00	(0) Angle brackets	Yes	1.00	1.200	2.00	0.17	0.20	7.814	0.461	0.000	1.72	0.00
70.00	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	7.814	0.462	0.000	0.00	0.00
70.00	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	7.814	0.462	0.000	0.01	0.01
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	7.814	0.462	0.000	0.01	0.00
70.00	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	7.814	0.462	0.000	0.01	0.00
70.00	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	7.814	0.462	0.000	0.01	0.03
70.00	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	7.814	0.462	0.000	0.01	0.02
70.00	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	7.814	0.462	0.000	0.01	0.00
73.50	(1) 1 1/4" Hybriflex	Yes	3.50	0.000	0.00	0.00	0.00	7.924	0.467	0.000	0.00	3.50
73.50	(5) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	7.924	0.467	0.000	6.04	14.35
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	7.924	0.467	0.000	7.63	0.00
73.50	(4) #18 Dywidag bars	Yes	3.50	1.200	2.50	0.73	0.88	7.924	0.467	0.000	7.63	0.00
73.50	(12) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	7.924	0.467	0.000	6.04	34.44
73.50	(7) 1 5/8" Coax	Yes	3.50	1.200	1.98	0.58	0.69	7.924	0.467	0.000	6.04	20.09
73.50	(0) Angle brackets	Yes	3.50	1.200	2.00	0.58	0.70	7.924	0.467	0.000	6.10	0.00
75.00	(1) 1 1/4" Hybriflex	Yes	1.50	0.000	0.00	0.00	0.00	7.969	0.465	0.000	0.00	1.50
75.00	(5) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	7.969	0.465	0.000	2.60	6.14
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	7.969	0.465	0.000	3.28	0.00
75.00	(4) #18 Dywidag bars	Yes	1.50	1.200	2.50	0.31	0.37	7.969	0.465	0.000	3.28	0.00
75.00	(12) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	7.969	0.465	0.000	2.60	14.73
75.00	(7) 1 5/8" Coax	Yes	1.50	1.200	1.98	0.25	0.30	7.969	0.465	0.000	2.60	8.59
75.00	(0) Angle brackets	Yes	1.50	1.200	2.00	0.25	0.30	7.969	0.465	0.000	2.62	0.00
80.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	8.118	0.474	0.000	0.00	5.00
80.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.118	0.474	0.000	8.84	20.50
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.118	0.474	0.000	11.16	0.00
80.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.118	0.474	0.000	11.16	0.00

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:04 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 36
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		

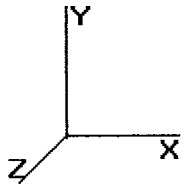


Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

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

80.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.118	0.474	0.000	8.84	49.19
80.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.118	0.474	0.000	8.84	28.70
80.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	8.118	0.474	0.000	8.93	0.00
85.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	8.260	0.489	0.000	0.00	5.00
85.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.260	0.489	0.000	8.99	20.50
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.260	0.489	0.000	11.36	0.00
85.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.260	0.489	0.000	11.36	0.00
85.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.260	0.489	0.000	8.99	49.19
85.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.260	0.489	0.000	8.99	28.70
85.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	8.260	0.489	0.000	9.09	0.00
90.00	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	8.396	0.504	0.000	0.00	5.00
90.00	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.396	0.504	0.000	9.14	20.50
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.396	0.504	0.000	11.54	0.00
90.00	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.396	0.504	0.000	11.54	0.00
90.00	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.396	0.504	0.000	9.14	49.19
90.00	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.396	0.504	0.000	9.14	28.70
90.00	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	8.396	0.504	0.000	9.24	0.00
93.00	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	8.475	0.517	0.000	0.00	3.00
93.00	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.475	0.517	0.000	5.54	12.30
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	8.475	0.517	0.000	6.99	0.00
93.00	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	8.475	0.517	0.000	6.99	0.00
93.00	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.475	0.517	0.000	5.54	29.52
93.00	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.475	0.517	0.000	5.54	17.22
93.00	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	8.475	0.517	0.000	5.59	0.00
95.00	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	8.526	0.526	0.000	0.00	2.00
95.00	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.526	0.526	0.000	3.71	8.20
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	8.526	0.526	0.000	4.69	0.00
95.00	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	8.526	0.526	0.000	4.69	0.00
95.00	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.526	0.526	0.000	3.71	19.68
95.00	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.526	0.526	0.000	3.71	11.48
95.00	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	8.526	0.526	0.000	3.75	0.00
100.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	8.652	0.538	0.000	0.00	5.00
100.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.652	0.538	0.000	9.42	20.50
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.652	0.538	0.000	11.90	0.00
100.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.652	0.538	0.000	11.90	0.00
100.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.652	0.538	0.000	9.42	49.19
100.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.652	0.538	0.000	9.42	28.70
100.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	8.652	0.538	0.000	9.52	0.00
103.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	8.726	0.553	0.000	0.00	3.00
103.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.726	0.553	0.000	5.70	12.30
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	8.726	0.553	0.000	7.20	0.00
103.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	8.726	0.553	0.000	7.20	0.00
103.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.726	0.553	0.000	5.70	29.52
103.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	8.726	0.553	0.000	5.70	17.22
103.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	8.726	0.553	0.000	5.76	0.00
105.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	8.774	0.563	0.000	0.00	2.00
105.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.774	0.563	0.000	3.82	8.20
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	8.774	0.563	0.000	4.83	0.00
105.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	8.774	0.563	0.000	4.83	0.00
105.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.774	0.563	0.000	3.82	19.68
105.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	8.774	0.563	0.000	3.82	11.48
105.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	8.774	0.563	0.000	3.86	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	8.891	0.577	0.000	0.00	5.00
110.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.891	0.577	0.000	9.68	20.50
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.891	0.577	0.000	12.23	0.00
110.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	8.891	0.577	0.000	12.23	0.00
110.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.891	0.577	0.000	9.68	49.19

Pole :	302484				Code: ANSI/TIA-222 Rev G						5/31/2013 3:05:04 PM	
Location :	Branford CT 6, CT				Struct Class : II						Page: 37	
Height :	150.0 (ft)				Exposure Category : B							
Base Dia :	37.38 (in)				Topographic Category : 1							
Top Dia :	15.00 (in)				Base Elev : 0.000 (ft)							
Shape :	12 Sides											
Taper :	0.156700 (in/ft)											

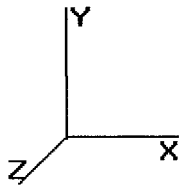


Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

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

110.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.891	0.577	0.000	9.68	28.70
110.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	8.891	0.577	0.000	9.78	0.00
110.0	(1) 1 1/4" Hybriflex	Yes	0.00	0.000	0.00	0.00	0.00	8.891	0.588	0.000	0.00	0.00
110.0	(5) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	8.891	0.588	0.000	0.01	0.01
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	8.891	0.588	0.000	0.01	0.00
110.0	(4) #18 Dywidag bars	Yes	0.00	1.200	2.50	0.00	0.00	8.891	0.588	0.000	0.01	0.00
110.0	(12) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	8.891	0.588	0.000	0.01	0.03
110.0	(7) 1 5/8" Coax	Yes	0.00	1.200	1.98	0.00	0.00	8.891	0.588	0.000	0.01	0.02
110.0	(0) Angle brackets	Yes	0.00	1.200	2.00	0.00	0.00	8.891	0.588	0.000	0.01	0.00
113.0	(1) 1 1/4" Hybriflex	Yes	3.00	0.000	0.00	0.00	0.00	8.960	0.594	0.000	0.00	3.00
113.0	(5) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	8.960	0.594	0.000	5.85	12.28
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	8.960	0.594	0.000	7.38	0.00
113.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.62	0.75	8.960	0.594	0.000	7.38	0.00
113.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	8.960	0.594	0.000	5.85	29.48
113.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.49	0.59	8.960	0.594	0.000	5.85	17.20
113.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	8.960	0.594	0.000	5.91	0.00
115.0	(1) 1 1/4" Hybriflex	Yes	2.00	0.000	0.00	0.00	0.00	9.005	0.606	0.000	0.00	2.00
115.0	(5) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	9.005	0.606	0.000	3.92	8.20
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	9.005	0.606	0.000	4.95	0.00
115.0	(4) #18 Dywidag bars	Yes	2.00	1.200	2.50	0.42	0.50	9.005	0.606	0.000	4.95	0.00
115.0	(12) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	9.005	0.606	0.000	3.92	19.68
115.0	(7) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	9.005	0.606	0.000	3.92	11.48
115.0	(0) Angle brackets	Yes	2.00	1.200	2.00	0.33	0.40	9.005	0.606	0.000	3.96	0.00
120.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	9.115	0.622	0.000	0.00	5.00
120.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.115	0.622	0.000	9.93	20.50
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	9.115	0.622	0.000	12.53	0.00
120.0	(4) #18 Dywidag bars	Yes	5.00	1.200	2.50	1.04	1.25	9.115	0.622	0.000	12.53	0.00
120.0	(12) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.115	0.622	0.000	9.93	49.19
120.0	(7) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.115	0.622	0.000	9.93	28.70
120.0	(0) Angle brackets	Yes	5.00	1.200	2.00	0.83	1.00	9.115	0.622	0.000	10.03	0.00
125.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	9.222	0.508	0.000	0.00	5.00
125.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.222	0.508	0.000	10.04	20.50
125.0	(7) 1 5/8" Coax	Yes	2.00	1.200	4.00	0.67	0.80	9.222	0.508	0.000	8.12	11.48
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	9.222	0.508	0.000	7.61	0.00
125.0	(4) #18 Dywidag bars	Yes	3.00	1.200	2.50	0.63	0.75	9.222	0.508	0.000	7.61	0.00
125.0	(12) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	9.222	0.508	0.000	6.03	29.52
125.0	(7) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	9.222	0.508	0.000	6.03	17.22
125.0	(0) Angle brackets	Yes	3.00	1.200	2.00	0.50	0.60	9.222	0.508	0.000	6.09	0.00
130.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	9.326	0.312	0.000	0.00	5.00
130.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.326	0.312	0.000	10.16	20.50
130.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	1.67	2.00	9.326	0.312	0.000	20.52	28.70
135.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	9.427	0.326	0.000	0.00	5.00
135.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.427	0.326	0.000	10.27	20.50
135.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	1.67	2.00	9.427	0.326	0.000	20.74	28.70
140.0	(1) 1 1/4" Hybriflex	Yes	5.00	0.000	0.00	0.00	0.00	9.525	0.341	0.000	0.00	5.00
140.0	(5) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	9.525	0.341	0.000	10.37	20.50
140.0	(7) 1 5/8" Coax	Yes	5.00	1.200	4.00	1.67	2.00	9.525	0.341	0.000	20.96	28.70
										Totals:	1,421.81	2,727.60

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:05 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 38
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

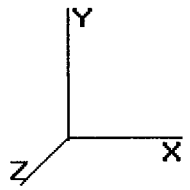
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	172.69	1,825.52	0.00	0.00
10.00	169.96	1,809.42	0.00	0.00
15.00	167.23	1,793.33	0.00	0.00
18.00	99.02	1,068.27	0.00	0.00
20.00	65.47	572.88	0.00	0.00
25.00	161.76	1,420.94	0.00	0.00
30.00	159.16	1,404.84	0.00	0.00
31.50	47.98	419.24	0.00	0.00
35.00	115.61	1,359.03	0.00	0.00
35.67	22.11	258.76	0.00	0.00
40.00	146.38	1,106.58	0.00	0.00
45.00	171.94	1,265.27	0.00	0.00
50.00	174.03	1,251.84	0.00	0.00
55.00	175.58	1,238.40	0.00	0.00
59.00	140.92	981.05	0.00	0.00
60.00	35.07	243.92	0.00	0.00
63.00	105.86	728.53	0.00	0.00
65.00	70.53	374.20	0.00	0.00
69.00	320.80	929.95	0.00	0.00
70.00	35.25	184.07	0.00	0.00
70.00	0.12	0.61	0.00	0.00
73.50	125.58	898.96	0.00	0.00
75.00	53.48	247.05	0.00	0.00
80.00	179.63	818.36	0.00	0.00
85.00	179.08	807.63	0.00	0.00
90.00	178.28	796.90	0.00	0.00
93.00	154.99	700.99	0.00	120.23
95.00	70.44	312.52	0.00	0.00
100.0	176.01	773.79	0.00	0.00
103.0	186.37	693.12	0.00	271.98
105.0	69.36	302.61	0.00	0.00
110.0	172.94	749.02	0.00	0.00
110.0	0.11	0.50	0.00	0.00
113.0	537.35	1,561.64	0.00	0.00
115.0	67.97	251.46	0.00	0.00
120.0	169.16	351.19	0.00	0.00
125.0	152.91	323.26	0.00	0.00
130.0	439.98	610.27	0.00	0.00
135.0	126.24	274.75	0.00	0.00
140.0	481.07	1,792.18	0.00	0.00
145.0	73.85	204.42	0.00	0.00
150.0	777.12	2,933.55	0.00	1,361.95
Totals:	6,929.39	35,640.82	0.00	1,754.17

Pole :	302484	Code: ANSI/TIA-222 Rev G	5/31/2013 3:05:05 PM
Location :	Branford CT 6, CT	Struct Class : II	Page: 39
Height :	150.0 (ft)	Exposure Category : B	
Base Dia :	37.38 (in)	Topographic Category : 1	
Top Dia :	15.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.156700 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 23 Iterations

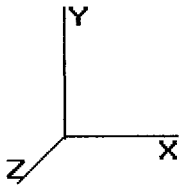
Gust Response Factor : 1.10 — Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.64	-6.94	0.00	-642.99	0.00	642.99	3,133.66	1,566.83	4,776.46	2,358.91	0.00	0.00	0.109
5.00	-33.81	-6.79	0.00	-608.27	0.00	608.27	3,091.35	1,545.67	4,611.19	2,277.30	0.02	-0.04	0.105
10.00	-31.99	-6.65	0.00	-574.30	0.00	574.30	3,047.99	1,524.00	4,447.17	2,196.29	0.09	-0.09	0.101
15.00	-30.20	-6.49	0.00	-541.07	0.00	541.07	3,003.60	1,501.80	4,284.50	2,115.95	0.21	-0.13	0.097
18.00	-29.13	-6.40	0.00	-521.58	0.00	521.58	2,976.47	1,488.23	4,187.58	2,068.09	0.30	-0.15	0.094
18.00	-29.13	-6.40	0.00	-521.58	0.00	521.58	2,976.47	1,488.23	4,187.58	2,068.09	0.30	-0.15	0.116
20.00	-28.55	-6.35	0.00	-508.78	0.00	508.78	2,958.17	1,479.08	4,123.27	2,036.33	0.36	-0.17	0.114
25.00	-27.12	-6.21	0.00	-477.01	0.00	477.01	2,911.70	1,455.85	3,963.58	1,957.46	0.57	-0.22	0.109
30.00	-25.72	-6.06	0.00	-445.96	0.00	445.96	2,864.18	1,432.09	3,805.55	1,879.42	0.83	-0.27	0.104
31.50	-25.29	-6.02	0.00	-436.85	0.00	436.85	2,849.69	1,424.85	3,758.37	1,856.12	0.92	-0.29	0.102
35.00	-23.93	-5.91	0.00	-415.80	0.00	415.80	2,805.48	1,402.74	3,636.10	1,795.73	1.15	-0.32	0.098
35.67	-23.67	-5.89	0.00	-411.84	0.00	411.84	2,236.04	1,118.02	2,957.95	1,460.82	1.19	-0.33	0.110
40.00	-22.56	-5.76	0.00	-386.33	0.00	386.33	2,206.84	1,103.42	2,857.02	1,410.98	1.51	-0.37	0.105
45.00	-21.29	-5.59	0.00	-357.54	0.00	357.54	2,172.15	1,086.07	2,741.31	1,353.83	1.92	-0.42	0.099
50.00	-20.04	-5.43	0.00	-329.57	0.00	329.57	2,136.42	1,068.21	2,626.58	1,297.17	2.39	-0.47	0.093
55.00	-18.80	-5.25	0.00	-302.44	0.00	302.44	2,099.65	1,049.82	2,512.93	1,241.04	2.90	-0.51	0.087
59.00	-17.82	-5.11	0.00	-281.42	0.00	281.42	2,069.49	1,034.74	2,422.87	1,196.56	3.34	-0.55	0.082
59.00	-17.82	-5.11	0.00	-281.42	0.00	281.42	2,069.49	1,034.74	2,422.87	1,196.56	3.34	-0.55	0.082
60.00	-17.57	-5.08	0.00	-276.31	0.00	276.31	2,061.84	1,030.92	2,400.48	1,185.51	3.46	-0.56	0.081
63.00	-16.84	-4.97	0.00	-261.08	0.00	261.08	2,038.66	1,019.33	2,333.61	1,152.48	3.82	-0.58	0.077
63.00	-16.84	-4.97	0.00	-261.08	0.00	261.08	2,038.66	1,019.33	2,333.61	1,152.48	3.82	-0.58	0.108
65.00	-16.47	-4.91	0.00	-251.13	0.00	251.13	2,022.99	1,011.50	2,289.31	1,130.60	4.06	-0.60	0.105
69.00	-15.54	-4.58	0.00	-231.51	0.00	231.51	1,991.17	995.58	2,201.37	1,087.17	4.59	-0.64	0.098
70.00	-15.35	-4.55	0.00	-226.92	0.00	226.92	1,983.10	991.55	2,179.53	1,076.39	4.72	-0.66	0.097
70.00	-15.35	-4.55	0.00	-226.91	0.00	226.91	1,983.08	991.54	2,179.46	1,076.35	4.72	-0.66	0.097
73.50	-14.45	-4.42	0.00	-210.97	0.00	210.97	1,462.66	731.33	1,612.14	796.18	5.22	-0.69	0.107
75.00	-14.20	-4.38	0.00	-204.35	0.00	204.35	1,455.09	727.55	1,589.60	785.05	5.44	-0.71	0.104
80.00	-13.38	-4.20	0.00	-182.47	0.00	182.47	1,429.14	714.57	1,514.67	748.04	6.21	-0.77	0.095
85.00	-12.57	-4.02	0.00	-161.48	0.00	161.48	1,402.15	701.08	1,440.36	711.34	7.04	-0.82	0.086
90.00	-11.78	-3.84	0.00	-141.39	0.00	141.39	1,374.13	687.06	1,366.78	675.00	7.93	-0.87	0.077
93.00	-11.08	-3.68	0.00	-129.76	0.00	129.76	1,356.81	678.41	1,323.02	653.39	8.48	-0.89	0.071
95.00	-10.76	-3.61	0.00	-122.40	0.00	122.40	1,345.06	672.53	1,294.02	639.07	8.86	-0.91	0.068
100.00	-9.99	-3.42	0.00	-104.38	0.00	104.38	1,314.95	657.47	1,222.19	603.60	9.83	-0.95	0.059
103.00	-9.30	-3.23	0.00	-93.84	0.00	93.84	1,296.39	648.19	1,179.59	582.55	10.44	-0.97	0.054
105.00	-9.00	-3.16	0.00	-87.38	0.00	87.38	1,283.80	641.90	1,151.40	568.63	10.85	-0.99	0.051
110.00	-8.25	-2.97	0.00	-71.60	0.00	71.60	1,247.19	623.60	1,077.91	532.34	11.90	-1.02	0.043
110.00	-8.25	-2.97	0.00	-71.59	0.00	71.59	1,247.16	623.58	1,077.86	532.31	11.90	-1.02	0.043
110.00	-8.25	-2.97	0.00	-71.59	0.00	71.59	849.80	424.90	738.78	364.86	11.90	-1.02	0.051
113.00	-6.70	-2.41	0.00	-62.68	0.00	62.68	839.07	419.54	713.06	352.15	12.55	-1.04	0.045
115.00	-6.45	-2.34	0.00	-57.86	0.00	57.86	831.70	415.85	695.95	343.70	12.99	-1.05	0.041
120.00	-6.10	-2.17	0.00	-46.15	0.00	46.15	812.54	406.27	653.43	322.71	14.10	-1.08	0.032
120.00	-6.10	-2.17	0.00	-46.15	0.00	46.15	812.54	406.27	653.43	322.71	14.10	-1.08	0.151
125.00	-5.78	-2.01	0.00	-35.32	0.00	35.32	792.35	396.17	611.37	301.93	15.24	-1.10	0.124
130.00	-5.17	-1.57	0.00	-25.25	0.00	25.25	771.11	385.56	569.85	281.43	16.44	-1.18	0.096
135.00	-4.90	-1.44	0.00	-17.41	0.00	17.41	748.84	374.42	528.98	261.24	17.71	-1.25	0.073
140.00	-3.12	-0.92	0.00	-10.20	0.00	10.20	725.52	362.76	488.86	241.43	19.05	-1.30	0.047
145.00	-2.91	-0.85	0.00	-5.59	0.00	5.59	695.93	347.97	446.23	220.38	20.43	-1.33	0.030
150.00	0.00	-0.78	0.00	-1.36	0.00	1.36	660.97	330.49	402.27	198.67	21.83	-1.35	0.007



Analysis Summary

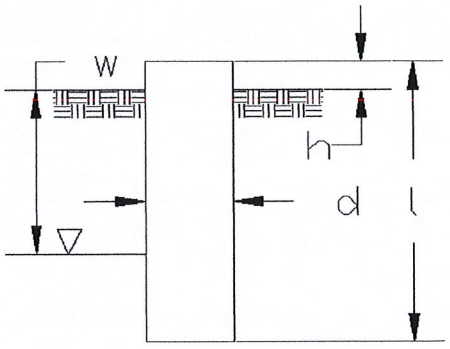
Load Case	Reactions Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage Elev (ft)	Interaction Ratio
1.2D + 1.6W	40.74	0.00	40.49	0.00	0.00	3781.61	120.00	0.85
0.9D + 1.6W	40.72	0.00	33.07	0.00	0.00	3750.41	120.00	0.83
1.2D + 1.0Di + 1.0Wi	8.76	0.00	95.98	0.00	0.00	871.93	120.00	0.22
1.0D + 1.0W	6.94	0.00	35.64	0.00	0.00	642.99	120.00	0.15

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Upper Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Lower Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Max Member Pu (kip)	phiPn (kip)	Ratio
0.00	120.	(4) SOL-#18 All Thre	403.9	12.1	16.8	76.7	12.0	7	10	0.0	12.0	0	0	249.5	249.8	0.999
0.00	18.0	(4) PL-PL 5" x 1"	194.0	2.3	25.3	189.9	25.3	8	0	0.0	25.3	0	0	215.0	218.0	0.986
0.00	59.0	(4) SOL-#18 All Thre	239.8	7.2	16.8	0.0	25.3	0	0	0.0	25.3	0	0	218.5	249.8	0.875
59.0	63.0	(4) SOL-#18 All Thre	239.3	2.9	16.8	150.5	12.0	13	15	0.0	12.0	0	0	159.3	266.7	0.597

Site Name:	**Branford CT 6, CT**
Site Number:	**302484**
Engineer:	**R. Keith**
Engineering Number:	**53055824**
Date:	**5/31/2013**

Program Last 5/26/2010
American Tower Corporation



Design Base Loads (Factored) - Analysis per TIA-222-G Standards

Foundation Mapped:	Y	
Moment (M):	3781.6	k-ft
Shear/Leg (V):	40.7	k
Compression/Leg (P):	40.5	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) Top	Depth (ft) Bottom	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
0.0	5.0	125	0	30	100	4000
5.0	7.0	125	0	33	100	4000
7.0	23.0	125	8000	40	100	8000
23.0	28.0	125	8000	40	100	8000

Required Embedment:	14.4	ft - OK, Caisson Embedment Satisfactor
Volume of Concrete:	441.8	ft^3 = 16.4 yd^3
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:	157.1	k
Pullout Weight (Minus Concrete Weight):	437.1	k
Nominal Uplift Capacity per Leg ($\phi_s T_n$):	59.1	k
Nominal Compressive Capacity per Leg ($\phi_s P_n$):	143.7	k
P_u:	53.4	k
$T_u/\phi_s T_n$:	0.00	Result: OK
$P_u/\phi_s P_n$:	0.37	Result: OK
Total Lateral Resistance:	8682.2	k
Inflection Point (Below Ground Surface):	15.1	ft
Design Overturning Moment At Inflection Point (M_D):	4417.6	k-ft
Nominal Moment Capacity ($\phi_s M_n$):	24658.7	k-ft
$M_D/\phi_s M_n$:	0.18	Result: OK
ϕ_s:	0.80	

TMONN102C

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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

CTNH102C

Branford American Tower
405 Brushy Plain Road
Branford, CT 06405

July 17, 2013

EBI Project Number: 62138526

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
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July 17, 2013

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Re: Emissions Values for Site: **CTNH102C - Branford American Tower**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 405 Brushy Plain Road, Branford, CT, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μW/cm2). The general population exposure limit for the cellular band is 567 μW/cm2, and the general population exposure limit for the PCS band is 1000 μW/cm2. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 405 Brushy Plain Road, Branford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

For all calculations, all equipment was calculated using the following assumptions:

1) 2 GSM channels (1935.000 MHz—to 1945.000 MHz / 1980.000 MHz—to 1985.000 MHz) were considered for each sector of the proposed installation.
2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications

7) The antenna mounting height centerline of the proposed antennas is **140 feet** above ground level (AGL)
8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CTNH102C - Branford American Tower
Site Addresss	405 Brushy Plain Road, Branford, CT 06405
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	140	134	None	0	0	48.326044	0.967559	0.09676%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	140	134	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
2B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
														Sector total Power Density Value:		0.194%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	140	134	None	0	0	48.326044	0.967559	0.09676%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	140	134	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
														Sector total Power Density Value:		0.194%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	140	134	None	0	0	48.326044	0.967559	0.09676%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	140	134	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	140	134	1-5/8"	0	0	24.163022	0.48378	0.04838%
														Sector total Power Density Value:		0.194%	

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.581%
AT&T	13.730%
Clearwire	1.100%
Verizon Wireless	27.270%
Branford Police	2.750%
PageNet	10.190%
Total Site MPE %	**55.621%**

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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.581% (0.194% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **55.621%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

AMERICAN TOWER®
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ATC TOWER SERVICES, INC.
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IRVING, TX 75063
PHONE: (972) 999-8900 / FAX: (972) 999-8940

302484 - BRANFORD CT 6, CT

MODIFICATION FOR A 150' MONOPOLE

PROJECT DESCRIPTION

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 53055821, DATED 4/29/13. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.

AS-BUILT SIGN-OFF		
DESCRIPTION	SIGNATURE	DATE
CONTRACTOR NAME		
CONTRACTOR REPRESENTATIVE (PRINT NAME)		
CONTRACTOR REPRESENTATIVE (SIGNATURE)		
REDEVELOPMENT P.M. (PRINT NAME)		
REDEVELOPMENT P.M. (SIGNATURE)		

PROJECT SUMMARY

ATC PROJECT NUMBER: 53055832

CUSTOMER: T-MOBILE

CUSTOMER SITE NUMBER: CTNH102C

CUSTOMER SITE NAME: N/A

SITE ADDRESS: 405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

DATE: 5/2/13

REVISION: 0

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Connecticut.

SHEET	SHEET TITLE	REV.
BOM	BILL OF MATERIALS (1 PAGE)	0
IGN	IBC GENERAL NOTES	0
A-1	SHAFT REINFORCEMENT INSTALLATION DETAILS	0
F-1	SHAFT REINFORCEMENT FABRICATION DETAILS	0

BILL OF MATERIALS

QUANTITY REQUIRED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTION	LENGTH	SHEET LIST	PIECE WEIGHT	WEIGHT (lb)	NOTES
			MATERIAL & HARDWARE					
3	3	SP-1	PL 1" THICK X 5"	19'-10"	F-1	337.4	1012	GALVANIZED
1	1	SP-2	PL 1" THICK X 4"	19'-10"	F-1	270	270	GALVANIZED
124	130	LHBM16 #2-HDG	HOLLO-BOLT, 5/8" DIA. (M16) LINDAPTER	—	—	----	—	GALVANIZED
					TOTAL WEIGHT (lb) =		1,282	

PAGE 1 OF 1

AMERICAN TOWER®
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CDL	5/2/13

ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6, CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

DRAWN BY:	CDL
APPROVED BY:	RK
DATE DRAWN:	5/2/13
JOB NO:	53055832

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER: BOM
REV. # 0

GENERAL

1. ALL METHODS, MATERIALS AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICE.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER TIA-1019-A-2011, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A307 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES AND FIELD DRILLED HOLES SHALL BE REPAIRED WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC-2004 (SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS.)
2. TIGHTEN FLANGE BOLTS BY AISC "TURN-OF-THE-NUT" METHOD, USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

3. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-NUT PRETENSIONING
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

4. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

   ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1K.

APPLICABLE CODES AND STANDARDS

1. ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION, ADDENDUM 2.
2. 2003 INTERNATIONAL BUILDING CODE WITH 2005 CONNECTICUT SUPPLEMENTS AND 2009 CONNECTICUT AMENDMENTS.
3. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-02.
4. CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
5. AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
6. AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

AMERICAN TOWER®
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CDL	5/2/13

ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6, CT

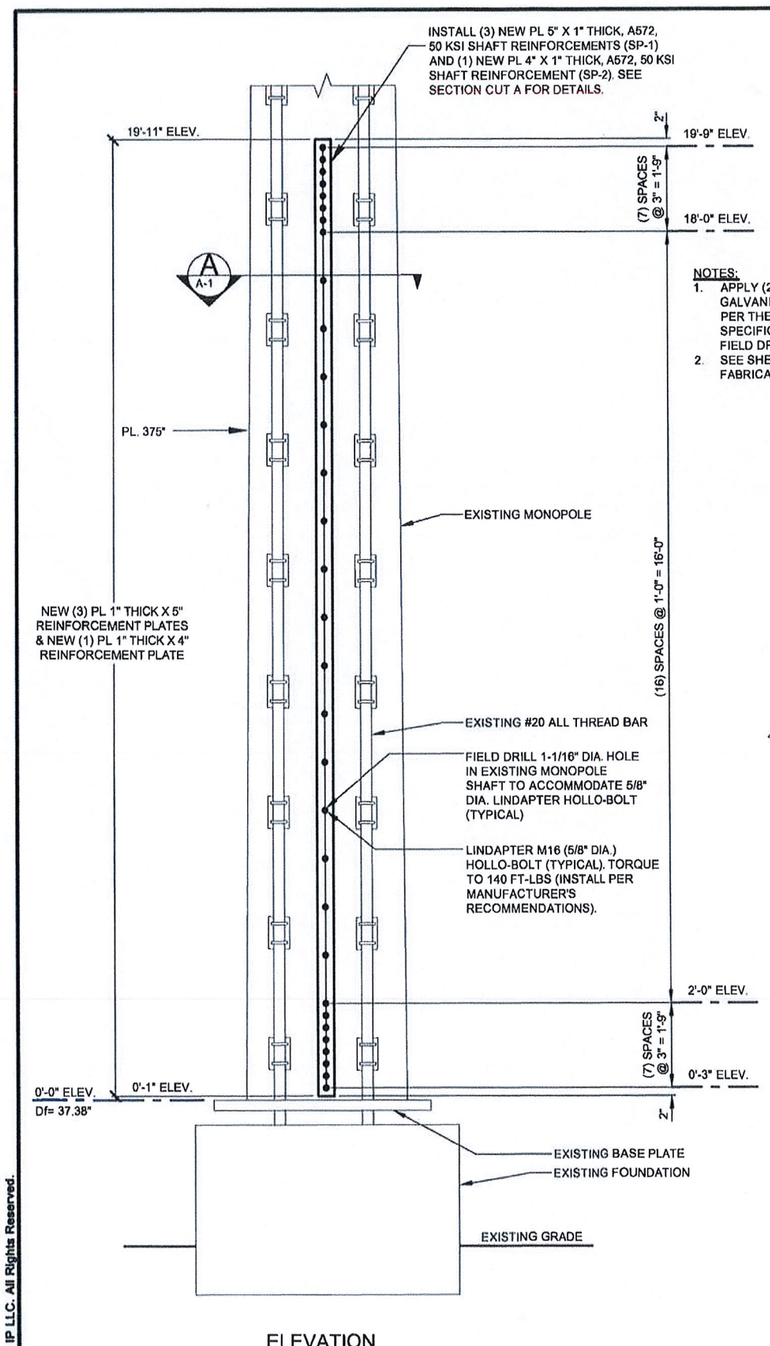
SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

DRAWN BY:	CDL
APPROVED BY:	RK
DATE DRAWN:	5/2/13
JOB NO:	53056832

SHEET TITLE:
IBC GENERAL NOTES

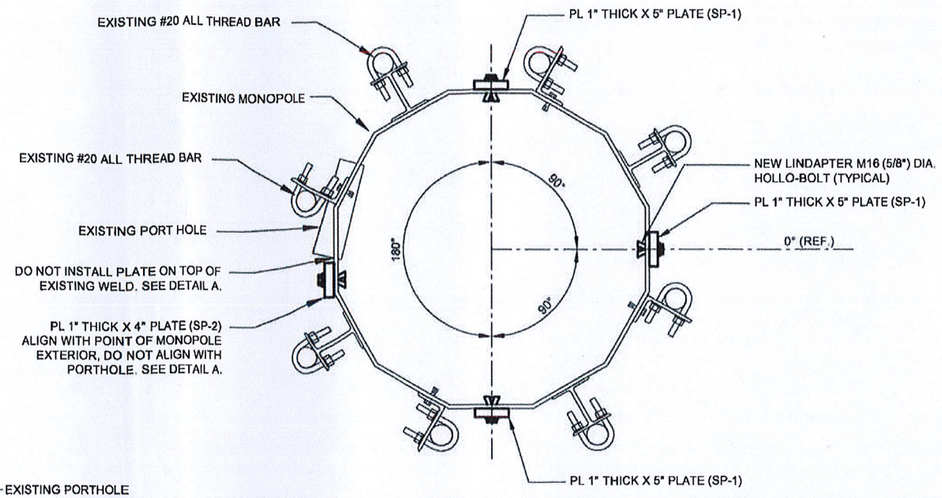
SHEET NUMBER: IGN

REV. # 0

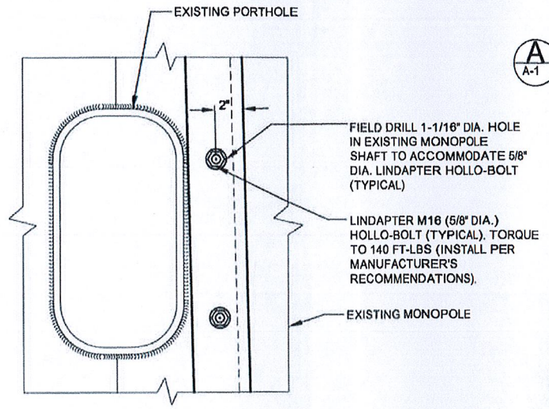


ELEVATION

NOTES:
1. APPLY (2) COATS ZINC RICH GALVANIZING COMPOUND PER THE MANUFACTURER'S SPECIFICATIONS TO ALL FIELD DRILLED HOLES.
2. SEE SHEET F-1 FOR FABRICATION DETAILS.



A A-1 SECTION
NOT TO SCALE



DETAIL A

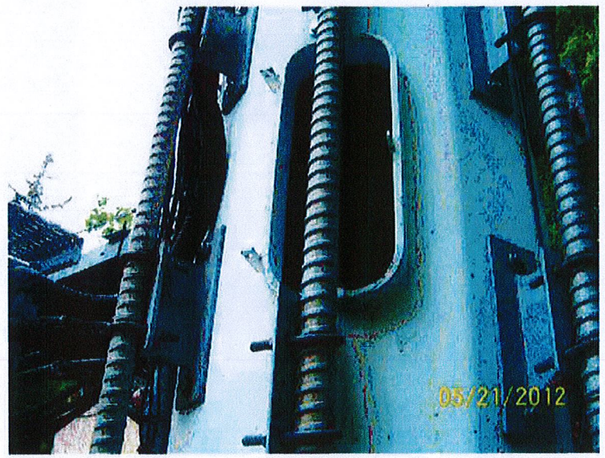


PHOTO 1

SHAFT REINFORCEMENT INSTALLATION DETAILS N.T.S. 1

AMERICAN TOWER®
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CDL	5/2/13

ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6, CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

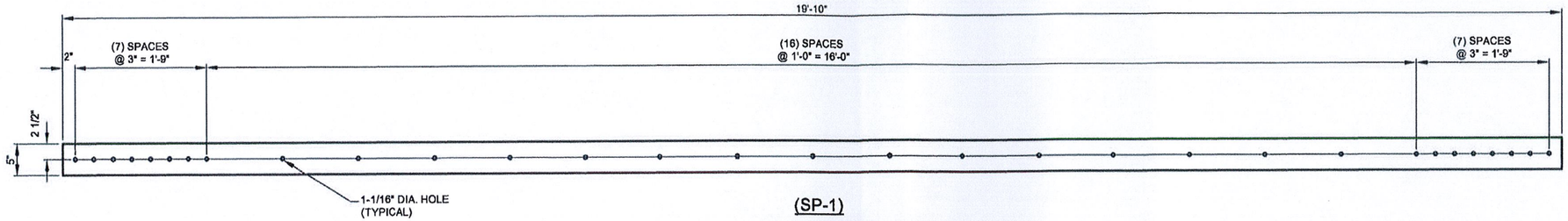
DRAWN BY:	CDL
APPROVED BY:	RK
DATE DRAWN:	5/2/13
JOB NO:	53055832

SHEET TITLE:
SHAFT REINFORCEMENT INSTALLATION DETAILS

SHEET NUMBER:	REV. #
A-1	0

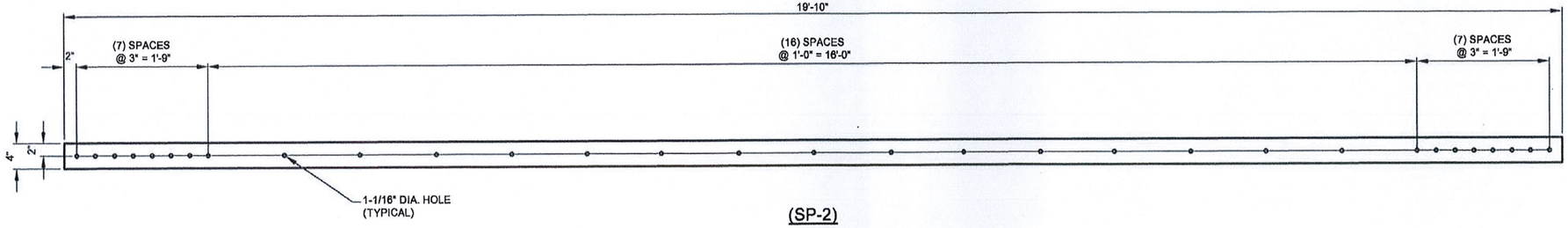
NOTE:

1. HOT-DIPPED GALVANIZED PER ASTM A123.



(SP-1)

PL 1" THICK X 5", A572, 50 KSI



(SP-2)

PL 1" THICK X 4", A572, 50 KSI

AMERICAN TOWER®
ATC TOWER SERVICES, INC.
8505 FREEPORT PARKWAY
SUITE 135
IRVING, TX 75063
PHONE: (972) 999-8900
FAX: (972) 999-8940
NYSE AMT

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CDL	5/2/13

ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6, CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

DRAWN BY:	CDL
APPROVED BY:	RK
DATE DRAWN:	5/2/13
JOB NO:	53055832

SHEET TITLE:
SHAFT REIFORCEMENT FABRICATION DETAILS

SHEET NUMBER:	REV. #
F-1	0

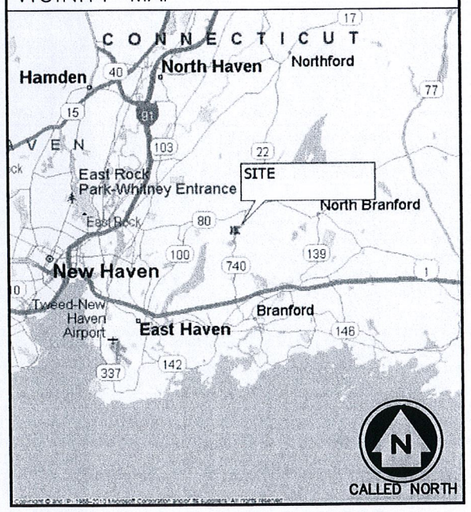
T-MOBILE NORTHEAST LLC

CTNH102C
CT 102/BRANFORD AMERICAN TOWER

405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

(2C CONFIGURATION)

VICINITY MAP



DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL:
"CALL BEFORE YOU DIG"
WWW.CBYD.COM
CALL 811, OR 1-800-922-4455
CALL THREE WORKING DAYS PRIOR TO DIGGING
SAFETY PRECAUTIONS SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS.

COLOR CODE FOR UTILITY LOCATIONS

ELECTRIC	– RED	SEWER	– GREEN
GAS/OIL	– YELLOW	SURVEY	– PINK
TEL/CATV	– ORANGE	PROPOSED EXCAVATION	– WHITE
WATER	– BLUE	RECLAIMED WATER	– PURPLE

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES. RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONSTRUCT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE T–MOBILE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXPENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING OF ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUM OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS AND INSPECTIONS WHICH ARE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY, OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC., DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS, AS WELL AS THE LATEST EDITIONS OF ANY PERTINENT STATE SAFETY REGULATIONS.
14. THE CONTRACTOR SHALL NOTIFY THE T–MOBILE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE T–MOBILE REPRESENTATIVE.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC., ON THE JOB.
16. THE CONTRACTOR SHALL RETURN ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITION AT THE COMPLETION OF WORK.

PROJECT SUMMARY

SITE NUMBER:	CTNH102C	APPLICANT:	T–MOBILE NORTHEAST LLC 400 STREET RD BENSALEM, PA 19020
SITE NAME:	CT 102/BRANFORD AMERICAN TOWER		
SITE ADDRESS:	405 BRUSHY PLAIN ROAD BRANFORD, CT 06405		
PROPERTY OWNER:	DOROTHY MCCARTHY 4 SYLVAN WAY PARSIPPANY, NJ 07054	PROJECT MANAGER:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801
PARCEL:	TBD		
CURRENT ZONING:	TBD	CONTACT:	TARA RUSSO 717–695–2942
JURISDICTION:	TBD		
ATC SITE NUMBER:	302484	ARCHITECT/ENGINEER:	INFINIGY ENGINEERING 11 HERBERT DRIVE LATHAM, NY 12110
LAT./LONG.:	N 41.31676° / W 72.81961°		
CONSTRUCTION TYPE:	–	CONTACT:	AJ DESANTIS 518–690–0790
USE GROUP:	–		

PROJECT DESCRIPTION

- ☒ EXISTING MONOPOLE
- ☐ EXISTING LATTICE TOWER
- ☐ EXISTING TRANSMISSION TOWER
- ☐ EXISTING WATER TANK
- ☐ EXISTING BUILDING
- ☐ EXISTING FLAGPOLE
- ☐ EXISTING FORT WORTH
- ☒ EXISTING CABINET(S)
- ☐ EXISTING RBS 2106
- ☐ EXISTING RBS 3106
- ☐ PROPOSED RBS 6102
- ☐ SITE SUPPORT KIT
- ☐ SITE SUPPORT CABINET
- ☒ GPS
- ☒ OUTDOOR
- ☐ INDOOR
- ☒ EXISTING CONCRETE PAD
- ☐ EXISTING STEEL PLATFORM
- ☒ EXISTING PPC
- ☐ PANELBOARD

T–MOBILE NORTHEAST LLC PROPOSES THE MODIFICATION OF AN UNMANNED WIRELESS BROADBAND FACILITY. REPLACEMENT OF EXISTING PANEL ANTENNAS & TTA'S WITH PROPOSED AIR21 PANEL ANTENNAS AND ASSOCIATED CABLING. REUSE EXISTING GPS ANTENNA AND EXISTING EQUIPMENT CABINETS.

SHEET INDEX

T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

INFINIGY Design. Build. Deliver.
11 HERBERT DRIVE
LATHAM, NY 12210
OFFICE: (518) 690–0790
FAX: (518) 690–0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/23/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO: 317-0974
DRAWN BY: SKB
CHECKED BY: AJD

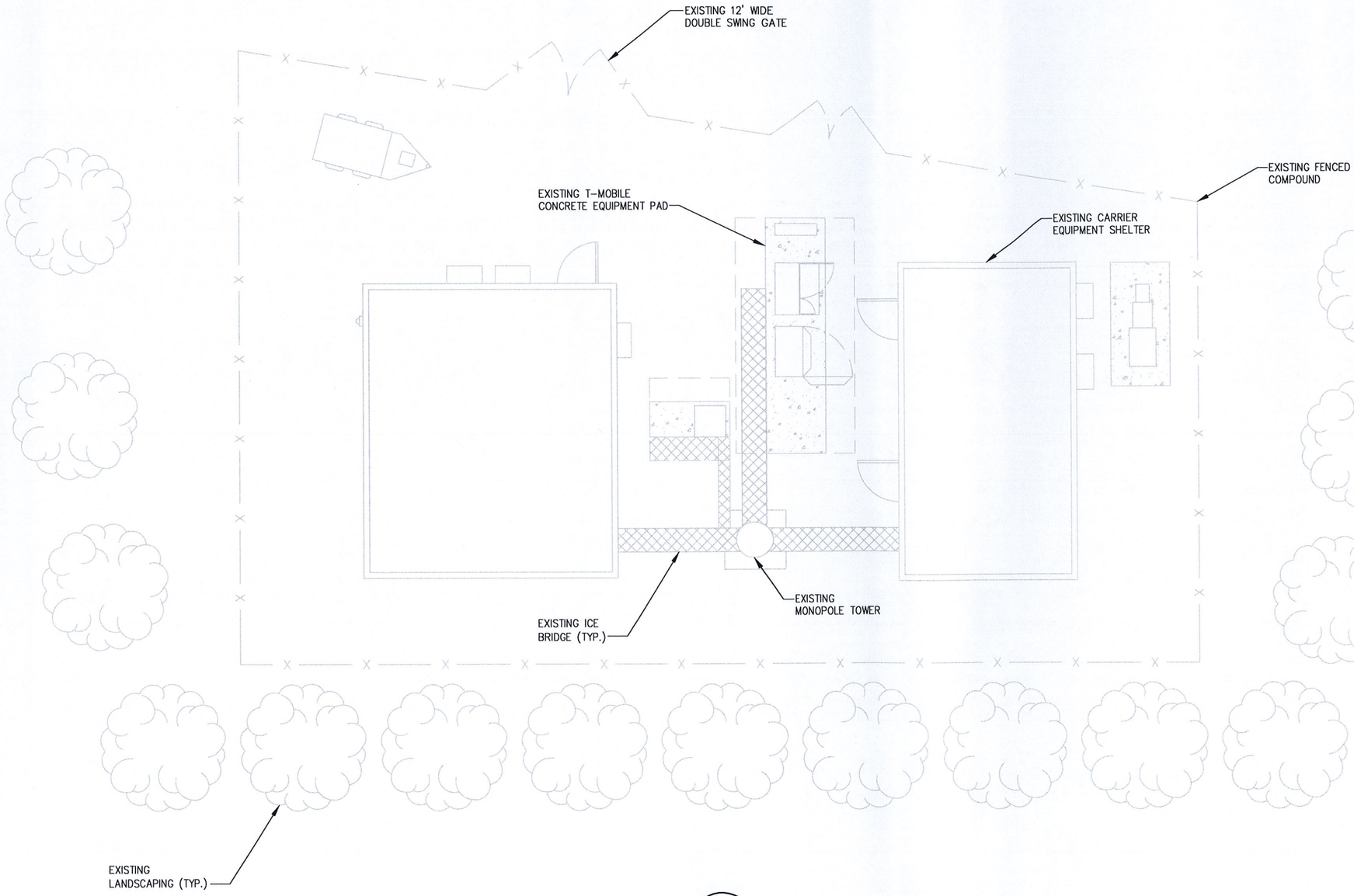
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1
SHEET 1 OF 8 SHEETS



CALLED NORTH

1 COMPOUND PLAN
SCALE: AS NOTED

GENERAL SITE NOTES:

1. A COMPLETE BOUNDARY SURVEY OF THE HOST PARCEL HAS NOT BEEN PERFORMED BY INFINIGY ENGINEERING. BOUNDARY INFORMATION WAS OBTAINED FROM INFORMATION PROVIDED BY OTHERS. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
2. BASEMAPPING INFORMATION BASED ON PROVIDED INFORMATION.
3. CONTRACTOR TO FIELD VERIFY DIMENSIONS AS NECESSARY BEFORE CONSTRUCTION.
4. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE SIGNS OF ADVERTISING.
5. THE PROPOSED DEVELOPMENT IS UNMANNED AND THEREFORE DOES NOT REQUIRE A MEANS OF WATER SUPPLY OR SEWAGE DISPOSAL.
6. NO LANDSCAPING WORK IS PROPOSED IN CONJUNCTION WITH THIS DEVELOPMENT OTHER THAN THAT WHICH IS SHOWN.
7. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
8. UTILITIES SHOWN ON PLAN ARE TAKEN FROM OWNERS RECORDS AND FIELD LOCATION OF VISIBLE SURFACE FEATURES. THE EXISTENCE, EXTENT AND EXACT HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES HAS NOT BEEN VERIFIED. ANY CONTRACTOR PERFORMING WORK ON THIS SITE MUST CONTACT MISS UTILITY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
9. ALL OBSOLETE OR UNUSED FACILITIES SHALL BE REMOVED WITHIN 12 MONTHS OF CESSATION OF OPERATIONS.

SITE LEGEND

- SITE PROPERTY LINE
- STREET OR ROAD
- CHAIN LINK FENCE
- OPAQUE WOODEN FENCE
- BOARD ON BOARD FENCE
- DECIDUOUS TREES/SHRUBS
- EVERGREEN TREES/SHRUBS
- TREE LINE
- UTILITY POLE
- (E) EXISTING
- (N) NEW
- (P) PROPOSED
- (F) FUTURE
- PROP. GSM ANTENNA
- PROP. UMTS ANTENNA
- EX. GSM ANTENNA
- EX. UMTS ANTENNA

GRAPHIC SCALE

20' 10' 0 10' 20'

SCALE (11x17): 1" = 20'-0"
SCALE (22x34): 1" = 10'-0"

T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

INFINIGY
Design. Build. Deliver.
11 HERBERT DRIVE
LATHAM, NY 12110
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/23/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD

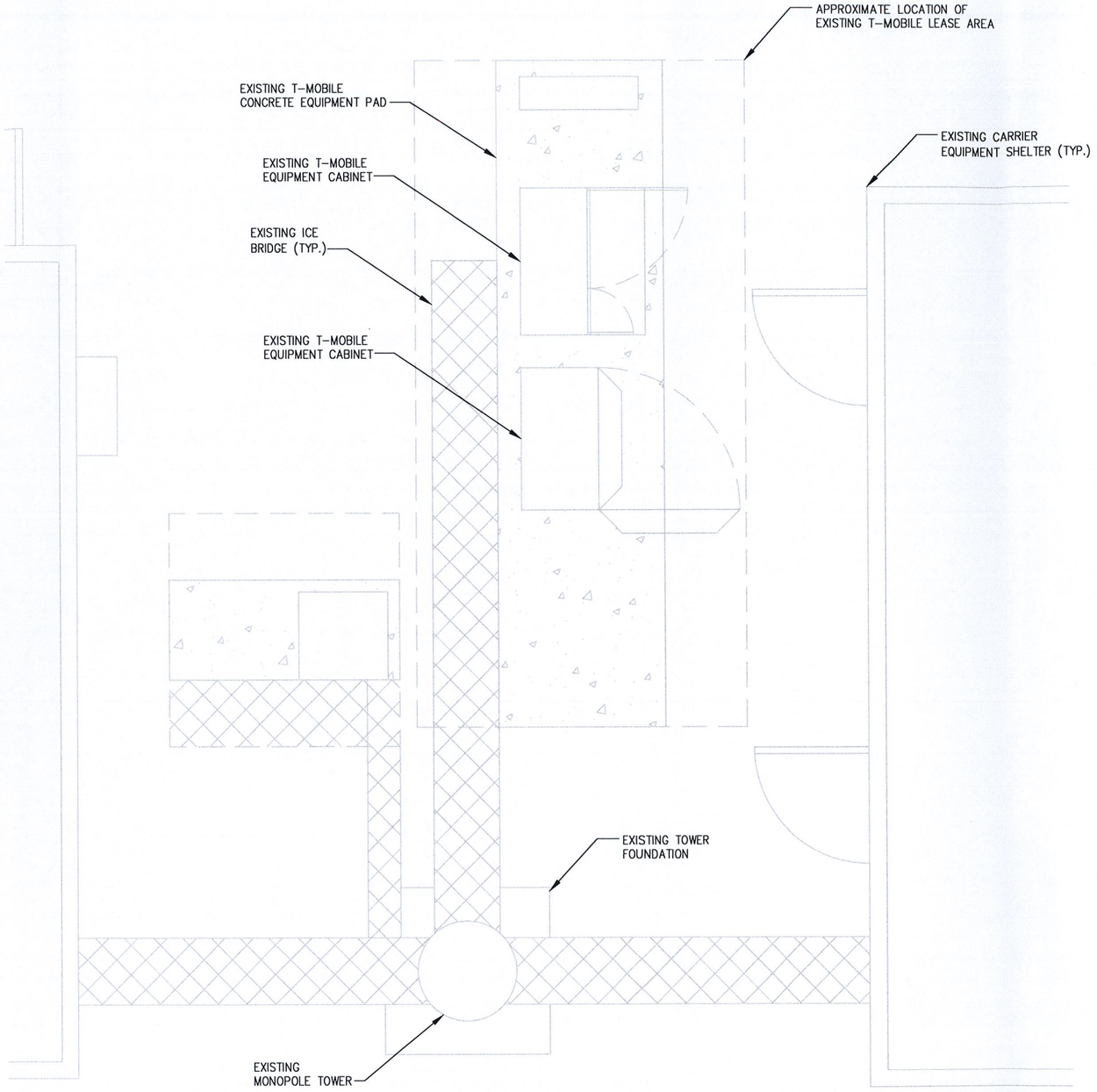
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
SITE PLAN

SHEET NUMBER
C-1
SHEET 2 OF **8** SHEETS



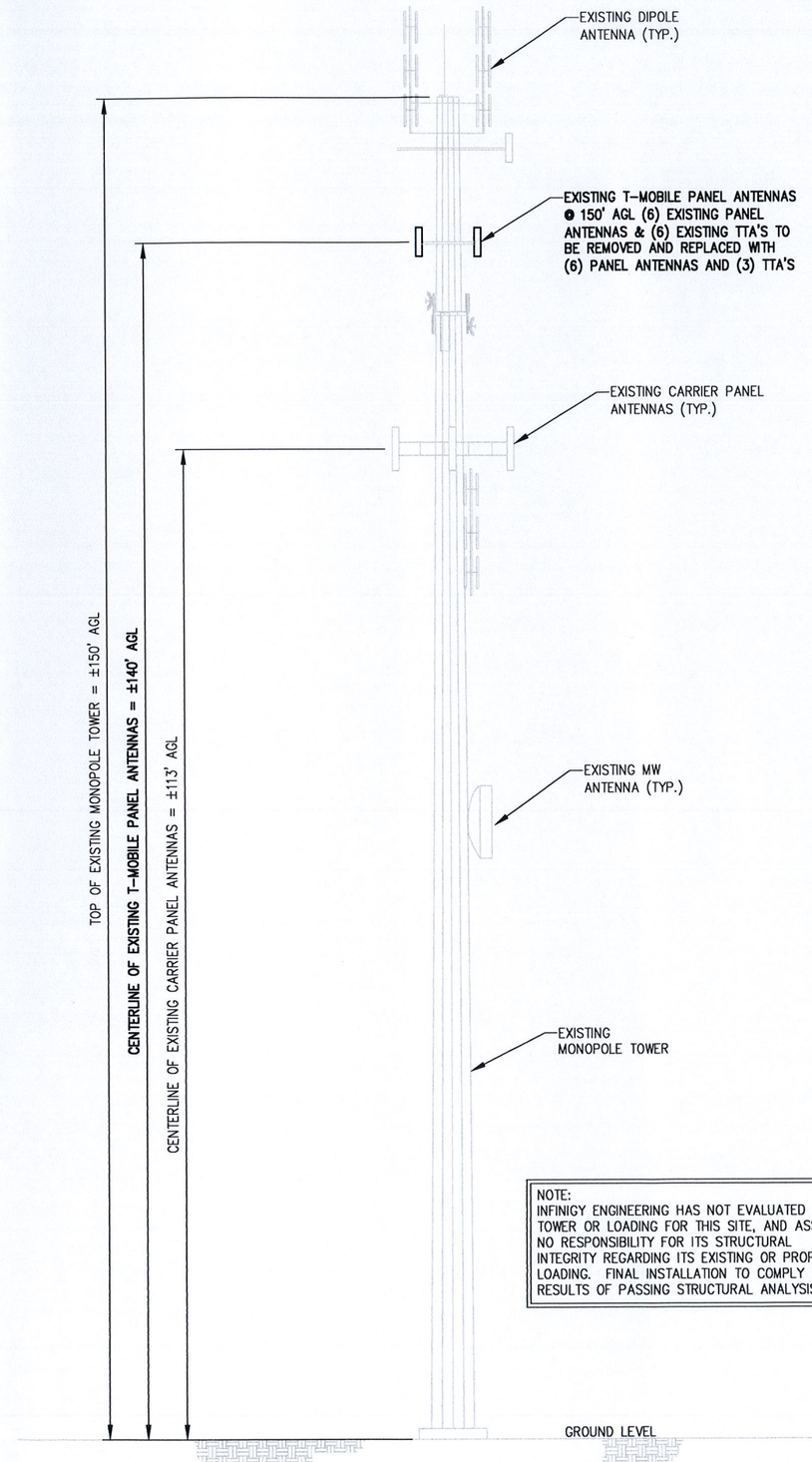
CALLED NORTH

1 COMPOUND PLAN
SCALE: AS NOTED

GRAPHIC SCALE

4' 2' 0 2' 4'

SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"



NOTE:
INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER OR LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSIS.

2 TOWER ELEVATION
NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

INFINIGY
Design. Build. Deliver.
11 HERBERT DRIVE
PITTSBURGH, NY 13170
OFFICE: (518) 690-0790
FAX: (518) 690-0783

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/22/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
COMPOUND PLAN & ELEVATION

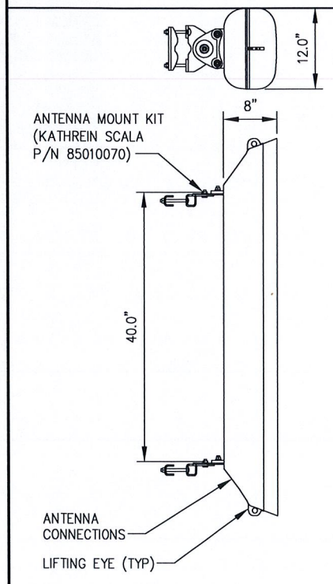
SHEET NUMBER
C-2
SHEET 3 OF 8 SHEETS

RF SYSTEM SCHEDULE (2C CONFIGURATION)

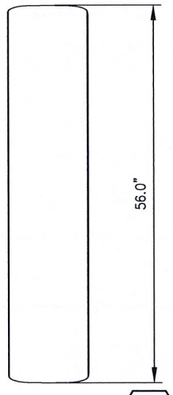
SECTOR	TECHNOLOGY	ANTENNA PORT	BAND	ANTENNA MODEL #	VENDOR	AZIMUTH	M-TILT	E-TILT	ANTENNA CENTERLINE	TMA MODEL #	VENDOR	CABLE LENGTH	CABLE DIAMETER	CABLE TYPE	CABLE MODEL #	VENDOR	CABLE TAGGING	COLOR CODING	JUMPER TYPE	JUMPER TAGGING	COLOR CODING
A	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	120°	0°	3°	140'-0"	ATMAA1412D	N/A	EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS A1	B	COAX	UMTS AWS A1	B
		RF #2										EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS A2	B	COAX	UMTS AWS A2	B
	LMU	LMU #1	–							–	–	EXISTING	1¼"	COAX	EXISTING	N/A	LMU A1	–	COAX	LMU A1	–
		LMU #2										EXISTING	1¼"	COAX	EXISTING	N/A	LMU A2	–	COAX	LMU A2	–
	GSM	**OPTICAL #1**	**B2A**							–	–	125'±		**HYBRID**	**MASTERLINE EXTREME HYBRID (3x6)**	**ERICSSON**	**FIBER 1**	**O**	**FIBER**	**GSM 1900 A1**	**R**
	UMTS	**OPTICAL #2**																	**FIBER**	**UMTS 1900 A2**	**G**
	LTE AWS	**OPTICAL #1**	**B4A**	AIR21	ERICSSON	120°	0°	3°	140'-0"	–	–								**FIBER**	**LTE FIBER 1**	**Y**
	–	–	–	–	–				–	–	–	EXISTING									
B	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	200°	0°	10°	140'-0"	ATMAA1412D	N/A	EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS B1	BB	COAX	UMTS AWS B1	BB
		RF #2										EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS B2	BB	COAX	UMTS AWS B2	BB
	LMU	LMU #1	–							–	–	EXISTING	1¼"	COAX	EXISTING	N/A	LMU B1	–	COAX	LMU B1	–
		LMU #2										EXISTING	1¼"	COAX	EXISTING	N/A	LMU B2	–	COAX	LMU B2	–
	GSM	**OPTICAL #1**	**B2A**							–	–	**(ANTENNA CONNECTED VIA SINGLE SHARED MLE HYBRID GEN2 CABLE. SEE SECTOR "A")**							**HYBRID**	**GSM 1900 B1**	**RR**
	UMTS	**OPTICAL #2**																	**HYBRID**	**UMTS 1900 B2**	**GG**
	LTE AWS	**OPTICAL #1**	**B4A**	AIR21	ERICSSON	200°	0°	10°	140'-0"	–	–								**HYBRID**	**LTE FIBER 2**	**YY**
	–	–	–	–	–				–	–	–	EXISTING									
C	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	300°	0°	7°	140'-0"	ATMAA1412D	N/A	EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS C1	BBB	COAX	UMTS AWS C1	BBB
		RF #2										EXISTING	1¼"	COAX	EXISTING	N/A	UMTS AWS C2	BBB	COAX	UMTS AWS C2	BBB
	LMU	LMU #1	–							–	–	EXISTING	1¼"	COAX	EXISTING	N/A	LMU C1	–	COAX	LMU C1	–
		LMU #2										EXISTING	1¼"	COAX	EXISTING	N/A	LMU C2	–	COAX	LMU C2	–
	GSM	**OPTICAL #1**	**B2A**							–	–	**(ANTENNA CONNECTED VIA SINGLE SHARED MLE HYBRID GEN2 CABLE. SEE SECTOR "A")**							**HYBRID**	**GSM 1900 C1**	**RRR**
	UMTS	**OPTICAL #2**																	**HYBRID**	**UMTS 1900 C2**	**GGG**
	LTE AWS	**OPTICAL #1**	**B4A**	AIR21	ERICSSON	300°	0°	7°	140'-0"	–	–								**HYBRID**	**LTE FIBER 3**	**YYY**
	–	–	–	–	–				–	–	–	EXISTING									–

1 RF SCHEDULE
NOT TO SCALE

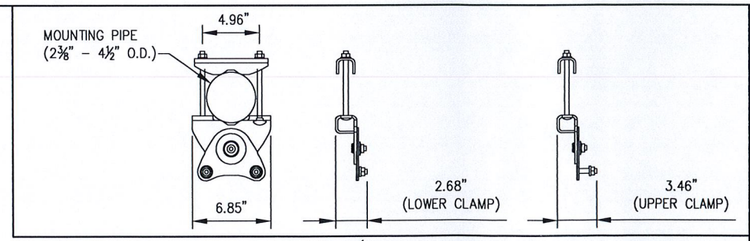
KEY	
EXISTING	R – RED – GSM
PROPOSED	G – GREEN – UMTS 1900
FIBER CONNECTION	B – BLUE – UMTS AWS
	Y – YELLOW – LTE
	O – ORANGE – FIBER CABLE

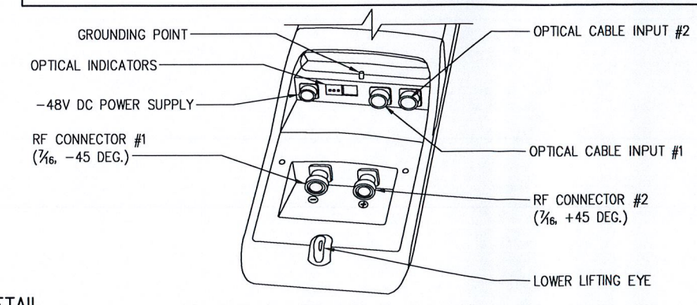


AIR21 "ANTENNA INTEGRATED RADIO"
(PCS & AWS VERSIONS)
WEIGHT: 83LBS (MAX)

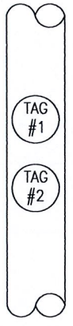


2 ANTENNA DETAIL
NOT TO SCALE





ANTENNA CONNECTION INTERFACE DETAIL
NOT TO SCALE



METALLIC TAG NOTES:

1. TWO METALLIC TAGS SHALL BE ATTACHED AT EACH END OF EVERY CABLE LONGER THAN (3) THREE FEET.
2. CABLES LESS THAN (3) THREE FEET WILL HAVE TWO METALLIC TAGS ATTACHED AT THE CENTER OF THE CABLE.
3. TAGS WILL BE FASTENED WITH STAINLESS STEEL ZIP TIES APPROPRIATE FOR CABLE DIAMETER.
4. STANDARDIZED METALLIC TAG KITS WILL BE ASSEMBLED WITH TAGS ALREADY ENGRAVED TO ACCOMODATE ALL CONFIGURATIONS.

3 METALLIC TAG DETAIL
NOT TO SCALE

T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

INFINIGY
Design. Build. Deliver.
11 HERBERT DRIVE
LATHAM, NY 12110
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
4/23/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO: 317-0974
DRAWN BY: SKB
CHECKED BY: AJD

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

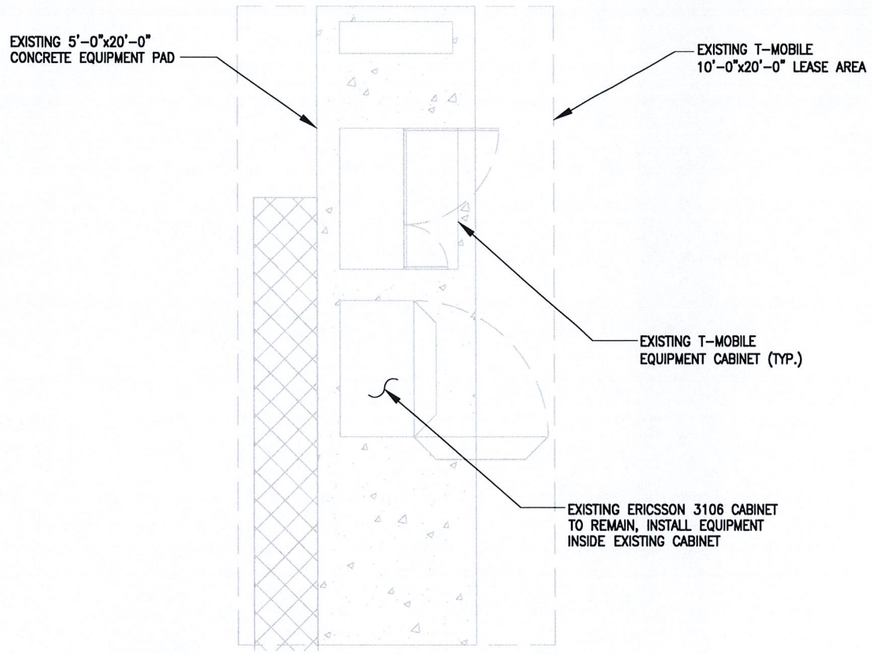
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
ANTENNA DETAIL & RF SCHEDULE

SHEET NUMBER
C-3
SHEET 4 OF 8 SHEETS



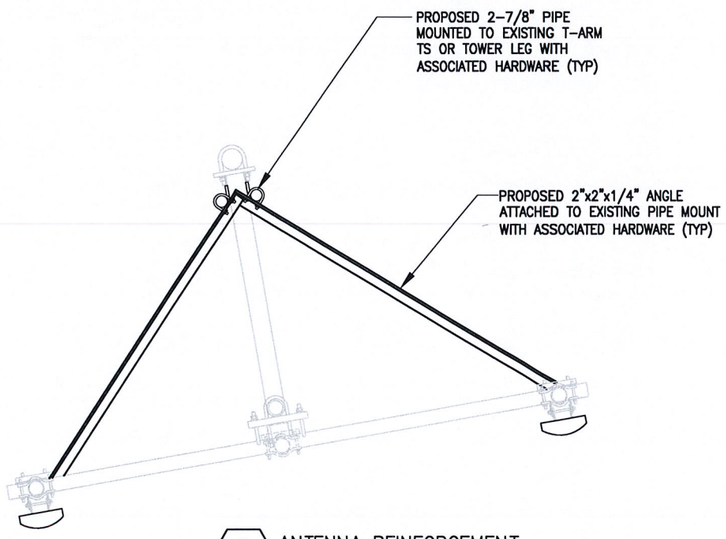
CALLED NORTH

1 EQUIPMENT PAD LAYOUT PLAN
NOT TO SCALE

2 NOT USED
NOT TO SCALE

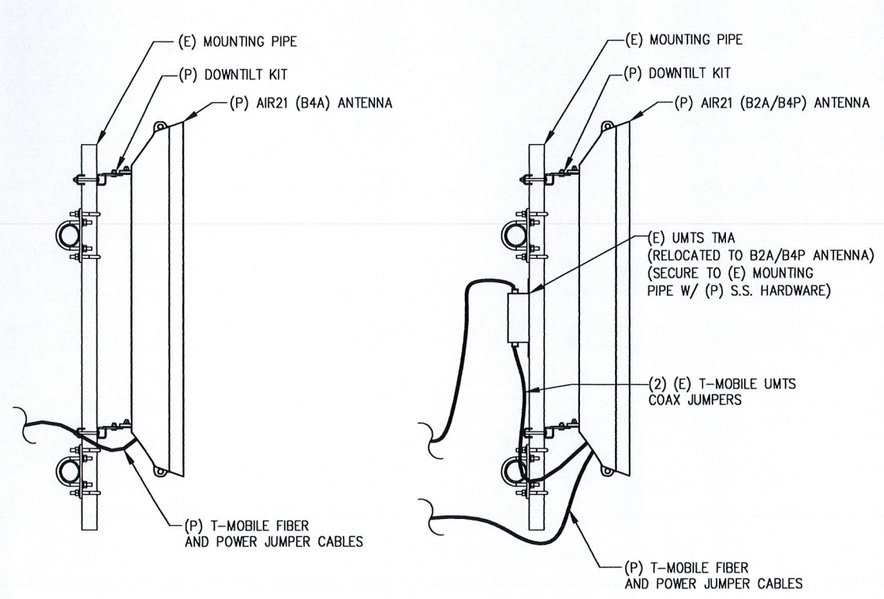
STRUCTURAL NOTES:

1. SPECIFICATIONS / CODES:
   - CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
   - STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, 9tH EDITION.
   - WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-92 "STRUCTURAL WELDING" CODE-STEEL.
   - REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE."
2. MATERIALS:
   - CONCRETE: fc' - 3000psi. (MIN. U.N.O.)
   - REINFORCING STEEL: ASTM A615, GRADE 60.
   - WIRE MESH: ASTM A185.
   - STRUCTURAL STEEL: ASTM A36.
   - ELECTRODES FOR WELDING: E 70xx.
   - GALVANIZING: ASTM A153 (BOLTS) OR ASTM A123 (SHAPES, PLATES).
   - EXPANSION BOLTS: HILTI KWIK BOLT II, STAINLESS STEEL, 3/4"øx43/4" EMBEDMENT OR AN APPROVED EQUAL.



3 ANTENNA REINFORCEMENT
NOT TO SCALE

*USE WHEN EXISTING ANTENNA PIPE MOUNT HAS ONLY ONE POINT OF ATTACHMENT



4 ANTENNA MOUNTING DETAIL
NOT TO SCALE

T-MOBILE NORTHEAST LLC
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SUBMITTALS

DATE	DESCRIPTION	REVISION
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DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

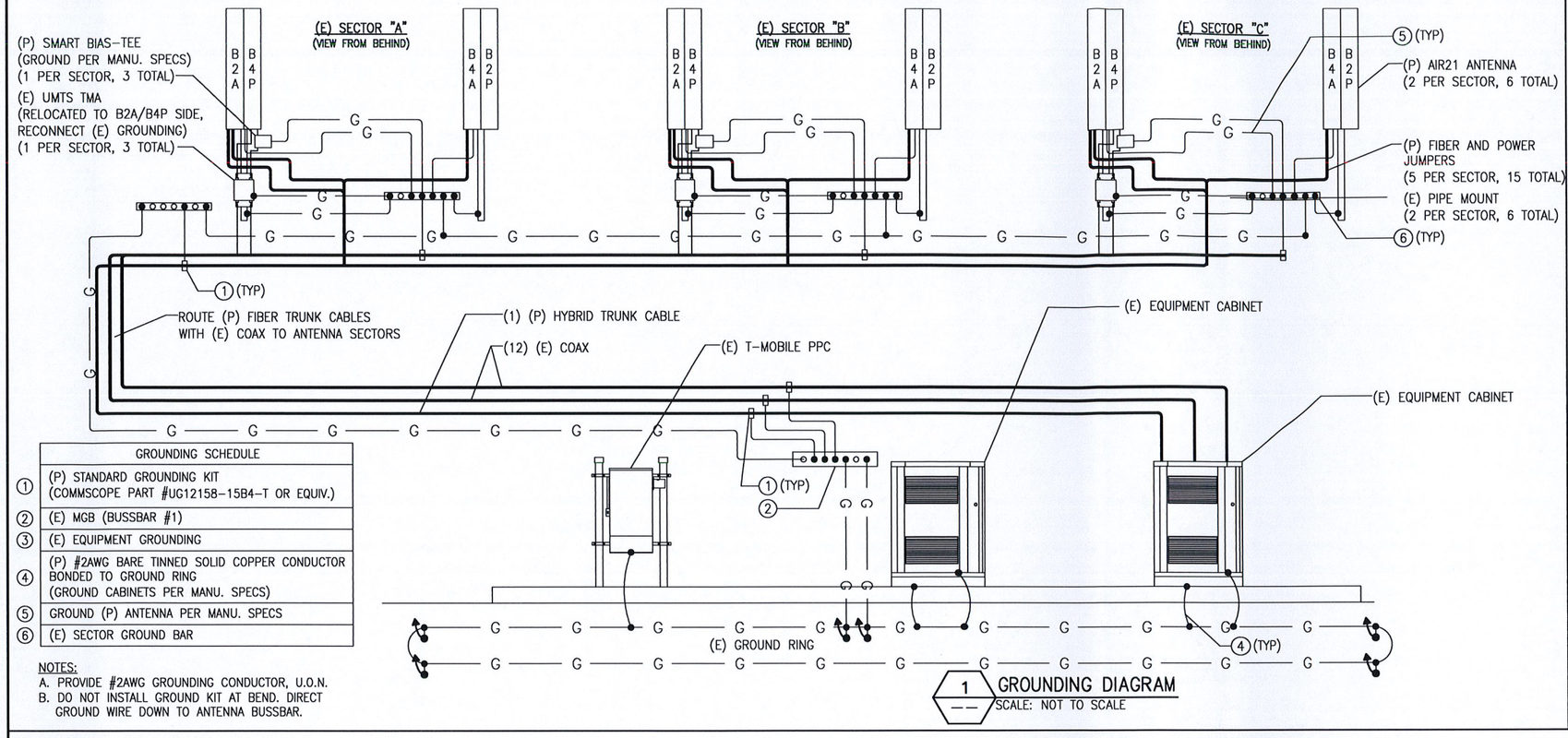
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
EQUIPMENT SPECIFICATIONS

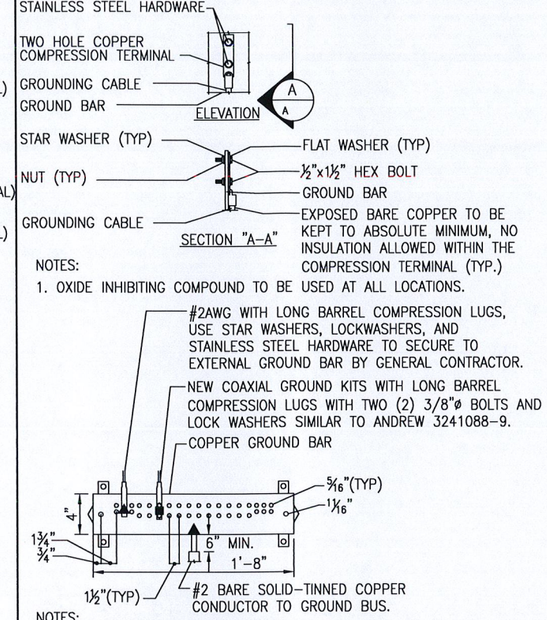
SHEET NUMBER
S-1
SHEET 5 OF **8** SHEETS



GROUNDING SCHEDULE	
1	(P) STANDARD GROUNDING KIT (COMMSCOPE PART #UG12158-15B4-T OR EQUIV.)
2	(E) MGB (BUSSBAR #1)
3	(E) EQUIPMENT GROUNDING
4	(P) #2AWG BARE TINNED SOLID COPPER CONDUCTOR BONDED TO GROUND RING (GROUND CABINETS PER MANU. SPECS)
5	GROUND (P) ANTENNA PER MANU. SPECS
6	(E) SECTOR GROUND BAR

NOTES:
A. PROVIDE #2AWG GROUNDING CONDUCTOR, U.O.N.
B. DO NOT INSTALL GROUND KIT AT BEND. DIRECT GROUND WIRE DOWN TO ANTENNA BUSSBAR.

1 GROUNDING DIAGRAM
SCALE: NOT TO SCALE

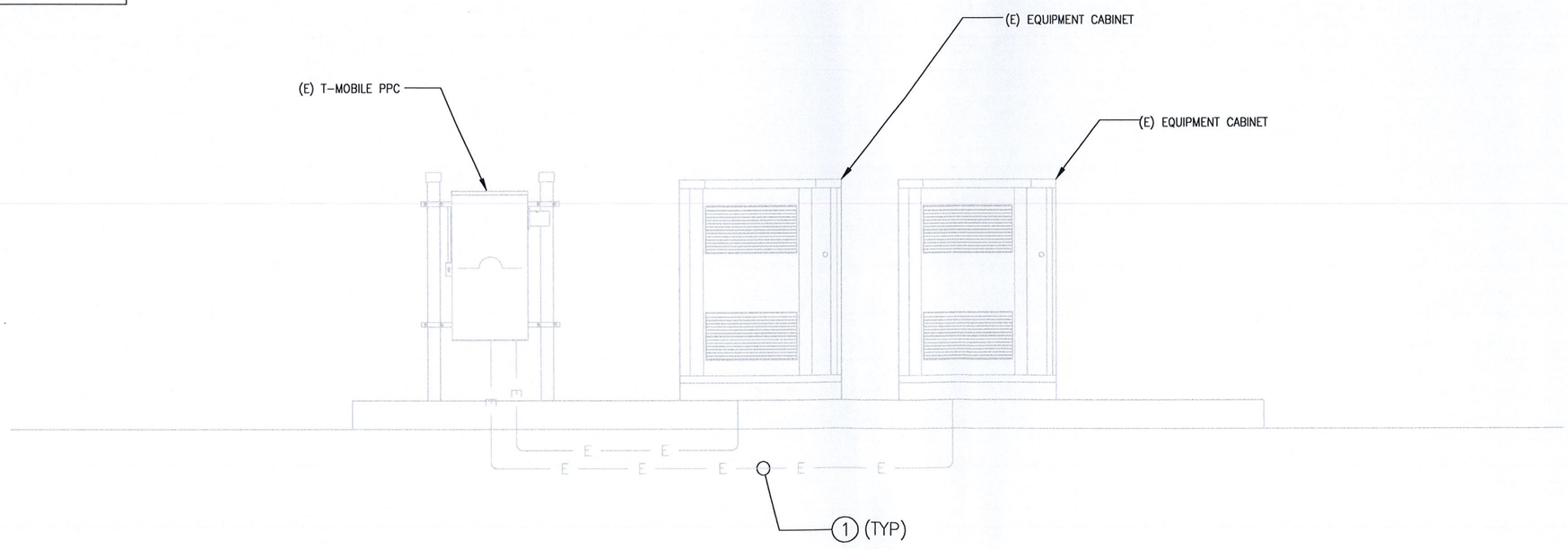


NOTES:
1. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

NOTES:
1. ALL HARDWARE STAINLESS STEEL COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
3. ALL HOLES ARE COUNTERSUNK 1/16".

2 GROUND BAR CONNECTION DETAILS
SCALE: NOT TO SCALE

CONDUIT SCHEDULE	
1	(E) POWER CONDUIT



3 POWER DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
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BENSALEM, PA 19020

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SUBMITTALS

DATE	DESCRIPTION	REVISION
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5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD

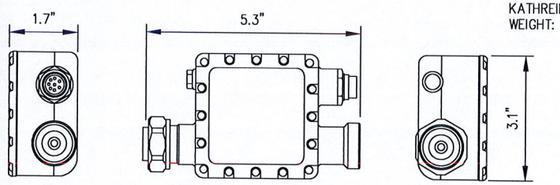
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

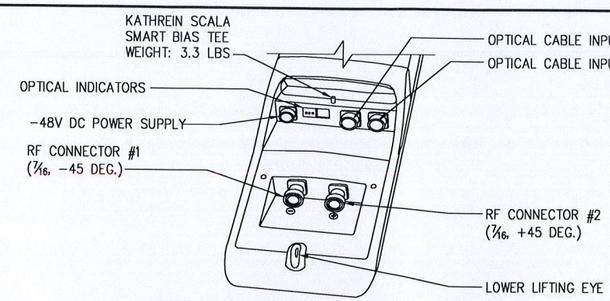
SHEET TITLE
GROUNDING & POWER DIAGRAMS

SHEET NUMBER
E-1
SHEET 6 OF **8** SHEETS



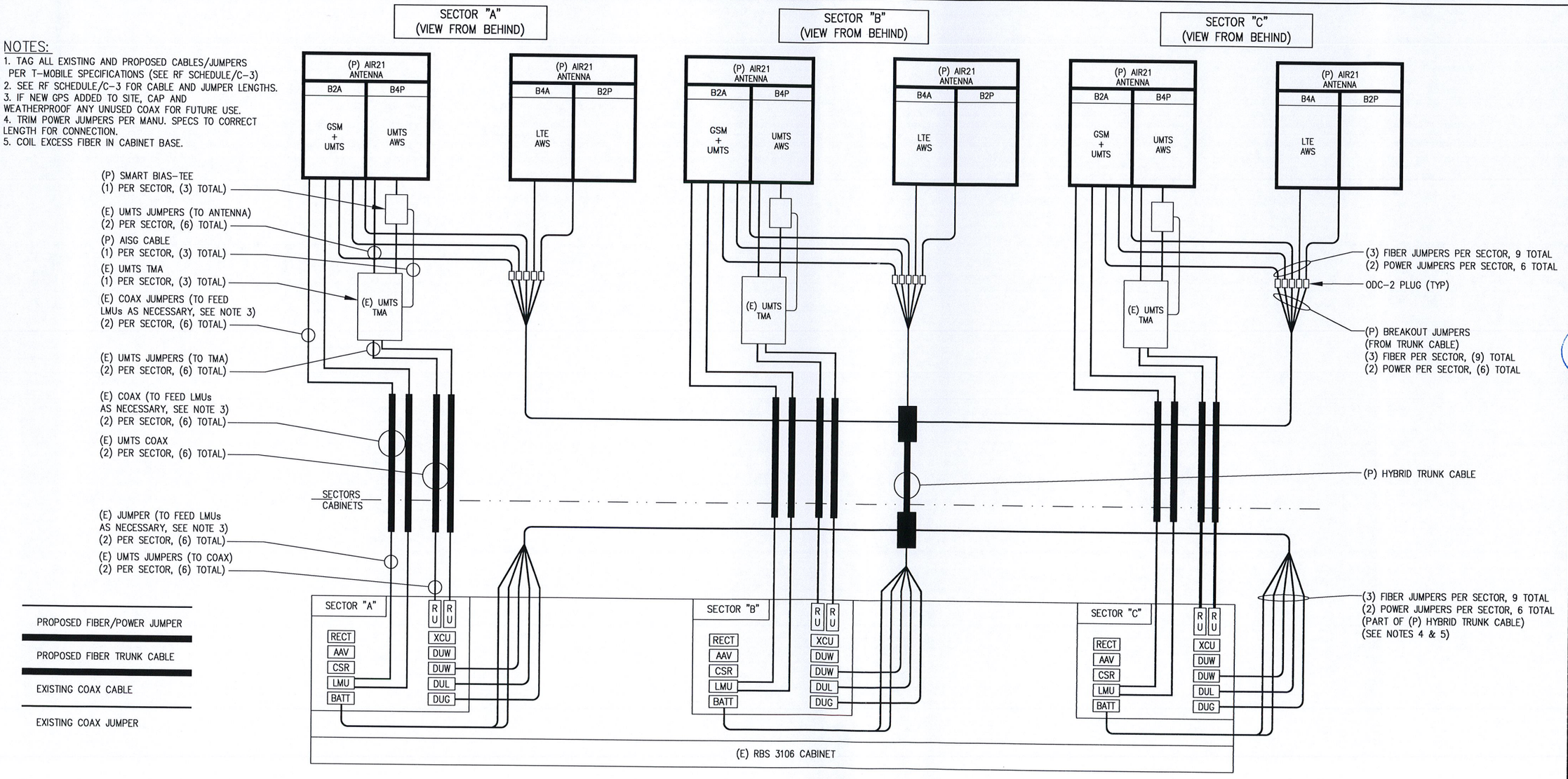
KATHREIN SCALA SMART BIAS TEE
WEIGHT: 3.3 LBS

1 SMART BIAS-TEE DETAIL
NOT TO SCALE



2 ANTENNA CONNECTION INTERFACE
NOT TO SCALE

NOTES:
1. TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER T-MOBILE SPECIFICATIONS (SEE RF SCHEDULE/C-3)
2. SEE RF SCHEDULE/C-3 FOR CABLE AND JUMPER LENGTHS.
3. IF NEW GPS ADDED TO SITE, CAP AND WEATHERPROOF ANY UNUSED COAX FOR FUTURE USE.
4. TRIM POWER JUMPERS PER MANU. SPECS TO CORRECT LENGTH FOR CONNECTION.
5. COIL EXCESS FIBER IN CABINET BASE.



PROPOSED FIBER/POWER JUMPER
PROPOSED FIBER TRUNK CABLE
EXISTING COAX CABLE
EXISTING COAX JUMPER

3 2C CONFIGURATION COAX/FIBER PLUMBING DIAGRAM
NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
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BENSALEM, PA 19020

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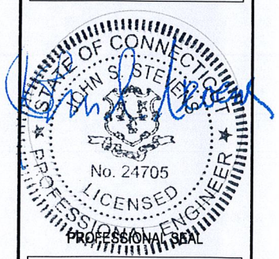
SUBMITTALS

DATE	DESCRIPTION	REVISION
4/23/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD



PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
COAX/FIBER PLUMBING DIAGRAM

SHEET NUMBER
E-2
SHEET 7 OF 8 SHEETS

ELECTRICAL NOTES:

WORK INCLUDED

1. INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, PLANT SERVICES AND ADMINISTRATIVE TASKS REQUIRED TO COMPLETE AND MAKE OPERABLE THE ELECTRICAL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. PREPARE AND SUBMIT SHOP DRAWINGS, DIAGRAMS AND ILLUSTRATIONS.
   B. PROCURE ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL REQUIRED FEES AND CHARGES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
   C. SUBMIT AS-BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS.
   D. EXECUTE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING OF EXISTING OR NEWLY INSTALLED CONSTRUCTION REQUIRED FOR THE WORK OF THIS CONTRACT. FOR SLAB PENETRATIONS THROUGH POST TENSION SLABS, X-RAY EXACT AREA OF PENETRATION PRIOR TO PERFORMING WORK. COORDINATE ALL X-RAY WORK WITH BUILDING ENGINEER.
   E. PROVIDE HANGERS, SUPPORTS, FOUNDATIONS, STRUCTURAL FRAMING SUPPORTS, AND BASES FOR CONDUIT AND EQUIPMENT PROVIDED OR INSTALLED UNDER THE WORK OF HIS CONTRACT. PROVIDE COUNTER FLASHING, SLEEVES AND SEALS FOR FLOOR AND WALL PENETRATIONS.
   F. MAINTAIN ALL EXISTING ELECTRICAL SERVICES IN THE BUILDING AREAS NOT AFFECTED BY THE ALTERATION DURING THE PROGRESS OF THE WORK INCLUDING PROVIDING ALL TEMPORARY JUMPERS, CONDUITS, CAPS, PROTECTIVE DEVICES, CONNECTIONS AND EQUIPMENT REQUIRED. PROVIDE TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
2. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR AN INSTALLATION THAT IS COMPLETE IN EVERY RESPECT. IT IS NOT THE INTENT TO GIVE EVERY DETAIL ON THE DRAWINGS AND IN THE SPECIFICATIONS. IF AN ITEM OF WORK IS INDICATED IN THE DRAWINGS, IT IS CONSIDERED SUFFICIENT FOR INCLUSION IN THE CONTRACT. FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT USUALLY FURNISHED OR NEEDED TO MAKE A COMPLETE INSTALLATION WHETHER OR NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

GENERAL REQUIREMENTS

1. PROVIDE ALL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL AND STATE ELECTRICAL CODES.
2. THE ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT DIMENSIONS OF THE BUILDING.
3. LOAD CALCULATIONS ARE BASED ON EXISTING BUILDING INFORMATION/DRAWINGS PROVIDED TO ENGINEERING. CONTRACTOR IS TO VERIFY ALL EXISTING RATINGS AND LOADS PRIOR TO PURCHASING OF SPECIFIED EQUIPMENT FOR COMPLIANCE TO NEC. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES AND REQUEST FURTHER DIRECTION BY ENGINEER.
4. EXISTING BUILDING EQUIPMENT IS NOTED ON THE DRAWINGS. NEW OR RELOCATED EQUIPMENT IS SHOWN WITH SOLID LINES. FUTURE EQUIPMENT (NOT IN THIS CONTRACT) IS DEPICTED WITH SHADED LINES. REQUEST CLARIFICATION OF DRAWINGS OR OF SPECIFICATIONS PRIOR TO PRICING OR INSTALLATION.
5. GENERAL
   A. AFTER CAREFULLY STUDYING THE DRAWINGS AND SPECIFICATIONS, AND BEFORE SUBMITTING THE PROPOSAL, MAKE A MANDATORY SITE VISIT TO ASCERTAIN CONDITIONS OF THE SITE, AND THE NATURE AND EXACT QUANTITY OF WORK TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO NOTIFY THE OWNER, IN WRITING, OF ANY DISCREPANCIES THAT MAY HAVE BEEN NOTED BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS AND SPECIFICATIONS.
   B. VERIFY ALL MEASUREMENTS AT THE SITE AND BE RESPONSIBLE FOR CORRECTNESS OF SAME.
6. QUALITY, WORKMANSHIP, MATERIALS AND SAFETY
   A. PROVIDE NEW MATERIALS AND EQUIPMENT OF A DOMESTIC MANUFACTURER BY THOSE REGULARLY ENGAGED IN THE PRODUCTION AND MANUFACTURE OF SPECIFIED MATERIALS AND EQUIPMENT. WHERE UL, OR OTHER AGENCY, HAS ESTABLISHED STANDARDS FOR MATERIALS, PROVIDE MATERIALS WHICH ARE LISTED AND LABELED ACCORDINGLY. THE COMMERCIALLY STANDARD ITEMS OF EQUIPMENT AND THE SPECIFIC NAMES MENTIONED HEREIN ARE INTENDED FOR THE PROPER FUNCTIONING OF THE WORK.
   B. WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE REQUIRED FOR THE WORK. INSTALL MATERIALS AND EQUIPMENT TO PRESENT A NEAT APPEARANCE WHEN COMPLETED AND IN ACCORDANCE WITH THE APPROVED RECOMMENDATIONS OF THE MANUFACTURER AND IN ACCORDANCE WITH CONTRACT DOCUMENTS.
   C. PROVIDE LABOR, MATERIALS, APPARATUS AND APPLIANCES ESSENTIAL TO THE FUNCTIONING OF THE SYSTEMS DESCRIBED OR INDICATED HEREIN, OR WHICH MAY BE REASONABLY IMPLIED AS ESSENTIAL WHENEVER MENTIONED IN THE CONTRACT DOCUMENT OR NOT.
   D. MAKE WRITTEN REQUESTS FOR SUPPLEMENTARY INSTRUCTIONS TO ARCHITECT/ENGINEER IN CASE OF DOUBT AS TO WORK INTENDED OR IN EVENT OF NEED FOR EXPLANATION THEREOF.
   E. PERFORMANCE AND MATERIAL REQUIREMENTS SCHEDULED OR SPECIFIED ARE MINIMUM STANDARD ACCEPTABLE. THE RIGHT TO JUDGE THE QUALITY OF EQUIPMENT THAT DEVIATES FROM THE CONTRACT DOCUMENT REMAINS SOLELY WITH ARCHITECT/ENGINEER. CONTRACT DOCUMENT OR NOT.

GUARANTEE

1. GUARANTEE MATERIALS, PARTS AND LABOR FOR WORK FOR ONE YEAR FROM THE DATE OF ISSUANCE OF OCCUPANCY PERMIT. DURING THAT PERIOD, MAKE GOOD FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP WITH NO ADDITIONAL COMPENSATION AND AS DIRECTED BY ARCHITECT.

CLEANING

1. REMOVE ALL CONSTRUCTION DEBRIS RESULTING FROM THE WORK.
2. CLEAN EQUIPMENT AND SYSTEMS FOLLOWING THE COMPLETION OF THE PROJECT TO THE SATISFACTION OF THE ENGINEER.

COORDINATION AND SUPERVISION

1. CAREFULLY LAY OUT ALL WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS OR OTHER SURFACES. WHERE SUCH WORK IS NECESSARY, HOWEVER, PATCH AND REPAIR THE WORK IN AN APPROVED MANNER BY SKILLED MECHANICS AT NO ADDITIONAL COST TO THE OWNER. RENDER FULL COOPERATION TO OTHER TRADES WHERE WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES. ASSIST IN WORKING OUT SPACE CONDITIONS. IF WORK IS INSTALLED BEFORE COORDINATION WITH OTHER TRADES, OR CAUSES INTERFERENCE, MAKE CHANGES NECESSARY TO CORRECT CONDITIONS WITHOUT EXTRA CHARGE.

SUBMITTALS

1. AS-BUILT DRAWINGS:
   A. UPON COMPLETION OF THE WORK, FURNISH TO THE OWNER "AS-BUILT" DRAWINGS.
2. SERVICE MANUALS:
   A. UPON COMPLETION OF THE WORK, FULLY INSTRUCT T-MOBILE AS TO THE OPERATION AND MAINTENANCE OF ALL MATERIAL, EQUIPMENT AND SYSTEMS.
   B. PROVIDE 3 COMPLETE BOUND SETS OF INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT.

CUTTING AND PATCHING

1. PROVIDE ALL CUTTING, DRILLING, ROUGH AND FINISH PATCHING REQUIRED TO COMPLETE THE WORK.
2. OBTAIN OWNER APPROVAL PRIOR TO CUTTING THROUGH FLOORS OR WALLS FOR PIPING OR CONDUIT.

TESTS, INSPECTION AND APPROVAL

1. BEFORE ENERGIZING ANY ELECTRICAL INSTALLATION, INSPECT EACH UNIT IN DETAIL. TIGHTEN ALL BOLTS AND CONNECTIONS (TORQUE-TIGHTEN WHERE REQUIRED) AND DETERMINE THAT ALL COMPONENTS ARE ALIGNED, AND THE EQUIPMENT IS IN SAFE, OPERATIONAL CONDITION.
2. PROVIDE THE COMPLETE ELECTRICAL SYSTEM FREE OF GROUND FAULTS AND SHORT CIRCUITS SUCH THAT THE SYSTEM WILL OPERATE SATISFACTORILY UNDER FULL LOAD CONDITIONS, WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.

SPECIAL REQUIREMENTS

1. DO NOT LEAVE ANY WORK INCOMPLETE NOR ANY HAZARDOUS SITUATIONS CREATED WHICH WILL AFFECT THE LIFE OR SAFETY OF THE PUBLIC AND/OR BUILDING OCCUPANTS. DO NOT INTERFERE WITH OR CUTOFF ANY OF THE EXISTING SERVICES WITHOUT THE OWNER'S WRITTEN PERMISSION.
2. WHEN NECESSARY TO TEMPORARILY DISCONNECT ANY EXISTING BUILDING UTILITIES AND SERVICE SYSTEMS, INCLUDING FEEDER OR BRANCH CIRCUITING SUPPLYING EXISTING FACILITIES, CONFER WITH THE OWNER AND ARRANGE THE PERIOD OF INTERRUPTION FOR A TIME MUTUALLY AGREED UPON. SHUTDOWN NOTE: SCHEDULE AND NOTIFY OWNER 48 HOURS PRIOR TO SHUTDOWN. ALL SHUTDOWN WORK TO BE SCHEDULED AT A TIME CONVENIENT TO OWNER.

GROUNDING

1. ROUTE ALL GROUNDING CONDUCTORS AS SHOWN ON CONDUIT/GROUNDING RISER.
2. ROUTE 500 KCMIL CU. THHN CONDUCTOR FROM THE MGB LOCATION TO BUILDING STEEL. VERIFY BUILDING STEEL IS EFFECTIVELY GROUNDED PER NEC TO THE MAIN SERVICE GROUNDING ELECTRODE CONDUCTOR (GEC).
3. MAKE ALL GROUND CONNECTIONS FROM MGB TO ELECTRICAL EQUIPMENT WITH 2 HOLE, CRIMP TYPE, BURNDY COMPRESSION TERMINATIONS, SIZED AS REQUIRED.
4. USE 1 HOLE, CRIMP TYPE, BURNDY COMPRESSIONS TERMINATIONS, SIZED AS REQUIRED, AT EQUIPMENT GROUND CONNECTIONS.
5. HIRE AN INDEPENDENT LAB TO PERFORM THE SPECIFIED OHMS TESTING. PROVIDE 4 SETS OF THE CERTIFIED DOCUMENTS TO THE OWNER FOR VERIFICATION PRIOR TO THE PROJECT COMPLETION.

RACEWAYS

1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
   A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
   B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
   C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.
   D. INSTALL PULL ROPES IN ALL NEW EMPTY CONDUITS INSTALLED ON THIS PROJECT.
   E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "T-MOBILE". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
   F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
   G. MINIMUM SIZE CONDUIT TO BE ¾" TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
   I. CONDUIT TO BE RUN CONCEALED IN CEILINGS, FINISHED AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.
   J. THE ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND CLEARANCES.
   K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.

RACEWAYS CONT'D

   L. PENETRATIONS OF WALLS, FLOORS AND ROOFS, FOR THE PASSAGE OF ELECTRICAL RACEWAYS, TO BE PROPERLY SEALED AFTER INSTALLATION OF RACEWAYS SO AS TO MAINTAIN THE STRUCTURAL OR WATERPROOF INTEGRITY OF THE WALL, FLOOR OR ROOF SYSTEM TO BE PENETRATED. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS OR SMOKE TIGHT CORRIDOR PARTITIONS TO MAINTAIN PROPER RATING OF WALL OR CEILING.
   M. PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
   N. CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF 8'-0", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
   O. PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR ALL JUNCTION BOXES AND/OR OUTLET BOXES NOT USED IN EXPOSED AREAS. PROVIDE ALL OTHER UNUSED BOXES WITH STANDARD STEEL COVER PLATES.
   P. WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS, PER BUILDING.

WIRES AND CABLES

1. CONTRACTOR TO COORDINATE WITH EQUIPMENT SUPPLIER AND VENDOR FOR EXACT EQUIPMENT OVER-CURRENT PROTECTION VOLTAGE, WIRE SIZE AND PLUG CONFIGURATION, IF APPLICABLE, PRIOR TO BID.
2. ALL EQUIPMENT/DEVICES TO BE PROVIDED WITH INSULATED GROUND CONDUCTOR.
3. ALL WIRE AND CABLE TO BE 600VOLT, COPPER, WITH THWN/THHN INSULATION, EXCEPT AS NOTED.
4. WIRE FOR POWER AND LIGHTING WILL NOT BE LESS THAN NO. 12AWG. ALL WIRE NO. 8 AND LARGER TO BE STRANDED.
5. CONTROL WIRING IS NOT TO BE LESS THAN NO. 14AWG, FLEXIBLE IN SINGLE CONDUCTORS OR MULTI-CONDUCTOR CABLES. CONTROL WIRING WILL CONSIST OF MULTI-CONDUCTOR CABLES WHEREVER POSSIBLE. CABLES TO BE PROVIDED WITH AN OVERALL FLAME-RETARDANT, EXTRUDED JACKET AND RATED FOR PLENUM USE. ALL CONTROL WIRE TO BE 600VOLT RATED.
6. WIRE PREVIOUSLY PULLED INTO CONDUIT IS CONSIDERED USED AND IS NOT TO BE RE-PULLED.
7. HOME RUNS AND BRANCH CIRCUIT WIRING FOR 20A, 120V CIRCUITS:

LENGTH (FT.)	HOME RUN WIRE SIZE
0 TO 50	NO. 12
51 TO 100	NO. 10
101 TO 150	NO. 8

8. VOLTAGE DROP IS NOT TO EXCEED 3%.
9. MAKE ALL CONNECTIONS WITH UL APPROVED, SOLDERLESS, PRESSURE TYPE INSULATED CONNECTORS: SCOTCHLOK OR AND APPROVED EQUAL.

WIRING DEVICES

1. ALL RECEPTACLES INSTALLED IN THIS PROJECT TO BE GROUNDING TYPE, WITH GROUNDING PIN SLOT CONNECTED TO DEVICE GROUND SCREW FOR GROUND WIRE CONNECTION.

DISCONNECT SWITCHES AND FUSES

1. DISCONNECT SWITCHES TO BE VOLTAGE-RATED TO SUIT THE CHARACTERISTICS OF THE SYSTEM FROM WHICH THEY ARE SUPPLIED.
2. PROVIDE HEAVY-DUTY, METAL-ENCLOSED, EXTERNALLY-OPERATED DISCONNECT SWITCHES, FUSED OR UNFUSED, OF SUCH TYPE AND SIZE AS REQUIRED TO PROPERLY PROTECT OR DISCONNECT THE LOAD FOR WHICH THEY ARE INTENDED.
3. PROVIDE NEMA 1 DISCONNECT SWITCHES FOR INTERIOR INSTALLATION, NEMA 3R FOR EXTERIOR INSTALLATION.
4. DISCONNECT SWITCHES TO BE MANUFACTURED BY:
   A. GENERAL ELECTRIC COMPANY
   B. SQUARE-D
5. PROVIDE RK-1 TYPE FUSES, UNLESS NOTED OTHERWISE.

INSTALLATION

1. INSTALL DISCONNECT SWITCHES WHERE INDICATED ON DRAWINGS.
2. INSTALL FUSES IN FUSIBLE DISCONNECT SWITCHES. FUSES MUST MATCH IN TYPE AND RATING.
3. FUSES TO BE MOUNTED SO THAT THE LABELS SHOWING THEIR RATINGS CAN BE READ WITHOUT REQUIRING FUSE REMOVAL.
4. FURNISH AND DEPOSIT SPARE FUSES AT THE JOB SITE AS FOLLOWS:
   A. THREE SPARES FOR EACH TYPE AND SIZE, IN EXCESS OF 60A, USED FOR INITIAL FUSING.
   B. TEN PERCENT SPARES FOR EACH TYPE AND SIZE, UP TO AND INCLUDING 60A, USED FOR INITIAL FUSING. IN NO CASE WILL LESS THAN THREE FUSES OF ONE PARTICULAR TYPE AND SIZE BE FURNISHED.

GENERAL NOTES:

INTENT

1. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION.
2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH
3. THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.
4. THE PURPOSE OF THE SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIALS REQUIRED TO COMPLETE THE WORK.
5. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

CONFLICTS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATIONS OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE OWNER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
2. THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING SUCH BIDDER MIGHT HAVE FULLY INFORMED THEMSELVES PRIOR TO THE BIDDING.
3. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED IN THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS GOVERNING THE WORK.

CONTRACTS AND WARRANTIES

1. CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES AND BONDS.
2. SEE MASTER CONTRACTION SERVICES AGREEMENT FOR ADDITIONAL DETAILS.

STORAGE

1. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION AND IN A MANNER THAT DOES NOT NECESSARILY OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER.

CLEANUP

1. THE CONTRACTORS SHALL, AT ALL TIMES, KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR EMPLOYEES AT WORK AND AT THE COMPLETION OF THE WORK. THEY SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING AREA, INCLUDING ALL THEIR TOOLS, SCAFFOLDING AND SURPLUS MATERIALS AND SHALL LEAVE THEIR WORK CLEAN AND READY TO USE.
2. EXTERIOR
   A. VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
   B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
   C. IF NECESSARY, TO ACHIEVE A UNIFORM DEGREE OF CLEANLINESS, HOSE DOWN THE EXTERIOR OF THE STRUCTURE.
3. INTERIOR
   A. VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER FROM WALLS, FLOOR, AND CEILING.
   B. REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
   C. REMOVE PAINT DROPPINGS, SPOTS, STAINS, AND DIRT FROM FINISHED SURFACES.

CHANGE ORDER PROCEDURE:

1. REFER TO SECTION 17 OF SIGNED MCSA: SEE PROFESSIONAL SERVICE AGREEMENT FOR MCSA.

RELATED DOCUMENTS AND COORDINATION

1. GENERAL CARPENTRY, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

SHOP DRAWINGS

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS REQUIRED AND LISTED IN THESE SPECIFICATIONS TO THE OWNER FOR APPROVAL.
2. ALL SHOP DRAWINGS SHALL BE REVIEWED, CHECKED AND CORRECTED BY CONTRACTOR PRIOR TO SUBMITTAL TO THE OWNER.

PRODUCTS AND SUBSTITUTIONS

1. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST, IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.
2. SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE OWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT SHEETS.

QUALITY ASSURANCE

1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THESE SHALL INCLUDE, BUT NOT BE LIMITED TO THE APPLICABLE CODES SET FORTH BY THE LOCAL GOVERNING BODY. SEE "CODE COMPLIANCE" T-1.

ADMINISTRATION

1. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
2. SUBMIT A BAR TYPE PROGRESS CHART, NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK ON THE SCHEDULE, INDICATING A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT THE SITE, PROPERLY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK AND SHOWING COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.
3. PRIOR TO COMMENCING CONSTRUCTION, THE OWNER SHALL SCHEDULE AN ON-SITE MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE, BUT NOT LIMITED TO, THE OWNER, PROJECT MANAGER, CONTRACTOR, LAND OWNER REPRESENTATIVE, LOCAL TELEPHONE COMPANY, TOWER ERECTION FOREMAN (IF SUBCONTRACTED).
4. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A MOBILE PHONE OR A BEEPER. THIS EQUIPMENT WILL NOT BE SUPPLIED BY THE OWNER, NOR WILL WIRELESS SERVICE BE ARRANGED.
5. DURING CONSTRUCTION, CONTRACTOR MUST ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES. CONTRACTOR WILL COMPLY WITH ALL WPCS SAFETY REQUIREMENTS IN THEIR AGREEMENT.
6. PROVIDE WRITTEN DAILY UPDATES ON SITE PROGRESS TO THE OWNER.
7. COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.
8. NOTIFY THE OWNER/PROJECT MANAGER IN WRITING NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, TOWER ERECTIONS, AND EQUIPMENT CABINET PLACEMENTS.

INSURANCE AND BONDS

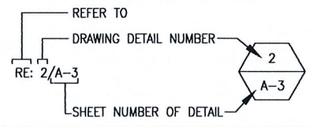
1. CONTRACTOR, AT THEIR OWN EXPENSE, SHALL CARRY AND MAINTAIN, FOR THE DURATION OF THE PROJECT, ALL INSURANCE, AS REQUIRED AND LISTED, AND SHALL NOT COMMENCE WITH THEIR WORK UNTIL THEY HAVE PRESENTED AN ORIGINAL CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE OWNER. REFER TO THE MASTER AGREEMENT FOR REQUIRED INSURANCE LIMITS.
2. THE OWNER SHALL BE NAMED AS AN ADDITIONAL INSURED ON ALL POLICIES.
3. CONTRACTOR MUST PROVIDE PROOF OF INSURANCE.

ARCHITECTURAL SYMBOLS

ROOM ###

X

DETAIL REFERENCE KEY



ABBREVIATIONS

ADJ	ADJUSTABLE
AGL	ABOVE GROUND LINE
&	AND
APPROX	APPROXIMATE
@	AT
BTS	BASE TRANSMISSION STATION
CAB	CABINET
CLG	CEILING
CONC	CONCRETE
CONT	CONTINUOUS
DIA OR ø	DIAMETER
DWG	DRAWING
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EGB	EQUIPMENT GROUND BAR
(E)	EXISTING
EXT	EXTERIOR
FF	FINISHED FLOOR
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GRND	GROUND
LG	LONG
MAX	MAXIMUM
MECH	MECHANICAL
MW	MICROWAVE DISH
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
(P)	PROPOSED
PCS	PERSONAL COMMUNICATION SYSTEM
PPC	POWER PROTECTION CABINET
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SS	STAINLESS STEEL
STL	STEEL
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TYP	TYPICAL
VIF	VERIFY IN FIELD
UON	UNLESS OTHERWISE NOTED
WWF	WELDED WIRE FABRIC
W/	WITH

T-Mobile

T-MOBILE NORTHEAST LLC
400 STREET ROAD
BENSALEM, PA 19020

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SUBMITTALS

DATE	DESCRIPTION	REVISION
4/23/13	REVIEW	A
5/3/13	FOR PERMIT	0

DEPT.	DATE	APP'D	REVISIONS
RFE			
RF MAN.			
ZONING			
OPS			
CONSTR.			
SITE AC.			

PROJECT NO:	317-0974
DRAWN BY:	SKB
CHECKED BY:	AJD

STATE OF CONNECTICUT
JOHN STEVEN YOUNG
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

NOTE: IF DRAWINGS ARE 22"x34", USE GRAPHICAL SCALE AND/OR 1/2 TIMES OF THE NOTED SCALE.

SITE NAME
CTNH102C
CT 102/BRANFORD AMERICAN TOWER
405 BRUSHY PLAIN ROAD
BRANFORD, CT 06405

SHEET TITLE
GENERAL AND ELECTRICAL NOTES

SHEET NUMBER
N-1

SHEET 8 OF 8 SHEETS