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

May 7, 2014

Hand Delivered

Ms. Melanie A. Bachman
Acting 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 260 Beckley Road, Berlin, CT 06037. Known to T-Mobile Northeast LLC as site CT11182A.

Dear Ms. Bachman:

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 (845) 499-4712 or email jnotaro@transcendwireless.com with questions concerning this matter.

Thank you for your consideration.

Sincerely,

Jennifer Notaro
(845) 499-4712

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environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11182A

Berlin / Rt 9 / X22_1
260 Beckley Road
Berlin, CT 06037

May 5, 2014

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

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May 5, 2014

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

Re: Emissions Values for Site: **CT11182A - Berlin / Rt 9 / X22_1**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 260 Beckley Road, Berlin, 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 and AWS bands 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 260 Beckley Road, Berlin, 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) 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 **163 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 calculations were done with respect to uncontrolled / general public threshold limits.

Site ID	CT11182A - Berlin / Rt 9 / X22_1
Site Address	260 Beckley Road, Berlin, CT 06037
Site Type	Self Support Tower

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	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	7/8"	1.2	0	18.329527	0.267336	0.02673%
1B	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	163	157	7/8"	1.2	0	48.878738	0.712897	0.07129%
														Sector total Power Density Value:		0.098%	

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	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	7/8"	1.2	0	18.329527	0.267336	0.02673%
1B	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	163	157	1-5/8"	1.2	0	48.878738	0.712897	0.07129%
														Sector total Power Density Value:		0.098%	

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	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	163	157	7/8"	1.2	0	18.329527	0.267336	0.02673%
1B	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	163	157	1-5/8"	1.2	0	48.878738	0.712897	0.07129%
														Sector total Power Density Value:		0.098%	

Site Composite MPE %

Carrier	MPE %
T-Mobile	0.294%
AT&T	13.920%
MetroPCS	6.030%
Berlin FD	0.160%
Verizon Wireless	31.860%
Sprint	7.230%
Nextel	9.390%
Total Site MPE %	**68.884%**

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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 **0.294% (0.098% 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 **68.884%** 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 well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

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Structural Analysis Report

Structure	:	**162 ft Monopole**
ATC Site Name	:	**Brln - Berlin, CT**
ATC Site Number	:	**302483**
Engineering Number	:	**57303023**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**Brln - Berlin**
Carrier Site Number	:	**CT11182A**
Site Location	:	**260 Beckley Road** **Kensington, CT 06037-2419** **41.631722, -72.729900**
County	:	**Hartford**
Date	:	**April 30, 2014**
Max Usage	:	**95%**
Result	:	**Pass**

Isaac P. Dodson
Structural Engineer I

Isaac P. Dodson

STATE OF CONNECTICUT
WILLIAM GARRETT
No. 23235
LICENSED
PROFESSIONAL ENGINEER

Apr 30 2014 5:35 PM

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 162 ft monopole to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	ITT Meyer Type "B", dated July 21, 2001 Smith Cullum Mapping Acq. #CT-0019, dated July 21, 2001
Geotechnical Report	Daniel G. Loucks Project #CT-0019, dated December 21, 2001
Modifications	Scientel Project Berlin-CT0019, dated July 30, 2002

Analysis

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

Basic Wind Speed:	80 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	69 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (5) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
163.0	-	-	-	-	(12) 1 5/8" Coax	T-Mobile
150.0	152.0	1	Raycap DC6-48-60-18-8F	Platform w/ Handrails	(12) 1 1/4" Coax (2) 19.7 mm Cable (1) 10 mm Cable (1) 3" Conduit	AT&T Mobility
		6	Powerwave Allgon LGP21401			
		6	Ericsson RRUS 11			
		3	Powerwave Allgon 7770.00			
		6	KMW AM-X-CD-16-65-00T-RET			
142.0	142.0	3	RFS APXV18-206517LS-C	Flush	(12) 1 5/8" Coax	MetroPCS
127.0	127.0	3	RFS IBC1900BB-1	Low Profile Platform	(12) 1 5/8" Coax (3) 1 1/4" Hybriflex	Sprint Nextel
		3	RFS IBC1900HG-2A			
		3	Alcatel-Lucent 800MHz 2X50W R			
		3	Powerwave Allgon 7184.14			
		6	Alcatel-Lucent 4X40W RRH			
		1	RFS APXV9ERR18-C-A20			
		2	RFS APXVSPP18-C-A20			
116.0	116.0	3	Alcatel-Lucent RRH2x40-AWS	Low Profile Platform	(19) 1 5/8" Coax	Verizon
		6	Antel BXA-171063-8BF-EDIN-X			
		1	RFS DB-T1-6Z-8AB-0Z			
		2	Andrew LNX-6514DS-T4M			
		1	RFS APX75-866514-CT0			
		6	Antel LPA-80063-6CF-EDIN-X			
106.0	106.0	3	48" x 6" Panel	Flush	(6) 1 1/4" Coax	AT&T Mobility
96.0	96.0	12	Decibel 844G65VTZASX	Low Profile Platform	(15) 1 5/8" Coax	Sprint Nextel

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
163.0	163.0	6	Andrew ETW200VA12UB	-	-	T-Mobile

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
163.0	163.0	3	Ericsson AIR 21, 1.3M, B2A B4P	Flush	(1) 1 5/8" Fiber	T-Mobile
		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).

Install proposed coax outside the pole shaft. Stacking coax is not allowed.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	60%	Pass
Shaft	95%	Pass
Base Plate	66%	Pass

Foundations

Reaction Component	Analysis Reactions
Moment (Kips-Ft)	3,565.9
Axial (Kips)	63.8
Shear (Kips)	36.1

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) (°)
163.0	5.783	3.753

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

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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:

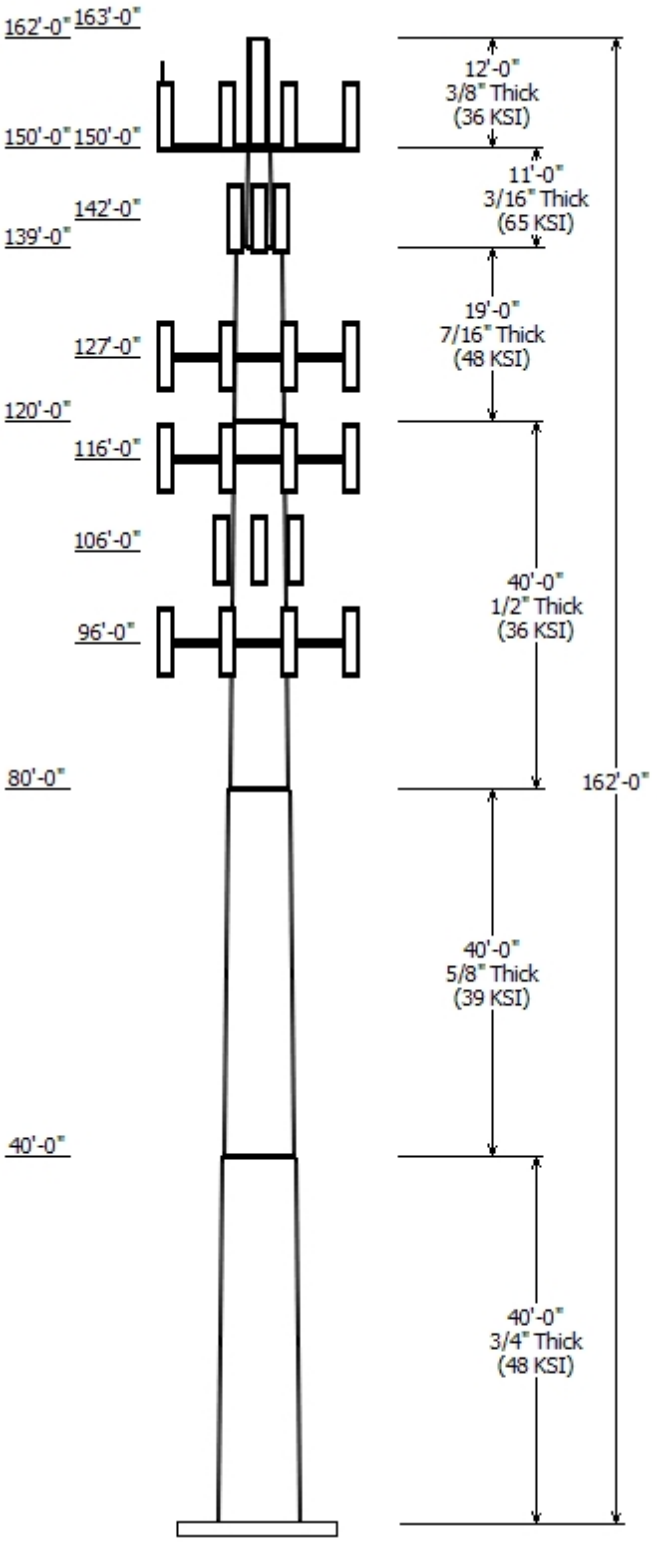
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 :	302483	Code: TIA/EIA-222 Rev F
Description :	150 ft ITT Meyer Monopole	
Client :	T- Mobile	
Location :	Brln - Berlin, CT	
Shape :	12 Sides	
Height :	162.00 (ft)	
Base Elev (ft):	0.00	
Taper:	0.18970 (in/ft)	

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	40.000	43.71	51.30	0.750		0.000	0.189701	48
2	40.000	36.09	43.68	0.625	Butt Joint	0.000	0.189701	39
3	40.000	28.50	36.09	0.500	Butt Joint	0.000	0.189701	36
4	19.000	24.90	28.50	0.438	Butt Joint	0.000	0.189701	48
5	11.000	15.00	16.72	0.188	Butt Joint	0.000	0.156364	65
6	12.000	12.00	12.00	0.375	Butt Joint	0.000	0.000000	36

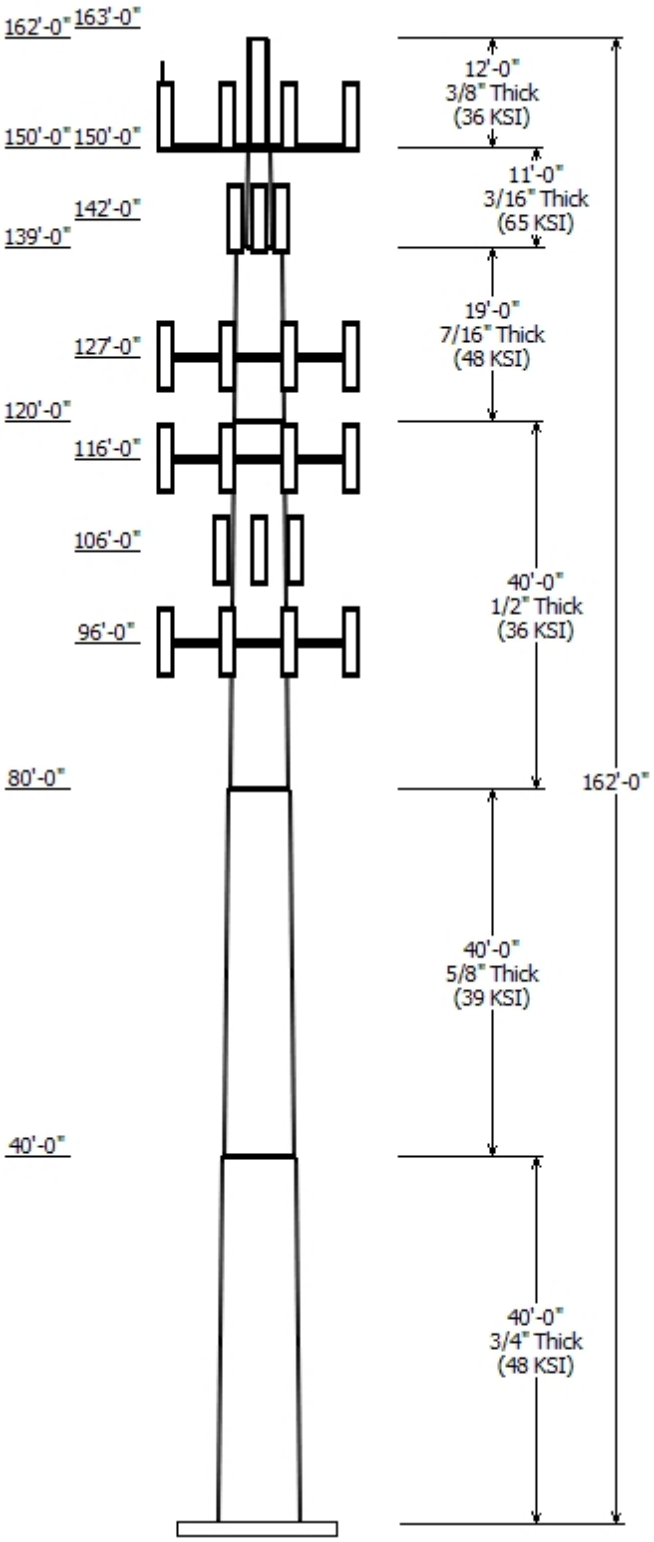
Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
163.000	163.000	3	Ericsson AIR 21, 1.3M, B2A B4P
163.000	163.000	3	Ericsson KRY 112 144/1
150.000	152.000	6	KMW AM-X-CD-16-65-00T-RET
150.000	152.000	6	Ericsson RRUS 11
150.000	152.000	1	Raycap DC6-48-60-18-8F
150.000	152.000	6	Powerwave LGP21401
150.000	152.000	3	Powerwave 7770.00
150.000	150.000	1	Flat Platform w/ Handrails
150.000	156.500	1	Concealment Canister
142.000	142.000	3	RFS APXV18-206517LS-C
127.000	127.000	1	Flat Low Profile Platform
127.000	127.000	1	RFS APXV9ERR18-C-A20
127.000	127.000	2	RFS APXVSPP18-C-A20
127.000	127.000	6	Alcatel-Lucent 4X40W RRH
127.000	127.000	3	Alcatel-Lucent 800 MHz 2X50W
127.000	127.000	3	RFS IBC1900BB-1
127.000	127.000	3	RFS IBC1900HG-2A
127.000	127.000	3	Allgon 7184
116.000	116.000	3	Alcatel-Lucent RRH2x40-AWS
116.000	116.000	1	RFS DB-T1-6Z-8AB-0Z
116.000	116.000	6	Antel LPA-80063-6CF-EDIN-X
116.000	116.000	1	RFS APX75-866514-CT0
116.000	116.000	2	Andrew LNX-6514DS-T4M
116.000	116.000	6	Antel BXA-171063-8BF-EDIN-X
116.000	116.000	1	Round Low Profile Platform
106.000	106.000	3	48" x 6" Panel
96.000	96.000	1	Flat Low Profile Platform
96.000	96.000	12	Decibel 844G65VTZASX

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
142.0	163.0	1 5/8" Coax	Yes
127.0	142.0	1 5/8" Coax	Yes
5.000	152.0	1 1/4" Coax	No
5.000	152.0	10 mm Cable	No
5.000	152.0	19.7 mm Cable	No
5.000	152.0	3" Conduit	No
5.000	163.0	1 5/8" Coax	No

5.000	163.0	1 5/8" Fiber Cable	Yes
5.000	96.000	1 5/8" Coax	Yes
5.000	96.000	1 5/8" Coax	No
5.000	106.0	1 1/4" Coax	No
5.000	116.0	1 5/8" Coax	Yes
5.000	127.0	1 1/4" Hybriflex	Yes
5.000	127.0	1 5/8" Coax	No
5.000	127.0	1 5/8" Coax	Yes
5.000	142.0	1 5/8" Coax	Yes



Load Cases

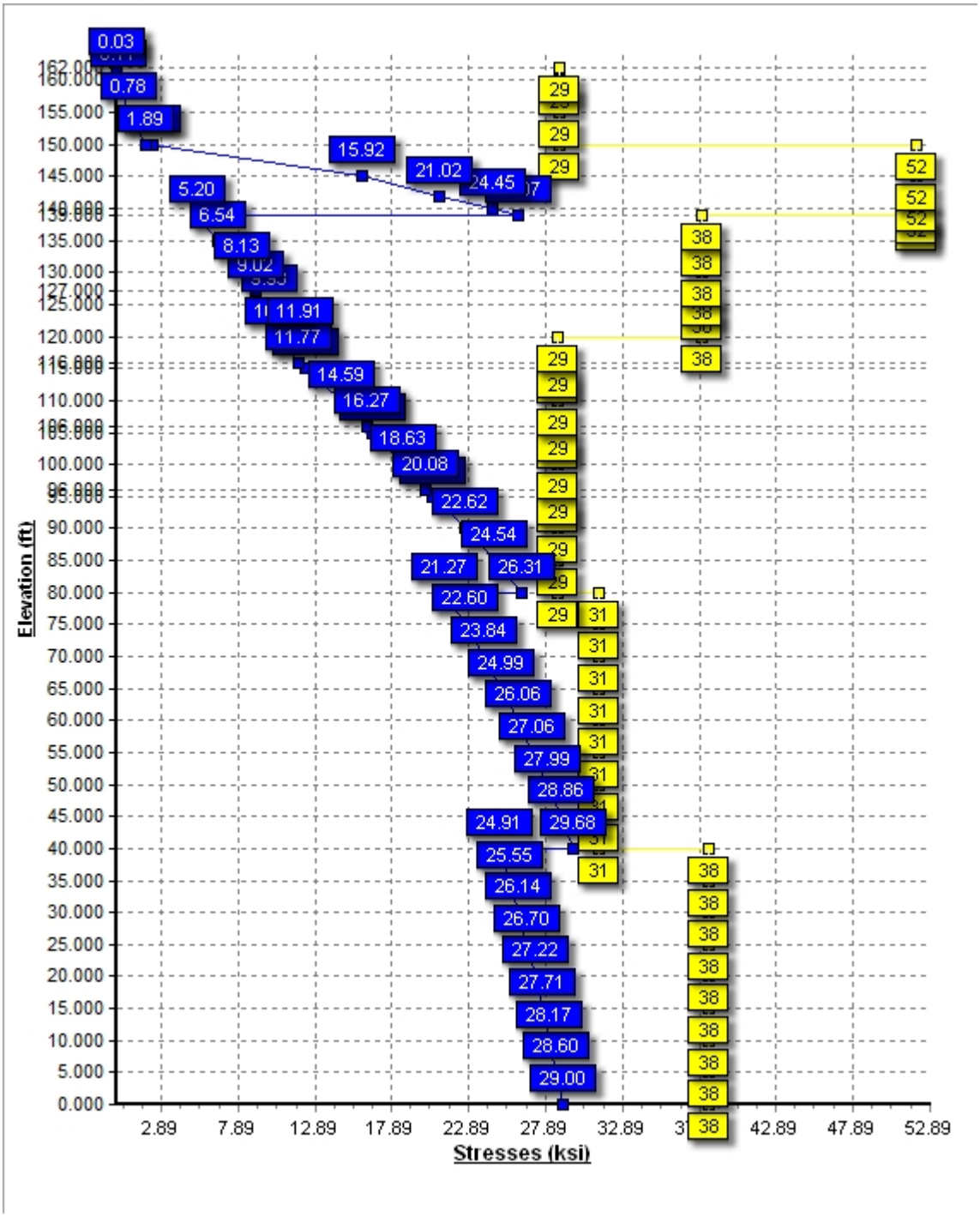
No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	3565.90	36.05	53.65
Ice	3083.04	30.16	63.82
Twist/Sway	1393.91	14.08	53.69

Dish Deflections

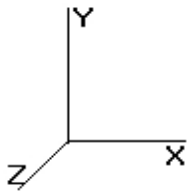
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Elevation (ft)
Stresses (ksi)
0.03
0.78
1.89
5.20
6.54
8.13
11.91
11.77
14.59
16.27
18.63
20.08
22.62
24.54
21.27
26.31
22.60
23.84
24.99
26.06
27.06
27.99
28.86
24.91
29.68
25.55
26.14
26.70
27.22
27.71
28.17
28.60
29.00
15.92
21.02
24.45
29
31
38
52
2.89
7.89
12.89
17.89
22.89
27.89
32.89
42.89
47.89
52.89

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



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Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	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	40.000	0.7500	48		0.00	15,369	51.30	0.00	122.08	39816.6	16.18	68.40	43.71	40.00	103.75	24442.9	13.47	58.28	0.189701
2-12	40.000	0.6250	39	Butt	0.00	10,755	43.68	40.00	86.65	20501.8	16.58	69.89	36.09	80.00	71.38	11460.3	13.33	57.75	0.189701
3-12	40.000	0.5000	36	Butt	0.00	6,968	36.09	80.00	57.30	9265.7	17.20	72.18	28.50	120.00	45.09	4513.2	13.13	57.01	0.189701
4-12	19.000	0.4375	48	Butt	0.00	2,392	28.50	120.00	39.54	3975.5	15.31	65.15	24.90	139.00	34.46	2632.2	13.11	56.91	0.189701
5-12	11.000	0.1875	65	Butt	0.00	354	16.72	139.00	9.98	348.2	21.75	89.17	15.00	150.00	8.94	250.4	19.29	80.00	0.156364
6-12	12.000	0.3750	36	Butt	0.00	573	12.00	150.00	14.04	242.1	6.43	32.00	12.00	162.00	14.04	242.1	6.43	32.00	0.000000
				Shaft Weight		36,411													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
163.00	Ericsson AIR 21, 1.3M, B2A	3	83.00	0.000	0.71	132.60	7.200	0.71	0.000	0.000
163.00	Ericsson KRY 112 144/1	3	11.00	0.000	0.86	14.10	0.550	0.86	0.000	0.000
150.00	Concealment Canister	1	200.00	15.000	1.00	300.00	20.000	1.00	0.000	6.500
150.00	Ericsson RRUS 11	6	55.00	2.940	0.50	74.30	3.290	0.50	0.000	2.000
150.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	2,450.00	48.400	1.00	0.000	0.000
150.00	KMW AM-X-CD-16-65-00T-	6	48.50	8.260	0.67	95.00	9.080	0.67	0.000	2.000
150.00	Powerwave 7770.00	3	35.00	5.880	0.65	67.75	6.530	0.65	0.000	2.000
150.00	Powerwave LGP21401	6	14.10	1.290	0.33	21.26	1.530	0.33	0.000	2.000
150.00	Raycap DC6-48-60-18-8F	1	20.00	1.260	1.00	35.10	1.460	1.00	0.000	2.000
142.00	RFS APXV18-206517LS-C	3	22.00	5.020	0.68	48.13	5.700	0.68	0.000	0.000
127.00	Alcatel-Lucent 4X40W RRH	6	59.50	2.910	0.50	82.60	3.070	0.50	0.000	0.000
127.00	Alcatel-Lucent 800 MHz	3	64.00	2.400	0.50	86.10	2.720	0.50	0.000	0.000
127.00	Allgon 7184	3	11.20	2.680	0.65	27.10	3.280	0.65	0.000	0.000
127.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
127.00	RFS APXV9ERR18-C-A20	1	62.00	8.020	0.71	113.90	9.080	0.71	0.000	0.000
127.00	RFS APXVSPP18-C-A20	2	57.00	8.260	0.71	106.50	9.080	0.71	0.000	0.000
127.00	RFS IBC1900BB-1	3	22.00	1.130	0.33	59.80	1.360	0.33	0.000	0.000
127.00	RFS IBC1900HG-2A	3	22.00	1.130	0.33	59.80	1.360	0.33	0.000	0.000
116.00	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.520	0.50	61.40	2.870	0.50	0.000	0.000
116.00	Andrew LNX-6514DS-T4M	2	38.40	8.410	0.77	88.90	9.240	0.77	0.000	0.000
116.00	Antel BXA-171063-8BF-EDIN-X	6	10.50	2.940	0.71	29.30	3.410	0.71	0.000	0.000
116.00	Antel LPA-80063-6CF-EDIN-X	6	27.00	10.500	0.75	101.90	11.350	0.75	0.000	0.000
116.00	RFS APX75-866514-CT0	1	30.80	9.760	1.00	81.10	10.690	1.00	0.000	0.000
116.00	RFS DB-T1-6Z-8AB-0Z	1	110.00	4.800	1.00	144.50	6.080	1.00	0.000	0.000
116.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
106.00	48" x 6" Panel	3	20.00	2.870	0.67	40.00	4.000	0.67	0.000	0.000
96.00	Decibel 844G65VTZASX	12	16.00	5.890	0.71	55.00	6.500	0.71	0.000	0.000
96.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
	Totals	91	9595.80			13,491.87			Number of Loadings :	28

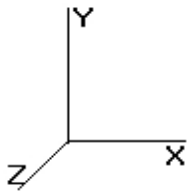
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
5.00	163.00	(6) 1 5/8" Coax	4.92	0.00	0.00	0.00	N
5.00	163.00	(1) 1 5/8" Fiber Cable	1.61	0.00	0.00	0.00	Y
142.00	163.00	(6) 1 5/8" Coax	4.92	0.20	9.46	0.25	Y
5.00	152.00	(12) 1 1/4" Coax	7.56	0.00	0.00	0.00	N
5.00	152.00	(1) 10 mm Cable	0.07	0.00	0.00	0.00	N

Pole :	302483
Location :	Brln - Berlin, CT
Height :	162.0 (ft)
Base Dia :	51.30 (in)
Top Dia :	12.00 (in)
Shape :	12 Sides
Taper :	0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



5.00	152.00	(2) 19.7 mm Cable	1.18	0.00	0.00	0.00	N
5.00	152.00	(1) 3" Conduit	7.58	0.00	0.00	0.00	N
5.00	142.00	(6) 1 5/8" Coax	4.92	0.00	9.46	0.00	Y
127.00	142.00	(6) 1 5/8" Coax	4.92	0.20	9.46	0.25	Y
5.00	127.00	(3) 1 1/4" Hybriflex	1.89	0.16	3.77	0.21	Y
5.00	127.00	(6) 1 5/8" Coax	2.46	0.00	0.00	0.00	N
5.00	127.00	(6) 1 5/8" Coax	4.92	0.00	9.46	0.00	Y
5.00	116.00	(19) 1 5/8" Coax	9.84	0.59	18.93	0.64	Y
5.00	106.00	(6) 1 1/4" Coax	0.63	0.00	0.00	0.00	N
5.00	96.00	(6) 1 5/8" Coax	4.92	0.39	9.46	0.44	Y
5.00	96.00	(9) 1 5/8" Coax	7.38	0.00	0.00	0.00	N
		Total Weight	7,698.34 (lb)		6,212.73 (lb)		

Pole : 302483
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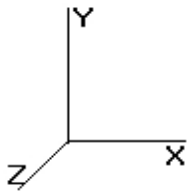
Code: TIA/EIA-222 Rev F

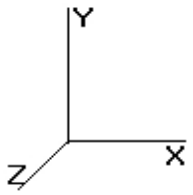
Base Elev : 0.000 (ft)



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)	Fb (ksi)	Weight (lb)
0.00		0.7500	51.300	122.078	39,816.6	16.18	68.40	48	38	0.0
5.00		0.7500	50.351	119.787	37,617.1	15.85	67.14	48	38	2,057.5
10.00		0.7500	49.403	117.497	35,500.1	15.51	65.87	48	38	2,018.6
15.00		0.7500	48.454	115.206	33,464.0	15.17	64.61	48	38	1,979.6
20.00		0.7500	47.506	112.915	31,507.4	14.83	63.34	48	38	1,940.6
25.00		0.7500	46.557	110.625	29,628.5	14.49	62.08	48	38	1,901.6
30.00		0.7500	45.609	108.334	27,825.8	14.15	60.81	48	38	1,862.7
35.00		0.7500	44.660	106.044	26,097.8	13.81	59.55	48	38	1,823.7
40.00	Top - Section 1	0.7500	43.712	103.753	24,442.9	13.47	58.28	48	38	1,784.7
40.00	Bot - Section 2	0.6250	43.680	86.648	20,501.8	16.58	69.89	39	31	
45.00		0.6250	42.731	84.739	19,176.5	16.18	68.37	39	31	1,458.0
50.00		0.6250	41.783	82.830	17,909.5	15.77	66.85	39	31	1,425.5
55.00		0.6250	40.834	80.922	16,699.7	15.36	65.34	39	31	1,393.0
60.00		0.6250	39.886	79.013	15,545.5	14.96	63.82	39	31	1,360.6
65.00		0.6250	38.937	77.104	14,445.8	14.55	62.30	39	31	1,328.1
70.00		0.6250	37.989	75.195	13,399.3	14.14	60.78	39	31	1,295.6
75.00		0.6250	37.040	73.286	12,404.5	13.74	59.26	39	31	1,263.1
80.00	Top - Section 2	0.6250	36.092	71.377	11,460.3	13.33	57.75	39	31	1,230.6
80.00	Bot - Section 3	0.5000	36.092	57.303	9,265.7	17.20	72.18	36	29	
85.00		0.5000	35.144	55.776	8,544.5	16.69	70.29	36	29	962.0
90.00		0.5000	34.195	54.249	7,861.7	16.18	68.39	36	29	936.0
95.00		0.5000	33.247	52.722	7,216.3	15.67	66.49	36	29	910.0
96.00		0.5000	33.057	52.417	7,091.6	15.57	66.11	36	29	178.9
100.0		0.5000	32.298	51.195	6,607.2	15.16	64.60	36	29	705.1
105.0		0.5000	31.350	49.668	6,033.4	14.66	62.70	36	29	858.0
106.0		0.5000	31.160	49.363	5,922.8	14.55	62.32	36	29	168.5
110.0		0.5000	30.401	48.141	5,493.9	14.15	60.80	36	29	663.6
115.0		0.5000	29.453	46.614	4,987.4	13.64	58.91	36	29	806.1
116.0		0.5000	29.263	46.308	4,890.0	13.54	58.53	36	29	158.1
120.0	Top - Section 3	0.5000	28.504	45.087	4,513.2	13.13	57.01	36	29	622.0
120.0	Bot - Section 4	0.4375	28.504	39.539	3,975.5	15.31	65.15	48	38	
125.0		0.4375	27.556	38.203	3,585.9	14.73	62.98	48	38	661.3
127.0		0.4375	27.176	37.668	3,437.5	14.50	62.12	48	38	258.2
130.0		0.4375	26.607	36.866	3,222.6	14.15	60.82	48	38	380.4
135.0		0.4375	25.659	35.530	2,884.8	13.57	58.65	48	38	615.9
139.0	Top - Section 4	0.4375	24.900	34.461	2,632.2	13.11	56.91	48	38	476.3
139.0	Bot - Section 5	0.1875	16.720	9.981	348.2	21.75	89.17	65	52	
140.0		0.1875	16.564	9.887	338.4	21.53	88.34	65	52	33.8
142.0		0.1875	16.251	9.698	319.4	21.08	86.67	65	52	66.6
145.0		0.1875	15.782	9.415	292.2	20.41	84.17	65	52	97.6
150.0	Top - Section 5	0.1875	15.000	8.943	250.4	19.29	80.00	65	52	156.2
150.0	Bot - Section 6	0.3750	12.000	14.037	242.1	6.43	32.00	36	29	
155.0		0.3750	12.000	14.037	242.1	6.43	32.00	36	29	238.8
160.0		0.3750	12.000	14.037	242.1	6.43	32.00	36	29	238.8
162.0		0.3750	12.000	14.037	242.1	6.43	32.00	36	29	95.5
										36,411.3

Pole :	302483	Code: TIA/EIA-222 Rev F	4/30/2014 8:43:32 AM
Location :	Brln - Berlin, CT		Page: 4
Height :	162.0 (ft)		
Base Dia :	51.30 (in)		
Top Dia :	12.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.189701 (in/ft)		



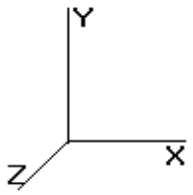
Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	16.384	27.68	341.99	1.030	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	16.384	27.68	335.67	1.030	0.000	5.00	21.177	21.81	604.0	0.0	2,057.5
10.00		0.00	1.00	16.384	27.68	329.35	1.030	0.000	5.00	20.782	21.41	592.7	0.0	2,018.6
15.00		0.00	1.00	16.384	27.68	323.02	1.030	0.000	5.00	20.387	21.00	581.4	0.0	1,979.6
20.00		0.00	1.00	16.384	27.68	316.70	1.030	0.000	5.00	19.992	20.59	570.2	0.0	1,940.6
25.00		0.00	1.00	16.384	27.68	310.38	1.030	0.000	5.00	19.597	20.18	558.9	0.0	1,901.6
30.00		0.00	1.00	16.384	27.68	304.05	1.030	0.000	5.00	19.201	19.78	547.6	0.0	1,862.7
35.00		0.00	1.01	16.662	28.15	300.24	1.030	0.000	5.00	18.806	19.37	545.4	0.0	1,823.7
40.00	Top - Section 1	0.00	1.05	17.310	29.25	299.53	1.030	0.000	5.00	18.411	18.96	554.7	0.0	1,784.7
45.00		0.00	1.09	17.902	30.25	297.78	1.030	0.000	5.00	18.002	18.54	561.0	0.0	1,458.0
50.00		0.00	1.12	18.449	31.17	295.58	1.030	0.000	5.00	17.607	18.14	565.4	0.0	1,425.5
55.00		0.00	1.15	18.959	32.04	292.83	1.030	0.000	5.00	17.212	17.73	568.0	0.0	1,393.0
60.00		0.00	1.18	19.436	32.84	289.61	1.030	0.000	5.00	16.817	17.32	568.9	0.0	1,360.6
65.00		0.00	1.21	19.885	33.60	285.97	1.030	0.000	5.00	16.422	16.91	568.4	0.0	1,328.1
70.00		0.00	1.24	20.311	34.32	281.98	1.030	0.000	5.00	16.026	16.51	566.6	0.0	1,295.6
75.00		0.00	1.26	20.715	35.00	277.66	1.030	0.000	5.00	15.631	16.10	563.6	0.0	1,263.1
80.00	Top - Section 2	0.00	1.28	21.101	35.66	273.06	1.030	0.000	5.00	15.236	15.69	559.6	0.0	1,230.6
85.00		0.00	1.31	21.469	36.28	268.19	1.030	0.000	5.00	14.841	15.29	554.6	0.0	962.0
90.00		0.00	1.33	21.823	36.88	263.10	1.030	0.000	5.00	14.446	14.88	548.7	0.0	936.0
95.00		0.00	1.35	22.163	37.45	257.78	1.030	0.000	5.00	14.050	14.47	542.0	0.0	910.0
96.00	Appertunance(s)	0.00	1.35	22.229	37.56	256.69	1.030	0.000	1.00	2.763	2.85	106.9	0.0	178.9
100.0		0.00	1.37	22.490	38.00	252.27	1.030	0.000	4.00	10.893	11.22	426.4	0.0	705.1
105.0		0.00	1.39	22.806	38.54	246.57	1.030	0.000	5.00	13.260	13.66	526.4	0.0	858.0
106.0	Appertunance(s)	0.00	1.39	22.867	38.64	245.41	1.030	0.000	1.00	2.605	2.68	103.7	0.0	168.5
110.0		0.00	1.41	23.111	39.05	240.71	1.030	0.000	4.00	10.260	10.57	412.8	0.0	663.6
115.0		0.00	1.42	23.406	39.55	234.68	1.030	0.000	5.00	12.470	12.84	508.0	0.0	806.1
116.0	Appertunance(s)	0.00	1.43	23.464	39.65	233.46	1.030	0.000	1.00	2.446	2.52	99.9	0.0	158.1
120.0	Top - Section 3	0.00	1.44	23.692	40.04	228.51	1.030	0.000	4.00	9.628	9.92	397.1	0.0	622.0
125.0		0.00	1.46	23.970	40.51	222.20	1.030	0.000	5.00	11.679	12.03	487.3	0.0	661.3
127.0	Appertunance(s)	0.00	1.47	24.079	40.69	219.63	1.030	0.000	2.00	4.561	4.70	191.2	0.0	258.2
130.0		0.00	1.48	24.241	40.96	215.75	1.030	0.000	3.00	6.723	6.92	283.7	0.0	380.4
135.0		0.00	1.49	24.503	41.41	209.19	1.030	0.000	5.00	10.889	11.22	464.4	0.0	615.9
139.0	Top - Section 4	0.00	1.50	24.709	41.75	203.85	1.030	0.000	4.00	8.426	8.68	362.4	0.0	476.3
140.0		0.00	1.51	24.759	41.84	135.74	1.030	0.000	1.00	1.387	1.43	59.8	0.0	33.8
142.0	Appertunance(s)	0.00	1.51	24.860	42.01	133.45	1.030	0.000	2.00	2.735	2.82	118.3	0.0	66.6
145.0		0.00	1.52	25.009	42.26	129.98	1.030	0.000	3.00	4.004	4.12	174.3	0.0	97.6
150.0	Top - Section 5	0.00	1.54	25.252	42.67	124.14	1.030	0.000	5.00	6.413	6.61	281.9	0.0	156.2
155.0		0.00	1.55	25.490	43.07	99.785	1.030	0.000	5.00	5.000	5.15	221.9	0.0	238.8
160.0		0.00	1.57	25.722	43.47	100.23	1.030	0.000	5.00	5.000	5.15	223.9	0.0	238.8
162.0	Appertunance(s)	0.00	1.57	25.814	43.62	100.41	1.030	0.000	2.00	2.000	2.06	89.9	0.0	95.5
						Totals:			162.00			16,262.1	0.0	36,411.3

Pole :	302483	Code: TIA/EIA-222 Rev F	4/30/2014 8:43:32 AM
Location :	Brln - Berlin, CT		Page: 5
Height :	162.0 (ft)		
Base Dia :	51.30 (in)		
Top Dia :	12.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.189701 (in/ft)		

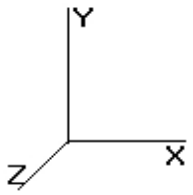


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
96.00	Decibel	12	22.229	37.567	0.71	50.18	0.000	0.000	1,885.23	0.00	0.00	192.00
96.00	Flat Low Profile Pla	1	22.229	37.567	1.00	26.10	0.000	0.000	980.50	0.00	0.00	1,500.00
106.0	48" x 6" Panel	3	22.867	38.646	0.67	5.77	0.000	0.000	222.94	0.00	0.00	60.00
116.0	Round Low Profile Pl	1	23.464	39.654	1.00	21.70	0.000	0.000	860.50	0.00	0.00	1,500.00
116.0	Antel BXA-171063-8BF	6	23.464	39.654	0.71	12.52	0.000	0.000	496.65	0.00	0.00	63.00
116.0	Andrew LNX-6514DS-	2	23.464	39.654	0.77	12.95	0.000	0.000	513.58	0.00	0.00	76.80
116.0	RFS APX75-866514-	1	23.464	39.654	1.00	9.76	0.000	0.000	387.03	0.00	0.00	30.80
116.0	Antel LPA-80063-6CF-	6	23.464	39.654	0.75	47.25	0.000	0.000	1,873.67	0.00	0.00	162.00
116.0	RFS DB-T1-6Z-8AB-0Z	1	23.464	39.654	1.00	4.80	0.000	0.000	190.34	0.00	0.00	110.00
116.0	Alcatel-Lucent RRH2x	3	23.464	39.654	0.50	3.78	0.000	0.000	149.89	0.00	0.00	132.00
127.0	Allgon 7184	3	24.079	40.694	0.65	5.23	0.000	0.000	212.67	0.00	0.00	33.60
127.0	RFS IBC1900HG-2A	3	24.079	40.694	0.33	1.12	0.000	0.000	45.52	0.00	0.00	66.00
127.0	RFS IBC1900BB-1	3	24.079	40.694	0.33	1.12	0.000	0.000	45.52	0.00	0.00	66.00
127.0	Alcatel-Lucent 800 M	3	24.079	40.694	0.50	3.60	0.000	0.000	146.50	0.00	0.00	192.00
127.0	Alcatel-Lucent 4X40W	6	24.079	40.694	0.50	8.73	0.000	0.000	355.26	0.00	0.00	357.00
127.0	RFS APXVSPP18-C-	2	24.079	40.694	0.71	11.73	0.000	0.000	477.31	0.00	0.00	114.00
127.0	RFS APXV9ERR18-C-	1	24.079	40.694	0.71	5.69	0.000	0.000	231.72	0.00	0.00	62.00
127.0	Flat Low Profile Pla	1	24.079	40.694	1.00	26.10	0.000	0.000	1,062.12	0.00	0.00	1,500.00
142.0	RFS APXV18-	3	24.860	42.013	0.68	10.24	0.000	0.000	430.25	0.00	0.00	66.00
150.0	Concealment Canister	1	25.560	43.197	1.00	15.00	0.000	6.500	647.95	0.00	4,211.67	200.00
150.0	Raycap DC6-48-60-18-	1	25.348	42.838	1.00	1.26	0.000	2.000	53.98	0.00	107.95	20.00
150.0	Ericsson RRUS 11	6	25.348	42.838	0.50	8.82	0.000	2.000	377.83	0.00	755.66	330.00
150.0	KMW AM-X-CD-16-65-	6	25.348	42.838	0.67	33.21	0.000	2.000	1,422.45	0.00	2,844.89	291.00
150.0	Flat Platform w/ Han	1	25.252	42.676	1.00	42.40	0.000	0.000	1,809.47	0.00	0.00	2,000.00
150.0	Powerwave 7770.00	3	25.348	42.838	0.65	11.47	0.000	2.000	491.18	0.00	982.36	105.00
150.0	Powerwave LGP21401	6	25.348	42.838	0.33	2.55	0.000	2.000	109.42	0.00	218.83	84.60
163.0	Ericsson KRY 112 144	3	25.859	43.702	0.86	0.00	0.000	0.000	0.00	0.00	0.00	33.00
163.0	Ericsson AIR 21, 1.3	3	25.859	43.702	0.71	0.00	0.000	0.000	0.00	0.00	0.00	249.00
									15,479.46			9,595.80



Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

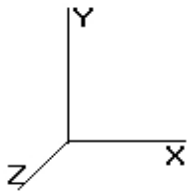
Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
10.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.384	0.00	8.05
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
10.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.384	22.15	9.45
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
10.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.384	81.68	49.20
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.384	53.99	24.60
15.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.384	0.00	8.05
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
15.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.384	22.15	9.45
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
15.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.384	81.68	49.20
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.384	53.99	24.60
20.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.384	0.00	8.05
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
20.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.384	22.15	9.45
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
20.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.384	81.68	49.20
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.384	53.99	24.60
25.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.384	0.00	8.05
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
25.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.384	22.15	9.45
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
25.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.384	81.68	49.20
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.384	53.99	24.60
30.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.384	0.00	8.05
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
30.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.384	22.15	9.45
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.384	0.00	24.60
30.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.384	81.68	49.20
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.384	53.99	24.60
35.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	16.662	0.00	8.05
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.662	0.00	24.60
35.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	16.662	22.53	9.45
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	16.662	0.00	24.60
35.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	16.662	83.07	49.20
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	16.662	54.91	24.60
40.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	17.310	0.00	8.05
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	17.310	0.00	24.60
40.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	17.310	23.40	9.45
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	17.310	0.00	24.60
40.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	17.310	86.30	49.20
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	17.310	57.04	24.60
45.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	17.902	0.00	8.05
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	17.902	0.00	24.60
45.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	17.902	24.20	9.45
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	17.902	0.00	24.60
45.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	17.902	89.25	49.20
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	17.902	59.00	24.60
50.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	18.449	0.00	8.05
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	18.449	0.00	24.60
50.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	18.449	24.94	9.45

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	18.449	0.00	24.60
50.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	18.449	91.98	49.20
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	18.449	60.80	24.60
55.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	18.959	0.00	8.05
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	18.959	0.00	24.60
55.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	18.959	25.63	9.45
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	18.959	0.00	24.60
55.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	18.959	94.52	49.20
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	18.959	62.48	24.60
60.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	19.436	0.00	8.05
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	19.436	0.00	24.60
60.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	19.436	26.28	9.45
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	19.436	0.00	24.60
60.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	19.436	96.90	49.20
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	19.436	64.05	24.60
65.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	19.885	0.00	8.05
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	19.885	0.00	24.60
65.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	19.885	26.89	9.45
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	19.885	0.00	24.60
65.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	19.885	99.14	49.20
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	19.885	65.53	24.60
70.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	20.311	0.00	8.05
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	20.311	0.00	24.60
70.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	20.311	27.46	9.45
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	20.311	0.00	24.60
70.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	20.311	101.26	49.20
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	20.311	66.93	24.60
75.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	20.715	0.00	8.05
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	20.715	0.00	24.60
75.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	20.715	28.01	9.45
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	20.715	0.00	24.60
75.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	20.715	103.28	49.20
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	20.715	68.27	24.60
80.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	21.101	0.00	8.05
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.101	0.00	24.60
80.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	21.101	28.53	9.45
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.101	0.00	24.60
80.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	21.101	105.20	49.20
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	21.101	69.54	24.60
85.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	21.469	0.00	8.05
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.469	0.00	24.60
85.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	21.469	29.03	9.45
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.469	0.00	24.60
85.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	21.469	107.04	49.20
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	21.469	70.75	24.60
90.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	21.823	0.00	8.05
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.823	0.00	24.60
90.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	21.823	29.50	9.45
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	21.823	0.00	24.60
90.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	21.823	108.80	49.20
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	21.823	71.92	24.60
95.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	22.163	0.00	8.05
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	22.163	0.00	24.60
95.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	22.163	29.96	9.45
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	22.163	0.00	24.60
95.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	22.163	110.49	49.20
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	22.163	73.04	24.60

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
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Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

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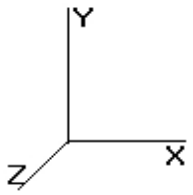


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

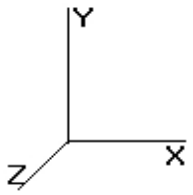
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

96.00	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	22.229	0.00	1.61
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	22.229	0.00	4.92
96.00	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	22.229	6.01	1.89
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	22.229	0.00	4.92
96.00	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	22.229	22.16	9.84
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.39	22.229	14.65	4.92
100.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	22.490	0.00	6.44
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	22.490	0.00	19.68
100.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	22.490	24.33	7.56
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	22.490	0.00	19.68
100.0	(19) 1 5/8" Coax	Yes	4.00	9.84	0.59	22.490	89.70	39.36
105.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	22.806	0.00	8.05
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	22.806	0.00	24.60
105.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	22.806	30.83	9.45
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	22.806	0.00	24.60
105.0	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	22.806	113.70	49.20
106.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	22.867	0.00	1.61
106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	22.867	0.00	4.92
106.0	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	22.867	6.18	1.89
106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	22.867	0.00	4.92
106.0	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	22.867	22.80	9.84
110.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	23.111	0.00	6.44
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	23.111	0.00	19.68
110.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	23.111	25.00	7.56
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	23.111	0.00	19.68
110.0	(19) 1 5/8" Coax	Yes	4.00	9.84	0.59	23.111	92.17	39.36
115.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	23.406	0.00	8.05
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	23.406	0.00	24.60
115.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	23.406	31.65	9.45
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	23.406	0.00	24.60
115.0	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	23.406	116.69	49.20
116.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	23.464	0.00	1.61
116.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	23.464	0.00	4.92
116.0	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	23.464	6.34	1.89
116.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	23.464	0.00	4.92
116.0	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	23.464	23.40	9.84
120.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	23.692	0.00	6.44
120.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	23.692	0.00	19.68
120.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	23.692	25.63	7.56
120.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	23.692	0.00	19.68
125.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	23.970	0.00	8.05
125.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	23.970	0.00	24.60
125.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	23.970	32.41	9.45
125.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	23.970	0.00	24.60
127.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	24.079	0.00	3.22
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	24.079	0.00	9.84
127.0	(3) 1 1/4" Hybriflex	Yes	2.00	1.89	0.16	24.079	13.02	3.78
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	24.079	0.00	9.84
130.0	(1) 1 5/8" Fiber Cable	Yes	3.00	1.61	0.00	24.241	0.00	4.83
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.00	24.241	0.00	14.76
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	24.241	24.58	14.76
135.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	24.503	0.00	8.05
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	24.503	0.00	24.60
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	24.503	41.41	24.60
139.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	24.709	0.00	6.44
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	24.709	0.00	19.68
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	24.709	33.41	19.68

Pole :	302483
Location :	Brln - Berlin, CT
Height :	162.0 (ft)
Base Dia :	51.30 (in)
Top Dia :	12.00 (in)
Shape :	12 Sides
Taper :	0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

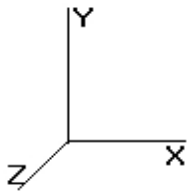
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

140.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	24.759		0.00	1.61
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	24.759		0.00	4.92
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	24.759		8.37	4.92
142.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	24.860		0.00	3.22
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	24.860		0.00	9.84
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	24.860		16.81	9.84
145.0	(1) 1 5/8" Fiber Cable	Yes	3.00	1.61	0.00	25.009		0.00	4.83
145.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	25.009		25.36	14.76
150.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	25.252		0.00	8.05
150.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	25.252		42.68	24.60
155.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	25.490		0.00	8.05
155.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	25.490		43.08	24.60
160.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	25.722		0.00	8.05
160.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	25.722		43.47	24.60
162.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	25.814		0.00	3.22
162.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	25.814		17.45	9.84
							Totals:	4,250.24	3,469.79

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

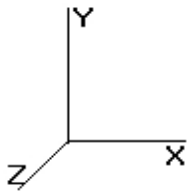


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	603.97	2,057.54	0.00	0.00
10.00	750.53	2,317.96	0.00	0.00
15.00	739.25	2,278.99	0.00	0.00
20.00	727.98	2,240.02	0.00	0.00
25.00	716.71	2,201.04	0.00	0.00
30.00	705.44	2,162.07	0.00	0.00
35.00	705.94	2,123.10	0.00	0.00
40.00	721.48	2,084.13	0.00	0.00
45.00	733.45	1,757.38	0.00	0.00
50.00	743.17	1,724.91	0.00	0.00
55.00	750.64	1,692.43	0.00	0.00
60.00	756.17	1,659.95	0.00	0.00
65.00	759.98	1,627.48	0.00	0.00
70.00	762.27	1,595.00	0.00	0.00
75.00	763.19	1,562.52	0.00	0.00
80.00	762.88	1,530.04	0.00	0.00
85.00	761.44	1,261.36	0.00	0.00
90.00	758.97	1,235.38	0.00	0.00
95.00	755.54	1,209.40	0.00	0.00
96.00	3,015.46	1,930.76	0.00	0.00
100.0	540.45	895.46	0.00	0.00
105.0	670.92	1,095.94	0.00	0.00
106.0	355.60	276.07	0.00	0.00
110.0	529.93	851.37	0.00	0.00
115.0	656.38	1,040.82	0.00	0.00
116.0	4,601.31	2,279.65	0.00	0.00
120.0	422.69	770.43	0.00	0.00
125.0	519.72	846.89	0.00	0.00
127.0	2,780.82	2,722.99	0.00	0.00
130.0	308.26	478.72	0.00	0.00
135.0	505.85	779.67	0.00	0.00
139.0	395.83	607.37	0.00	0.00
140.0	68.14	66.56	0.00	0.00
142.0	565.39	198.16	0.00	0.00
145.0	199.67	181.08	0.00	0.00
150.0	5,236.83	3,325.97	0.00	9,121.37
155.0	264.93	328.86	0.00	0.00
160.0	267.34	296.08	0.00	0.00
162.0	107.32	400.43	0.00	0.00
Totals:	35,991.84	53,693.99	0.00	9,121.37



Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

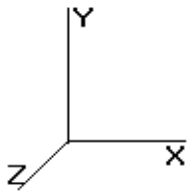
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-36.051	-53.654	0.000	0.000	0.000	-3,565.902	0.000	0.000	0.000	0.000
5.00	-35.557	-51.520	0.000	0.000	0.000	-3,385.651	-0.067	0.000	0.067	-0.124
10.00	-34.906	-49.128	0.000	0.000	0.000	-3,207.871	-0.264	0.000	0.264	-0.249
15.00	-34.256	-46.779	0.000	0.000	0.000	-3,033.346	-0.592	0.000	0.592	-0.374
20.00	-33.608	-44.471	0.000	0.000	0.000	-2,862.067	-1.051	0.000	1.051	-0.499
25.00	-32.963	-42.205	0.000	0.000	0.000	-2,694.028	-1.641	0.000	1.641	-0.625
30.00	-32.319	-39.981	0.000	0.000	0.000	-2,529.217	-2.363	0.000	2.363	-0.750
35.00	-31.665	-37.799	0.000	0.000	0.000	-2,367.625	-3.216	0.000	3.216	-0.875
40.00	-30.987	-35.660	0.000	0.000	0.000	-2,209.301	-4.199	0.000	4.199	-1.000
45.00	-30.302	-33.845	0.000	0.000	0.000	-2,054.367	-5.313	0.000	5.313	-1.124
50.00	-29.604	-32.060	0.000	0.000	0.000	-1,902.861	-6.570	0.000	6.570	-1.271
55.00	-28.891	-30.313	0.000	0.000	0.000	-1,754.842	-7.979	0.000	7.979	-1.416
60.00	-28.163	-28.604	0.000	0.000	0.000	-1,610.391	-9.539	0.000	9.539	-1.559
65.00	-27.422	-26.932	0.000	0.000	0.000	-1,469.580	-11.248	0.000	11.248	-1.700
70.00	-26.671	-25.298	0.000	0.000	0.000	-1,332.471	-13.103	0.000	13.103	-1.838
75.00	-25.911	-23.702	0.000	0.000	0.000	-1,199.117	-15.101	0.000	15.101	-1.973
80.00	-25.144	-22.144	0.000	0.000	0.000	-1,069.563	-17.237	0.000	17.237	-2.103
85.00	-24.385	-20.854	0.000	0.000	0.000	-943.845	-19.507	0.000	19.507	-2.228
90.00	-23.626	-19.592	0.000	0.000	0.000	-821.922	-21.919	0.000	21.919	-2.375
95.00	-22.845	-18.384	0.000	0.000	0.000	-703.795	-24.481	0.000	24.481	-2.513
96.00	-19.767	-16.565	0.000	0.000	0.000	-680.950	-25.010	0.000	25.010	-2.540
100.0	-19.217	-15.657	0.000	0.000	0.000	-601.885	-27.183	0.000	27.183	-2.643
105.0	-18.513	-14.572	0.000	0.000	0.000	-505.801	-30.015	0.000	30.015	-2.762
106.0	-18.158	-14.296	0.000	0.000	0.000	-487.289	-30.596	0.000	30.596	-2.786
110.0	-17.608	-13.443	0.000	0.000	0.000	-414.657	-32.967	0.000	32.967	-2.872
115.0	-16.912	-12.421	0.000	0.000	0.000	-326.616	-36.027	0.000	36.027	-2.968
116.0	-12.206	-10.374	0.000	0.000	0.000	-309.704	-36.651	0.000	36.651	-2.986
120.0	-11.755	-9.613	0.000	0.000	0.000	-260.880	-39.181	0.000	39.181	-3.053
125.0	-11.198	-8.785	0.000	0.000	0.000	-202.105	-42.417	0.000	42.417	-3.126
127.0	-8.276	-6.214	0.000	0.000	0.000	-179.708	-43.733	0.000	43.733	-3.156
130.0	-7.947	-5.746	0.000	0.000	0.000	-154.880	-45.729	0.000	45.729	-3.198
135.0	-7.403	-4.989	0.000	0.000	0.000	-115.144	-49.109	0.000	49.109	-3.257
139.0	-6.974	-4.403	0.000	0.000	0.000	-85.534	-51.854	0.000	51.854	-3.297
140.0	-6.908	-4.332	0.000	0.000	0.000	-78.559	-52.545	0.000	52.545	-3.306
142.0	-6.342	-4.152	0.000	0.000	0.000	-64.744	-53.956	0.000	53.956	-3.426
145.0	-6.142	-3.967	0.000	0.000	0.000	-45.719	-56.158	0.000	56.158	-3.574
150.0	-0.705	-0.982	0.000	0.000	0.000	-5.887	-59.991	0.000	59.991	-3.721
155.0	-0.419	-0.671	0.000	0.000	0.000	-2.363	-63.900	0.000	63.900	-3.745
160.0	-0.133	-0.393	0.000	0.000	0.000	-0.266	-67.824	0.000	67.824	-3.753
162.0	-0.107	0.000	0.000	0.000	0.000	0.000	-69.394	0.000	69.394	-3.753

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



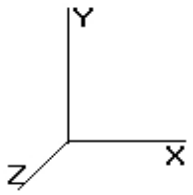
Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.44	0.60	0.00	0.00	0.00	28.54	29.00	38.5	0.0	0.754
5.00	0.43	0.60	0.00	0.00	0.00	28.15	28.60	38.5	0.0	0.743
10.00	0.42	0.60	0.00	0.00	0.00	27.73	28.17	38.5	0.0	0.732
15.00	0.41	0.60	0.00	0.00	0.00	27.28	27.71	38.5	0.0	0.720
20.00	0.39	0.60	0.00	0.00	0.00	26.81	27.22	38.5	0.0	0.707
25.00	0.38	0.61	0.00	0.00	0.00	26.30	26.70	38.5	0.0	0.694
30.00	0.37	0.61	0.00	0.00	0.00	25.75	26.14	38.5	0.0	0.679
35.00	0.36	0.61	0.00	0.00	0.00	25.17	25.55	38.5	0.0	0.664
40.00	0.34	0.61	0.00	0.00	0.00	24.54	24.91	38.5	0.0	0.647
40.00	0.41	0.73	0.00	0.00	0.00	29.24	29.68	31.4	0.0	0.946
45.00	0.40	0.73	0.00	0.00	0.00	28.44	28.86	31.4	0.0	0.920
50.00	0.39	0.73	0.00	0.00	0.00	27.58	27.99	31.4	0.0	0.893
55.00	0.37	0.73	0.00	0.00	0.00	26.65	27.06	31.4	0.0	0.863
60.00	0.36	0.72	0.00	0.00	0.00	25.67	26.06	31.4	0.0	0.831
65.00	0.35	0.72	0.00	0.00	0.00	24.61	24.99	31.4	0.0	0.797
70.00	0.34	0.72	0.00	0.00	0.00	23.47	23.84	31.4	0.0	0.760
75.00	0.32	0.72	0.00	0.00	0.00	22.24	22.60	31.4	0.0	0.721
80.00	0.31	0.72	0.00	0.00	0.00	20.92	21.27	31.4	0.0	0.678
80.00	0.39	0.89	0.00	0.00	0.00	25.88	26.31	28.7	0.0	0.916
85.00	0.37	0.89	0.00	0.00	0.00	24.11	24.54	28.7	0.0	0.854
90.00	0.36	0.88	0.00	0.00	0.00	22.21	22.62	28.7	0.0	0.788
95.00	0.35	0.88	0.00	0.00	0.00	20.14	20.55	28.7	0.0	0.715
96.00	0.32	0.77	0.00	0.00	0.00	19.72	20.08	28.7	0.0	0.699
100.00	0.31	0.76	0.00	0.00	0.00	18.28	18.63	28.7	0.0	0.649
105.00	0.29	0.76	0.00	0.00	0.00	16.33	16.67	28.7	0.0	0.580
106.00	0.29	0.75	0.00	0.00	0.00	15.92	16.27	28.7	0.0	0.566
110.00	0.28	0.74	0.00	0.00	0.00	14.25	14.59	28.7	0.0	0.508
115.00	0.27	0.74	0.00	0.00	0.00	11.98	12.31	28.7	0.0	0.429
116.00	0.22	0.54	0.00	0.00	0.00	11.51	11.77	28.7	0.0	0.410
120.00	0.21	0.53	0.00	0.00	0.00	10.23	10.49	28.7	0.0	0.365
120.00	0.24	0.60	0.00	0.00	0.00	11.62	11.91	38.1	0.0	0.313
125.00	0.23	0.60	0.00	0.00	0.00	9.65	9.93	38.1	0.0	0.261
127.00	0.16	0.45	0.00	0.00	0.00	8.83	9.02	38.1	0.0	0.237
130.00	0.16	0.44	0.00	0.00	0.00	7.94	8.13	38.1	0.0	0.214
135.00	0.14	0.42	0.00	0.00	0.00	6.36	6.54	38.1	0.0	0.172
139.00	0.13	0.41	0.00	0.00	0.00	5.03	5.20	38.1	0.0	0.137
139.00	0.44	1.42	0.00	0.00	0.00	25.51	26.07	52.0	0.0	0.501
140.00	0.44	1.42	0.00	0.00	0.00	23.88	24.45	52.0	0.0	0.470
142.00	0.43	1.33	0.00	0.00	0.00	20.46	21.02	52.0	0.0	0.404
145.00	0.42	1.33	0.00	0.00	0.00	15.34	15.92	52.0	0.0	0.306
150.00	0.11	0.16	0.00	0.00	0.00	2.19	2.32	52.0	0.0	0.045
150.00	0.07	0.10	0.00	0.00	0.00	1.81	1.89	28.8	0.0	0.066
155.00	0.05	0.06	0.00	0.00	0.00	0.73	0.78	28.8	0.0	0.027
160.00	0.03	0.02	0.00	0.00	0.00	0.08	0.11	28.8	0.0	0.004
162.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	28.8	0.0	0.001

Pole :	**302483**	**Code: TIA/EIA-222 Rev F**	**4/30/2014 8:43:32 AM**
Location :	**Brln - Berlin, CT**		**Page: 13**
Height :	**162.0 (ft)**		
Base Dia :	**51.30 (in)**		
Top Dia :	**12.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**12 Sides**		
Taper :	**0.189701 (in/ft)**		



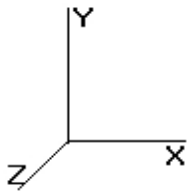
Load Case: **Ice** — **69.28 mph Wind with Ice** — **23 Iterations**

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

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	12.287	20.76	296.17	1.030	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	12.287	20.76	290.69	1.030	0.500	5.00	21.594	22.24	461.9	159.2	2,216.7
10.00		0.00	1.00	12.287	20.76	285.21	1.030	0.500	5.00	21.199	21.83	453.4	156.2	2,174.8
15.00		0.00	1.00	12.287	20.76	279.74	1.030	0.500	5.00	20.804	21.43	445.0	153.3	2,132.8
20.00		0.00	1.00	12.287	20.76	274.26	1.030	0.500	5.00	20.408	21.02	436.5	150.3	2,090.9
25.00		0.00	1.00	12.287	20.76	268.79	1.030	0.500	5.00	20.013	20.61	428.1	147.3	2,049.0
30.00		0.00	1.00	12.287	20.76	263.31	1.030	0.500	5.00	19.618	20.21	419.6	144.3	2,007.0
35.00		0.00	1.01	12.496	21.11	260.01	1.030	0.500	5.00	19.223	19.80	418.1	141.4	1,965.1
40.00	Top - Section 1	0.00	1.05	12.982	21.93	259.39	1.030	0.500	5.00	18.828	19.39	425.4	138.4	1,923.1
45.00		0.00	1.09	13.426	22.69	257.88	1.030	0.500	5.00	18.419	18.97	430.5	135.3	1,593.3
50.00		0.00	1.12	13.836	23.38	255.98	1.030	0.500	5.00	18.024	18.56	434.1	132.4	1,557.9
55.00		0.00	1.15	14.218	24.02	253.59	1.030	0.500	5.00	17.629	18.16	436.3	129.4	1,522.4
60.00		0.00	1.18	14.576	24.63	250.80	1.030	0.500	5.00	17.233	17.75	437.3	126.4	1,487.0
65.00		0.00	1.21	14.913	25.20	247.65	1.030	0.500	5.00	16.838	17.34	437.1	123.5	1,451.5
70.00		0.00	1.24	15.232	25.74	244.19	1.030	0.500	5.00	16.443	16.94	436.0	120.5	1,416.1
75.00		0.00	1.26	15.536	26.25	240.45	1.030	0.500	5.00	16.048	16.53	434.0	117.5	1,380.6
80.00	Top - Section 2	0.00	1.28	15.825	26.74	236.47	1.030	0.500	5.00	15.653	16.12	431.2	114.6	1,345.2
85.00		0.00	1.31	16.101	27.21	232.26	1.030	0.500	5.00	15.257	15.72	427.6	111.6	1,073.5
90.00		0.00	1.33	16.366	27.65	227.84	1.030	0.500	5.00	14.862	15.31	423.4	108.6	1,044.6
95.00		0.00	1.35	16.621	28.09	223.24	1.030	0.500	5.00	14.467	14.90	418.6	105.6	1,015.6
96.00	Appertunance(s)	0.00	1.35	16.671	28.17	222.30	1.030	0.500	1.00	2.846	2.93	82.6	21.0	199.9
100.0		0.00	1.37	16.866	28.50	218.46	1.030	0.500	4.00	11.226	11.56	329.6	82.1	787.3
105.0		0.00	1.39	17.103	28.90	213.53	1.030	0.500	5.00	13.677	14.09	407.2	99.7	957.7
106.0	Appertunance(s)	0.00	1.39	17.150	28.98	212.53	1.030	0.500	1.00	2.688	2.77	80.2	19.8	188.3
110.0		0.00	1.41	17.332	29.29	208.45	1.030	0.500	4.00	10.594	10.91	319.6	77.4	741.0
115.0		0.00	1.42	17.554	29.66	203.23	1.030	0.500	5.00	12.886	13.27	393.7	93.8	899.8
116.0	Appertunance(s)	0.00	1.43	17.597	29.73	202.18	1.030	0.500	1.00	2.530	2.61	77.5	18.6	176.7
120.0	Top - Section 3	0.00	1.44	17.768	30.02	197.89	1.030	0.500	4.00	9.961	10.26	308.1	72.6	694.6
125.0		0.00	1.46	17.977	30.38	192.42	1.030	0.500	5.00	12.096	12.46	378.5	87.8	749.2
127.0	Appertunance(s)	0.00	1.47	18.058	30.51	190.20	1.030	0.500	2.00	4.728	4.87	148.6	34.7	292.8
130.0		0.00	1.48	18.179	30.72	186.84	1.030	0.500	3.00	6.973	7.18	220.7	50.9	431.4
135.0		0.00	1.49	18.376	31.05	181.16	1.030	0.500	5.00	11.305	11.64	361.6	81.9	697.8
139.0	Top - Section 4	0.00	1.50	18.530	31.31	176.53	1.030	0.500	4.00	8.760	9.02	282.6	63.6	539.9
140.0		0.00	1.51	18.568	31.38	117.55	1.030	0.500	1.00	1.470	1.51	47.5	10.7	44.5
142.0	Appertunance(s)	0.00	1.51	18.644	31.50	115.56	1.030	0.500	2.00	2.901	2.99	94.2	21.0	87.6
145.0		0.00	1.52	18.755	31.69	112.56	1.030	0.500	3.00	4.254	4.38	138.9	30.6	128.1
150.0	Top - Section 5	0.00	1.54	18.938	32.00	107.51	1.030	0.500	5.00	6.830	7.03	225.1	48.5	204.7
155.0		0.00	1.55	19.116	32.30	86.414	1.030	0.500	5.00	5.417	5.58	180.2	39.1	278.0
160.0		0.00	1.57	19.290	32.60	86.806	1.030	0.500	5.00	5.417	5.58	181.9	39.1	278.0
162.0	Appertunance(s)	0.00	1.57	19.359	32.71	86.961	1.030	0.500	2.00	2.167	2.23	73.0	15.7	111.2
							Totals:		162.00			12,565.2	3,524.5	39,935.8

Pole :	302483	Code: TIA/EIA-222 Rev F	4/30/2014 8:43:32 AM
Location :	Brln - Berlin, CT		Page: 14
Height :	162.0 (ft)		
Base Dia :	51.30 (in)		
Top Dia :	12.00 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.189701 (in/ft)		



Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

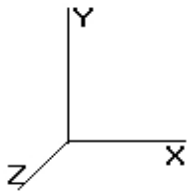
Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
96.00	Decibel	12	16.671	28.174	0.71	55.38	0.000	0.000	1,560.26	0.00	0.00	660.00
96.00	Flat Low Profile Pla	1	16.671	28.174	1.00	31.60	0.000	0.000	890.29	0.00	0.00	1,700.00
106.0	48" x 6" Panel	3	17.150	28.983	0.67	8.04	0.000	0.000	233.02	0.00	0.00	120.00
116.0	Round Low Profile Pl	1	17.597	29.739	1.00	27.20	0.000	0.000	808.90	0.00	0.00	1,700.00
116.0	Antel BXA-171063-8BF	6	17.597	29.739	0.71	14.53	0.000	0.000	432.01	0.00	0.00	175.80
116.0	Andrew LNX-6514DS-	2	17.597	29.739	0.77	14.23	0.000	0.000	423.17	0.00	0.00	177.80
116.0	RFS APX75-866514-	1	17.597	29.739	1.00	10.69	0.000	0.000	317.91	0.00	0.00	81.10
116.0	Antel LPA-80063-6CF-	6	17.597	29.739	0.75	51.08	0.000	0.000	1,518.92	0.00	0.00	611.40
116.0	RFS DB-T1-6Z-8AB-0Z	1	17.597	29.739	1.00	6.08	0.000	0.000	180.81	0.00	0.00	144.50
116.0	Alcatel-Lucent RRH2x	3	17.597	29.739	0.50	4.30	0.000	0.000	128.03	0.00	0.00	184.20
127.0	Allgon 7184	3	18.058	30.519	0.65	6.40	0.000	0.000	195.19	0.00	0.00	81.29
127.0	RFS IBC1900HG-2A	3	18.058	30.519	0.33	1.35	0.000	0.000	41.09	0.00	0.00	179.40
127.0	RFS IBC1900BB-1	3	18.058	30.519	0.33	1.35	0.000	0.000	41.09	0.00	0.00	179.40
127.0	Alcatel-Lucent 800 M	3	18.058	30.519	0.50	4.08	0.000	0.000	124.52	0.00	0.00	258.30
127.0	Alcatel-Lucent 4X40W	6	18.058	30.519	0.50	9.21	0.000	0.000	281.08	0.00	0.00	495.60
127.0	RFS APXVSPP18-C-	2	18.058	30.519	0.71	12.89	0.000	0.000	393.50	0.00	0.00	213.00
127.0	RFS APXV9ERR18-C-	1	18.058	30.519	0.71	6.45	0.000	0.000	196.75	0.00	0.00	113.90
127.0	Flat Low Profile Pla	1	18.058	30.519	1.00	31.60	0.000	0.000	964.40	0.00	0.00	1,700.00
142.0	RFS APXV18-	3	18.644	31.508	0.68	11.63	0.000	0.000	366.38	0.00	0.00	144.39
150.0	Concealment Canister	1	19.169	32.396	1.00	20.00	0.000	6.500	647.91	0.00	4,211.42	300.00
150.0	Raycap DC6-48-60-18-	1	19.010	32.127	1.00	1.46	0.000	2.000	46.90	0.00	93.81	35.10
150.0	Ericsson RRUS 11	6	19.010	32.127	0.50	9.87	0.000	2.000	317.09	0.00	634.18	445.80
150.0	KMW AM-X-CD-16-65-	6	19.010	32.127	0.67	36.50	0.000	2.000	1,172.67	0.00	2,345.35	570.00
150.0	Flat Platform w/ Han	1	18.938	32.005	1.00	48.40	0.000	0.000	1,549.05	0.00	0.00	2,450.00
150.0	Powerwave 7770.00	3	19.010	32.127	0.65	12.73	0.000	2.000	409.08	0.00	818.17	203.24
150.0	Powerwave LGP21401	6	19.010	32.127	0.33	3.03	0.000	2.000	97.32	0.00	194.65	127.56
163.0	Ericsson KRY 112 144	3	19.393	32.774	0.86	1.42	0.000	0.000	46.51	0.00	46.51	42.30
163.0	Ericsson AIR 21, 1.3	3	19.393	32.774	0.71	15.34	0.000	0.000	502.63	0.00	502.63	397.80
									13,886.48			13,491.87

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

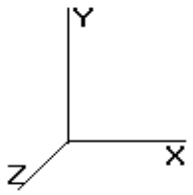


Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

Linear Appurtenance Segment Forces

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
10.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.287	0.00	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
10.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.287	21.80	18.85
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
10.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.287	66.45	94.65
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.287	45.68	47.30
15.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.287	0.00	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
15.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.287	21.80	18.85
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
15.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.287	66.45	94.65
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.287	45.68	47.30
20.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.287	0.00	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
20.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.287	21.80	18.85
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
20.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.287	66.45	94.65
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.287	45.68	47.30
25.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.287	0.00	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
25.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.287	21.80	18.85
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
25.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.287	66.45	94.65
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.287	45.68	47.30
30.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.287	0.00	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
30.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.287	21.80	18.85
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.287	0.00	47.30
30.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.287	66.45	94.65
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.287	45.68	47.30
35.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.496	0.00	0.00
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.496	0.00	47.30
35.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.496	22.17	18.85
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.496	0.00	47.30
35.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.496	67.58	94.65
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.496	46.46	47.30
40.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	12.982	0.00	0.00
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.982	0.00	47.30
40.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	12.982	23.04	18.85
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	12.982	0.00	47.30
40.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	12.982	70.20	94.65
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	12.982	48.27	47.30
45.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	13.426	0.00	0.00
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	13.426	0.00	47.30
45.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	13.426	23.82	18.85
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	13.426	0.00	47.30
45.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	13.426	72.61	94.65
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	13.426	49.92	47.30
50.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	13.836	0.00	0.00
50.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	13.836	0.00	47.30
50.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	13.836	24.55	18.85



Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

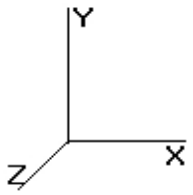
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

50.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	13.836	0.00	47.30
50.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	13.836	74.83	94.65
50.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	13.836	51.44	47.30
55.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	14.218	0.00	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.218	0.00	47.30
55.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	14.218	25.23	18.85
55.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.218	0.00	47.30
55.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	14.218	76.89	94.65
55.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	14.218	52.86	47.30
60.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	14.576	0.00	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.576	0.00	47.30
60.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	14.576	25.87	18.85
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.576	0.00	47.30
60.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	14.576	78.83	94.65
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	14.576	54.19	47.30
65.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	14.913	0.00	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.913	0.00	47.30
65.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	14.913	26.46	18.85
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	14.913	0.00	47.30
65.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	14.913	80.65	94.65
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	14.913	55.45	47.30
70.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	15.232	0.00	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.232	0.00	47.30
70.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	15.232	27.03	18.85
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.232	0.00	47.30
70.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	15.232	82.38	94.65
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	15.232	56.63	47.30
75.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	15.536	0.00	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.536	0.00	47.30
75.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	15.536	27.57	18.85
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.536	0.00	47.30
75.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	15.536	84.02	94.65
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	15.536	57.76	47.30
80.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	15.825	0.00	0.00
80.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.825	0.00	47.30
80.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	15.825	28.08	18.85
80.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	15.825	0.00	47.30
80.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	15.825	85.58	94.65
80.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	15.825	58.84	47.30
85.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	16.101	0.00	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.101	0.00	47.30
85.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	16.101	28.57	18.85
85.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.101	0.00	47.30
85.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	16.101	87.08	94.65
85.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	16.101	59.86	47.30
90.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	16.366	0.00	0.00
90.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.366	0.00	47.30
90.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	16.366	29.04	18.85
90.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.366	0.00	47.30
90.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	16.366	88.51	94.65
90.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	16.366	60.85	47.30
95.00	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	16.621	0.00	0.00
95.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.621	0.00	47.30
95.00	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	16.621	29.49	18.85
95.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	16.621	0.00	47.30
95.00	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	16.621	89.89	94.65
95.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.44	16.621	61.80	47.30

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

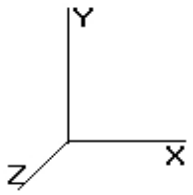
Base Elev : 0.000 (ft)



Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

96.00	(1) 1 5/8" Fiber Cable	Yes	1.00	0.00	0.00	16.671	0.00	0.00
96.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	16.671	0.00	9.46
96.00	(3) 1 1/4" Hybriflex	Yes	1.00	3.77	0.21	16.671	5.92	3.77
96.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	16.671	0.00	9.46
96.00	(19) 1 5/8" Coax	Yes	1.00	18.93	0.64	16.671	18.03	18.93
96.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.44	16.671	12.40	9.46
100.0	(1) 1 5/8" Fiber Cable	Yes	4.00	0.00	0.00	16.866	0.00	0.00
100.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	16.866	0.00	37.84
100.0	(3) 1 1/4" Hybriflex	Yes	4.00	3.77	0.21	16.866	23.94	15.08
100.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	16.866	0.00	37.84
100.0	(19) 1 5/8" Coax	Yes	4.00	18.93	0.64	16.866	72.97	75.72
105.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	17.103	0.00	0.00
105.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.103	0.00	47.30
105.0	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	17.103	30.35	18.85
105.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.103	0.00	47.30
105.0	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	17.103	92.49	94.65
106.0	(1) 1 5/8" Fiber Cable	Yes	1.00	0.00	0.00	17.150	0.00	0.00
106.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	17.150	0.00	9.46
106.0	(3) 1 1/4" Hybriflex	Yes	1.00	3.77	0.21	17.150	6.09	3.77
106.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	17.150	0.00	9.46
106.0	(19) 1 5/8" Coax	Yes	1.00	18.93	0.64	17.150	18.55	18.93
110.0	(1) 1 5/8" Fiber Cable	Yes	4.00	0.00	0.00	17.332	0.00	0.00
110.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	17.332	0.00	37.84
110.0	(3) 1 1/4" Hybriflex	Yes	4.00	3.77	0.21	17.332	24.60	15.08
110.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	17.332	0.00	37.84
110.0	(19) 1 5/8" Coax	Yes	4.00	18.93	0.64	17.332	74.99	75.72
115.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	17.554	0.00	0.00
115.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.554	0.00	47.30
115.0	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	17.554	31.15	18.85
115.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.554	0.00	47.30
115.0	(19) 1 5/8" Coax	Yes	5.00	18.93	0.64	17.554	94.93	94.65
116.0	(1) 1 5/8" Fiber Cable	Yes	1.00	0.00	0.00	17.597	0.00	0.00
116.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	17.597	0.00	9.46
116.0	(3) 1 1/4" Hybriflex	Yes	1.00	3.77	0.21	17.597	6.25	3.77
116.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	17.597	0.00	9.46
116.0	(19) 1 5/8" Coax	Yes	1.00	18.93	0.64	17.597	19.03	18.93
120.0	(1) 1 5/8" Fiber Cable	Yes	4.00	0.00	0.00	17.768	0.00	0.00
120.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	17.768	0.00	37.84
120.0	(3) 1 1/4" Hybriflex	Yes	4.00	3.77	0.21	17.768	25.22	15.08
120.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	17.768	0.00	37.84
125.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	17.977	0.00	0.00
125.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.977	0.00	47.30
125.0	(3) 1 1/4" Hybriflex	Yes	5.00	3.77	0.21	17.977	31.90	18.85
125.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	17.977	0.00	47.30
127.0	(1) 1 5/8" Fiber Cable	Yes	2.00	0.00	0.00	18.058	0.00	0.00
127.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.00	18.058	0.00	18.92
127.0	(3) 1 1/4" Hybriflex	Yes	2.00	3.77	0.21	18.058	12.82	7.54
127.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.00	18.058	0.00	18.92
130.0	(1) 1 5/8" Fiber Cable	Yes	3.00	0.00	0.00	18.179	0.00	0.00
130.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.00	18.179	0.00	28.38
130.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	18.179	23.04	28.38
135.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	18.376	0.00	0.00
135.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.00	18.376	0.00	47.30
135.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	18.376	38.82	47.30
139.0	(1) 1 5/8" Fiber Cable	Yes	4.00	0.00	0.00	18.530	0.00	0.00
139.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.00	18.530	0.00	37.84
139.0	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	18.530	31.32	37.84

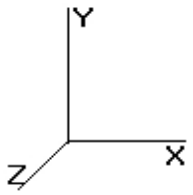


Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

140.0	(1) 1 5/8" Fiber Cable	Yes	1.00	0.00	0.00	18.568		0.00	0.00
140.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.00	18.568		0.00	9.46
140.0	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	18.568		7.85	9.46
142.0	(1) 1 5/8" Fiber Cable	Yes	2.00	0.00	0.00	18.644		0.00	0.00
142.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.00	18.644		0.00	18.92
142.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	18.644		15.75	18.92
145.0	(1) 1 5/8" Fiber Cable	Yes	3.00	0.00	0.00	18.755		0.00	0.00
145.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	18.755		23.77	28.38
150.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	18.938		0.00	0.00
150.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	18.938		40.01	47.30
155.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	19.116		0.00	0.00
155.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	19.116		40.38	47.30
160.0	(1) 1 5/8" Fiber Cable	Yes	5.00	0.00	0.00	19.290		0.00	0.00
160.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	19.290		40.75	47.30
162.0	(1) 1 5/8" Fiber Cable	Yes	2.00	0.00	0.00	19.359		0.00	0.00
162.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	19.359		16.36	18.92
							Totals:	3,643.65	6,203.27

Pole :	**302483**	**Code: TIA/EIA-222 Rev F**	**4/30/2014 8:43:33 AM**
Location :	**Brln - Berlin, CT**		**Page: 19**
Height :	**162.0 (ft)**		
Base Dia :	**51.30 (in)**		
Top Dia :	**12.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**12 Sides**		
Taper :	**0.189701 (in/ft)**		

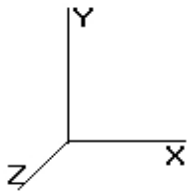


Load Case: **Ice** **69.28 mph Wind with Ice** **23 Iterations**

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

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	461.86	2,216.73	0.00	0.00
10.00	587.35	2,589.09	0.00	0.00
15.00	578.89	2,547.14	0.00	0.00
20.00	570.44	2,505.20	0.00	0.00
25.00	561.99	2,463.26	0.00	0.00
30.00	553.54	2,421.32	0.00	0.00
35.00	554.32	2,379.38	0.00	0.00
40.00	566.95	2,337.43	0.00	0.00
45.00	576.81	2,007.62	0.00	0.00
50.00	584.92	1,972.18	0.00	0.00
55.00	591.28	1,936.73	0.00	0.00
60.00	596.14	1,901.28	0.00	0.00
65.00	599.67	1,865.84	0.00	0.00
70.00	602.02	1,830.39	0.00	0.00
75.00	603.32	1,794.94	0.00	0.00
80.00	603.66	1,759.50	0.00	0.00
85.00	603.14	1,487.85	0.00	0.00
90.00	601.81	1,458.90	0.00	0.00
95.00	599.74	1,429.95	0.00	0.00
96.00	2,569.48	2,642.75	0.00	0.00
100.0	426.50	1,051.36	0.00	0.00
105.0	530.02	1,287.84	0.00	0.00
106.0	337.90	374.33	0.00	0.00
110.0	419.20	1,002.52	0.00	0.00
115.0	519.82	1,226.79	0.00	0.00
116.0	3,912.52	3,316.92	0.00	0.00
120.0	333.32	880.47	0.00	0.00
125.0	410.40	981.47	0.00	0.00
127.0	2,399.04	3,606.64	0.00	0.00
130.0	243.70	552.04	0.00	0.00
135.0	400.45	898.91	0.00	0.00
139.0	313.87	700.86	0.00	0.00
140.0	55.36	84.72	0.00	0.00
142.0	476.28	312.47	0.00	0.00
145.0	162.66	220.45	0.00	0.00
150.0	4,505.18	4,490.24	0.00	8,297.58
155.0	220.63	382.64	0.00	0.00
160.0	222.64	349.86	0.00	0.00
162.0	638.51	580.04	0.00	549.14
Totals:	**30,095.33**	**63,848.06**	**0.00**	**8,846.71**



Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

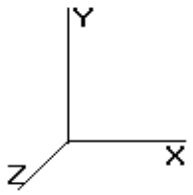
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-30.156	-63.819	0.000	0.000	0.000	-3,083.036	0.000	0.000	0.000	0.000
5.00	-29.808	-61.547	0.000	0.000	0.000	-2,932.258	-0.058	0.000	0.058	-0.107
10.00	-29.325	-58.904	0.000	0.000	0.000	-2,783.222	-0.228	0.000	0.228	-0.216
15.00	-28.841	-56.305	0.000	0.000	0.000	-2,636.601	-0.512	0.000	0.512	-0.324
20.00	-28.356	-53.750	0.000	0.000	0.000	-2,492.401	-0.911	0.000	0.911	-0.433
25.00	-27.871	-51.238	0.000	0.000	0.000	-2,350.622	-1.423	0.000	1.423	-0.542
30.00	-27.386	-48.770	0.000	0.000	0.000	-2,211.269	-2.050	0.000	2.050	-0.652
35.00	-26.890	-46.347	0.000	0.000	0.000	-2,074.344	-2.792	0.000	2.792	-0.762
40.00	-26.374	-43.968	0.000	0.000	0.000	-1,939.894	-3.648	0.000	3.648	-0.871
45.00	-25.852	-41.916	0.000	0.000	0.000	-1,808.025	-4.619	0.000	4.619	-0.980
50.00	-25.321	-39.898	0.000	0.000	0.000	-1,678.766	-5.715	0.000	5.715	-1.109
55.00	-24.775	-37.918	0.000	0.000	0.000	-1,552.161	-6.946	0.000	6.946	-1.238
60.00	-24.215	-35.978	0.000	0.000	0.000	-1,428.288	-8.310	0.000	8.310	-1.365
65.00	-23.643	-34.076	0.000	0.000	0.000	-1,307.215	-9.807	0.000	9.807	-1.490
70.00	-23.060	-32.214	0.000	0.000	0.000	-1,189.002	-11.433	0.000	11.433	-1.613
75.00	-22.467	-30.391	0.000	0.000	0.000	-1,073.705	-13.187	0.000	13.187	-1.733
80.00	-21.866	-28.608	0.000	0.000	0.000	-961.370	-15.064	0.000	15.064	-1.849
85.00	-21.272	-27.095	0.000	0.000	0.000	-852.041	-17.062	0.000	17.062	-1.962
90.00	-20.677	-25.612	0.000	0.000	0.000	-745.682	-19.189	0.000	19.189	-2.095
95.00	-20.055	-24.180	0.000	0.000	0.000	-642.299	-21.451	0.000	21.451	-2.221
96.00	-17.407	-21.621	0.000	0.000	0.000	-622.245	-21.919	0.000	21.919	-2.245
100.0	-16.976	-20.557	0.000	0.000	0.000	-552.618	-23.841	0.000	23.841	-2.340
105.0	-16.414	-19.274	0.000	0.000	0.000	-467.740	-26.351	0.000	26.351	-2.450
106.0	-16.077	-18.900	0.000	0.000	0.000	-451.327	-26.866	0.000	26.866	-2.471
110.0	-15.642	-17.893	0.000	0.000	0.000	-387.018	-28.972	0.000	28.972	-2.552
115.0	-15.082	-16.678	0.000	0.000	0.000	-308.811	-31.693	0.000	31.693	-2.642
116.0	-11.030	-13.538	0.000	0.000	0.000	-293.729	-32.248	0.000	32.248	-2.659
120.0	-10.670	-12.661	0.000	0.000	0.000	-249.611	-34.503	0.000	34.503	-2.722
125.0	-10.223	-11.692	0.000	0.000	0.000	-196.261	-37.392	0.000	37.392	-2.793
127.0	-7.655	-8.203	0.000	0.000	0.000	-175.815	-38.568	0.000	38.568	-2.822
130.0	-7.391	-7.657	0.000	0.000	0.000	-152.849	-40.354	0.000	40.354	-2.863
135.0	-6.952	-6.773	0.000	0.000	0.000	-115.893	-43.384	0.000	43.384	-2.922
139.0	-6.605	-6.087	0.000	0.000	0.000	-88.086	-45.849	0.000	45.849	-2.962
140.0	-6.553	-5.997	0.000	0.000	0.000	-81.481	-46.470	0.000	46.470	-2.972
142.0	-6.075	-5.695	0.000	0.000	0.000	-68.376	-47.743	0.000	47.743	-3.098
145.0	-5.917	-5.466	0.000	0.000	0.000	-50.151	-49.742	0.000	49.742	-3.256
150.0	-1.159	-1.245	0.000	0.000	0.000	-12.269	-53.255	0.000	53.255	-3.428
155.0	-0.916	-0.876	0.000	0.000	0.000	-6.475	-56.873	0.000	56.873	-3.481
160.0	-0.673	-0.540	0.000	0.000	0.000	-1.895	-60.532	0.000	60.532	-3.506
162.0	-0.638	0.000	0.000	0.000	0.000	-0.549	-62.001	0.000	62.001	-3.509

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

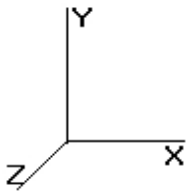
Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.52	0.50	0.00	0.00	0.00	24.67	25.21	38.5	0.0	0.655
5.00	0.51	0.51	0.00	0.00	0.00	24.38	24.91	38.5	0.0	0.647
10.00	0.50	0.51	0.00	0.00	0.00	24.06	24.58	38.5	0.0	0.639
15.00	0.49	0.51	0.00	0.00	0.00	23.71	24.22	38.5	0.0	0.629
20.00	0.48	0.51	0.00	0.00	0.00	23.34	23.84	38.5	0.0	0.619
25.00	0.46	0.51	0.00	0.00	0.00	22.94	23.42	38.5	0.0	0.609
30.00	0.45	0.51	0.00	0.00	0.00	22.51	22.98	38.5	0.0	0.597
35.00	0.44	0.52	0.00	0.00	0.00	22.05	22.50	38.5	0.0	0.585
40.00	0.42	0.52	0.00	0.00	0.00	21.55	21.99	38.5	0.0	0.572
40.00	0.51	0.62	0.00	0.00	0.00	25.67	26.20	31.4	0.0	0.836
45.00	0.49	0.62	0.00	0.00	0.00	25.03	25.54	31.4	0.0	0.815
50.00	0.48	0.62	0.00	0.00	0.00	24.33	24.83	31.4	0.0	0.792
55.00	0.47	0.62	0.00	0.00	0.00	23.58	24.07	31.4	0.0	0.768
60.00	0.46	0.62	0.00	0.00	0.00	22.76	23.24	31.4	0.0	0.741
65.00	0.44	0.62	0.00	0.00	0.00	21.89	22.35	31.4	0.0	0.713
70.00	0.43	0.62	0.00	0.00	0.00	20.94	21.40	31.4	0.0	0.682
75.00	0.41	0.62	0.00	0.00	0.00	19.92	20.36	31.4	0.0	0.649
80.00	0.40	0.62	0.00	0.00	0.00	18.81	19.24	31.4	0.0	0.613
80.00	0.50	0.78	0.00	0.00	0.00	23.26	23.80	28.7	0.0	0.829
85.00	0.49	0.77	0.00	0.00	0.00	21.77	22.29	28.7	0.0	0.776
90.00	0.47	0.77	0.00	0.00	0.00	20.15	20.66	28.7	0.0	0.719
95.00	0.46	0.77	0.00	0.00	0.00	18.38	18.89	28.7	0.0	0.658
96.00	0.41	0.67	0.00	0.00	0.00	18.02	18.47	28.7	0.0	0.643
100.00	0.40	0.67	0.00	0.00	0.00	16.78	17.22	28.7	0.0	0.600
105.00	0.39	0.67	0.00	0.00	0.00	15.10	15.53	28.7	0.0	0.541
106.00	0.38	0.66	0.00	0.00	0.00	14.75	15.18	28.7	0.0	0.528
110.00	0.37	0.66	0.00	0.00	0.00	13.30	13.72	28.7	0.0	0.478
115.00	0.36	0.66	0.00	0.00	0.00	11.33	11.74	28.7	0.0	0.409
116.00	0.29	0.48	0.00	0.00	0.00	10.92	11.24	28.7	0.0	0.391
120.00	0.28	0.48	0.00	0.00	0.00	9.79	10.11	28.7	0.0	0.352
120.00	0.32	0.55	0.00	0.00	0.00	11.12	11.48	38.1	0.0	0.301
125.00	0.31	0.54	0.00	0.00	0.00	9.37	9.72	38.1	0.0	0.255
127.00	0.22	0.41	0.00	0.00	0.00	8.63	8.88	38.1	0.0	0.233
130.00	0.21	0.41	0.00	0.00	0.00	7.84	8.08	38.1	0.0	0.212
135.00	0.19	0.40	0.00	0.00	0.00	6.40	6.63	38.1	0.0	0.174
139.00	0.18	0.39	0.00	0.00	0.00	5.18	5.39	38.1	0.0	0.142
139.00	0.61	1.34	0.00	0.00	0.00	26.27	26.98	52.0	0.0	0.519
140.00	0.61	1.35	0.00	0.00	0.00	24.77	25.48	52.0	0.0	0.490
142.00	0.59	1.27	0.00	0.00	0.00	21.61	22.31	52.0	0.0	0.429
145.00	0.58	1.28	0.00	0.00	0.00	16.82	17.54	52.0	0.0	0.337
150.00	0.14	0.26	0.00	0.00	0.00	4.56	4.73	52.0	0.0	0.091
150.00	0.09	0.17	0.00	0.00	0.00	3.78	3.88	28.8	0.0	0.135
155.00	0.06	0.13	0.00	0.00	0.00	1.99	2.07	28.8	0.0	0.072
160.00	0.04	0.10	0.00	0.00	0.00	0.58	0.64	28.8	0.0	0.022
162.00	0.00	0.09	0.00	0.00	0.00	0.17	0.23	28.8	0.0	0.008

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



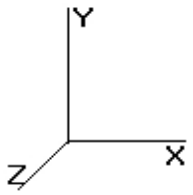
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.81	213.75	1.030	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	209.79	1.030	0.000	5.00	21.177	21.81	235.9	0.0	2,057.5
10.00		0.00	1.00	6.400	10.81	205.84	1.030	0.000	5.00	20.782	21.41	231.5	0.0	2,018.6
15.00		0.00	1.00	6.400	10.81	201.89	1.030	0.000	5.00	20.387	21.00	227.1	0.0	1,979.6
20.00		0.00	1.00	6.400	10.81	197.94	1.030	0.000	5.00	19.992	20.59	222.7	0.0	1,940.6
25.00		0.00	1.00	6.400	10.81	193.98	1.030	0.000	5.00	19.597	20.18	218.3	0.0	1,901.6
30.00		0.00	1.00	6.400	10.81	190.03	1.030	0.000	5.00	19.201	19.78	213.9	0.0	1,862.7
35.00		0.00	1.01	6.509	10.99	187.65	1.030	0.000	5.00	18.806	19.37	213.1	0.0	1,823.7
40.00	Top - Section 1	0.00	1.05	6.762	11.42	187.20	1.030	0.000	5.00	18.411	18.96	216.7	0.0	1,784.7
45.00		0.00	1.09	6.993	11.81	186.11	1.030	0.000	5.00	18.002	18.54	219.1	0.0	1,458.0
50.00		0.00	1.12	7.207	12.17	184.74	1.030	0.000	5.00	17.607	18.14	220.9	0.0	1,425.5
55.00		0.00	1.15	7.406	12.51	183.02	1.030	0.000	5.00	17.212	17.73	221.9	0.0	1,393.0
60.00		0.00	1.18	7.592	12.83	181.00	1.030	0.000	5.00	16.817	17.32	222.2	0.0	1,360.6
65.00		0.00	1.21	7.768	13.12	178.73	1.030	0.000	5.00	16.422	16.91	222.0	0.0	1,328.1
70.00		0.00	1.24	7.934	13.40	176.23	1.030	0.000	5.00	16.026	16.51	221.3	0.0	1,295.6
75.00		0.00	1.26	8.092	13.67	173.54	1.030	0.000	5.00	15.631	16.10	220.2	0.0	1,263.1
80.00	Top - Section 2	0.00	1.28	8.242	13.93	170.66	1.030	0.000	5.00	15.236	15.69	218.6	0.0	1,230.6
85.00		0.00	1.31	8.387	14.17	167.62	1.030	0.000	5.00	14.841	15.29	216.7	0.0	962.0
90.00		0.00	1.33	8.525	14.40	164.43	1.030	0.000	5.00	14.446	14.88	214.4	0.0	936.0
95.00		0.00	1.35	8.657	14.63	161.11	1.030	0.000	5.00	14.050	14.47	211.7	0.0	910.0
96.00	Appertunance(s)	0.00	1.35	8.683	14.67	160.43	1.030	0.000	1.00	2.763	2.85	41.8	0.0	178.9
100.0		0.00	1.37	8.785	14.84	157.67	1.030	0.000	4.00	10.893	11.22	166.6	0.0	705.1
105.0		0.00	1.39	8.908	15.05	154.11	1.030	0.000	5.00	13.260	13.66	205.6	0.0	858.0
106.0	Appertunance(s)	0.00	1.39	8.933	15.09	153.38	1.030	0.000	1.00	2.605	2.68	40.5	0.0	168.5
110.0		0.00	1.41	9.028	15.25	150.44	1.030	0.000	4.00	10.260	10.57	161.2	0.0	663.6
115.0		0.00	1.42	9.143	15.45	146.67	1.030	0.000	5.00	12.470	12.84	198.5	0.0	806.1
116.0	Appertunance(s)	0.00	1.43	9.166	15.49	145.91	1.030	0.000	1.00	2.446	2.52	39.0	0.0	158.1
120.0	Top - Section 3	0.00	1.44	9.255	15.64	142.82	1.030	0.000	4.00	9.628	9.92	155.1	0.0	622.0
125.0		0.00	1.46	9.363	15.82	138.87	1.030	0.000	5.00	11.679	12.03	190.4	0.0	661.3
127.0	Appertunance(s)	0.00	1.47	9.406	15.89	137.27	1.030	0.000	2.00	4.561	4.70	74.7	0.0	258.2
130.0		0.00	1.48	9.469	16.00	134.84	1.030	0.000	3.00	6.723	6.92	110.8	0.0	380.4
135.0		0.00	1.49	9.572	16.17	130.74	1.030	0.000	5.00	10.889	11.22	181.4	0.0	615.9
139.0	Top - Section 4	0.00	1.50	9.652	16.31	127.40	1.030	0.000	4.00	8.426	8.68	141.6	0.0	476.3
140.0		0.00	1.51	9.672	16.34	84.840	1.030	0.000	1.00	1.387	1.43	23.3	0.0	33.8
142.0	Appertunance(s)	0.00	1.51	9.711	16.41	83.407	1.030	0.000	2.00	2.735	2.82	46.2	0.0	66.6
145.0		0.00	1.52	9.769	16.51	81.242	1.030	0.000	3.00	4.004	4.12	68.1	0.0	97.6
150.0	Top - Section 5	0.00	1.54	9.864	16.67	77.592	1.030	0.000	5.00	6.413	6.61	110.1	0.0	156.2
155.0		0.00	1.55	9.957	16.82	62.365	1.047	0.000	5.00	5.000	5.23	88.1	0.0	238.8
160.0		0.00	1.57	10.048	16.98	62.649	1.044	0.000	5.00	5.000	5.22	88.7	0.0	238.8
162.0	Appertunance(s)	0.00	1.57	10.083	17.04	62.760	1.043	0.000	2.00	2.000	2.09	35.5	0.0	95.5
							Totals:		162.00			6,355.5	0.0	36,411.3

Pole :	**302483**	**Code: TIA/EIA-222 Rev F**	**4/30/2014 8:43:33 AM**
Location :	**Brln - Berlin, CT**		**Page: 23**
Height :	**162.0 (ft)**		
Base Dia :	**51.30 (in)**		
Top Dia :	**12.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**12 Sides**		
Taper :	**0.189701 (in/ft)**		

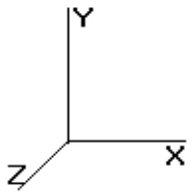


Load Case: **Twist/Sway** **50.00 mph Wind with No Ice** **22 Iterations**

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

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
96.00	Decibel	12	8.683	14.675	0.71	50.18	0.000	0.000	736.42	0.00	0.00	192.00
96.00	Flat Low Profile Pla	1	8.683	14.675	1.00	26.10	0.000	0.000	383.01	0.00	0.00	1,500.00
106.0	48" x 6" Panel	3	8.933	15.096	0.67	5.77	0.000	0.000	87.08	0.00	0.00	60.00
116.0	Round Low Profile Pl	1	9.166	15.490	1.00	21.70	0.000	0.000	336.13	0.00	0.00	1,500.00
116.0	Antel BXA-171063-8BF	6	9.166	15.490	0.71	12.52	0.000	0.000	194.00	0.00	0.00	63.00
116.0	Andrew LNX-6514DS-	2	9.166	15.490	0.77	12.95	0.000	0.000	200.62	0.00	0.00	76.80
116.0	RFS APX75-866514-	1	9.166	15.490	1.00	9.76	0.000	0.000	151.18	0.00	0.00	30.80
116.0	Antel LPA-80063-6CF-	6	9.166	15.490	0.75	47.25	0.000	0.000	731.90	0.00	0.00	162.00
116.0	RFS DB-T1-6Z-8AB-0Z	1	9.166	15.490	1.00	4.80	0.000	0.000	74.35	0.00	0.00	110.00
116.0	Alcatel-Lucent RRH2x	3	9.166	15.490	0.50	3.78	0.000	0.000	58.55	0.00	0.00	132.00
127.0	Allgon 7184	3	9.406	15.896	0.65	5.23	0.000	0.000	83.07	0.00	0.00	33.60
127.0	RFS IBC1900HG-2A	3	9.406	15.896	0.33	1.12	0.000	0.000	17.78	0.00	0.00	66.00
127.0	RFS IBC1900BB-1	3	9.406	15.896	0.33	1.12	0.000	0.000	17.78	0.00	0.00	66.00
127.0	Alcatel-Lucent 800 M	3	9.406	15.896	0.50	3.60	0.000	0.000	57.23	0.00	0.00	192.00
127.0	Alcatel-Lucent 4X40W	6	9.406	15.896	0.50	8.73	0.000	0.000	138.77	0.00	0.00	357.00
127.0	RFS APXVSPP18-C-	2	9.406	15.896	0.71	11.73	0.000	0.000	186.45	0.00	0.00	114.00
127.0	RFS APXV9ERR18-C-	1	9.406	15.896	0.71	5.69	0.000	0.000	90.52	0.00	0.00	62.00
127.0	Flat Low Profile Pla	1	9.406	15.896	1.00	26.10	0.000	0.000	414.89	0.00	0.00	1,500.00
142.0	RFS APXV18-	3	9.711	16.411	0.68	10.24	0.000	0.000	168.07	0.00	0.00	66.00
150.0	Concealment Canister	1	9.984	16.874	1.00	15.00	0.000	6.500	253.11	0.00	1,645.18	200.00
150.0	Raycap DC6-48-60-18-	1	9.902	16.734	1.00	1.26	0.000	2.000	21.08	0.00	42.17	20.00
150.0	Ericsson RRUS 11	6	9.902	16.734	0.50	8.82	0.000	2.000	147.59	0.00	295.18	330.00
150.0	KMW AM-X-CD-16-65-	6	9.902	16.734	0.67	33.21	0.000	2.000	555.64	0.00	1,111.29	291.00
150.0	Flat Platform w/ Han	1	9.864	16.670	1.00	42.40	0.000	0.000	706.82	0.00	0.00	2,000.00
150.0	Powerwave 7770.00	3	9.902	16.734	0.65	11.47	0.000	2.000	191.87	0.00	383.73	105.00
150.0	Powerwave LGP21401	6	9.902	16.734	0.33	2.55	0.000	2.000	42.74	0.00	85.48	84.60
163.0	Ericsson KRY 112 144	3	10.101	17.071	0.86	0.00	0.000	0.000	0.00	0.00	0.00	33.00
163.0	Ericsson AIR 21, 1.3	3	10.101	17.071	0.71	0.00	0.000	0.000	0.00	0.00	0.00	249.00
									6,046.66			9,595.80

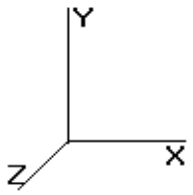


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

Linear Appurtenance Segment Forces

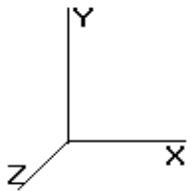
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
10.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.400	0.00	8.05
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
10.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.400	8.65	9.45
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
10.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.400	31.91	49.20
10.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.400	21.09	24.60
15.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.400	0.00	8.05
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
15.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.400	8.65	9.45
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
15.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.400	31.91	49.20
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.400	21.09	24.60
20.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.400	0.00	8.05
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
20.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.400	8.65	9.45
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
20.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.400	31.91	49.20
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.400	21.09	24.60
25.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.400	0.00	8.05
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
25.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.400	8.65	9.45
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
25.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.400	31.91	49.20
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.400	21.09	24.60
30.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.400	0.00	8.05
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
30.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.400	8.65	9.45
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.400	0.00	24.60
30.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.400	31.91	49.20
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.400	21.09	24.60
35.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.509	0.00	8.05
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.509	0.00	24.60
35.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.509	8.80	9.45
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.509	0.00	24.60
35.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.509	32.45	49.20
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.509	21.45	24.60
40.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.762	0.00	8.05
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.762	0.00	24.60
40.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.762	9.14	9.45
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.762	0.00	24.60
40.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.762	33.71	49.20
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.762	22.28	24.60
45.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	6.993	0.00	8.05
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.993	0.00	24.60
45.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	6.993	9.45	9.45
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	6.993	0.00	24.60
45.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	6.993	34.86	49.20
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	6.993	23.05	24.60
50.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	7.207	0.00	8.05
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.207	0.00	24.60
50.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	7.207	9.74	9.45



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

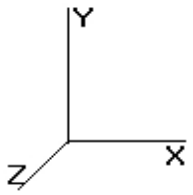
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.207	0.00	24.60
50.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	7.207	35.93	49.20
50.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	7.207	23.75	24.60
55.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	7.406	0.00	8.05
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.406	0.00	24.60
55.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	7.406	10.01	9.45
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.406	0.00	24.60
55.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	7.406	36.92	49.20
55.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	7.406	24.41	24.60
60.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	7.592	0.00	8.05
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.592	0.00	24.60
60.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	7.592	10.26	9.45
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.592	0.00	24.60
60.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	7.592	37.85	49.20
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	7.592	25.02	24.60
65.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	7.768	0.00	8.05
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.768	0.00	24.60
65.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	7.768	10.50	9.45
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.768	0.00	24.60
65.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	7.768	38.73	49.20
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	7.768	25.60	24.60
70.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	7.934	0.00	8.05
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.934	0.00	24.60
70.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	7.934	10.73	9.45
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	7.934	0.00	24.60
70.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	7.934	39.55	49.20
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	7.934	26.15	24.60
75.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.092	0.00	8.05
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.092	0.00	24.60
75.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.092	10.94	9.45
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.092	0.00	24.60
75.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.092	40.34	49.20
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	8.092	26.67	24.60
80.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.242	0.00	8.05
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.242	0.00	24.60
80.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.242	11.14	9.45
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.242	0.00	24.60
80.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.242	41.09	49.20
80.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	8.242	27.16	24.60
85.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.387	0.00	8.05
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.387	0.00	24.60
85.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.387	11.34	9.45
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.387	0.00	24.60
85.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.387	41.81	49.20
85.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	8.387	27.64	24.60
90.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.525	0.00	8.05
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.525	0.00	24.60
90.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.525	11.53	9.45
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.525	0.00	24.60
90.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.525	42.50	49.20
90.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	8.525	28.09	24.60
95.00	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.657	0.00	8.05
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.657	0.00	24.60
95.00	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.657	11.70	9.45
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.657	0.00	24.60
95.00	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.657	43.16	49.20
95.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.39	8.657	28.53	24.60



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

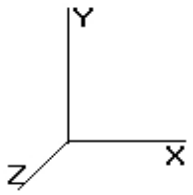
96.00	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	8.683	0.00	1.61
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	8.683	0.00	4.92
96.00	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	8.683	2.35	1.89
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	8.683	0.00	4.92
96.00	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	8.683	8.66	9.84
96.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.39	8.683	5.72	4.92
100.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	8.785	0.00	6.44
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	8.785	0.00	19.68
100.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	8.785	9.50	7.56
100.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	8.785	0.00	19.68
100.0	(19) 1 5/8" Coax	Yes	4.00	9.84	0.59	8.785	35.04	39.36
105.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	8.908	0.00	8.05
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.908	0.00	24.60
105.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	8.908	12.04	9.45
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	8.908	0.00	24.60
105.0	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	8.908	44.41	49.20
106.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	8.933	0.00	1.61
106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	8.933	0.00	4.92
106.0	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	8.933	2.42	1.89
106.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	8.933	0.00	4.92
106.0	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	8.933	8.91	9.84
110.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	9.028	0.00	6.44
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	9.028	0.00	19.68
110.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	9.028	9.76	7.56
110.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	9.028	0.00	19.68
110.0	(19) 1 5/8" Coax	Yes	4.00	9.84	0.59	9.028	36.01	39.36
115.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	9.143	0.00	8.05
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	9.143	0.00	24.60
115.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	9.143	12.36	9.45
115.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	9.143	0.00	24.60
115.0	(19) 1 5/8" Coax	Yes	5.00	9.84	0.59	9.143	45.58	49.20
116.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	9.166	0.00	1.61
116.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	9.166	0.00	4.92
116.0	(3) 1 1/4" Hybriflex	Yes	1.00	1.89	0.16	9.166	2.48	1.89
116.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	9.166	0.00	4.92
116.0	(19) 1 5/8" Coax	Yes	1.00	9.84	0.59	9.166	9.14	9.84
120.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	9.255	0.00	6.44
120.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	9.255	0.00	19.68
120.0	(3) 1 1/4" Hybriflex	Yes	4.00	1.89	0.16	9.255	10.01	7.56
120.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	9.255	0.00	19.68
125.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	9.363	0.00	8.05
125.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	9.363	0.00	24.60
125.0	(3) 1 1/4" Hybriflex	Yes	5.00	1.89	0.16	9.363	12.66	9.45
125.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	9.363	0.00	24.60
127.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	9.406	0.00	3.22
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	9.406	0.00	9.84
127.0	(3) 1 1/4" Hybriflex	Yes	2.00	1.89	0.16	9.406	5.09	3.78
127.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	9.406	0.00	9.84
130.0	(1) 1 5/8" Fiber Cable	Yes	3.00	1.61	0.00	9.469	0.00	4.83
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.00	9.469	0.00	14.76
130.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.469	9.60	14.76
135.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	9.572	0.00	8.05
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.00	9.572	0.00	24.60
135.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.572	16.18	24.60
139.0	(1) 1 5/8" Fiber Cable	Yes	4.00	1.61	0.00	9.652	0.00	6.44
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.00	9.652	0.00	19.68
139.0	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	9.652	13.05	19.68



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

140.0	(1) 1 5/8" Fiber Cable	Yes	1.00	1.61	0.00	9.672		0.00	1.61
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.00	9.672		0.00	4.92
140.0	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	9.672		3.27	4.92
142.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	9.711		0.00	3.22
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.00	9.711		0.00	9.84
142.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.711		6.56	9.84
145.0	(1) 1 5/8" Fiber Cable	Yes	3.00	1.61	0.00	9.769		0.00	4.83
145.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.769		9.91	14.76
150.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	9.864		0.00	8.05
150.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.864		16.67	24.60
155.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	9.957		0.00	8.05
155.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.957		16.83	24.60
160.0	(1) 1 5/8" Fiber Cable	Yes	5.00	1.61	0.00	10.048		0.00	8.05
160.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	10.048		16.98	24.60
162.0	(1) 1 5/8" Fiber Cable	Yes	2.00	1.61	0.00	10.083		0.00	3.22
162.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	10.083		6.82	9.84
							Totals:	1,660.25	3,469.79



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

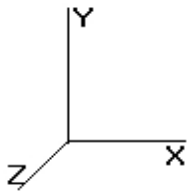
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	235.93	2,057.54	0.00	0.00
10.00	293.17	2,317.96	0.00	0.00
15.00	288.77	2,278.99	0.00	0.00
20.00	284.37	2,240.02	0.00	0.00
25.00	279.97	2,201.04	0.00	0.00
30.00	275.56	2,162.07	0.00	0.00
35.00	275.76	2,123.10	0.00	0.00
40.00	281.83	2,084.13	0.00	0.00
45.00	286.50	1,757.38	0.00	0.00
50.00	290.30	1,724.91	0.00	0.00
55.00	293.22	1,692.43	0.00	0.00
60.00	295.38	1,659.95	0.00	0.00
65.00	296.87	1,627.48	0.00	0.00
70.00	297.76	1,595.00	0.00	0.00
75.00	298.12	1,562.52	0.00	0.00
80.00	298.00	1,530.04	0.00	0.00
85.00	297.44	1,261.36	0.00	0.00
90.00	296.47	1,235.38	0.00	0.00
95.00	295.13	1,209.40	0.00	0.00
96.00	1,177.91	1,930.76	0.00	0.00
100.0	211.11	895.46	0.00	0.00
105.0	262.08	1,095.94	0.00	0.00
106.0	138.91	276.07	0.00	0.00
110.0	207.00	851.37	0.00	0.00
115.0	256.40	1,040.82	0.00	0.00
116.0	1,797.39	2,279.65	0.00	0.00
120.0	165.11	770.43	0.00	0.00
125.0	203.02	846.89	0.00	0.00
127.0	1,086.26	2,722.99	0.00	0.00
130.0	120.41	478.72	0.00	0.00
135.0	197.60	779.67	0.00	0.00
139.0	154.62	607.37	0.00	0.00
140.0	26.62	66.56	0.00	0.00
142.0	220.85	198.16	0.00	0.00
145.0	77.99	181.08	0.00	0.00
150.0	2,045.64	3,325.97	0.00	3,563.03
155.0	104.92	328.86	0.00	0.00
160.0	105.63	296.08	0.00	0.00
162.0	42.37	400.43	0.00	0.00
Totals:	14,062.39	53,693.99	0.00	3,563.03

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

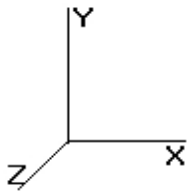
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-14.085	-53.688	0.000	0.000	0.000	-1,393.906	0.000	0.000	0.000	0.000
5.00	-13.892	-51.619	0.000	0.000	0.000	-1,323.484	-0.026	0.000	0.026	-0.049
10.00	-13.637	-49.289	0.000	0.000	0.000	-1,254.027	-0.103	0.000	0.103	-0.097
15.00	-13.384	-47.000	0.000	0.000	0.000	-1,185.840	-0.231	0.000	0.231	-0.146
20.00	-13.131	-44.749	0.000	0.000	0.000	-1,118.921	-0.411	0.000	0.411	-0.195
25.00	-12.879	-42.538	0.000	0.000	0.000	-1,053.266	-0.642	0.000	0.642	-0.244
30.00	-12.628	-40.367	0.000	0.000	0.000	-988.871	-0.924	0.000	0.924	-0.293
35.00	-12.373	-38.235	0.000	0.000	0.000	-925.732	-1.257	0.000	1.257	-0.342
40.00	-12.109	-36.142	0.000	0.000	0.000	-863.868	-1.642	0.000	1.642	-0.391
45.00	-11.841	-34.376	0.000	0.000	0.000	-803.326	-2.077	0.000	2.077	-0.439
50.00	-11.569	-32.642	0.000	0.000	0.000	-744.120	-2.568	0.000	2.568	-0.497
55.00	-11.291	-30.941	0.000	0.000	0.000	-686.275	-3.119	0.000	3.119	-0.554
60.00	-11.007	-29.274	0.000	0.000	0.000	-629.820	-3.730	0.000	3.730	-0.610
65.00	-10.719	-27.639	0.000	0.000	0.000	-574.784	-4.398	0.000	4.398	-0.665
70.00	-10.426	-26.038	0.000	0.000	0.000	-521.192	-5.123	0.000	5.123	-0.719
75.00	-10.130	-24.471	0.000	0.000	0.000	-469.063	-5.904	0.000	5.904	-0.771
80.00	-9.830	-22.936	0.000	0.000	0.000	-418.416	-6.740	0.000	6.740	-0.822
85.00	-9.534	-21.671	0.000	0.000	0.000	-369.266	-7.628	0.000	7.628	-0.871
90.00	-9.239	-20.431	0.000	0.000	0.000	-321.594	-8.571	0.000	8.571	-0.929
95.00	-8.934	-19.222	0.000	0.000	0.000	-275.402	-9.573	0.000	9.573	-0.983
96.00	-7.731	-17.308	0.000	0.000	0.000	-266.469	-9.780	0.000	9.780	-0.993
100.0	-7.516	-16.411	0.000	0.000	0.000	-235.547	-10.630	0.000	10.630	-1.034
105.0	-7.241	-15.317	0.000	0.000	0.000	-197.966	-11.738	0.000	11.738	-1.080
106.0	-7.103	-15.041	0.000	0.000	0.000	-190.725	-11.966	0.000	11.966	-1.089
110.0	-6.889	-14.189	0.000	0.000	0.000	-162.313	-12.893	0.000	12.893	-1.123
115.0	-6.616	-13.151	0.000	0.000	0.000	-127.871	-14.091	0.000	14.091	-1.161
116.0	-4.776	-10.907	0.000	0.000	0.000	-121.255	-14.335	0.000	14.335	-1.168
120.0	-4.600	-10.138	0.000	0.000	0.000	-102.150	-15.324	0.000	15.324	-1.194
125.0	-4.383	-9.294	0.000	0.000	0.000	-79.149	-16.591	0.000	16.591	-1.223
127.0	-3.240	-6.594	0.000	0.000	0.000	-70.384	-17.106	0.000	17.106	-1.234
130.0	-3.111	-6.117	0.000	0.000	0.000	-60.665	-17.887	0.000	17.887	-1.251
135.0	-2.898	-5.341	0.000	0.000	0.000	-45.108	-19.209	0.000	19.209	-1.274
139.0	-2.731	-4.737	0.000	0.000	0.000	-33.515	-20.284	0.000	20.284	-1.290
140.0	-2.705	-4.670	0.000	0.000	0.000	-30.784	-20.554	0.000	20.554	-1.293
142.0	-2.484	-4.474	0.000	0.000	0.000	-25.374	-21.106	0.000	21.106	-1.340
145.0	-2.406	-4.293	0.000	0.000	0.000	-17.922	-21.968	0.000	21.968	-1.398
150.0	-0.279	-1.019	0.000	0.000	0.000	-2.327	-23.469	0.000	23.469	-1.456
155.0	-0.166	-0.692	0.000	0.000	0.000	-0.933	-24.999	0.000	24.999	-1.465
160.0	-0.053	-0.399	0.000	0.000	0.000	-0.105	-26.535	0.000	26.535	-1.468
162.0	-0.042	0.000	0.000	0.000	0.000	0.000	-27.150	0.000	27.150	-1.468

Pole : 302483
Location : Brln - Berlin, CT
Height : 162.0 (ft)
Base Dia : 51.30 (in)
Top Dia : 12.00 (in)
Shape : 12 Sides
Taper : 0.189701 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



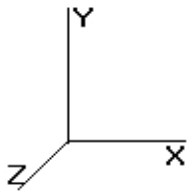
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.44	0.23	0.00	0.00	0.00	11.16	11.60	38.5	0.0	0.302
5.00	0.43	0.24	0.00	0.00	0.00	11.00	11.44	38.5	0.0	0.297
10.00	0.42	0.24	0.00	0.00	0.00	10.84	11.27	38.5	0.0	0.293
15.00	0.41	0.24	0.00	0.00	0.00	10.67	11.08	38.5	0.0	0.288
20.00	0.40	0.24	0.00	0.00	0.00	10.48	10.88	38.5	0.0	0.283
25.00	0.38	0.24	0.00	0.00	0.00	10.28	10.67	38.5	0.0	0.277
30.00	0.37	0.24	0.00	0.00	0.00	10.07	10.45	38.5	0.0	0.272
35.00	0.36	0.24	0.00	0.00	0.00	9.84	10.21	38.5	0.0	0.265
40.00	0.35	0.24	0.00	0.00	0.00	9.60	9.95	38.5	0.0	0.259
40.00	0.42	0.28	0.00	0.00	0.00	11.43	11.86	31.4	0.0	0.378
45.00	0.41	0.28	0.00	0.00	0.00	11.12	11.54	31.4	0.0	0.368
50.00	0.39	0.28	0.00	0.00	0.00	10.78	11.19	31.4	0.0	0.357
55.00	0.38	0.28	0.00	0.00	0.00	10.42	10.82	31.4	0.0	0.345
60.00	0.37	0.28	0.00	0.00	0.00	10.04	10.42	31.4	0.0	0.332
65.00	0.36	0.28	0.00	0.00	0.00	9.62	9.99	31.4	0.0	0.319
70.00	0.35	0.28	0.00	0.00	0.00	9.18	9.54	31.4	0.0	0.304
75.00	0.33	0.28	0.00	0.00	0.00	8.70	9.05	31.4	0.0	0.289
80.00	0.32	0.28	0.00	0.00	0.00	8.19	8.52	31.4	0.0	0.272
80.00	0.40	0.35	0.00	0.00	0.00	10.12	10.54	28.7	0.0	0.367
85.00	0.39	0.35	0.00	0.00	0.00	9.43	9.84	28.7	0.0	0.343
90.00	0.38	0.35	0.00	0.00	0.00	8.69	9.09	28.7	0.0	0.316
95.00	0.36	0.34	0.00	0.00	0.00	7.88	8.27	28.7	0.0	0.288
96.00	0.33	0.30	0.00	0.00	0.00	7.72	8.06	28.7	0.0	0.281
100.00	0.32	0.30	0.00	0.00	0.00	7.15	7.49	28.7	0.0	0.261
105.00	0.31	0.30	0.00	0.00	0.00	6.39	6.72	28.7	0.0	0.234
106.00	0.30	0.29	0.00	0.00	0.00	6.23	6.56	28.7	0.0	0.228
110.00	0.29	0.29	0.00	0.00	0.00	5.58	5.90	28.7	0.0	0.205
115.00	0.28	0.29	0.00	0.00	0.00	4.69	5.00	28.7	0.0	0.174
116.00	0.24	0.21	0.00	0.00	0.00	4.51	4.76	28.7	0.0	0.166
120.00	0.22	0.21	0.00	0.00	0.00	4.01	4.25	28.7	0.0	0.148
120.00	0.26	0.24	0.00	0.00	0.00	4.55	4.82	38.1	0.0	0.127
125.00	0.24	0.23	0.00	0.00	0.00	3.78	4.04	38.1	0.0	0.106
127.00	0.18	0.17	0.00	0.00	0.00	3.46	3.64	38.1	0.0	0.096
130.00	0.17	0.17	0.00	0.00	0.00	3.11	3.29	38.1	0.0	0.086
135.00	0.15	0.17	0.00	0.00	0.00	2.49	2.66	38.1	0.0	0.070
139.00	0.14	0.16	0.00	0.00	0.00	1.97	2.13	38.1	0.0	0.056
139.00	0.47	0.56	0.00	0.00	0.00	10.00	10.51	52.0	0.0	0.202
140.00	0.47	0.56	0.00	0.00	0.00	9.36	9.88	52.0	0.0	0.190
142.00	0.46	0.52	0.00	0.00	0.00	8.02	8.53	52.0	0.0	0.164
145.00	0.46	0.52	0.00	0.00	0.00	6.01	6.53	52.0	0.0	0.126
150.00	0.11	0.06	0.00	0.00	0.00	0.87	0.99	52.0	0.0	0.019
150.00	0.07	0.04	0.00	0.00	0.00	0.72	0.79	28.8	0.0	0.028
155.00	0.05	0.02	0.00	0.00	0.00	0.29	0.34	28.8	0.0	0.012
160.00	0.03	0.01	0.00	0.00	0.00	0.03	0.06	28.8	0.0	0.002
162.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	28.8	0.0	0.000

Pole :	**302483**	**Code: TIA/EIA-222 Rev F**	**4/30/2014 8:43:34 AM**
Location :	**Brln - Berlin, CT**		**Page: 31**
Height :	**162.0 (ft)**		
Base Dia :	**51.30 (in)**		
Top Dia :	**12.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**12 Sides**		
Taper :	**0.189701 (in/ft)**		



Analysis Summary

	Reactions						Max Stresses			
Load Case	**Shear FX (kips)**	**Shear FZ (kips)**	**Axial FY (kips)**	**Moment MX (ft-kips)**	**Moment MY (ft-kips)**	**Moment MZ (ft-kips)**	**Combined Stress (ksi)**	**Allowable Stress (ksi)**	**Elev (ft)**	**Stress Ratio**
No Ice	**36.1**	**0.00**	**53.65**	**0.00**	**0.00**	**3565.90**	**29.68**	**31.4**	**40.00**	**0.946**
Ice	**30.2**	**0.00**	**63.82**	**0.00**	**0.00**	**3083.04**	**26.20**	**31.4**	**40.00**	**0.836**
Twist/Sway	**14.1**	**0.00**	**53.69**	**0.00**	**0.00**	**1393.91**	**11.86**	**31.4**	**40.00**	**0.378**

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	37.38	in
	Pole Thickness		in
	Plate Length	62	in
	Plate Thickness	2	in
	Plate Fy	60	ksi
	Weld Length	0.25	in
	Allowable	664.01	k-in
	Applied	439.76	k-in
Stiffeners	#	***0***	

Bolts	#	***8***	
	Bolt Circle	44	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
●	Diameter	2.25	in
	Hole Diameter	2.375	in
	Type	#18J	
	Fy	75	ksi
	Fu	100	ksi
	Allowable	194.86	k
	Applied	117.43	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***12***	
	Bolt Circle	55.5	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
	Offset Angle	30	°
	Diameter	1.75	in
	Type	R71	
	Fu	390	ksi
	Allowable	412.75	k
	Applied	104.52	k

Code Rev.	***F***	**Date**	3/24/2014
A.S.I.	1.33	**Engineer**	MJL
		Site #	302483
Moment *	2317.8 k-ft	**Carrier**	Verizon
Axial *	34.9 k		

* Factored by 0.65, see attached calcs

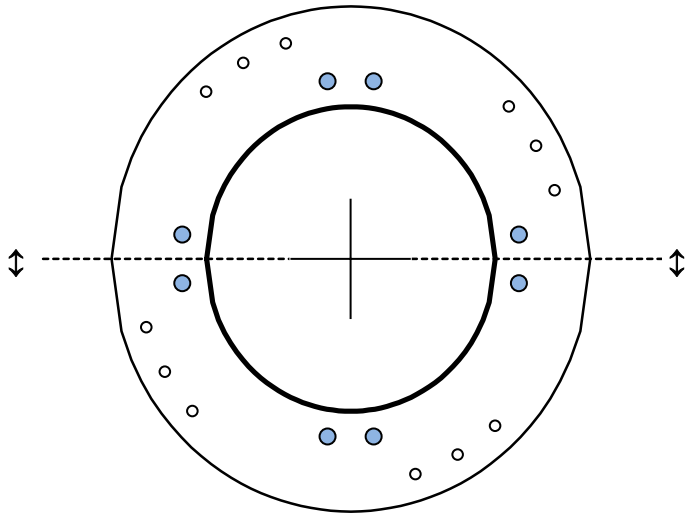


Plate Stress Ratio:
0.66 (Pass)

Bolt Stress Ratio:
0.60 (Pass)

Extra Bolt Stress Ratio:
0.25 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 10.0 ft***
	Pole Diameter	37.38	in
	Pole Thickness		in
	Plate Diameter	62	in
	Plate Thickness	2	in
	Plate Fy	60	ksi
	Weld Length	0.25	in
	Allowable	424.01	k-in
	Applied	249.14	k-in
Stiffeners	#	***0***	

Bolts	#	***8***	
	Bolt Circle	44	in
	(R)adial / (S)quare	R	
●	Diameter	2.25	in
	Hole Diameter	2.375	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	Allowable	239.03	k
	Applied	133.05	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***12***	
	Bolt Circle	55.5	in
	(R)adial / (S)quare	S	
	Bolt Gap	6	in
	Offset Angle	30	°
	Diameter	1.5	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	Allowable	103.67	k
	Applied	92.80	k

Code Rev.	***F***
A.S.I.	1.33
Moment *	2317.8 k-ft
Axial *	34.9 k

* Factored by 0.65, see attached calcs

Date	3/24/2014
Engineer	MJL
Site #	302483
Carrier	Verizon

Required Flange Thickness:

1.53 in OK

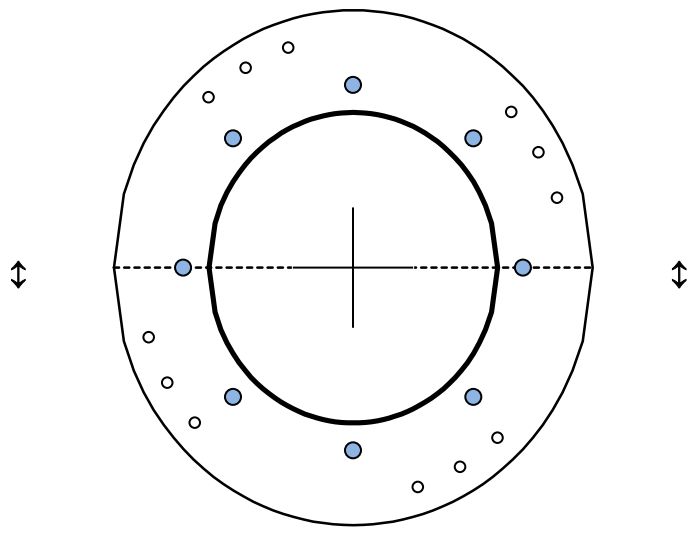


Plate Stress Ratio:

0.59 (Pass)

Bolt Stress Ratio:

0.56 (Pass)

Extra Bolt Stress Ratio:

0.90 (Pass)

3/25/2014

MJL

#302483

Foundation Check

M=365.9 K-ft

V=36.1 K

P=53.7 K

Sliding Factor of Safety

V=36.1 K

Total Weight = Wt. of Concrete = Wt. of Soi + P = 86.7 + 47.8 + 53.9 = 188.2 K

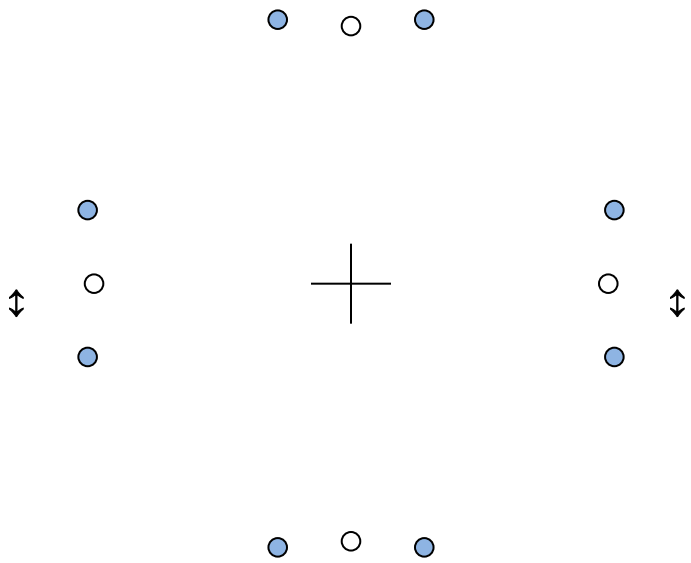
Ultimate friction resistance = 0.41 x (wt.) = 0.41x 188.2k = 77.2 K

Ultimate passive sliding resistance = 11’ x 2.58’ x 1.33 = 37.7 K

Factor of Safety = 114.9/36.1 = 3.18 ; OK

(12) R71 Williams 150ks rock anchor check (next page)

Code Rev.	*F*		**Date**	3/25/2014
A.S.I.	1.33		**Engineer**	MJL
			Site #	302483
Moment	3565.9 k-ft		**Carrier**	T-Mobile
Axial	53.7 k			



Bolts	#	***8***	
	Bolt Circle	44.25	in
	(R)adial / (S)quare	S	
	Bolt Gap	12	in
●	Diameter	1.75	in
	Hole Diameter	3.625	in
	Type	R71 William	
	Fu	390	ksi
	Allowable	446.16	k
	Applied	323.53	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***4***	
	Bolt Circle	41.63	in
	(R)adial / (S)quare	R	
	Offset Angle	90	°
	Diameter	1.75	in
	Type	R71 William	
	Fu	390	ksi
	Allowable	412.75	k
	Applied	311.75	k

Bolt Stress Ratio:
0.73 (Pass)

Extra Bolt Stress Ratio:
0.76 (Pass)

T-MOBILE NORTHEAST LLC

CT11182A
BERLIN/RT-9 X22_1

260 BECKLEY ROAD
KENSINGTON, CT 06037

(1B 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:	CT11182A	APPLICANT:	T-MOBILE NORTHEAST LLC 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002 (860)-692-7100
SITE NAME:	BERLIN/RT-9 X22_1		
SITE ADDRESS:	260 BECKLEY ROAD KENSINGTON, CT 06037		
PROPERTY OWNER:	TBD	PROJECT MANAGER:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801
PARCEL:	TBD	CONTACT:	TARA RUSSO 717-695-2942
CURRENT ZONING:	TBD		
JURISDICTION:	TOWN OF KENSINGTON, CT	ARCHITECT/ENGINEER:	INFINIGY ENGINEERING 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205
ATC SITE NUMBER:	302483		
LAT./LONG.:	N 41.63170° / W 72.72986°		
CONSTRUCTION TYPE:	2B	CONTACT:	AJ DESANTIS 518-690-0790

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 & TMA'S WITH PROPOSED AIR21 PANEL ANTENNAS AND ASSOCIATED CABLING. REUSE EXISTING GPS ANTENNA AND REPLACE EQUIPMENT CABINET.

SHEET INDEX

T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

INFINIGY& Design. Build. Deliver.
1033 WATERVLIET SHAKER ROAD
ALBANY, NY 12205
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/5/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
CHECKED BY:	AJD

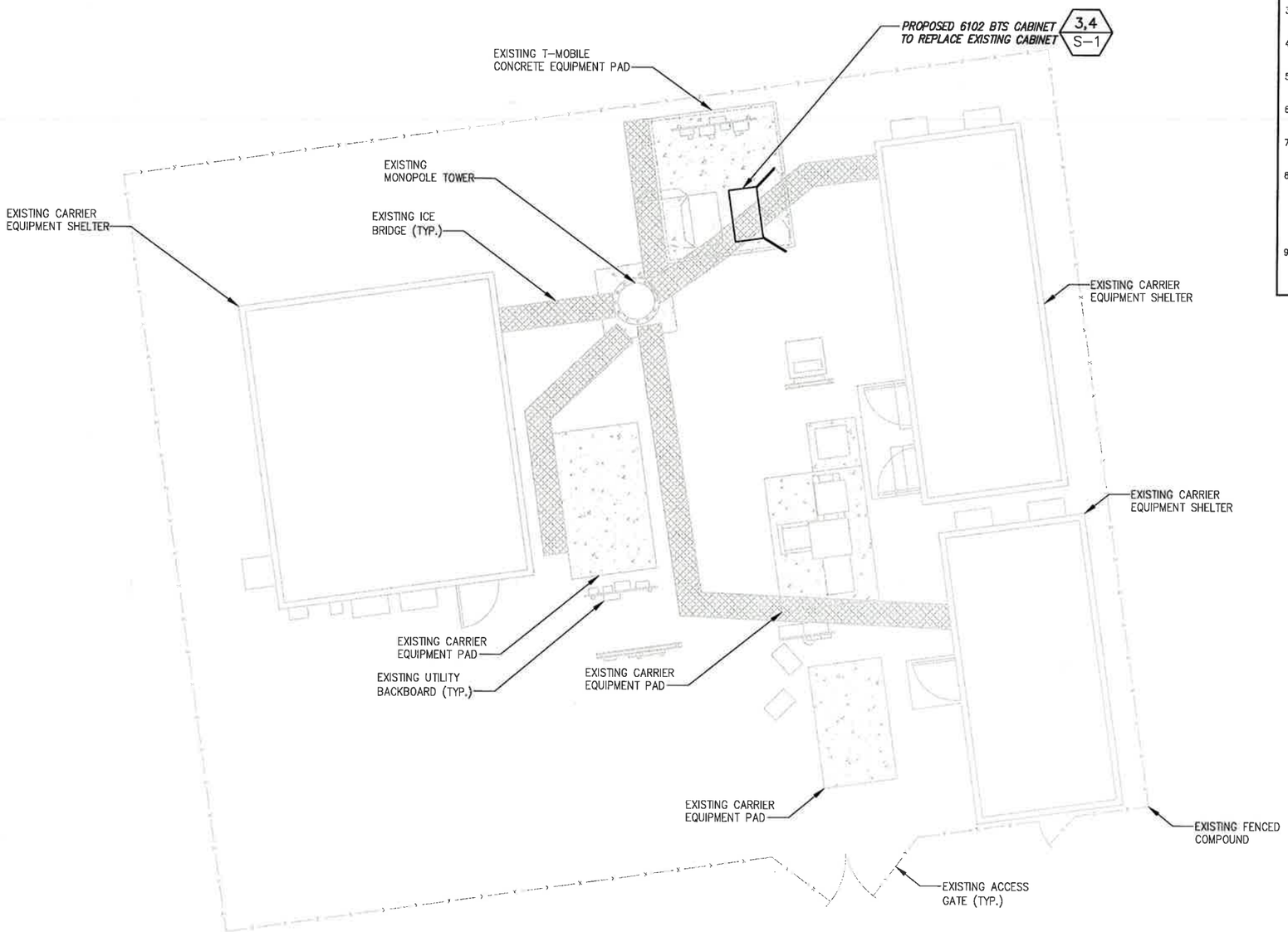
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NAME
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1



CALLED NORTH

1 SITE 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

10' 5' 0 5' 10'

SCALE (11x17): 1" = 10'-0"
SCALE (22x34): 1" = 5'-0"

T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

INFINIGY Design. Build. Deliver.
1033 WATERVLIET SHAKER ROAD
ALBANY, NY 12205
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/3/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
CHECKED BY:	AJD

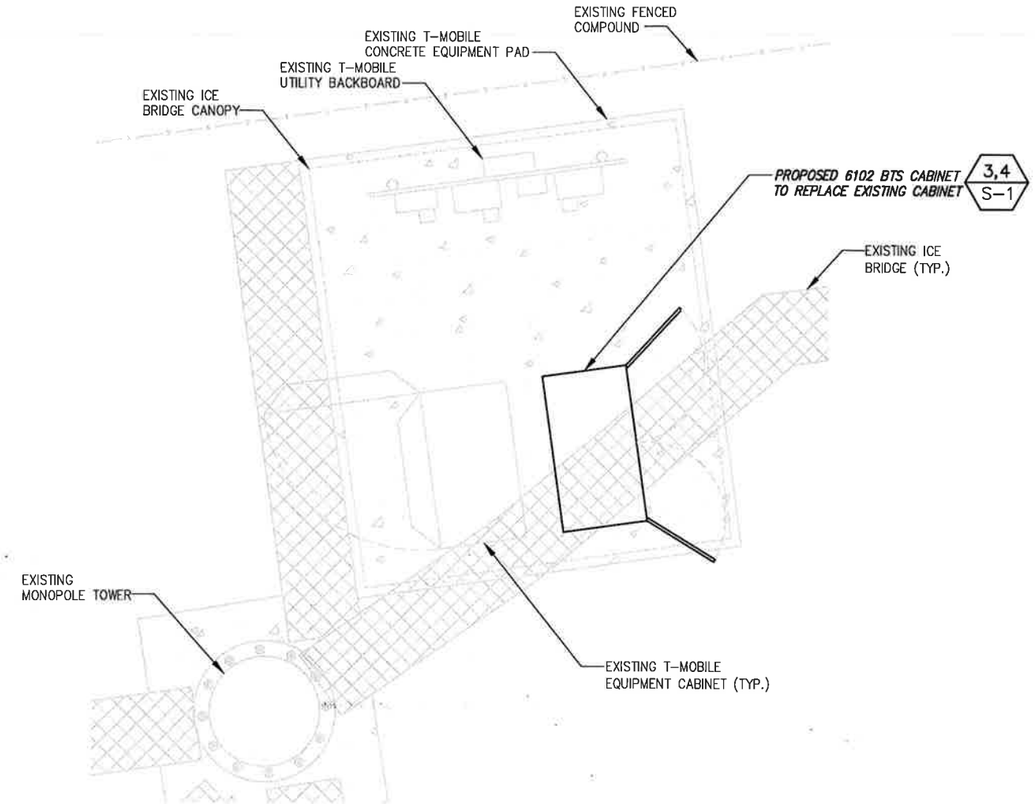
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NAME
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
SITE PLAN

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



N

CALLED NORTH

1 — COMPOUND PLAN
SCALE: AS NOTED

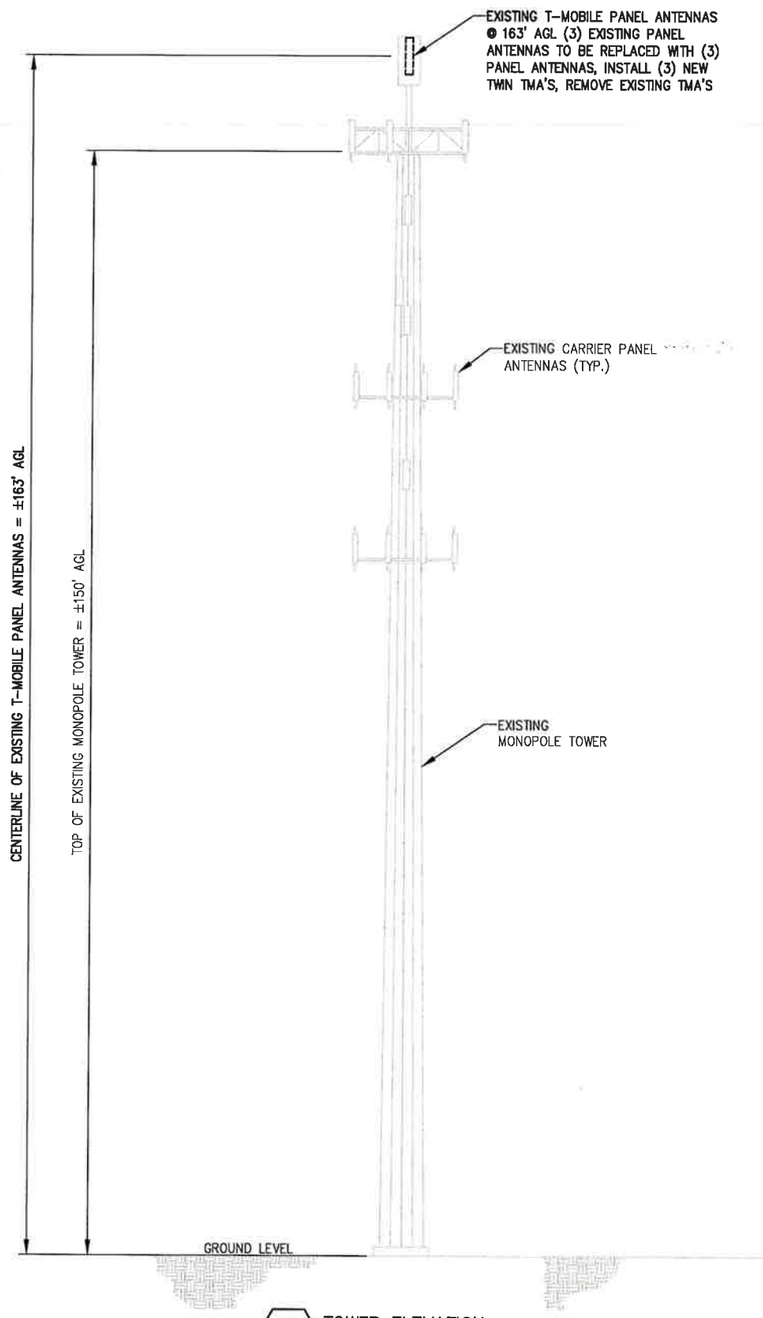
GRAPHIC SCALE

4' 2' 0 2' 4'

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

NOTE:
EXISTING T-MOBILE PANEL ANTENNAS CONTAINED WITHIN RF FRIENDLY ENCLOSURE VERIFY EXISTING ENCLOSURE DIMENSIONS PRIOR TO INSTALLATION

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
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

INFINIGY
Design. Build. Deliver.
1033 WATERVLIET SHAKER ROAD
ALBANY, NY 12205
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/5/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
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
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
COMPOUND PLAN & ELEVATION

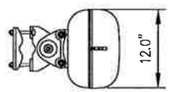
SHEET NUMBER
C-2
SHEET 3 OF 8 SHEETS

RF SYSTEM SCHEDULE (1B CONFIGURATION)

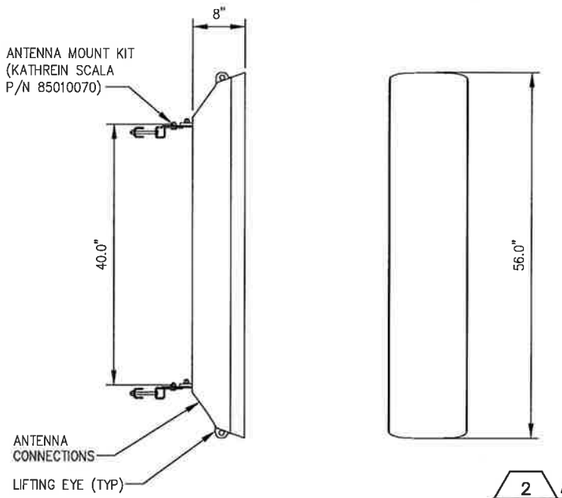
SECTOR	TECHNOLOGY	ANTENNA PORT	BAND	ANTENNA MODEL #	VENDOR	AZIMUTH	M-TILT	E-TILT	ANTENNA CENTERLINE	TMA MODEL #	VENDOR	CABLE LENGTH	CABLE DIAMETER	CABLE TYPE	CABLE MODEL #	VENDOR	CABLE TAGGING	COLOR CODING	JUMPER TYPE	JUMPER TAGGING	COLOR CODING
A	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	90°	0°	2°	163'-0"	*KRY 112 144/1*	*N/A*	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS A1	B	*COAX*	UMTS AWS A1	B
		RF #2										*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS A2	B	*COAX*	UMTS AWS A2	B
	LMU	LMU #1	–							–	–	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	LMU A1	–	*COAX*	LMU A1	–
		LMU #2										*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	LMU A2	–	*COAX*	LMU A2	–
	GSM	**OPTICAL #1**	**B2A**							–	–	178'±	–	**HYBRID**	**MASTERLINE EXTREME HYBRID (9x18)**	**ERICSSON**	**FIBER 1**	**O**	**FIBER**	**GSM 1900 A1**	**R**
	UMTS	**OPTICAL #2**																	**FIBER**	**UMTS 1900 A2**	**G**
B	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	210°	0°	2°	163'-0"	*KRY 112 144/1*	*N/A*	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS B1	BB	*COAX*	UMTS AWS B1	BB
		RF #2										*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS B2	BB	*COAX*	UMTS AWS B2	BB
	LMU	LMU #1	–							–	–	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	LMU B1	–	*COAX*	LMU B1	–
		LMU #2										*EXISTING*	1-5/8"	*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**
C	UMTS AWS	RF #1	B4P	AIR21	ERICSSON	330°	0°	2°	163'-0"	*KRY 112 144/1*	*N/A*	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS C1	BBB	*COAX*	UMTS AWS C1	BBB
		RF #2										*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	UMTS AWS C2	BBB	*COAX*	UMTS AWS C2	BBB
	LMU	LMU #1	–							–	–	*EXISTING*	1-5/8"	*COAX*	*EXISTING*	*N/A*	LMU C1	–	*COAX*	LMU C1	–
		LMU #2										*EXISTING*	1-5/8"	*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**

1 RF SCHEDULE
NOT TO SCALE

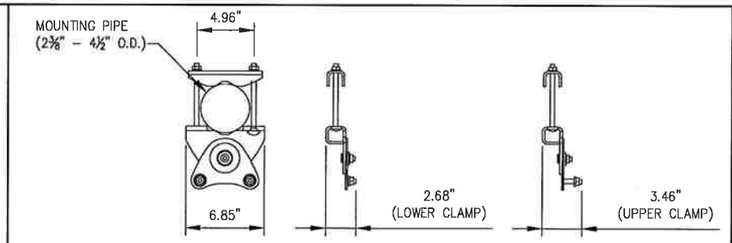
KEY	
EXISTING	R – RED – GSM
PROPOSED	G – GREEN – UMTS 1900
FIBER CONNECTION	B – BLUE – UMTS AWS
	Y – YELLOW – LTE
	O – ORANGE – FIBER CABLE

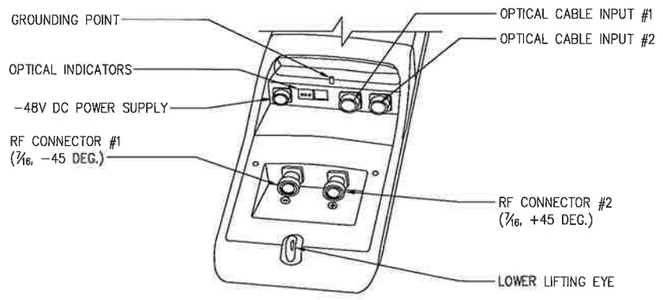


AIR21 "ANTENNA INTEGRATED RADIO"
WEIGHT: 83LBS (MAX)

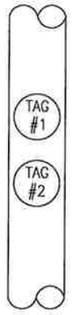


2 ANTENNA DETAIL
NOT TO SCALE





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 ACCOMMODATE ALL CONFIGURATIONS.

3 METALLIC TAG DETAIL
NOT TO SCALE

T-MOBILE NORTHEAST LLC
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FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/5/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO: 317-1185
DRAWN BY: JLM
CHECKED BY: AJD

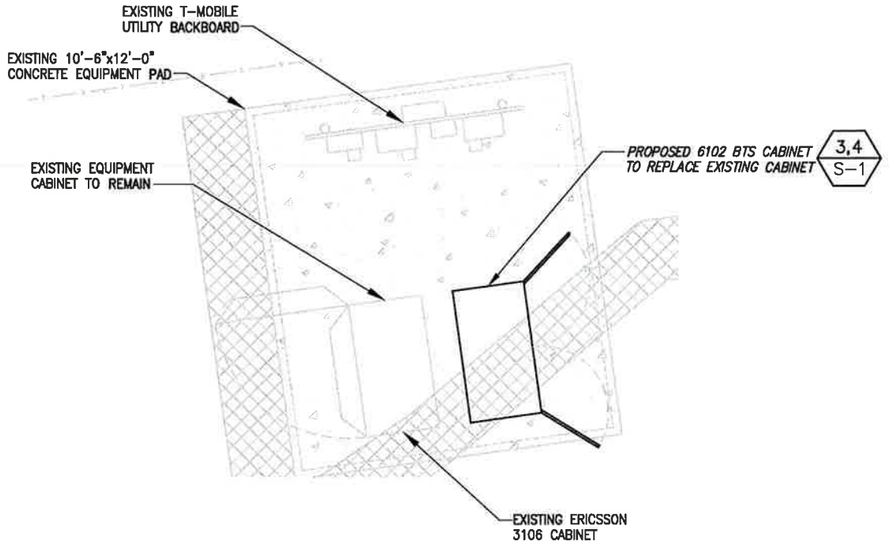
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NAME
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

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

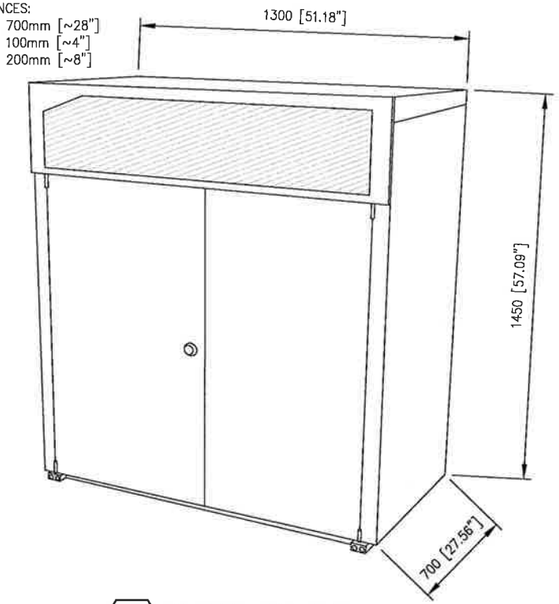
2 DETAIL NOT USED
NOT TO SCALE

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.

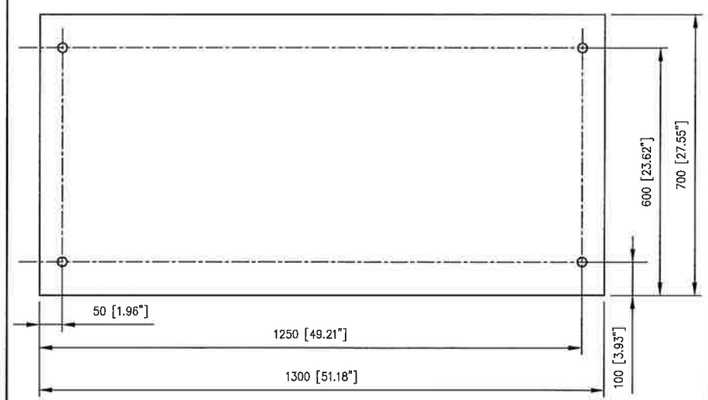
CABINET WEIGHT (WITHOUT BATTERIES): 330 KG [728 LBS]

CABINET COLOR AS MANUFACTURED: GREY, RAL7035 GLOSSY

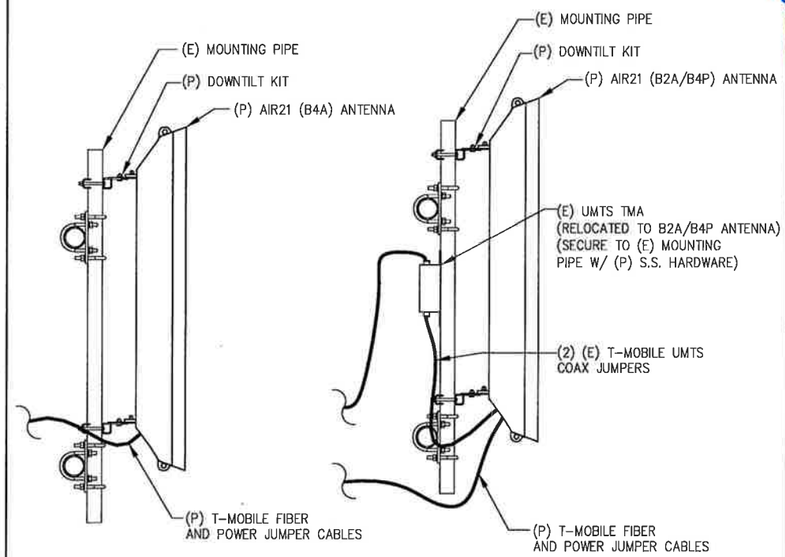
CABINET CLEARANCES:
FRONT: 700mm [~28"]
SIDES: 100mm [~4"]
REAR: 200mm [~8"]



3 ERICSSON RBS 6102
NOT TO SCALE



4 BOLT HOLE DIAGRAM
NOT TO SCALE



5 ANTENNA MOUNTING DETAIL
NOT TO SCALE

T-MOBILE NORTHEAST LLC
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BLOOMFIELD, CT 06002

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ALBANY, NY 12205
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FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/5/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
CHECKED BY:	AJD

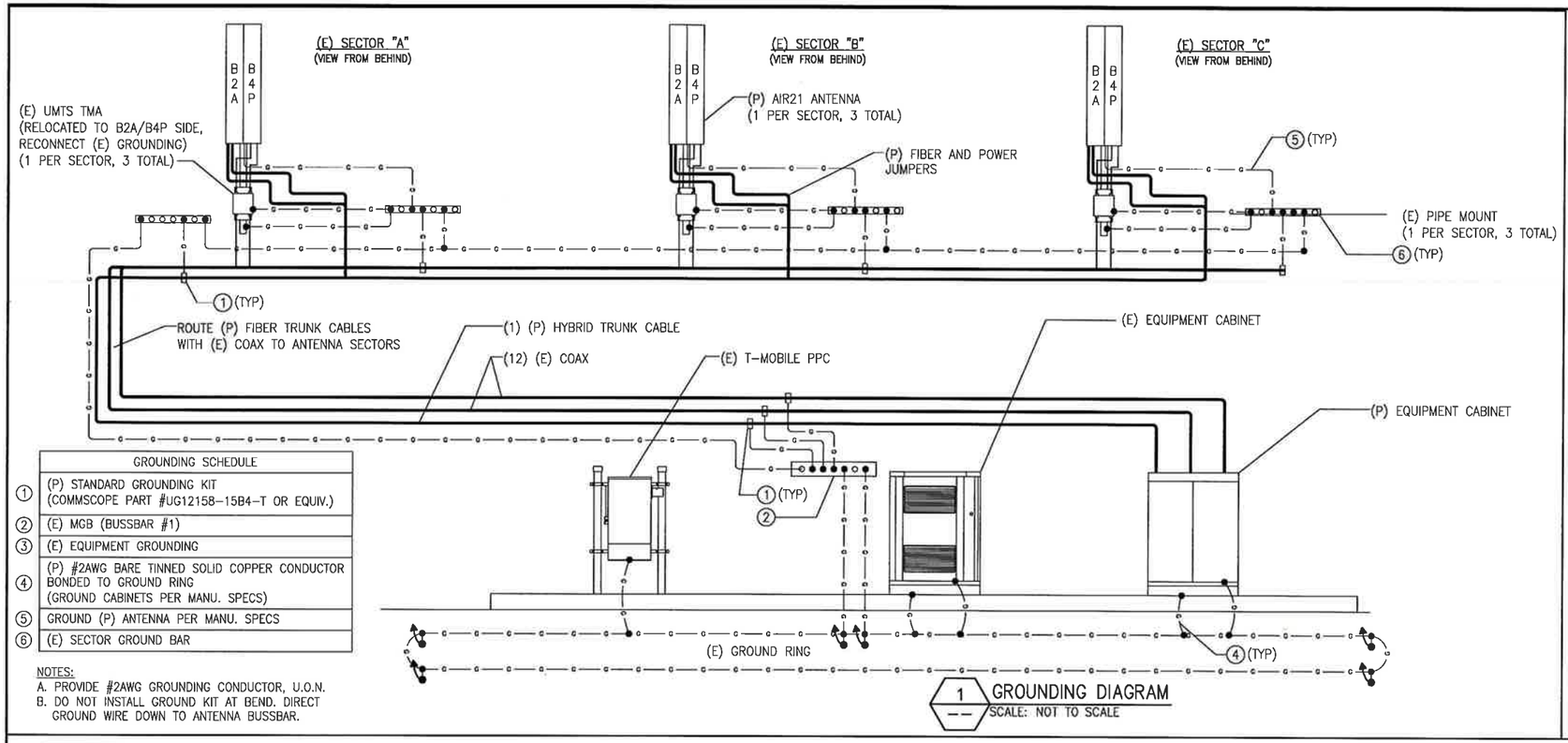
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

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

SITE NAME
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
EQUIPMENT SPECIFICATIONS

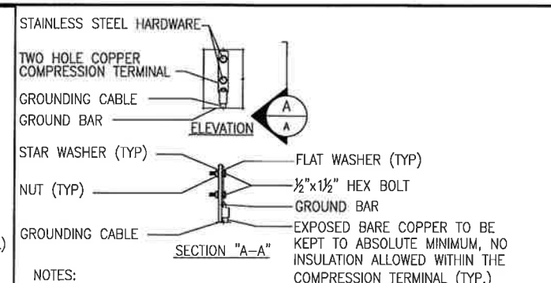
SHEET NUMBER
S-1
SHEET 5 OF **8** SHEETS



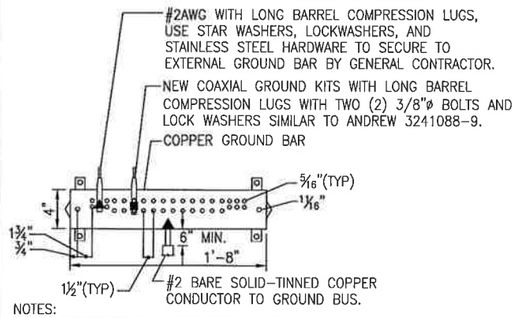
GROUNDING SCHEDULE	
1	(P) STANDARD GROUNDING KIT (COMMSCOPE PART #UG12158-15B4-T OR EQUIV.)
2	(E) MGB (BUSSBAR #1)
3	(E) EQUIPMENT GROUNDING
4	(P) #2AWG BARE TINNED SOLID COPPER CONDUCTOR BONDED TO GROUND RING (GROUND CABINETS PER MANU. SPECS)
5	GROUND (P) ANTENNA PER MANU. SPECS
6	(E) SECTOR GROUND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



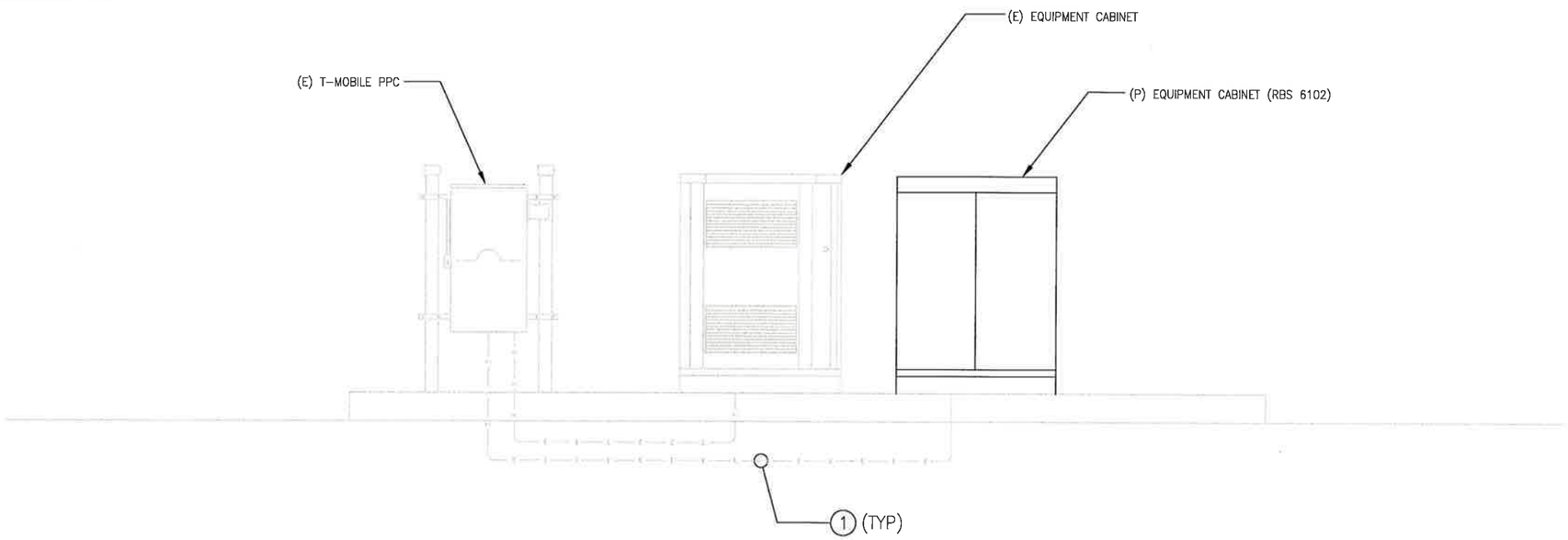
NOTES:
1. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.



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



2 POWER DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
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SUBMITTALS		
DATE	DESCRIPTION	REVISION
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4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
CHECKED BY:	AJD

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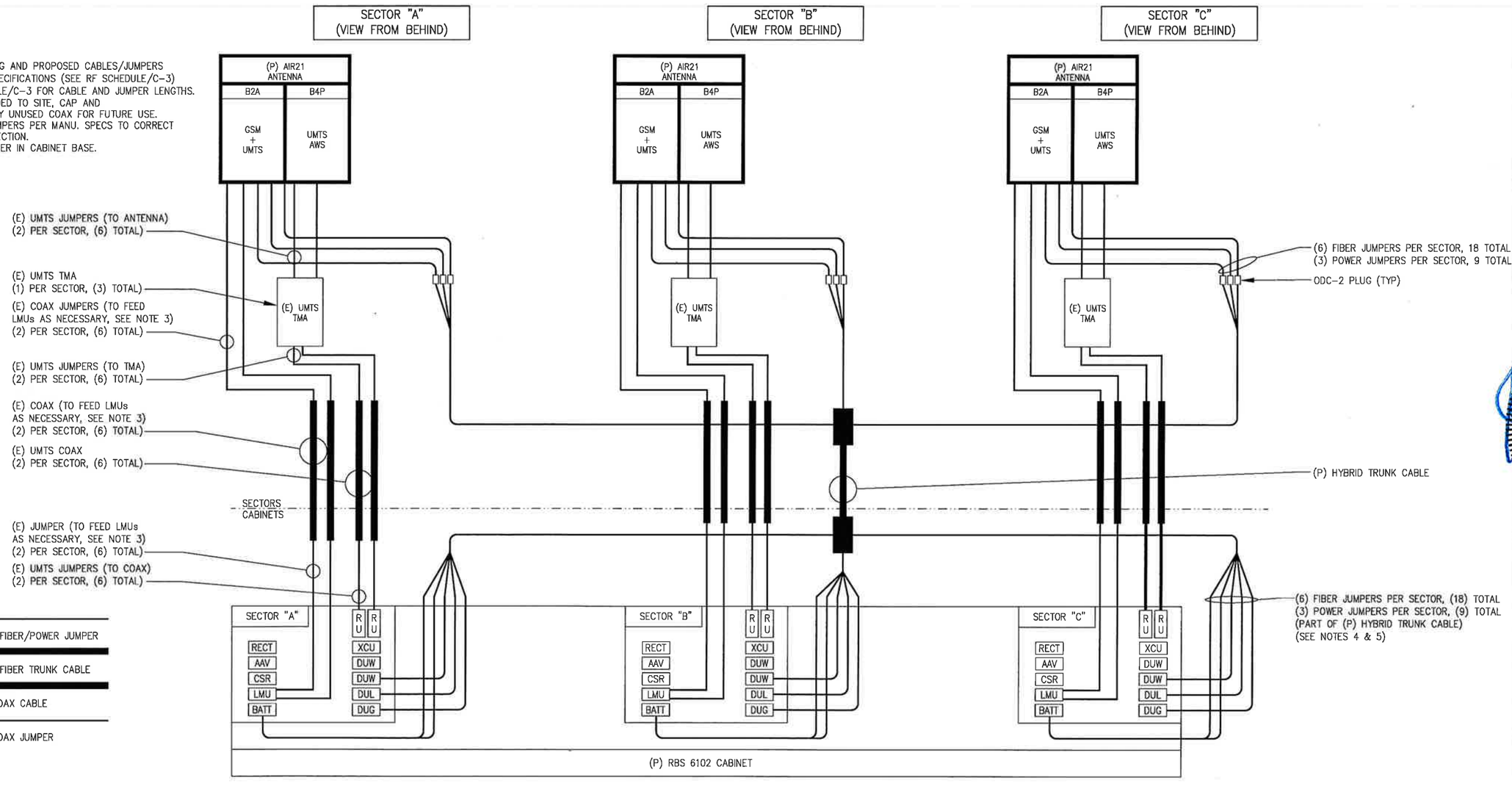
SITE NAME
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
GROUNDING & POWER DIAGRAMS

SHEET NUMBER
E-1
SHEET 6 OF 8 SHEETS

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.



2 1B CONFIGURATION COAX/FIBER PLUMBING DIAGRAM
NOT TO SCALE

T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

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SUBMITTALS		
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4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
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STATE OF CONNECTICUT
JOHN S. STEVENS
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BERLIN/RT-9 X22_1
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KENSINGTON,CT 06037

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.

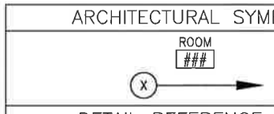
PRODUCTS AND SUBSTITUTIONS
1. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST, IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH 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.

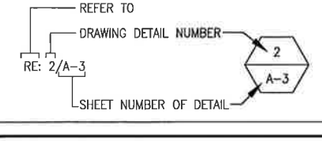
ADMINISTRATION
1. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE 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



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
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

INFINIGY
Design. Build. Deliver.
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ALBANY, NY 12205
OFFICE: (518) 690-0790
FAX: (518) 690-0793

SUBMITTALS

DATE	DESCRIPTION	REVISION
3/5/14	REVIEW	A
4/28/14	FOR PERMIT	0

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

PROJECT NO:	317-1185
DRAWN BY:	JLM
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
CT11182A
BERLIN/RT-9 X22_1
260 BECKLEY ROAD
KENSINGTON,CT 06037

SHEET TITLE
GENERAL AND ELECTRICAL NOTES

SHEET NUMBER
N-1
SHEET 8 OF 8 SHEETS