48 Spruce Street
Oakland, NJ 07436
Phone: (201)-951-3869
Tom Kincaid
Real Estate Consultant

March 27, 2014

Hand Delivered

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

RE: Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at 99 Meadow Street, Hartford, CT 06518. Known to Sprint Spectrum L.P. as site CT43XC806.

Dear Ms. Roberts:

In order to accommodate technological changes, implement Code Division Multiple Access ("CDMA") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the state of Connecticut, Sprint Spectrum L.P. 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.

CDMA 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.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Sprint's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modification as defined Connecticut General 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 CDMA 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 Sprint Spectrum L.P. 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 JPalumbo@Transcendwireless.com with questions concerning this matter.
Thank you for your consideration.

Sincerely,

Jennifer Palumbo
Real Estate Consultant

EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY FCC REGULATORY COMPLIANCE MAXIMUM PERMISSIBLE EXPOSURE (MPE) ASSESSMENT

Sprint Existing Facility

Site ID: CT43XC806

Petro Lock

99 Meadow Street
Hartford, CT 06518

March 18, 2014

EBI Project Number: 62141223

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

EBI Consulting
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March 18, 2014

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Radio Frequency Maximum Permissible Exposure (MPE) Assessment for Site:
CT43XC806 - Petro Lock

Site Total: 78.101% - MPE% in full compliance

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 99 Meadow Street, Hartford, CT, for the purpose of determining whether the radio frequency (RF) exposure levels from the proposed Sprint equipment upgrades 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/cm^2). The general population exposure limit for the cellular band (850 MHz Band) is approximately 567 µW/cm^2, and the general population exposure limit for the 1900 MHz and 2500 MHz bands band is 1000 µW/cm^2. 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 upgrades to the existing Sprint Wireless antenna facility located at 99 Meadow Street, Hartford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all emissions were calculated using the following assumptions:

1) 5 channels in the 1900 MHz Band were considered for each sector of the proposed installation.
2) 1 channel in the 800 MHz Band was considered for each sector of the proposed installation
3) 2 channels in the 2500 MHz Band 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 maximum gain of the antenna per the antenna manufactures supplied specifications was used in this direction.

6) The antennas used in this modeling are the RFS APXVSPP18-C-A20 and the RFS APXVTMM-C-120. This is based on feedback from the carrier with regards to anticipated antenna selection. The RFS APXVSPP18-C-A20 has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. The RFS APXVTMM-C-120 has a 15.9 dBd gain value at its main lobe at 2500 MHz. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.
7) The antenna mounting height centerline for the proposed antennas is **98 feet** above ground level (AGL).
8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

Site ID	CT43XC806 - Petro Lock
Site Addresss	99 Meadow Street, Hartford, CT 06518
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	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	Antenna Height Meters	Cable Size	Cable Loss (dB)	Additional Loss (dB)	Gain Factor	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	15.9	98	92	28.04194	1/2 "	0.5	3	17.378008	1737.8008	73.81257	7.38126%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	195.44744	8.301572	1.46412%
1B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	390.89489	16.60314	2.92824%
																Sector total Power Density Value:		11.774%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	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	Antenna Height Meters	Cable Size	Cable Loss (dB)	Additional Loss (dB)	Gain Factor	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	15.9	98	92	28.04194	1/2 "	0.5	3	17.378008	1737.8008	73.81257	7.38126%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	195.44744	8.301572	1.46412%
2B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	390.89489	16.60314	2.92824%
																Sector total Power Density Value:		11.774%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	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	Antenna Height Meters	Cable Size	Cable Loss (dB)	Additional Loss (dB)	Gain Factor	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	5	100	15.9	98	92	28.04194	1/2 "	0.5	3	17.378008	1737.8008	73.81257	7.38126%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	195.44744	8.301572	1.46412%
3B	RFS	APXVTMM14-C-120	RRH	2500 MHz	CDMA / LTE	20	2	40	13.4	98	92	28.04194	1/2 "	0.5	3	9.7723722	390.89489	16.60314	2.92824%
																Sector total Power Density Value:		11.774%	

Site Composite MPE %	
Carrier	MPE %
Sprint	35.321%
T-Mobile	6.730%
MetroPCS	9.520%
AT&T	21.810%
Nextel	2.370%
Clearwire	2.350%
Total Site MPE %	**78.101%**

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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public Maximum Permissible Exposure (MPE) to radio frequency energy.

The anticipated Maximum Composite contributions from the Sprint facility are **35.321% (11.774% 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 **78.101%** of the allowable FCC established general public limit sampled at 6 feet above ground level. This total composite site value is based upon MPE 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	:	**147.9 ft Monopole**
ATC Site Name	:	**Petro Lock, CT**
ATC Site Number	:	**302468**
Engineering Number	:	**55431721**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**N/A**
Carrier Site Number	:	**CT43XC806**
Site Location	:	**99 Meadow St** **Hartford, CT 06114-1598** **41.743197,-72.667500**
County	:	**Hartford**
Date	:	**December 4, 2013**
Max Usage	:	**85%**
Result	:	**Pass**

Amir H. Tabarestani, E.I.
Structural Engineer I

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Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion 1

Existing and Reserved Equipment 2

Proposed Equipment 2

Structure Usages 3

Foundations 3

Deflection, Twist, and Sway 3

Standard Conditions 4

Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 147.9 ft monopole to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	FWT Job #21719000 Rev. 1, dated July 18, 2000
Foundation Drawing	FWT Job #21719000 Rev. 1, dated July 18, 2000
Geotechnical Report	Osprey Environmental Engineering Job #98083-01, dated August 28, 1998

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

Mount Elev.[1] (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
147.9	1	Flash Technology FTB 324-2	Flush	-	--
147.0	9	48" x 12" Panels	Platform w/ Handrails	(12) 1 5/8" Coax	Sprint Nextel
	3	72" x 12" Panels			
135.0	1	Andrew SBNH-1D6565C	Platform w/ Handrails	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Cable (1) 3" Conduit	AT&T Mobility
	6	Ericsson RRUS 11			
	2	KMW AM-X-CD-16-65-00T-RET			
	6	LGP Allgon LGP21903			
	6	Powerwave 7750.00			
	6	Powerwave LGP21401			
	1	Raycap DC6-48-60-18-8F			
123.0	3	RFS APX16DWV-16DWVS-E-A20	T-Arms	(18) 1 5/8" Coax	T-Mobile
	6	RFS APXV18-206516L-C			
	3	RFS ATMAA1412D-1A20			
	3	RFS ATMPP1412D-1CWA			
113.0	3	RFS APXV18-206517	Flush	(6) 1 5/8" Coax	Metro PCS
98.0	3	Alcatel-Lucent 4x40W RRH	Low Profile Platform	(3) 1 1/4" Hybriflex	Sprint Nextel
	3	Alcatel-Lucent 800 MHz 2X50W RRH w/Filter			
	3	RFS APXVSPP18-C-A20			
	3	RFS IBC1900BB-1			
	3	RFS IBC1900HG-2A			
89.0	3	Argus LLPX310R	Side Arms	(6) 5/16" Coax (3) 1/2" Coax (1) 3" Conduit	Clearwire
	1	DragonWave A-ANT-11G-2.5-C			
	2	DragonWave A-ANT-18G-2-C			
	3	DragonWave Horizon Compact			
	3	NextNet BTS-2500			
84.0	3	Alcatel-Lucent RRH2x40 (700)	Low Profile Platform	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	Verizon
	3	Alcatel-Lucent RRH2x40-AWS			
	6	Antel BXA-171063-8BF-EDIN-X			
	6	Antel BXA-70063-6CF-EDIN-X			
	1	RFS DB-T1-6Z-8AB-0Z			
20.0	1	Lucent KS-24019	Flush	(1) 1/2" Coax	Sprint Nextel

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
98.0	98.0	3	Alcatel-Lucent TD-RRH8x20-25 w/S.S.	Low Profile Platform	(1) 1 1/4" Hybriflex	Sprint Nextel
		3	RFS APXVTM14-C-I20			

[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 inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	84%	Pass
Shaft	85%	Pass
Base Plate	45%	Pass

Foundations

Reaction Component	Analysis Reactions
Moment (Kips-Ft)	3,348.8
Shear (Kips)	32.6

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) (°)
98.0	1.130	1.246

***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:

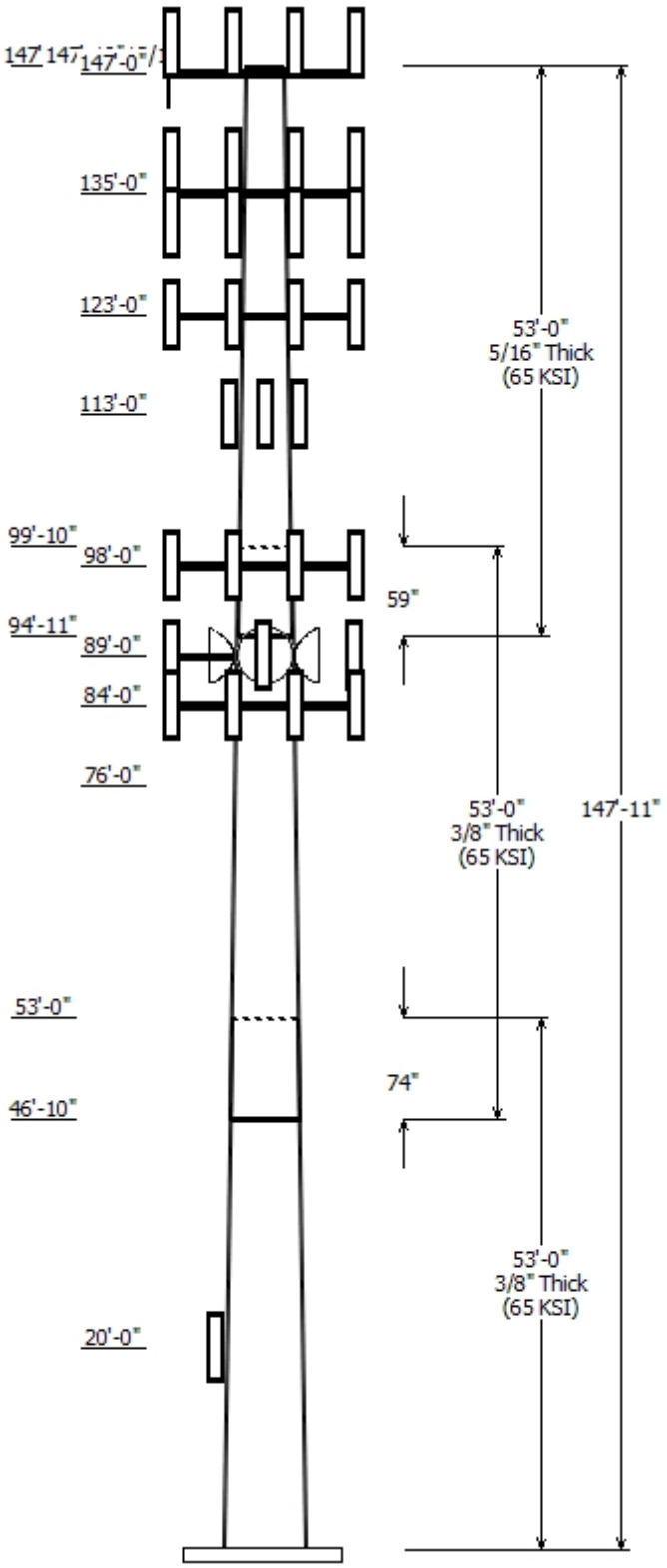
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 :	302468
Description :	148' FWT Monopole
Client :	Sprint Nextel
Location :	Petro Lock, CT
Shape :	18 Sides
Height :	147.92 (ft)
Base Elev (ft):	0.00
Taper:	0.214561(in/ft)

Code: TIA/EIA-222 Rev F

Sections Properties

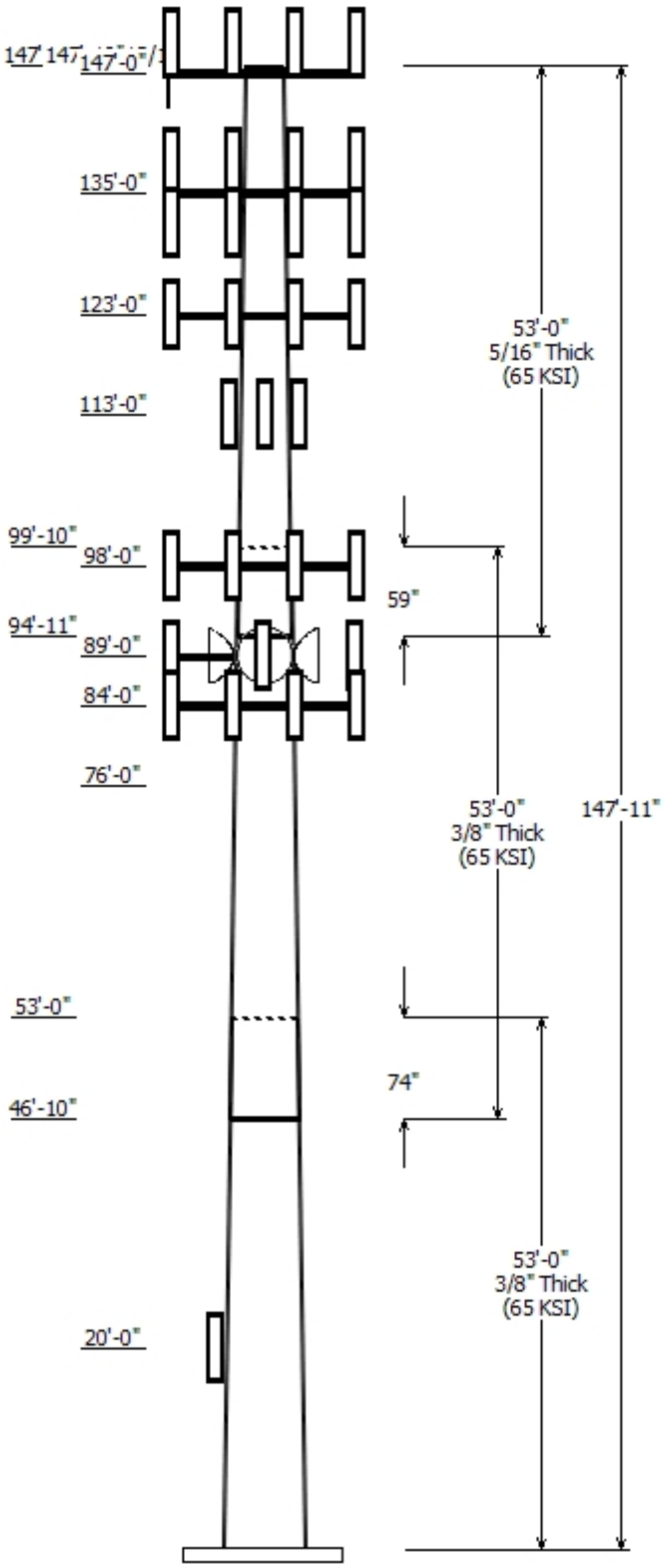
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	53.000	45.20	56.58	0.375		0.000	0.214568	65
2	53.000	35.90	47.28	0.375	Slip Joint	74.000	0.214568	65
3	53.000	26.21	37.58	0.313	Slip Joint	59.000	0.214568	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
147.900	147.900	1	Flash Technology FTB 324-2
147.000	147.000	1	Flat Platform w/ Handrails
147.000	149.900	9	48" x 12" Panels
147.000	149.900	3	72" x 12" Panels
135.000	134.000	1	Raycap DC6-48-60-18-8F
135.000	137.000	6	Ericsson RRUS 11
135.000	137.000	1	Andrew SBNH-1D6565C
135.000	137.000	2	KMW AM-X-CD-16-65-00T-RET
135.000	136.000	6	LGP Allgon LGP21903
135.000	136.000	6	Powerwave LGP21401
135.000	135.000	1	Flat Platform w/ Handrails
135.000	137.000	6	Powerwave 7750.00
123.000	123.000	6	RFS APXV18-206516L-C
123.000	123.000	3	RFS APX16DWV-16DWVS-E-A20
123.000	123.000	3	Round T-Arms
123.000	123.000	3	RFS ATMAA1412D-1A20
123.000	123.000	3	RFS ATMPP1412D-1CWA
113.000	113.000	3	RFS APXV18-206517
98.000	98.000	3	RFS APXVTM14-C-I20
98.000	98.000	3	Alcatel-Lucent TD-RRH8x20-25
98.000	98.000	3	RFS IBC1900HG-2A
98.000	98.000	3	RFS IBC1900BB-1
98.000	98.000	3	Alcatel-Lucent 800 MHz 2X50W
98.000	98.000	3	Alcatel-Lucent 4x40W RRH
98.000	98.000	3	RFS APXVSPP18-C-A20
98.000	98.000	1	Round Low Profile Platform
89.000	89.000	1	DragonWave A-ANT-11G-2.5-C
89.000	89.000	1	Side Arms
89.000	89.000	3	NextNet BTS-2500
89.000	89.000	3	Argus LLPX310R
89.000	89.000	3	DragonWave Horizon Compact
89.000	89.000	2	DragonWave A-ANT-18G-2-C
84.000	84.000	1	RFS DB-T1-6Z-8AB-0Z
84.000	84.000	1	Flat Low Profile Platform
84.000	84.000	6	Antel BXA-70063-6CF-EDIN-X
84.000	84.000	6	Antel BXA-171063-8BF-EDIN-X
84.000	84.000	3	Alcatel-Lucent RRH2x40-AWS
84.000	84.000	3	Alcatel-Lucent RRH2x40 (700)
76.000	76.000	2	Side Markers
20.000	20.000	1	Lucent KS-24019

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind



5.000	20.000	1/2" Coax	No
5.000	84.000	1 5/8" Coax	No
5.000	84.000	1 5/8" Hybriflex	No
5.000	89.000	1/2" Coax	Yes
5.000	89.000	3" Conduit	Yes
5.000	89.000	5/16" Coax	No
5.000	98.000	1 1/4" Hybriflex	No
5.000	113.0	1 5/8" Coax	No
5.000	123.0	1 5/8" Coax	No
5.000	123.0	1 5/8" Coax	Yes
5.000	135.0	0.39" Cable	No
5.000	135.0	0.78" 8 AWG 6	No
5.000	135.0	1 5/8" Coax	No
5.000	135.0	3" Conduit	No
5.000	147.0	1 5/8" Coax	No

Load Cases

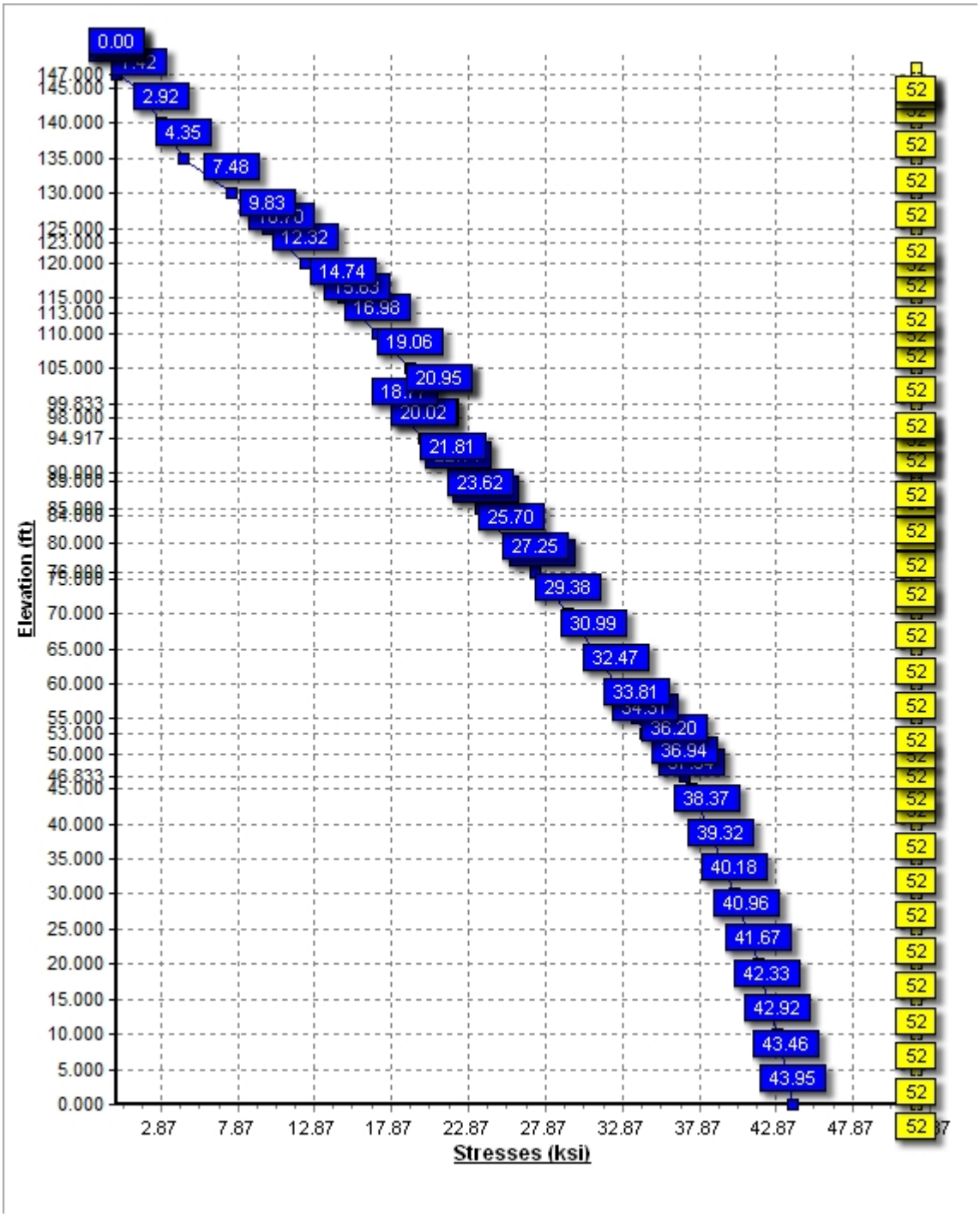
No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions

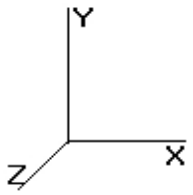
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	3348.78	32.55	45.26
Ice	2801.42	26.81	54.13
Twist/Sway	1308.83	12.71	45.30

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
Twist/Sway	89.00	11.289	1.160
Twist/Sway	89.00	11.289	1.160


0.00
2.92
4.35
7.48
9.83
12.32
14.74
16.98
19.06
20.95
20.02
21.81
23.62
25.70
27.25
29.38
30.99
32.47
33.81
36.20
36.94
38.37
39.32
40.18
40.96
41.67
42.33
42.92
43.46
43.95
52
Elevation (ft)
147.000
145.000
140.000
135.000
130.000
125.000
123.000
120.000
115.000
113.000
110.000
105.000
99.833
98.000
94.917
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
53.000
50.000
46.833
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87
Stresses (ksi)

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:47 AM**
Location :	**Petro Lock, CT**		**Page: 1**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (in/ft)**		



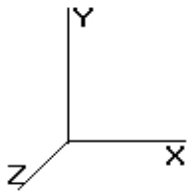
Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	53.000	0.3750	65		0.00	10,844	56.58	0.00	66.90	26698.9	24.84	150.88	45.20	53.00	53.36	13550.6	19.49	120.55	0.214568
2-18	53.000	0.3750	65	Slip	74.00	8,848	47.28	46.83	55.83	15518.6	20.47	126.08	35.90	99.83	42.29	6746.7	15.12	95.76	0.214568
3-18	53.000	0.3125	65	Slip	59.00	5,651	37.58	94.92	36.97	6490.6	19.45	120.28	26.21	147.92	25.69	2178.2	13.03	83.89	0.214568
				Shaft Weight		25,342													

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)
147.90	Flash Technology FTB 324-2	1	28.00	3.700	1.00	72.30	4.010	1.00	0.000	0.000
147.00	48" x 12" Panels	9	30.00	5.600	0.76	63.00	6.190	0.76	0.000	2.900
147.00	72" x 12" Panels	3	40.00	8.400	0.78	87.00	9.230	0.78	0.000	2.900
147.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	2,450.00	48.400	1.00	0.000	0.000
135.00	Andrew SBNH-1D6565C	1	66.10	11.440	1.00	132.00	12.370	1.00	0.000	2.000
135.00	Ericsson RRUS 11	6	55.00	2.940	0.67	74.30	3.290	0.67	0.000	2.000
135.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	2,450.00	48.400	1.00	0.000	0.000
135.00	KMW AM-X-CD-16-65-00T-	2	48.50	8.260	0.84	95.00	9.080	0.84	0.000	2.000
135.00	LGP Allgon LGP21903	6	5.50	0.270	0.50	7.90	0.380	0.50	0.000	1.000
135.00	Powerwave 7750.00	6	35.00	5.880	0.75	65.67	6.540	0.75	0.000	2.000
135.00	Powerwave LGP21401	6	14.10	1.290	0.50	21.26	1.530	0.50	0.000	1.000
135.00	Raycap DC6-48-60-18-8F	1	20.00	1.260	1.00	35.10	1.460	1.00	0.000	-1.000
123.00	RFS APX16DWV-16DWVS-E-	3	40.70	7.200	0.65	69.38	7.350	0.65	0.000	0.000
123.00	RFS APXV18-206516L-C	6	18.70	3.620	0.78	38.66	4.070	0.78	0.000	0.000
123.00	RFS ATMAA1412D-1A20	3	13.00	1.170	0.50	20.60	1.390	0.50	0.000	0.000
123.00	RFS ATMPP1412D-1CWA	3	12.50	1.170	0.50	19.50	1.400	0.50	0.000	0.000
123.00	Round T-Arms	3	250.00	9.700	0.67	314.00	12.100	0.67	0.000	0.000
113.00	RFS APXV18-206517	3	26.40	5.050	0.80	48.13	5.700	0.80	0.000	0.000
98.00	Alcatel-Lucent 4x40W RRH	3	88.00	2.910	0.67	122.40	4.230	0.67	0.000	0.000
98.00	Alcatel-Lucent 800 MHz	3	64.00	2.400	0.67	86.10	2.720	0.67	0.000	0.000
98.00	Alcatel-Lucent TD-RRH8x20-	3	66.10	4.720	0.67	122.40	4.230	0.67	0.000	0.000
98.00	RFS APXVSPP18-C-A20	3	57.00	8.260	0.82	106.50	9.080	0.82	0.000	0.000
98.00	RFS APXVTM14-C-I20	3	52.90	6.900	0.76	73.60	7.740	0.76	0.000	0.000
98.00	RFS IBC1900BB-1	3	22.00	1.130	0.50	59.80	1.360	0.50	0.000	0.000
98.00	RFS IBC1900HG-2A	3	22.00	1.130	0.50	59.80	1.360	0.50	0.000	0.000
98.00	Round Low Profile Platform	1	1500.00	21.700	1.00	1,700.00	27.200	1.00	0.000	0.000
89.00	Argus LLPX310R	3	28.60	4.830	0.70	54.50	5.360	0.70	0.000	0.000
89.00	DragonWave A-ANT-11G-2.5-	1	66.10	8.670	0.95	117.00	9.170	0.95	0.000	0.000
89.00	DragonWave A-ANT-18G-2-C	2	27.10	4.690	0.80	55.10	5.050	0.80	0.000	0.000
89.00	DragonWave Horizon	3	10.60	0.430	0.50	17.00	0.580	0.50	0.000	0.000
89.00	NextNet BTS-2500	3	35.00	2.120	0.67	48.30	2.430	0.67	0.000	0.000
89.00	Side Arms	1	560.00	8.500	1.00	680.00	10.500	1.00	0.000	0.000
84.00	Alcatel-Lucent RRH2x40 (700)	3	50.00	2.480	0.67	71.08	2.810	0.67	0.000	0.000
84.00	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.520	0.67	61.40	2.870	0.67	0.000	0.000
84.00	Antel BXA-171063-8BF-EDIN-X	6	10.50	2.940	0.87	29.30	3.410	0.87	0.000	0.000
84.00	Antel BXA-70063-6CF-EDIN-X	6	17.00	7.730	0.77	58.00	8.540	0.77	0.000	0.000
84.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
84.00	RFS DB-T1-6Z-8AB-0Z	1	44.00	5.600	0.67	44.30	3.280	0.67	0.000	0.000
76.00	Side Markers	2	20.00	0.800	1.00	31.90	0.940	1.00	0.000	0.000
20.00	Lucent KS-24019	1	4.00	0.910	1.00	15.00	1.300	1.00	0.000	0.000
	Totals	122	11952.60			16,421.70			Number of Loadings :	40

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:47 AM**
Location :	**Petro Lock, CT**		**Page: 2**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (in/ft)**		



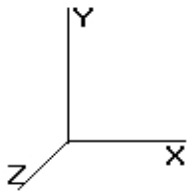
Linear Appurtenance Properties

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	147.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
5.00	135.00	(1) 0.39" Cable	0.07	0.00	0.00	0.00	N
5.00	135.00	(2) 0.78" 8 AWG 6	1.18	0.00	0.00	0.00	N
5.00	135.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
5.00	135.00	(1) 3" Conduit	7.58	0.00	0.00	0.00	N
5.00	123.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
5.00	123.00	(6) 1 5/8" Coax	4.92	0.20	9.46	0.25	Y
5.00	113.00	(6) 1 5/8" Coax	4.92	0.00	0.00	0.00	N
5.00	98.00	(4) 1 1/4" Hybriflex	2.52	0.00	0.00	0.00	N
5.00	89.00	(3) 1/2" Coax	0.45	0.00	0.00	0.00	Y
5.00	89.00	(1) 3" Conduit	7.58	0.35	8.80	0.40	Y
5.00	89.00	(6) 5/16" Coax	0.30	0.00	0.00	0.00	N
5.00	84.00	(12) 1 5/8" Coax	9.84	0.00	0.00	0.00	N
5.00	84.00	(2) 1 5/8" Hybriflex	2.60	0.00	0.00	0.00	N
5.00	20.00	(1) 1/2" Coax	0.15	0.00	0.00	0.00	N
		Total Weight	8,016.51 (lb)		1,855.48 (lb)		

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

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		0.3750	56.580	66.895	26,698.9	24.84	150.88	65	52	0.0
5.00		0.3750	55.507	65.618	25,199.0	24.34	148.02	65	52	1,127.3
10.00		0.3750	54.434	64.341	23,756.4	23.83	145.16	65	52	1,105.6
15.00		0.3750	53.361	63.065	22,369.9	23.33	142.30	65	52	1,083.8
20.00		0.3750	52.288	61.788	21,038.4	22.82	139.44	65	52	1,062.1
25.00		0.3750	51.216	60.511	19,760.8	22.32	136.57	65	52	1,040.4
30.00		0.3750	50.143	59.234	18,536.1	21.81	133.71	65	52	1,018.7
35.00		0.3750	49.070	57.957	17,363.0	21.31	130.85	65	52	996.9
40.00		0.3750	47.997	56.680	16,240.5	20.81	127.99	65	52	975.2
45.00		0.3750	46.924	55.403	15,167.4	20.30	125.13	65	52	953.5
46.83	Bot - Section 2	0.3750	46.531	54.935	14,786.1	20.12	124.08	65	52	344.2
50.00		0.3750	45.851	54.126	14,142.7	19.80	122.27	65	52	1,184.8
53.00	Top - Section 1	0.3750	45.958	54.253	14,242.1	19.85	122.55	65	52	1,106.4
55.00		0.3750	45.528	53.742	13,843.6	19.64	121.41	65	52	367.5
60.00		0.3750	44.456	52.465	12,880.1	19.14	118.55	65	52	903.5
65.00		0.3750	43.383	51.188	11,962.4	18.64	115.69	65	52	881.8
70.00		0.3750	42.310	49.911	11,089.3	18.13	112.83	65	52	860.0
75.00		0.3750	41.237	48.634	10,259.8	17.63	109.97	65	52	838.3
76.00		0.3750	41.023	48.379	10,099.0	17.53	109.39	65	52	165.1
80.00		0.3750	40.164	47.357	9,472.7	17.12	107.10	65	52	651.5
84.00		0.3750	39.306	46.336	8,872.8	16.72	104.82	65	52	637.6
85.00		0.3750	39.091	46.081	8,726.9	16.62	104.24	65	52	157.2
89.00		0.3750	38.233	45.059	8,159.3	16.21	101.96	65	52	620.3
90.00		0.3750	38.019	44.804	8,021.4	16.11	101.38	65	52	152.9
94.92	Bot - Section 3	0.3750	36.964	43.548	7,365.7	15.62	98.57	65	52	739.1
95.00		0.3750	36.946	43.527	7,354.9	15.61	98.52	65	52	22.8
98.00		0.3750	36.302	42.761	6,973.3	15.31	96.81	65	52	814.4
99.83	Top - Section 2	0.3125	36.534	35.926	5,955.0	18.85	116.91	65	52	490.6
100.0		0.3125	36.498	35.890	5,937.4	18.83	116.79	65	52	20.4
105.0		0.3125	35.425	34.826	5,424.8	18.23	113.36	65	52	601.6
110.0		0.3125	34.352	33.762	4,942.6	17.62	109.93	65	52	583.5
113.0		0.3125	33.709	33.124	4,667.5	17.26	107.87	65	52	341.4
115.0		0.3125	33.279	32.698	4,489.8	17.01	106.49	65	52	224.0
120.0		0.3125	32.207	31.634	4,065.6	16.41	103.06	65	52	547.3
123.0		0.3125	31.563	30.995	3,824.4	16.05	101.00	65	52	319.7
125.0		0.3125	31.134	30.570	3,669.0	15.80	99.63	65	52	209.5
130.0		0.3125	30.061	29.506	3,299.0	15.20	96.19	65	52	511.1
135.0		0.3125	28.988	28.442	2,954.8	14.59	92.76	65	52	493.0
140.0		0.3125	27.915	27.377	2,635.4	13.99	89.33	65	52	474.8
145.0		0.3125	26.842	26.313	2,339.9	13.38	85.90	65	52	456.7
147.0		0.3125	26.413	25.888	2,228.2	13.14	84.52	65	52	177.6
147.9		0.3125	26.220	25.696	2,179.1	13.03	83.90	65	52	79.0
147.9		0.3125	26.216	25.693	2,178.2	13.03	83.89	65	52	1.5
										25,342.4

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:47 AM**
Location :	**Petro Lock, CT**		**Page: 4**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
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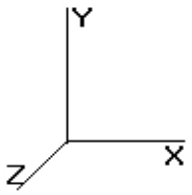
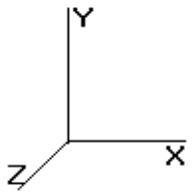


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

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	377.19	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	16.384	27.68	370.04	0.650	0.000	5.00	23.351	15.18	420.3	0.0	1,127.3
10.00		0.00	1.00	16.384	27.68	362.89	0.650	0.000	5.00	22.904	14.89	412.2	0.0	1,105.6
15.00		0.00	1.00	16.384	27.68	355.74	0.650	0.000	5.00	22.457	14.60	404.2	0.0	1,083.8
20.00	Appertunance(s)	0.00	1.00	16.384	27.68	348.58	0.650	0.000	5.00	22.010	14.31	396.1	0.0	1,062.1
25.00		0.00	1.00	16.384	27.68	341.43	0.650	0.000	5.00	21.563	14.02	388.1	0.0	1,040.4
30.00		0.00	1.00	16.384	27.68	334.28	0.650	0.000	5.00	21.116	13.73	380.0	0.0	1,018.7
35.00		0.00	1.01	16.662	28.15	329.89	0.650	0.000	5.00	20.669	13.44	378.3	0.0	996.9
40.00		0.00	1.05	17.310	29.25	328.89	0.650	0.000	5.00	20.222	13.14	384.5	0.0	975.2
45.00		0.00	1.09	17.902	30.25	327.00	0.650	0.000	5.00	19.775	12.85	388.9	0.0	953.5
46.83	Bot - Section 2	0.00	1.10	18.108	30.60	326.11	0.650	0.000	1.83	7.139	4.64	142.0	0.0	344.2
50.00		0.00	1.12	18.449	31.17	324.37	0.650	0.000	3.17	12.387	8.05	251.0	0.0	1,184.8
53.00	Top - Section 1	0.00	1.14	18.759	31.70	322.48	0.650	0.000	3.00	11.570	7.52	238.4	0.0	1,106.4
55.00		0.00	1.15	18.959	32.04	326.50	0.650	0.000	2.00	7.624	4.96	158.8	0.0	367.5
60.00		0.00	1.18	19.436	32.84	322.79	0.650	0.000	5.00	18.747	12.19	400.2	0.0	903.5
65.00		0.00	1.21	19.885	33.60	318.62	0.650	0.000	5.00	18.300	11.89	399.7	0.0	881.8
70.00		0.00	1.24	20.311	34.32	314.05	0.650	0.000	5.00	17.853	11.60	398.3	0.0	860.0
75.00		0.00	1.26	20.715	35.00	309.12	0.650	0.000	5.00	17.406	11.31	396.1	0.0	838.3
76.00	Appertunance(s)	0.00	1.26	20.794	35.14	308.09	0.650	0.000	1.00	3.427	2.23	78.3	0.0	165.1
80.00		0.00	1.28	21.101	35.66	303.87	0.650	0.000	4.00	13.531	8.80	313.6	0.0	651.5
84.00	Appertunance(s)	0.00	1.30	21.397	36.16	299.45	0.650	0.000	4.00	13.245	8.61	311.3	0.0	637.6
85.00		0.00	1.31	21.469	36.28	298.32	0.650	0.000	1.00	3.267	2.12	77.0	0.0	157.2
89.00	Appertunance(s)	0.00	1.32	21.753	36.76	293.69	0.650	0.000	4.00	12.887	8.38	308.0	0.0	620.3
90.00		0.00	1.33	21.823	36.88	292.51	0.650	0.000	1.00	3.177	2.07	76.2	0.0	152.9
94.92	Bot - Section 3	0.00	1.35	22.157	37.44	286.57	0.650	0.000	4.92	15.361	9.98	373.9	0.0	739.1
95.00		0.00	1.35	22.163	37.45	286.46	0.650	0.000	0.08	0.261	0.17	6.4	0.0	22.8
98.00	Appertunance(s)	0.00	1.36	22.360	37.78	282.72	0.650	0.000	3.00	9.312	6.05	228.7	0.0	814.4
99.83	Top - Section 2	0.00	1.37	22.479	37.99	280.40	0.650	0.000	1.83	5.612	3.65	138.6	0.0	490.6
100.0		0.00	1.37	22.490	38.00	285.07	0.650	0.000	0.17	0.507	0.33	12.5	0.0	20.4
105.0		0.00	1.39	22.806	38.54	278.63	0.650	0.000	5.00	14.984	9.74	375.4	0.0	601.6
110.0		0.00	1.41	23.111	39.05	271.99	0.650	0.000	5.00	14.537	9.45	369.1	0.0	583.5
113.0	Appertunance(s)	0.00	1.42	23.289	39.35	267.92	0.650	0.000	3.00	8.508	5.53	217.7	0.0	341.4
115.0		0.00	1.42	23.406	39.55	265.17	0.650	0.000	2.00	5.582	3.63	143.5	0.0	224.0
120.0		0.00	1.44	23.692	40.04	258.19	0.650	0.000	5.00	13.643	8.87	355.1	0.0	547.3
123.0	Appertunance(s)	0.00	1.45	23.860	40.32	253.92	0.650	0.000	3.00	7.971	5.18	208.9	0.0	319.7
125.0		0.00	1.46	23.970	40.51	251.05	0.650	0.000	2.00	5.225	3.40	137.6	0.0	209.5
130.0		0.00	1.48	24.241	40.96	243.76	0.650	0.000	5.00	12.749	8.29	339.5	0.0	511.1
135.0	Appertunance(s)	0.00	1.49	24.503	41.41	236.33	0.650	0.000	5.00	12.302	8.00	331.1	0.0	493.0
140.0		0.00	1.51	24.759	41.84	228.77	0.650	0.000	5.00	11.855	7.71	322.4	0.0	474.8
145.0		0.00	1.52	25.009	42.26	221.08	0.650	0.000	5.00	11.408	7.42	313.4	0.0	456.7
147.0	Appertunance(s)	0.00	1.53	25.107	42.43	217.98	0.650	0.000	2.00	4.438	2.88	122.4	0.0	177.6
147.9	Appertunance(s)	0.00	1.53	25.151	42.50	216.57	0.650	0.000	0.90	1.974	1.28	54.5	0.0	79.0
147.9		0.00	1.53	25.152	42.50	216.54	0.650	0.000	0.02	0.037	0.02	1.0	0.0	1.5
							Totals:		147.92			11,153.4	0.0	25,342.4



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

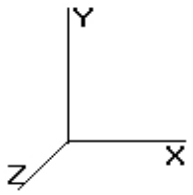
Discrete Appurtenance Segment Forces

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)
20.00	Lucent KS-24019	1	16.384	27.689	1.00	0.91	0.000	0.000	25.20	0.00	0.00	4.00
76.00	Side Markers	2	20.794	35.142	1.00	1.60	0.000	0.000	56.23	0.00	0.00	40.00
84.00	Alcatel-Lucent RRH2x	3	21.397	36.161	0.67	4.98	0.000	0.000	180.26	0.00	0.00	150.00
84.00	Alcatel-Lucent RRH2x	3	21.397	36.161	0.67	5.07	0.000	0.000	183.16	0.00	0.00	132.00
84.00	Antel BXA-171063-8BF	6	21.397	36.161	0.87	15.35	0.000	0.000	554.95	0.00	0.00	63.00
84.00	Antel BXA-70063-6CF-	6	21.397	36.161	0.77	35.71	0.000	0.000	1,291.40	0.00	0.00	102.00
84.00	Flat Low Profile Pla	1	21.397	36.161	1.00	26.10	0.000	0.000	943.80	0.00	0.00	1,500.00
84.00	RFS DB-T1-6Z-8AB-0Z	1	21.397	36.161	0.67	3.75	0.000	0.000	135.68	0.00	0.00	44.00
89.00	Argus LLPX310R	3	21.753	36.763	0.70	10.14	0.000	0.000	372.89	0.00	0.00	85.80
89.00	DragonWave A-ANT-	1	21.753	36.763	0.95	8.24	0.000	0.000	302.80	0.00	0.00	66.10
89.00	DragonWave A-ANT-	2	21.753	36.763	0.80	7.50	0.000	0.000	275.87	0.00	0.00	54.20
89.00	DragonWave Horizon	3	21.753	36.763	0.50	0.64	0.000	0.000	23.71	0.00	0.00	31.80
89.00	NextNet BTS-2500	3	21.753	36.763	0.67	4.26	0.000	0.000	156.66	0.00	0.00	105.00
89.00	Side Arms	1	21.753	36.763	1.00	8.50	0.000	0.000	312.49	0.00	0.00	560.00
98.00	Alcatel-Lucent 4x40W	3	22.360	37.789	0.67	5.85	0.000	0.000	221.03	0.00	0.00	264.00
98.00	Alcatel-Lucent 800 M	3	22.360	37.789	0.67	4.82	0.000	0.000	182.29	0.00	0.00	192.00
98.00	Alcatel-Lucent TD-RR	3	22.360	37.789	0.67	9.49	0.000	0.000	358.51	0.00	0.00	198.30
98.00	RFS APXVSPP18-C-	3	22.360	37.789	0.82	20.32	0.000	0.000	767.86	0.00	0.00	171.00
98.00	RFS APXVTM14-C-I20	3	22.360	37.789	0.76	15.73	0.000	0.000	594.50	0.00	0.00	158.70
98.00	RFS IBC1900BB-1	3	22.360	37.789	0.50	1.69	0.000	0.000	64.05	0.00	0.00	66.00
98.00	RFS IBC1900HG-2A	3	22.360	37.789	0.50	1.69	0.000	0.000	64.05	0.00	0.00	66.00
98.00	Round Low Profile Pl	1	22.360	37.789	1.00	21.70	0.000	0.000	820.02	0.00	0.00	1,500.00
113.0	RFS APXV18-206517	3	23.289	39.359	0.80	12.12	0.000	0.000	477.03	0.00	0.00	79.20
123.0	RFS APX16DWV-	3	23.860	40.324	0.65	14.04	0.000	0.000	566.15	0.00	0.00	122.10
123.0	RFS APXV18-206516L-	6	23.860	40.324	0.78	16.94	0.000	0.000	683.15	0.00	0.00	112.20
123.0	RFS ATMAA1412D-	3	23.860	40.324	0.50	1.75	0.000	0.000	70.77	0.00	0.00	39.00
123.0	RFS ATMPP1412D-	3	23.860	40.324	0.50	1.75	0.000	0.000	70.77	0.00	0.00	37.50
123.0	Round T-Arms	3	23.860	40.324	0.67	19.50	0.000	0.000	786.18	0.00	0.00	750.00
135.0	Andrew SBNH-	1	24.607	41.585	1.00	11.44	0.000	2.000	475.73	0.00	951.47	66.10
135.0	Ericsson RRUS 11	6	24.607	41.585	0.67	11.82	0.000	2.000	491.49	0.00	982.97	330.00
135.0	Flat Platform w/ Han	1	24.503	41.411	1.00	42.40	0.000	0.000	1,755.81	0.00	0.00	2,000.00
135.0	KMW AM-X-CD-16-65-	2	24.607	41.585	0.84	13.88	0.000	2.000	577.07	0.00	1,154.13	97.00
135.0	LGP Allgon LGP21903	6	24.555	41.498	0.50	0.81	0.000	1.000	33.61	0.00	33.61	33.00
135.0	Powerwave 7750.00	6	24.607	41.585	0.75	26.46	0.000	2.000	1,100.34	0.00	2,200.68	210.00
135.0	Powerwave LGP21401	6	24.555	41.498	0.50	3.87	0.000	1.000	160.60	0.00	160.60	84.60
135.0	Raycap DC6-48-60-18-	1	24.451	41.323	1.00	1.26	0.000	-1.000	52.07	0.00	-52.07	20.00
147.0	48" x 12" Panels	9	25.247	42.668	0.76	38.30	0.000	2.900	1,634.36	0.00	4,739.64	270.00
147.0	72" x 12" Panels	3	25.247	42.668	0.78	19.66	0.000	2.900	838.68	0.00	2,432.18	120.00
147.0	Flat Platform w/ Han	1	25.107	42.431	1.00	42.40	0.000	0.000	1,799.05	0.00	0.00	2,000.00
147.9	Flash Technology FTB	1	25.151	42.505	1.00	3.70	0.000	0.000	157.27	0.00	0.00	28.00
									19,617.53			11,952.60

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



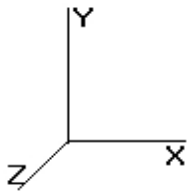
Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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

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	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
10.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.384	0.00	2.25
10.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.384	48.46	37.90
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
15.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.384	0.00	2.25
15.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.384	48.46	37.90
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
20.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.384	0.00	2.25
20.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.384	48.46	37.90
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
25.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.384	0.00	2.25
25.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.384	48.46	37.90
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.384	27.69	24.60
30.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.384	0.00	2.25
30.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.384	48.46	37.90
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	16.662	28.16	24.60
35.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	16.662	0.00	2.25
35.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	16.662	49.28	37.90
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.310	29.25	24.60
40.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	17.310	0.00	2.25
40.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	17.310	51.19	37.90
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	17.902	30.25	24.60
45.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	17.902	0.00	2.25
45.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	17.902	52.95	37.90
46.83	(6) 1 5/8" Coax	Yes	1.83	4.92	0.20	18.108	11.22	9.02
46.83	(3) 1/2" Coax	Yes	1.83	0.45	0.00	18.108	0.00	0.83
46.83	(1) 3" Conduit	Yes	1.83	7.58	0.35	18.108	19.64	13.90
50.00	(6) 1 5/8" Coax	Yes	3.17	4.92	0.20	18.449	19.75	15.58
50.00	(3) 1/2" Coax	Yes	3.17	0.45	0.00	18.449	0.00	1.42
50.00	(1) 3" Conduit	Yes	3.17	7.58	0.35	18.449	34.56	24.00
53.00	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	18.759	19.02	14.76
53.00	(3) 1/2" Coax	Yes	3.00	0.45	0.00	18.759	0.00	1.35
53.00	(1) 3" Conduit	Yes	3.00	7.58	0.35	18.759	33.29	22.74
55.00	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	18.959	12.82	9.84
55.00	(3) 1/2" Coax	Yes	2.00	0.45	0.00	18.959	0.00	0.90
55.00	(1) 3" Conduit	Yes	2.00	7.58	0.35	18.959	22.43	15.16
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.436	32.85	24.60
60.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	19.436	0.00	2.25
60.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	19.436	57.48	37.90
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	19.885	33.61	24.60
65.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	19.885	0.00	2.25
65.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	19.885	58.81	37.90
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.311	34.33	24.60
70.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	20.311	0.00	2.25
70.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	20.311	60.07	37.90
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	20.715	35.01	24.60
75.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	20.715	0.00	2.25
75.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	20.715	61.27	37.90
76.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	20.794	7.03	4.92
76.00	(3) 1/2" Coax	Yes	1.00	0.45	0.00	20.794	0.00	0.45
76.00	(1) 3" Conduit	Yes	1.00	7.58	0.35	20.794	12.30	7.58

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:47 AM**
Location :	**Petro Lock, CT**		**Page: 7**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (in/ft)**		



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

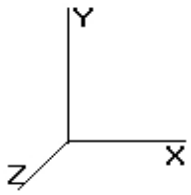
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

80.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	21.101	28.53	19.68
80.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	21.101	0.00	1.80
80.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	21.101	49.92	30.32
84.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	21.397	28.93	19.68
84.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	21.397	0.00	1.80
84.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	21.397	50.63	30.32
85.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	21.469	7.26	4.92
85.00	(3) 1/2" Coax	Yes	1.00	0.45	0.00	21.469	0.00	0.45
85.00	(1) 3" Conduit	Yes	1.00	7.58	0.35	21.469	12.70	7.58
89.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	21.753	29.41	19.68
89.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	21.753	0.00	1.80
89.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	21.753	51.47	30.32
90.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	21.823	7.38	4.92
94.92	(6) 1 5/8" Coax	Yes	4.92	4.92	0.20	22.157	36.82	24.19
95.00	(6) 1 5/8" Coax	Yes	0.08	4.92	0.20	22.163	0.62	0.41
98.00	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	22.360	22.67	14.76
99.83	(6) 1 5/8" Coax	Yes	1.83	4.92	0.20	22.479	13.93	9.02
100.0	(6) 1 5/8" Coax	Yes	0.17	4.92	0.20	22.490	1.27	0.82
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	22.806	38.54	24.60
110.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	23.111	39.06	24.60
113.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	23.289	23.62	14.76
115.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	23.406	15.82	9.84
120.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	23.692	40.04	24.60
123.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	23.860	24.19	14.76
						Totals:	**1,710.07**	**1,255.08**

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

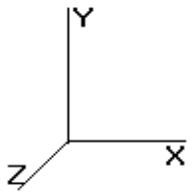


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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	420.27	1,127.29	0.00	0.00
10.00	488.37	1,463.71	0.00	0.00
15.00	480.33	1,441.99	0.00	0.00
20.00	497.48	1,424.26	0.00	0.00
25.00	464.24	1,397.79	0.00	0.00
30.00	456.19	1,376.06	0.00	0.00
35.00	455.74	1,354.34	0.00	0.00
40.00	464.97	1,332.61	0.00	0.00
45.00	472.09	1,310.89	0.00	0.00
46.83	172.86	475.22	0.00	0.00
50.00	305.35	1,411.16	0.00	0.00
53.00	290.73	1,320.81	0.00	0.00
55.00	194.02	510.44	0.00	0.00
60.00	490.57	1,260.90	0.00	0.00
65.00	492.16	1,239.17	0.00	0.00
70.00	492.72	1,217.45	0.00	0.00
75.00	492.35	1,195.72	0.00	0.00
76.00	153.84	276.54	0.00	0.00
80.00	392.09	937.46	0.00	0.00
84.00	3,680.12	2,914.56	0.00	0.00
85.00	97.00	216.28	0.00	0.00
89.00	1,833.26	1,759.32	0.00	0.00
90.00	83.54	203.60	0.00	0.00
94.92	410.70	988.40	0.00	0.00
95.00	6.98	27.05	0.00	0.00
98.00	3,323.74	3,582.54	0.00	0.00
99.83	152.50	578.98	0.00	0.00
100.0	13.80	28.40	0.00	0.00
105.0	413.92	842.53	0.00	0.00
110.0	408.11	824.42	0.00	0.00
113.0	718.29	565.16	0.00	0.00
115.0	159.35	310.52	0.00	0.00
120.0	395.11	763.62	0.00	0.00
123.0	2,410.14	1,510.28	0.00	0.00
125.0	137.57	266.51	0.00	0.00
130.0	339.48	653.61	0.00	0.00
135.0	4,977.84	3,476.20	0.00	5,431.40
140.0	322.43	524.05	0.00	0.00
145.0	313.40	505.95	0.00	0.00
147.0	4,394.49	2,587.31	0.00	7,171.82
147.9	211.80	106.99	0.00	0.00
147.9	1.03	1.49	0.00	0.00
Totals:	32,480.97	45,311.53	0.00	12,603.22

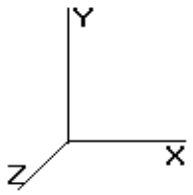


Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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	-32.551	-45.261	0.000	0.000	0.000	-3,348.780	0.000	0.000	0.000	0.000
5.00	-32.263	-44.036	0.000	0.000	0.000	-3,186.031	-0.094	0.000	0.094	-0.174
10.00	-31.899	-42.477	0.000	0.000	0.000	-3,024.719	-0.371	0.000	0.371	-0.349
15.00	-31.534	-40.941	0.000	0.000	0.000	-2,865.230	-0.832	0.000	0.832	-0.526
20.00	-31.143	-39.426	0.000	0.000	0.000	-2,707.566	-1.478	0.000	1.478	-0.703
25.00	-30.778	-37.939	0.000	0.000	0.000	-2,551.853	-2.310	0.000	2.310	-0.881
30.00	-30.412	-36.477	0.000	0.000	0.000	-2,397.968	-3.329	0.000	3.329	-1.059
35.00	-30.038	-35.039	0.000	0.000	0.000	-2,245.913	-4.534	0.000	4.534	-1.237
40.00	-29.647	-33.626	0.000	0.000	0.000	-2,095.726	-5.926	0.000	5.926	-1.415
45.00	-29.208	-32.266	0.000	0.000	0.000	-1,947.496	-7.503	0.000	7.503	-1.592
46.83	-29.072	-31.751	0.000	0.000	0.000	-1,893.949	-8.128	0.000	8.128	-1.658
50.00	-28.782	-30.294	0.000	0.000	0.000	-1,801.890	-9.267	0.000	9.267	-1.771
53.00	-28.494	-28.940	0.000	0.000	0.000	-1,715.546	-10.414	0.000	10.414	-1.877
55.00	-28.342	-28.378	0.000	0.000	0.000	-1,658.559	-11.216	0.000	11.216	-1.948
60.00	-27.883	-27.057	0.000	0.000	0.000	-1,516.854	-13.344	0.000	13.344	-2.111
65.00	-27.415	-25.762	0.000	0.000	0.000	-1,377.442	-15.641	0.000	15.641	-2.271
70.00	-26.938	-24.494	0.000	0.000	0.000	-1,240.371	-18.103	0.000	18.103	-2.426
75.00	-26.430	-23.279	0.000	0.000	0.000	-1,105.682	-20.725	0.000	20.725	-2.577
76.00	-26.294	-22.976	0.000	0.000	0.000	-1,079.253	-21.268	0.000	21.268	-2.607
80.00	-25.902	-22.007	0.000	0.000	0.000	-974.080	-23.503	0.000	23.503	-2.723
84.00	-22.108	-19.248	0.000	0.000	0.000	-870.474	-25.832	0.000	25.832	-2.834
85.00	-22.022	-19.011	0.000	0.000	0.000	-848.366	-26.428	0.000	26.428	-2.861
89.00	-20.121	-17.325	0.000	0.000	0.000	-760.278	-28.870	0.000	28.870	-2.966
90.00	-20.050	-17.100	0.000	0.000	0.000	-740.157	-29.494	0.000	29.494	-2.992
94.92	-19.604	-16.114	0.000	0.000	0.000	-641.581	-32.639	0.000	32.639	-3.113
95.00	-19.606	-16.075	0.000	0.000	0.000	-639.947	-32.694	0.000	32.694	-3.115
98.00	-16.103	-12.665	0.000	0.000	0.000	-581.130	-34.673	0.000	34.673	-3.186
99.83	-15.923	-12.089	0.000	0.000	0.000	-551.609	-35.905	0.000	35.905	-3.228
100.0	-15.921	-12.043	0.000	0.000	0.000	-548.956	-36.017	0.000	36.017	-3.232
105.0	-15.482	-11.194	0.000	0.000	0.000	-469.352	-39.467	0.000	39.467	-3.354
110.0	-15.042	-10.373	0.000	0.000	0.000	-391.941	-43.040	0.000	43.040	-3.467
113.0	-14.299	-9.839	0.000	0.000	0.000	-346.816	-45.238	0.000	45.238	-3.530
115.0	-14.132	-9.523	0.000	0.000	0.000	-318.218	-46.725	0.000	46.725	-3.571
120.0	-13.700	-8.770	0.000	0.000	0.000	-247.559	-50.513	0.000	50.513	-3.661
123.0	-11.203	-7.410	0.000	0.000	0.000	-206.459	-52.828	0.000	52.828	-3.708
125.0	-11.054	-7.144	0.000	0.000	0.000	-184.054	-54.387	0.000	54.387	-3.737
130.0	-10.678	-6.504	0.000	0.000	0.000	-128.786	-58.333	0.000	58.333	-3.798
135.0	-5.482	-3.365	0.000	0.000	0.000	-69.965	-62.333	0.000	62.333	-3.842
140.0	-5.126	-2.862	0.000	0.000	0.000	-42.557	-66.370	0.000	66.370	-3.869
145.0	-4.779	-2.377	0.000	0.000	0.000	-16.928	-70.429	0.000	70.429	-3.885
147.0	-0.220	-0.094	0.000	0.000	0.000	-0.198	-72.056	0.000	72.056	-3.888
147.9	-0.001	-0.001	0.000	0.000	0.000	0.000	-72.788	0.000	72.788	-3.888
147.9	-0.001	0.000	0.000	0.000	0.000	0.000	-72.802	0.000	72.802	-3.888



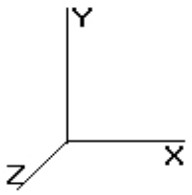
Load Case: No Ice — 80.00 mph Wind with No Ice — 23 Iterations

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	0.68	0.98	0.00	0.00	0.00	43.24	43.95	52.0	0.0	0.846
5.00	0.67	0.99	0.00	0.00	0.00	42.76	43.46	52.0	0.0	0.836
10.00	0.66	1.00	0.00	0.00	0.00	42.23	42.92	52.0	0.0	0.826
15.00	0.65	1.01	0.00	0.00	0.00	41.64	42.33	52.0	0.0	0.814
20.00	0.64	1.02	0.00	0.00	0.00	41.00	41.67	52.0	0.0	0.802
25.00	0.63	1.03	0.00	0.00	0.00	40.30	40.96	52.0	0.0	0.788
30.00	0.62	1.03	0.00	0.00	0.00	39.52	40.18	52.0	0.0	0.773
35.00	0.60	1.04	0.00	0.00	0.00	38.67	39.32	52.0	0.0	0.756
40.00	0.59	1.05	0.00	0.00	0.00	37.74	38.37	52.0	0.0	0.738
45.00	0.58	1.06	0.00	0.00	0.00	36.71	37.34	52.0	0.0	0.718
46.83	0.58	1.07	0.00	0.00	0.00	36.31	36.94	52.0	0.0	0.711
50.00	0.56	1.07	0.00	0.00	0.00	35.59	36.20	52.0	0.0	0.696
53.00	0.53	1.06	0.00	0.00	0.00	33.73	34.31	52.0	0.0	0.660
55.00	0.53	1.06	0.00	0.00	0.00	33.23	33.81	52.0	0.0	0.650
60.00	0.52	1.07	0.00	0.00	0.00	31.90	32.47	52.0	0.0	0.625
65.00	0.50	1.08	0.00	0.00	0.00	30.44	30.99	52.0	0.0	0.596
70.00	0.49	1.09	0.00	0.00	0.00	28.83	29.38	52.0	0.0	0.565
75.00	0.48	1.10	0.00	0.00	0.00	27.08	27.62	52.0	0.0	0.531
76.00	0.47	1.10	0.00	0.00	0.00	26.71	27.25	52.0	0.0	0.524
80.00	0.46	1.10	0.00	0.00	0.00	25.16	25.70	52.0	0.0	0.494
84.00	0.42	0.96	0.00	0.00	0.00	23.49	23.97	52.0	0.0	0.461
85.00	0.41	0.96	0.00	0.00	0.00	23.15	23.62	52.0	0.0	0.454
89.00	0.38	0.90	0.00	0.00	0.00	21.70	22.14	52.0	0.0	0.426
90.00	0.38	0.90	0.00	0.00	0.00	21.37	21.81	52.0	0.0	0.420
94.92	0.37	0.91	0.00	0.00	0.00	19.62	20.05	52.0	0.0	0.386
95.00	0.37	0.91	0.00	0.00	0.00	19.59	20.02	52.0	0.0	0.385
98.00	0.30	0.76	0.00	0.00	0.00	18.43	18.77	52.0	0.0	0.361
99.83	0.34	0.89	0.00	0.00	0.00	20.62	21.01	52.0	0.0	0.404
100.00	0.34	0.89	0.00	0.00	0.00	20.56	20.95	52.0	0.0	0.403
105.00	0.32	0.90	0.00	0.00	0.00	18.67	19.06	52.0	0.0	0.367
110.00	0.31	0.90	0.00	0.00	0.00	16.60	16.98	52.0	0.0	0.327
113.00	0.30	0.87	0.00	0.00	0.00	15.26	15.63	52.0	0.0	0.301
115.00	0.29	0.87	0.00	0.00	0.00	14.37	14.74	52.0	0.0	0.284
120.00	0.28	0.87	0.00	0.00	0.00	11.95	12.32	52.0	0.0	0.237
123.00	0.24	0.73	0.00	0.00	0.00	10.38	10.70	52.0	0.0	0.206
125.00	0.23	0.73	0.00	0.00	0.00	9.52	9.83	52.0	0.0	0.189
130.00	0.22	0.73	0.00	0.00	0.00	7.15	7.48	52.0	0.0	0.144
135.00	0.12	0.39	0.00	0.00	0.00	4.18	4.35	52.0	0.0	0.084
140.00	0.10	0.38	0.00	0.00	0.00	2.75	2.92	52.0	0.0	0.056
145.00	0.09	0.37	0.00	0.00	0.00	1.18	1.42	52.0	0.0	0.027
147.00	0.00	0.02	0.00	0.00	0.00	0.01	0.03	52.0	0.0	0.001
147.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000
147.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000

Pole :	302468	Code: TIA/EIA-222 Rev F	12/4/2013 10:42:48 AM
Location :	Petro Lock, CT		Page: 11
Height :	147.9 (ft)		
Base Dia :	56.58 (in)		
Top Dia :	26.21 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.214568 (in/ft)		

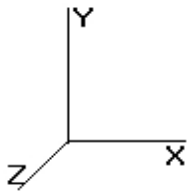


Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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	326.65	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	12.287	20.76	320.46	0.650	0.500	5.00	23.768	15.45	320.8	172.8	1,300.1
10.00		0.00	1.00	12.287	20.76	314.26	0.650	0.500	5.00	23.321	15.16	314.8	169.5	1,275.1
15.00		0.00	1.00	12.287	20.76	308.07	0.650	0.500	5.00	22.874	14.87	308.7	166.2	1,250.0
20.00	Appertunance(s)	0.00	1.00	12.287	20.76	301.87	0.650	0.500	5.00	22.427	14.58	302.7	162.9	1,225.0
25.00		0.00	1.00	12.287	20.76	295.68	0.650	0.500	5.00	21.980	14.29	296.7	159.6	1,200.0
30.00		0.00	1.00	12.287	20.76	289.49	0.650	0.500	5.00	21.533	14.00	290.6	156.3	1,174.9
35.00		0.00	1.01	12.496	21.11	285.68	0.650	0.500	5.00	21.086	13.71	289.4	153.0	1,149.9
40.00		0.00	1.05	12.982	21.93	284.82	0.650	0.500	5.00	20.639	13.42	294.3	149.6	1,124.9
45.00		0.00	1.09	13.426	22.69	283.18	0.650	0.500	5.00	20.192	13.12	297.8	146.3	1,099.8
46.83	Bot - Section 2	0.00	1.10	13.580	22.95	282.41	0.650	0.500	1.83	7.292	4.74	108.8	53.2	397.4
50.00		0.00	1.12	13.836	23.38	280.90	0.650	0.500	3.17	12.651	8.22	192.3	92.0	1,276.9
53.00	Top - Section 1	0.00	1.14	14.068	23.77	279.27	0.650	0.500	3.00	11.820	7.68	182.7	86.0	1,192.4
55.00		0.00	1.15	14.218	24.02	282.75	0.650	0.500	2.00	7.791	5.06	121.7	56.8	424.3
60.00		0.00	1.18	14.576	24.63	279.54	0.650	0.500	5.00	19.163	12.46	306.8	138.7	1,042.2
65.00		0.00	1.21	14.913	25.20	275.93	0.650	0.500	5.00	18.716	12.17	306.6	135.4	1,017.2
70.00		0.00	1.24	15.232	25.74	271.97	0.650	0.500	5.00	18.269	11.88	305.7	132.1	992.1
75.00		0.00	1.26	15.536	26.25	267.70	0.650	0.500	5.00	17.822	11.58	304.2	128.8	967.1
76.00	Appertunance(s)	0.00	1.26	15.594	26.35	266.81	0.650	0.500	1.00	3.511	2.28	60.1	25.6	190.7
80.00		0.00	1.28	15.825	26.74	263.15	0.650	0.500	4.00	13.864	9.01	241.0	100.4	751.9
84.00	Appertunance(s)	0.00	1.30	16.047	27.11	259.33	0.650	0.500	4.00	13.578	8.83	239.4	98.3	735.9
85.00		0.00	1.31	16.101	27.21	258.35	0.650	0.500	1.00	3.350	2.18	59.2	24.4	181.7
89.00	Appertunance(s)	0.00	1.32	16.314	27.57	254.34	0.650	0.500	4.00	13.221	8.59	236.9	95.6	715.9
90.00		0.00	1.33	16.366	27.65	253.32	0.650	0.500	1.00	3.260	2.12	58.6	23.8	176.7
94.92	Bot - Section 3	0.00	1.35	16.617	28.08	248.16	0.650	0.500	4.92	15.771	10.25	287.9	113.7	852.8
95.00		0.00	1.35	16.621	28.09	248.08	0.650	0.500	0.08	0.268	0.17	4.9	2.0	24.8
98.00	Appertunance(s)	0.00	1.36	16.769	28.34	244.84	0.650	0.500	3.00	9.562	6.22	176.1	69.3	883.7
99.83	Top - Section 2	0.00	1.37	16.858	28.49	242.83	0.650	0.500	1.83	5.764	3.75	106.8	41.9	532.5
100.0		0.00	1.37	16.866	28.50	246.87	0.650	0.500	0.17	0.521	0.34	9.7	3.8	24.2
105.0		0.00	1.39	17.103	28.90	241.29	0.650	0.500	5.00	15.401	10.01	289.3	110.9	712.4
110.0		0.00	1.41	17.332	29.29	235.54	0.650	0.500	5.00	14.954	9.72	284.7	107.5	691.0
113.0	Appertunance(s)	0.00	1.42	17.466	29.51	232.02	0.650	0.500	3.00	8.758	5.69	168.0	63.3	404.7
115.0		0.00	1.42	17.554	29.66	229.64	0.650	0.500	2.00	5.749	3.74	110.9	41.7	265.7
120.0		0.00	1.44	17.768	30.02	223.59	0.650	0.500	5.00	14.060	9.14	274.4	100.9	648.2
123.0	Appertunance(s)	0.00	1.45	17.894	30.24	219.90	0.650	0.500	3.00	8.221	5.34	161.6	59.4	379.0
125.0		0.00	1.46	17.977	30.38	217.41	0.650	0.500	2.00	5.391	3.50	106.5	39.0	248.5
130.0		0.00	1.48	18.179	30.72	211.10	0.650	0.500	5.00	13.166	8.56	262.9	94.3	605.4
135.0	Appertunance(s)	0.00	1.49	18.376	31.05	204.66	0.650	0.500	5.00	12.719	8.27	256.7	91.0	583.9
140.0		0.00	1.51	18.568	31.38	198.11	0.650	0.500	5.00	12.272	7.98	250.3	87.7	562.5
145.0		0.00	1.52	18.755	31.69	191.46	0.650	0.500	5.00	11.825	7.69	243.6	84.4	541.1
147.0	Appertunance(s)	0.00	1.53	18.829	31.82	188.77	0.650	0.500	2.00	4.605	2.99	95.2	33.2	210.8
147.9	Appertunance(s)	0.00	1.53	18.862	31.87	187.55	0.650	0.500	0.90	2.049	1.33	42.4	14.8	93.8
147.9		0.00	1.53	18.863	31.87	187.53	0.650	0.500	0.02	0.039	0.03	0.8	0.3	1.8
							Totals:		147.92			8,572.7	3,786.5	29,128.9



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

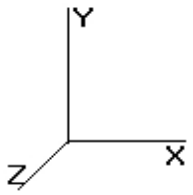
Discrete Appurtenance Segment Forces

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)
20.00	Lucent KS-24019	1	12.287	20.766	1.00	1.30	0.000	0.000	27.00	0.00	0.00	15.00
76.00	Side Markers	2	15.594	26.355	1.00	1.88	0.000	0.000	49.55	0.00	0.00	63.80
84.00	Alcatel-Lucent RRH2x	3	16.047	27.119	0.67	5.65	0.000	0.000	153.17	0.00	0.00	213.24
84.00	Alcatel-Lucent RRH2x	3	16.047	27.119	0.67	5.77	0.000	0.000	156.44	0.00	0.00	184.20
84.00	Antel BXA-171063-8BF	6	16.047	27.119	0.87	17.80	0.000	0.000	482.73	0.00	0.00	175.80
84.00	Antel BXA-70063-6CF-	6	16.047	27.119	0.77	39.45	0.000	0.000	1,069.97	0.00	0.00	348.00
84.00	Flat Low Profile Pla	1	16.047	27.119	1.00	31.60	0.000	0.000	856.96	0.00	0.00	1,700.00
84.00	RFS DB-T1-6Z-8AB-0Z	1	16.047	27.119	0.67	2.20	0.000	0.000	59.60	0.00	0.00	44.30
89.00	Argus LLPX310R	3	16.314	27.571	0.70	11.26	0.000	0.000	310.34	0.00	0.00	163.50
89.00	DragonWave A-ANT-	1	16.314	27.571	0.95	8.71	0.000	0.000	240.18	0.00	0.00	117.00
89.00	DragonWave A-ANT-	2	16.314	27.571	0.80	8.08	0.000	0.000	222.77	0.00	0.00	110.20
89.00	DragonWave Horizon	3	16.314	27.571	0.50	0.87	0.000	0.000	23.99	0.00	0.00	51.00
89.00	NextNet BTS-2500	3	16.314	27.571	0.67	4.88	0.000	0.000	134.66	0.00	0.00	144.90
89.00	Side Arms	1	16.314	27.571	1.00	10.50	0.000	0.000	289.49	0.00	0.00	680.00
98.00	Alcatel-Lucent 4x40W	3	16.769	28.340	0.67	8.50	0.000	0.000	240.96	0.00	0.00	367.20
98.00	Alcatel-Lucent 800 M	3	16.769	28.340	0.67	5.47	0.000	0.000	154.94	0.00	0.00	258.30
98.00	Alcatel-Lucent TD-RR	3	16.769	28.340	0.67	8.50	0.000	0.000	240.96	0.00	0.00	367.20
98.00	RFS APXVSPP18-C-	3	16.769	28.340	0.82	22.34	0.000	0.000	633.03	0.00	0.00	319.50
98.00	RFS APXVTM14-C-I20	3	16.769	28.340	0.76	17.65	0.000	0.000	500.13	0.00	0.00	220.80
98.00	RFS IBC1900BB-1	3	16.769	28.340	0.50	2.04	0.000	0.000	57.81	0.00	0.00	179.40
98.00	RFS IBC1900HG-2A	3	16.769	28.340	0.50	2.04	0.000	0.000	57.81	0.00	0.00	179.40
98.00	Round Low Profile Pl	1	16.769	28.340	1.00	27.20	0.000	0.000	770.85	0.00	0.00	1,700.00
113.0	RFS APXV18-206517	3	17.466	29.517	0.80	13.68	0.000	0.000	403.80	0.00	0.00	144.39
123.0	RFS APX16DWV-	3	17.894	30.241	0.65	14.33	0.000	0.000	433.43	0.00	0.00	208.14
123.0	RFS APXV18-206516L-	6	17.894	30.241	0.78	19.05	0.000	0.000	576.02	0.00	0.00	231.96
123.0	RFS ATMAA1412D-	3	17.894	30.241	0.50	2.09	0.000	0.000	63.05	0.00	0.00	61.80
123.0	RFS ATMPP1412D-	3	17.894	30.241	0.50	2.10	0.000	0.000	63.51	0.00	0.00	58.50
123.0	Round T-Arms	3	17.894	30.241	0.67	24.32	0.000	0.000	735.49	0.00	0.00	942.00
135.0	Andrew SBNH-	1	18.454	31.187	1.00	12.37	0.000	2.000	385.78	0.00	771.56	132.00
135.0	Ericsson RRUS 11	6	18.454	31.187	0.67	13.23	0.000	2.000	412.47	0.00	824.94	445.80
135.0	Flat Platform w/ Han	1	18.376	31.056	1.00	48.40	0.000	0.000	1,503.12	0.00	0.00	2,450.00
135.0	KMW AM-X-CD-16-65-	2	18.454	31.187	0.84	15.25	0.000	2.000	475.74	0.00	951.48	190.00
135.0	LGP Allgon LGP21903	6	18.415	31.122	0.50	1.14	0.000	1.000	35.48	0.00	35.48	47.40
135.0	Powerwave 7750.00	6	18.454	31.187	0.75	29.43	0.000	2.000	917.83	0.00	1,835.66	394.02
135.0	Powerwave LGP21401	6	18.415	31.122	0.50	4.59	0.000	1.000	142.85	0.00	142.85	127.56
135.0	Raycap DC6-48-60-18-	1	18.337	30.990	1.00	1.46	0.000	-1.000	45.25	0.00	-45.25	35.10
147.0	48" x 12" Panels	9	18.934	31.999	0.76	42.34	0.000	2.900	1,354.83	0.00	3,929.02	567.00
147.0	72" x 12" Panels	3	18.934	31.999	0.78	21.60	0.000	2.900	691.12	0.00	2,004.26	261.00
147.0	Flat Platform w/ Han	1	18.829	31.821	1.00	48.40	0.000	0.000	1,540.14	0.00	0.00	2,450.00
147.9	Flash Technology FTB	1	18.862	31.877	1.00	4.01	0.000	0.000	127.83	0.00	0.00	72.30
									16,641.06			16,421.70

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

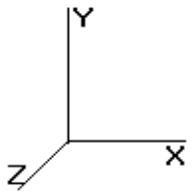


Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

Linear Appurtenance Segment Forces

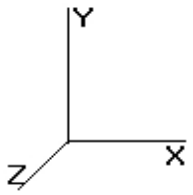
Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	FX (lb)	Dead Load (lb)
10.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
10.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.287	0.00	0.00
10.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.287	41.53	44.00
15.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
15.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.287	0.00	0.00
15.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.287	41.53	44.00
20.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
20.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.287	0.00	0.00
20.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.287	41.53	44.00
25.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
25.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.287	0.00	0.00
25.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.287	41.53	44.00
30.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.287	25.96	47.30
30.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.287	0.00	0.00
30.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.287	41.53	44.00
35.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.496	26.40	47.30
35.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.496	0.00	0.00
35.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.496	42.24	44.00
40.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	12.982	27.42	47.30
40.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	12.982	0.00	0.00
40.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	12.982	43.88	44.00
45.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	13.426	28.36	47.30
45.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	13.426	0.00	0.00
45.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	13.426	45.38	44.00
46.83	(6) 1 5/8" Coax	Yes	1.83	9.46	0.25	13.580	10.52	17.34
46.83	(3) 1/2" Coax	Yes	1.83	0.00	0.00	13.580	0.00	0.00
46.83	(1) 3" Conduit	Yes	1.83	8.80	0.40	13.580	16.83	16.13
50.00	(6) 1 5/8" Coax	Yes	3.17	9.46	0.25	13.836	18.51	29.96
50.00	(3) 1/2" Coax	Yes	3.17	0.00	0.00	13.836	0.00	0.00
50.00	(1) 3" Conduit	Yes	3.17	8.80	0.40	13.836	29.62	27.87
53.00	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	14.068	17.83	28.38
53.00	(3) 1/2" Coax	Yes	3.00	0.00	0.00	14.068	0.00	0.00
53.00	(1) 3" Conduit	Yes	3.00	8.80	0.40	14.068	28.53	26.40
55.00	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	14.218	12.01	18.92
55.00	(3) 1/2" Coax	Yes	2.00	0.00	0.00	14.218	0.00	0.00
55.00	(1) 3" Conduit	Yes	2.00	8.80	0.40	14.218	19.22	17.60
60.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.576	30.79	47.30
60.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	14.576	0.00	0.00
60.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	14.576	49.27	44.00
65.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	14.913	31.50	47.30
65.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	14.913	0.00	0.00
65.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	14.913	50.41	44.00
70.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.232	32.18	47.30
70.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	15.232	0.00	0.00
70.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	15.232	51.49	44.00
75.00	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	15.536	32.82	47.30
75.00	(3) 1/2" Coax	Yes	5.00	0.00	0.00	15.536	0.00	0.00
75.00	(1) 3" Conduit	Yes	5.00	8.80	0.40	15.536	52.51	44.00
76.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	15.594	6.59	9.46
76.00	(3) 1/2" Coax	Yes	1.00	0.00	0.00	15.594	0.00	0.00
76.00	(1) 3" Conduit	Yes	1.00	8.80	0.40	15.594	10.54	8.80



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

80.00	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	15.825		26.74	37.84
80.00	(3) 1/2" Coax	Yes	4.00	0.00	0.00	15.825		0.00	0.00
80.00	(1) 3" Conduit	Yes	4.00	8.80	0.40	15.825		42.79	35.20
84.00	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	16.047		27.12	37.84
84.00	(3) 1/2" Coax	Yes	4.00	0.00	0.00	16.047		0.00	0.00
84.00	(1) 3" Conduit	Yes	4.00	8.80	0.40	16.047		43.39	35.20
85.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	16.101		6.80	9.46
85.00	(3) 1/2" Coax	Yes	1.00	0.00	0.00	16.101		0.00	0.00
85.00	(1) 3" Conduit	Yes	1.00	8.80	0.40	16.101		10.88	8.80
89.00	(6) 1 5/8" Coax	Yes	4.00	9.46	0.25	16.314		27.57	37.84
89.00	(3) 1/2" Coax	Yes	4.00	0.00	0.00	16.314		0.00	0.00
89.00	(1) 3" Conduit	Yes	4.00	8.80	0.40	16.314		44.11	35.20
90.00	(6) 1 5/8" Coax	Yes	1.00	9.46	0.25	16.366		6.91	9.46
94.92	(6) 1 5/8" Coax	Yes	4.92	9.46	0.25	16.617		34.52	46.51
95.00	(6) 1 5/8" Coax	Yes	0.08	9.46	0.25	16.621		0.59	0.79
98.00	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	16.769		21.26	28.38
99.83	(6) 1 5/8" Coax	Yes	1.83	9.46	0.25	16.858		13.06	17.34
100.0	(6) 1 5/8" Coax	Yes	0.17	9.46	0.25	16.866		1.19	1.58
105.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	17.103		36.13	47.30
110.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	17.332		36.61	47.30
113.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	17.466		22.14	28.38
115.0	(6) 1 5/8" Coax	Yes	2.00	9.46	0.25	17.554		14.83	18.92
120.0	(6) 1 5/8" Coax	Yes	5.00	9.46	0.25	17.768		37.54	47.30
123.0	(6) 1 5/8" Coax	Yes	3.00	9.46	0.25	17.894		22.68	28.38
							Totals:	1,529.15	1,855.48



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

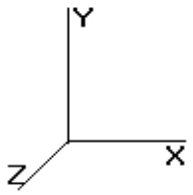
Applied Segment Forces Summary

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	320.81	1,300.11	0.00	0.00
10.00	382.27	1,659.77	0.00	0.00
15.00	376.23	1,634.74	0.00	0.00
20.00	397.19	1,624.70	0.00	0.00
25.00	364.16	1,583.92	0.00	0.00
30.00	358.13	1,558.88	0.00	0.00
35.00	358.07	1,533.84	0.00	0.00
40.00	365.62	1,508.81	0.00	0.00
45.00	371.54	1,483.77	0.00	0.00
46.83	136.12	538.16	0.00	0.00
50.00	240.41	1,520.02	0.00	0.00
53.00	229.03	1,422.75	0.00	0.00
55.00	152.91	577.87	0.00	0.00
60.00	386.90	1,426.17	0.00	0.00
65.00	388.52	1,401.13	0.00	0.00
70.00	389.36	1,376.10	0.00	0.00
75.00	389.48	1,351.06	0.00	0.00
76.00	126.82	331.27	0.00	0.00
80.00	310.55	1,059.08	0.00	0.00
84.00	3,088.73	3,708.60	0.00	0.00
85.00	76.94	246.02	0.00	0.00
89.00	1,530.05	2,239.87	0.00	0.00
90.00	65.53	231.91	0.00	0.00
94.92	322.39	1,124.40	0.00	0.00
95.00	5.48	29.39	0.00	0.00
98.00	2,853.89	4,641.25	0.00	0.00
99.83	119.81	629.21	0.00	0.00
100.0	10.84	32.96	0.00	0.00
105.0	325.48	976.08	0.00	0.00
110.0	321.32	954.67	0.00	0.00
113.0	593.96	707.31	0.00	0.00
115.0	125.69	361.29	0.00	0.00
120.0	311.96	887.24	0.00	0.00
123.0	2,055.78	2,024.86	0.00	0.00
125.0	106.47	305.56	0.00	0.00
130.0	262.92	747.91	0.00	0.00
135.0	4,175.25	4,548.38	0.00	4,516.73
140.0	250.31	611.73	0.00	0.00
145.0	243.62	590.32	0.00	0.00
147.0	3,681.34	3,508.53	0.00	5,933.28
147.9	170.27	166.13	0.00	0.00
147.9	0.80	1.77	0.00	0.00
Totals:	26,742.93	54,167.53	0.00	10,450.00

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

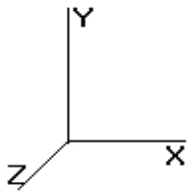


Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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

Calculated 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	-26.813	-54.132	0.000	0.000	0.000	-2,801.421	0.000	0.000	0.000	0.000
5.00	-26.625	-52.765	0.000	0.000	0.000	-2,667.361	-0.079	0.000	0.079	-0.146
10.00	-26.368	-51.039	0.000	0.000	0.000	-2,534.239	-0.310	0.000	0.310	-0.293
15.00	-26.109	-49.339	0.000	0.000	0.000	-2,402.403	-0.696	0.000	0.696	-0.440
20.00	-25.821	-47.651	0.000	0.000	0.000	-2,271.863	-1.238	0.000	1.238	-0.589
25.00	-25.559	-46.005	0.000	0.000	0.000	-2,142.761	-1.935	0.000	1.935	-0.738
30.00	-25.294	-44.386	0.000	0.000	0.000	-2,014.972	-2.789	0.000	2.789	-0.888
35.00	-25.023	-42.793	0.000	0.000	0.000	-1,888.503	-3.800	0.000	3.800	-1.038
40.00	-24.735	-41.227	0.000	0.000	0.000	-1,763.394	-4.967	0.000	4.967	-1.187
45.00	-24.401	-39.709	0.000	0.000	0.000	-1,639.721	-6.291	0.000	6.291	-1.336
46.83	-24.304	-39.142	0.000	0.000	0.000	-1,594.986	-6.815	0.000	6.815	-1.392
50.00	-24.086	-37.590	0.000	0.000	0.000	-1,518.025	-7.771	0.000	7.771	-1.487
53.00	-23.866	-36.143	0.000	0.000	0.000	-1,445.769	-8.735	0.000	8.735	-1.576
55.00	-23.759	-35.528	0.000	0.000	0.000	-1,398.038	-9.408	0.000	9.408	-1.636
60.00	-23.410	-34.059	0.000	0.000	0.000	-1,279.248	-11.196	0.000	11.196	-1.773
65.00	-23.053	-32.617	0.000	0.000	0.000	-1,162.198	-13.126	0.000	13.126	-1.908
70.00	-22.687	-31.204	0.000	0.000	0.000	-1,046.936	-15.196	0.000	15.196	-2.040
75.00	-22.287	-29.839	0.000	0.000	0.000	-933.505	-17.401	0.000	17.401	-2.167
76.00	-22.180	-29.489	0.000	0.000	0.000	-911.218	-17.857	0.000	17.857	-2.192
80.00	-21.876	-28.406	0.000	0.000	0.000	-822.500	-19.737	0.000	19.737	-2.290
84.00	-18.663	-24.808	0.000	0.000	0.000	-735.000	-21.696	0.000	21.696	-2.383
85.00	-18.600	-24.547	0.000	0.000	0.000	-716.337	-22.198	0.000	22.198	-2.407
89.00	-16.997	-22.359	0.000	0.000	0.000	-641.938	-24.252	0.000	24.252	-2.495
90.00	-16.946	-22.111	0.000	0.000	0.000	-624.941	-24.777	0.000	24.777	-2.517
94.92	-16.592	-20.988	0.000	0.000	0.000	-541.626	-27.424	0.000	27.424	-2.619
95.00	-16.596	-20.950	0.000	0.000	0.000	-540.244	-27.469	0.000	27.469	-2.621
98.00	-13.544	-16.434	0.000	0.000	0.000	-490.456	-29.135	0.000	29.135	-2.681
99.83	-13.400	-15.807	0.000	0.000	0.000	-465.625	-30.172	0.000	30.172	-2.716
100.0	-13.403	-15.762	0.000	0.000	0.000	-463.392	-30.267	0.000	30.267	-2.720
105.0	-13.056	-14.780	0.000	0.000	0.000	-396.378	-33.170	0.000	33.170	-2.823
110.0	-12.705	-13.826	0.000	0.000	0.000	-331.097	-36.178	0.000	36.178	-2.918
113.0	-12.086	-13.141	0.000	0.000	0.000	-292.982	-38.029	0.000	38.029	-2.972
115.0	-11.954	-12.775	0.000	0.000	0.000	-268.810	-39.281	0.000	39.281	-3.006
120.0	-11.607	-11.894	0.000	0.000	0.000	-209.040	-42.470	0.000	42.470	-3.082
123.0	-9.451	-9.978	0.000	0.000	0.000	-174.218	-44.419	0.000	44.419	-3.122
125.0	-9.334	-9.673	0.000	0.000	0.000	-155.318	-45.732	0.000	45.732	-3.147
130.0	-9.037	-8.934	0.000	0.000	0.000	-108.647	-49.055	0.000	49.055	-3.198
135.0	-4.615	-4.624	0.000	0.000	0.000	-58.945	-52.424	0.000	52.424	-3.235
140.0	-4.332	-4.026	0.000	0.000	0.000	-35.868	-55.824	0.000	55.824	-3.258
145.0	-4.056	-3.450	0.000	0.000	0.000	-14.207	-59.242	0.000	59.242	-3.271
147.0	-0.180	-0.158	0.000	0.000	0.000	-0.162	-60.612	0.000	60.612	-3.274
147.9	-0.001	-0.002	0.000	0.000	0.000	0.000	-61.229	0.000	61.229	-3.274
147.9	-0.001	0.000	0.000	0.000	0.000	0.000	-61.241	0.000	61.241	-3.274



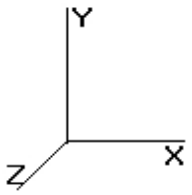
Load Case: Ice — 69.28 mph Wind with Ice — 23 Iterations

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	0.81	0.81	0.00	0.00	0.00	36.17	37.01	52.0	0.0	0.712
5.00	0.80	0.82	0.00	0.00	0.00	35.80	36.63	52.0	0.0	0.705
10.00	0.79	0.83	0.00	0.00	0.00	35.38	36.20	52.0	0.0	0.696
15.00	0.78	0.83	0.00	0.00	0.00	34.91	35.73	52.0	0.0	0.687
20.00	0.77	0.84	0.00	0.00	0.00	34.40	35.20	52.0	0.0	0.677
25.00	0.76	0.85	0.00	0.00	0.00	33.84	34.63	52.0	0.0	0.666
30.00	0.75	0.86	0.00	0.00	0.00	33.21	33.99	52.0	0.0	0.654
35.00	0.74	0.87	0.00	0.00	0.00	32.52	33.29	52.0	0.0	0.640
40.00	0.73	0.88	0.00	0.00	0.00	31.75	32.51	52.0	0.0	0.626
45.00	0.72	0.89	0.00	0.00	0.00	30.91	31.66	52.0	0.0	0.609
46.83	0.71	0.89	0.00	0.00	0.00	30.58	31.33	52.0	0.0	0.603
50.00	0.69	0.90	0.00	0.00	0.00	29.98	30.72	52.0	0.0	0.591
53.00	0.67	0.89	0.00	0.00	0.00	28.42	29.13	52.0	0.0	0.560
55.00	0.66	0.89	0.00	0.00	0.00	28.01	28.72	52.0	0.0	0.552
60.00	0.65	0.90	0.00	0.00	0.00	26.90	27.59	52.0	0.0	0.531
65.00	0.64	0.91	0.00	0.00	0.00	25.68	26.36	52.0	0.0	0.507
70.00	0.63	0.92	0.00	0.00	0.00	24.34	25.01	52.0	0.0	0.481
75.00	0.61	0.92	0.00	0.00	0.00	22.86	23.53	52.0	0.0	0.453
76.00	0.61	0.92	0.00	0.00	0.00	22.55	23.22	52.0	0.0	0.447
80.00	0.60	0.93	0.00	0.00	0.00	21.25	21.91	52.0	0.0	0.421
84.00	0.54	0.81	0.00	0.00	0.00	19.84	20.42	52.0	0.0	0.393
85.00	0.53	0.81	0.00	0.00	0.00	19.55	20.13	52.0	0.0	0.387
89.00	0.50	0.76	0.00	0.00	0.00	18.33	18.87	52.0	0.0	0.363
90.00	0.49	0.76	0.00	0.00	0.00	18.05	18.59	52.0	0.0	0.358
94.92	0.48	0.77	0.00	0.00	0.00	16.56	17.09	52.0	0.0	0.329
95.00	0.48	0.77	0.00	0.00	0.00	16.53	17.07	52.0	0.0	0.328
98.00	0.38	0.64	0.00	0.00	0.00	15.56	15.98	52.0	0.0	0.307
99.83	0.44	0.75	0.00	0.00	0.00	17.40	17.89	52.0	0.0	0.344
100.00	0.44	0.75	0.00	0.00	0.00	17.35	17.84	52.0	0.0	0.343
105.00	0.42	0.76	0.00	0.00	0.00	15.77	16.25	52.0	0.0	0.313
110.00	0.41	0.76	0.00	0.00	0.00	14.02	14.49	52.0	0.0	0.279
113.00	0.40	0.74	0.00	0.00	0.00	12.89	13.35	52.0	0.0	0.257
115.00	0.39	0.74	0.00	0.00	0.00	12.14	12.59	52.0	0.0	0.242
120.00	0.38	0.74	0.00	0.00	0.00	10.09	10.54	52.0	0.0	0.203
123.00	0.32	0.61	0.00	0.00	0.00	8.76	9.14	52.0	0.0	0.176
125.00	0.32	0.62	0.00	0.00	0.00	8.03	8.41	52.0	0.0	0.162
130.00	0.30	0.62	0.00	0.00	0.00	6.03	6.42	52.0	0.0	0.124
135.00	0.16	0.33	0.00	0.00	0.00	3.52	3.73	52.0	0.0	0.072
140.00	0.15	0.32	0.00	0.00	0.00	2.31	2.52	52.0	0.0	0.049
145.00	0.13	0.31	0.00	0.00	0.00	0.99	1.25	52.0	0.0	0.024
147.00	0.01	0.01	0.00	0.00	0.00	0.01	0.03	52.0	0.0	0.001
147.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000
147.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:48 AM**
Location :	**Petro Lock, CT**		**Page: 18**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (in/ft)**		

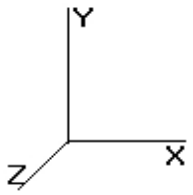


Load Case: Twist/Sway — **50.00 mph Wind with No Ice** — **22 Iterations**

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

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	235.74	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	231.27	0.650	0.000	5.00	23.351	15.18	164.2	0.0	1,127.3
10.00		0.00	1.00	6.400	10.81	226.80	0.650	0.000	5.00	22.904	14.89	161.0	0.0	1,105.6
15.00		0.00	1.00	6.400	10.81	222.33	0.650	0.000	5.00	22.457	14.60	157.9	0.0	1,083.8
20.00	Appertunance(s)	0.00	1.00	6.400	10.81	217.86	0.650	0.000	5.00	22.010	14.31	154.7	0.0	1,062.1
25.00		0.00	1.00	6.400	10.81	213.39	0.650	0.000	5.00	21.563	14.02	151.6	0.0	1,040.4
30.00		0.00	1.00	6.400	10.81	208.92	0.650	0.000	5.00	21.116	13.73	148.5	0.0	1,018.7
35.00		0.00	1.01	6.509	10.99	206.18	0.650	0.000	5.00	20.669	13.44	147.8	0.0	996.9
40.00		0.00	1.05	6.762	11.42	205.56	0.650	0.000	5.00	20.222	13.14	150.2	0.0	975.2
45.00		0.00	1.09	6.993	11.81	204.37	0.650	0.000	5.00	19.775	12.85	151.9	0.0	953.5
46.83	Bot - Section 2	0.00	1.10	7.073	11.95	203.82	0.650	0.000	1.83	7.139	4.64	55.5	0.0	344.2
50.00		0.00	1.12	7.207	12.17	202.73	0.650	0.000	3.17	12.387	8.05	98.1	0.0	1,184.8
53.00	Top - Section 1	0.00	1.14	7.328	12.38	201.55	0.650	0.000	3.00	11.570	7.52	93.1	0.0	1,106.4
55.00		0.00	1.15	7.406	12.51	204.06	0.650	0.000	2.00	7.624	4.96	62.0	0.0	367.5
60.00		0.00	1.18	7.592	12.83	201.74	0.650	0.000	5.00	18.747	12.19	156.3	0.0	903.5
65.00		0.00	1.21	7.768	13.12	199.14	0.650	0.000	5.00	18.300	11.89	156.1	0.0	881.8
70.00		0.00	1.24	7.934	13.40	196.28	0.650	0.000	5.00	17.853	11.60	155.6	0.0	860.0
75.00		0.00	1.26	8.092	13.67	193.20	0.650	0.000	5.00	17.406	11.31	154.7	0.0	838.3
76.00	Appertunance(s)	0.00	1.26	8.123	13.72	192.56	0.650	0.000	1.00	3.427	2.23	30.6	0.0	165.1
80.00		0.00	1.28	8.242	13.93	189.91	0.650	0.000	4.00	13.531	8.80	122.5	0.0	651.5
84.00	Appertunance(s)	0.00	1.30	8.358	14.12	187.16	0.650	0.000	4.00	13.245	8.61	121.6	0.0	637.6
85.00		0.00	1.31	8.387	14.17	186.45	0.650	0.000	1.00	3.267	2.12	30.1	0.0	157.2
89.00	Appertunance(s)	0.00	1.32	8.497	14.36	183.56	0.650	0.000	4.00	12.887	8.38	120.3	0.0	620.3
90.00		0.00	1.33	8.525	14.40	182.82	0.650	0.000	1.00	3.177	2.07	29.8	0.0	152.9
94.92	Bot - Section 3	0.00	1.35	8.655	14.62	179.10	0.650	0.000	4.92	15.361	9.98	146.0	0.0	739.1
95.00		0.00	1.35	8.657	14.63	179.04	0.650	0.000	0.08	0.261	0.17	2.5	0.0	22.8
98.00	Appertunance(s)	0.00	1.36	8.735	14.76	176.70	0.650	0.000	3.00	9.312	6.05	89.3	0.0	814.4
99.83	Top - Section 2	0.00	1.37	8.781	14.84	175.25	0.650	0.000	1.83	5.612	3.65	54.1	0.0	490.6
100.0		0.00	1.37	8.785	14.84	178.17	0.650	0.000	0.17	0.507	0.33	4.9	0.0	20.4
105.0		0.00	1.39	8.908	15.05	174.14	0.650	0.000	5.00	14.984	9.74	146.6	0.0	601.6
110.0		0.00	1.41	9.028	15.25	169.99	0.650	0.000	5.00	14.537	9.45	144.2	0.0	583.5
113.0	Appertunance(s)	0.00	1.42	9.097	15.37	167.45	0.650	0.000	3.00	8.508	5.53	85.0	0.0	341.4
115.0		0.00	1.42	9.143	15.45	165.73	0.650	0.000	2.00	5.582	3.63	56.1	0.0	224.0
120.0		0.00	1.44	9.255	15.64	161.37	0.650	0.000	5.00	13.643	8.87	138.7	0.0	547.3
123.0	Appertunance(s)	0.00	1.45	9.320	15.75	158.70	0.650	0.000	3.00	7.971	5.18	81.6	0.0	319.7
125.0		0.00	1.46	9.363	15.82	156.90	0.650	0.000	2.00	5.225	3.40	53.7	0.0	209.5
130.0		0.00	1.48	9.469	16.00	152.35	0.650	0.000	5.00	12.749	8.29	132.6	0.0	511.1
135.0	Appertunance(s)	0.00	1.49	9.572	16.17	147.71	0.650	0.000	5.00	12.302	8.00	129.3	0.0	493.0
140.0		0.00	1.51	9.672	16.34	142.98	0.650	0.000	5.00	11.855	7.71	125.9	0.0	474.8
145.0		0.00	1.52	9.769	16.51	138.18	0.650	0.000	5.00	11.408	7.42	122.4	0.0	456.7
147.0	Appertunance(s)	0.00	1.53	9.807	16.57	136.23	0.650	0.000	2.00	4.438	2.88	47.8	0.0	177.6
147.9	Appertunance(s)	0.00	1.53	9.824	16.60	135.35	0.650	0.000	0.90	1.974	1.28	21.3	0.0	79.0
147.9		0.00	1.53	9.825	16.60	135.34	0.650	0.000	0.02	0.037	0.02	0.4	0.0	1.5
							Totals:		147.92			4,356.8	0.0	25,342.4



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

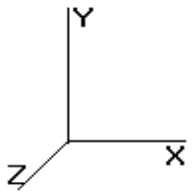
Discrete Appurtenance Segment Forces

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)
20.00	Lucent KS-24019	1	6.400	10.816	1.00	0.91	0.000	0.000	9.84	0.00	0.00	4.00
76.00	Side Markers	2	8.123	13.727	1.00	1.60	0.000	0.000	21.96	0.00	0.00	40.00
84.00	Alcatel-Lucent RRH2x	3	8.358	14.125	0.67	4.98	0.000	0.000	70.41	0.00	0.00	150.00
84.00	Alcatel-Lucent RRH2x	3	8.358	14.125	0.67	5.07	0.000	0.000	71.55	0.00	0.00	132.00
84.00	Antel BXA-171063-8BF	6	8.358	14.125	0.87	15.35	0.000	0.000	216.78	0.00	0.00	63.00
84.00	Antel BXA-70063-6CF-	6	8.358	14.125	0.77	35.71	0.000	0.000	504.45	0.00	0.00	102.00
84.00	Flat Low Profile Pla	1	8.358	14.125	1.00	26.10	0.000	0.000	368.67	0.00	0.00	1,500.00
84.00	RFS DB-T1-6Z-8AB-0Z	1	8.358	14.125	0.67	3.75	0.000	0.000	53.00	0.00	0.00	44.00
89.00	Argus LLPX310R	3	8.497	14.361	0.70	10.14	0.000	0.000	145.66	0.00	0.00	85.80
89.00	DragonWave A-ANT-	1	8.497	14.361	0.95	8.24	0.000	0.000	118.28	0.00	0.00	66.10
89.00	DragonWave A-ANT-	2	8.497	14.361	0.80	7.50	0.000	0.000	107.76	0.00	0.00	54.20
89.00	DragonWave Horizon	3	8.497	14.361	0.50	0.64	0.000	0.000	9.26	0.00	0.00	31.80
89.00	NextNet BTS-2500	3	8.497	14.361	0.67	4.26	0.000	0.000	61.19	0.00	0.00	105.00
89.00	Side Arms	1	8.497	14.361	1.00	8.50	0.000	0.000	122.07	0.00	0.00	560.00
98.00	Alcatel-Lucent 4x40W	3	8.735	14.761	0.67	5.85	0.000	0.000	86.34	0.00	0.00	264.00
98.00	Alcatel-Lucent 800 M	3	8.735	14.761	0.67	4.82	0.000	0.000	71.21	0.00	0.00	192.00
98.00	Alcatel-Lucent TD-RR	3	8.735	14.761	0.67	9.49	0.000	0.000	140.04	0.00	0.00	198.30
98.00	RFS APXVSPP18-C-	3	8.735	14.761	0.82	20.32	0.000	0.000	299.95	0.00	0.00	171.00
98.00	RFS APXVTM14-C-I20	3	8.735	14.761	0.76	15.73	0.000	0.000	232.23	0.00	0.00	158.70
98.00	RFS IBC1900BB-1	3	8.735	14.761	0.50	1.69	0.000	0.000	25.02	0.00	0.00	66.00
98.00	RFS IBC1900HG-2A	3	8.735	14.761	0.50	1.69	0.000	0.000	25.02	0.00	0.00	66.00
98.00	Round Low Profile Pl	1	8.735	14.761	1.00	21.70	0.000	0.000	320.32	0.00	0.00	1,500.00
113.0	RFS APXV18-206517	3	9.097	15.374	0.80	12.12	0.000	0.000	186.34	0.00	0.00	79.20
123.0	RFS APX16DWV-	3	9.320	15.751	0.65	14.04	0.000	0.000	221.15	0.00	0.00	122.10
123.0	RFS APXV18-206516L-	6	9.320	15.751	0.78	16.94	0.000	0.000	266.86	0.00	0.00	112.20
123.0	RFS ATMAA1412D-	3	9.320	15.751	0.50	1.75	0.000	0.000	27.64	0.00	0.00	39.00
123.0	RFS ATMPP1412D-	3	9.320	15.751	0.50	1.75	0.000	0.000	27.64	0.00	0.00	37.50
123.0	Round T-Arms	3	9.320	15.751	0.67	19.50	0.000	0.000	307.10	0.00	0.00	750.00
135.0	Andrew SBNH-	1	9.612	16.244	1.00	11.44	0.000	2.000	185.83	0.00	371.67	66.10
135.0	Ericsson RRUS 11	6	9.612	16.244	0.67	11.82	0.000	2.000	191.99	0.00	383.97	330.00
135.0	Flat Platform w/ Han	1	9.572	16.176	1.00	42.40	0.000	0.000	685.86	0.00	0.00	2,000.00
135.0	KMW AM-X-CD-16-65-	2	9.612	16.244	0.84	13.88	0.000	2.000	225.42	0.00	450.83	97.00
135.0	LGP Allgon LGP21903	6	9.592	16.210	0.50	0.81	0.000	1.000	13.13	0.00	13.13	33.00
135.0	Powerwave 7750.00	6	9.612	16.244	0.75	26.46	0.000	2.000	429.82	0.00	859.64	210.00
135.0	Powerwave LGP21401	6	9.592	16.210	0.50	3.87	0.000	1.000	62.73	0.00	62.73	84.60
135.0	Raycap DC6-48-60-18-	1	9.551	16.142	1.00	1.26	0.000	-1.000	20.34	0.00	-20.34	20.00
147.0	48" x 12" Panels	9	9.862	16.667	0.76	38.30	0.000	2.900	638.42	0.00	1,851.42	270.00
147.0	72" x 12" Panels	3	9.862	16.667	0.78	19.66	0.000	2.900	327.61	0.00	950.07	120.00
147.0	Flat Platform w/ Han	1	9.807	16.574	1.00	42.40	0.000	0.000	702.75	0.00	0.00	2,000.00
147.9	Flash Technology FTB	1	9.824	16.603	1.00	3.70	0.000	0.000	61.43	0.00	0.00	28.00
									7,663.10			11,952.60

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

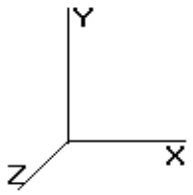


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

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	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
10.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.400	0.00	2.25
10.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.400	18.93	37.90
15.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
15.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.400	0.00	2.25
15.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.400	18.93	37.90
20.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
20.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.400	0.00	2.25
20.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.400	18.93	37.90
25.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
25.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.400	0.00	2.25
25.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.400	18.93	37.90
30.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.400	10.82	24.60
30.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.400	0.00	2.25
30.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.400	18.93	37.90
35.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.509	11.00	24.60
35.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.509	0.00	2.25
35.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.509	19.25	37.90
40.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.762	11.43	24.60
40.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.762	0.00	2.25
40.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.762	20.00	37.90
45.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	6.993	11.82	24.60
45.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	6.993	0.00	2.25
45.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	6.993	20.68	37.90
46.83	(6) 1 5/8" Coax	Yes	1.83	4.92	0.20	7.073	4.38	9.02
46.83	(3) 1/2" Coax	Yes	1.83	0.45	0.00	7.073	0.00	0.83
46.83	(1) 3" Conduit	Yes	1.83	7.58	0.35	7.073	7.67	13.90
50.00	(6) 1 5/8" Coax	Yes	3.17	4.92	0.20	7.207	7.71	15.58
50.00	(3) 1/2" Coax	Yes	3.17	0.45	0.00	7.207	0.00	1.42
50.00	(1) 3" Conduit	Yes	3.17	7.58	0.35	7.207	13.50	24.00
53.00	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	7.328	7.43	14.76
53.00	(3) 1/2" Coax	Yes	3.00	0.45	0.00	7.328	0.00	1.35
53.00	(1) 3" Conduit	Yes	3.00	7.58	0.35	7.328	13.00	22.74
55.00	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	7.406	5.01	9.84
55.00	(3) 1/2" Coax	Yes	2.00	0.45	0.00	7.406	0.00	0.90
55.00	(1) 3" Conduit	Yes	2.00	7.58	0.35	7.406	8.76	15.16
60.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.592	12.83	24.60
60.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	7.592	0.00	2.25
60.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	7.592	22.45	37.90
65.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.768	13.13	24.60
65.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	7.768	0.00	2.25
65.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	7.768	22.97	37.90
70.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	7.934	13.41	24.60
70.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	7.934	0.00	2.25
70.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	7.934	23.46	37.90
75.00	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.092	13.68	24.60
75.00	(3) 1/2" Coax	Yes	5.00	0.45	0.00	8.092	0.00	2.25
75.00	(1) 3" Conduit	Yes	5.00	7.58	0.35	8.092	23.93	37.90
76.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.123	2.75	4.92
76.00	(3) 1/2" Coax	Yes	1.00	0.45	0.00	8.123	0.00	0.45
76.00	(1) 3" Conduit	Yes	1.00	7.58	0.35	8.123	4.80	7.58

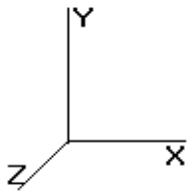


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

80.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	8.242		11.14	19.68
80.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	8.242		0.00	1.80
80.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	8.242		19.50	30.32
84.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	8.358		11.30	19.68
84.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	8.358		0.00	1.80
84.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	8.358		19.78	30.32
85.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.387		2.83	4.92
85.00	(3) 1/2" Coax	Yes	1.00	0.45	0.00	8.387		0.00	0.45
85.00	(1) 3" Conduit	Yes	1.00	7.58	0.35	8.387		4.96	7.58
89.00	(6) 1 5/8" Coax	Yes	4.00	4.92	0.20	8.497		11.49	19.68
89.00	(3) 1/2" Coax	Yes	4.00	0.45	0.00	8.497		0.00	1.80
89.00	(1) 3" Conduit	Yes	4.00	7.58	0.35	8.497		20.10	30.32
90.00	(6) 1 5/8" Coax	Yes	1.00	4.92	0.20	8.525		2.88	4.92
94.92	(6) 1 5/8" Coax	Yes	4.92	4.92	0.20	8.655		14.38	24.19
95.00	(6) 1 5/8" Coax	Yes	0.08	4.92	0.20	8.657		0.24	0.41
98.00	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	8.735		8.86	14.76
99.83	(6) 1 5/8" Coax	Yes	1.83	4.92	0.20	8.781		5.44	9.02
100.0	(6) 1 5/8" Coax	Yes	0.17	4.92	0.20	8.785		0.49	0.82
105.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	8.908		15.06	24.60
110.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.028		15.26	24.60
113.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.097		9.22	14.76
115.0	(6) 1 5/8" Coax	Yes	2.00	4.92	0.20	9.143		6.18	9.84
120.0	(6) 1 5/8" Coax	Yes	5.00	4.92	0.20	9.255		15.64	24.60
123.0	(6) 1 5/8" Coax	Yes	3.00	4.92	0.20	9.320		9.45	14.76
							Totals:	667.99	1,255.08

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:48 AM**
Location :	**Petro Lock, CT**		**Page: 22**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (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

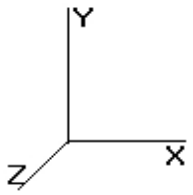
Applied Segment Forces Summary

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	164.17	1,127.29	0.00	0.00
10.00	190.77	1,463.71	0.00	0.00
15.00	187.63	1,441.99	0.00	0.00
20.00	194.33	1,424.26	0.00	0.00
25.00	181.34	1,397.79	0.00	0.00
30.00	178.20	1,376.06	0.00	0.00
35.00	178.03	1,354.34	0.00	0.00
40.00	181.63	1,332.61	0.00	0.00
45.00	184.41	1,310.89	0.00	0.00
46.83	67.52	475.22	0.00	0.00
50.00	119.28	1,411.16	0.00	0.00
53.00	113.57	1,320.81	0.00	0.00
55.00	75.79	510.44	0.00	0.00
60.00	191.63	1,260.90	0.00	0.00
65.00	192.25	1,239.17	0.00	0.00
70.00	192.47	1,217.45	0.00	0.00
75.00	192.33	1,195.72	0.00	0.00
76.00	60.10	276.54	0.00	0.00
80.00	153.16	937.46	0.00	0.00
84.00	1,437.55	2,914.56	0.00	0.00
85.00	37.89	216.28	0.00	0.00
89.00	716.12	1,759.32	0.00	0.00
90.00	32.63	203.60	0.00	0.00
94.92	160.43	988.40	0.00	0.00
95.00	2.73	27.05	0.00	0.00
98.00	1,298.33	3,582.54	0.00	0.00
99.83	59.57	578.98	0.00	0.00
100.0	5.39	28.40	0.00	0.00
105.0	161.69	842.53	0.00	0.00
110.0	159.42	824.42	0.00	0.00
113.0	280.58	565.16	0.00	0.00
115.0	62.25	310.52	0.00	0.00
120.0	154.34	763.62	0.00	0.00
123.0	941.46	1,510.28	0.00	0.00
125.0	53.74	266.51	0.00	0.00
130.0	132.61	653.61	0.00	0.00
135.0	1,944.47	3,476.20	0.00	2,121.64
140.0	125.95	524.05	0.00	0.00
145.0	122.42	505.95	0.00	0.00
147.0	1,716.60	2,587.31	0.00	2,801.49
147.9	82.73	106.99	0.00	0.00
147.9	0.40	1.49	0.00	0.00
Totals:	**12,687.88**	**45,311.53**	**0.00**	**4,923.13**

Pole : 302468
Location : Petro Lock, CT
Height : 147.9 (ft)
Base Dia : 56.58 (in)
Top Dia : 26.21 (in)
Shape : 18 Sides
Taper : 0.214568 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)

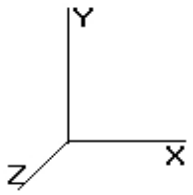


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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	-12.714	-45.304	0.000	0.000	0.000	-1,308.833	0.000	0.000	0.000	0.000
5.00	-12.602	-44.162	0.000	0.000	0.000	-1,245.265	-0.037	0.000	0.037	-0.068
10.00	-12.460	-42.683	0.000	0.000	0.000	-1,182.257	-0.145	0.000	0.145	-0.137
15.00	-12.317	-41.227	0.000	0.000	0.000	-1,119.960	-0.325	0.000	0.325	-0.205
20.00	-12.165	-39.789	0.000	0.000	0.000	-1,058.375	-0.578	0.000	0.578	-0.275
25.00	-12.023	-38.378	0.000	0.000	0.000	-997.550	-0.903	0.000	0.903	-0.344
30.00	-11.881	-36.988	0.000	0.000	0.000	-937.436	-1.301	0.000	1.301	-0.414
35.00	-11.735	-35.621	0.000	0.000	0.000	-878.034	-1.772	0.000	1.772	-0.484
40.00	-11.583	-34.276	0.000	0.000	0.000	-819.359	-2.316	0.000	2.316	-0.553
45.00	-11.412	-32.958	0.000	0.000	0.000	-761.445	-2.933	0.000	2.933	-0.622
46.83	-11.360	-32.477	0.000	0.000	0.000	-740.522	-3.177	0.000	3.177	-0.648
50.00	-11.247	-31.059	0.000	0.000	0.000	-704.551	-3.622	0.000	3.622	-0.692
53.00	-11.135	-29.733	0.000	0.000	0.000	-670.811	-4.071	0.000	4.071	-0.734
55.00	-11.076	-29.214	0.000	0.000	0.000	-648.542	-4.384	0.000	4.384	-0.761
60.00	-10.898	-27.944	0.000	0.000	0.000	-593.164	-5.216	0.000	5.216	-0.825
65.00	-10.716	-26.696	0.000	0.000	0.000	-538.677	-6.115	0.000	6.115	-0.888
70.00	-10.530	-25.471	0.000	0.000	0.000	-485.100	-7.077	0.000	7.077	-0.949
75.00	-10.332	-24.273	0.000	0.000	0.000	-432.449	-8.103	0.000	8.103	-1.007
76.00	-10.280	-23.992	0.000	0.000	0.000	-422.117	-8.315	0.000	8.315	-1.019
80.00	-10.127	-23.050	0.000	0.000	0.000	-381.000	-9.189	0.000	9.189	-1.064
84.00	-8.644	-20.159	0.000	0.000	0.000	-340.492	-10.100	0.000	10.100	-1.108
85.00	-8.611	-19.940	0.000	0.000	0.000	-331.848	-10.333	0.000	10.333	-1.119
89.00	-7.868	-18.191	0.000	0.000	0.000	-297.404	-11.289	0.000	11.289	-1.160
90.00	-7.841	-17.984	0.000	0.000	0.000	-289.536	-11.533	0.000	11.533	-1.170
94.92	-7.667	-16.996	0.000	0.000	0.000	-250.988	-12.763	0.000	12.763	-1.217
95.00	-7.668	-16.968	0.000	0.000	0.000	-250.349	-12.784	0.000	12.784	-1.218
98.00	-6.298	-13.411	0.000	0.000	0.000	-227.347	-13.558	0.000	13.558	-1.246
99.83	-6.227	-12.833	0.000	0.000	0.000	-215.801	-14.040	0.000	14.040	-1.262
100.0	-6.227	-12.802	0.000	0.000	0.000	-214.763	-14.084	0.000	14.084	-1.264
105.0	-6.056	-11.958	0.000	0.000	0.000	-183.628	-15.434	0.000	15.434	-1.311
110.0	-5.884	-11.134	0.000	0.000	0.000	-153.348	-16.831	0.000	16.831	-1.356
113.0	-5.594	-10.574	0.000	0.000	0.000	-135.695	-17.691	0.000	17.691	-1.380
115.0	-5.529	-10.263	0.000	0.000	0.000	-124.507	-18.273	0.000	18.273	-1.396
120.0	-5.360	-9.501	0.000	0.000	0.000	-96.862	-19.755	0.000	19.755	-1.431
123.0	-4.383	-8.013	0.000	0.000	0.000	-80.781	-20.661	0.000	20.661	-1.450
125.0	-4.325	-7.747	0.000	0.000	0.000	-72.014	-21.271	0.000	21.271	-1.461
130.0	-4.179	-7.095	0.000	0.000	0.000	-50.388	-22.815	0.000	22.815	-1.485
135.0	-2.145	-3.671	0.000	0.000	0.000	-27.374	-24.380	0.000	24.380	-1.502
140.0	-2.006	-3.150	0.000	0.000	0.000	-16.649	-25.960	0.000	25.960	-1.513
145.0	-1.870	-2.647	0.000	0.000	0.000	-6.619	-27.548	0.000	27.548	-1.519
147.0	-0.086	-0.106	0.000	0.000	0.000	-0.077	-28.185	0.000	28.185	-1.520
147.9	0.000	-0.001	0.000	0.000	0.000	0.000	-28.471	0.000	28.471	-1.520
147.9	0.000	0.000	0.000	0.000	0.000	0.000	-28.476	0.000	28.476	-1.520



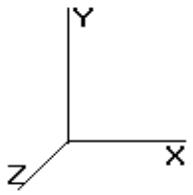
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 22 Iterations

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

Calculated Stresses

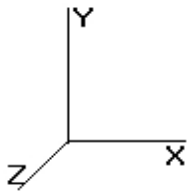
Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.68	0.38	0.00	0.00	0.00	16.90	17.59	52.0	0.0	0.339
5.00	0.67	0.39	0.00	0.00	0.00	16.71	17.40	52.0	0.0	0.335
10.00	0.66	0.39	0.00	0.00	0.00	16.50	17.18	52.0	0.0	0.331
15.00	0.65	0.39	0.00	0.00	0.00	16.28	16.94	52.0	0.0	0.326
20.00	0.64	0.40	0.00	0.00	0.00	16.03	16.68	52.0	0.0	0.321
25.00	0.63	0.40	0.00	0.00	0.00	15.75	16.40	52.0	0.0	0.316
30.00	0.62	0.40	0.00	0.00	0.00	15.45	16.09	52.0	0.0	0.310
35.00	0.61	0.41	0.00	0.00	0.00	15.12	15.75	52.0	0.0	0.303
40.00	0.60	0.41	0.00	0.00	0.00	14.75	15.37	52.0	0.0	0.296
45.00	0.59	0.42	0.00	0.00	0.00	14.35	14.96	52.0	0.0	0.288
46.83	0.59	0.42	0.00	0.00	0.00	14.20	14.81	52.0	0.0	0.285
50.00	0.57	0.42	0.00	0.00	0.00	13.92	14.51	52.0	0.0	0.279
53.00	0.55	0.41	0.00	0.00	0.00	13.19	13.75	52.0	0.0	0.265
55.00	0.54	0.42	0.00	0.00	0.00	12.99	13.56	52.0	0.0	0.261
60.00	0.53	0.42	0.00	0.00	0.00	12.47	13.03	52.0	0.0	0.251
65.00	0.52	0.42	0.00	0.00	0.00	11.90	12.45	52.0	0.0	0.239
70.00	0.51	0.43	0.00	0.00	0.00	11.28	11.81	52.0	0.0	0.227
75.00	0.50	0.43	0.00	0.00	0.00	10.59	11.11	52.0	0.0	0.214
76.00	0.50	0.43	0.00	0.00	0.00	10.45	10.97	52.0	0.0	0.211
80.00	0.49	0.43	0.00	0.00	0.00	9.84	10.36	52.0	0.0	0.199
84.00	0.44	0.38	0.00	0.00	0.00	9.19	9.65	52.0	0.0	0.186
85.00	0.43	0.38	0.00	0.00	0.00	9.06	9.51	52.0	0.0	0.183
89.00	0.40	0.35	0.00	0.00	0.00	8.49	8.92	52.0	0.0	0.172
90.00	0.40	0.35	0.00	0.00	0.00	8.36	8.78	52.0	0.0	0.169
94.92	0.39	0.35	0.00	0.00	0.00	7.67	8.09	52.0	0.0	0.156
95.00	0.39	0.36	0.00	0.00	0.00	7.66	8.08	52.0	0.0	0.155
98.00	0.31	0.30	0.00	0.00	0.00	7.21	7.54	52.0	0.0	0.145
99.83	0.36	0.35	0.00	0.00	0.00	8.07	8.45	52.0	0.0	0.162
100.00	0.36	0.35	0.00	0.00	0.00	8.04	8.42	52.0	0.0	0.162
105.00	0.34	0.35	0.00	0.00	0.00	7.31	7.67	52.0	0.0	0.148
110.00	0.33	0.35	0.00	0.00	0.00	6.49	6.85	52.0	0.0	0.132
113.00	0.32	0.34	0.00	0.00	0.00	5.97	6.32	52.0	0.0	0.122
115.00	0.31	0.34	0.00	0.00	0.00	5.62	5.97	52.0	0.0	0.115
120.00	0.30	0.34	0.00	0.00	0.00	4.67	5.01	52.0	0.0	0.096
123.00	0.26	0.29	0.00	0.00	0.00	4.06	4.35	52.0	0.0	0.084
125.00	0.25	0.29	0.00	0.00	0.00	3.72	4.01	52.0	0.0	0.077
130.00	0.24	0.29	0.00	0.00	0.00	2.80	3.08	52.0	0.0	0.059
135.00	0.13	0.15	0.00	0.00	0.00	1.64	1.78	52.0	0.0	0.034
140.00	0.12	0.15	0.00	0.00	0.00	1.07	1.22	52.0	0.0	0.023
145.00	0.10	0.14	0.00	0.00	0.00	0.46	0.62	52.0	0.0	0.012
147.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02	52.0	0.0	0.000
147.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000
147.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.0	0.0	0.000

Pole :	**302468**	**Code: TIA/EIA-222 Rev F**	**12/4/2013 10:42:49 AM**
Location :	**Petro Lock, CT**		**Page: 25**
Height :	**147.9 (ft)**		
Base Dia :	**56.58 (in)**		
Top Dia :	**26.21 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.214568 (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	**32.6**	**0.00**	**45.26**	**0.00**	**0.00**	**3348.78**	**43.95**	**52.0**	**0.00**	**0.846**
Ice	**26.8**	**0.00**	**54.13**	**0.00**	**0.00**	**2801.42**	**37.01**	**52.0**	**0.00**	**0.712**
Twist/Sway	**12.7**	**0.00**	**45.30**	**0.00**	**0.00**	**1308.83**	**17.59**	**52.0**	**0.00**	**0.339**



Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
2,489.00	36.10	23.90	3,348.78	54.13	32.55	134.54

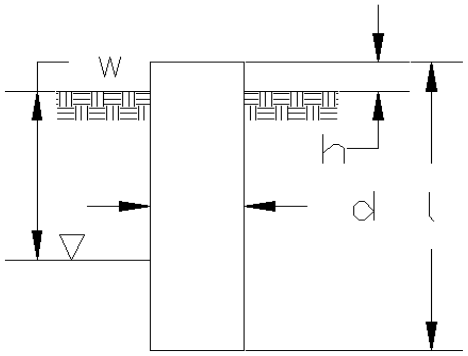
Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Moment (kip-in)	Allow Stress (ksi)	Applied Stress (ksi)	Stress Ratio
60.0	2.500	69.000	Round	0	0.00	11.224	313.66	60.00	26.83	0.45

Anchor Bolts

								Start	Compression			Tension		
Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Angle (deg)	Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
63.00	16	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	162.85	195.00	0.84	156.08	195.00	0.80

Site Name:	Petro Lock	*Program Last Updated:*	*4/28/2013*
Site Number:	302468	*American Tower Corporation*	
Engineer:	B. Lanier		
Engineering Number:	55431721		
Date:	12/04/13		



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

Analyze or Design a Foundation?	Analyze	
Foundation Mapped:	N	
Moment (M):	3348.8	k-ft
Shear/Leg (V):	32.6	k
Axial Load (P):	45.3	k
Uplift/Leg (U):	0.0	k
Tower Type (GT / SST / MP):	MP	
Diameter of Caisson (d):	7.0	ft
Caisson Embedment (L-h):	33.5	ft
Caisson Height Above Ground (h):	0.5	ft
Depth Below Ground Surface to Water Table (w):	10.0	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Water:	62.4	pcf
Tension Skin Friction/Compression Skin Friction:	1.00	
Pullout Angle:	30.0	degrees

Engineer Notes

Soil Mechanical Properties

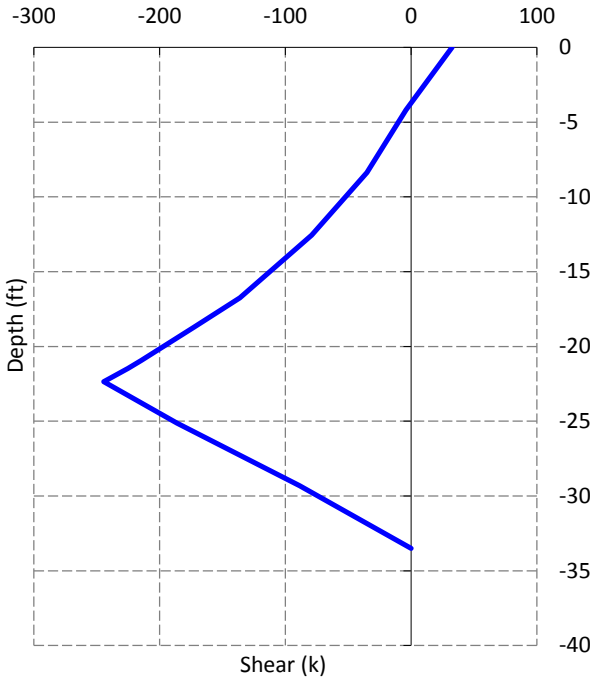
Depth (ft) Top	Depth (ft) Bottom	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)	Allowable Skin Friction (psf)	Allowable Bearing Pressure (psf)
0.0	2.0	100		0		
2.0	7.0	110		25		
7.0	10.0	110		20		
10.0	14.0	110		20		
14.0	17.0	110		25		
17.0	26.0	110		25		
26.0	30.0	110		20		
30.0	35.0	110		20		20000

Required Embedment:	30.1	ft - OK, Caisson Embedment Satisfactory
Volume of Concrete:	1308.5	ft^3 = 48.5 yd^3
Weight of Concrete (Buoyancy Effect Considered):	139.8	k
Average Soil Unit Weight:	65.6	pcf
Skin Friction Resistance:	0.0	k
Compressive Bearing Resistance:	769.7	k
Pullout Weight (Minus Concrete Weight):	1328.8	k
Allowable Uplift Capacity (U_{Allow}):	93.2	k
Allowable Compressive Capacity (P_{Allow}):	769.7	k
Compressive Design Load (P):	97.6	k
U / U_{Allow}:	0.00	Result: OK
P / P_{Allow}:	0.13	Result: OK
Total Lateral Resistance:	1769.9	k
Inflection Point (Below Ground Surface):	22.4	ft
Design Overturning Moment At Inflection Point (M_D):	4093.8	k-ft
Nominal Moment Capacity (M_{Allow}):	11578.8	k-ft
M_{Allow} / M_D Factor of Safety:	2.83	Result: OK

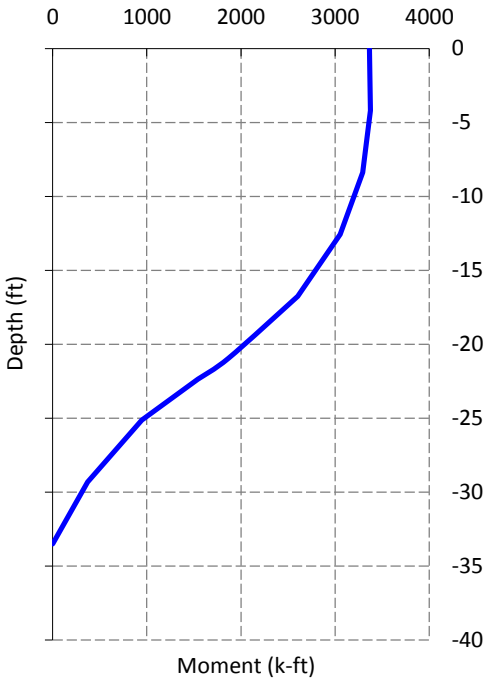
Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	3000	psi
Vertical Steel Rebar Size #:	11	
Vertical Steel Rebar Area:	1.56	in^2
Design # of Vertical Steel Rebars:	21	
Vertical Steel Rebar Yield Strength (F_y):	60	ksi
Horizontal Tie / Stirrup Size #:	5	
Horizontal Tie / Stirrup Area:	0.31	in^2
Design Horizontal Tie / Stirrup Spacing:	18.0	in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60	ksi
Rebar Cage Diameter:	76.0	in
Strength Bending/Tension Reduction Factor (ϕ_B):	0.90	ACI318-05 - 9.3.2.1
Strength Shear Reduction Factor (ϕ_V):	0.75	ACI318-05 - 9.3.2.3
Strength Compression Reduction Factor (ϕ_V):	0.65	ACI318-05 - 9.3.2.2
Wind Design Factor:	1.30	ACI318-05 - 9.2.1
Steel Elastic Modulus:	29000	ksi
Design Moment (M_u):	4388.0	k-ft
Nominal Moment Capacity ($\phi_B M_n$):	4963.4	k-ft - ACI318-005 - 10.2
$M_u/\phi_B M_n$:	0.88	Result: OK
Design Shear (V_u):	317.8	k
Nominal Shear Capacity ($\phi_V V_n$):	457.2	k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u/\phi_V V_n$:	0.70	Result: OK
Design Tension (T_u):	0.0	k
Nominal Tension Capacity ($\phi_T T_n$):	1769.0	k - ACI318-05 - 10.2
$T_u/\phi_T T_n$:	0.00	Result: OK
Design Compression (P_u):	126.9	k
Nominal Compression Capacity ($\phi_P P_n$):	7304.9	k - ACI318-05 - 10.3.6.2
$P_u/\phi_P P_n$:	0.02	Result: OK
Bending Reinforcement Ratio:	0.006	ACI318-05 - 10.8.4 & 10.9.1
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.88	Result: OK

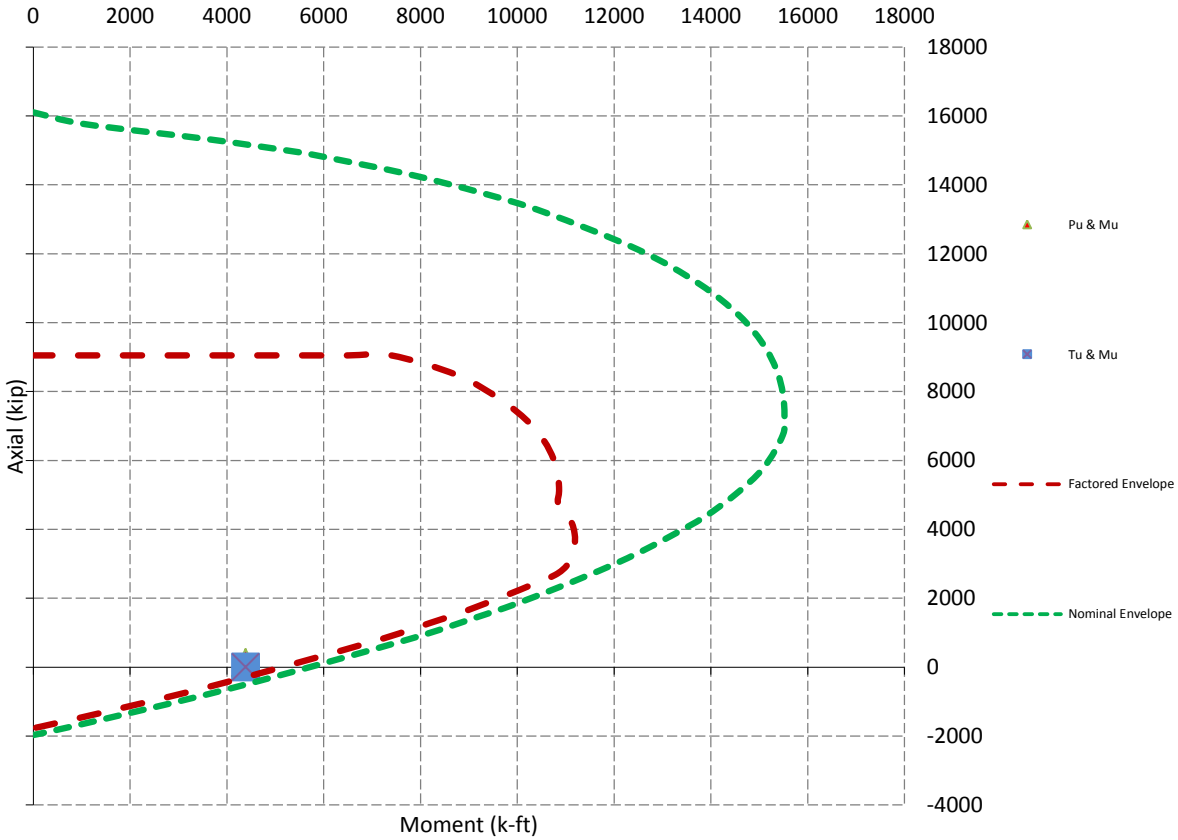
Design Unfactored Shear / Depth



Design Unfactored Moment / Depth



Nominal and Factored Moment Capacity and Factored Design Loads



Sprint

AMERICAN TOWER CORPORATION

PROJECT:	2.5 EQUIPMENT DEPLOYMENT
SITE NAME:	PETRO LOCK
SITE CASCADE:	CT43XC806
SITE NUMBER:	302468
SITE ADDRESS:	99 MEADOW ST. HARTFORD, CT 06518
SITE TYPE:	MONOPOLE TOWER
MARKET:	NORTHERN CONNECTICUT

SITE INFORMATION

TOWER OWNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

LATITUDE (NAD83):
41° 44' 35.51" N
41.743197°

LONGITUDE (NAD83):
72° 40' 3.14" W
-72.667539°

COUNTY:
HARTFORD

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

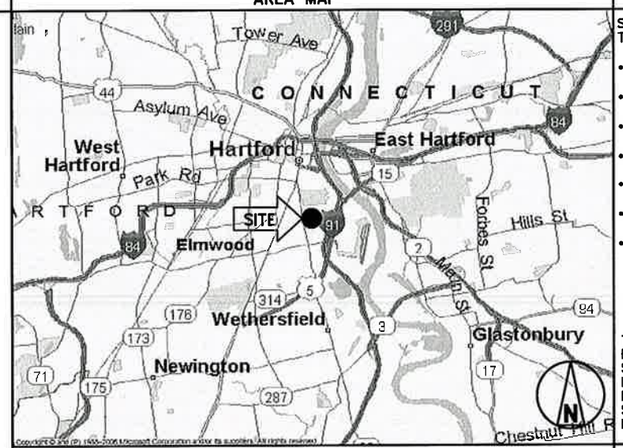
ZONING DISTRICT:
I2

POWER COMPANY:
CONNECTICUT LIGHT & POWER
(800) 286-2000

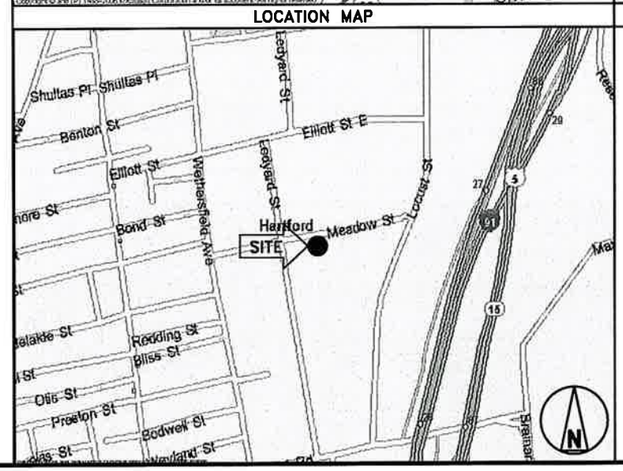
AAV PROVIDER:
AT&T
(800) 246-2020

SPRINT CM:
MICHAEL DELIA
781-316-6348
MICHAEL.DELIA@SPRINT.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- INSTALL (3) PANEL ANTENNAS
- INSTALL (3) RRU'S TO TOWER
- INSTALL (27) JUMPER CABLES
- INSTALL (1) HYBRID CABLE
- INSTALL 2.5 EQUIPMENT IN EXISTING N.V. MMBS CABINET
- INSTALL (8) NEW BATTERIES IN EXISTING BBU CABINET
- INSTALL RECTIFIER SHELF AND (3) RECTIFIERS IN EXISTING N.V. MMBS CABINET

THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY SPRINT IN ACCORDANCE WITH THE SCOPE OF WORK PROVIDED BY SPRINT. INFINIGY HAS INCORPORATED THIS SCOPE OF WORK IN THE PLANS. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS PREPARED BY A LICENSED STRUCTURAL ENGINEER. STRUCTURAL ANALYSIS MUST INCLUDE BOTH TOWER AND MOUNT.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (2012 IBC)
2. TIA-EIA-222-F OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

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DRAWING INDEX

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET & PROJECT DATA	0
SP-1	SPRINT SPECIFICATIONS	0
SP-2	SPRINT SPECIFICATIONS	0
SP-3	SPRINT SPECIFICATIONS	0
A-1	SITE PLAN	0
A-2	TOWER ELEVATION & CABLE PLAN	0
A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0
A-4	COLOR CODING & NOTES	0
A-5	EQUIPMENT & MOUNTING DETAILS	0
A-6	CIVIL DETAILS	0
A-7	PLUMBING DIAGRAM	0
E-1	ELECTRICAL & GROUNDING PLAN	0
E-2	ELECTRICAL & GROUNDING DETAILS	0

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
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MLA PARTNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

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

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:
PERTRO LOCK

SITE CASCADE:
CT43XC806

SITE ADDRESS:
99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:
TITLE SHEET & PROJECT DATA

SHEET NUMBER:
T-1

THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.

1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:

A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:

1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY –GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC") AND NFPA 101 (LIFE SAFETY CODE).
5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
7. AMERICAN CONCRETE INSTITUTE (ACI)
8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
11. PORTLAND CEMENT ASSOCIATION (PCA)
12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
13. BRICK INDUSTRY ASSOCIATION (BIA)
14. AMERICAN WELDING SOCIETY (AWS)
15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
17. DOOR AND HARDWARE INSTITUTE (DHI)
18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.

B. COMPANY: SPRINT CORPORATION

C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.

D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.

E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.

G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

1.6 SITE FAMILIARITY: CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.

1.7 POINT OF CONTACT: COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.

1.8 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.9 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.

A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.

C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.

1.10 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.11 UTILITIES SERVICES: WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED:

1.12 PERMITS / FEES: WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.

1.14 METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION: CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

NOTE: IN SHORT-FORM SPECIFICATIONS ON THE DRAWINGS, A/E TO INSERT LIST OF APPLICABLE MOPS INCLUDING EN-2012-001, EN-2013-002, EL-0568, AND TS-0193

1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

3.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

3.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

3.4 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 EXISTING CONDITIONS: NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 RECEIPT OF MATERIAL AND EQUIPMENT:

A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.

B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:

1 ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

3.2 DELIVERABLES:

A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.

B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.

C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 NOTICE TO PROCEED

A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.

B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 FUNCTIONAL REQUIREMENTS:

A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.

B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.

C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES

D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY Design. Build. Deliver.
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
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JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

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

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:
PERTRO LOCK

SITE CASCADE:
CT43XC806

SITE ADDRESS:
99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:
SPRINT SPECIFICATIONS

SHEET NUMBER:
SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNAL AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.

1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION

E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER

B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.

1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
2. PROJECT PROGRESS REPORTS.
3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

1.3 SUBMITTALS:

A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.

B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL.

1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
5. CHEMICAL GROUNDING DESIGN

D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING;

1. AZIMUTH, DOWNTILT, AGL – UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
3. ALL AVAILABLE JURISDICTIONAL INFORMATION
4. PDF SCAN OF REDLINES PRODUCED IN FIELD
5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
6. LIEN WAIVERS
7. FINAL PAYMENT APPLICATION
8. REQUIRED FINAL CONSTRUCTION PHOTOS
9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
6. ANTENNA AZIMUTH , DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS – ANTENNALIGN ALIGNMENT TOOL (AAT)

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. Build. Deliver.

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Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
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SITE NAME:

PERTRO LOCK

SITE CASCADE:

CT43XC806

SITE ADDRESS:

99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

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SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.

8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC.). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.

9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.

10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT

11. ALL AVAILABLE JURISDICTIONAL INFORMATION

12. PDF SCAN OF REDLINES PRODUCED IN FIELD

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.

D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.

3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.

A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.

1. CONCRETE MIX AND CYLINDER BREAK REPORTS.

2. STRUCTURAL BACKFILL COMPACTION REPORTS.

3. SITE RESISTANCE TO EARTH TEST.

4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION

5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.

6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".

B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING;

1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.

2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;

3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS – PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.

4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET.; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING – TOP AND BOTTOM; PHOTOS OF COAX GROUNDING---TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;

6. SITE LAYOUT – PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.

7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.

8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.

9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 – SUBMITTALS & TESTS

PART 1 – GENERAL

1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.

B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 WEEKLY REPORTS:

A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.

B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.

3.2 PROJECT CONFERENCE CALLS:

A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.

3.3 PROJECT TRACKING IN SMS:

A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.

3.4 ADDITIONAL REPORTING:

A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.

3.5 PROJECT PHOTOGRAPHS:

A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:

1. 1SHELTER AND TOWER OVERVIEW.

2. TOWER FOUNDATION(S) – FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).

3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).

4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).

5. PHOTOS OF TOWER SECTION STACKING.

6. CONCRETE TESTING / SAMPLES.

7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.

8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.

9. SHELTER FOUNDATION---FORMS AND STEEL BEFORE POURING.

10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.

11. COAX CABLE ENTRY INTO SHELTER.

12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.

13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.

14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.

15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.

16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.

17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.

18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.

19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.

21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.

22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

25. ALL BTS GROUND CONNECTIONS.

26. ALL GROUND TEST WELLS.

27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.

28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.

29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.

30. GPS ANTENNAS.

31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.

32. DOGHOUSE/CABLE EXIT FROM ROOF.

33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.

34. MASTER BUS BAR.

35. TELCO BOARD AND NIU.

36. ELECTRICAL DISTRIBUTION WALL.

37. CABLE ENTRY WITH SURGE SUPPRESSION.

38. ENTRANCE TO EQUIPMENT ROOM.

39. COAX WEATHERPROOFING-TOP AND BOTTOM OF TOWER.

40. COAX GROUNDING -TOP AND BOTTOM OF TOWER.

41. ANTENNA AND MAST GROUNDING.

42. LANDSCAPING – WHERE APPLICABLE.

3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

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JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

ENGINEERING LICENSE:

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:

PERTRO LOCK

SITE CASCADE:

CT43XC806

SITE ADDRESS:

99 MEADOW ST.
HARTFORD, CT 06518

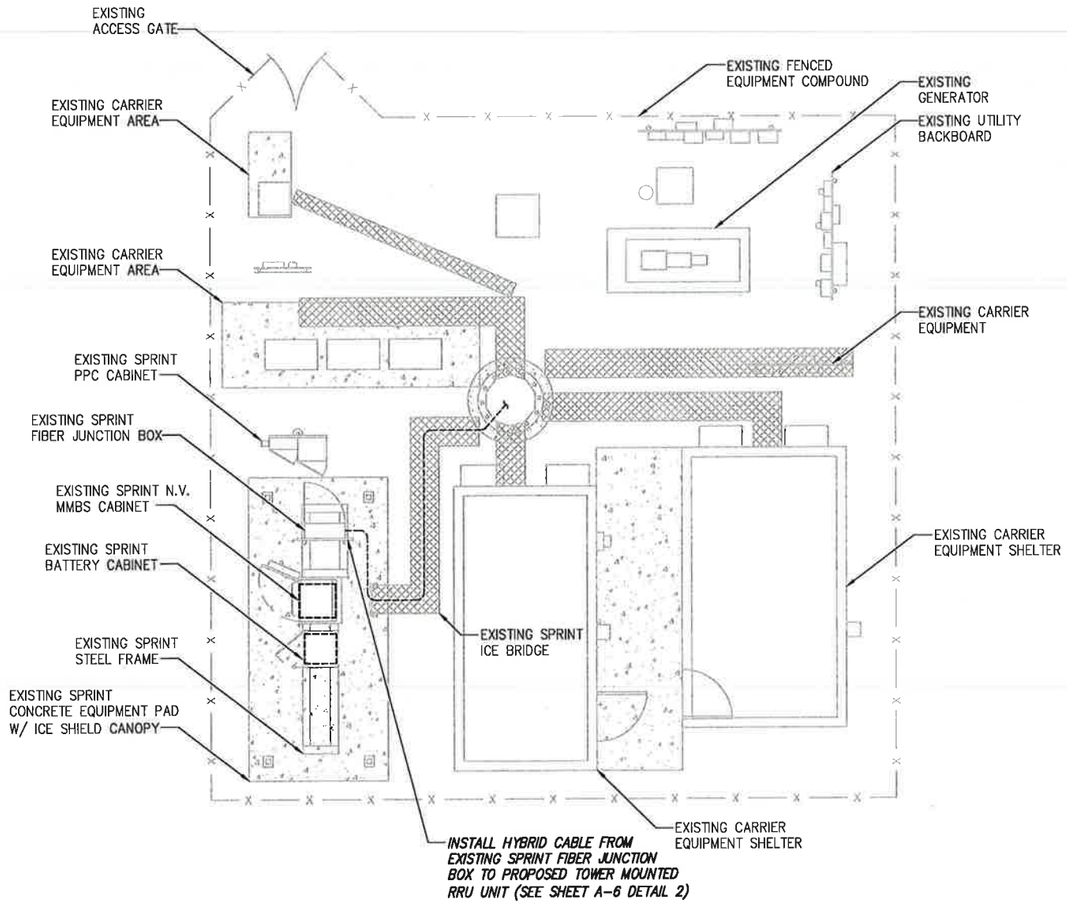
SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

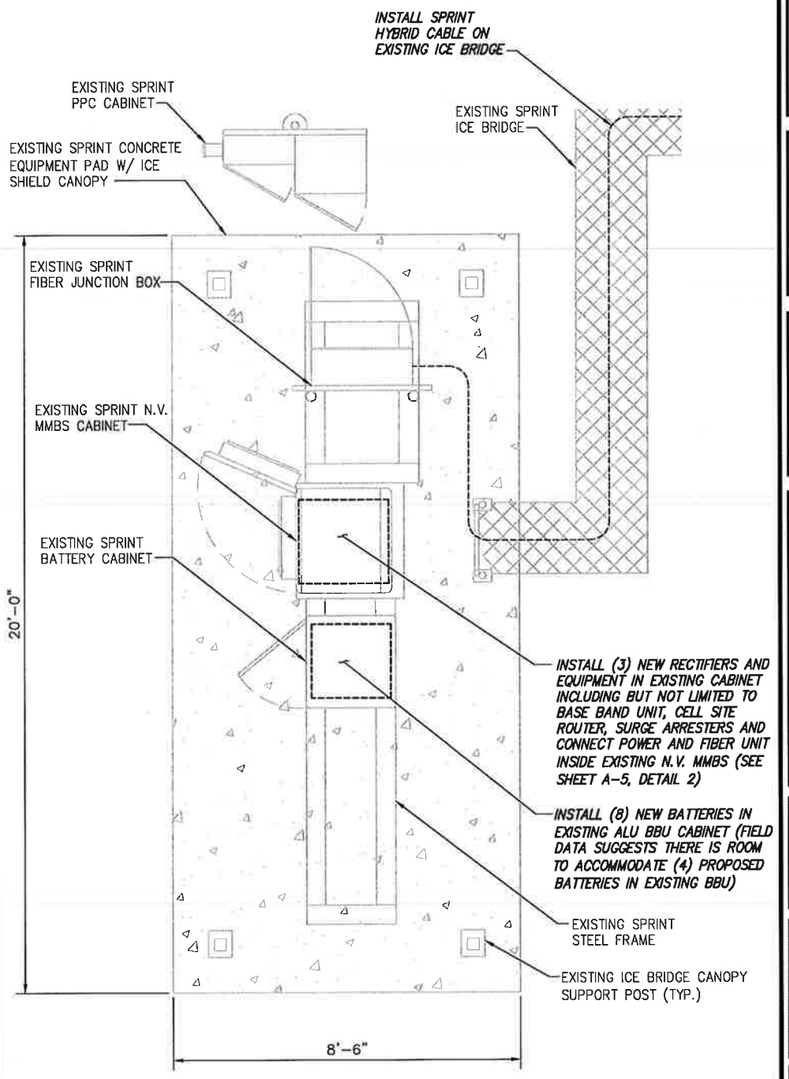
SP-3

INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.



SCALE: 24"x36" SHEET 1" = 5'-0"
SCALE: 11"x17" SHEET 1" = 10'-0"

OVERALL SITE PLAN | SCALE: AS NOTED | 1



SCALE: 24"x36" SHEET 1" = 2'-0"
SCALE: 11"x17" SHEET 1" = 4'-0"

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

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SHEET DESCRIPTION:

SITE PLAN

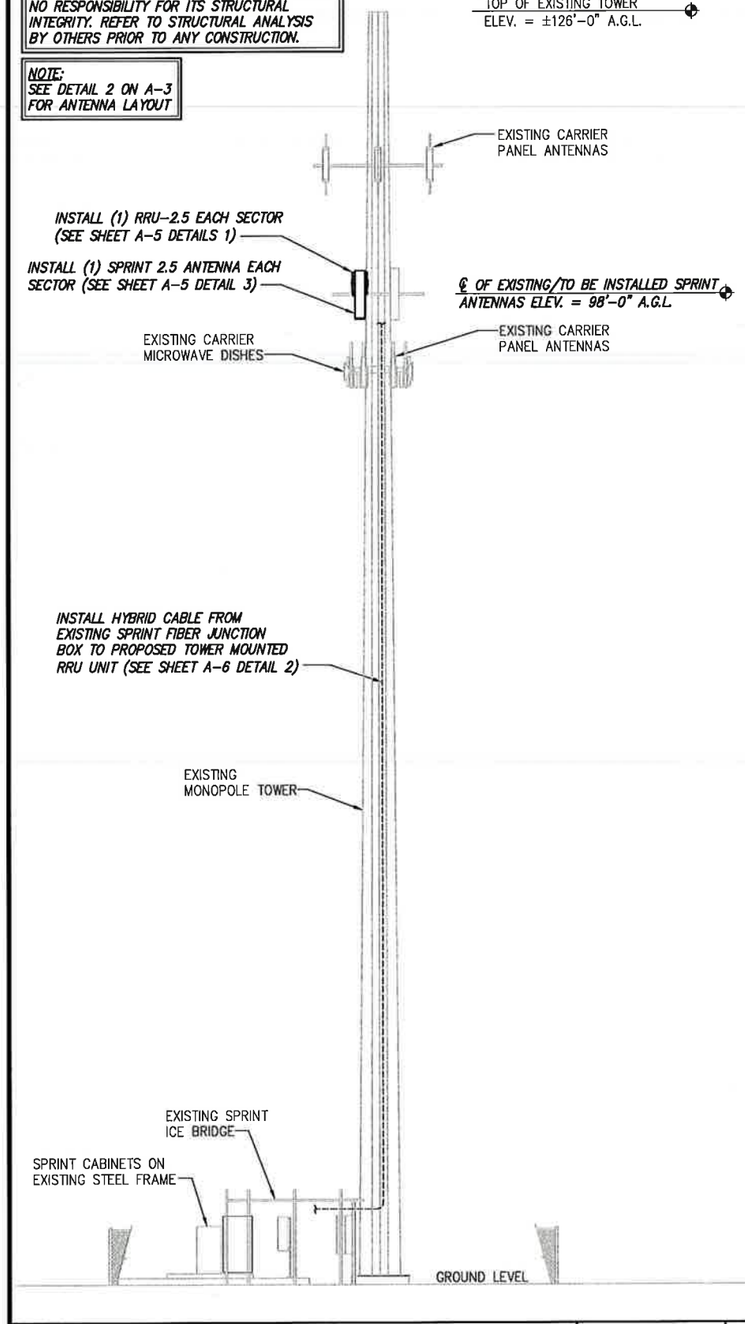
SHEET NUMBER:

A-1

NOTE:
SPRINT TOWER TOP WORK CONTINGENT ON FOLLOWING: COMPLETION OF STRUCTURAL ANALYSIS PROVIDED BY ATC, COMPLETION OF ANTENNA/RRH MOUNTING ASSESSMENT (PROVIDED BY AE)

NOTE:
INFINIGY ENGINEERING HAS NOT EVALUATED THE EXISTING TOWER FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY OTHERS PRIOR TO ANY CONSTRUCTION.

NOTE:
SEE DETAIL 2 ON A-3 FOR ANTENNA LAYOUT



TOWER ELEVATION | NO SCALE | 1

DETAIL NOT USED | NO SCALE | 2

DETAIL NOT USED | NO SCALE | 3

DETAIL NOT USED | NO SCALE | 4

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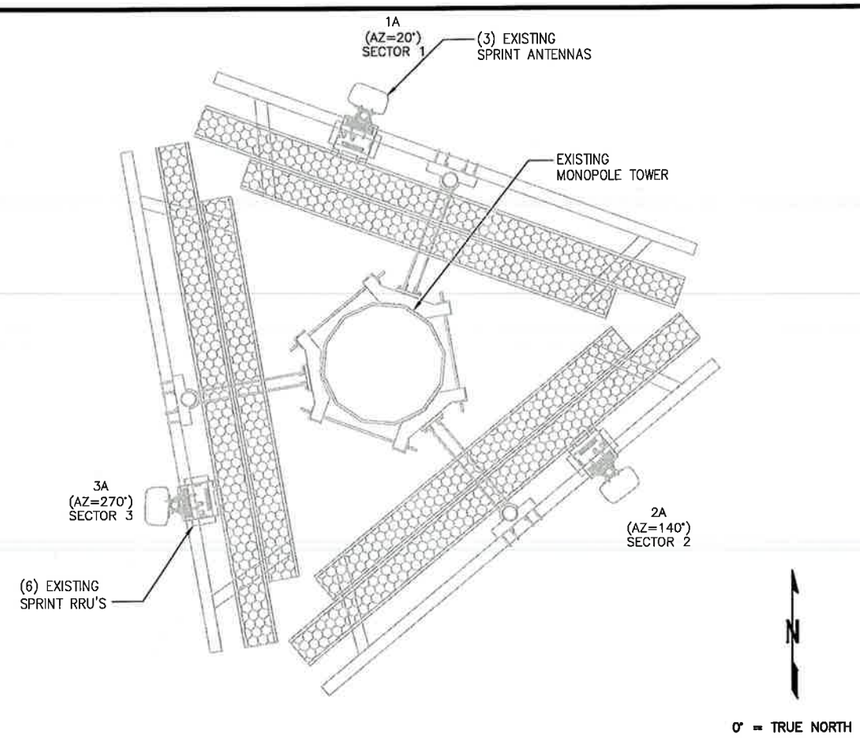
SHEET DESCRIPTION:

TOWER ELEVATION & CABLE PLAN

SHEET NUMBER:

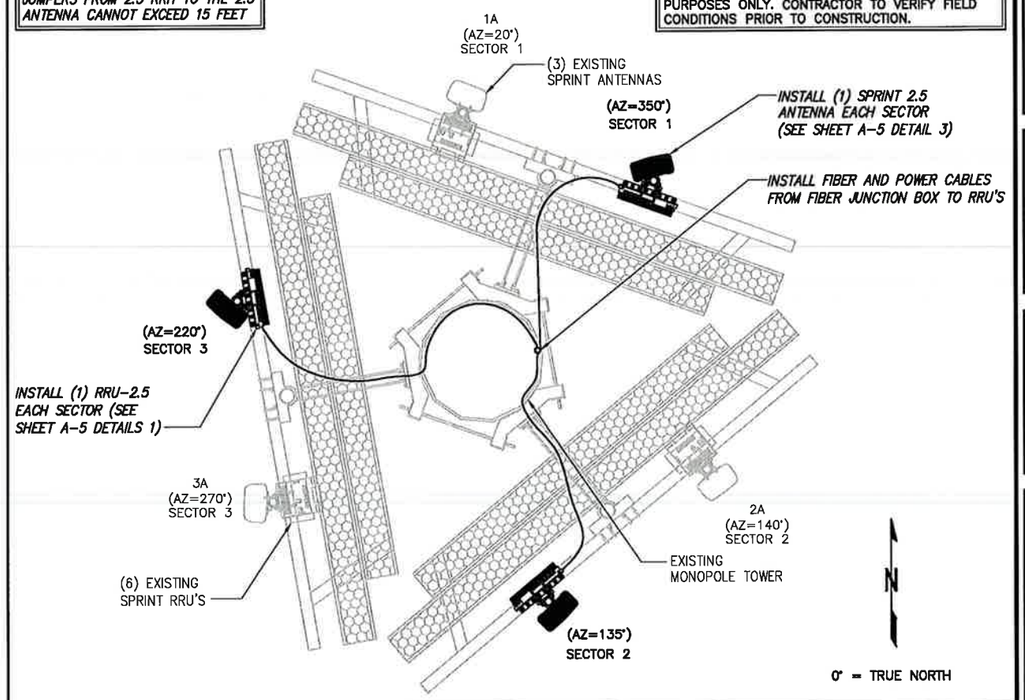
A-2



EXISTING ANTENNA & RRU LAYOUT | NO SCALE | 1

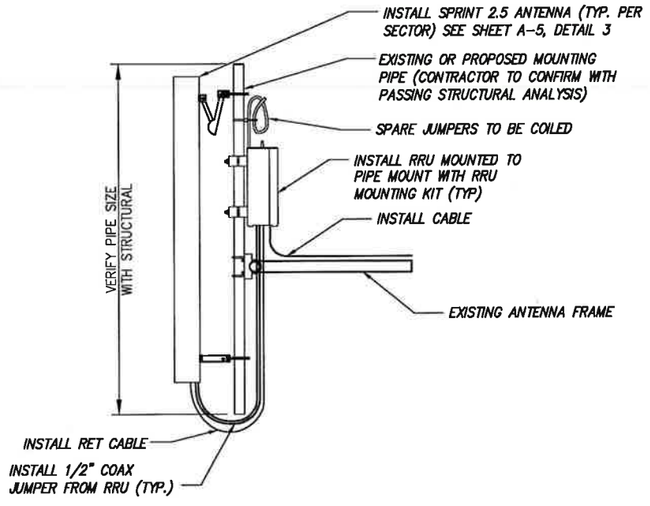
NOTE:
JUMPERS FROM 2.5 RRH TO THE 2.5 ANTENNA CANNOT EXCEED 15 FEET

THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.



FINAL ANTENNA LAYOUT | NO SCALE | 2

DETAIL NOT USED | NO SCALE | 3



NOTES:

1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRU.
3. DO NO EXCEED BEND RADIUS.

NOTE:
CONTRACTOR TO POSITION RRU ON MOUNT BEHIND ANTENNA SUCH THAT THE RRU DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

NOTE:
SPARE DC CABLES ARE COILED UP ON NV RRHS AT SPRINT ARRAY. THESE ARE TO BE USED TO POWER UP THE 2.5 RRHS AND TIED INTO EXISTING DC BREAKERS INSIDE THE FIBER JUNCTION BOX LOCATED AT EQUIPMENT.

NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRU MOUNTING DETAILS

TYPICAL ANTENNA & RRU MOUNTING DETAILS | NO SCALE | 4

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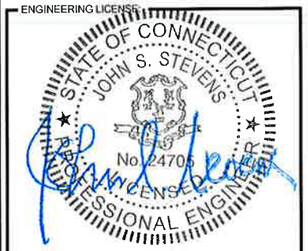

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SHEET DESCRIPTION:

ANTENNA LAYOUT
& MOUNTING DETAILS

SHEET NUMBER:

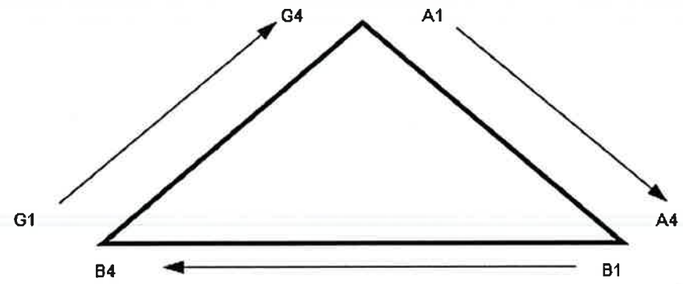
A-3

NV CABLES				
BAND	INDICATOR		PORT	COLOR
800-1	YEL	GRN	NV-1	GRN
1900-1	YEL	RED	NV-2	BLU
1900-2	YEL	BRN	NV-3	BRN
1900-3	YEL	BLU	NV-4	WHT
1900-4	YEL	SLT	NV-5	RED
800-2	YEL	ORG	NV-6	SLT
SPARE	YEL	WHT	NV-7	PPL
2500	YEL	PPL	NV-8	ORG

HYBRID	
HYBRID	COLOR
1	GRN
2	BLU
3	BRN
4	WHT
5	RED
6	SLT
7	PPL
8	ORG

2.5 Band			
2500 Radio 1			COLOR
YEL	WHT		GRN
YEL	WHT		BLU
YEL	WHT		BRN
YEL	WHT		WHT
YEL	WHT		RED
YEL	WHT		SLT
YEL	WHT		PPL
YEL	WHT		ORG

Figure 1: Antenna Orientation



NOTES:

1. ALL CABLES SHALL BE MARKED WITH 2" WIDE, UV STABILIZED, UL APPROVED TAPE.

2. THE FIRST RING SHALL BE CLOSEST TO THE END OF THE CABLE AND SPACED APPROXIMATELY 2" FROM THE END CONNECTOR, WEATHERPROOFING, OR BREAK-OUT CYLINDER. THERE SHALL BE A 1" SPACE BETWEEN EACH RING FOR THE CABLE IDENTIFIER, AND NO SPACES BETWEEN THE FREQUENCY BANDS.

3. A 2" GAP SHALL SEPARATE THE CABLE COLOR CODE FROM THE FREQUENCY COLOR CODE. THE 2" COLOR RINGS FOR THE FREQUENCY CODE SHALL BE PLACED NEXT TO EACH OTHER WITH NO SPACES.

4. THE 2" COLORED TAPE(S) SHALL EACH BE WRAPPED A MINIMUM OF 3 TIMES AROUND THE INDIVIDUAL CABLES, AND THE TAPE SHALL BE KEPT IN THE SAME LOCATION AS MUCH AS POSSIBLE.

5. SITES WITH MORE THAN FOUR (4) SECTORS WILL REQUIRE ADDITIONAL RINGS FOR EACH SECTOR, FOLLOWING THE PATTERN. HIGH CAPACITY SITES WILL USE THE NEXT COLOR IN THE SEQUENCE FOR ADDITIONAL CABLES IN EACH SECTOR.

6. HYBRID FIBER CABLE SHALL BE SECTOR IDENTIFIED INSIDE THE CABINET ON FREQUENCY BUNDLES, ON THE SEALTITE, ON THE MAIN LINE UPON EXIT OF SEALTITE, AND BEFORE AND AFTER THE BREAKOUT UNIT (MEDUSA), AS WELL AS BEFORE AND AFTER ANY ENTRANCE OR EXIT.

7. HFC "MAIN TRUNK" WILL NOT BE MARKED WITH THE FREQUENCY CODES, AS IT CONTAINS ALL FREQUENCIES.

8. INDIVIDUAL POWER PAIRS AND FIBER BUNDLES SHALL BE LABELED WITH BOTH THE CABLE AND FREQUENCY.

Sector	Cable	First Ring	Second Ring	Third Ring
1 Alpha	1	Green	No Tape	No Tape
1	2	Blue	No Tape	No Tape
1	3	Brown	No Tape	No Tape
1	4	White	No Tape	No Tape
1	5	Red	No Tape	No Tape
1	6	Grey	No Tape	No Tape
1	7	Purple	No Tape	No Tape
1	8	Orange	No Tape	No Tape
2 Beta	1	Green	Green	No Tape
2	2	Blue	Blue	No Tape
2	3	Brown	Brown	No Tape
2	4	White	White	No Tape
2	5	Red	Red	No Tape
2	6	Grey	Grey	No Tape
2	7	Purple	Purple	No Tape
2	8	Orange	Orange	No Tape
3 Gamma	1	Green	Green	Green
3	2	Blue	Blue	Blue
3	3	Brown	Brown	Brown
3	4	White	White	White
3	5	Red	Red	Red
3	6	Grey	Grey	Grey
3	7	Purple	Purple	Purple
3	8	Orange	Orange	Orange

NV FREQUENCY	INDICATOR	ID
800-1	YEL	GRN
1900-1	YEL	RED
1900-2	YEL	BRN
1900-3	YEL	BLU
1900-4	YEL	SLT
800-1	YEL	ORG
RESERVED	YEL	WHT
RESERVED	YEL	PPL

2.5 FREQUENCY	INDICATOR		ID
2500 -1	YEL	WHT	GRN
2500 -2	YEL	WHT	RED
2500 -3	YEL	WHT	BRN
2500 -4	YEL	WHT	BLU
2500 -5	YEL	WHT	SLT
2500 -6	YEL	WHT	ORG
2500 -7	YEL	WHT	WHT
2500 -8	YEL	WHT	PPL

Example – Sector 2, Cable 2, 800mhz Radio #1

Example – Sector 3, Cable 1, 1900mhz Radio #1

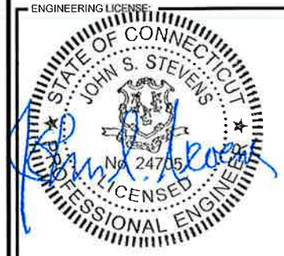
Example – Sector 1, Cable 4, 800 mhz Radio #1 and 1900mhz Radio #1

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY Design. Build. Deliver.
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

ENGINEERING LICENSE:



REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:
PERTRO LOCK

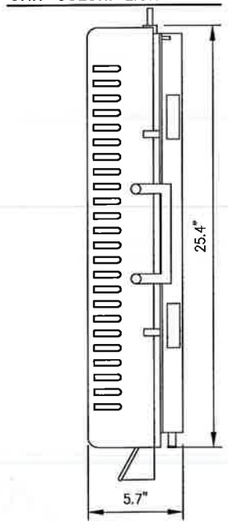
SITE CASCADE:
CT43XC806

SITE ADDRESS:
99 MEADOW ST.
HARTFORD, CT 06518

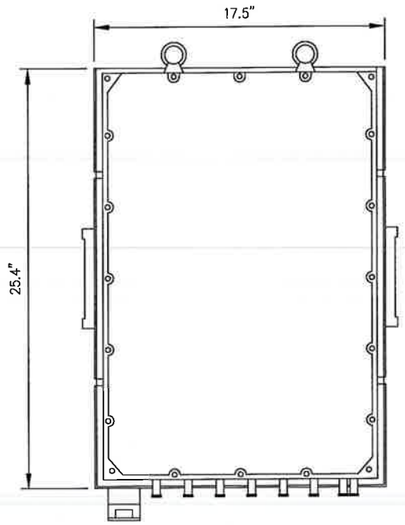
SHEET DESCRIPTION:
COLOR CODING AND NOTES

SHEET NUMBER:
A-4

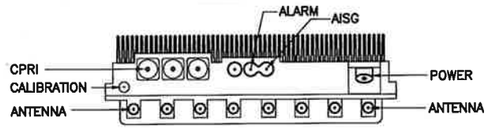
RRU: ALCATEL LUCENT TD-RRH8X20
UNIT WEIGHT: 70LBS
UNIT COLOR: LIGHT GRAY



SIDE VIEW



FRONT VIEW

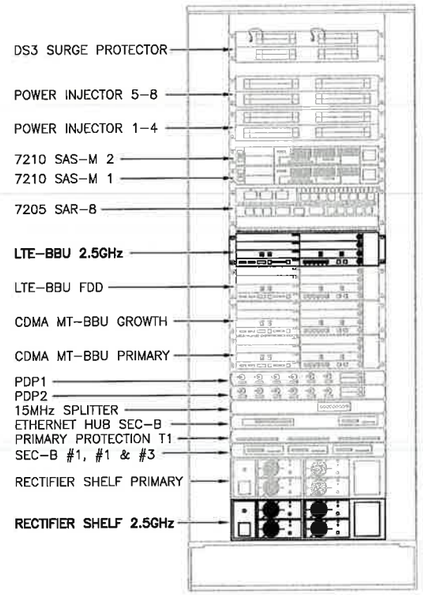


PLAN VIEW

NOTES

COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN.

2.5 RRU | NO SCALE | 1

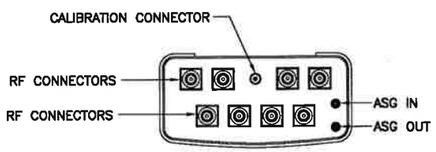


FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET | NO SCALE | 2

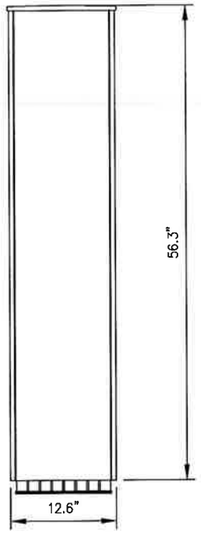
ANTENNA: RFS APXVTM14-C-I20

RADOME MATERIAL:	ASA
RADOME COLOR:	LIGHT GREY
DIMENSIONS, HxWxD.in(mim):	56.3"x12.6"x6.3" (1430x320x160mm)
WEIGHT:	52.9 lbs
CONNECTORS:	(8) 4.1/9.5 DIN FEMALE (1) NF – CALIBRATION CONNECTOR



PLAN VIEW

SIDE VIEW



FRONT VIEW

2.5 ANTENNA | NO SCALE | 3

DETAIL NOT USED | NO SCALE | 4

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:
INFINIGY Design. Build. Deliver.
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Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

ENGINEERING LICENSE:
STATE OF CONNECTICUT
BRIAN S. STEVENS
No. 24705
LICENSED
PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:
PERTRO LOCK

SITE CASCADE:
CT43XC806

SITE ADDRESS:
99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-5

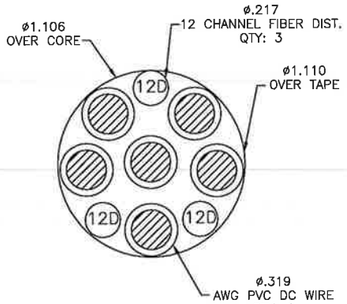
RFS HYBRIFLEX RISER CABLE SCHEDULE

Fiber Only (Existing DC Power)	Hybrid cable MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
	MN: HB058-M12-200F	200 ft
8 AWG Power	Hybrid cable MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
	MN: HB114-08U3M12-200F	200 ft
6 AWG Power	Hybrid cable MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	Hybrid cable MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

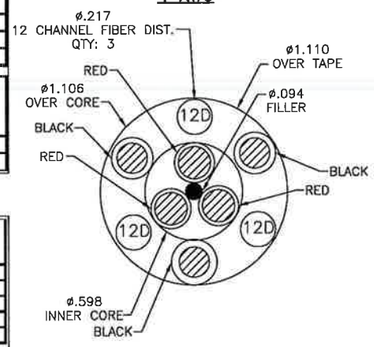
RFS HYBRIFLEX JUMPER CABLE SCHEDULE

Fiber Only	Hybrid Jumper cable MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	Hybrid Jumper cable MN: HBF058-08U1M3-5F1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
	MN: HBF058-08U1M3-20F1	20 ft
	MN: HBF058-08U1M3-25F1	25 ft
	MN: HBF058-08U1M3-30F1	30 ft
6 AWG Power	Hybrid Jumper cable MN: HBF058-13U1M3-5F1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
	MN: HBF058-13U1M3-20F1	20 ft
	MN: HBF058-13U1M3-25F1	25 ft
	MN: HBF058-13U1M3-30F1	30 ft
4 AWG Power	Hybrid Jumper cable MN: HBF078-21U1M3-5F1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft
	MN: HBF078-21U1M3-20F1	20 ft
	MN: HBF078-21U1M3-25F1	25 ft
	MN: HBF078-21U1M3-30F1	30 ft

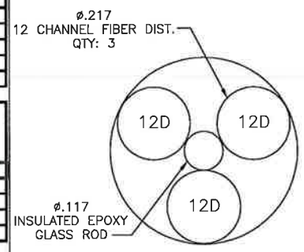
NOTE:
SPRINT CM TO CONFIRM HYBRID RISER CABLE AND HYBRID JUMPER CABLE MODEL NUMBERS BEFORE PREPARING BOM.



4 AWG

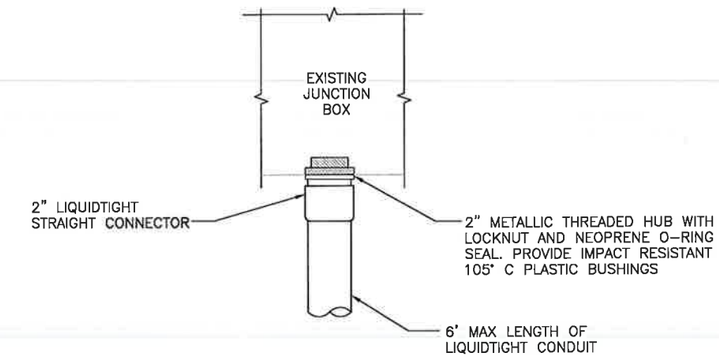


8 & 6 AWG



FIBER ONLY

2.5 CABLE CROSS SECTION DATA | NO SCALE | 1



FIBER JUNCTION BOX PENETRATION | NO SCALE | 2

DETAIL NOT USED | NO SCALE | 3

PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

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Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
JOB NUMBER 340-XXXX

MLA PARTNER:
AMERICAN TOWER CORPORATION
116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

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

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

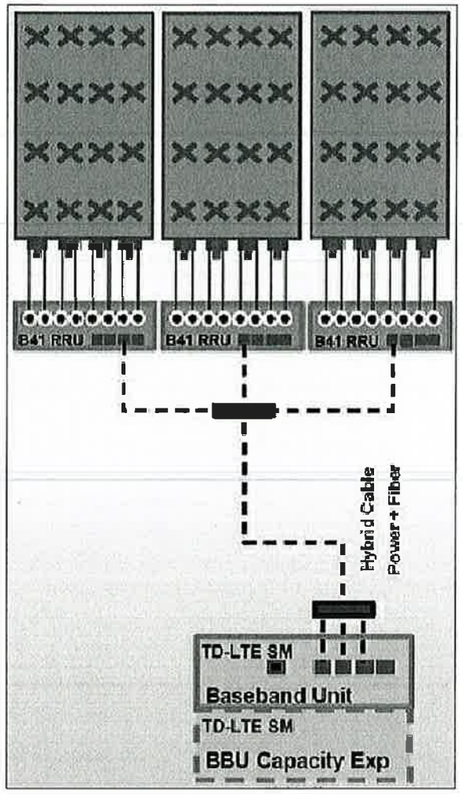
SITE NAME:
PERTRO LOCK

SITE CASCADE:
CT43XC806

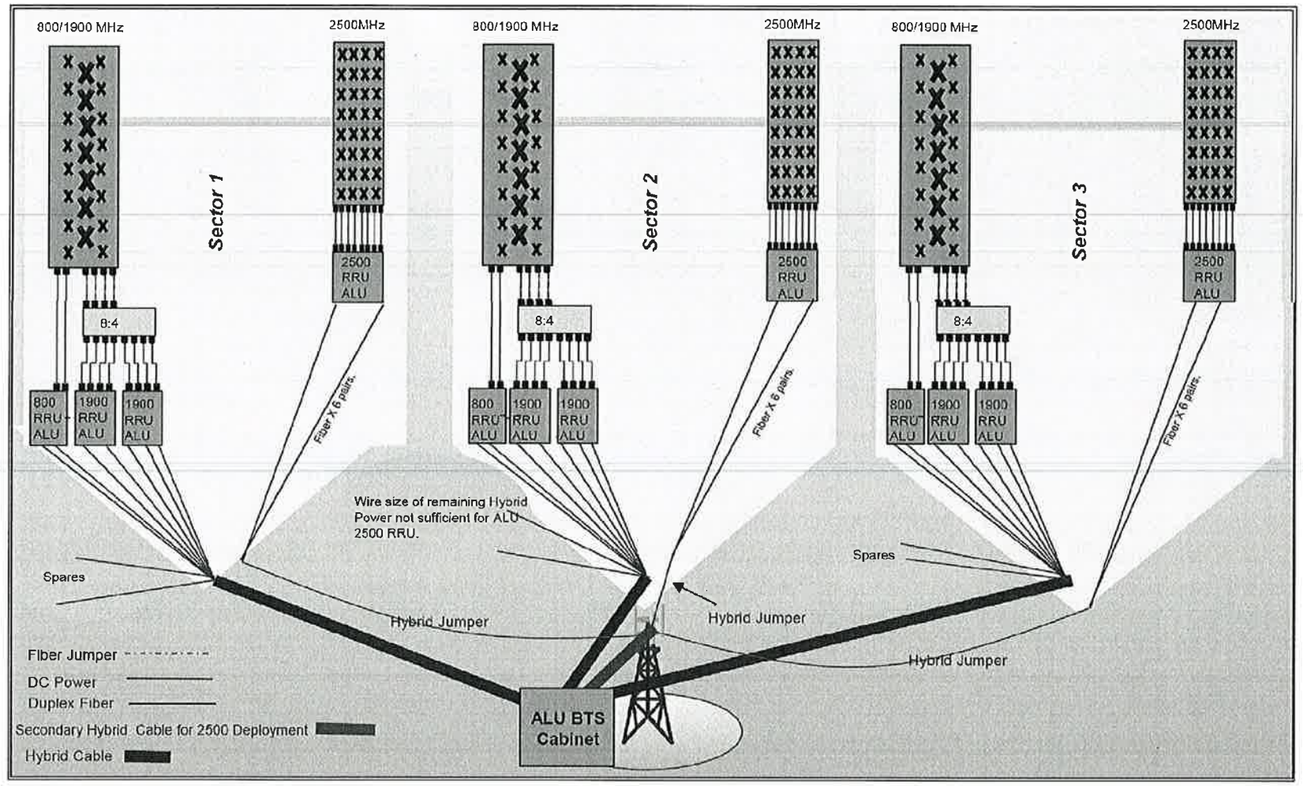
SITE ADDRESS:
99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:
CIVIL DETAILS

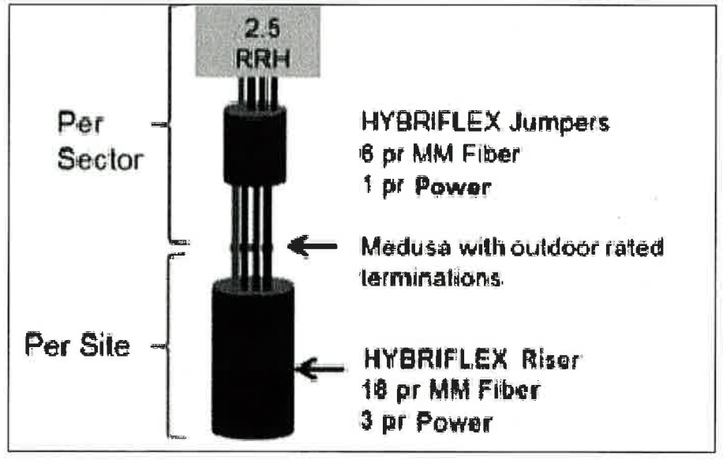
SHEET NUMBER:
A-6



ALU 2.5 ALU SCENARIO 1



RAN WIRING DIAGRAM



RF 2.5 ALU SCENARIO 1

PLUMBING DIAGRAM

NO SCALE

1

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Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

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JOB NUMBER 340-XXXX

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ENGINEERING LICENSE:

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JOHN G. STEVENS
No. 24705
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DRAWING NOTICE:

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ISSUED FOR CONSTRUCTION	02/17/14	MJB	0

SITE NAME:

PERTRO LOCK

SITE CASCADE:

CT43XC806

SITE ADDRESS:

99 MEADOW ST.
HARTFORD, CT 06518

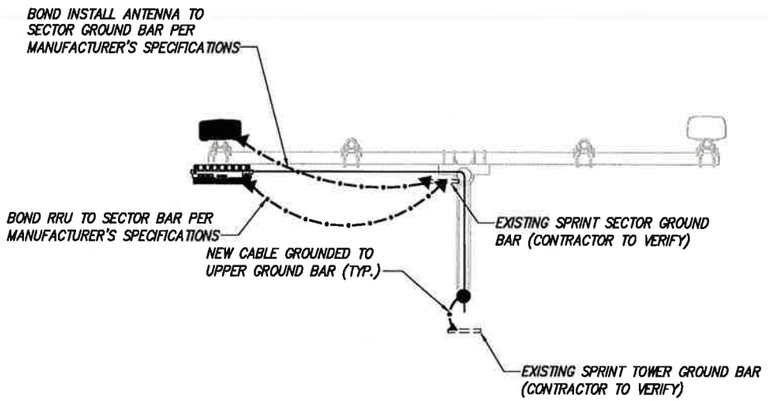
SHEET DESCRIPTION:

PLUMBING DIAGRAM

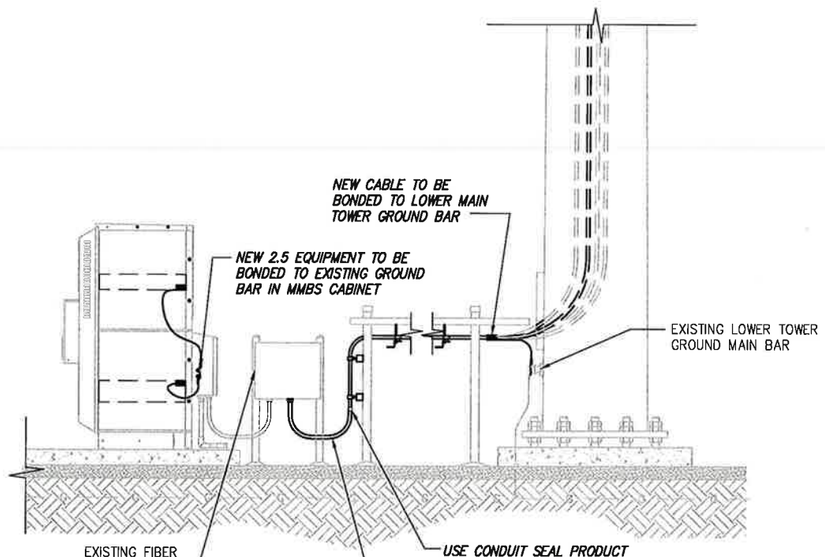
SHEET NUMBER:

A-7

PLAN NOT USED | NO SCALE | 1



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2



NOTE:
DEPICTION IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO FIELD VERIFY PRIOR TO CONSTRUCTION

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION) | NO SCALE | 3

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

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SITE NAME:

PERTRO LOCK

SITE CASCADE:

CT43XC806

SITE ADDRESS:

99 MEADOW ST.
HARTFORD, CT 06518

SHEET DESCRIPTION:

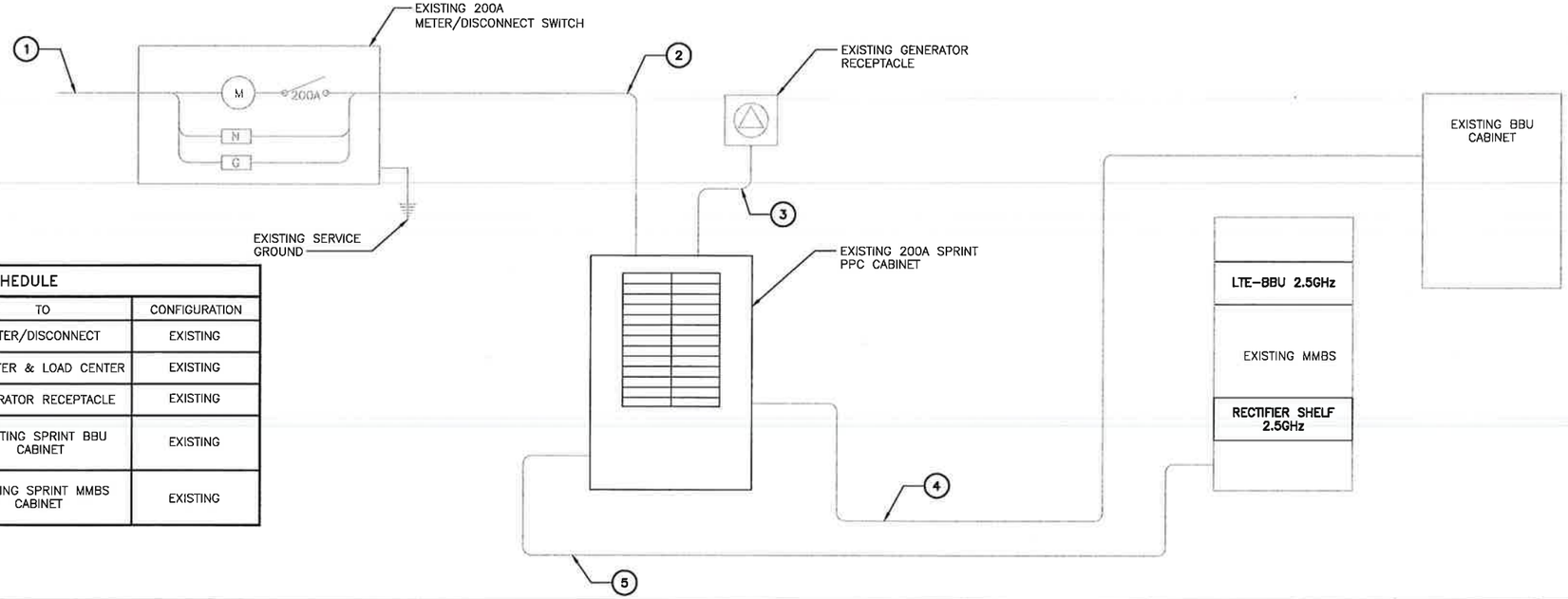
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:

E-1

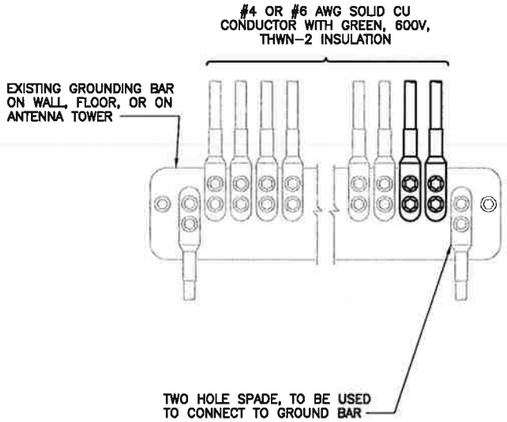
NOTES

GC SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
1	UTILITY SOURCE	METER/DISCONNECT	EXISTING
2	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
3	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
4	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	EXISTING
5	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

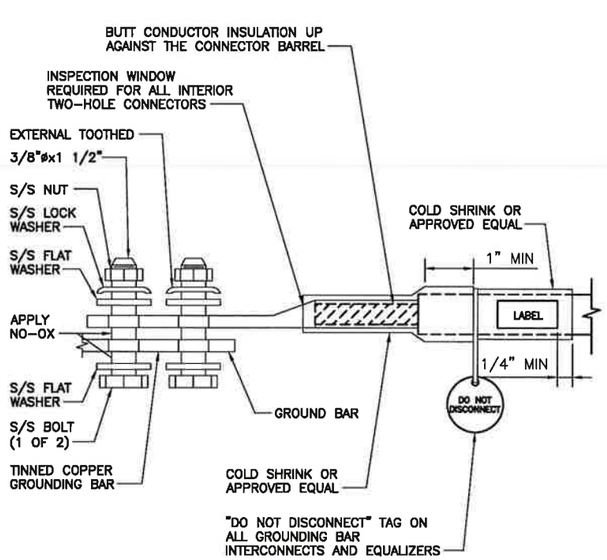
ELECTRICAL ONE-LINE DIAGRAM — NO SCALE — 1



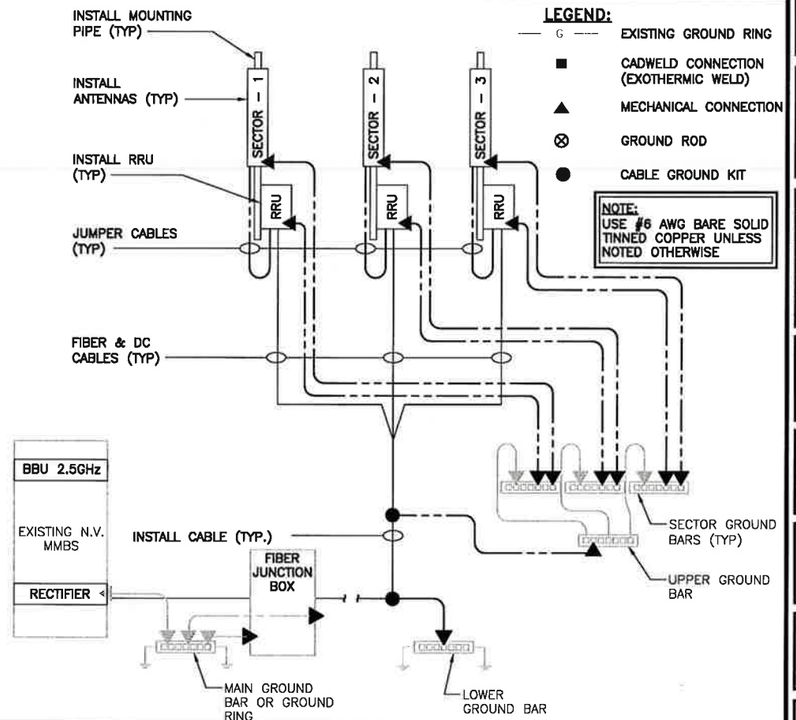
NOTES

1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR — NO SCALE — 2



TWO HOLE LUG — NO SCALE — 3



GROUNDING RISER DIAGRAM — NO SCALE — 4

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Sprint

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Overland Park, Kansas 66251

PLANS PREPARED BY:

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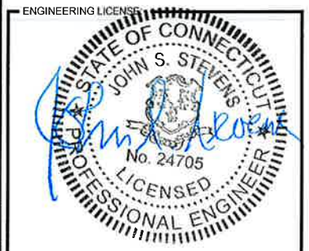
JOB NUMBER 340-XXXX

MLA PARTNER:

AMERICAN TOWER CORPORATION

116 HUNTINGTON AVENUE, 11TH FLOOR
BOSTON, MA 02116

ENGINEERING LICENSE:



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SITE NAME:

PERTRO LOCK

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HARTFORD, CT 06518

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2