August 7, 2015

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
500 Highland Avenue
Cheshire, CT 06410
N 41° 30' 40.2834"
W 72° 53' 54.5634"
T-Mobile Site #: CT11308D_L700

Members of the Siting Council:

On behalf of T-Mobile, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 500 Highland Avenue, Cheshire, CT.

The 500 Highland Avenue facility consists of a 160' Monopole Tower owned and operated by SBA Site Management. In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile 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 attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

As part of T-Mobile's L700 project, T-Mobile desires to upgrade their equipment to meet the new standards of 4G technology. The new equipment will allow customers to download files and browse the internet at a high rate of speed while also allowing their phones to be compatible with the latest 4G technology.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in T-Mobile's operations at the site along with the required fee of $625.

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

1. The overall height of the structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than the new equipment cabinets.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. The changes in radio frequency power density 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, SBA Communications on behalf of T-Mobile, respectfully submits that he 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 508.251.0720 x 3804 with any questions you may have concerning this matter.

Thank you,

Kri Pelletier
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbasite.com

T-Mobile

Equipment Modification

500 Highland Avenue, Cheshire CT
Site #: CT11308D_L700

Tower Owner: SBA Site Management

Equipment Configuration: Monopole

Current and/or approved:

- (3) Ericsson AIR21 B2A/B4P
- (3) Ericsson AIR21 B4A/B2P
- (3) RFS APX16-PV-6PVL-C
- (3) Ericsson KRY 112 144
- (3) RFS ATMAA1412D1A20
- (18) 1-5/8" coax
- (12) ½" coax

Planned Modifications:

- (3) Ericsson AIR21 B2A/B4P
- (3) Ericsson AIR21 B4A/B2P
- (3) Commscope LNX-6515DS-VTM
- (3) Ericsson KRY 112 144
- (3) RFS ATMAA1412D1A20
- (3) Ericsson S11B12
- (18) 1-5/8" coax
- (12) ½" coax

Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

Power Density:

The anticipated Maximum Composite contributions from the T-Mobile facility are 5.90% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 81.43% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE%	
Carrier	MPE%
T-Mobile	**5.90**
Sprint Microwave	0.01 %
Sprint	7.43 %
MetroPCS	6.43 %
Town Emergency Services	5.13 %
AT&T	26.82 %
Verizon Wireless	29.71 %
Site Total MPE %:	**81.43 %**

August 7, 2015

Michael A. Milone
Town Manager
Town of Cheshire
Town Hall
84 South Main Street
Cheshire, CT 06410

RE: Telecommunications Facility @ 500 Highland Avenue, Cheshire CT

Dear Mr. Milone,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, T-Mobile will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review T-Mobile's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes T-Mobile's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at 508.251.0720 x 3804.

Thank you,

Kri Pelletier
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
203-446-7700 + C
kpelletier@sbasite.com

Property Owner:

Town of Cheshire CT
84 South Main Street
Finance Cheshire CT 06410

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

T-Mobile Existing Facility

Site ID: CT11308D

Cheshire Police/ TVI
500 Highland Avenue
Cheshire, CT 06410

August 5, 2015

EBI Project Number: 6215004249

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	81.43 %

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

EBI Consulting
environmental | engineering | due diligence

August 5, 2015

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

Emissions Analysis for Site: **CT11308D – Cheshire Police/ TVI**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **500 Highland Avenue, Cheshire, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ 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 ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu W/cm^2$, and the general population exposure limit for the PCS and AWS bands is 1000 $\mu W/cm^2$. 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 T-Mobile Wireless antenna facility located at **500 Highland Avenue, Cheshire, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. 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 equipment was calculated using the following assumptions:

1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel

2) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

5) 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.

6) 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 minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antennas used in this modeling are the **Ericsson AIR21 B4A/B2P** & **B2A/B4P)** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR21 B4A/B2P** & **B2A/B4P)** have a maximum gain of **15.9 dBd** at their main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antenna mounting height centerline of the proposed antennas is **149 feet** above ground level (AGL).

9) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Ericsson AIR21 B2A/B4P	Make / Model:	Ericsson AIR21 B2A/B4P	Make / Model:	Ericsson AIR21 B2A/B4P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	149	Height (AGL):	149	Height (AGL):	149
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	2	Channel Count	2	# PCS Channels:	2
Total TX Power:	120	Total TX Power:	120	# AWS Channels:	120
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna A1 MPE%	0.82	Antenna B1 MPE%	0.82	Antenna C1 MPE%	0.82
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	149	Height (AGL):	149	Height (AGL):	149
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	120	Total TX Power:	120	Total TX Power:	120
ERP (W):	4,668.54	ERP (W):	4,668.54	ERP (W):	4,668.54
Antenna A2 MPE%	0.82	Antenna B2 MPE%	0.82	Antenna C2 MPE%	0.82
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	149	Height (AGL):	149	Height (AGL):	149
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A3 MPE%	0.33	Antenna B3 MPE%	0.33	Antenna C3 MPE%	0.33

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile	**5.90**
Sprint Microwave	0.01 %
Sprint	7.43 %
MetroPCS	6.43 %
Town Emergency Services	5.13 %
AT&T	26.82 %
Verizon Wireless	29.71 %
Site Total MPE %:	**81.43 %**

T-Mobile Sector 1 Total:	1.97 %
T-Mobile Sector 2 Total:	1.97 %
T-Mobile Sector 3 Total:	1.97 %
Site Total:	81.43 %

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Summary

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

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	1.97 %
Sector 2:	1.97 %
Sector 3 :	1.97 %
T-Mobile Total:	5.90 %
Site Total:	81.43 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **81.43%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

GPD Engineering and Architecture
Professional Corporation

STRUCTURAL ANALYSIS REPORT

160' Monopole Tower

500 Highland Avenue
Cheshire, CT 06410

SBA Site Name: Cheshire
SBA Site Number: CT33762-M

T-Mobile Site ID: CT11308D

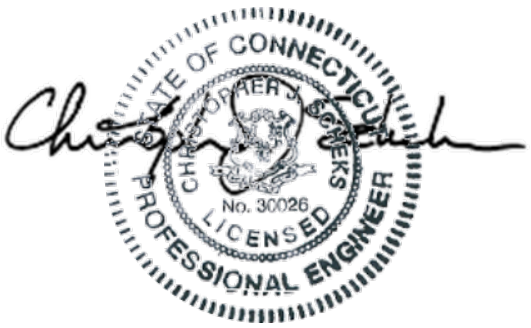
GPD Project Number: 2015778.33762.07

Analysis Results

Tower Components	90.6%	Sufficient
Foundation	53.1%	Sufficient

July 23, 2015

Respectfully submitted by:



7/23/2015
Christopher J. Scheks, P.E.
Connecticut #: 30026

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APPENDICES

1. TNX TOWER OUTPUT

2. ADDITIONAL CALCULATIONS

Executive Summary

The purpose of this analysis is to verify whether the existing monopole tower is structurally capable of carrying the proposed antenna and coax loads as specified by T-Mobile to SBA. This report was commissioned by Mr. Rick Woods of SBA Site Management.

The existing structure and its foundations have been analyzed using the following requirements:

Governing Code/s	TIA-222-G, & 2005 CTBC
Wind Speed	100 MPH 3-Second Gust
Wind Speed w/ Ice	50 MPH 3-Second Gust
Radial Ice Thickness	3/4″
Structure Class	III
Exposure Class	B
Topographic Category	1

Conclusions & Recommendations

The designs of the tower and its foundation are sufficient for the proposed loading configuration considering the above analysis criteria and will not require modification.

Tower Description

The existing 160' Monopole Tower is located in Cheshire, Connecticut. The tower was originally designed by Sabre in September of 2003. All structural information was obtained from a previous analysis performed by URS. The original design load for the tower was not available at the time of analysis.

Documents Provided:

Document Type	Remarks	Source
Previous Structural Analysis	Hudson Design Group dated 05/06/2013	SBA
Previous Structural Analysis	GPD Job #: 2015778.33762.05, dated 3/18/2015	SBA
Foundation Calculations	URS Corporation Job #: 36917370, dated 10/10/2012	SBA
Construction Drawings	Hudson Design Group, reviewed by SBA 7/10/2014	SBA

Tower Materials:

Structural Components	Material Strength
Pole	ASTM A572 (65 KSI Yield Strength)
Base Plate	ASTM A572 (60 KSI Yield Strength)
Anchor Rods	ASTM A615 (75 KSI Yield Strength)

Tower Loading

The following data shows the major loading that the tower supports. All existing/leased and proposed loading was provided by SBA or taken from the previous analysis. **Existing/Leased Loading**

Carrier	Mounting Level (ft)	Center Line Elevation (ft)	# of Antennas	Antenna Manufact.	Antenna/Mount Model	# of Coax	Coax Size (in)	Note
Town of Cheshire	160	170	1		20' Omni	4	1/2	
		168	2	Decibel	DB224			
		166.17	1		6' Omni			
		160	3		T-Arm			
Sprint	160	160	1		LP Platform	6	1-1/4	
		158	3	RFS	APXVSPP18-C-A20			
			3	RFS	APXVTM14-C-I20			
			4	RFS	ACU-A20-N			
			3	ALU	1900 MHz RRH			
			3	ALU	800 MHz RRH			
			3	ALU	2500 MHz RRH			
			3	ALU	800 MHz Filter			
T-Mobile	152	152	1		LP Platform	18 12	1-5/8 1/2	
		149	3	Ericsson	AIR21 B2A/B4P			
			3	Ericsson	AIR21 B4A/B2P			
			3	RFS	APX16-PV-6PVL-C			
			3	Ericsson	KRY 112 144			
			3	RFS	ATMAA1412D1A20			
Pocket	141.08	141.08	3	RFS	APXV18-206517S-C	6	1-5/8	
			3		T-Arm			
AT&T	128	128	6	Kathrein	800 10121	12 1 4	1-5/8" 10mm 19.7mm	
			2	CCI	OPA-65R-LCUU-H8			
			1	CCI	OPA-65R-LCUU-H6			
			3	Powerwave	TT19-08BP111-001 TMA			
			6	Powerwave	LGP 21401 TMA			
			6	Kathrein	860-10025			
			3	Ericsson	RRUS-11			
			3	Ericsson	RRUS-12			
			3	Ericsson	A2 Module			
			2	Raycap	DC6-48-60-18-8F			
			1	Commscope	MTC3607			
Verizon	122.5	122.5	3	Antel	BXA 70063/6CF	12 1	1-5/8 1-5/8 Fiber	
			3	Antel	BXA 185063/8CF			
			3	Andrew	HBX-6517DS-VTM			
			3	Andrew	LNX-6514DS-VTM			
			6	RFS	FD9R6004/2C-3L			
			3	ALU	RRH2x40-AWS			
			1		DB-T1-6Z-8AB-0Z			
			1		LP Platform			
Town of Cheshire	89.08	89.08	1		Dipole Antenna	5	1/2	
			1		Collar Mount			
		81.25	1		Yagi Antenna			
		79.33	1		Yagi Antenna			
	83.17	83.17	1	PCTEL	GPS-TMG-HR-26N			
			1		Collar Mount			
		81.17	1		Yagi Antenna			

Final Proposed Loading Configuration

Carrier	Mounting Level (ft)	Center Line Elevation (ft)	# of Antennas	Antenna Manufact.	Antenna/Mount Model	# of Coax	Coax Size	Note
T-Mobile	152	152	1		LP Platform	18 12	1-5/8 1/2	1
		149	3	Ericsson	AIR21 B2A/B4P			
			3	Ericsson	AIR21 B4A/B2P			
			3	Commscope	LNX-6515DS-VTM			
			3	Ericsson	KRY 112 144			
			3	RFS	ATMAA1412D1A20			
			3	Ericsson	S11B12			

Notes:

1)This loading represents the final configuration for T-Mobile. See the next page for the proposed coax layout.

Assumptions

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in the Existing/Reserved Loading and Proposed Loading Tables, and the specified documents.
4) All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5) Mount sizes, weights, and manufacturers are best estimates based on photos provided and determined without the benefit of a site visit by GPD.
6) The proposed coax shall be installed internal to the monopole.
7) All member connections and foundation steel reinforcing are assumed designed to meet or exceed the load carrying capacity of the connected member and surrounding soils respectively unless otherwise specified in this report.
8) The existing loads on the tower were modeled from the previous structural analyses.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD should be allowed to review any new information to determine its effect on the structural integrity of the tower.

Tower Section Results

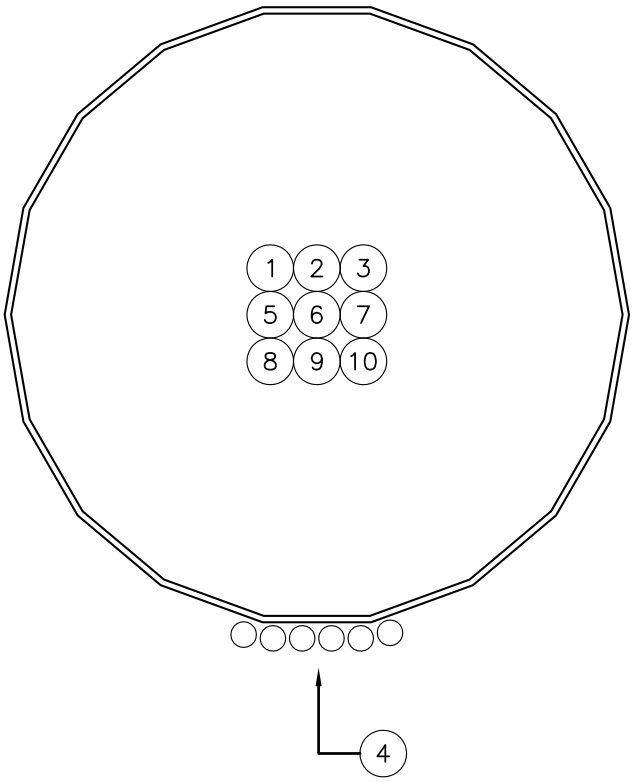
Capacity Summary of Structural Components

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass/ Fail
L1	160 - 146.5	Pole	TP20.91x16.75x0.1875	1	-4.53	865.69	21.4	Pass
L2	146.5 - 95.75	Pole	TP36.16x19.6876x0.25	2	-20.36	1841.20	90.3	Pass
L3	95.75 - 46.75	Pole	TP50.76x34.2745x0.3125	3	-33.61	3077.94	90.6	Pass
L4	46.75 - 0	Pole	TP64.53x48.1321x0.375	4	-53.63	4662.89	78.8	Pass
							Summary	
							Pole (L3)	90.6	Pass
							RATING =	**90.6**	**Pass**

Additional Capacities

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
	Anchor Rods	0	80.3	Pass
	Base Plate	0	50.0	Pass
	Tower Base Foundation	0	53.1	Pass

Proposed Coax Configuration



#	CARRIER	SIZE	QTY.	ELEVATION	NOTES
1	Town of Cheshire	1/2"	4	160'	
2	Sprint	1-1/4" Fiber	6	160'	
3	T-Mobile	1-5/8", 1/2"	18, 12	152'	
4	Pocket	1-5/8"	6	141.08'	
5	AT&T	1-5/8"	12	128'	
6	AT&T	10mm	1	128'	Fiber
7	AT&T	19.7mm	4	128'	DC Cables
8	Verizon	1-5/8"	12	122.5'	
9	Verizon	1-5/8"	1	122.5'	Fiber
10	Town of Cheshire	1/2"	5	89.09'	

Disclaimer of Warranties

GPD has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

GPD does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

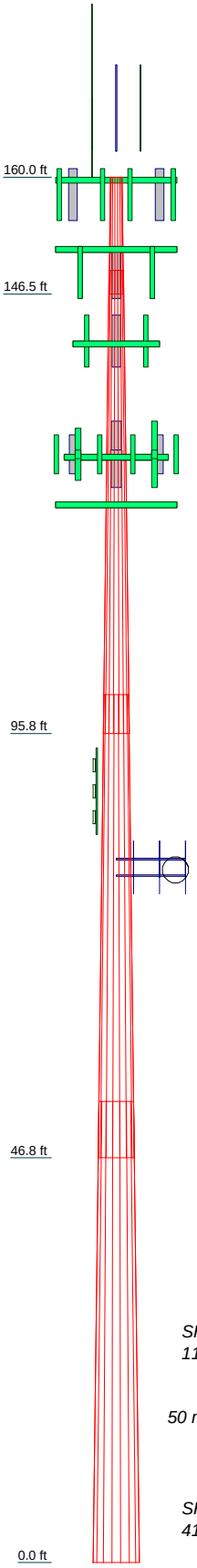
The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD , but are beyond the scope of this report.
Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

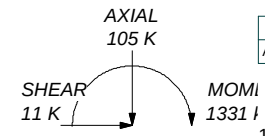
GPD makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD pursuant to this report will be limited to the total fee received for preparation of this report.

TNX TOWER OUTPUT

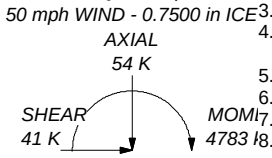
Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	13.50	18	0.1875	2.75	16.7500	20.9100		0.5
2	53.50	18	0.2500	4.50	19.6876	36.1600		4.0
3	53.50	18	0.3125	6.50	34.2745	50.7600		7.6
4	53.25	18	0.3750		48.1321	64.5300		12.1
							A572-65	24.2



ALL REACTIONS ARE FACTORED



TORQUE 1 kip-ft
50 mph WIND - 0.7500 in ICE



TORQUE 1 kip-ft
REACTIONS - 100 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
20' Omni (3" Diam)	160	OPA-65R-LCUU-H8 w/ Mount Pipe	128
DB224	160	OPA-65R-LCUU-H6 w/ Mount Pipe	128
DB224	160	TT19-08BP111-001	128
6' Omni	160	TT19-08BP111-001	128
MTS 36" Standoff (3)	160	TT19-08BP111-001	128
APXVSPP18-C-A20 w/ Mount Pipe	160	(2) LGP21401	128
APXVSPP18-C-A20 w/ Mount Pipe	160	(2) LGP21401	128
APXVSPP18-C-A20 w/ Mount Pipe	160	(2) LGP21401	128
APXVTM14-C-120 w/ Mount Pipe	160	Andrew Collar Mount	128
APXVTM14-C-120 w/ Mount Pipe	160	Platform Mount [LP 1301-1]	128
APXVTM14-C-120 w/ Mount Pipe	160	RRUS-11	128
(2) ACU-A20-N	160	RRUS-11	128
ACU-A20-N	160	RRUS-11	128
ACU-A20-N	160	RRUS-12	128
1900MHz RRH	160	RRUS-12	128
1900MHz RRH	160	RRUS-12	128
1900MHz RRH	160	RRUS A2 MODULE	128
RRH 800 MHz	160	RRUS A2 MODULE	128
RRH 800 MHz	160	RRUS A2 MODULE	128
RRH 800 MHz	160	DC6-48-60-18-8F Surge Suppression Unit	128
RRH 2500MHz	160		
RRH 2500MHz	160	DC6-48-60-18-8F Surge Suppression Unit	128
RRH 2500MHz	160		
800 MHz Filter	160	Commscope MTC3607 Platform w/ Reinforcing Kit	128
800 MHz Filter	160		
800 MHz Filter	160	BXA-70063-6CF w/ Mount Pipe	122.5
Sabre 12' LP Platform	160	BXA-70063-6CF w/ Mount Pipe	122.5
AIR21 B2A/B4P w/ mount pipe	152	BXA-70063-6CF w/ Mount Pipe	122.5
AIR21 B4A/B2P w/ mount pipe	152	BXA-185063/8CF w/ Mount Pipe	122.5
LNX-6515DS-VTM w/ mount pipe	152	BXA-185063/8CF w/ Mount Pipe	122.5
AIR21 B2A/B4P w/ mount pipe	152	BXA-185063/8CF w/ Mount Pipe	122.5
AIR21 B4A/B2P w/ mount pipe	152	(2) FD9R6004/2C-3L	122.5
LNX-6515DS-VTM w/ mount pipe	152	(2) FD9R6004/2C-3L	122.5
AIR21 B2A/B4P w/ mount pipe	152	(2) FD9R6004/2C-3L	122.5
AIR21 B4A/B2P w/ mount pipe	152	HBX-6517DS-VTM w/ Mount Pipe	122.5
LNX-6515DS-VTM w/ mount pipe	152	HBX-6517DS-VTM w/ Mount Pipe	122.5
KRY 112 144/1 (G-Code)	152	HBX-6517DS-VTM w/ Mount Pipe	122.5
ATMAA1412D1A20	152	LNX-6514DS-VTM w/ Mount Pipe	122.5
KRY 112 144/1 (G-Code)	152	LNX-6514DS-VTM w/ Mount Pipe	122.5
ATMAA1412D1A20	152	LNX-6514DS-VTM w/ Mount Pipe	122.5
KRY 112 144/1 (G-Code)	152	RRH2x40-AWS	122.5
ATMAA1412D1A20	152	RRH2x40-AWS	122.5
S11B12	152	RRH2x40-AWS	122.5
S11B12	152	DB-T1-6Z-8AB-0Z	122.5
S11B12	152	MTS 14.5' LP Platform	122.5
Sabre 12' LP Platform	152	3' Yagi	89.08
APXV18-206517S-C w/ Mount Pipe	141.08	3' Yagi	89.08
APXV18-206517S-C w/ Mount Pipe	141.08	Andrew Collar Mount	89.08
APXV18-206517S-C w/ Mount Pipe	141.08	14' Dipole	89.08
MTS 36" Standoff (3)	141.08	3' Yagi	83.17
(2) 800 10121 w/ Mount Pipe	128	Andrew Collar Mount	83.17
(2) 800 10121 w/ Mount Pipe	128	GPS-TMG-HR-26N	83.17
(2) 800 10121 w/ Mount Pipe	128	3' Yagi	83.17
OPA-65R-LCUU-H8 w/ Mount Pipe	128		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 100 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class III.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 90.6%

GPD
520 South Main Street, Suite 2531
Akron, OH 44311
Phone: 330.572.2100
FAX: 330.572.2101

Job:	***CT33762-M Cheshire, CT***		
Project:	***2015778.33762.06***		
Client: SBA	Drawn by: Roberto D'Angelo	App'd:	
Code: TIA-222-G	Date: 07/22/15	Scale: NTS	
Path: T:\SBA\33762\06 SA\tnx\CT33762_G Code.eri		Dwg No. E-1	

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

- Tower is located in New Haven County, Connecticut.
- Basic wind speed of 100 mph.
- Structure Class III.
- Exposure Category B.
- Topographic Category 1.
- Crest Height 0.00 ft.
- Nominal ice thickness of 0.7500 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	All Leg Panels Have Same Allowable
Escalate Ice	√ Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination	Use TIA-222-G Tension Splice Capacity Exemption	

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	*Sector*	*Component Type*	*Placement*	*Total Number*	*Number Per Row*	*Start/End Position*	*Width or Diameter*	*Perimeter*	*Weight*
			ft				*in*	*in*	*plf*
LDF7-50A (1-5/8 FOAM)	C	Surface Ar (CaAa)	141.08 - 8.00	6	6	0.000 0.000	1.9800		0.82
Step Pegs	B	Surface Ar	160.00 - 0.00	1	1	0.000	0.8000		2.72

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
		(CaAa)				0.000			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	160.00 - 8.00	4	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
LDF6-50A (1-1/4 FOAM)	A	No	Inside Pole	160.00 - 8.00	6	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	152.00 - 8.00	18	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	128.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
19.7mm DC Power Cable	A	No	Inside Pole	128.00 - 8.00	2	No Ice	0.00	0.59
						1/2" Ice	0.00	0.59
						1" Ice	0.00	0.59
10mm Fiber Cable	A	No	Inside Pole	128.00 - 8.00	1	No Ice	0.00	0.10
						1/2" Ice	0.00	0.10
						1" Ice	0.00	0.10
HB158-1-08U8-S8J18 (1-5/8")	A	No	Inside Pole	122.50 - 8.00	1	No Ice	0.00	1.30
						1/2" Ice	0.00	1.30
						1" Ice	0.00	1.30
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	122.50 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	89.08 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
Safety Line (3/8")	B	No	CaAa (Out Of Face)	160.00 - 0.00	1	No Ice	0.04	0.22
						1/2" Ice	0.14	0.75
						1" Ice	0.24	1.28
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	81.25 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	79.33 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	83.17 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	81.17 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
19.7mm DC Power Cable	A	No	Inside Pole	128.00 - 8.00	4	No Ice	0.00	0.59
						1/2" Ice	0.00	0.59
						1" Ice	0.00	0.59
LDF4-50A (1/2 FOAM)	C	No	Inside Pole	152.00 - 8.00	12	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
20' Omni (3" Diam)	C	From Leg	2.50 0.00 10.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	6.00 8.03 10.08	6.00 8.03 10.08	0.05 0.09 0.14
DB224	A	From Leg	2.50 0.00 8.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	3.15 5.67 8.19	3.15 5.67 8.19	0.03 0.04 0.05
DB224	B	From Leg	2.50 0.00 8.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	3.15 5.67 8.19	3.15 5.67 8.19	0.03 0.04 0.05
6' Omni	C	From Leg	2.50 0.00 6.17	0.0000	160.00	No Ice 1/2" Ice 1" Ice	1.77 2.13 2.50	1.77 2.13 2.50	0.03 0.04 0.06
MTS 36" Standoff (3)	C	None		0.0000	160.00	No Ice 1/2" Ice 1" Ice	2.64 4.10 5.56	2.64 4.10 5.56	0.09 0.13 0.17
***									
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	8.26 8.81 9.36	6.71 7.66 8.49	0.08 0.14 0.22
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	8.26 8.81 9.36	6.71 7.66 8.49	0.08 0.14 0.22
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	8.26 8.81 9.36	6.71 7.66 8.49	0.08 0.14 0.22
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	7.13 7.66 8.18	4.96 5.75 6.47	0.08 0.13 0.19
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	7.13 7.66 8.18	4.96 5.75 6.47	0.08 0.13 0.19
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	7.13 7.66 8.18	4.96 5.75 6.47	0.08 0.13 0.19
(2) ACU-A20-N	A	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	0.08 0.12 0.17	0.14 0.19 0.25	0.00 0.00 0.00
ACU-A20-N	B	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	0.08 0.12 0.17	0.14 0.19 0.25	0.00 0.00 0.00
ACU-A20-N	C	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	0.08 0.12 0.17	0.14 0.19 0.25	0.00 0.00 0.00
1900MHz RRH	A	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.19 1.35 1.52	0.06 0.08 0.11
1900MHz RRH	B	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.19 1.35 1.52	0.06 0.08 0.11
1900MHz RRH	C	From Leg	4.00 0.00 -2.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.19 1.35 1.52	0.06 0.08 0.11
RRH 800 MHz	A	From Leg	4.00 0.00	0.0000	160.00	No Ice 1/2" Ice	2.01 2.21	1.67 1.86	0.05 0.06

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			-2.00			1" Ice	2.42	2.06	0.08
RRH 800 MHz	B	From Leg	4.00	0.0000	160.00	No Ice	2.01	1.67	0.05
			0.00			1/2" Ice	2.21	1.86	0.06
			-2.00			1" Ice	2.42	2.06	0.08
RRH 800 MHz	C	From Leg	4.00	0.0000	160.00	No Ice	2.01	1.67	0.05
			0.00			1/2" Ice	2.21	1.86	0.06
			-2.00			1" Ice	2.42	2.06	0.08
RRH 2500MHz	A	From Leg	4.00	0.0000	160.00	No Ice	3.76	2.23	0.06
			0.00			1/2" Ice	4.03	2.46	0.08
			-2.00			1" Ice	4.30	2.69	0.11
RRH 2500MHz	B	From Leg	4.00	0.0000	160.00	No Ice	3.76	2.23	0.06
			0.00			1/2" Ice	4.03	2.46	0.08
			-2.00			1" Ice	4.30	2.69	0.11
RRH 2500MHz	C	From Leg	4.00	0.0000	160.00	No Ice	3.76	2.23	0.06
			0.00			1/2" Ice	4.03	2.46	0.08
			-2.00			1" Ice	4.30	2.69	0.11
800 MHz Filter	A	From Leg	4.00	0.0000	160.00	No Ice	0.49	0.48	0.01
			0.00			1/2" Ice	0.60	0.59	0.01
			-2.00			1" Ice	0.71	0.70	0.02
800 MHz Filter	B	From Leg	4.00	0.0000	160.00	No Ice	0.49	0.48	0.01
			0.00			1/2" Ice	0.60	0.59	0.01
			-2.00			1" Ice	0.71	0.70	0.02
800 MHz Filter	C	From Leg	4.00	0.0000	160.00	No Ice	0.49	0.48	0.01
			0.00			1/2" Ice	0.60	0.59	0.01
			-2.00			1" Ice	0.71	0.70	0.02
Sabre 12' LP Platform	A	None		0.0000	160.00	No Ice	28.47	28.47	1.12
						1/2" Ice	33.59	33.59	1.51
						1" Ice	38.71	38.71	1.91
***									
AIR21 B2A/B4P w/ mount pipe	A	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.09
			0.00			1/2" Ice	7.08	6.27	0.14
			-3.00			1" Ice	7.55	7.01	0.21
AIR21 B4A/B2P w/ mount pipe	A	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.10
			0.00			1/2" Ice	7.08	6.27	0.16
			-3.00			1" Ice	7.55	7.01	0.22
LNX-6515DS-VTM w/ mount pipe	A	From Leg	4.00	0.0000	152.00	No Ice	11.43	9.35	0.08
			0.00			1/2" Ice	12.05	10.67	0.16
			-3.00			1" Ice	12.67	11.70	0.25
AIR21 B2A/B4P w/ mount pipe	B	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.09
			0.00			1/2" Ice	7.08	6.27	0.14
			-3.00			1" Ice	7.55	7.01	0.21
AIR21 B4A/B2P w/ mount pipe	B	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.10
			0.00			1/2" Ice	7.08	6.27	0.16
			-3.00			1" Ice	7.55	7.01	0.22
LNX-6515DS-VTM w/ mount pipe	B	From Leg	4.00	0.0000	152.00	No Ice	11.43	9.35	0.08
			0.00			1/2" Ice	12.05	10.67	0.16
			-3.00			1" Ice	12.67	11.70	0.25
AIR21 B2A/B4P w/ mount pipe	C	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.09
			0.00			1/2" Ice	7.08	6.27	0.14
			-3.00			1" Ice	7.55	7.01	0.21
AIR21 B4A/B2P w/ mount pipe	C	From Leg	4.00	0.0000	152.00	No Ice	6.61	5.54	0.10
			0.00			1/2" Ice	7.08	6.27	0.16
			-3.00			1" Ice	7.55	7.01	0.22
LNX-6515DS-VTM w/ mount pipe	C	From Leg	4.00	0.0000	152.00	No Ice	11.43	9.35	0.08
			0.00			1/2" Ice	12.05	10.67	0.16
			-3.00			1" Ice	12.67	11.70	0.25
KRY 112 144/1 (G-Code)	A	From Leg	4.00	0.0000	152.00	No Ice	0.35	0.17	0.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	0.42	0.23	0.01
			-3.00			1" Ice	0.49	0.28	0.02
ATMAA1412D1A20	A	From Leg	4.00	0.0000	152.00	No Ice	1.17	0.47	0.02
			0.00			1/2" Ice	1.31	0.57	0.02
			-3.00			1" Ice	1.47	0.69	0.03
KRY 112 144/1 (G-Code)	B	From Leg	4.00	0.0000	152.00	No Ice	0.35	0.17	0.01
			0.00			1/2" Ice	0.42	0.23	0.01
			-3.00			1" Ice	0.49	0.28	0.02
ATMAA1412D1A20	B	From Leg	4.00	0.0000	152.00	No Ice	1.17	0.47	0.02
			0.00			1/2" Ice	1.31	0.57	0.02
			-3.00			1" Ice	1.47	0.69	0.03
KRY 112 144/1 (G-Code)	C	From Leg	4.00	0.0000	152.00	No Ice	0.35	0.17	0.01
			0.00			1/2" Ice	0.42	0.23	0.01
			-3.00			1" Ice	0.49	0.28	0.02
ATMAA1412D1A20	C	From Leg	4.00	0.0000	152.00	No Ice	1.17	0.47	0.02
			0.00			1/2" Ice	1.31	0.57	0.02
			-3.00			1" Ice	1.47	0.69	0.03
S11B12	A	From Leg	4.00	0.0000	152.00	No Ice	3.31	1.36	0.05
			0.00			1/2" Ice	3.55	1.54	0.07
			-3.00			1" Ice	3.80	1.73	0.10
S11B12	B	From Leg	4.00	0.0000	152.00	No Ice	3.31	1.36	0.05
			0.00			1/2" Ice	3.55	1.54	0.07
			-3.00			1" Ice	3.80	1.73	0.10
S11B12	C	From Leg	4.00	0.0000	152.00	No Ice	3.31	1.36	0.05
			0.00			1/2" Ice	3.55	1.54	0.07
			-3.00			1" Ice	3.80	1.73	0.10
Sabre 12' LP Platform	C	None		0.0000	152.00	No Ice	28.47	28.47	1.12
						1/2" Ice	33.59	33.59	1.51
						1" Ice	38.71	38.71	1.91
***									
APXV18-206517S-C w/ Mount Pipe	A	From Leg	3.00	0.0000	141.08	No Ice	5.17	4.46	0.05
			0.00			1/2" Ice	5.62	5.39	0.09
			0.00			1" Ice	6.08	6.20	0.14
APXV18-206517S-C w/ Mount Pipe	B	From Leg	3.00	0.0000	141.08	No Ice	5.17	4.46	0.05
			0.00			1/2" Ice	5.62	5.39	0.09
			0.00			1" Ice	6.08	6.20	0.14
APXV18-206517S-C w/ Mount Pipe	C	From Leg	3.00	0.0000	141.08	No Ice	5.17	4.46	0.05
			0.00			1/2" Ice	5.62	5.39	0.09
			0.00			1" Ice	6.08	6.20	0.14
MTS 36" Standoff (3)	B	None		0.0000	141.08	No Ice	2.64	2.64	0.09
						1/2" Ice	4.10	4.10	0.13
						1" Ice	5.56	5.56	0.17
***									
(2) 800 10121 w/ Mount Pipe	A	From Leg	4.00	0.0000	128.00	No Ice	5.56	4.47	0.06
			0.00			1/2" Ice	6.01	5.13	0.11
			0.00			1" Ice	6.47	5.79	0.16
(2) 800 10121 w/ Mount Pipe	B	From Leg	4.00	0.0000	128.00	No Ice	5.56	4.47	0.06
			0.00			1/2" Ice	6.01	5.13	0.11
			0.00			1" Ice	6.47	5.79	0.16
(2) 800 10121 w/ Mount Pipe	C	From Leg	4.00	0.0000	128.00	No Ice	5.56	4.47	0.06
			0.00			1/2" Ice	6.01	5.13	0.11
			0.00			1" Ice	6.47	5.79	0.16
OPA-65R-LCUU-H8 w/ Mount Pipe	A	From Leg	4.00	0.0000	128.00	No Ice	13.22	9.32	0.12
			0.00			1/2" Ice	14.02	10.79	0.21
			0.00			1" Ice	14.82	12.24	0.32
OPA-65R-LCUU-H8 w/ Mount Pipe	B	From Leg	4.00	0.0000	128.00	No Ice	13.22	9.32	0.12
			0.00			1/2" Ice	14.02	10.79	0.21

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	14.82	12.24	0.32
OPA-65R-LCUU-H6 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	10.36 10.93 11.50	7.24 8.06 8.89	0.11 0.18 0.27
TT19-08BP111-001	A	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	0.64 0.76 0.88	0.52 0.62 0.74	0.02 0.02 0.03
TT19-08BP111-001	B	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	0.64 0.76 0.88	0.52 0.62 0.74	0.02 0.02 0.03
TT19-08BP111-001	C	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	0.64 0.76 0.88	0.52 0.62 0.74	0.02 0.02 0.03
(2) LGP21401	A	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.29 1.45 1.61	0.23 0.31 0.40	0.01 0.02 0.03
(2) LGP21401	B	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.29 1.45 1.61	0.23 0.31 0.40	0.01 0.02 0.03
(2) LGP21401	C	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.29 1.45 1.61	0.23 0.31 0.40	0.01 0.02 0.03
Andrew Collar Mount	C	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice	2.14 2.35 2.57	2.14 2.35 2.57	0.19 0.25 0.30
Platform Mount [LP 1301-1]	C	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice	51.70 62.70 73.70	51.70 62.70 73.70	2.26 2.94 3.61
***									
RRUS-11	A	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.25 3.49 3.74	1.37 1.55 1.74	0.05 0.07 0.09
RRUS-11	B	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.25 3.49 3.74	1.37 1.55 1.74	0.05 0.07 0.09
RRUS-11	C	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.25 3.49 3.74	1.37 1.55 1.74	0.05 0.07 0.09
RRUS-12	A	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.67 3.93 4.19	1.49 1.67 1.87	0.06 0.08 0.11
RRUS-12	B	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.67 3.93 4.19	1.49 1.67 1.87	0.06 0.08 0.11
RRUS-12	C	From Leg	1.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	3.67 3.93 4.19	1.49 1.67 1.87	0.06 0.08 0.11
RRUS A2 MODULE	A	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.87 2.05 2.24	0.42 0.53 0.65	0.02 0.03 0.04
RRUS A2 MODULE	B	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.87 2.05 2.24	0.42 0.53 0.65	0.02 0.03 0.04
RRUS A2 MODULE	C	From Leg	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.87 2.05 2.24	0.42 0.53 0.65	0.02 0.03 0.04
DC6-48-60-18-8F Surge	A	From Leg	1.00	0.0000	128.00	No Ice	1.47	1.47	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Suppression Unit			0.00				1/2" Ice	1.67	1.67	0.04
			0.00				1" Ice	1.88	1.88	0.06
DC6-48-60-18-8F Surge Suppression Unit	B	From Leg	1.00 0.00 0.00		0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.47 1.67 1.88	1.47 1.67 1.88	0.02 0.04 0.06
Commscope MTC3607 Platform w/ Reinforcing Kit	C	None			0.0000	128.00	No Ice 1/2" Ice 1" Ice	51.70 62.70 73.70	51.70 62.70 73.70	2.26 2.94 3.61
***										
BXA-70063-6CF w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	7.73 8.27 8.81	5.49 6.23 6.99	0.05 0.10 0.17
BXA-70063-6CF w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	7.73 8.27 8.81	5.49 6.23 6.99	0.05 0.10 0.17
BXA-70063-6CF w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	7.73 8.27 8.81	5.49 6.23 6.99	0.05 0.10 0.17
BXA-185063/8CF w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	3.64 4.26 4.79	3.46 4.48 5.23	0.04 0.07 0.11
BXA-185063/8CF w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	3.64 4.26 4.79	3.46 4.48 5.23	0.04 0.07 0.11
BXA-185063/8CF w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	3.64 4.26 4.79	3.46 4.48 5.23	0.04 0.07 0.11
(2) FD9R6004/2C-3L	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.54	0.08 0.14 0.20	0.00 0.01 0.01
(2) FD9R6004/2C-3L	B	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.54	0.08 0.14 0.20	0.00 0.01 0.01
(2) FD9R6004/2C-3L	C	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.54	0.08 0.14 0.20	0.00 0.01 0.01
HBX-6517DS-VTM w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	5.30 5.77 6.25	4.73 5.68 6.50	0.04 0.08 0.13
HBX-6517DS-VTM w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	5.30 5.77 6.25	4.73 5.68 6.50	0.04 0.08 0.13
HBX-6517DS-VTM w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	5.30 5.77 6.25	4.73 5.68 6.50	0.04 0.08 0.13
LNX-6514DS-VTM w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	8.41 8.96 9.52	6.83 7.79 8.62	0.06 0.13 0.20
LNX-6514DS-VTM w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	8.41 8.96 9.52	6.83 7.79 8.62	0.06 0.13 0.20
LNX-6514DS-VTM w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	8.41 8.96 9.52	6.83 7.79 8.62	0.06 0.13 0.20
RRH2x40-AWS	A	From Centroid-Leg	4.00 0.00 0.00		0.0000	122.50	No Ice 1/2" Ice 1" Ice	2.52 2.75 2.99	1.59 1.80 2.01	0.04 0.06 0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
RRH2x40-AWS	B	From Centroid-Leg	4.00 0.00 0.00	0.0000	122.50	No Ice 1/2" Ice 1" Ice	2.52 2.75 2.99	1.59 1.80 2.01	0.04 0.06 0.08
RRH2x40-AWS	C	From Centroid-Leg	4.00 0.00 0.00	0.0000	122.50	No Ice 1/2" Ice 1" Ice	2.52 2.75 2.99	1.59 1.80 2.01	0.04 0.06 0.08
DB-T1-6Z-8AB-0Z	C	From Centroid-Leg	4.00 0.00 0.00	0.0000	122.50	No Ice 1/2" Ice 1" Ice	5.60 5.92 6.24	2.33 2.56 2.79	0.05 0.09 0.13
MTS 14.5' LP Platform	C	None		0.0000	122.50	No Ice 1/2" Ice 1" Ice	17.46 22.44 27.42	17.46 22.44 27.42	1.35 1.62 1.90
*** ***									
3' Yagi	A	From Leg	1.50 0.00 -7.83	0.0000	89.08	No Ice 1/2" Ice 1" Ice	0.52 0.71 0.90	0.52 0.71 0.90	0.02 0.02 0.03
3' Yagi	A	From Leg	1.50 0.00 -9.75	0.0000	89.08	No Ice 1/2" Ice 1" Ice	0.52 0.71 0.90	0.52 0.71 0.90	0.02 0.02 0.03
3' Yagi	A	From Leg	1.50 0.00 -1.92	0.0000	83.17	No Ice 1/2" Ice 1" Ice	0.52 0.71 0.90	0.52 0.71 0.90	0.02 0.02 0.03
Andrew Collar Mount	C	None		0.0000	83.17	No Ice 1/2" Ice 1" Ice	2.14 2.35 2.57	2.14 2.35 2.57	0.19 0.25 0.30
Andrew Collar Mount	C	None		0.0000	89.08	No Ice 1/2" Ice 1" Ice	2.14 2.35 2.57	2.14 2.35 2.57	0.19 0.25 0.30
14' Dipole	C	From Leg	1.00 0.00 0.00	0.0000	89.08	No Ice 1/2" Ice 1" Ice	2.80 4.22 5.67	2.80 4.22 5.67	0.03 0.05 0.08
GPS-TMG-HR-26N	B	From Leg	1.00 0.00 0.00	0.0000	83.17	No Ice 1/2" Ice 1" Ice	0.16 0.21 0.28	0.16 0.21 0.28	0.00 0.00 0.01
3' Yagi	A	From Leg	1.50 0.00 -1.92	0.0000	83.17	No Ice 1/2" Ice 1" Ice	0.52 0.71 0.90	0.52 0.71 0.90	0.02 0.02 0.03

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
160.00	20' Omni (3" Diam)	47	22.598	1.3980	0.0029	17158
152.00	AIR21 B2A/B4P w/ mount pipe	47	20.269	1.3729	0.0020	10809
141.08	APXV18-206517S-C w/ Mount Pipe	47	17.210	1.3081	0.0010	7065
128.00	(2) 800 10121 w/ Mount Pipe	47	13.815	1.1815	0.0004	5969
122.50	BXA-70063-6CF w/ Mount Pipe	47	12.487	1.1174	0.0004	5604
89.08	3' Yagi	47	5.947	0.7014	0.0004	4777
83.17	3' Yagi	47	5.086	0.6355	0.0003	4944

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	160 - 146.5	Pole	TP20.91x16.75x0.1875	1	-4.53	865.69	21.4	Pass
L2	146.5 - 95.75	Pole	TP36.16x19.6876x0.25	2	-20.36	1841.20	90.3	Pass
L3	95.75 - 46.75	Pole	TP50.76x34.2745x0.3125	3	-33.61	3077.94	90.6	Pass
L4	46.75 - 0	Pole	TP64.53x48.1321x0.375	4	-53.63	4662.89	78.8	Pass
							Summary	
						Pole (L3)	90.6	Pass
						RATING =	**90.6**	**Pass**

ADDITIONAL CALCULATIONS

Mat Foundation Analysis
CT33762-M/Cheshire, CT
2015778.33762.06

General Info	
Code	TIA-222-G
Bearing On	Soil
Foundation Type	Mono Pad
Pier Type	Round
Reinforcing Known	Yes
Max Capacity	1

Tower Reactions		
Moment, M	4783	k-ft
Axial, P	54	k
Shear, V	41	k

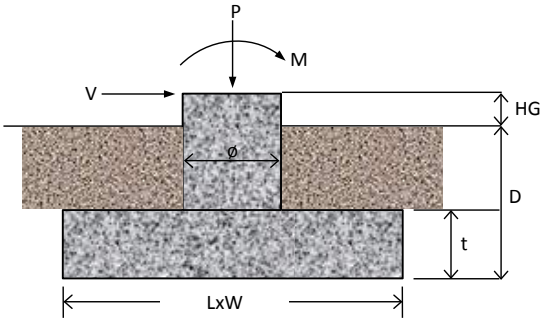
Pad & Pier Geometry		
Pier Diameter, ø	8	ft
Pad Length, L	27	ft
Pad Width, W	27	ft
Pad Thickness, t	5	ft
Depth, D	13.25	ft
Height Above Grade, HG	0	ft

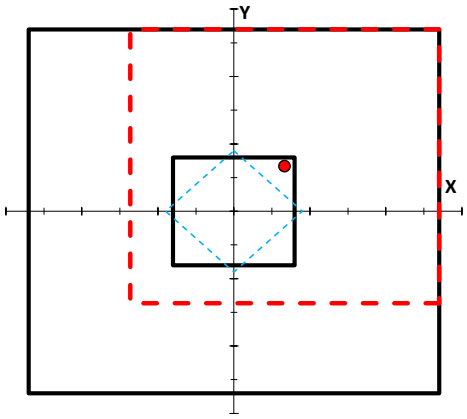
Pad & Pier Reinforcing		
Rebar Fy	60	ksi
Concrete Fc'	4	ksi
Clear Cover	3	in
Reinforced Top & Bottom?	Yes	
Pad Reinforcing Size	# 8	
Pad Quantity Per Layer	42	
Pier Rebar Size	# 9	
Pier Quantity of Rebar	38	

Soil Properties		
Soil Type	Granular	
Soil Unit Weight	100	pcf
Angle of Friction, ø	35	°
Bearing Type	Gross	
Ultimate Bearing	8	ksf
Water Table Depth	0	ft
Frost Depth	3.33333	ft

Bearing Summary			Load Case
Qxmax	1.69	ksf	1.2D+1.6W
Qymax	1.69	ksf	1.2D+1.6W
Qmax @ 45°	1.78	ksf	1.2D+1.6W
$Q_{(all)\ Gross}$	6.00	ksf	
Controlling Capacity	**29.6%**	**Pass**	

Overturning Summary (Required FS=1.0)			Load Case
FS(ot)x	1.88	≥1.0	0.9D+1.6W
FS(ot)y	1.88	≥1.0	0.9D+1.6W
Controlling Capacity	**53.1%**	**Pass**	





Anchor Rod and Base Plate Stresses, TIA-222-G-1
CT33762-M/Cheshire, CT
2015778.33762.06

Overturning Moment =	4783.00	k*ft
Axial Force =	54.00	k
Shear Force =	41.00	k

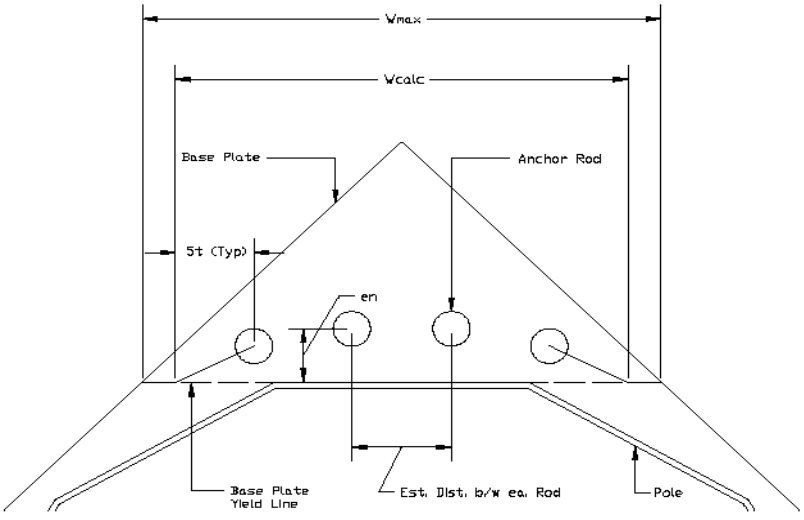
Acceptable Stress Ratio =	100.0%

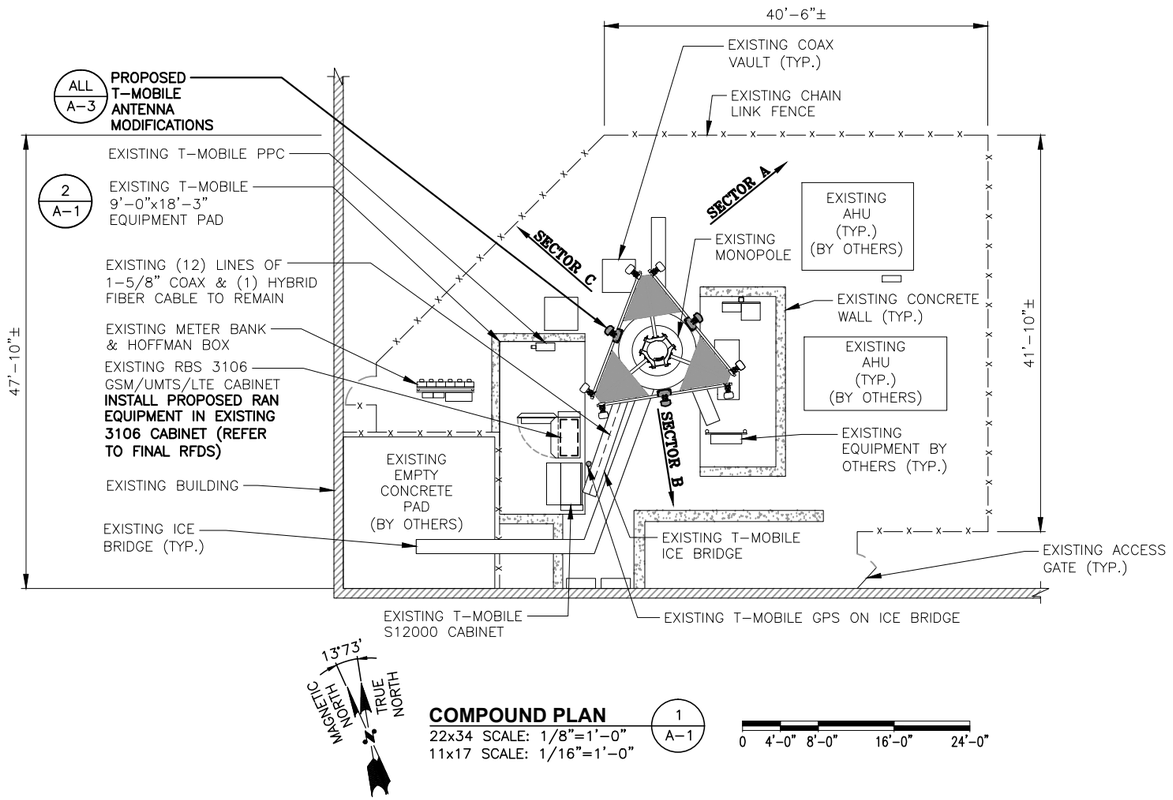
Anchor Rods		
Pole Diameter =	64.53	in
Number of Rods =	16	
ϕ =	0.8	
Rod Ultimate Strength (F_u) =	100	ksi
Base Plate Detail Type* =	d	
Rod Circle =	71.651	in
Rod Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
Max Tension on Rod =	196.79	kips
Max Compression on Rod =	203.54	kips
P_u =	203.54	kips
V_u =	2.56	kips
η =	0.50	
φR_{nt} =	260.00	kips
Anchor Rod Capacity =	**80.3%**	**OK**

(Section 4.9.9, TIA-222-G-1)

Base Plate		
Plate Strength (Fy) =	60	ksi
ϕ =	0.9	
Plate Thickness =	3	in
Plate Width =	73	in
Est. Dist. b/w ea. Rod =	6	in
w_{calc} =	47.83	in
w_{max} =	38.71	in
w =	38.71	in
Z =	87.09	in^3
M_u =	2353.25	k-in
φM_n =	4702.97	k-in
Base Plate Capacity =	**50.0%**	**OK**

***This analysis assumes the clear distance from the top of the concrete to the bottom of the leveling nut is less than the diameter of the anchor rod. Notify GPD Group immediately if existing field conditions do not meet this assumption.**

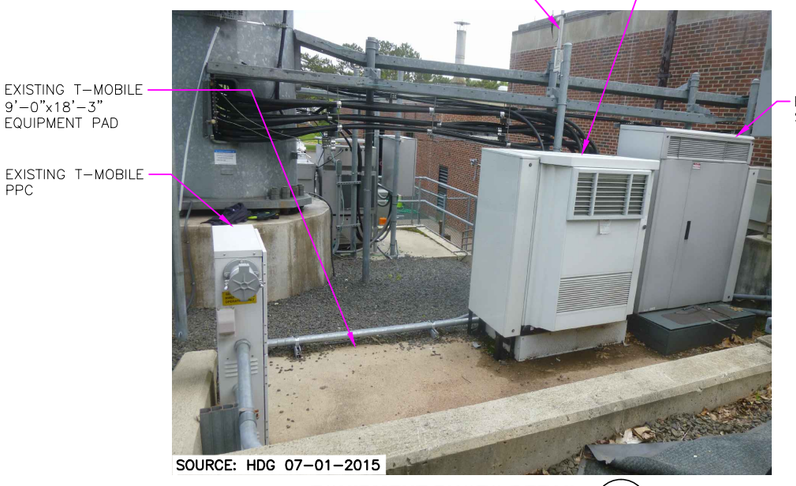




COMPOUND PLAN 1 A-1

22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

0 4'-0" 8'-0" 16'-0" 24'-0"



SOURCE: HDG 07-01-2015

EQUIPMENT PHOTO DETAIL 2 A-1
SCALE: N.T.S

STRUCTURAL NOTES:
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SPECIAL WORK NOTE:
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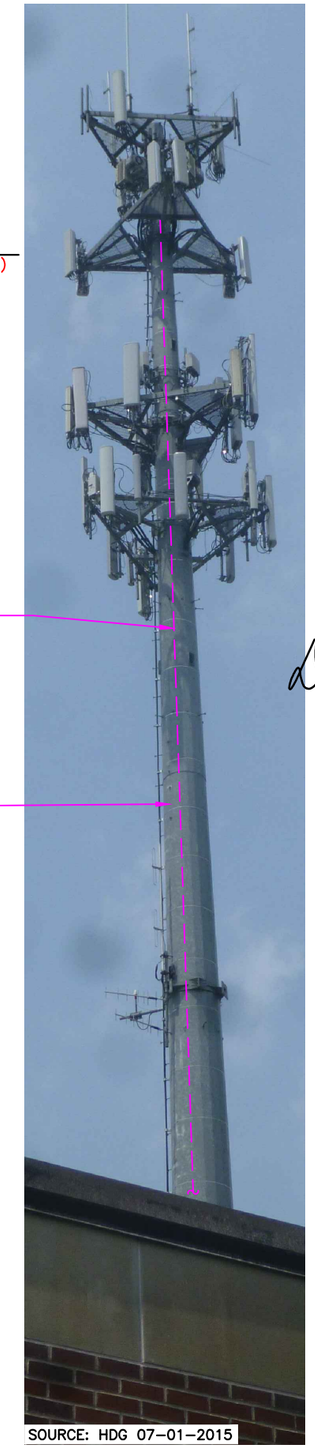
ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT IS ADEQUATE TO ACCOMMODATE ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

2 A-2 ALL A-3 T-MOBILE PLATFORM
ELEV. = 147.0'± A.G.L (SBA*)



SOURCE: HDG 07-01-2015

ELEVATION PHOTO DETAIL 3 A-1
SCALE: N.T.S

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STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

Daniel P. Hamm

CHECKED BY: BB

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	07/23/15	CONSTRUCTION FINAL	JA
0	07/16/15	ISSUED FOR CONSTRUCTION	VP

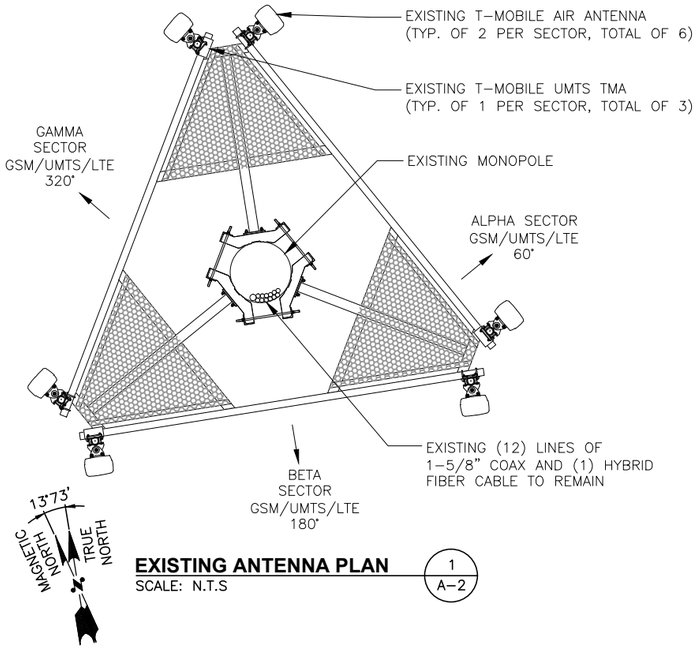
SITE NUMBER:
CT11308D

SITE NAME:
CHESHIRE POLICE/TVI

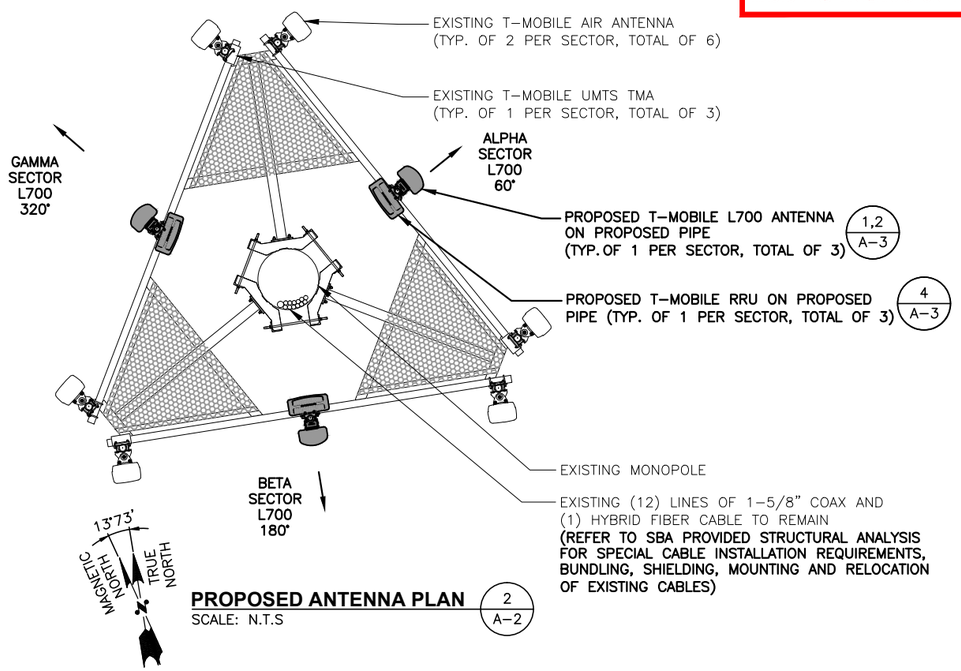
SITE ADDRESS:
500 HIGHLAND AVENUE
CHESHIRE, CT 06410
NEW HAVEN COUNTY

SHEET TITLE
COMPOUND & ELEVATION PLAN

SHEET NUMBER
A-1



EXISTING ANTENNA PLAN 1 / A-2
SCALE: N.T.S



PROPOSED ANTENNA PLAN 2 / A-2
SCALE: N.T.S

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SPECIAL WORK NOTE:
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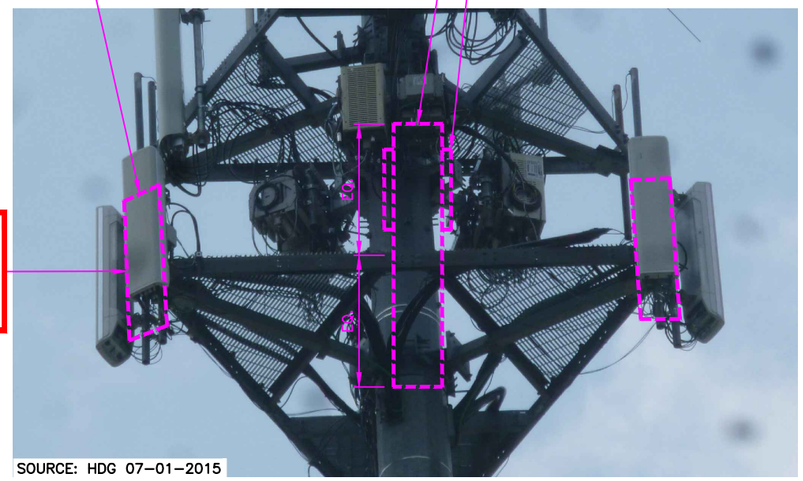
ANTENNA INSTALLATION SPECIAL WORK NOTE:
ANTENNA INSTALLATION WORKING POINT IS THE STRUCTURAL FACE FRAME VERTICAL CENTERLINE OF THE EXISTING ANTENNA SUPPORT ASSEMBLY. UNLESS NOTED OTHERWISE, VERTICALLY CENTER ALL PIPE MASTS AND ANTENNAS ON THIS WORKING POINT.



SOURCE: HDG 07-01-2015

PROPOSED ANTENNA PHOTO DETAIL 3 / A-2
SCALE: N.T.S

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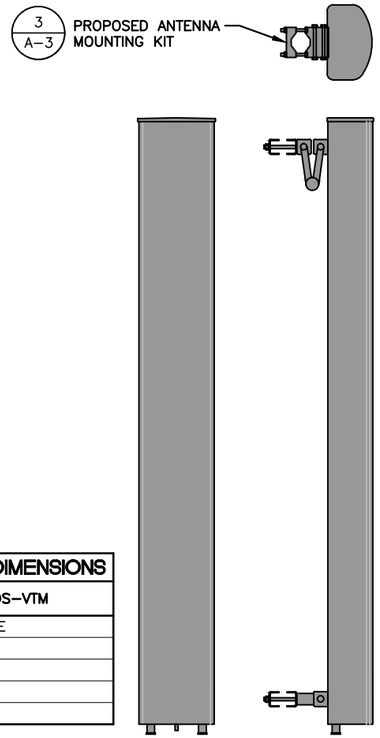
500 HIGHLAND AVENUE
CHESHIRE, CT 06410
NEW HAVEN COUNTY

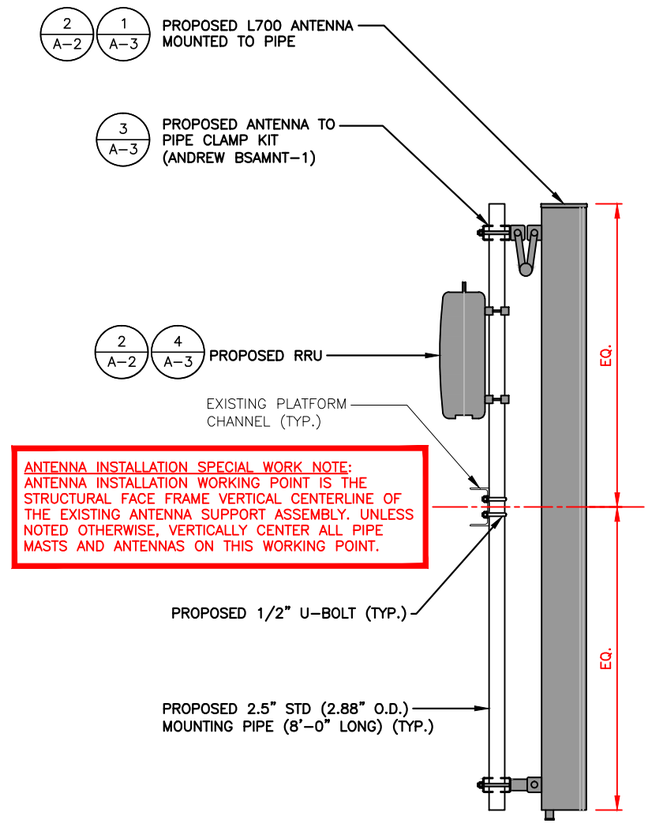
SHEET TITLE
EXISTING & PROPOSED ANTENNA PLANS

SHEET NUMBER
A-2



L700 ANTENNA DIMENSIONS	
MODEL #	LNX-6515DS-VTM
MANUF.	COMMSCOPE
WIDTH	11.9"
DEPTH	7.1"
HEIGHT	96.4"
WEIGHT	50.3 LBS

L700 ANTENNA DETAIL (1 / A-3)
SCALE: N.T.S



ANTENNA INSTALLATION SPECIAL WORK NOTE:
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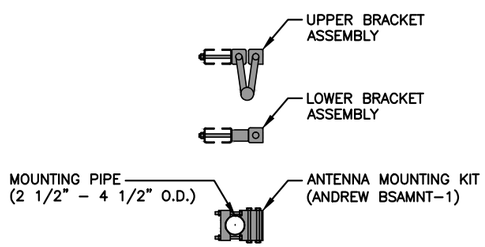
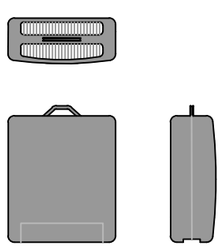
PROPOSED L700 ANTENNA & RRU MOUNTING DETAIL (2 / A-3)
SCALE: N.T.S



ANTENNA MOUNTING BRACKET (3 / A-3)
SCALE: N.T.S



RRU DIMENSIONS	
MODEL #	RRU11 B12
MANUF.	ERICSSON
WIDTH	17"
DEPTH	7"
HEIGHT	20"
WEIGHT	50.6 LBS

PROPOSED RRU DETAIL (4 / A-3)
SCALE: N.T.S

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A-3