6/21/2016

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

Notice of Exempt Modification
151 Waterbury Road, Prospect, CT 06712
N 41.52300600
W -72.99781800

Dear Ms. Bachman:

T-Mobile currently maintains 9 antennas at the 137-foot level of the existing 150 foot monopole at 151 Waterbury Road, Prospect, CT 06712. The tower is owned by SBA Properties, LLC. The property is owned by Clear Channel. T-Mobile now intends to replace the 3 existing antennas with 3 new antennas, for a total of 9 antennas. These antennas would be installed at the 137-foot level of the tower. The Structural Analysis is passing with a 74% ratio.

This facility was approved by the Town of Prospect however they have no record of the original zoning dockets number. Please see the attached email from 6/21/2016 provided by the Town of Prospect Land Use Clerk, Rosalyn Moffo, for confirmation.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ~ 16- 50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. ~ 16-50j- 72(b)(2). In accordance with R.C.S.A. g 16-50j-73, a copy of this letter is being sent to Robert Chatfield – Town of Prospect Mayor – as well as the property owner and the tower owner.

The planned modifications to the facility fall squarely within those activities explicitly provided fox its R.C.S:A. ~ 16-50j-72(b)(2}.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels ox more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard,

5. The proposed modifications wall not cause a change or alteration in the physical ox environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. ~ 16-SOj-72(b}(2).

Sincerely,

Gregg Shappy
10 Industrial Ave.
Suite 3
Mahwah, NJ 07430
(845) 553-2045
gshappy@transcendwireless.com

Attachments
cc: Robert Chatfield – Town of Prospect Mayor
Michael Villa - SBA
Gary Hess – Clear Channel

EBI Consulting
environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTNH302A

Clr Channel/Prospect
151 Waterbury Road
Prospect, CT 06712

June 2, 2016

EBI Project Number: 6216002646

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	21.63 %

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

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June 2, 2016

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

Emissions Analysis for Site: **CTNH302A – Clr Channel/Prospect**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **151 Waterbury Road, Prospect, 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 **151 Waterbury Road, Prospect, 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 (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 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.

4) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

5) 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.

6) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

7) 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.

8) 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.

9) The antennas used in this modeling are the **Ericsson AIR32 B66Aa/B2P** & **Ericsson AIR32 B4A/B2P** 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 AIR32 B66Aa/B2P** & **Ericsson AIR32 B4A/B2P** have a maximum gain of **15.9 dBd** at their main lobe at 1900 MHz & 2100 MHz. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe at 700 MHz. 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.

10) The antenna mounting height centerline of the proposed antennas is **137 feet** above ground level (AGL).

11) 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 AIR32 B66Aa/B2P	Make / Model:	Ericsson AIR32 B66Aa/B2P	Make / Model:	Ericsson AIR32 B66Aa/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	137	Height (AGL):	137	Height (AGL):	137
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(W):	240	Total TX Power(W):	240	Total TX Power(W):	240
ERP (W):	9,337.08	ERP (W):	9,337.08	ERP (W):	9,337.08
Antenna A1 MPE%	1.96	Antenna B1 MPE%	1.96	Antenna C1 MPE%	1.96
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):	137	Height (AGL):	137	Height (AGL):	137
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	6	Channel Count	6	Channel Count	6
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	7,002.81	ERP (W):	7,002.81	ERP (W):	7,002.81
Antenna A2 MPE%	1.47	Antenna B2 MPE%	1.47	Antenna C2 MPE%	1.47
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):	137	Height (AGL):	137	Height (AGL):	137
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A3 MPE%	0.39	Antenna B3 MPE%	0.39	Antenna C3 MPE%	0.39

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**3.81 %**
AT&T	17.82 %
Site Total MPE %:	**21.63 %**

T-Mobile Sector 1 Total:	3.81 %
T-Mobile Sector 2 Total:	3.81 %
T-Mobile Sector 3 Total:	3.81 %
Site Total:	21.63 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (AWS) LTE	**2**	**2334.27**	**135**	**9.78**	**1900**	**1000**	**0.98 %**
T-Mobile 2100 MHz (AWS) LTE	**2**	**2334.27**	**135**	**9.78**	**2100**	**1000**	**0.98 %**
T-Mobile 1900 MHz (PCS) GSM	**2**	**1167.14**	**135**	**4.89**	**1900**	**1000**	**0.49 %**
T-Mobile 1900 MHz (PCS) UMTS	**2**	**1167.14**	**135**	**4.89**	**1900**	**1000**	**0.49 %**
T-Mobile 2100 MHz (AWS) UMTS	**2**	**1167.14**	**135**	**4.89**	**2100**	**1000**	**0.49 %**
T-Mobile 700 MHz LTE	**1**	**865.21**	**135**	**1.81**	**700**	**467**	**0.39 %**
						Total*:	**3.81 %**

*** The total value may vary by 0.01 % from the sum of the individual values because of the summing of remainders**

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:	3.81 %
Sector 2:	3.81 %
Sector 3:	3.81 %
T-Mobile Per Sector Maximum:	3.81 %
Site Total:	21.63 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **21.63%** 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.

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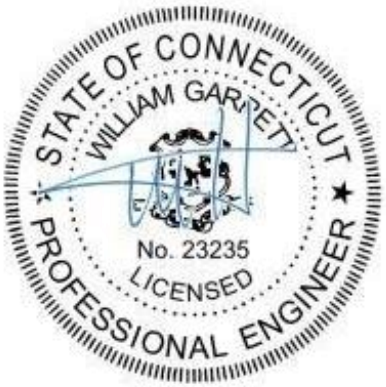
Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Prospect CT, CT**
ATC Site Number	:	**282660**
Engineering Number	:	**66383921**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**CTNH302/CLRChannel/Prosp**
Carrier Site Number	:	**CTNH302A**
Site Location	:	**151 Waterbury Prospect road** **Prospect, CT 06712-1228** **41.523700,-72.995500**
County	:	**New Haven**
Date	:	**May 6, 2016**
Max Usage	:	**74%**
Result	:	**Pass**

Reviewed by:
William Garrett, PE
Chief Engineer



Prepared By:
Felix Buabeng

May 24 2016 3:15 PM

COA: PEC.0001553

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Table of Contents

Introduction

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

Supporting Documents

Tower Drawings	ERI Project #25148/001, dated November 13, 2009
Foundation Drawing	ERI Project #25148/002, dated November 13, 2009
Geotechnical Report	FDH Project #09-10144E G1, dated November 9, 2009

Analysis

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

Basic Wind Speed:	100 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	154.0	6	Ericsson RRUS A2	Low Profile Platform	(6) 1 5/8" Coax (6) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk	AT&T Mobility
		3	Ericsson RRUS 32 (50.8 lbs)			
		6	Ericsson RRUS 12			
		1	Ericsson RRUS E2 B29			
		6	Ericsson RRUS-11			
	153.0	3	CCI HPA-65R-BUU-H6			
		6	CCI HPA-65R-BUU-H8			
	152.0	3	Powerwave Allgon TT08-19DB111-001			
	149.0	3	Raycap DC6-48-60-0-8F			
137.0	137.0	3	Ericsson AIR 21, 1.3 M, B2A B4P	Low Profile Platform	(12) 1 5/8" Coax (1) 1 1/4" Hybriflex Cable	T-Mobile
		3	Andrew LNX-6515DS-VTM			
	137.0	3	Ericsson KRY 112 144/1			
		3	Ericsson RRUS 11 B12			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
137.0	137.0	3	Ericsson AIR 21, 1.3M, B4A B2P	-	-	T-Mobile

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
137.0	137.0	3	Ericsson AIR32 B66Aa/B2a	-	(1) 1 5/8" Hybriflex	T-Mobile

[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	41%	Pass
Shaft	52%	Pass
Base Plate	65%	Pass
Flanges	74%	Pass
Reinforcement	41%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,334.0	53%
Axial (Kips)	66.0	26%
Shear (Kips)	21.9	16%

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)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
137.0	Ericsson AIR32 B66Aa/B2a	T-Mobile	0.557	0.455

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

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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:

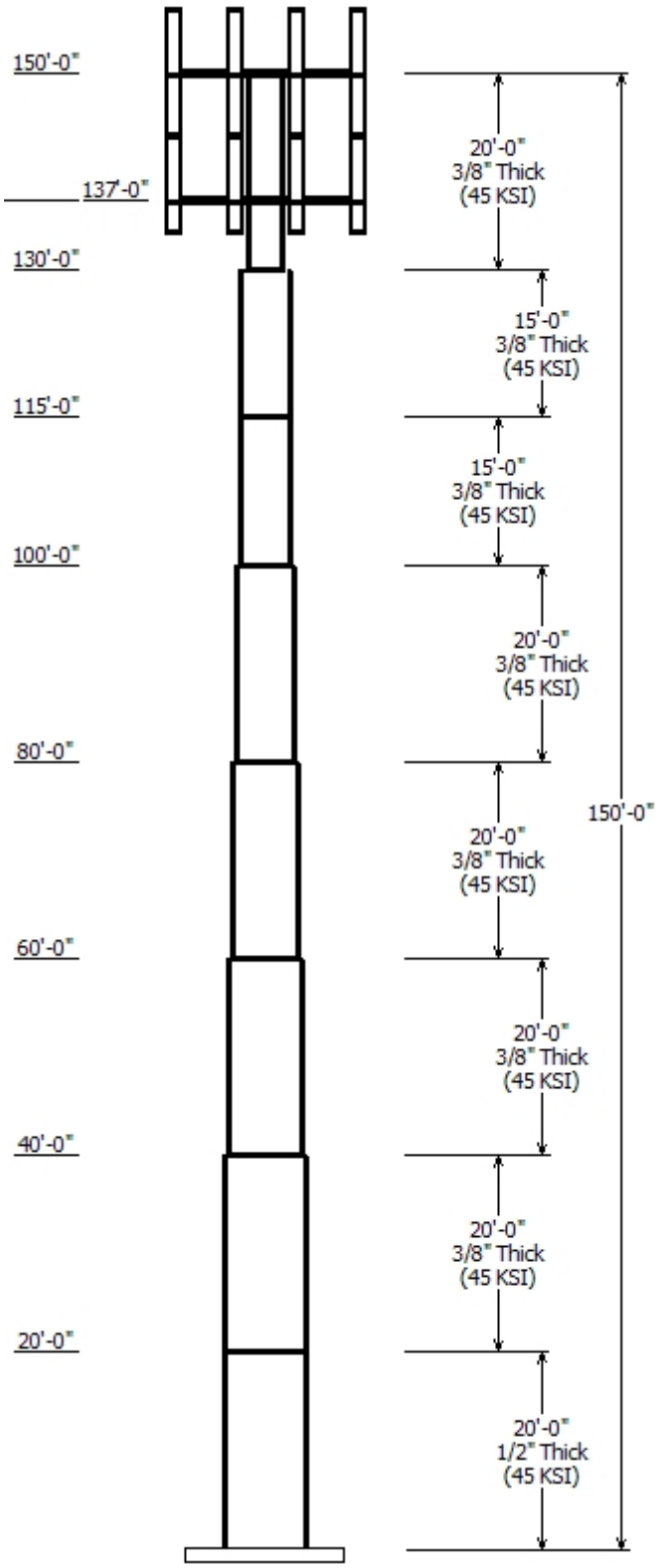
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 A.T. Engineering Service, PLLC 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. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	282660	Code:	ANSI/TIA-222-G
Description :			
Client :	T-MOBILE	Struct Class :	II
Location :	Prospect CT, CT		
Shape :	Round	Exposure :	B
Height :	150.00 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.00000 (in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	20.000	60.00	60.00	0.500		0.000	0.000000	45
2	20.000	60.00	60.00	0.375	Butt Joint	0.000	0.000000	45
3	20.000	54.00	54.00	0.375	Butt Joint	0.000	0.000000	45
4	20.000	48.00	48.00	0.375	Butt Joint	0.000	0.000000	45
5	20.000	42.00	42.00	0.375	Butt Joint	0.000	0.000000	45
6	15.000	36.00	36.00	0.375	Butt Joint	0.000	0.000000	45
7	15.000	36.00	36.00	0.375	Butt Joint	0.000	0.000000	45
8	20.000	24.00	24.00	0.375	Butt Joint	0.000	0.000000	45

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	152.000	3	Powerwave TT08-19DB111-001
150.000	153.000	6	CCI HPA-65R-BUU-H8
150.000	153.000	3	CCI HPA-65R-BUU-H6
150.000	154.000	6	Ericsson RRUS-11
150.000	154.000	3	Ericsson RRUS 32 (50.8 lbs)
150.000	154.000	1	Ericsson RRUS E2 B29
150.000	154.000	6	Ericsson RRUS 12
150.000	154.000	6	Ericsson RRUS A2
150.000	150.000	1	Round Low Profile Platform
150.000	149.000	3	Raycap DC6-48-60-0-8F
137.000	138.000	3	Andrew LNX-6515DS-VTM
137.000	137.000	3	Ericsson RRUS 11 B12
137.000	137.000	3	Ericsson KRY 112 144/1
137.000	138.000	3	Ericsson AIR32 B66Aa/B2a
137.000	137.000	1	Round Low Profile Platform
137.000	138.000	3	Ericsson AIR 21, 1.3 M, B2A B4

Linear Appurtenance

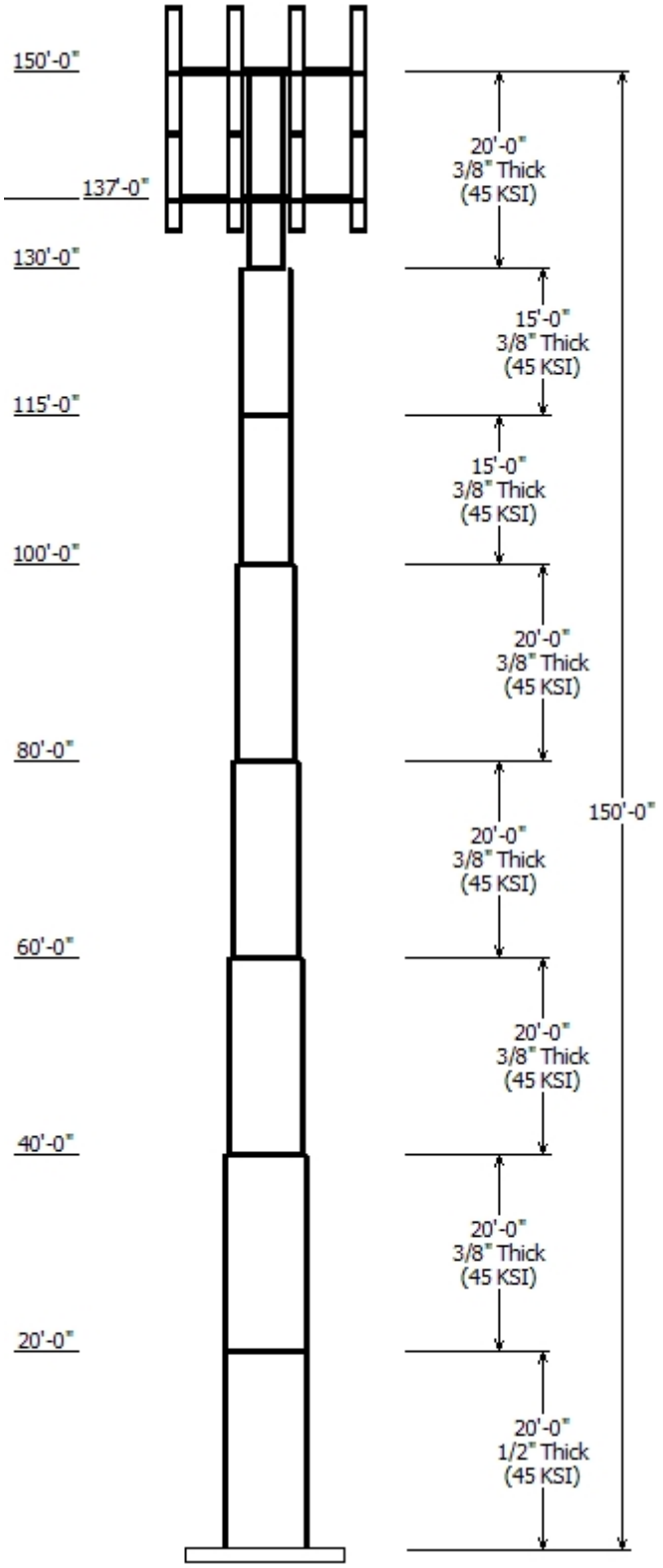
Elev (ft) From	To	Description	Exposed To Wind
0.000	137.0	1 1/4" Hybriflex	No
0.000	137.0	1 5/8" Coax	No
0.000	137.0	1 5/8" Hybriflex	No
0.000	150.0	0.39" Fiber Trunk	No
0.000	150.0	0.78" 8 AWG 6	No
0.000	150.0	1 5/8" Coax	No

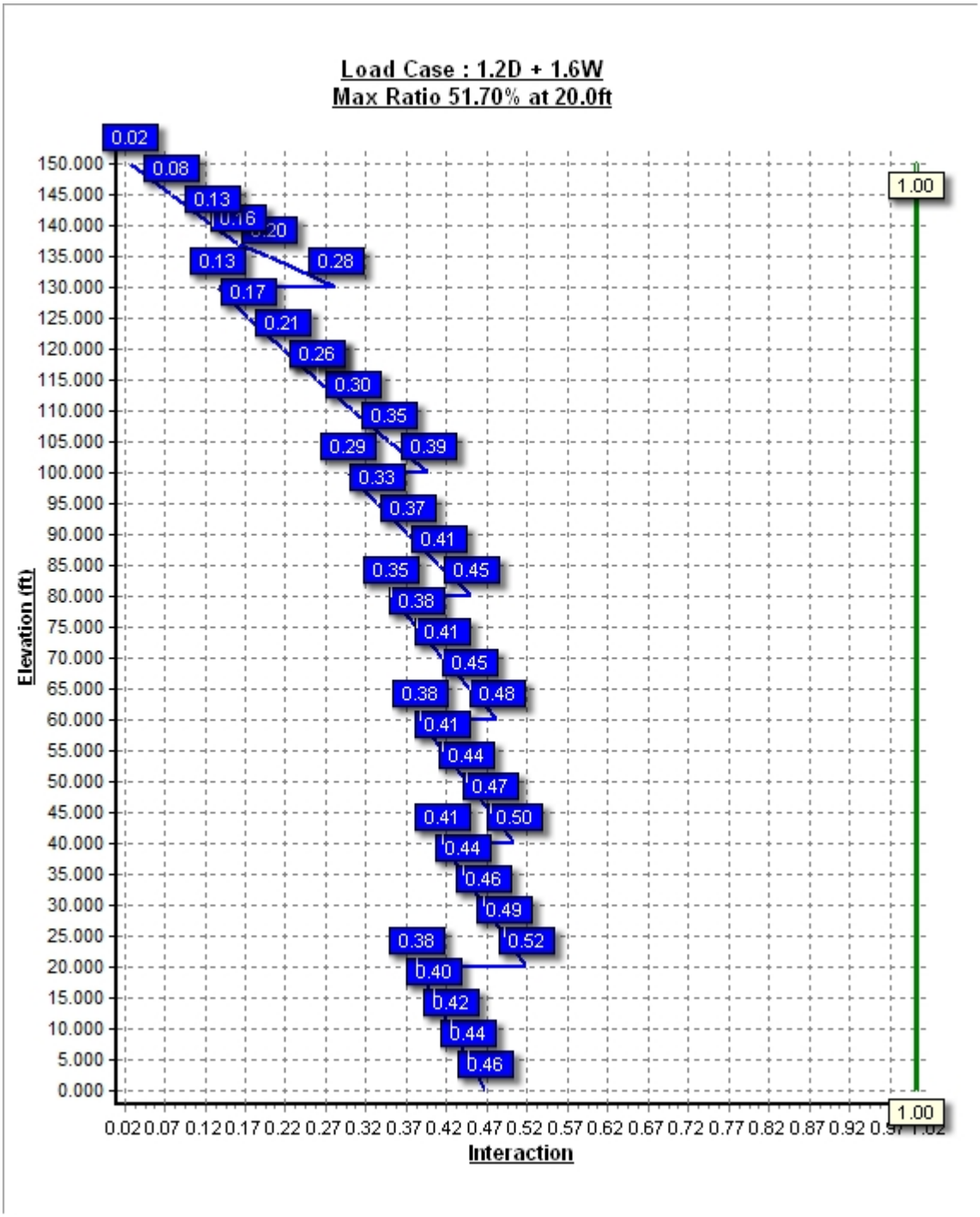
Load Cases

1.2D + 1.6W	100 mph with No Ice
0.9D + 1.6W	100 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2333.99	21.91	44.83
0.9D + 1.6W	2321.79	21.91	33.62
1.2D + 1.0Di + 1.0Wi	612.74	6.14	66.01
(1.2 + 0.2Sds) * DL + E ELFM	241.17	2.08	44.24
(1.2 + 0.2Sds) * DL + E EMAM	328.49	2.72	44.24
1.0D + 1.0W	523.31	4.93	37.37

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




Load Case : 1.2D + 1.6W
Max Ratio 51.70% at 20.0ft
Elevation (ft)
Interaction
150.000
145.000
140.000
135.000
130.000
125.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.02 0.07 0.12 0.17 0.22 0.27 0.32 0.37 0.42 0.47 0.52 0.57 0.62 0.67 0.72 0.77 0.82 0.87 0.92
1.00
1.00
0.02
0.08
0.13
0.16
0.20
0.13
0.28
0.17
0.21
0.26
0.30
0.35
0.29
0.39
0.33
0.37
0.41
0.35
0.45
0.38
0.41
0.45
0.38
0.48
0.41
0.44
0.47
0.41
0.50
0.44
0.46
0.49
0.38
0.52
0.40
0.42
0.44
0.46

Site Number:	**282660**	**Code: ANSI/TIA-222-G**	
Site Name:	**Prospect CT, CT**	**Engineering Number: 66383921**	**5/6/2016 9:41:26 AM**
Customer:	**T-MOBILE**		

Analysis Parameters

Location:	**New Haven County, CT**		
Code:	**ANSI/TIA-222-G**	**Height (ft):**	**150**
Shape:	**Round**	**Base Diameter (in):**	**60.00**
Pole Type:	**Stepped**	**Top Diameter (in):**	**24.00**
Pole Manfacturer:	**ERI**	**Taper (in/ft) :**	**0.000**

Ice & Wind Parameters

Structure Class:	**II**	**Design Wind Speed Without Ice:**	**100 mph**
Exposure Category:	**B**	**Design Wind Speed With Ice:**	**50 mph**
Topographic Category:	**1**	**Operational Wind Speed:**	**60 mph**
Crest Height:	**0.0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method:	**Equivalent Modal Analysis & Equivalent Lateral Force Methods**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**1.60**				
T_L (sec):	**6**	**p:**	**1.3**	**C_s:**	**0.043**
S_s:	**0.188**	**S_1:**	**0.064**	**C_s Max:**	**0.043**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.201**	**S_{d1}:**	**0.102**		

Load Cases

1.2D + 1.6W	**100 mph with No Ice**
0.9D + 1.6W	**100 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**50 mph with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E ELFM	**Seismic Equivalent Lateral Forces Method**
(1.2 + 0.2Sds) * DL + E EMAM	**Seismic Equivalent Modal Analysis Method**
1.0D + 1.0W	**Serviceability 60 mph**

Site Number:	**282660**	**Code: ANSI/TIA-222-G**	
Site Name:	**Prospect CT, CT**	**Engineering Number: 66383921**	**5/6/2016 9:41:26 AM**
Customer:	**T-MOBILE**		

Shaft Section Properties

							Bottom						Top						
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-R	20.000	0.5000	45		0.00	6,361	60.00	0.00	93.46	41391.7	0.00	120.00	60.00	20.00	93.46	41391.7	0.00	120.00	0.000000
2-R	20.000	0.3750	45	Butt	0.00	4,780	60.00	20.00	70.24	31239.9	0.00	160.00	60.00	40.00	70.24	31239.9	0.00	160.00	0.000000
3-R	20.000	0.3750	45	Butt	0.00	4,299	54.00	40.00	63.18	22726.1	0.00	144.00	54.00	60.00	63.18	22726.1	0.00	144.00	0.000000
4-R	20.000	0.3750	45	Butt	0.00	3,818	48.00	60.00	56.11	15919.5	0.00	128.00	48.00	80.00	56.11	15919.5	0.00	128.00	0.000000
5-R	20.000	0.3750	45	Butt	0.00	3,337	42.00	80.00	49.04	10628.9	0.00	112.00	42.00	100.00	49.04	10628.9	0.00	112.00	0.000000
6-R	15.000	0.3750	45	Butt	0.00	2,142	36.00	100.00	41.97	6663.3	0.00	96.00	36.00	115.00	41.97	6663.3	0.00	96.00	0.000000
7-R	15.000	0.3750	45	Butt	0.00	2,142	36.00	115.00	41.97	6663.3	0.00	96.00	36.00	130.00	41.97	6663.3	0.00	96.00	0.000000
8-R	20.000	0.3750	45	Butt	0.00	1,894	24.00	130.00	27.83	1943.3	0.00	64.00	24.00	150.00	27.83	1943.3	0.00	64.00	0.000000
				Shaft Weight		28,775													

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)
150.00	CCI HPA-65R-BUU-H6	3	51.00	9.660	0.83	298.62	11.024	0.83	0.000	3.000
150.00	CCI HPA-65R-BUU-H8	6	68.00	12.980	0.79	358.48	14.592	0.79	0.000	3.000
150.00	Ericsson RRUS 12	6	50.00	3.150	0.67	145.19	3.863	0.67	0.000	4.000
150.00	Ericsson RRUS 32 (50.8 lbs)	3	50.80	2.690	0.67	136.07	3.416	0.67	0.000	4.000
150.00	Ericsson RRUS A2	6	15.00	1.600	0.50	61.37	2.131	0.50	0.000	4.000
150.00	Ericsson RRUS E2 B29	1	60.00	3.150	0.67	155.19	3.863	0.67	0.000	4.000
150.00	Ericsson RRUS-11	6	55.00	3.790	0.67	160.06	4.582	0.67	0.000	4.000
150.00	Powerwave TT08-19DB111-	3	22.00	0.920	0.67	57.14	1.203	0.67	0.000	2.000
150.00	Raycap DC6-48-60-0-8F	3	32.80	1.190	1.00	120.73	2.669	1.00	0.000	-1.000
150.00	Round Low Profile Platform	1	1500.00	21.700	1.00	2,148.13	40.906	1.00	0.000	0.000
137.00	Andrew LNX-6515DS-VTM	3	51.30	11.430	0.84	311.69	13.077	0.84	0.000	1.000
137.00	Ericsson AIR 21, 1.3 M, B2A	3	83.00	6.050	0.86	250.08	7.137	0.86	0.000	1.000
137.00	Ericsson AIR32 B66Aa/B2a	3	132.20	6.510	0.86	313.44	7.626	0.86	0.000	1.000
137.00	Ericsson KRY 112 144/1	3	11.00	0.410	0.50	27.15	0.631	0.50	0.000	0.000
137.00	Ericsson RRUS 11 B12	3	50.70	2.790	0.67	136.08	3.462	0.67	0.000	0.000
137.00	Round Low Profile Platform	1	1500.00	21.700	1.00	2,142.89	40.751	1.00	0.000	0.000
	Totals	54	5642.40		13,749.75			Number of Loadings :		16

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	150.00	2	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	150.00	6	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	150.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	137.00	1	1 1/4" Hybriflex	1.54	1.00	N	0.00	N	T-Mobile
0.00	137.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	137.00	1	1 5/8" Hybriflex Cable	1.98	1.30	N	0.00	N	T-Mobile

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.5000	60.000	93.462	41,391.7	0.00	120.00	39.2	1379.	1770.	0.0
5.00		0.5000	60.000	93.462	41,391.7	0.00	120.00	39.2	1379.	1770.	1,590.2
10.00		0.5000	60.000	93.462	41,391.7	0.00	120.00	39.2	1379.	1770.	1,590.2
15.00		0.5000	60.000	93.462	41,391.7	0.00	120.00	39.2	1379.	1770.	1,590.2
20.00	Top - Section 1	0.5000	60.000	93.462	41,391.7	0.00	120.00	39.2	1379.	1770.	1,590.2
20.00	Bot - Section 2	0.3750	60.000	70.244	31,239.9	0.00	160.00	36.9	1041.	1333.	
25.00		0.3750	60.000	70.244	31,239.9	0.00	160.00	36.9	1041.	1333.	1,195.1
30.00		0.3750	60.000	70.244	31,239.9	0.00	160.00	36.9	1041.	1333.	1,195.1
35.00		0.3750	60.000	70.244	31,239.9	0.00	160.00	36.9	1041.	1333.	1,195.1
40.00	Top - Section 2	0.3750	60.000	70.244	31,239.9	0.00	160.00	36.9	1041.	1333.	1,195.1
40.00	Bot - Section 3	0.3750	54.000	63.175	22,726.1	0.00	144.00	37.6	841.7	1078.	
45.00		0.3750	54.000	63.175	22,726.1	0.00	144.00	37.6	841.7	1078.	1,074.9
50.00		0.3750	54.000	63.175	22,726.1	0.00	144.00	37.6	841.7	1078.	1,074.9
55.00		0.3750	54.000	63.175	22,726.1	0.00	144.00	37.6	841.7	1078.	1,074.9
60.00	Top - Section 3	0.3750	54.000	63.175	22,726.1	0.00	144.00	37.6	841.7	1078.	1,074.9
60.00	Bot - Section 4	0.3750	48.000	56.107	15,919.5	0.00	128.00	38.6	663.3	850.6	
65.00		0.3750	48.000	56.107	15,919.5	0.00	128.00	38.6	663.3	850.6	954.6
70.00		0.3750	48.000	56.107	15,919.5	0.00	128.00	38.6	663.3	850.6	954.6
75.00		0.3750	48.000	56.107	15,919.5	0.00	128.00	38.6	663.3	850.6	954.6
80.00	Top - Section 4	0.3750	48.000	56.107	15,919.5	0.00	128.00	38.6	663.3	850.6	954.6
80.00	Bot - Section 5	0.3750	42.000	49.038	10,628.9	0.00	112.00	39.8	506.1	649.8	
85.00		0.3750	42.000	49.038	10,628.9	0.00	112.00	39.8	506.1	649.8	834.3
90.00		0.3750	42.000	49.038	10,628.9	0.00	112.00	39.8	506.1	649.8	834.3
95.00		0.3750	42.000	49.038	10,628.9	0.00	112.00	39.8	506.1	649.8	834.3
100.0	Top - Section 5	0.3750	42.000	49.038	10,628.9	0.00	112.00	39.8	506.1	649.8	834.3
100.0	Bot - Section 6	0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	
105.0		0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
110.0		0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
115.0	Top - Section 6	0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
115.0	Bot - Section 7	0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	
120.0		0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
125.0		0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
130.0	Top - Section 7	0.3750	36.000	41.970	6,663.3	0.00	96.00	41.4	370.2	475.9	714.1
130.0	Bot - Section 8	0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	
135.0		0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	473.5
137.0		0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	189.4
140.0		0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	284.1
145.0		0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	473.5
150.0		0.3750	24.000	27.833	1,943.3	0.00	64.00	45.0	161.9	209.3	473.5
											28,774.9

Load Case: 1.2D + 1.6W — 100 mph with No Ice — 19 Iterations

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

Wind Importance Factor : 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		224.7	0.0					0.0	0.0	224.7	0.0	0.0	0.0
5.00		449.4	1,908.2					0.0	124.3	449.4	2,032.5	0.0	0.0
10.00		449.4	1,908.2					0.0	124.3	449.4	2,032.5	0.0	0.0
15.00		449.4	1,908.2					0.0	124.3	449.4	2,032.5	0.0	0.0
20.00	Top - Section 1	449.4	1,908.2					0.0	124.3	449.4	2,032.5	0.0	0.0
25.00		449.4	1,434.1					0.0	124.3	449.4	1,558.5	0.0	0.0
30.00		454.8	1,434.1					0.0	124.3	454.8	1,558.5	0.0	0.0
35.00		469.8	1,434.1					0.0	124.3	469.8	1,558.5	0.0	0.0
40.00	Top - Section 2	463.3	1,434.1					0.0	124.3	463.3	1,558.5	0.0	0.0
45.00		454.4	1,289.8					0.0	124.3	454.4	1,414.2	0.0	0.0
50.00		468.3	1,289.8					0.0	124.3	468.3	1,414.2	0.0	0.0
55.00		481.3	1,289.8					0.0	124.3	481.3	1,414.2	0.0	0.0
60.00	Top - Section 3	465.7	1,289.8					0.0	124.3	465.7	1,414.2	0.0	0.0
65.00		448.7	1,145.5					0.0	124.3	448.7	1,269.8	0.0	0.0
70.00		458.4	1,145.5					0.0	124.3	458.4	1,269.8	0.0	0.0
75.00		467.5	1,145.5					0.0	124.3	467.5	1,269.8	0.0	0.0
80.00	Top - Section 4	446.2	1,145.5					0.0	124.3	446.2	1,269.8	0.0	0.0
85.00		424.0	1,001.2					0.0	124.3	424.0	1,125.5	0.0	0.0
90.00		430.9	1,001.2					0.0	124.3	430.9	1,125.5	0.0	0.0
95.00		437.7	1,001.2					0.0	124.3	437.7	1,125.5	0.0	0.0
100.00	Top - Section 5	412.2	1,001.2					0.0	124.3	412.2	1,125.5	0.0	0.0
105.00		386.0	856.9					0.0	124.3	386.0	981.2	0.0	0.0
110.00		391.2	856.9					0.0	124.3	391.2	981.2	0.0	0.0
115.00	Top - Section 6	396.2	856.9					0.0	124.3	396.2	981.2	0.0	0.0
120.00		401.0	856.9					0.0	124.3	401.0	981.2	0.0	0.0
125.00		405.7	856.9					0.0	124.3	405.7	981.2	0.0	0.0
130.00	Top - Section 7	341.6	856.9					0.0	124.3	341.6	981.2	0.0	0.0
135.00		192.9	568.2					0.0	124.3	192.9	692.6	0.0	0.0
137.00	Appertunance(s)	139.0	227.3	3,505.6	0.0	2,270.9	2,981.5	0.0	49.7	3,644.6	3,258.5	0.0	0.0
140.00		224.0	340.9					0.0	30.9	224.0	371.8	0.0	0.0
145.00		282.2	568.2					0.0	51.5	282.2	619.7	0.0	0.0
150.00	Appertunance(s)	141.8	568.2	6,046.2	0.0	15,974.3	3,789.4	0.0	51.5	6,188.0	4,409.1	0.0	0.0
								Totals:		22,108.4	44,840.9	0.00	0.00

Site Number: 282660 Code: ANSI/TIA-222-G

Site Name: Prospect CT, CT Engineering Number: 66383921 5/6/2016 9:41:27 AM

Customer: T-MOBILE

Load Case: 1.2D + 1.6W 100 mph with No Ice 19 Iterations

Gust Response Factor : 1.10 Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-44.83	-21.91	0.00	-2,333.99	0.00	2,333.99	3,293.92	1,646.96	8,093.29	5,174.22	0.00	0.00	0.465
5.00	-42.76	-21.52	0.00	-2,224.43	0.00	2,224.43	3,293.92	1,646.96	8,093.29	5,174.22	0.04	-0.08	0.443
10.00	-40.71	-21.12	0.00	-2,116.82	0.00	2,116.82	3,293.92	1,646.96	8,093.29	5,174.22	0.16	-0.15	0.422
15.00	-38.65	-20.71	0.00	-2,011.23	0.00	2,011.23	3,293.92	1,646.96	8,093.29	5,174.22	0.36	-0.22	0.401
20.00	-36.60	-20.29	0.00	-1,907.69	0.00	1,907.69	3,293.92	1,646.96	8,093.29	5,174.22	0.63	-0.29	0.380
20.00	-36.60	-20.29	0.00	-1,907.69	0.00	1,907.69	2,330.87	1,165.43	5,751.12	3,807.50	0.63	-0.29	0.517
25.00	-35.02	-19.88	0.00	-1,806.23	0.00	1,806.23	2,330.87	1,165.43	5,751.12	3,807.50	0.97	-0.36	0.490
30.00	-33.43	-19.46	0.00	-1,706.84	0.00	1,706.84	2,330.87	1,165.43	5,751.12	3,807.50	1.39	-0.44	0.463
35.00	-31.86	-19.02	0.00	-1,609.55	0.00	1,609.55	2,330.87	1,165.43	5,751.12	3,807.50	1.89	-0.51	0.437
40.00	-30.28	-18.57	0.00	-1,514.47	0.00	1,514.47	2,330.87	1,165.43	5,751.12	3,807.50	2.46	-0.58	0.411
40.00	-30.28	-18.57	0.00	-1,514.47	0.00	1,514.47	2,139.71	1,069.86	4,744.89	3,103.93	2.46	-0.58	0.502
45.00	-28.85	-18.14	0.00	-1,421.60	0.00	1,421.60	2,139.71	1,069.86	4,744.89	3,103.93	3.10	-0.65	0.472
50.00	-27.41	-17.70	0.00	-1,330.89	0.00	1,330.89	2,139.71	1,069.86	4,744.89	3,103.93	3.83	-0.73	0.442
55.00	-25.98	-17.23	0.00	-1,242.40	0.00	1,242.40	2,139.71	1,069.86	4,744.89	3,103.93	4.64	-0.82	0.413
60.00	-24.55	-16.78	0.00	-1,156.24	0.00	1,156.24	2,139.71	1,069.86	4,744.89	3,103.93	5.54	-0.89	0.384
60.00	-24.55	-16.78	0.00	-1,156.24	0.00	1,156.24	1,948.48	974.24	3,834.02	2,471.99	5.54	-0.89	0.481
65.00	-23.27	-16.34	0.00	-1,072.35	0.00	1,072.35	1,948.48	974.24	3,834.02	2,471.99	6.51	-0.96	0.446
70.00	-21.98	-15.89	0.00	-990.65	0.00	990.65	1,948.48	974.24	3,834.02	2,471.99	7.56	-1.05	0.412
75.00	-20.70	-15.43	0.00	-911.18	0.00	911.18	1,948.48	974.24	3,834.02	2,471.99	8.71	-1.14	0.379
80.00	-19.42	-14.99	0.00	-834.02	0.00	834.02	1,948.48	974.24	3,834.02	2,471.99	9.94	-1.22	0.348
80.00	-19.42	-14.99	0.00	-834.02	0.00	834.02	1,757.14	878.57	3,018.53	1,911.67	9.94	-1.22	0.448
85.00	-18.28	-14.56	0.00	-759.10	0.00	759.10	1,757.14	878.57	3,018.53	1,911.67	11.26	-1.29	0.408
90.00	-17.14	-14.13	0.00	-686.28	0.00	686.28	1,757.14	878.57	3,018.53	1,911.67	12.66	-1.38	0.369
95.00	-16.01	-13.69	0.00	-615.61	0.00	615.61	1,757.14	878.57	3,018.53	1,911.67	14.15	-1.47	0.331
100.00	-14.88	-13.27	0.00	-547.15	0.00	547.15	1,757.14	878.57	3,018.53	1,911.67	15.73	-1.55	0.295
100.00	-14.88	-13.27	0.00	-547.15	0.00	547.15	1,565.64	782.82	2,298.42	1,422.98	15.73	-1.55	0.394
105.00	-13.89	-12.88	0.00	-480.81	0.00	480.81	1,565.64	782.82	2,298.42	1,422.98	17.39	-1.62	0.347
110.00	-12.90	-12.48	0.00	-416.43	0.00	416.43	1,565.64	782.82	2,298.42	1,422.98	19.14	-1.71	0.301
115.00	-11.92	-12.07	0.00	-354.04	0.00	354.04	1,565.64	782.82	2,298.42	1,422.98	20.98	-1.79	0.257
115.00	-11.92	-12.07	0.00	-354.04	0.00	354.04	1,565.64	782.82	2,298.42	1,422.98	20.98	-1.79	0.257
120.00	-10.94	-11.65	0.00	-293.71	0.00	293.71	1,565.64	782.82	2,298.42	1,422.98	22.89	-1.86	0.214
125.00	-9.96	-11.22	0.00	-235.48	0.00	235.48	1,565.64	782.82	2,298.42	1,422.98	24.88	-1.92	0.172
130.00	-8.98	-10.85	0.00	-179.40	0.00	179.40	1,565.64	782.82	2,298.42	1,422.98	26.91	-1.96	0.132
130.00	-8.98	-10.85	0.00	-179.40	0.00	179.40	1,127.22	563.61	1,091.62	660.47	26.91	-1.96	0.280
135.00	-8.29	-10.64	0.00	-125.15	0.00	125.15	1,127.22	563.61	1,091.62	660.47	28.99	-2.00	0.197
137.00	-5.16	-6.88	0.00	-101.61	0.00	101.61	1,127.22	563.61	1,091.62	660.47	29.83	-2.03	0.159
140.00	-4.79	-6.65	0.00	-80.96	0.00	80.96	1,127.22	563.61	1,091.62	660.47	31.12	-2.07	0.127
145.00	-4.18	-6.35	0.00	-47.71	0.00	47.71	1,127.22	563.61	1,091.62	660.47	33.32	-2.12	0.076
150.00	0.00	-6.19	0.00	-15.97	0.00	15.97	1,127.22	563.61	1,091.62	660.47	35.55	-2.14	0.024

Site Number:	**282660**	**Code: ANSI/TIA-222-G**	
Site Name:	**Prospect CT, CT**	**Engineering Number: 66383921**	**5/6/2016 9:41:27 AM**
Customer:	**T-MOBILE**		

Load Case: **0.9D + 1.6W** — **100 mph with No Ice (Reduced DL)** — **19 Iterations**

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

Wind Importance Factor : 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		224.7	0.0					0.0	0.0	224.7	0.0	0.0	0.0
5.00		449.4	1,431.1					0.0	93.2	449.4	1,524.4	0.0	0.0
10.00		449.4	1,431.1					0.0	93.2	449.4	1,524.4	0.0	0.0
15.00		449.4	1,431.1					0.0	93.2	449.4	1,524.4	0.0	0.0
20.00	Top - Section 1	449.4	1,431.1					0.0	93.2	449.4	1,524.4	0.0	0.0
25.00		449.4	1,075.6					0.0	93.2	449.4	1,168.9	0.0	0.0
30.00		454.8	1,075.6					0.0	93.2	454.8	1,168.9	0.0	0.0
35.00		469.8	1,075.6					0.0	93.2	469.8	1,168.9	0.0	0.0
40.00	Top - Section 2	463.3	1,075.6					0.0	93.2	463.3	1,168.9	0.0	0.0
45.00		454.4	967.4					0.0	93.2	454.4	1,060.6	0.0	0.0
50.00		468.3	967.4					0.0	93.2	468.3	1,060.6	0.0	0.0
55.00		481.3	967.4					0.0	93.2	481.3	1,060.6	0.0	0.0
60.00	Top - Section 3	465.7	967.4					0.0	93.2	465.7	1,060.6	0.0	0.0
65.00		448.7	859.1					0.0	93.2	448.7	952.4	0.0	0.0
70.00		458.4	859.1					0.0	93.2	458.4	952.4	0.0	0.0
75.00		467.5	859.1					0.0	93.2	467.5	952.4	0.0	0.0
80.00	Top - Section 4	446.2	859.1					0.0	93.2	446.2	952.4	0.0	0.0
85.00		424.0	750.9					0.0	93.2	424.0	844.1	0.0	0.0
90.00		430.9	750.9					0.0	93.2	430.9	844.1	0.0	0.0
95.00		437.7	750.9					0.0	93.2	437.7	844.1	0.0	0.0
100.00	Top - Section 5	412.2	750.9					0.0	93.2	412.2	844.1	0.0	0.0
105.00		386.0	642.7					0.0	93.2	386.0	735.9	0.0	0.0
110.00		391.2	642.7					0.0	93.2	391.2	735.9	0.0	0.0
115.00	Top - Section 6	396.2	642.7					0.0	93.2	396.2	735.9	0.0	0.0
120.00		401.0	642.7					0.0	93.2	401.0	735.9	0.0	0.0
125.00		405.7	642.7					0.0	93.2	405.7	735.9	0.0	0.0
130.00	Top - Section 7	341.6	642.7					0.0	93.2	341.6	735.9	0.0	0.0
135.00		192.9	426.2					0.0	93.2	192.9	519.4	0.0	0.0
137.00	Appertunance(s)	139.0	170.5	3,505.6	0.0	2,270.9	2,236.1	0.0	37.3	3,644.6	2,443.9	0.0	0.0
140.00		224.0	255.7					0.0	23.2	224.0	278.9	0.0	0.0
145.00		282.2	426.2					0.0	38.6	282.2	464.8	0.0	0.0
150.00	Appertunance(s)	141.8	426.2	6,046.2	0.0	15,974.3	2,842.0	0.0	38.6	6,188.0	3,306.8	0.0	0.0
								Totals:		22,108.4	33,630.6	0.00	0.00

Site Number: 282660 | Code: ANSI/TIA-222-G |

Site Name: Prospect CT, CT | Engineering Number: 66383921 | 5/6/2016 9:41:28 AM

Customer: T-MOBILE

Load Case: 0.9D + 1.6W — 100 mph with No Ice (Reduced DL) — 19 Iterations

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

Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-33.62	-21.91	0.00	-2,321.79	0.00	2,321.79	3,293.92	1,646.96	8,093.29	5,174.22	0.00	0.00	0.459
5.00	-32.06	-21.50	0.00	-2,212.26	0.00	2,212.26	3,293.92	1,646.96	8,093.29	5,174.22	0.04	-0.08	0.437
10.00	-30.51	-21.08	0.00	-2,104.77	0.00	2,104.77	3,293.92	1,646.96	8,093.29	5,174.22	0.16	-0.15	0.416
15.00	-28.97	-20.66	0.00	-1,999.35	0.00	1,999.35	3,293.92	1,646.96	8,093.29	5,174.22	0.36	-0.22	0.395
20.00	-27.42	-20.24	0.00	-1,896.03	0.00	1,896.03	3,293.92	1,646.96	8,093.29	5,174.22	0.63	-0.29	0.375
20.00	-27.42	-20.24	0.00	-1,896.03	0.00	1,896.03	2,330.87	1,165.43	5,751.12	3,807.50	0.63	-0.29	0.510
25.00	-26.23	-19.82	0.00	-1,794.84	0.00	1,794.84	2,330.87	1,165.43	5,751.12	3,807.50	0.97	-0.35	0.483
30.00	-25.04	-19.39	0.00	-1,695.75	0.00	1,695.75	2,330.87	1,165.43	5,751.12	3,807.50	1.38	-0.43	0.456
35.00	-23.85	-18.94	0.00	-1,598.82	0.00	1,598.82	2,330.87	1,165.43	5,751.12	3,807.50	1.87	-0.51	0.430
40.00	-22.66	-18.49	0.00	-1,504.13	0.00	1,504.13	2,330.87	1,165.43	5,751.12	3,807.50	2.44	-0.58	0.405
40.00	-22.66	-18.49	0.00	-1,504.13	0.00	1,504.13	2,139.71	1,069.86	4,744.89	3,103.93	2.44	-0.58	0.495
45.00	-21.58	-18.05	0.00	-1,411.68	0.00	1,411.68	2,139.71	1,069.86	4,744.89	3,103.93	3.09	-0.64	0.465
50.00	-20.50	-17.60	0.00	-1,321.41	0.00	1,321.41	2,139.71	1,069.86	4,744.89	3,103.93	3.81	-0.73	0.436
55.00	-19.42	-17.13	0.00	-1,233.40	0.00	1,233.40	2,139.71	1,069.86	4,744.89	3,103.93	4.62	-0.81	0.407
60.00	-18.35	-16.67	0.00	-1,147.73	0.00	1,147.73	2,139.71	1,069.86	4,744.89	3,103.93	5.50	-0.88	0.379
60.00	-18.35	-16.67	0.00	-1,147.73	0.00	1,147.73	1,948.48	974.24	3,834.02	2,471.99	5.50	-0.88	0.474
65.00	-17.38	-16.24	0.00	-1,064.36	0.00	1,064.36	1,948.48	974.24	3,834.02	2,471.99	6.47	-0.95	0.440
70.00	-16.41	-15.79	0.00	-983.18	0.00	983.18	1,948.48	974.24	3,834.02	2,471.99	7.52	-1.05	0.406
75.00	-15.45	-15.32	0.00	-904.25	0.00	904.25	1,948.48	974.24	3,834.02	2,471.99	8.66	-1.13	0.374
80.00	-14.49	-14.88	0.00	-827.64	0.00	827.64	1,948.48	974.24	3,834.02	2,471.99	9.88	-1.21	0.342
80.00	-14.49	-14.88	0.00	-827.64	0.00	827.64	1,757.14	878.57	3,018.53	1,911.67	9.88	-1.21	0.441
85.00	-13.63	-14.45	0.00	-753.27	0.00	753.27	1,757.14	878.57	3,018.53	1,911.67	11.18	-1.28	0.402
90.00	-12.77	-14.02	0.00	-681.01	0.00	681.01	1,757.14	878.57	3,018.53	1,911.67	12.57	-1.37	0.364
95.00	-11.92	-13.58	0.00	-610.89	0.00	610.89	1,757.14	878.57	3,018.53	1,911.67	14.06	-1.46	0.327
100.00	-11.07	-13.16	0.00	-542.98	0.00	542.98	1,757.14	878.57	3,018.53	1,911.67	15.63	-1.54	0.291
100.00	-11.07	-13.16	0.00	-542.98	0.00	542.98	1,565.64	782.82	2,298.42	1,422.98	15.63	-1.54	0.389
105.00	-10.33	-12.77	0.00	-477.18	0.00	477.18	1,565.64	782.82	2,298.42	1,422.98	17.28	-1.61	0.342
110.00	-9.59	-12.37	0.00	-413.32	0.00	413.32	1,565.64	782.82	2,298.42	1,422.98	19.01	-1.70	0.297
115.00	-8.85	-11.97	0.00	-351.46	0.00	351.46	1,565.64	782.82	2,298.42	1,422.98	20.84	-1.78	0.253
115.00	-8.85	-11.97	0.00	-351.46	0.00	351.46	1,565.64	782.82	2,298.42	1,422.98	20.84	-1.78	0.253
120.00	-8.11	-11.55	0.00	-291.63	0.00	291.63	1,565.64	782.82	2,298.42	1,422.98	22.74	-1.85	0.210
125.00	-7.38	-11.13	0.00	-233.88	0.00	233.88	1,565.64	782.82	2,298.42	1,422.98	24.71	-1.91	0.169
130.00	-6.65	-10.77	0.00	-178.24	0.00	178.24	1,565.64	782.82	2,298.42	1,422.98	26.73	-1.95	0.130
130.00	-6.65	-10.77	0.00	-178.24	0.00	178.24	1,127.22	563.61	1,091.62	660.47	26.73	-1.95	0.276
135.00	-6.13	-10.56	0.00	-124.41	0.00	124.41	1,127.22	563.61	1,091.62	660.47	28.79	-1.98	0.194
137.00	-3.81	-6.83	0.00	-101.02	0.00	101.02	1,127.22	563.61	1,091.62	660.47	29.63	-2.02	0.156
140.00	-3.53	-6.60	0.00	-80.52	0.00	80.52	1,127.22	563.61	1,091.62	660.47	30.91	-2.06	0.125
145.00	-3.08	-6.31	0.00	-47.50	0.00	47.50	1,127.22	563.61	1,091.62	660.47	33.09	-2.10	0.075
150.00	0.00	-6.19	0.00	-15.97	0.00	15.97	1,127.22	563.61	1,091.62	660.47	35.31	-2.13	0.024

Site Number:	**282660**	**Code: ANSI/TIA-222-G**	
Site Name:	**Prospect CT, CT**	**Engineering Number: 66383921**	**5/6/2016 9:41:29 AM**
Customer:	**T-MOBILE**		

Load Case: **1.2D + 1.0Di + 1.0Wi** **50 mph with 0.75 in Radial Ice** **19 Iterations**

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

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		72.9	0.0					0.0	0.0	72.9	0.0	0.0	0.0
5.00		146.2	2,340.9					0.0	124.3	146.2	2,465.2	0.0	0.0
10.00		146.7	2,392.2					0.0	124.3	146.7	2,516.6	0.0	0.0
15.00		146.9	2,418.2					0.0	124.3	146.9	2,542.5	0.0	0.0
20.00	Top - Section 1	147.1	2,436.0					0.0	124.3	147.1	2,560.3	0.0	0.0
25.00		147.3	1,975.7					0.0	124.3	147.3	2,100.0	0.0	0.0
30.00		149.2	1,987.0					0.0	124.3	149.2	2,111.3	0.0	0.0
35.00		154.2	1,996.5					0.0	124.3	154.2	2,120.8	0.0	0.0
40.00	Top - Section 2	152.6	2,004.8					0.0	124.3	152.6	2,129.1	0.0	0.0
45.00		150.1	1,811.5					0.0	124.3	150.1	1,935.8	0.0	0.0
50.00		154.8	1,817.5					0.0	124.3	154.8	1,941.8	0.0	0.0
55.00		159.2	1,823.0					0.0	124.3	159.2	1,947.3	0.0	0.0
60.00	Top - Section 3	154.6	1,828.0					0.0	124.3	154.6	1,952.3	0.0	0.0
65.00		149.6	1,629.7					0.0	124.3	149.6	1,754.0	0.0	0.0
70.00		152.9	1,633.6					0.0	124.3	152.9	1,757.9	0.0	0.0
75.00		156.0	1,637.2					0.0	124.3	156.0	1,761.5	0.0	0.0
80.00	Top - Section 4	149.6	1,640.6					0.0	124.3	149.6	1,764.9	0.0	0.0
85.00		142.9	1,439.3					0.0	124.3	142.9	1,563.6	0.0	0.0
90.00		145.3	1,441.9					0.0	124.3	145.3	1,566.3	0.0	0.0
95.00		147.6	1,444.5					0.0	124.3	147.6	1,568.8	0.0	0.0
100.00	Top - Section 5	139.9	1,446.9					0.0	124.3	139.9	1,571.2	0.0	0.0
105.00		131.9	1,243.4					0.0	124.3	131.9	1,367.7	0.0	0.0
110.00		133.7	1,245.3					0.0	124.3	133.7	1,369.6	0.0	0.0
115.00	Top - Section 6	135.5	1,247.2					0.0	124.3	135.5	1,371.5	0.0	0.0
120.00		137.2	1,248.9					0.0	124.3	137.2	1,373.3	0.0	0.0
125.00		138.9	1,250.6					0.0	124.3	138.9	1,375.0	0.0	0.0
130.00	Top - Section 7	119.0	1,252.3					0.0	124.3	119.0	1,376.6	0.0	0.0
135.00		69.0	839.0					0.0	124.3	69.0	963.3	0.0	0.0
137.00	Appertunance(s)	49.7	335.9	752.3	0.0	411.8	5,555.1	0.0	49.7	802.0	5,940.7	0.0	0.0
140.00		80.1	504.2					0.0	30.9	80.1	535.0	0.0	0.0
145.00		101.0	841.1					0.0	51.5	101.0	892.6	0.0	0.0
150.00	Appertunance(s)	50.7	842.1	1,240.1	0.0	2,903.3	8,923.1	0.0	51.5	1,290.9	9,816.7	0.0	0.0
									Totals:	6,204.69	66,013.3	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 19 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-66.01	-6.14	0.00	-612.74	0.00	612.74	3,293.92	1,646.96	8,093.29	5,174.22	0.00	0.00	0.138
5.00	-63.54	-6.02	0.00	-582.02	0.00	582.02	3,293.92	1,646.96	8,093.29	5,174.22	0.01	-0.02	0.132
10.00	-61.03	-5.89	0.00	-551.93	0.00	551.93	3,293.92	1,646.96	8,093.29	5,174.22	0.04	-0.04	0.125
15.00	-58.48	-5.76	0.00	-522.47	0.00	522.47	3,293.92	1,646.96	8,093.29	5,174.22	0.10	-0.06	0.119
20.00	-55.92	-5.63	0.00	-493.67	0.00	493.67	3,293.92	1,646.96	8,093.29	5,174.22	0.17	-0.08	0.112
20.00	-55.92	-5.63	0.00	-493.67	0.00	493.67	2,330.87	1,165.43	5,751.12	3,807.50	0.17	-0.08	0.154
25.00	-53.82	-5.49	0.00	-465.53	0.00	465.53	2,330.87	1,165.43	5,751.12	3,807.50	0.25	-0.09	0.145
30.00	-51.71	-5.36	0.00	-438.06	0.00	438.06	2,330.87	1,165.43	5,751.12	3,807.50	0.36	-0.11	0.137
35.00	-49.58	-5.22	0.00	-411.27	0.00	411.27	2,330.87	1,165.43	5,751.12	3,807.50	0.49	-0.13	0.129
40.00	-47.45	-5.07	0.00	-385.18	0.00	385.18	2,330.87	1,165.43	5,751.12	3,807.50	0.64	-0.15	0.122
40.00	-47.45	-5.07	0.00	-385.18	0.00	385.18	2,139.71	1,069.86	4,744.89	3,103.93	0.64	-0.15	0.146
45.00	-45.52	-4.93	0.00	-359.82	0.00	359.82	2,139.71	1,069.86	4,744.89	3,103.93	0.81	-0.17	0.137
50.00	-43.57	-4.79	0.00	-335.15	0.00	335.15	2,139.71	1,069.86	4,744.89	3,103.93	0.99	-0.19	0.128
55.00	-41.63	-4.64	0.00	-311.21	0.00	311.21	2,139.71	1,069.86	4,744.89	3,103.93	1.20	-0.21	0.120
60.00	-39.67	-4.49	0.00	-288.03	0.00	288.03	2,139.71	1,069.86	4,744.89	3,103.93	1.43	-0.23	0.111
60.00	-39.67	-4.49	0.00	-288.03	0.00	288.03	1,948.48	974.24	3,834.02	2,471.99	1.43	-0.23	0.137
65.00	-37.92	-4.34	0.00	-265.60	0.00	265.60	1,948.48	974.24	3,834.02	2,471.99	1.68	-0.25	0.127
70.00	-36.16	-4.20	0.00	-243.88	0.00	243.88	1,948.48	974.24	3,834.02	2,471.99	1.95	-0.27	0.117
75.00	-34.40	-4.04	0.00	-222.90	0.00	222.90	1,948.48	974.24	3,834.02	2,471.99	2.24	-0.29	0.108
80.00	-32.63	-3.90	0.00	-202.68	0.00	202.68	1,948.48	974.24	3,834.02	2,471.99	2.56	-0.31	0.099
80.00	-32.63	-3.90	0.00	-202.68	0.00	202.68	1,757.14	878.57	3,018.53	1,911.67	2.56	-0.31	0.125
85.00	-31.07	-3.75	0.00	-183.20	0.00	183.20	1,757.14	878.57	3,018.53	1,911.67	2.89	-0.33	0.114
90.00	-29.50	-3.61	0.00	-164.43	0.00	164.43	1,757.14	878.57	3,018.53	1,911.67	3.24	-0.35	0.103
95.00	-27.93	-3.46	0.00	-146.37	0.00	146.37	1,757.14	878.57	3,018.53	1,911.67	3.62	-0.37	0.092
100.00	-26.36	-3.32	0.00	-129.06	0.00	129.06	1,757.14	878.57	3,018.53	1,911.67	4.01	-0.39	0.083
100.00	-26.36	-3.32	0.00	-129.06	0.00	129.06	1,565.64	782.82	2,298.42	1,422.98	4.01	-0.39	0.108
105.00	-24.99	-3.19	0.00	-112.45	0.00	112.45	1,565.64	782.82	2,298.42	1,422.98	4.43	-0.40	0.095
110.00	-23.62	-3.05	0.00	-96.51	0.00	96.51	1,565.64	782.82	2,298.42	1,422.98	4.87	-0.43	0.083
115.00	-22.25	-2.91	0.00	-81.24	0.00	81.24	1,565.64	782.82	2,298.42	1,422.98	5.32	-0.45	0.071
115.00	-22.25	-2.91	0.00	-81.24	0.00	81.24	1,565.64	782.82	2,298.42	1,422.98	5.32	-0.45	0.071
120.00	-20.88	-2.77	0.00	-66.67	0.00	66.67	1,565.64	782.82	2,298.42	1,422.98	5.80	-0.46	0.060
125.00	-19.50	-2.62	0.00	-52.82	0.00	52.82	1,565.64	782.82	2,298.42	1,422.98	6.29	-0.47	0.050
130.00	-18.13	-2.50	0.00	-39.69	0.00	39.69	1,565.64	782.82	2,298.42	1,422.98	6.79	-0.48	0.039
130.00	-18.13	-2.50	0.00	-39.69	0.00	39.69	1,127.22	563.61	1,091.62	660.47	6.79	-0.48	0.076
135.00	-17.16	-2.42	0.00	-27.21	0.00	27.21	1,127.22	563.61	1,091.62	660.47	7.30	-0.49	0.056
137.00	-11.23	-1.57	0.00	-21.95	0.00	21.95	1,127.22	563.61	1,091.62	660.47	7.51	-0.50	0.043
140.00	-10.70	-1.49	0.00	-17.24	0.00	17.24	1,127.22	563.61	1,091.62	660.47	7.82	-0.51	0.036
145.00	-9.80	-1.38	0.00	-9.80	0.00	9.80	1,127.22	563.61	1,091.62	660.47	8.36	-0.52	0.024
150.00	0.00	-1.29	0.00	-2.90	0.00	2.90	1,127.22	563.61	1,091.62	660.47	8.90	-0.52	0.004

Site Number: 282660	**Code:** ANSI/TIA-222-G		
Site Name: Prospect CT, CT	**Engineering Number:** 66383921	**5/6/2016 9:41:30 AM**	
Customer: T-MOBILE			

Load Case: 1.0D + 1.0W — Serviceability 60 mph — 18 Iterations

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

Wind Importance Factor : 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		50.6	0.0					0.0	0.0	50.6	0.0	0.0	0.0
5.00		101.1	1,590.2					0.0	103.6	101.1	1,693.8	0.0	0.0
10.00		101.1	1,590.2					0.0	103.6	101.1	1,693.8	0.0	0.0
15.00		101.1	1,590.2					0.0	103.6	101.1	1,693.8	0.0	0.0
20.00	Top - Section 1	101.1	1,590.2					0.0	103.6	101.1	1,693.8	0.0	0.0
25.00		101.1	1,195.1					0.0	103.6	101.1	1,298.7	0.0	0.0
30.00		102.3	1,195.1					0.0	103.6	102.3	1,298.7	0.0	0.0
35.00		105.7	1,195.1					0.0	103.6	105.7	1,298.7	0.0	0.0
40.00	Top - Section 2	104.2	1,195.1					0.0	103.6	104.2	1,298.7	0.0	0.0
45.00		102.2	1,074.9					0.0	103.6	102.2	1,178.5	0.0	0.0
50.00		105.4	1,074.9					0.0	103.6	105.4	1,178.5	0.0	0.0
55.00		108.3	1,074.9					0.0	103.6	108.3	1,178.5	0.0	0.0
60.00	Top - Section 3	104.8	1,074.9					0.0	103.6	104.8	1,178.5	0.0	0.0
65.00		101.0	954.6					0.0	103.6	101.0	1,058.2	0.0	0.0
70.00		103.1	954.6					0.0	103.6	103.1	1,058.2	0.0	0.0
75.00		105.2	954.6					0.0	103.6	105.2	1,058.2	0.0	0.0
80.00	Top - Section 4	100.4	954.6					0.0	103.6	100.4	1,058.2	0.0	0.0
85.00		95.4	834.3					0.0	103.6	95.4	937.9	0.0	0.0
90.00		97.0	834.3					0.0	103.6	97.0	937.9	0.0	0.0
95.00		98.5	834.3					0.0	103.6	98.5	937.9	0.0	0.0
100.00	Top - Section 5	92.7	834.3					0.0	103.6	92.7	937.9	0.0	0.0
105.00		86.9	714.1					0.0	103.6	86.9	817.7	0.0	0.0
110.00		88.0	714.1					0.0	103.6	88.0	817.7	0.0	0.0
115.00	Top - Section 6	89.1	714.1					0.0	103.6	89.1	817.7	0.0	0.0
120.00		90.2	714.1					0.0	103.6	90.2	817.7	0.0	0.0
125.00		91.3	714.1					0.0	103.6	91.3	817.7	0.0	0.0
130.00	Top - Section 7	76.8	714.1					0.0	103.6	76.8	817.7	0.0	0.0
135.00		43.4	473.5					0.0	103.6	43.4	577.1	0.0	0.0
137.00	Appertunance(s)	31.3	189.4	788.8	0.0	511.0	2,484.6	0.0	41.4	820.0	2,715.5	0.0	0.0
140.00		50.4	284.1					0.0	25.7	50.4	309.9	0.0	0.0
145.00		63.5	473.5					0.0	42.9	63.5	516.4	0.0	0.0
150.00	Appertunance(s)	31.9	473.5	1,360.4	0.0	3,594.2	3,157.8	0.0	42.9	1,392.3	3,674.2	0.0	0.0
								Totals:		4,974.40	37,367.4	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 18 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-37.37	-4.93	0.00	-523.31	0.00	523.31	3,293.92	1,646.96	8,093.29	5,174.22	0.00	0.00	0.112
5.00	-35.67	-4.84	0.00	-498.67	0.00	498.67	3,293.92	1,646.96	8,093.29	5,174.22	0.01	-0.02	0.107
10.00	-33.98	-4.75	0.00	-474.48	0.00	474.48	3,293.92	1,646.96	8,093.29	5,174.22	0.04	-0.03	0.102
15.00	-32.28	-4.65	0.00	-450.75	0.00	450.75	3,293.92	1,646.96	8,093.29	5,174.22	0.08	-0.05	0.097
20.00	-30.59	-4.56	0.00	-427.49	0.00	427.49	3,293.92	1,646.96	8,093.29	5,174.22	0.14	-0.07	0.092
20.00	-30.59	-4.56	0.00	-427.49	0.00	427.49	2,330.87	1,165.43	5,751.12	3,807.50	0.14	-0.07	0.125
25.00	-29.29	-4.46	0.00	-404.71	0.00	404.71	2,330.87	1,165.43	5,751.12	3,807.50	0.22	-0.08	0.119
30.00	-27.99	-4.37	0.00	-382.39	0.00	382.39	2,330.87	1,165.43	5,751.12	3,807.50	0.31	-0.10	0.112
35.00	-26.69	-4.27	0.00	-360.56	0.00	360.56	2,330.87	1,165.43	5,751.12	3,807.50	0.42	-0.11	0.106
40.00	-25.39	-4.17	0.00	-339.23	0.00	339.23	2,330.87	1,165.43	5,751.12	3,807.50	0.55	-0.13	0.100
40.00	-25.39	-4.17	0.00	-339.23	0.00	339.23	2,139.71	1,069.86	4,744.89	3,103.93	0.55	-0.13	0.121
45.00	-24.21	-4.07	0.00	-318.40	0.00	318.40	2,139.71	1,069.86	4,744.89	3,103.93	0.70	-0.15	0.114
50.00	-23.03	-3.97	0.00	-298.06	0.00	298.06	2,139.71	1,069.86	4,744.89	3,103.93	0.86	-0.16	0.107
55.00	-21.85	-3.86	0.00	-278.22	0.00	278.22	2,139.71	1,069.86	4,744.89	3,103.93	1.04	-0.18	0.100
60.00	-20.67	-3.76	0.00	-258.91	0.00	258.91	2,139.71	1,069.86	4,744.89	3,103.93	1.24	-0.20	0.093
60.00	-20.67	-3.76	0.00	-258.91	0.00	258.91	1,948.48	974.24	3,834.02	2,471.99	1.24	-0.20	0.115
65.00	-19.61	-3.66	0.00	-240.12	0.00	240.12	1,948.48	974.24	3,834.02	2,471.99	1.46	-0.22	0.107
70.00	-18.55	-3.56	0.00	-221.82	0.00	221.82	1,948.48	974.24	3,834.02	2,471.99	1.69	-0.24	0.099
75.00	-17.49	-3.46	0.00	-204.02	0.00	204.02	1,948.48	974.24	3,834.02	2,471.99	1.95	-0.25	0.092
80.00	-16.43	-3.36	0.00	-186.74	0.00	186.74	1,948.48	974.24	3,834.02	2,471.99	2.23	-0.27	0.084
80.00	-16.43	-3.36	0.00	-186.74	0.00	186.74	1,757.14	878.57	3,018.53	1,911.67	2.23	-0.27	0.107
85.00	-15.50	-3.26	0.00	-169.96	0.00	169.96	1,757.14	878.57	3,018.53	1,911.67	2.52	-0.29	0.098
90.00	-14.56	-3.16	0.00	-153.66	0.00	153.66	1,757.14	878.57	3,018.53	1,911.67	2.84	-0.31	0.089
95.00	-13.62	-3.06	0.00	-137.84	0.00	137.84	1,757.14	878.57	3,018.53	1,911.67	3.17	-0.33	0.080
100.00	-12.68	-2.97	0.00	-122.52	0.00	122.52	1,757.14	878.57	3,018.53	1,911.67	3.53	-0.35	0.071
100.00	-12.68	-2.97	0.00	-122.52	0.00	122.52	1,565.64	782.82	2,298.42	1,422.98	3.53	-0.35	0.094
105.00	-11.86	-2.88	0.00	-107.67	0.00	107.67	1,565.64	782.82	2,298.42	1,422.98	3.90	-0.36	0.083
110.00	-11.04	-2.79	0.00	-93.26	0.00	93.26	1,565.64	782.82	2,298.42	1,422.98	4.29	-0.38	0.073
115.00	-10.23	-2.70	0.00	-79.30	0.00	79.30	1,565.64	782.82	2,298.42	1,422.98	4.70	-0.40	0.062
115.00	-10.23	-2.70	0.00	-79.30	0.00	79.30	1,565.64	782.82	2,298.42	1,422.98	4.70	-0.40	0.062
120.00	-9.41	-2.61	0.00	-65.80	0.00	65.80	1,565.64	782.82	2,298.42	1,422.98	5.13	-0.42	0.052
125.00	-8.59	-2.51	0.00	-52.76	0.00	52.76	1,565.64	782.82	2,298.42	1,422.98	5.57	-0.43	0.043
130.00	-7.77	-2.43	0.00	-40.21	0.00	40.21	1,565.64	782.82	2,298.42	1,422.98	6.03	-0.44	0.033
130.00	-7.77	-2.43	0.00	-40.21	0.00	40.21	1,127.22	563.61	1,091.62	660.47	6.03	-0.44	0.068
135.00	-7.20	-2.38	0.00	-28.06	0.00	28.06	1,127.22	563.61	1,091.62	660.47	6.49	-0.45	0.049
137.00	-4.49	-1.54	0.00	-22.78	0.00	22.78	1,127.22	563.61	1,091.62	660.47	6.68	-0.45	0.038
140.00	-4.18	-1.49	0.00	-18.16	0.00	18.16	1,127.22	563.61	1,091.62	660.47	6.97	-0.46	0.031
145.00	-3.66	-1.42	0.00	-10.71	0.00	10.71	1,127.22	563.61	1,091.62	660.47	7.46	-0.47	0.019
150.00	0.00	-1.39	0.00	-3.59	0.00	3.59	1,127.22	563.61	1,091.62	660.47	7.96	-0.48	0.005

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coeffiecient F_v:	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_s	0.04
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.60
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.55
Total Unfactored Dead Load:	37.37 k
Seismic Base Shear (E):	2.08 k

Site Number:	**282660**	**Code: ANSI/TIA-222-G**	
Site Name:	**Prospect CT, CT**	**Engineering Number: 66383921**	**5/6/2016 9:41:31 AM**
Customer:	**T-MOBILE**		

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	**0.19**
Spectral Response Acceleration at 1.0 Second Period (S_1):	**0.06**
Importance Factor (I_E):	**1.00**
Site Coefficient F_a:	**1.60**
Site Coefficient F_v	**2.40**
Response Modification Coefficient (R):	**1.50**
Design Spectral Response Acceleration at Short Period (S_{ds}):	**0.20**
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	**0.10**
Period Based on Rayleigh Method (sec):	**1.60**
Redundancy Factor (p):	**1.30**

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
31	147.50	516	1.828	1.667	1.025	0.350	157	640
30	142.50	516	1.706	1.144	0.823	0.275	123	640
29	138.50	310	1.611	0.814	0.686	0.221	59	384
28	136.00	231	1.554	0.642	0.609	0.190	38	286
27	132.50	577	1.475	0.441	0.513	0.151	76	716
26	127.50	818	1.366	0.222	0.397	0.103	73	1,014
25	122.50	818	1.261	0.069	0.302	0.063	44	1,014
24	117.50	818	1.160	-0.030	0.226	0.031	22	1,014
23	112.50	818	1.063	-0.088	0.165	0.008	6	1,014
22	107.50	818	0.971	-0.116	0.117	-0.007	-5	1,014
21	102.50	818	0.883	-0.121	0.081	-0.015	-10	1,014
20	97.50	938	0.799	-0.112	0.053	-0.015	-12	1,163
19	92.50	938	0.719	-0.092	0.034	-0.010	-8	1,163
18	87.50	938	0.643	-0.068	0.020	-0.001	-1	1,163
17	82.50	938	0.572	-0.043	0.012	0.009	8	1,163
16	77.50	1,058	0.505	-0.018	0.007	0.020	19	1,312
15	72.50	1,058	0.442	0.005	0.006	0.030	28	1,312
14	67.50	1,058	0.383	0.023	0.007	0.038	35	1,312
13	62.50	1,058	0.328	0.039	0.010	0.043	40	1,312
12	57.50	1,178	0.278	0.050	0.014	0.046	47	1,461
11	52.50	1,178	0.232	0.058	0.019	0.047	48	1,461
10	47.50	1,178	0.190	0.064	0.025	0.047	48	1,461
9	42.50	1,178	0.152	0.068	0.030	0.046	47	1,461
8	37.50	1,299	0.118	0.070	0.035	0.045	50	1,611
7	32.50	1,299	0.089	0.071	0.039	0.043	48	1,611
6	27.50	1,299	0.064	0.072	0.041	0.041	47	1,611
5	22.50	1,299	0.043	0.070	0.042	0.040	45	1,611
4	17.50	1,694	0.026	0.067	0.040	0.037	54	2,100
3	12.50	1,694	0.013	0.059	0.034	0.033	48	2,100
2	7.50	1,694	0.005	0.044	0.025	0.025	37	2,100
1	2.50	1,694	0.001	0.018	0.010	0.011	16	2,100
Powerwave TT08-	150.00	66	1.890	1.980	1.140	0.391	22	82
Raycap DC6-48-60-0-8	150.00	98	1.890	1.980	1.140	0.391	33	122
Ericsson RRUS A2	150.00	90	1.890	1.980	1.140	0.391	30	112

Ericsson RRUS 32 (50	150.00	152	1.890	1.980	1.140	0.391	52	189
Ericsson RRUS 12	150.00	300	1.890	1.980	1.140	0.391	102	372
Ericsson RRUS E2 B29	150.00	60	1.890	1.980	1.140	0.391	20	74
Ericsson RRUS-11	150.00	330	1.890	1.980	1.140	0.391	112	409
CCI HPA-65R-BUU-H6	150.00	153	1.890	1.980	1.140	0.391	52	190
CCI HPA-65R-BUU-H8	150.00	408	1.890	1.980	1.140	0.391	138	506
Round Low Profile Pl	150.00	1,500	1.890	1.980	1.140	0.391	508	1,860
Ericsson KRY 112 144	137.00	33	1.577	0.708	0.639	0.202	6	41
Ericsson RRUS 11 B12	137.00	152	1.577	0.708	0.639	0.202	27	189
Ericsson AIR 21, 1.3	137.00	249	1.577	0.708	0.639	0.202	44	309
Ericsson AIR32 B66Aa	137.00	397	1.577	0.708	0.639	0.202	70	492
Andrew LNX-6515DS-VT	137.00	154	1.577	0.708	0.639	0.202	27	191
Round Low Profile Pl	137.00	1,500	1.577	0.708	0.639	0.202	263	1,860
		37,367	48.831	29.135	20.679	7.069	2,729	46,340

Load Case (1.2 + 0.2Sds) * DL + E EMAM **Seismic Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
31	147.50	516	1.828	1.667	1.025	0.350	157	640
30	142.50	516	1.706	1.144	0.823	0.275	123	640
29	138.50	310	1.611	0.814	0.686	0.221	59	384
28	136.00	231	1.554	0.642	0.609	0.190	38	286
27	132.50	577	1.475	0.441	0.513	0.151	76	716
26	127.50	818	1.366	0.222	0.397	0.103	73	1,014
25	122.50	818	1.261	0.069	0.302	0.063	44	1,014
24	117.50	818	1.160	-0.030	0.226	0.031	22	1,014
23	112.50	818	1.063	-0.088	0.165	0.008	6	1,014
22	107.50	818	0.971	-0.116	0.117	-0.007	-5	1,014
21	102.50	818	0.883	-0.121	0.081	-0.015	-10	1,014
20	97.50	938	0.799	-0.112	0.053	-0.015	-12	1,163
19	92.50	938	0.719	-0.092	0.034	-0.010	-8	1,163
18	87.50	938	0.643	-0.068	0.020	-0.001	-1	1,163
17	82.50	938	0.572	-0.043	0.012	0.009	8	1,163
16	77.50	1,058	0.505	-0.018	0.007	0.020	19	1,312
15	72.50	1,058	0.442	0.005	0.006	0.030	28	1,312
14	67.50	1,058	0.383	0.023	0.007	0.038	35	1,312
13	62.50	1,058	0.328	0.039	0.010	0.043	40	1,312
12	57.50	1,178	0.278	0.050	0.014	0.046	47	1,461
11	52.50	1,178	0.232	0.058	0.019	0.047	48	1,461
10	47.50	1,178	0.190	0.064	0.025	0.047	48	1,461
9	42.50	1,178	0.152	0.068	0.030	0.046	47	1,461
8	37.50	1,299	0.118	0.070	0.035	0.045	50	1,611
7	32.50	1,299	0.089	0.071	0.039	0.043	48	1,611
6	27.50	1,299	0.064	0.072	0.041	0.041	47	1,611
5	22.50	1,299	0.043	0.070	0.042	0.040	45	1,611
4	17.50	1,694	0.026	0.067	0.040	0.037	54	2,100
3	12.50	1,694	0.013	0.059	0.034	0.033	48	2,100
2	7.50	1,694	0.005	0.044	0.025	0.025	37	2,100
1	2.50	1,694	0.001	0.018	0.010	0.011	16	2,100
Powerwave TT08-	150.00	66	1.890	1.980	1.140	0.391	22	82
Raycap DC6-48-60-0-8	150.00	98	1.890	1.980	1.140	0.391	33	122
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Ericsson RRUS 12	150.00	300	1.890	1.980	1.140	0.391	102	372
Ericsson RRUS E2 B29	150.00	60	1.890	1.980	1.140	0.391	20	74
Ericsson RRUS-11	150.00	330	1.890	1.980	1.140	0.391	112	409
CCI HPA-65R-BUU-H6	150.00	153	1.890	1.980	1.140	0.391	52	190
CCI HPA-65R-BUU-H8	150.00	408	1.890	1.980	1.140	0.391	138	506
Round Low Profile Pl	150.00	1,500	1.890	1.980	1.140	0.391	508	1,860

Ericsson KRY 112 144	137.00	33	1.577	0.708	0.639	0.202	6	41
Ericsson RRUS 11 B12	137.00	152	1.577	0.708	0.639	0.202	27	189
Ericsson AIR 21, 1.3	137.00	249	1.577	0.708	0.639	0.202	44	309
Ericsson AIR32 B66Aa	137.00	397	1.577	0.708	0.639	0.202	70	492
Andrew LNX-6515DS-VT	137.00	154	1.577	0.708	0.639	0.202	27	191
Round Low Profile Pl	137.00	1,500	1.577	0.708	0.639	0.202	263	1,860
		37,367	48.831	29.135	20.679	7.069	2,729	46,340

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	21.91	0.00	44.83	0.00	0.00	2333.99	20.00	0.52
0.9D + 1.6W	21.91	0.00	33.62	0.00	0.00	2321.79	20.00	0.51
1.2D + 1.0Di + 1.0Wi	6.14	0.00	66.01	0.00	0.00	612.74	20.00	0.15
(1.2 + 0.2Sds) * DL + E ELFM	2.08	0.00	44.24	0.00	0.00	241.17	20.00	0.07
(1.2 + 0.2Sds) * DL + E EMAM	2.72	0.00	44.24	0.00	0.00	328.49	20.00	0.09
1.0D + 1.0W	4.93	0.00	37.37	0.00	0.00	523.31	20.00	0.13

Code Rev.	G	Date	5/6/2016
		Engineer	FB
		Site #	282660
Moment	2334.0 k-ft	Carrier	T-Mobile
Axial	44.8 k		

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	60	in
	Pole Thickness	0.5	in
	Plate Diameter	72	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.4375	in
	ϕ_s Resistance	132.54	k-in
	Applied	86.19	k-in
Stiffeners	#	***0***	

Bolts	#	***36***	
	Bolt Circle	66	in
	(R)adial / (S)quare	R	
●	Diameter	1.5	in
	Hole Diameter	1.5625	in
	Type	A449	
	Fy	81	ksi
	Fu	105	ksi
	ϕ_s Resistance	118.04	k
	Applied	48.39	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

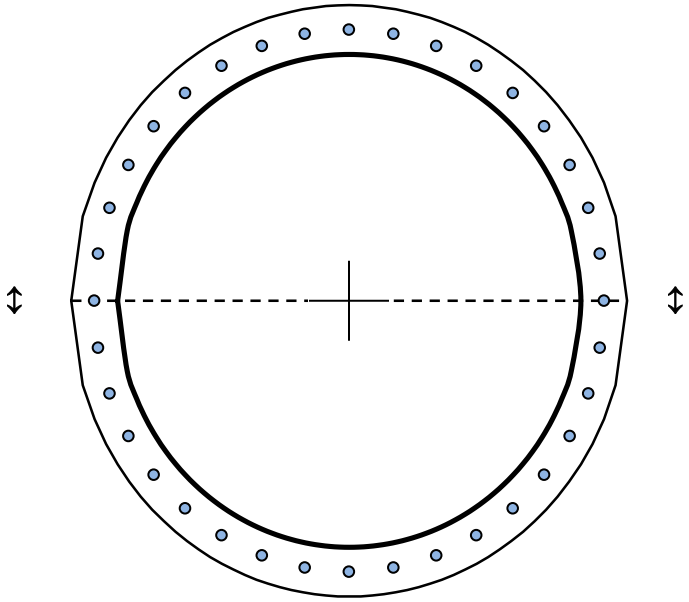


Plate Stress Ratio:
0.65 (Pass)

Bolt Stress Ratio:
0.41 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 20.0 ft***
	Pole Diameter	60	in
	Pole Thickness	0.375	in
	Plate Diameter	60	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	134.19	k-in
	Applied	98.80	k-in
Stiffeners	#	***0***	

Bolts	#	***32***	
	Bolt Circle	54	in
	(R)adial / (S)quare	R	
	Diameter	1.5	in
	Hole Diameter	1.5625	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	126.47	k
	Applied	51.83	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment	1907.7 k-ft
Axial	36.6 k

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Required Flange Thickness:

1.29 in OK

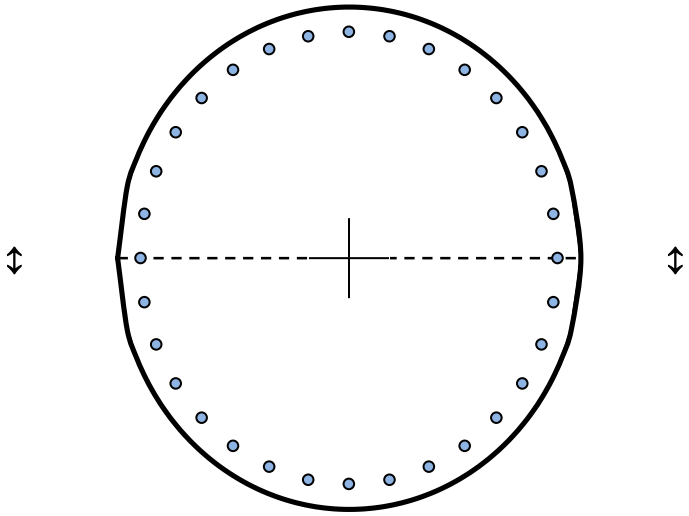


Plate Stress Ratio:

0.74 (Pass)

Bolt Stress Ratio:

0.41 (Pass)

Base/Flange Plate			
	Plate Type	***Flange***	***@ 40.0 ft***
	Pole Diameter	54	in
	Pole Thickness	0.375	in
	Plate Diameter	60	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	89.46	k-in
	Applied	16.21	k-in

Stiffeners		
	#	***0***

Bolts			
	#	***48***	
	Bolt Circle	57	in
	(R)adial / (S)quare	R	
●	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	25.94	k

Reinforcement ●		
	#	***0***

Extra Bolts O		
	#	***0***

Code Rev. ***G***

Moment 1514.5 k-ft

Axial 30.3 k

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Required Flange Thickness:

0.64 in OK

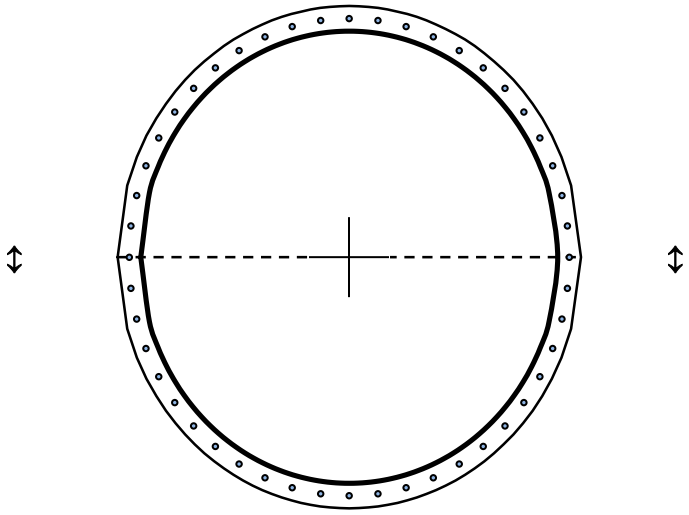


Plate Stress Ratio:

0.18 (Pass)

Bolt Stress Ratio:

0.48 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 60.0 ft***
	Pole Diameter	48	in
	Pole Thickness	0.375	in
	Plate Diameter	54	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	95.43	k-in
	Applied	16.62	k-in
Stiffeners	#	***0***	

Bolts	#	***40***	
	Bolt Circle	51	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	26.59	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment	1156.2 k-ft
Axial	24.6 k

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Required Flange Thickness:

0.63 in OK

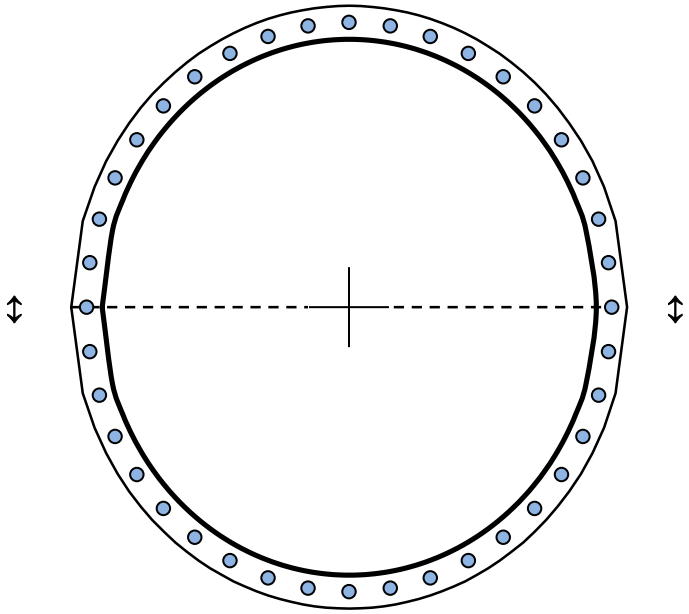


Plate Stress Ratio:

0.17 (Pass)

Bolt Stress Ratio:

0.49 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 80.0 ft***
	Pole Diameter	42	in
	Pole Thickness	0.375	in
	Plate Diameter	48	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	104.13	k-in
	Applied	16.99	k-in
Stiffeners	#	***0***	

Bolts	#	***32***	
	Bolt Circle	45	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	27.19	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment	834.0 k-ft
Axial	19.4 k

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Required Flange Thickness:

0.61 in OK

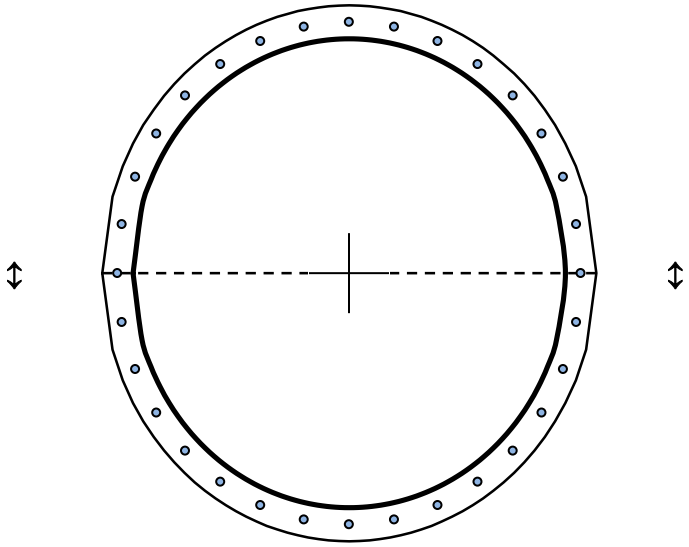


Plate Stress Ratio:

0.16 (Pass)

Bolt Stress Ratio:

0.50 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 100.0 ft***
	Pole Diameter	36	in
	Pole Thickness	0.375	in
	Plate Diameter	42	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	104.13	k-in
	Applied	17.14	k-in
Stiffeners	#	***0***	

Bolts	#	***24***	
	Bolt Circle	39	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	27.43	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment 547.2 k-ft
Axial 14.9 k

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Required Flange Thickness:
0.61 in OK

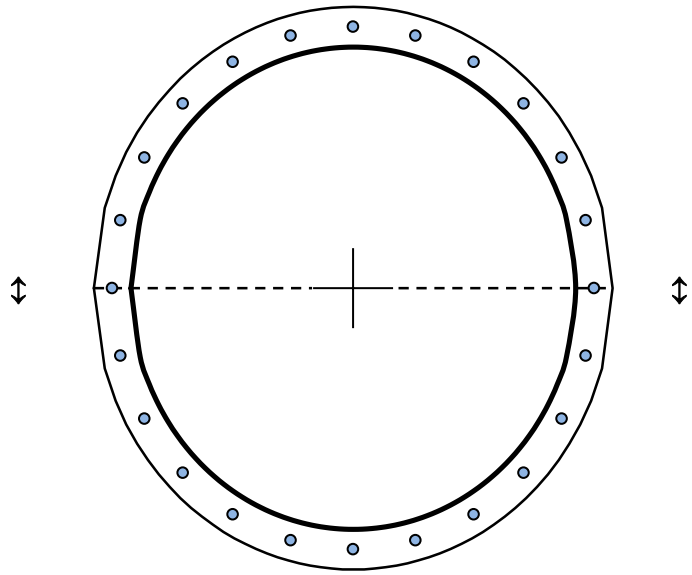


Plate Stress Ratio:
0.16 (Pass)

Bolt Stress Ratio:
0.50 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 115.0 ft***
	Pole Diameter	36	in
	Pole Thickness	0.375	in
	Plate Diameter	36	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	99.40	k-in
	Applied	49.08	k-in
Stiffeners	#	***0***	

Bolts	#	***24***	
	Bolt Circle	30	in
	(R)adial / (S)quare	R	
●	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	23.10	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Moment	354.0 k-ft
Axial	11.9 k

Required Flange Thickness:

1.05 in OK

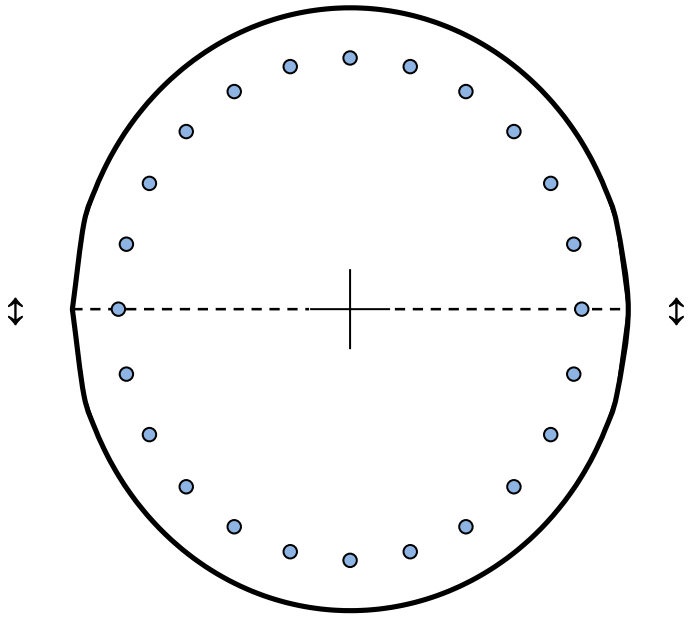


Plate Stress Ratio:

0.49 (Pass)

Bolt Stress Ratio:

0.42 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 130.0 ft***
	Pole Diameter	24	in
	Pole Thickness	0.375	in
	Plate Diameter	30	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	ϕ_s Resistance	95.43	k-in
	Applied	9.68	k-in
Stiffeners	#	***0***	

Bolts	#	***20***	
	Bolt Circle	27	in
	(R)adial / (S)quare	R	
●	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	15.49	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Date	5/6/2016
Engineer	ZAM
Site #	282660
Carrier	T-Mobile

Moment	179.4 k-ft
Axial	9.0 k

Required Flange Thickness:
0.48 in OK

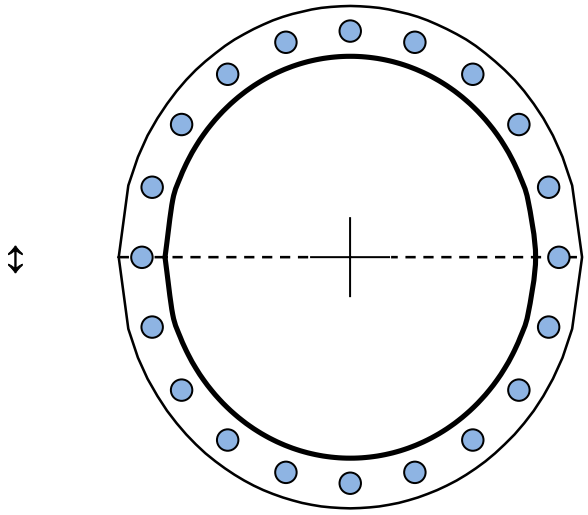
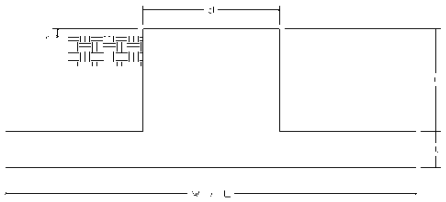


Plate Stress Ratio:
0.10 (Pass)

Bolt Stress Ratio:
0.28 (Pass)

Site Name:	Prospect CT, CT
Site Number:	282660
Engineering Number:	66383921
Engineer:	FB
Date:	05/06/16
Tower Type:	MP

Program Last Updated: *5/13/2014*



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

Design / Analysis / Mapping:	Analysis				
Compression/Leg:	44.8	k	Concrete Strength (f'_c):	4000	psi
Uplift/Leg:	0.0	k	Pad Tension Steel Depth:	20.00	in
Total Shear:	21.9	k	ϕ_{Shear}:	0.75	
Moment:	2334.0	k-ft	$\phi_{Flexure\ /\ Tension}$:	0.90	
Tower + Appurtenance Weight:	44.8	k	$\phi_{Compression:}$	0.65	
Depth to Base of Foundation (l + t - h):	4.00	ft	β:	0.85	
Diameter of Pier (d):	7.00	ft	Bottom Pad Rebar Size #:	9	
Height of Pier above Ground (h):	1.00		# of Bottom Pad Rebar:	27	
Width of Pad (W):	25.00	ft	Pad Bottom Steel Area:	27.00	in^2
Length of Pad (L):	25.00	ft	Pad Steel F_y:	60000	psi
Thickness of Pad (t):	2.00	ft	Top Pad Rebar Size #:	9	
Tower Leg Center to Center:	0.00	ft	# of Top Pad Rebar:	27	
Number of Tower Legs:	1.0	(1 if MP or GT)	Pad Top Steel Area:	27.00	in^2
Tower Center from Mat Center:	0.00	ft	Pier Rebar Size #:	7	
Depth Below Ground Surface to Water Table:	99.00	ft	Pier Steel Area (Single Bar):	0.60	in^2
Unit Weight of Concrete:	150.0	pcf	# of Pier Rebar:	60	
Unit Weight of Soil Above Water Table:	130.0	pcf	Pier Steel F_y:	60000	psi
Unit Weight of Water:	62.4	pcf	Pier Cage Diameter:	76.0	in
Unit Weight of Soil Below Water Table:	67.6	pcf	Rebar Strain Limit:	0.008	
Friction Angle of Uplift:	15.0	Degrees	Steel Elastic Modulus:	29000	ksi
Ultimate Coefficient of Shear Friction:	0.45		Tie Rebar Size #:	4	
Ultimate Compressive Bearing Pressure:	50000.0	psf	Tie Steel Area (Single Bar):	0.20	in^2
Ultimate Passive Pressure on Pad Face:	0.0	psf	Tie Spacing:	6	in
$\phi_{Soil\ and\ Concrete\ Weight}$:	0.9		Tie Steel F_y:	60000	psi
ϕ_{Soil}:	0.75				

Overturning Moment Usage

Design OTM:	2443.5	k-ft
OTM Resistance:	4599.0	k-ft
Design OTM / OTM Resistance:	0.53	Result: OK

Soil Bearing Pressure Usage

Net Bearing Pressure:	1467	psf
Factored Nominal Bearing Pressure:	37500	psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.04	Result: OK
Load Direction Controling Design Bearing Pressure:	Diagonal to Pad Edge	

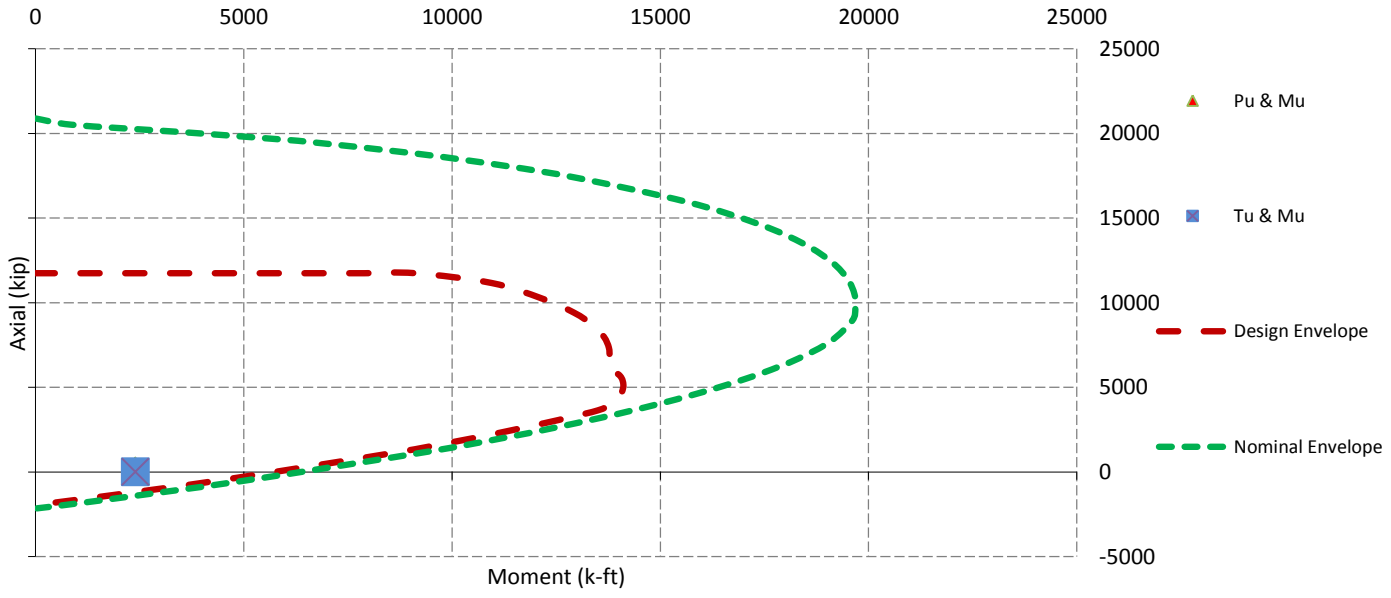
Sliding Factor of Safety

Total Factored Sliding Resistance:	133.2	k
Sliding Design / Sliding Resistance:	0.16	Result: OK

One Way Shear, Flexual Capacity, and Punching Shear

Factored One Way Shear (V_u):	150.5	k
One Way Shear Capacity (ϕV_c):	569.2	k - ACI11.3.1.1
V_u / ϕV_c:	0.26	Result: OK
Load Direction Controling Shear Capacity:	Parallel to Pad Edge	
Lower Steel Pad Factored Moment (M_u):	880.3	k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	2348.0	k-ft - ACI10.3
M_u / ϕM_n:	0.37	Result: OK
Load Direction Controling Flexural Capacity:	Parallel to Pad Edge	
Upper Steel Pad Factored Moment (M_u):	583.9	k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	2348.0	k-ft
M_u / ϕM_n:	0.25	Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0045	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0045	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	11	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	11	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	12.1	k
Nominal Punching Shear Capacity ($\phi_c V_n$):	1239.8	k - ACI11.12.2.1
V_u / ϕV_c:	0.01	Result: OK
Factored Moment in Pier (M_u):	2399.7	k-ft
Pier Moment Capacity (ϕM_n):	6019.8	k-ft
M_u / ϕM_n:	0.40	Result: OK
Factored Shear in Pier (V_u):	21.9	k
Pier Shear Capacity (ϕV_n):	527.9	k
V_u / ϕV_c:	0.04	Result: OK
Pier Shear Reinforcement Ratio:	0.0004	No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0	k
Pier Tension Capacity (ϕT_n):	1944.0	k
T_u / ϕT_n:	0.00	Result: OK
Factored Compression in Pier (P_u):	44.8	k
Pier Compression Capacity (ϕP_n):	9734.2	k - ACI10.3.6.2
P_u / ϕP_n:	0.00	Result: OK
Pier Compression Reinforcement Ratio:	0.006	OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.40	Result: OK

Nominal and Design Moment Capacity and Factored Design Loads



T-MOBILE NORTHEAST LLC

SITE #: CTNH302A

SITE NAME: CTNH302/CLRCHANNEL/PROSP

SITE ADDRESS:

151 WATERBURY RD

PROSPECT, CT 06712

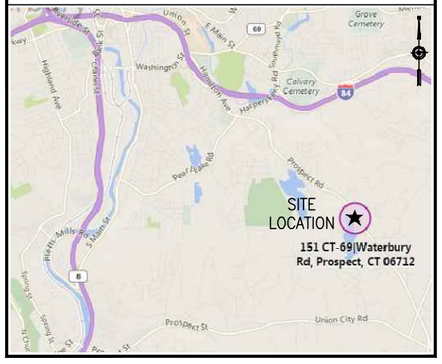
EXISTING WIRELESS BROADBAND FACILITY MODIFICATION

CONSTRUCTION DRAWINGS

(EXISITING CONFIGURATION 702CU)

(PROPOSED CONFIGURATION 792DB)

VICINITY MAP



DO NOT SCALE DRAWINGS

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

CALL BEFORE YOU DIG:

WWW.CBYD.COM

CALL 800 922 4455, OR 811

CALL THREE WORKING DAYS PRIOR TO DIGGING

SAFETY PRECAUTIONS SHALL BE IMPLEMENTED BY CONTRACTOR(S) AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS.

COLOR CODE FOR UTILITY LOCATIONS

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

GENERAL NOTES

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

PROJECT INFORMATION

SITE NUMBER:	CTNH302A
SITE NAME:	CTNH302/CLRCHANNEL/PROSP
SITE ADDRESS:	151 WATERBURY RD PROSPECT, CT 06712
LAT./LONG.:	N 41.52300600 –72.99781800
PROPERTY OWNER:	CLEAR CHANNEL
APPLICANT:	T–MOBILE NORTHEAST, LLC. 35 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002 (860) 692–7100
PROJECT MANAGER	TRANSCEND WIRELESS LLC 10 INDUSTRIAL AVE, SUITE #3 MAHWAH, NJ 07430
ARCHITECT/ENGINEER	FORESITE LLC. Site Design Services 462 Walnut Street Newton, MA 02460 TEL: 617–527–3031

PROJECT DESCRIPTION

T–MOBILE NORTHEAST LLC PROPOSES THE MODIFICATION OF AN EXISTING WIRELESS BROABAND FACILITY CONSISTING OF REPLACEMENT OF 3 EXISTING AIR21 ANTENNAS WITH (3) AIR32 ANTENNAS, ADD (1) (6×12) FIBER TRUNK AND UPGRADE CIRCUIT BREAKER TO 100 AMPS.

SHEET INDEX

SHEET	DESCRIPTION
T–1	TITLE SHEET
N–1	CONTRACTOR'S NOTES
A–1	SITE PLAN
A–2	ELEVATION ANTENNA PLAN AND DETAILS
E–1	GROUNDING AND POWER ONE LINE DIAGRAM

T-MOBILE NORTHEAST, LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

Transcend Wireless
10 INDUSTRIAL AVE
MAHWAH NJ 07430
TRANSCEND@TRANSCENDWIRELESS.COM
TELEPHONE: (201) 684–0066

FORESITE LLC.
SITE DESIGN SERVICES
462 WALNUT STREET
NEWTON, MA 02460
TEL: 617–527–3031

SUBMITTALS

DATE	DESCRIPTION	REVISION
05/4/16	ISSUED FOR REVIEW	A

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

PROJECT NO:	CTNH302A
DRAWN BY:	MS
CHECKED BY:	SM

PROFESSIONAL SEAL

SITE NUMBER
CTNH302A
SITE NAME
CTNH302/CLRCHANNEL/PROSP
SITE ADDRESS
151 WATERBURY RD
PROSPECT, CT 06712

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

ELECTRICAL NOTES:

WORK INCLUDED

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

GENERAL REQUIREMENTS

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

GUARANTEE

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

CLEANING

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

COORDINATION AND SUPERVISION

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

SUBMITTALS

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

CUTTING AND PATCHING

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

TESTS, INSPECTION AND APPROVAL

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

SPECIAL REQUIREMENTS

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

GROUNDING

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

RACEWAYS

1. ALL WIRING TO BE INSTALLED IN CONDUIT SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:
   A. EXTERIOR FEEDERS AND CONTROL, WHERE UNDERGROUND, TO BE IN SCH 40 PVC.
   B. EXTERIOR, ABOVE GROUND POWER CONDUITS TO BE GALVANIZED RIGID STEEL (RGS).
   C. ALL TELECOMMUNICATION CONDUITS, INTERIOR/EXTERIOR, TO BE EMT.
   D. INSTALL PULL ROPES IN ALL NEW EMPTY CONDUITS INSTALLED ON THIS PROJECT.
   E. ALL TELECOM CONDUITS AND PULL BOXES INSTALLED ON THIS PROJECT TO BE LABELED "T-MOBILE". OWNER WILL PROVIDE LABELS FOR CONTRACTOR TO INSTALL.
   F. INTERIOR FEEDERS TO BE INSTALLED IN E.M.T. WITH STEEL COMPRESSION FITTINGS.
   G. MINIMUM SIZE CONDUIT TO BE ¾" TRADE SIZE UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
   H. FINAL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT TO BE INSTALLED IN LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
   I. CONDUIT TO BE RUN CONCEALED IN CEILINGS, FINISHED AREAS OR DRYWALL PARTITIONS, UNLESS OTHERWISE NOTED.
   J. THE ROUTING OF CONDUITS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. BEFORE INSTALLING ANY WORK, EXAMINE THE WORKING LAYOUTS AND SHOP DRAWINGS OF THE OTHER TRADES TO DETERMINE THE EXACT LOCATIONS AND CLEARANCES.
   K. ALL EXTERIOR MOUNTING HARDWARE TO BE GALVANIZED STEEL. COORDINATE WITH BUILDING ENGINEER PRIOR TO ATTACHING TO BUILDING STRUCTURE.
   L. PENETRATIONS OF WALLS, FLOORS AND ROOFS, FOR THE PASSAGE OF ELECTRICAL RACEWAYS, TO BE PROPERLY SEALED AFTER INSTALLATION OF RACEWAYS SO AS TO MAINTAIN THE STRUCTURAL OR WATERPROOF INTEGRITY OF THE WALL, FLOOR OR ROOF SYSTEM TO BE PENETRATED. SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE OR SMOKE RATED WALLS, CEILINGS OR SMOKE TIGHT CORRIDOR PARTITIONS TO MAINTAIN PROPER RATING OF WALL OR CEILING.
   M. PROVIDE ALL CONDUIT ENDS WITH INSULATED METALLIC GROUNDING BUSHINGS.
   N. CONDUIT TO BE SUPPORTED AT MAXIMUM DISTANCE OF 8'-0", OR AS REQUIRED BY NEC, IN HORIZONTAL AND VERTICAL DIRECTIONS.
   O. PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR ALL JUNCTION BOXES AND/OR OUTLET BOXES NOT USED IN EXPOSED AREAS. PROVIDE ALL OTHER UNUSED BOXES WITH STANDARD STEEL COVER PLATES.
   P. WHERE APPLICABLE, PROVIDE ROOFTOP CONDUIT SUPPORT SYSTEM, CONFORMING TO ROOFTOP WARRANTY REQUIREMENTS, PER BUILDING.

WIRES AND CABLES

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

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

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

WIRING DEVICES

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

DISCONNECT SWITCHES AND FUSES

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

INSTALLATION

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

GENERAL NOTES:

INTENT

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

CONFLICTS

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

CONTRACTS AND WARRANTIES

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

STORAGE

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

CLEANUP

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

CHANGE ORDER PROCEDURE:

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

RELATED DOCUMENTS AND COORDINATION

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

SHOP DRAWINGS

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

PRODUCTS AND SUBSTITUTIONS

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

QUALITY ASSURANCE

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

ADMINISTRATION

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

INSURANCE AND BONDS

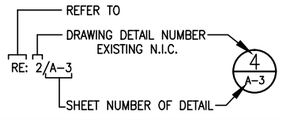
1. CONTRACTOR, AT THEIR OWN EXPENSE, SHALL CARRY AND MAINTAIN, FOR THE DURATION OF THE PROJECT, ALL INSURANCE, AS REQUIRED AND LISTED, AND SHALL NOT COMMENCE WITH THEIR WORK UNTIL THEY HAVE PRESENTED AN ORIGINAL CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE OWNER. REFER TO THE MASTER AGREEMENT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

ARCHITECTURAL SYMBOLS

STORAGE
38

3

DETAIL REFERENCE KEY



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SUBMITTALS

DATE	DESCRIPTION	REVISION
05/4/16	ISSUED FOR REVIEW	A

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

PROJECT NO:	CTNH302A
DRAWN BY:	MS
CHECKED BY:	SM

PROFESSIONAL SEAL

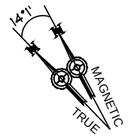
SITE NUMBER
CTNH302A
SITE NAME
CTNH302/CLRCHANNEL/PROSP
SITE ADDRESS
151 WATERBURY RD
PROSPECT, CT 06712

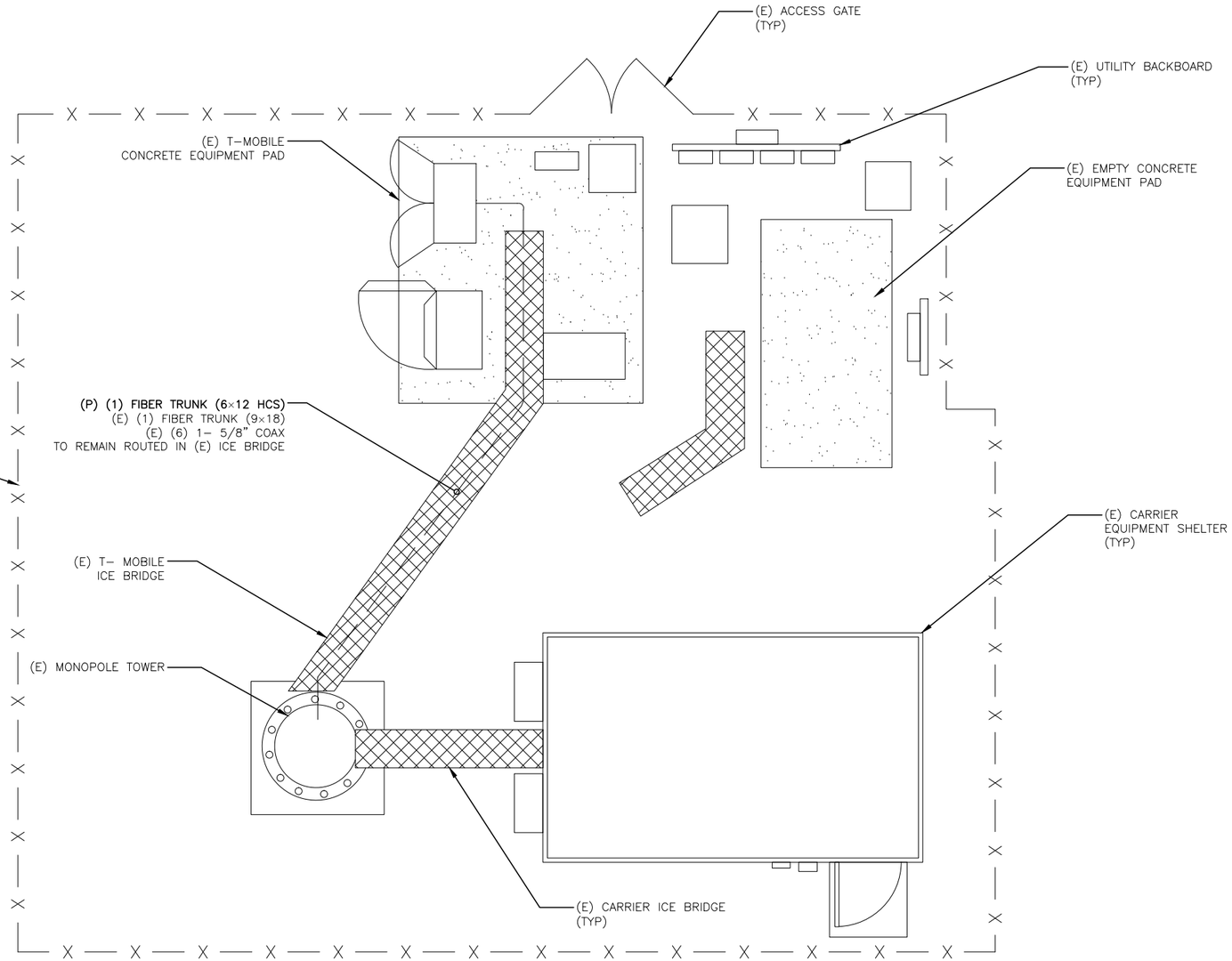
SHEET TITLE
CONTRACTOR'S NOTES

SHEET NUMBER
N-1

FINAL DESIGN PENDING STRUCTURAL EVALUATION

FOR ANTENNA PLAN SEE SHEET A-2





SITE PLAN 1 / A-1

SCALE 1"=8' (11x17)
1"=4' (24x36)

0 8 16 24

SCALE 1"=8' (11x17)
1"=4' (24x36)

GENERAL SITE NOTES

1. SITE INFORMATION WAS OBTAINED FROM A FIELD INVESTIGATION PERFORMED BY ATLANTIS GROUP, INC. CONTRACTOR TO FIELD VERIFY DIMENSIONS AS NECESSARY BEFORE CONSTRUCTION.

2. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE SIGNS OF ADVERTISING.

3. THE PROPOSED DEVELOPMENT IS UNMANNED AND THEREFORE DOES NOT REQUIRE A MEANS OF WATER SUPPLY OR SEWAGE DISPOSAL.

4. NO LANDSCAPING WORK IS PROPOSED IN CONJUNCTION WITH THIS DEVELOPMENT OTHER THAN THAT WHICH IS SHOWN.

5. THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.

6. UTILITIES SHOWN ON PLAN ARE TAKEN FROM OWNERS RECORDS AND FIELD LOCATION OF VISIBLE SURFACE FEATURES. THE EXISTENCE, EXTENT AND EXACT HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES HAS NOT BEEN VERIFIED. ANY CONTRACTOR PERFORMING WORK ON THIS SITE MUST CONTACT CALL BEFORE YOU DIG THREE WORKING DAYS PRIOR TO COMMENCING WORK.

7. ALL OBSOLETE OR UNUSED FACILITIES SHALL BE REMOVED WITHIN 12 MONTHS OF CESSATION OF OPERATIONS.

SITE LEGEND

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

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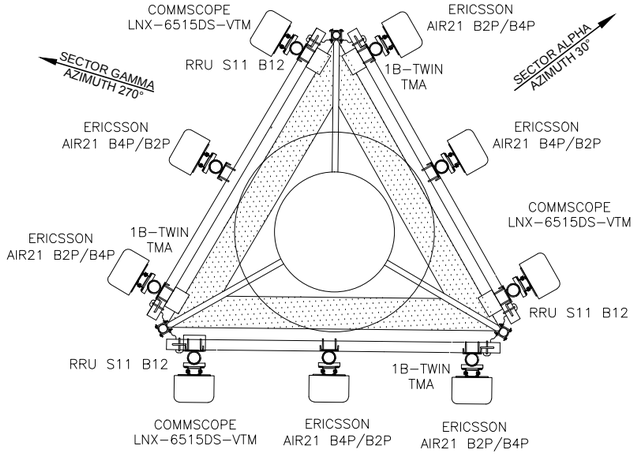
SHEET TITLE
SITE PLAN

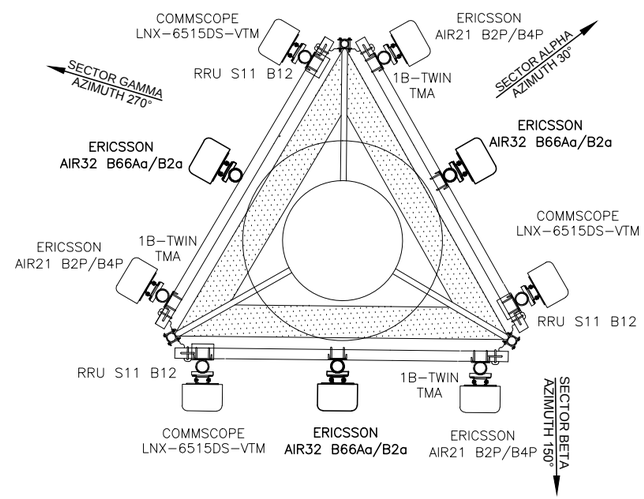
SHEET NUMBER
A-1

FINAL DESIGN PENDING STRUCTURAL EVALUATION

EXISTING ANTENNA CONFIGURATION



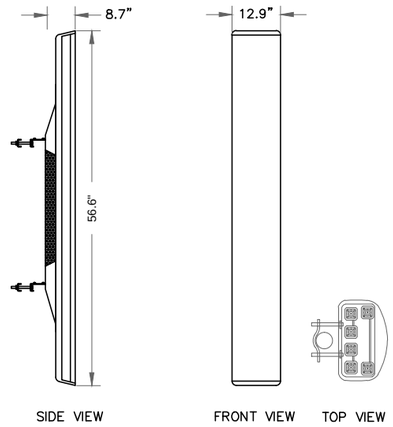
PROPOSED ANTENNA CONFIGURATION



ANTENNA PLAN

SCALE: N.T.S

1 / A-2

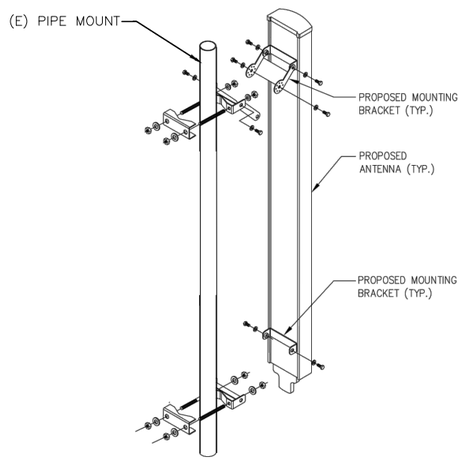


MANUFACTURER: ERICSSON
MODEL NO.: AIR32-B66Aa/B2a
DIMENSIONS - HxWxD, (IN) 56.6x12.9x8.7
WEIGHT - 132.2 LB

ERICSSON AIR32- B66Aa/B2a ANTENNA DETAIL

SCALE: N.T.S

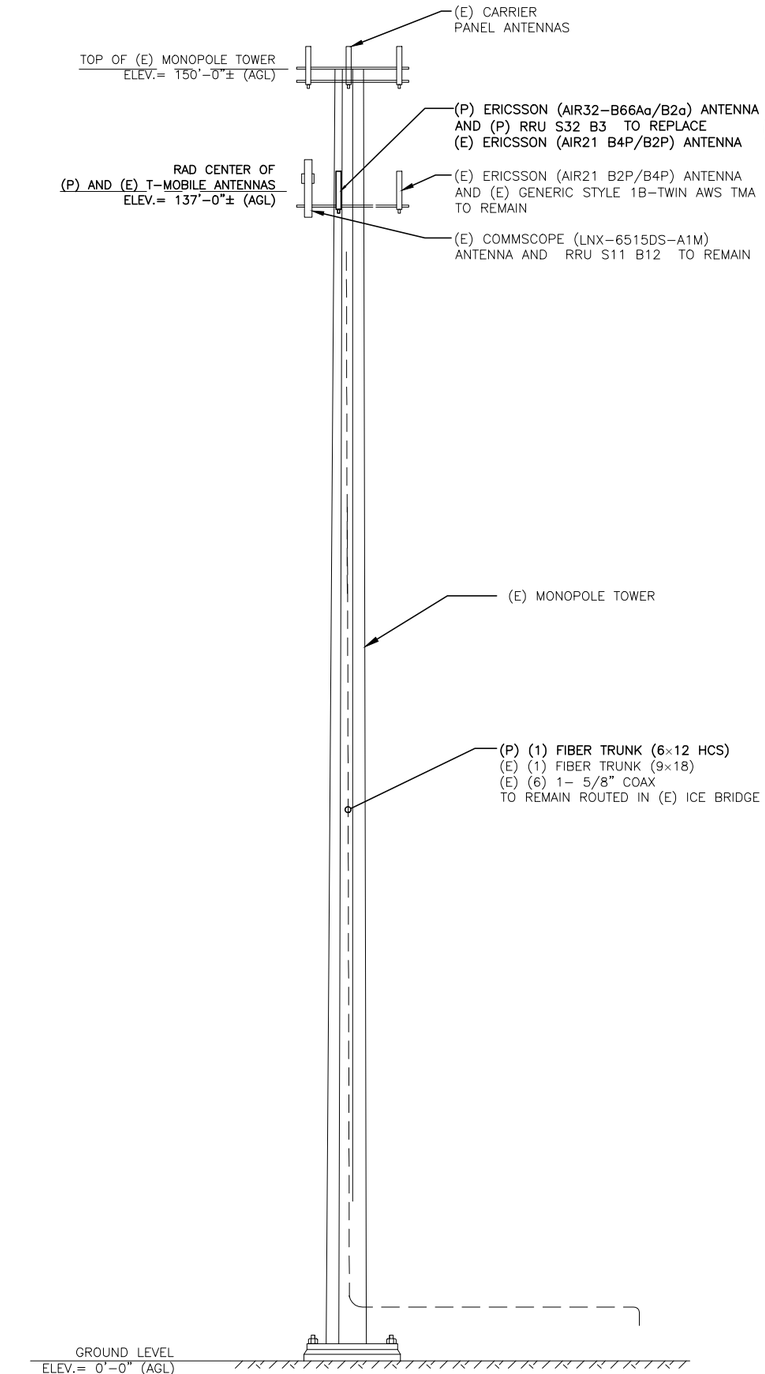
2 / A-2



MOUNTING DETAIL

SCALE: N.T.S

3 / A-2



ELEVATION

SCALE: N.T.S

2 / A-2

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RF MAN.			
ZONING			
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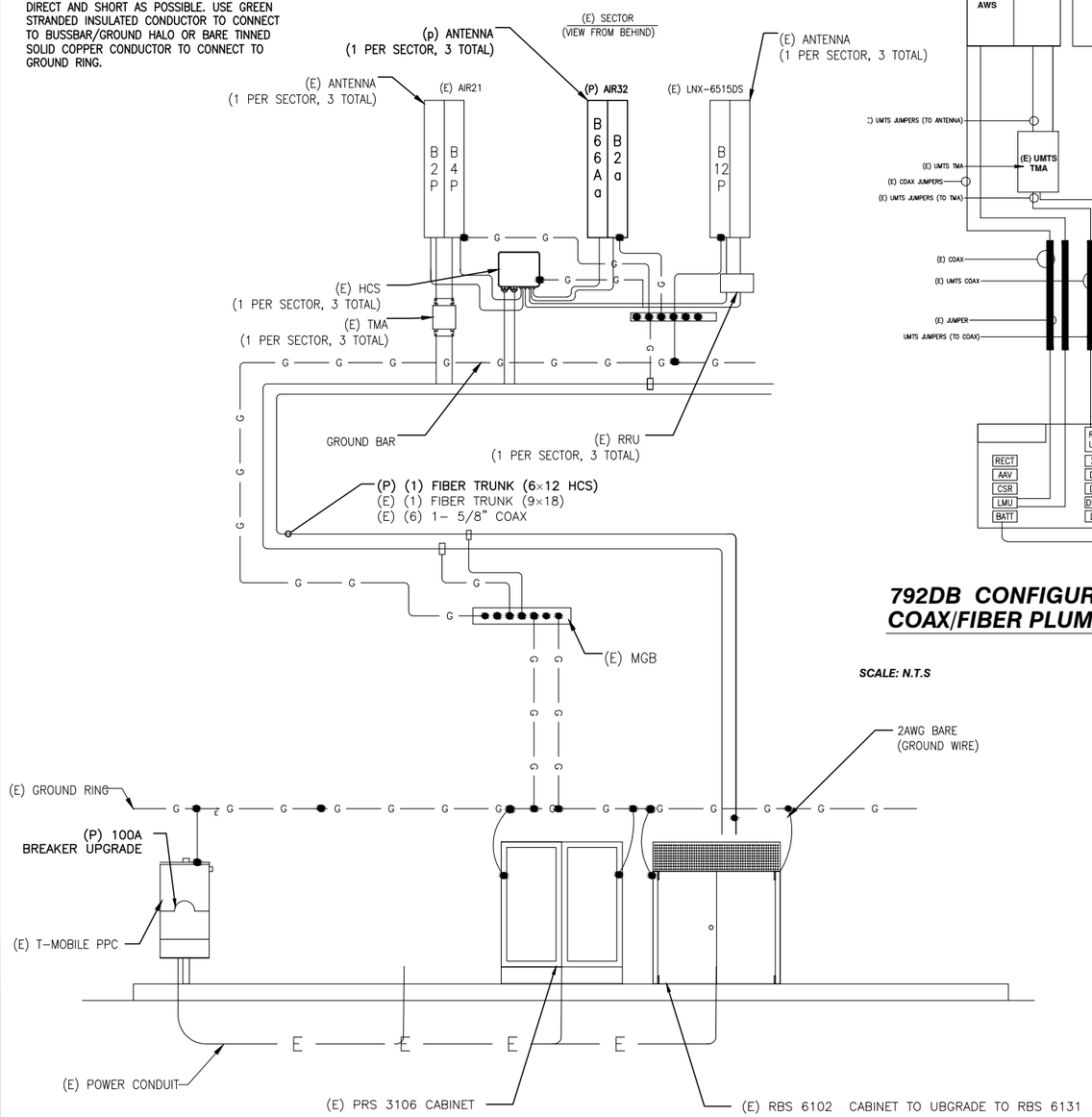
SITE NAME
CTNH302/CLRCHANNEL/PROSP

SITE ADDRESS
151 WATERBURY RD
PROSPECT, CT 06712

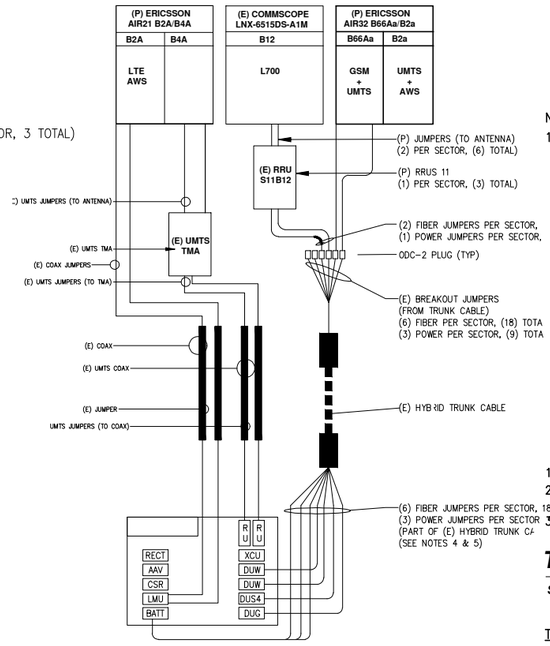
SHEET TITLE
ELEVATION
ANTENNA PLAN

SHEET NUMBER
A-2

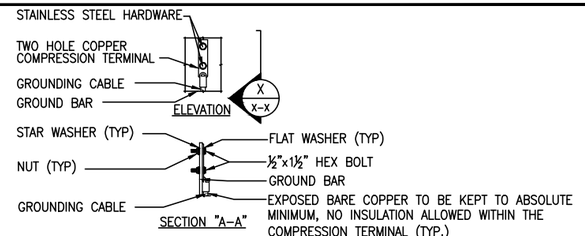
NOTES:
A. PROVIDE #2AWG GROUNDING CONDUCTOR, U.O.N.
B. DO NOT INSTALL GROUND KIT AT BEND. DIRECT GROUND WIRE DOWN TO ANTENNA BUSSBAR.
C. PROVIDE GROUNDING ELECTRODES IN QUANTITY, TYPE AND SIZE AS INDICATED ON SITE GROUNDING PLAN.
D. ADD COAX GROUND KIT CONNECTION TO BUSSBAR WHEN LENGTH OF COAX RUN (FROM EQUIPMENT TO ANTENNA) IS GREATER THAN 20'-0".
E. GROUND HCS BOX W/ #2AWG GROUNDING CONDUCTOR ATTACHED TO GOOD GROUND AS DIRECT AND SHORT AS POSSIBLE. USE GREEN STRANDED INSULATED CONDUCTOR TO CONNECT TO BUSSBAR/GROUND HALO OR BARE TINNED SOLID COPPER CONDUCTOR TO CONNECT TO GROUND RING.



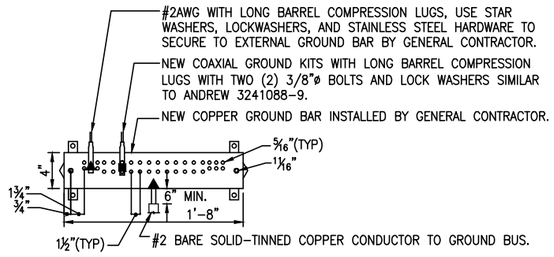
GROUNDING DIGRAM
SCALE: N.T.S
1 E-1



792DB CONFIGURATION
COAX/FIBER PLUMBING DIAGRAM
SCALE: N.T.S
2 E-1



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



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

TYPICAL GROUND BAR CONNECTIONS DETAIL
SCALE: N.T.S
3 E-1

TRUNK FIBER NOTES:
1. IN GENERAL THIS CABLE WILL HANDLE SIMILARLY TO ⅞" COAXIAL CABLE, AND SIMILAR INSTALLATION TECHNIQUES APPLY. ALL CABLES ARE INDIVIDUALLY SERIALIZED, BE SURE TO WRITE DOWN THE CABLE SERIAL NUMBER FOR FUTURE REFERENCE.
2. THE TERMINATED FIBER ENDS (THE BROKEN OUT FIBERS PLUS CONNECTORS) HOWEVER ARE FRAGILE, AND THESE MUST BE PROTECTED DURING THE INSTALLATION PROCESS.
3. LEAVE THE PROTECTIVE TUBE AND SOCK AROUND THE FIBER TAILS AND CONNECTORS IN PLACE DURING HOISTING AND SECURING THE CABLE. REMOVE THIS ONLY JUST PRIOR TO MAKING THE FINAL CONNECTIONS TO THE OVP BOX.
4. DO NOT BEND THE FIBER ENDS (IN THE ORANGE FURCATION TUBES) TIGHTER THAN ¾" (19MM) BEND RADIUS, ELSE THERE IS A RISK OF BREAKING THE GLASS FIBERS.
5. BE SURE THAT THE LACE UP ENDS AND FIBER CONNECTORS ARE NOT DAMAGED BY ATTACHMENT OF A HOISTING GRIP OR DURING THE HOISTING PROCESS. ATTACH A HOISTING GRIP ON THE JACKETED CABLE NO LESS THAN 6 INCHES BELOW THE FIBER BREAKOUT POINT. IF A HOISTING GRIP IS NOT EASILY ATTACHED, USE A SIMPLE LINE ATTACHED BELOW THE FIBER BREAK-OUT POINT (I.E. AT THE CABLE OUTER JACKET). PREVENT THE FIBER TAILS (IN PROTECTIVE TUBE) AT THE CABLE END FROM UNDUE MOVEMENT DURING HOISTING BY SECURING THE PROTECTIVE TUBE (WITH OUTER SOCK) TO THE HOISTING LINE.
6. DURING HOISTING ENSURE THAT THERE IS A FREE PATH AND THAT THE CABLE, AND ESPECIALLY THE FIBER ENDS, WILL NOT BE SNAGGED ON TOWER MEMBERS OR OTHER OBSTACLES.
7. INSTALLATION TEMPERATURE RANGE IS -22F TO 158F (-30C TO +70C).
8. MINIMUM CABLE BEND RADII ARE 22.2" (565MM) LOADED (WITH TENSION ON THE CABLE) AND 11.1" (280MM) UNLOADED.
9. MAXIMUM CABLE TENSILE LOAD IS 3560 N (800 LB) SHORT TERM (DURING INSTALLATION) AND 1070 N (240 LB) LONG TERM.
10. COMMSCOPE NON LACE UP GRIP RECOMMENDED FOR MONOPOLE INSTALLATIONS.
11. MAXIMUM HANGER SPACING 3FT (0.9 M).

HYBRID FIBER/POWER JUMPER NOTES:
1. IN GENERAL THIS CABLE WILL HANDLE SIMILARLY TO A ⅜" COAXIAL CABLE.
2. THE TERMINATED FIBER ENDS HOWEVER ARE FRAGILE AND MUST BE PROTECTED DURING INSTALLATION. LEAVE THE PACKAGING AROUND THE FIBER ENDS IN PLACE UNTIL READY TO CONNECT THE JUMPER BETWEEN OVP AND RRU OR BBU.
3. DO NOT BEND THE FIBER BREAKOUT CABLE (BETWEEN THE MAIN CABLE AND THE FIBER CONNECTOR) TIGHTER THAN ¾" (19MM) RADIUS, ELSE THERE IS A RISK OF BREAKING THE GLASS.
4. ATTACH THE MAIN CABLE SECURELY TO THE STRUCTURE OR EQUIPMENT USING HANGERS AND/OR CABLE TIES TO PREVENT STRAIN ON CONNECTIONS FROM MOVEMENT IN WIND OR SNOW/ICE CONDITIONS.
5. ENSURE THE LC FIBER CONNECTORS ARE SEATED FIRMLY IN PANEL IN OVP OR IN EQUIPMENT.
6. INSTALLATION TEMPERATURE RANGE IS -22F TO 158F (-30C TO 70C).
7. MINIMUM CABLE BEND RADII ARE 10.3 INCH (265MM) LOADED (WITH TENSION ON THE CABLE) AND 5.2 INCH (130MM) UNLOADED.
8. MAXIMUM CABLE TENSILE LOAD IS 350 LB (1560N) SHORT TERM (DURING INSTALLATION) AND 105 LB (470N) LONG TERM.
9. STANDARD LENGTHS AVAILABLE ARE 6 FEET, 15 FEET AND 20 FEET

COAX/FIBER NOTES
SCALE: N.T.S
4 E-1

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SUBMITTALS

DATE	DESCRIPTION	REVISION
05/4/16	ISSUED FOR REVIEW	A

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

PROJECT NO:	CTNH302A
DRAWN BY:	MS
CHECKED BY:	SM

PROFESSIONAL SEAL

SITE NUMBER
CTNH302A
SITE NAME
CTNH302/CLRCHANNEL/PROSP
SITE ADDRESS
151 WATERBURY RD
PROSPECT, CT 06712

SHEET TITLE
GROUNDING AND ONE LINE DIAGRAM
COAX/FIBER DIAGRAM

SHEET NUMBER
E-1

Transcend Wireless

Shappy, Gregg <gshappy@transcendwireless.com>

151 Waterbury Road

3 messages

Rosalyn Moffo <landuse03@sbcglobal.net> Tue, Jun 21, 2016 at 3:24 PM
Reply-To: Rosalyn Moffo <landuse03@sbcglobal.net>
To: "gshappy@transcendwireless.com" <gshappy@transcendwireless.com>

To Whom It May Concern:

All Land Use records for the existing tower at 151 Waterbury Road have been reviewed and the original Zoning decision has not been found.

Please contact the Land Use office if you have any questions @ (203) 758-4461.

Thank you.

Rosalyn Moffo
Land Use Clerk

Shappy, Gregg <gshappy@transcendwireless.com> Tue, Jun 21, 2016 at 3:36 PM
To: Rosalyn Moffo <landuse03@sbcglobal.net>

Thank you Rosalyn

Gregg Shappy
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, NJ 07430
gshappy@transcendwireless.com
(845)553-2045

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Rosalyn Moffo <landuse03@sbcglobal.net> Wed, Jun 22, 2016 at 10:10 AM
Reply-To: Rosalyn Moffo <landuse03@sbcglobal.net>
To: "Shappy, Gregg" <gshappy@transcendwireless.com>

No Problem!

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