

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

March 27, 2019

Elizabeth Jamieson
Real Estate Specialist
Transcend Wireless
10 Industrial Ave, Suite 3
Mahwah, NJ 07430

RE: **EM-T-MOBILE-152-190301** – T-Mobile notice of intent to modify an existing telecommunications facility located at 53 Dayton Road, Waterford, Connecticut.

Dear Ms. Jamieson:

The Connecticut Siting Council (Council) is in receipt of your correspondence of March 15, 2019 submitted in response to the Council's March 5, 2019 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/IN/emr



Robidoux, Evan

From: ejamieson@transcendwireless.com
Sent: Friday, March 15, 2019 4:24 PM
To: Nwankwo, Ifeanyi
Cc: CSC-DL Siting Council
Subject: RE: 53 Dayton Road, Waterford CT / T-Mobile / CT11041D
Attachments: STAMPED PDF. T-Mobile @ 411183 WATERFORD CT, CT (12605190_C3_01). Structural Analysis (42%).pdf; STAMPED CT11041D ATC-411183 WATERFORD CT, CT (12607172).AE(CD).REV3.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello

Attached is the updated SA to reflect the 2018 code, and attached are the correct drawings. I just want to note that the correct drawings were submitted with the application originally, we had just received the wrong hard copy set to send

From: Nwankwo, Ifeanyi <Ifeanyi.Nwankwo@ct.gov>
Sent: Friday, March 15, 2019 10:38 AM
To: 'ejamieson@transcendwireless.com' <ejamieson@transcendwireless.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: 53 Dayton Road, Waterford CT / T-Mobile / CT11041D

Hi,
Thank you for your email.
One hard copy of each and the digital copies via email will be fine.
Thank you.

Best Regards
Ifeanyichukwu Nwankwo
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051
P: 860.827.2941 | F: 860.827.2950 | E: Ifeanyi.Nwankwo@ct.gov



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*Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.*

From: ejamieson@transcendwireless.com [mailto:ejamieson@transcendwireless.com]
Sent: Friday, March 15, 2019 10:10 AM
To: Nwankwo, Ifeanyi; Robidoux, Evan
Subject: 53 Dayton Road, Waterford CT / T-Mobile / CT11041D

Hello again Ifeanyichukwu, or perhaps this question is for Evan?

I do have a question regarding the above referenced filing that was made on February 14th, where a revision to the structural referencing the 2018 building code needed to be made.

The structural has been updated. I was going to send a copy digitally today, but can you please tell me if you need 3 hard copies of the structural (and drawings) re-sent to the Council as well?

Thanks for your help

Elizabeth

From: Nwankwo, Ifeanyi <Ifeanyi.Nwankwo@ct.gov>
Sent: Friday, March 15, 2019 9:21 AM
To: 'ejamieson@transcendwireless.com' <ejamieson@transcendwireless.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: em-t-mobile-064-181205 / 305 West Service Road, Hartford 302466-WT1 / Customer #CT11491B (12605178)
: Revised SA FW: L700 4x2 T-MOBILE @

Good Morning Ms. Jamieson

This exempt modification request was denied on the 1st of February 2019, and notice was sent to all parties. (please see attached)

Once an exempt modification request has been denied the applicant will need to resubmit a new application with the required documents and supporting materials with a new filing fee.

Should you have any questions or need anything further please do not hesitate to contact me.

Thank you.

Best Regards
Ifeanyichukwu Nwankwo
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051
P: 860.827.2941 | F: 860.827.2950 | E: Ifeanyi.Nwankwo@ct.gov



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From: ejamieson@transcendwireless.com [<mailto:ejamieson@transcendwireless.com>]

Sent: Thursday, March 14, 2019 2:50 PM

To: CSC-DL Siting Council; Robidoux, Evan

Subject: em-t-mobile-064-181205 / 305 West Service Road, Hartford 302466-WT1 / Customer #CT11491B (12605178) :
Revised SA FW: L700 4x2 T-MOBILE @

Hello

Attached is an updated structural analysis referenced in the attached incomplete letter. Please let me know if there is anything else you need.

Elizabeth Jamieson

Real Estate Specialist

Transcend Wireless

10 Industrial Ave, Ste 3

Mahwah, NJ 07430

(M) 860-605-7808

EJamieson@TranscendWireless.com

Transcend Wireless



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 180 ft Self Supported Tower
ATC Site Name : Waterford CT, CT
ATC Site Number : 411183
Engineering Number : 12605190_C3_01
Proposed Carrier : T-Mobile
Carrier Site Name : CT11041D
Carrier Site Number : CT11041D
Site Location : 53 Dayton Rd.
Waterford, CT 06385-4274
41.377800, -72.141400
County : New London
Date : November 5, 2018
Max Usage : 42%
Result : Pass

Prepared By:
Alexander Cartledge
Structural Engineer I

Reviewed By:

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	Rohn Drawing #A982166, dated August 20, 1998
Foundation Drawing	Rohn Drawing #A982167-1, dated August 20, 1998
Geotechnical Report	Clarence Welti Site Name Cohenzie Fire Station; Waterford, CT, dated March 24, 1997

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:	105 mph (3-Second Gust, Vasd) / 135 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.16$, $S_1 = 0.06$
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					
180.0	187.0	4	15' Omni	Side Arms	(7) 7/8" Coax	Town Of Waterford Police Dept
	184.0	2	8' Omni			
	182.0	1	5' Omni			
	181.0	1	dbSpectra ATS4TMA4-4			
	174.0	1	13' Omni			
166.0	166.0	3	Ericsson AIR 21	Sector Frames	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex	T-Mobile
159.0	159.0	3	CCI TPA-65R-LCUUUU-H8	Sector Frames	(3) 0.39" Fiber Trunk (6) 0.78" 8 AWG 6 (12) 1 5/8" Coax (1) 3" Conduit	AT&T Mobility
		3	CCI HPA-65R-BUU-H8			
		3	Powerwave 7770.00			
		3	Ericsson RRUS-32 (77 lbs)			
		3	Ericsson RRUS 11 w/ RRUS A2			
		3	Ericsson RRUS 32 B2			
		3	Ericsson RRUS-11 (50 lbs.)			
		3	Raycap DC6-48-60-0-8F			
		6	Powerwave LGP21401			
		6	Powerwave LGP13519			
3	Kathrein 782 10253					
156.0	163.0	1	15' Omni	Side Arm	(1) 1 5/8" Coax	Town Of Waterford Police Dept
132.0	132.0	1	VZW Unused Reserve: 17,576 sq in	Sector Frames	(18) 1 5/8" Coax (3) 1 1/4" Hybriflex	Verizon
		2	Swedcom SLCP 2x6015			
		1	Antel BXA-70063-6CF-EDIN-2			
		2	Antel LPA-80063-4CF-EDIN-X			
		1	Swedcom SACP 2x5516			
		6	48" x 12" x 7" Panel			
		3	Antel BXA-171063-8CF-EDIN-X			
		3	Alcatel-Lucent B25 RRH4x30			
		6	Alcatel-Lucent B66A RRH 4x45			
		3	Raycap RRFDC-1064-PF-48			
125.0	125.0	6	Kathrein 800 10504	Sector Frames	-	Metro PCS
		1	MicroPulse GPS-QBW-26N			
50.0	50.0	1	GPS	Stand-Off	(1) 1/2" Coax	Verizon

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
164.0	164.0	3	Ericsson AIR 32 B4A-B2P	-	(1) 1 5/8" Hybriflex	T-Mobile
		3	Andrew LNX-6515DS-VTM			
		3	Ericsson RRUS 11 B12			



Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
166.0	166.0	3	RFS APXVAARR24_43-U-NA20	Sector Frames	(2) 1 1/4" Hybriflex	T-Mobile
		3	Ericsson AIR32 B66Aa/B2a			
		3	Ericsson Radio 4449 B12,B71			

¹Mount 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 stacked on top of existing T-Mobile coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	40%	Pass
Diagonals	42%	Pass
Horizontals	40%	Pass
Anchor Bolts	20%	Pass
Leg Bolts	27%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	621.3	838.8	233.0	28%
Axial (Kips)	732.9	989.4	320.1	32%
Shear (Kips)	141.8	191.4	34.8	18%

* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist, and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
166.0	Ericsson Radio 4449 B12,B71	T-Mobile	0.122	0.005	0.092
	Ericsson AIR32 B66Aa/B2a				
	RFS APXVAARR24_43-U-NA20				

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



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

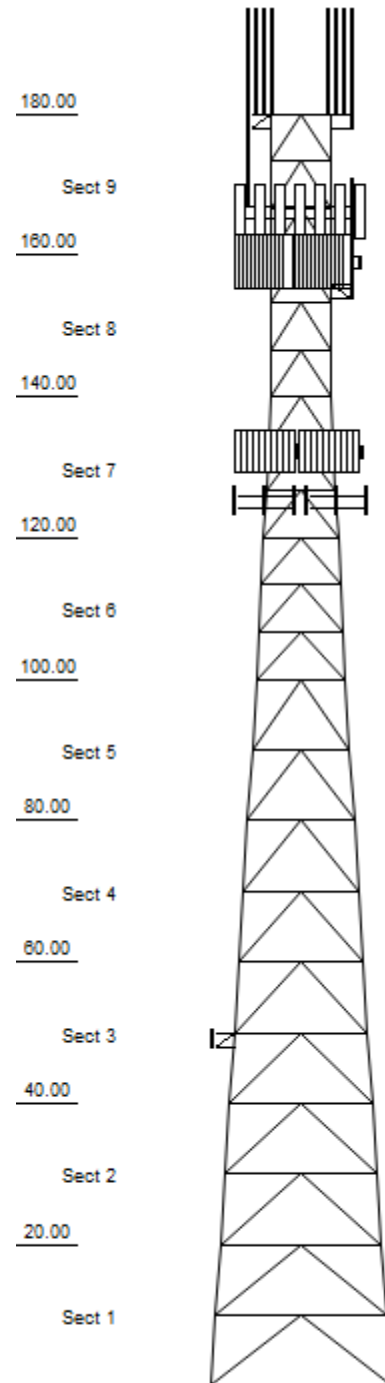
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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 supplied herein.



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Loads: 105 mph no ice
 50 mph w/ 3/4" radial ice
 Site Class: D Ss: 0.16 S1: 0.06
 60 mph Serviceability

Job Information		
Tower : 411183	Location : WATERFORD CT,	Base Width : 25.55 ft
Client : T-Mobile		Top Width : 8.50 ft
Code : ANSI/TIA-222-G		Tower Ht : 180.00 ft
		Shape : Triangle

Sections Properties				
Section	Leg Members	Diagonal Members	Horizontal Members	
1 - 2	PX 50 ksi 12" DIA PIPE	PST 50 ksi 3-1/2" DIA PIPE	PST 50 ksi 3" DIA PIPE	
3 - 4	PX 50 ksi 10" DIA PIPE	PX 50 ksi 3" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	
5	PX 50 ksi 8" DIA PIPE	PX 50 ksi 3" DIA PIPE	PX 50 ksi 2" DIA PIPE	
6	PX 50 ksi 6" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2" DIA PIPE	
7	PX 50 ksi 5" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 1-1/2" DIA PIPE	
8	PST 50 ksi 4" DIA PIPE	PST 50 ksi 2-1/2" DIA PIPE	PST 50 ksi 2" DIA PIPE	
9	PST 50 ksi 3" DIA PIPE	PST 50 ksi 2" DIA PIPE	PST 50 ksi 1-1/2" DIA PIPE	

Discrete Appurtenance				
Elev (ft)	Type	Qty	Description	
180.00	Mounting Frame	1	Round Sector Frame	
180.00	Straight Arm	2	Round Side Arm	
180.00	Whip	2	15' Omni	
180.00	Whip	1	15' Omni	
180.00	Whip	1	15' Omni	
180.00	Whip	1	13' Omni	
180.00		1	dbSpectra ATS4TMA4-4	
180.00	Whip	2	8' Omni	
180.00	Whip	1	5' Omni	
166.00	Panel	3	RFS APXVAARR24_43-U-NA20	
166.00	Mounting Frame	3	Round Sector Frame	
166.00	Panel	3	Ericsson AIR32 B66Aa/B2a	
166.00	Panel	3	Ericsson AIR 21	
166.00	Panel	3	Ericsson Radio 4449 B12,B71	
159.00	Mounting Frame	3	Round Sector Frame	
159.00	Panel	3	CCI TPA-65R-LCUUUU-H8	
159.00	Panel	3	CCI HPA-65R-BUUU-H8	
159.00	Panel	3	Powerwave Allgon 7770.00	
159.00	Panel	3	Ericsson RRUS-32 (77 lbs)	
159.00	Panel	3	Ericsson RRUS 11 w/ RRUS A2	
159.00	Panel	3	Ericsson RRUS 32 B2	
159.00	Panel	3	Ericsson RRUS-11 (50 lbs.)	
159.00	Panel	3	Raycap DC6-48-60-0-8F	
159.00	Panel	6	Powerwave Allgon LGP21401	
159.00	Panel	6	Powerwave Allgon LGP13519	
159.00	Panel	3	Kathrein Scala 782 10253	
156.00	Straight Arm	1	Round Side Arm	
156.00	Whip	1	15' Omni	
132.00	Panel	1	VZW Unused Reserve: 17,576 sq	
132.00	Mounting Frame	3	Round Sector Frame	
132.00	Panel	2	Swedcom SLCP 2x6015	
132.00	Panel	1	Amphenol Antel BXA-70063-6CF-E	
132.00	Panel	2	Amphenol Antel LPA-80063-4CF-E	
132.00	Panel	1	Swedcom SACP 2x5516	
132.00	Panel	6	48" x 12" x 7" Panel	
132.00	Panel	3	Amphenol Antel BXA-171063-8CF-	
132.00	Panel	3	Alcatel-Lucent B25 RRH4x30	
132.00	Panel	6	Alcatel-Lucent B66A RRH 4x45	
132.00	Panel	3	Raycap RRFDC-1064-PF-48	
125.00	Mounting Frame	3	Flat Light Sector Frame	
125.00	Panel	6	Kathrein Scala 800 10504	
125.00	Panel	1	MicroPulse GPS-QBW-26N	
50.00	Straight Arm	1	Stand-Off	
50.00	Whip	1	GPS	

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Job Information		
Tower : 411183	Location : WATERFORD CT,	Base Width : 25.55 ft
Client : T-Mobile		Top Width : 8.50 ft
Code : ANSI/TIA-222-G		Tower Ht : 180.00 ft
		Shape : Triangle

Linear Appurtenance				
Elev (ft)				
From	To	Qty	Description	
30.00	180.00	1	Waveguide	
30.00	180.00	7	7/8" Coax	
0.00	180.00	1	Waveguide	
30.00	166.00	1	1 5/8" Hybriflex	
30.00	166.00	12	1 5/8" Coax	
30.00	166.00	2	1 1/4" Hybriflex Cab	
0.00	166.00	1	Waveguide	
30.00	159.00	1	Waveguide	
30.00	159.00	1	3" Conduit	
30.00	159.00	12	1 5/8" Coax	
30.00	159.00	6	0.78" 8 AWG 6	
30.00	159.00	3	0.39" Fiber Trunk	
30.00	156.00	1	1 5/8" Coax	
30.00	132.00	18	1 5/8" Coax	
30.00	132.00	3	1 1/4" Hybriflex Cab	
30.00	50.00	1	1/2" Coax	

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	5,985.86	148.85	53.07
DL + WL + IL	1,434.87	234.13	12.56

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
320.14	232.96	34.75

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

11/5/2018 3:56:08 PM

Customer: T-Mobile

Analysis Parameters

Location:	NEW LONDON County, CT	Height (ft):	180
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	25.55
Tower Manufacturer:	Rohn	Top Face Width (ft):	8.50
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	105 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	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):	0.81		
T _L (sec):	6	p:	1.3
S _s :	0.163	S ₁ :	0.059
F _a :	1.600	F _v :	2.400
S _{ds} :	0.174	S _{d1} :	0.094
		C _s :	0.039
		C _s , Max:	0.039
		C _s , Min:	0.030

Load Cases

1.2D + 1.6W Normal	105 mph Normal with No Ice
1.2D + 1.6W 60 deg	105 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	105 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	105 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	105 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	105 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	105 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	105 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	105 mph 330 degree with No Ice
0.9D + 1.6W Normal	105 mph Normal with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	105 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	105 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	105 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	105 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	105 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	105 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	105 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	105 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 0.75 in Radial Ice

Analysis Parameters

1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 0.75 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
180.0	5' Omni	1	10	1.0	5.0	2.0	2.0	1.00	1.00	2.0	76.5	28.13	38	12
180.0	8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	4.0	736.9	28.22	184	60
180.0	dbSpectra	1	50	3.5	2.6	13.3	11.5	1.00	0.67	1.0	88.8	28.09	89	60
180.0	13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	-6.0	883.9	27.77	147	48
180.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1214.5	28.35	174	48
180.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1214.5	28.35	174	48
180.0	15' Omni	2	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	2429.1	28.35	347	96
180.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	28.04	321	360
180.0	Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	28.04	549	360
166.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	27.40	73	266
166.0	Ericsson AIR 21	3	91	6.1	4.7	12.0	7.9	0.80	0.70	0.0	0.0	27.40	379	328
166.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	27.40	413	476
166.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.40	809	1080
166.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	27.40	1140	460
159.0	Kathrein Scala 782	3	3	0.1	0.2	4.2	1.8	0.80	0.50	0.0	0.0	27.07	5	10
159.0	Powerwave Allgon	6	5	0.3	0.4	7.9	2.7	0.80	0.50	0.0	0.0	27.07	30	38
159.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	27.07	97	102
159.0	Raycap DC6-48-60-0-	3	33	1.2	1.9	11.0	11.0	0.80	1.00	0.0	0.0	27.07	105	118
159.0	Ericsson RRUS-11	3	50	2.6	1.5	17.3	7.2	0.80	0.67	0.0	0.0	27.07	152	180
159.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	27.07	162	191
159.0	Ericsson RRUS 11 w/	3	72	2.8	1.6	17.0	10.6	0.80	0.67	0.0	0.0	27.07	165	259
159.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.67	0.0	0.0	27.07	196	277
159.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	27.07	316	126
159.0	CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	27.07	768	245
159.0	CCI TPA-65R-	3	82	13.3	8.0	14.4	8.6	0.80	0.69	0.0	0.0	27.07	811	294
159.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.07	799	1080
156.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1167.8	27.26	167	48
156.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.92	190	180
132.0	Raycap RRFDC-1064-	3	14	1.2	1.1	10.2	8.2	0.80	0.50	0.0	0.0	25.67	49	50
132.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.67	119	191
132.0	Alcatel-Lucent B66A	6	67	2.6	2.2	12.0	7.3	0.80	0.67	0.0	0.0	25.67	290	482
132.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	0.0	0.0	25.67	175	38
132.0	48" x 12" x 7" Panel	6	35	5.1	4.0	12.0	7.0	0.80	0.68	0.0	0.0	25.67	578	252
132.0	Swedcom SACP	1	16	5.1	4.7	9.7	6.5	0.80	1.00	0.0	0.0	25.67	142	19
132.0	Amphenol Antel LPA-	2	20	6.1	4.0	15.2	13.1	0.80	0.82	0.0	0.0	25.67	281	48
132.0	Amphenol Antel BXA-	1	17	7.6	5.9	11.2	5.2	0.80	1.00	0.0	0.0	25.67	211	20
132.0	Swedcom SLCP	2	30	10.0	6.4	14.0	11.0	0.80	0.80	0.0	0.0	25.67	446	72
132.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.67	758	1080
132.0	VZW Unused	1	1513	122.2	2.2	26.0	26.0	1.00	1.00	0.0	0.0	25.67	4264	1815
125.0	MicroPulse GPS-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	25.27	2	1
125.0	Kathrein Scala 800	6	18	3.3	4.5	6.1	2.7	0.80	0.67	0.0	0.0	25.27	370	127
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.27	1038	1440
50.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	19.45	26	12
50.00	Stand-Off	1	40	1.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.45	43	48
Totals		114	10455	748.9									17595	12546

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
180.0	5' Omni	1	10	1.0	5.0	2.0	2.0	1.00	1.00	2.0	76.5	28.13	38	9
180.0	8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	4.0	736.9	28.22	184	45

Tower Loading

180.0 dbSpectra	1	50	3.5	2.6	13.3	11.5	1.00	0.67	1.0	88.8	28.09	89	45
180.0 13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	-6.0	883.9	27.77	147	36
180.0 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1214.5	28.35	174	36
180.0 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1214.5	28.35	174	36
180.0 15' Omni	2	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	2429.1	28.35	347	72
180.0 Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	28.04	321	270
180.0 Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	28.04	549	270
166.0 Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	27.40	73	200
166.0 Ericsson AIR 21	3	91	6.1	4.7	12.0	7.9	0.80	0.70	0.0	0.0	27.40	379	246
166.0 Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	27.40	413	357
166.0 Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.40	809	810
166.0 RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	27.40	1140	345
159.0 Kathrein Scala 782	3	3	0.1	0.2	4.2	1.8	0.80	0.50	0.0	0.0	27.07	5	8
159.0 Powerwave Allgon	6	5	0.3	0.4	7.9	2.7	0.80	0.50	0.0	0.0	27.07	30	29
159.0 Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	27.07	97	76
159.0 Raycap DC6-48-60-0-	3	33	1.2	1.9	11.0	11.0	0.80	1.00	0.0	0.0	27.07	105	89
159.0 Ericsson RRUS-11	3	50	2.6	1.5	17.3	7.2	0.80	0.67	0.0	0.0	27.07	152	135
159.0 Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	27.07	162	143
159.0 Ericsson RRUS 11 w/	3	72	2.8	1.6	17.0	10.6	0.80	0.67	0.0	0.0	27.07	165	194
159.0 Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.67	0.0	0.0	27.07	196	208
159.0 Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	27.07	316	95
159.0 CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	27.07	768	184
159.0 CCI TPA-65R-	3	82	13.3	8.0	14.4	8.6	0.80	0.69	0.0	0.0	27.07	811	220
159.0 Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	27.07	799	810
156.0 15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	1167.8	27.26	167	36
156.0 Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	26.92	190	135
132.0 Raycap RRFDC-1064-	3	14	1.2	1.1	10.2	8.2	0.80	0.50	0.0	0.0	25.67	49	38
132.0 Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	25.67	119	143
132.0 Alcatel-Lucent B66A	6	67	2.6	2.2	12.0	7.3	0.80	0.67	0.0	0.0	25.67	290	362
132.0 Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	0.0	0.0	25.67	175	28
132.0 48" x 12" x 7" Panel	6	35	5.1	4.0	12.0	7.0	0.80	0.68	0.0	0.0	25.67	578	189
132.0 Swedcom SACP	1	16	5.1	4.7	9.7	6.5	0.80	1.00	0.0	0.0	25.67	142	14
132.0 Amphenol Antel LPA-	2	20	6.1	4.0	15.2	13.1	0.80	0.82	0.0	0.0	25.67	281	36
132.0 Amphenol Antel BXA-	1	17	7.6	5.9	11.2	5.2	0.80	1.00	0.0	0.0	25.67	211	15
132.0 Swedcom SLCP	2	30	10.0	6.4	14.0	11.0	0.80	0.80	0.0	0.0	25.67	446	54
132.0 Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	25.67	758	810
132.0 VZW Unused	1	1513	122.2	2.2	26.0	26.0	1.00	1.00	0.0	0.0	25.67	4264	1361
125.0 MicroPulse GPS-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	25.27	2	1
125.0 Kathrein Scala 800	6	18	3.3	4.5	6.1	2.7	0.80	0.67	0.0	0.0	25.27	370	95
125.0 Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	25.27	1038	1080
50.00 GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	19.45	26	9
50.00 Stand-Off	1	40	1.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.45	43	36
Totals	114	10455	748.9									17595	9409

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
180.0	5' Omni	1	65	2.2	5.0	2.0	2.0	1.00	1.00	2.0	23.8	6.38	12	67
180.0	8' Omni	2	135	4.4	8.0	3.0	3.0	1.00	1.00	4.0	193.2	6.40	48	279
180.0	dbSpectra	1	85	5.9	2.6	13.3	11.5	1.00	0.67	1.0	21.5	6.37	21	95
180.0	13' Omni	1	162	9.2	13.0	3.0	3.0	1.00	1.00	-6.0	296.2	6.30	49	170
180.0	15' Omni	1	241	10.0	15.0	3.0	3.0	1.00	1.00	7.0	382.3	6.43	55	249
180.0	15' Omni	1	241	10.0	15.0	3.0	3.0	1.00	1.00	7.0	382.3	6.43	55	249
180.0	15' Omni	2	241	10.0	15.0	3.0	3.0	1.00	1.00	7.0	764.6	6.43	109	499
180.0	Round Side Arm	2	224	8.0	0.0	0.0	0.0	0.90	0.90	0.0	0.0	6.36	70	508

Tower Loading

180.0	Round Sector Frame	1	673	31.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.36	169	733
166.0	Ericsson Radio 4449	3	143	2.2	1.2	13.2	9.3	0.80	0.50	0.0	0.0	6.21	14	473
166.0	Ericsson AIR 21	3	262	7.2	4.7	12.0	7.9	0.80	0.70	0.0	0.0	6.21	64	840
166.0	Ericsson AIR32	3	318	7.7	4.7	12.9	8.7	0.80	0.71	0.0	0.0	6.21	69	1034
166.0	Round Sector Frame	3	673	31.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.21	248	2200
166.0	RFS	3	564	22.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	6.21	177	1770
159.0	Kathrein Scala 782	3	11	0.3	0.2	4.2	1.8	0.80	0.50	0.0	0.0	6.14	2	34
159.0	Powerwave Allgon	6	9	0.6	0.4	7.9	2.7	0.80	0.50	0.0	0.0	6.14	7	60
159.0	Powerwave Allgon	6	24	1.9	1.2	9.2	2.6	0.80	0.50	0.0	0.0	6.14	23	161
159.0	Raycap DC6-48-60-0-	3	121	2.7	1.9	11.0	11.0	0.80	1.00	0.0	0.0	6.14	33	382
159.0	Ericsson RRUS-11	3	131	3.2	1.5	17.3	7.2	0.80	0.67	0.0	0.0	6.14	27	424
159.0	Ericsson RRUS 32 B2	3	141	3.5	2.3	12.1	7.0	0.80	0.67	0.0	0.0	6.14	29	455
159.0	Ericsson RRUS 11 w/	3	174	3.5	1.6	17.0	10.6	0.80	0.67	0.0	0.0	6.14	29	565
159.0	Ericsson RRUS-32	3	174	4.6	2.5	13.3	9.5	0.80	0.67	0.0	0.0	6.14	39	570
159.0	Powerwave Allgon	3	170	6.6	4.6	11.0	5.0	0.80	0.65	0.0	0.0	6.14	53	532
159.0	CCI HPA-65R-BUU-H8	3	359	14.6	7.7	14.8	7.4	0.80	0.67	0.0	0.0	6.14	122	1118
159.0	CCI TPA-65R-	3	394	14.9	8.0	14.4	8.6	0.80	0.69	0.0	0.0	6.14	129	1230
159.0	Round Sector Frame	3	669	31.0	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.14	244	2186
156.0	15' Omni	1	238	9.9	15.0	3.0	3.0	1.00	1.00	7.0	365.0	6.18	52	246
156.0	Round Side Arm	1	223	7.9	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.10	41	253
132.0	Raycap RRFDC-1064-	3	65	1.6	1.1	10.2	8.2	0.80	0.50	0.0	0.0	5.82	10	203
132.0	Alcatel-Lucent B25	3	125	2.7	1.8	12.0	7.2	0.80	0.67	0.0	0.0	5.82	22	407
132.0	Alcatel-Lucent B66A	6	151	3.3	2.2	12.0	7.3	0.80	0.67	0.0	0.0	5.82	52	986
132.0	Amphenol Antel BXA-	3	92	3.8	4.0	6.1	4.1	0.80	0.71	0.0	0.0	5.82	32	283
132.0	48" x 12" x 7" Panel	6	173	6.0	4.0	12.0	7.0	0.80	0.68	0.0	0.0	5.82	97	1081
132.0	Swedcom SACP	1	153	6.1	4.7	9.7	6.5	0.80	1.00	0.0	0.0	5.82	24	157
132.0	Amphenol Antel LPA-	2	222	7.2	4.0	15.2	13.1	0.80	0.82	0.0	0.0	5.82	47	452
132.0	Amphenol Antel BXA-	1	188	8.8	5.9	11.2	5.2	0.80	1.00	0.0	0.0	5.82	35	192
132.0	Swedcom SLCP	2	302	11.4	6.4	14.0	11.0	0.80	0.80	0.0	0.0	5.82	72	617
132.0	Round Sector Frame	3	663	30.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	5.82	229	2170
132.0	VZW Unused	1	2553	206.2	2.2	26.0	26.0	1.00	1.00	0.0	0.0	5.82	1020	2856
125.0	MicroPulse GPS-	1	11	0.3	0.4	3.2	3.2	0.80	1.00	0.0	0.0	5.73	1	11
125.0	Kathrein Scala 800	6	98	4.3	4.5	6.1	2.7	0.80	0.67	0.0	0.0	5.73	67	608
125.0	Flat Light Sector	3	697	32.8	0.0	0.0	0.0	0.75	0.75	0.0	0.0	5.73	270	2332
50.00	GPS	1	43	0.9	1.0	9.0	6.0	1.00	1.00	0.0	0.0	4.41	3	45
50.00	Stand-Off	1	82	2.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.41	10	90
Totals		114	27781	1170.0									3982	29872

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K _a	Orient. Factor	Vert. Ecc.(ft)	M _u (lb-ft)	Q _z (psf)	F _a (WL) (lb)	P _a (DL) (lb)
180.0	5' Omni	1	10	1.0	5.0	2.0	2.0	1.00	1.00	2.0	15.6	9.19	8	10
180.0	8' Omni	2	25	2.4	8.0	3.0	3.0	1.00	1.00	4.0	150.4	9.21	38	50
180.0	dbSpectra	1	50	3.5	2.6	13.3	11.5	1.00	0.67	1.0	18.1	9.17	18	50
180.0	13' Omni	1	40	3.9	13.0	3.0	3.0	1.00	1.00	-6.0	180.4	9.07	30	40
180.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	247.9	9.26	35	40
180.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	247.9	9.26	35	40
180.0	15' Omni	2	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	495.7	9.26	71	80
180.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	9.16	66	300
180.0	Round Sector Frame	1	300	14.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.16	112	300
166.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	8.95	15	222
166.0	Ericsson AIR 21	3	91	6.1	4.7	12.0	7.9	0.80	0.70	0.0	0.0	8.95	77	273
166.0	Ericsson AIR32	3	132	6.5	4.7	12.9	8.7	0.80	0.71	0.0	0.0	8.95	84	397
166.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.95	165	900
166.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	8.95	233	384

Site Number: 411183

Code:

ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Tower Loading

159.0	Kathrein Scala 782	3	3	0.1	0.2	4.2	1.8	0.80	0.50	0.0	0.0	8.84	1	9
159.0	Powerwave Allgon	6	5	0.3	0.4	7.9	2.7	0.80	0.50	0.0	0.0	8.84	6	32
159.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	8.84	20	85
159.0	Raycap DC6-48-60-0-	3	33	1.2	1.9	11.0	11.0	0.80	1.00	0.0	0.0	8.84	21	98
159.0	Ericsson RRUS-11	3	50	2.6	1.5	17.3	7.2	0.80	0.67	0.0	0.0	8.84	31	150
159.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	0.0	0.0	8.84	33	159
159.0	Ericsson RRUS 11 w/	3	72	2.8	1.6	17.0	10.6	0.80	0.67	0.0	0.0	8.84	34	216
159.0	Ericsson RRUS-32	3	77	3.3	2.5	13.3	9.5	0.80	0.67	0.0	0.0	8.84	40	231
159.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	8.84	65	105
159.0	CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	8.84	157	204
159.0	CCI TPA-65R-	3	82	13.3	8.0	14.4	8.6	0.80	0.69	0.0	0.0	8.84	165	245
159.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.84	163	900
156.0	15' Omni	1	40	4.5	15.0	3.0	3.0	1.00	1.00	7.0	238.3	8.90	34	40
156.0	Round Side Arm	1	150	5.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.79	39	150
132.0	Raycap RRFDC-1064-	3	14	1.2	1.1	10.2	8.2	0.80	0.50	0.0	0.0	8.38	10	42
132.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	8.38	24	159
132.0	Alcatel-Lucent B66A	6	67	2.6	2.2	12.0	7.3	0.80	0.67	0.0	0.0	8.38	59	402
132.0	Amphenol Antel BXA-	3	11	2.9	4.0	6.1	4.1	0.80	0.71	0.0	0.0	8.38	36	32
132.0	48" x 12" x 7" Panel	6	35	5.1	4.0	12.0	7.0	0.80	0.68	0.0	0.0	8.38	118	210
132.0	Swedcom SACP	1	16	5.1	4.7	9.7	6.5	0.80	1.00	0.0	0.0	8.38	29	16
132.0	Amphenol Antel LPA-	2	20	6.1	4.0	15.2	13.1	0.80	0.82	0.0	0.0	8.38	57	40
132.0	Amphenol Antel BXA-	1	17	7.6	5.9	11.2	5.2	0.80	1.00	0.0	0.0	8.38	43	17
132.0	Swedcom SLCP	2	30	10.0	6.4	14.0	11.0	0.80	0.80	0.0	0.0	8.38	91	60
132.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.38	155	900
132.0	VZW Unused	1	1513	122.2	2.2	26.0	26.0	1.00	1.00	0.0	0.0	8.38	870	1513
125.0	MicroPulse GPS-	1	1	0.1	0.4	3.2	3.2	0.80	1.00	0.0	0.0	8.25	1	1
125.0	Kathrein Scala 800	6	18	3.3	4.5	6.1	2.7	0.80	0.67	0.0	0.0	8.25	76	106
125.0	Flat Light Sector	3	400	17.9	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.25	212	1200
50.00	GPS	1	10	1.0	1.0	9.0	6.0	1.00	1.00	0.0	0.0	6.35	5	10
50.00	Stand-Off	1	40	1.6	0.0	0.0	0.0	1.00	1.00	0.0	0.0	6.35	9	40
	Totals	114	10455	748.9									3591	10455

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	180.0	Waveguide	1	2.00	6.00	0	3	Individual	0.00	N	1.00	1.00	0.00
30.00	180.0	7/8" Coax	7	1.09	0.33	0	1	Cluster	3.22	N	0.00	1.00	0.00
30.00	180.0	Waveguide	1	2.00	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
0.00	166.0	Waveguide	1	2.00	6.00	0	1	Individual	0.00	N	1.00	1.00	0.00
30.00	166.0	1 1/4" Hybriflex	2	1.54	1.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
30.00	166.0	1 5/8" Coax	12	1.98	14.7	50	1	Block	0.00	N	0.50	1.00	0.00
30.00	166.0	1 5/8" Hybriflex	1	1.98	1.30	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
30.00	159.0	0.39" Fiber Trunk	3	0.39	0.06	0	2	Individual	0.00	N	1.00	1.00	0.01
30.00	159.0	0.78" 8 AWG 6	6	0.78	1.18	0	2	Individual	0.00	N	1.00	1.00	0.01
30.00	159.0	1 5/8" Coax	12	1.98	9.84	50	2	Block	0.00	N	0.50	1.00	0.00
30.00	159.0	3" Conduit	1	3.50	7.58	0	2	Individual	0.00	N	1.00	1.00	0.01
30.00	159.0	Waveguide	1	2.00	6.00	0	2	Individual	0.00	N	1.00	1.00	0.00
30.00	156.0	1 5/8" Coax	1	1.98	0.82	0	1	Individual	0.00	N	1.00	1.00	0.01
30.00	132.0	1 1/4" Hybriflex	3	1.54	3.00	0	1	Individual	0.00	N	1.00	1.00	0.01
30.00	132.0	1 5/8" Coax	18	1.98	14.7	33	1	Block	0.00	N	0.50	1.00	0.00
30.00	50.00	1/2" Coax	1	0.63	0.15	0	1	Individual	0.00	N	1.00	1.00	0.01

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Equivalent Lateral Force Method

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

Spectral Response Acceleration for Short Period (S_s):	0.16
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.17
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
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):	0.81
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.15
Total Unfactored Dead Load:	124.04 k
Seismic Base Shear (E):	6.26 k

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	2,695	1,015,46	0.046	287	3,327
8	150.00	8,569	2,794,42	0.126	789	10,580
7	130.00	12,570	3,474,70	0.157	981	15,521
6	110.00	15,526	3,538,86	0.159	999	19,171
5	90.00	17,048	3,081,83	0.139	870	21,050
4	70.00	18,053	2,441,28	0.110	689	22,291
3	50.00	18,292	1,677,15	0.076	474	22,587
2	30.00	13,293	675,592	0.030	191	16,414
1	10.00	7,543	107,776	0.005	30	9,313
5' Omni	180.00	10	4,026	0.000	1	12
8' Omni	180.00	50	20,128	0.001	6	62
dbSpectra ATS4TMA4-4	180.00	50	20,128	0.001	6	62
13' Omni	180.00	40	16,102	0.001	5	49
15' Omni	180.00	40	16,102	0.001	5	49
15' Omni	180.00	40	16,102	0.001	5	49
15' Omni	180.00	80	32,205	0.001	9	99
Round Side Arm	180.00	300	120,768	0.005	34	370
Round Sector Frame	180.00	300	120,768	0.005	34	370
Ericsson Radio 4449 B12,B71	166.00	222	81,390	0.004	23	274
Ericsson AIR 21	166.00	273	100,087	0.005	28	337
Ericsson AIR32 B66Aa/B2a	166.00	397	145,401	0.007	41	490
Round Sector Frame	166.00	900	329,958	0.015	93	1,111
RFS APXVAARR24_43-U-NA20	166.00	384	140,672	0.006	40	474

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Equivalent Lateral Force Method

Kathrein Scala 782 10253	159.00	9	3,035	0.000	1	11
Powerwave Allgon LGP13519	159.00	32	11,093	0.000	3	39
Powerwave Allgon LGP21401	159.00	85	29,510	0.001	8	104
Raycap DC6-48-60-0-8F	159.00	98	34,324	0.002	10	122
Ericsson RRUS-11 (50 lbs.)	159.00	150	52,323	0.002	15	185
Ericsson RRUS 32 B2	159.00	159	55,463	0.002	16	196
Ericsson RRUS 11 w/ RRUS A2	159.00	216	75,346	0.003	21	267
Ericsson RRUS-32 (77 lbs)	159.00	231	80,578	0.004	23	285
Powerwave Allgon 7770.00	159.00	105	36,626	0.002	10	130
CCI HPA-65R-BUU-H8	159.00	204	71,160	0.003	20	252
CCI TPA-65R-LCUUUU-H8	159.00	245	85,392	0.004	24	302
Round Sector Frame	159.00	900	313,941	0.014	89	1,111
15' Omni	156.00	40	13,649	0.001	4	49
Round Side Arm	156.00	150	51,185	0.002	14	185
Raycap RRFDC-1064-PF-48	132.00	42	11,817	0.001	3	52
Alcatel-Lucent B25 RRH4x30	132.00	159	44,735	0.002	13	196
Alcatel-Lucent B66A RRH 4x45	132.00	402	113,105	0.005	32	496
Amphenol Antel BXA-171063-8CF-EDIN-X	132.00	32	8,863	0.000	3	39
48" x 12" x 7" Panel	132.00	210	59,085	0.003	17	259
Swedcom SACP 2x5516	132.00	16	4,502	0.000	1	20
Amphenol Antel LPA-80063-4CF-EDIN-X	132.00	40	11,254	0.001	3	49
Amphenol Antel BXA-70063-6CF-EDIN-2	132.00	17	4,783	0.000	1	21
Swedcom SLCP 2x6015	132.00	60	16,881	0.001	5	74
Round Sector Frame	132.00	900	253,219	0.011	71	1,111
VZW Unused Reserve: 17,576 sq in	132.00	1,513	425,549	0.019	120	1,868
MicroPulse GPS-QBW-26N	125.00	1	159	0.000	0	1
Kathrein Scala 800 10504	125.00	106	27,899	0.001	8	130
Flat Light Sector Frame	125.00	1,200	317,033	0.014	90	1,482
GPS	50.00	10	917	0.000	0	12
Stand-Off	50.00	40	3,667	0.000	1	49
<hr/>						
		124,042	22,188,032	1.000	6,264	153,164

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vz}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	2,695	1,015,46	0.046	287	2,331
8	150.00	8,569	2,794,42	0.126	789	7,414
7	130.00	12,570	3,474,70	0.157	981	10,876
6	110.00	15,526	3,538,86	0.159	999	13,434
5	90.00	17,048	3,081,83	0.139	870	14,750
4	70.00	18,053	2,441,28	0.110	689	15,620
3	50.00	18,292	1,677,15	0.076	474	15,827
2	30.00	13,293	675,592	0.030	191	11,501
1	10.00	7,543	107,776	0.005	30	6,526
5' Omni	180.00	10	4,026	0.000	1	9
8' Omni	180.00	50	20,128	0.001	6	43
dbSpectra ATS4TMA4-4	180.00	50	20,128	0.001	6	43
13' Omni	180.00	40	16,102	0.001	5	35
15' Omni	180.00	40	16,102	0.001	5	35
15' Omni	180.00	40	16,102	0.001	5	35
15' Omni	180.00	80	32,205	0.001	9	69
Round Side Arm	180.00	300	120,768	0.005	34	260
Round Sector Frame	180.00	300	120,768	0.005	34	260

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Equivalent Lateral Force Method

Ericsson Radio 4449 B12,B71	166.00	222	81,390	0.004	23	192
Ericsson AIR 21	166.00	273	100,087	0.005	28	236
Ericsson AIR32 B66Aa/B2a	166.00	397	145,401	0.007	41	343
Round Sector Frame	166.00	900	329,958	0.015	93	779
RFS APXVAARR24_43-U-NA20	166.00	384	140,672	0.006	40	332
Kathrein Scala 782 10253	159.00	9	3,035	0.000	1	8
Powerwave Allgon LGP13519	159.00	32	11,093	0.000	3	28
Powerwave Allgon LGP21401	159.00	85	29,510	0.001	8	73
Raycap DC6-48-60-0-8F	159.00	98	34,324	0.002	10	85
Ericsson RRUS-11 (50 lbs.)	159.00	150	52,323	0.002	15	130
Ericsson RRUS 32 B2	159.00	159	55,463	0.002	16	138
Ericsson RRUS 11 w/ RRUS A2	159.00	216	75,346	0.003	21	187
Ericsson RRUS-32 (77 lbs)	159.00	231	80,578	0.004	23	200
Powerwave Allgon 7770.00	159.00	105	36,626	0.002	10	91
CCI HPA-65R-BUU-H8	159.00	204	71,160	0.003	20	177
CCI TPA-65R-LCUUUU-H8	159.00	245	85,392	0.004	24	212
Round Sector Frame	159.00	900	313,941	0.014	89	779
15' Omni	156.00	40	13,649	0.001	4	35
Round Side Arm	156.00	150	51,185	0.002	14	130
Raycap RRFDC-1064-PF-48	132.00	42	11,817	0.001	3	36
Alcatel-Lucent B25 RRH4x30	132.00	159	44,735	0.002	13	138
Alcatel-Lucent B66A RRH 4x45	132.00	402	113,105	0.005	32	348
Amphenol Antel BXA-171063-8CF-EDIN-X	132.00	32	8,863	0.000	3	27
48" x 12" x 7" Panel	132.00	210	59,085	0.003	17	182
Swedcom SACP 2x5516	132.00	16	4,502	0.000	1	14
Amphenol Antel LPA-80063-4CF-EDIN-X	132.00	40	11,254	0.001	3	35
Amphenol Antel BXA-70063-6CF-EDIN-2	132.00	17	4,783	0.000	1	15
Swedcom SLCP 2x6015	132.00	60	16,881	0.001	5	52
Round Sector Frame	132.00	900	253,219	0.011	71	779
VZW Unused Reserve: 17,576 sq in	132.00	1,513	425,549	0.019	120	1,309
MicroPulse GPS-QBW-26N	125.00	1	159	0.000	0	1
Kathrein Scala 800 10504	125.00	106	27,899	0.001	8	91
Flat Light Sector Frame	125.00	1,200	317,033	0.014	90	1,038
GPS	50.00	10	917	0.000	0	9
Stand-Off	50.00	40	3,667	0.000	1	35
		124,042	22,188,032	1.000	6,264	107,324

Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_{ps}):	0.16
Spectral Response Acceleration at 1.0 Second Period (S_{p1}):	0.06
Importance Factor (I_p):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.17
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Period Based on Rayleigh Method (sec):	0.81
Redundancy Factor (ρ):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E

Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	2,695	1.686	1.069	0.793	0.285	333	3,327
8	150.00	8,569	1.312	0.138	0.347	0.142	527	10,580
7	130.00	12,570	0.986	-0.113	0.124	0.076	412	15,521
6	110.00	15,526	0.706	-0.089	0.031	0.057	386	19,171
5	90.00	17,048	0.472	-0.006	0.006	0.053	392	21,050
4	70.00	18,053	0.286	0.048	0.013	0.045	353	22,291
3	50.00	18,292	0.146	0.068	0.031	0.034	266	22,587
2	30.00	13,293	0.053	0.071	0.042	0.024	136	16,414
1	10.00	7,543	0.006	0.047	0.027	0.012	41	9,313
5' Omni	180.00	10	1.890	1.980	1.140	0.390	2	12
8' Omni	180.00	50	1.890	1.980	1.140	0.390	8	62
dbSpectra ATS4TMA4-4	180.00	50	1.890	1.980	1.140	0.390	8	62
13' Omni	180.00	40	1.890	1.980	1.140	0.390	7	49
15' Omni	180.00	40	1.890	1.980	1.140	0.390	7	49
15' Omni	180.00	40	1.890	1.980	1.140	0.390	7	49
15' Omni	180.00	80	1.890	1.980	1.140	0.390	14	99
Round Side Arm	180.00	300	1.890	1.980	1.140	0.390	51	370
Round Sector Frame	180.00	300	1.890	1.980	1.140	0.390	51	370
Ericsson Radio 4449 B12,B71	166.00	222	1.607	0.802	0.680	0.249	24	274
Ericsson AIR 21	166.00	273	1.607	0.802	0.680	0.249	29	337
Ericsson AIR32 B66Aa/B2a	166.00	397	1.607	0.802	0.680	0.249	43	490
Round Sector Frame	166.00	900	1.607	0.802	0.680	0.249	97	1,111
RFS APXVAARR24_43-U-NA20	166.00	384	1.607	0.802	0.680	0.249	41	474
Kathrein Scala 782 10253	159.00	9	1.475	0.441	0.513	0.196	1	11
Powerwave Allgon LGP13519	159.00	32	1.475	0.441	0.513	0.196	3	39
Powerwave Allgon LGP21401	159.00	85	1.475	0.441	0.513	0.196	7	104
Raycap DC6-48-60-0-8F	159.00	98	1.475	0.441	0.513	0.196	8	122
Ericsson RRUS-11 (50 lbs.)	159.00	150	1.475	0.441	0.513	0.196	13	185
Ericsson RRUS 32 B2	159.00	159	1.475	0.441	0.513	0.196	13	196
Ericsson RRUS 11 w/ RRUS A2	159.00	216	1.475	0.441	0.513	0.196	18	267
Ericsson RRUS-32 (77 lbs)	159.00	231	1.475	0.441	0.513	0.196	20	285
Powerwave Allgon 7770.00	159.00	105	1.475	0.441	0.513	0.196	9	130
CCI HPA-65R-BUU-H8	159.00	204	1.475	0.441	0.513	0.196	17	252
CCI TPA-65R-LCUUUU-H8	159.00	245	1.475	0.441	0.513	0.196	21	302
Round Sector Frame	159.00	900	1.475	0.441	0.513	0.196	76	1,111
15' Omni	156.00	40	1.420	0.322	0.452	0.176	3	49
Round Side Arm	156.00	150	1.420	0.322	0.452	0.176	11	185
Raycap RRFDC-1064-PF-48	132.00	42	1.016	-0.105	0.140	0.080	1	52

Equivalent Modal Analysis Method

Alcatel-Lucent B25 RRH4x30	132.00	159	1.016	-0.105	0.140	0.080	5	196
Alcatel-Lucent B66A RRH 4x45	132.00	402	1.016	-0.105	0.140	0.080	14	496
Amphenol Antel BXA-171063-48" x 12" x 7" Panel	132.00	32	1.016	-0.105	0.140	0.080	1	39
Swedcom SACP 2x5516	132.00	210	1.016	-0.105	0.140	0.080	7	259
Amphenol Antel LPA-80063-4CF-	132.00	16	1.016	-0.105	0.140	0.080	1	20
Amphenol Antel BXA-70063-6CF-	132.00	40	1.016	-0.105	0.140	0.080	1	49
Swedcom SLCP 2x6015	132.00	17	1.016	-0.105	0.140	0.080	1	21
Round Sector Frame	132.00	60	1.016	-0.105	0.140	0.080	2	74
VZW Unused Reserve: 17,576 sq	132.00	90	1.016	-0.105	0.140	0.080	31	1,111
MicroPulse GPS-QBW-26N	132.00	1,513	1.016	-0.105	0.140	0.080	52	1,868
Kathrein Scala 800 10504	125.00	1	0.911	-0.122	0.092	0.068	0	1
Flat Light Sector Frame	125.00	106	0.911	-0.122	0.092	0.068	3	130
GPS	125.00	1,200	0.911	-0.122	0.092	0.068	35	1,482
Stand-Off	50.00	10	0.146	0.068	0.031	0.034	0	12
	50.00	40	0.146	0.068	0.031	0.034	1	49
		124,042	65.442	27.607	24.011	9.330	3,611	153,164

LoadCase (0.9 - 0.2Sds) * DL + E

Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S _{az}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	2,695	1.686	1.069	0.793	0.285	333	2,331
8	150.00	8,569	1.312	0.138	0.347	0.142	527	7,414
7	130.00	12,570	0.986	-0.113	0.124	0.076	412	10,876
6	110.00	15,526	0.706	-0.089	0.031	0.057	386	13,434
5	90.00	17,048	0.472	-0.006	0.006	0.053	392	14,750
4	70.00	18,053	0.286	0.048	0.013	0.045	353	15,620
3	50.00	18,292	0.146	0.068	0.031	0.034	266	15,827
2	30.00	13,293	0.053	0.071	0.042	0.024	136	11,501
1	10.00	7,543	0.006	0.047	0.027	0.012	41	6,526
5' Omni	180.00	10	1.890	1.980	1.140	0.390	2	9
8' Omni	180.00	50	1.890	1.980	1.140	0.390	8	43
dbSpectra ATS4TMA4-4	180.00	50	1.890	1.980	1.140	0.390	8	43
13' Omni	180.00	40	1.890	1.980	1.140	0.390	7	35
15' Omni	180.00	40	1.890	1.980	1.140	0.390	7	35
15' Omni	180.00	40	1.890	1.980	1.140	0.390	7	35
15' Omni	180.00	80	1.890	1.980	1.140	0.390	14	69
Round Side Arm	180.00	300	1.890	1.980	1.140	0.390	51	260
Round Sector Frame	180.00	300	1.890	1.980	1.140	0.390	51	260
Ericsson Radio 4449 B12,B71	166.00	222	1.607	0.802	0.680	0.249	24	192
Ericsson AIR 21	166.00	273	1.607	0.802	0.680	0.249	29	236
Ericsson AIR32 B66Aa/B2a	166.00	397	1.607	0.802	0.680	0.249	43	343
Round Sector Frame	166.00	900	1.607	0.802	0.680	0.249	97	779
RFS APXVAARR24_43-U-NA20	166.00	384	1.607	0.802	0.680	0.249	41	332
Kathrein Scala 782 10253	159.00	9	1.475	0.441	0.513	0.196	1	8
Powerwave Allgon LGP13519	159.00	32	1.475	0.441	0.513	0.196	3	28
Powerwave Allgon LGP21401	159.00	85	1.475	0.441	0.513	0.196	7	73
Raycap DC6-48-60-0-8F	159.00	98	1.475	0.441	0.513	0.196	8	85
Ericsson RRUS-11 (50 lbs.)	159.00	150	1.475	0.441	0.513	0.196	13	130
Ericsson RRUS 32 B2	159.00	159	1.475	0.441	0.513	0.196	13	138
Ericsson RRUS 11 w/ RRUS A2	159.00	216	1.475	0.441	0.513	0.196	18	187
Ericsson RRUS-32 (77 lbs)	159.00	231	1.475	0.441	0.513	0.196	20	200
Powerwave Allgon 7770.00	159.00	105	1.475	0.441	0.513	0.196	9	91
CCI HPA-65R-BUU-H8	159.00	204	1.475	0.441	0.513	0.196	17	177
CCI TPA-65R-LCUUUU-H8	159.00	245	1.475	0.441	0.513	0.196	21	212
Round Sector Frame	159.00	900	1.475	0.441	0.513	0.196	76	779
15' Omni	156.00	40	1.420	0.322	0.452	0.176	3	35
Round Side Arm	156.00	150	1.420	0.322	0.452	0.176	11	130
Raycap RRFDC-1064-PF-48	132.00	42	1.016	-0.105	0.140	0.080	1	36
Alcatel-Lucent B25 RRH4x30	132.00	159	1.016	-0.105	0.140	0.080	5	138
Alcatel-Lucent B66A RRH 4x45	132.00	402	1.016	-0.105	0.140	0.080	14	348
Amphenol Antel BXA-171063-48" x 12" x 7" Panel	132.00	32	1.016	-0.105	0.140	0.080	1	27
	132.00	210	1.016	-0.105	0.140	0.080	7	182

Site Number: 411183

Code:

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Equivalent Modal Analysis Method

Swedcom SACP 2x5516	132.00	16	1.016	-0.105	0.140	0.080	1	14
Amphenol Antel LPA-80063-4CF-	132.00	40	1.016	-0.105	0.140	0.080	1	35
Amphenol Antel BXA-70063-6CF-	132.00	17	1.016	-0.105	0.140	0.080	1	15
Swedcom SLCP 2x6015	132.00	60	1.016	-0.105	0.140	0.080	2	52
Round Sector Frame	132.00	900	1.016	-0.105	0.140	0.080	31	779
VZW Unused Reserve: 17,576 sq	132.00	1,513	1.016	-0.105	0.140	0.080	52	1,309
MicroPulse GPS-QBW-26N	125.00	1	0.911	-0.122	0.092	0.068	0	1
Kathrein Scala 800 10504	125.00	106	0.911	-0.122	0.092	0.068	3	91
Flat Light Sector Frame	125.00	1,200	0.911	-0.122	0.092	0.068	35	1,038
GPS	50.00	10	0.146	0.068	0.031	0.034	0	9
Stand-Off	50.00	40	0.146	0.068	0.031	0.034	1	35
		124,042	65.442	27.607	24.011	9.330	3,611	107,324

Site Number: 411183

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Force/Stress Summary

Section: 1		1		Bot Elev (ft): 0.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X Y Z			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 12" DIA PIPE	-309.02	1.2D + 1.6W	10.02	100	100	100	27.8	50.0	816.60	0	0	0.00	0.00	37 Member X
HORIZ	PST - 3" DIA PIPE	-7.44	1.2D + 1.6W 90	12.17	100	100	100	125.9	50.0	31.77	2	0	0.00	0.00	23 Member X
DIAG	PST - 3-1/2" DIA PIP	-11.69	1.2D + 1.6W 90	15.75	100	100	100	141.1	50.0	30.41	3	0	0.00	0.00	38 Member X
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	PX - 12" DIA PIPE	223.33	0.9D + 1.6W 60	50	65	864.00	0	0	0.00	0.00		25	Member		
HORIZ	PST - 3" DIA PIPE	9.35	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00	28	Bolt Bear		
DIAG	PST - 3-1/2" DIA PIP	10.73	1.2D + 1.6W 90	50	65	120.60	3	0	0.00	55.09	0.00	19	Bolt Bear		
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		211.47	0.9D + 1.6W 180	0.00	0	0									
Top Compression		294.43	1.2D + 1.6W	0.00	0										
Bot Tension		234.78	0.9D + 1.6W 180	1453.79	20	24	1" A354-BC								
Bot Compression		321.16	1.2D + 1.6W	0.00	0										

Section: 2		1		Bot Elev (ft): 20.00				Height (ft): 20.000							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X Y Z			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PX - 12" DIA PIPE	-282.37	1.2D + 1.6W	10.03	100	100	100	27.8	50.0	816.53	0	0	0.00	0.00	34 Member X
HORIZ	PST - 3" DIA PIPE	-6.87	0.9D + 1.6W 90	10.88	100	100	100	112.6	50.0	39.73	2	0	0.00	0.00	17 Member X
DIAG	PST - 3-1/2" DIA PIP	-11.03	1.2D + 1.6W 90	15.29	100	100	100	137.0	50.0	32.26	3	0	0.00	0.00	34 Member X
Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	PX - 12" DIA PIPE	202.09	0.9D + 1.6W 60	50	65	864.00	0	0	0.00	0.00		23	Member		
HORIZ	PST - 3" DIA PIPE	7.88	1.2D + 1.6W 90	50	65	100.35	2	0	0.00	32.43	0.00	24	Bolt Bear		
DIAG	PST - 3-1/2" DIA PIP	9.00	1.2D + 1.6W 90	50	65	120.60	3	0	0.00	55.09	0.00	16	Bolt Bear		
Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		192.07	0.9D + 1.6W 180	0.00	0	0									
Top Compression		267.06	1.2D + 1.6W	0.00	0										
Bot Tension		211.47	0.9D + 1.6W 180	872.27	24	16	1 A325								
Bot Compression		294.43	1.2D + 1.6W	0.00	0										

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Force/Stress Summary

Section: 3		1		Bot Elev (ft): 40.00				Height (ft): 20.000					
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	phiRnv	phiRn	%	Controls	
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	-250.77	10.03	100	100	100	50.0	668.58	0	0	0.00	0.00	37 Member X
HORIZ	PST - 2-1/2" DIA PIP	-7.12	9.570	100	100	100	50.0	26.18	2	0	0.00	0.00	27 Member X
DIAG	PX - 3" DIA PIPE	-12.75	14.28	100	100	100	50.0	30.17	3	0	0.00	0.00	42 Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
Max Tension Member		Load Case						(kip)	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	181.23	50	65	724.50	0	0	0.00	0.00			25 Member
HORIZ	PST - 2-1/2" DIA PIP	8.46	50	65	76.68	2	0	0.00	30.48	0.00		27 Bolt Bear
DIAG	PX - 3" DIA PIPE	10.25	50	65	135.90	3	0	0.00	73.13	0.00		14 Bolt Bear

		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Max Splice Forces		Load Case					
Top Tension		0.9D + 1.6W 180	0.00	0	0		
Top Compression		1.2D + 1.6W 90	0.00	0			
Bot Tension		0.9D + 1.6W 180	872.27	22	16	1 A325	
Bot Compression		1.2D + 1.6W 90	0.00	0			

Section: 4		1		Bot Elev (ft): 60.00				Height (ft): 20.000					
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	phiRnv	phiRn	%	Controls	
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	-214.52	10.03	100	100	100	50.0	668.56	0	0	0.00	0.00	32 Member X
HORIZ	PST - 2-1/2" DIA PIP	-6.57	8.297	100	100	100	50.0	34.17	2	0	0.00	0.00	19 Member X
DIAG	PX - 3" DIA PIPE	-12.51	13.42	100	100	100	50.0	34.18	3	0	0.00	0.00	36 Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
Max Tension Member		Load Case						(kip)	(kip)	(kip)		
LEG	PX - 10" DIA PIPE	157.21	50	65	724.50	0	0	0.00	0.00			21 Member
HORIZ	PST - 2-1/2" DIA PIP	7.68	50	65	76.68	2	0	0.00	30.48	0.00		25 Bolt Bear
DIAG	PX - 3" DIA PIPE	10.38	50	65	135.90	3	0	0.00	73.13	0.00		14 Bolt Bear

		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Max Splice Forces		Load Case					
Top Tension		0.9D + 1.6W 180	0.00	0	0		
Top Compression		1.2D + 1.6W 90	0.00	0			
Bot Tension		0.9D + 1.6W 180	654.20	26	12	1 A325	
Bot Compression		1.2D + 1.6W 90	0.00	0			

Force/Stress Summary

Section: 5		1		Bot Elev (ft): 80.00				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use				
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Num	phiRnv	phiRn	%	Controls			
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)					
LEG	PX - 8" DIA PIPE	-175.63	1.2D + 1.6W	10.03	100	100	100	41.8	50.0	507.01	0	0	0.00	0.00	34	Member X
HORIZ	PX - 2" DIA PIPE	-6.66	0.9D + 1.6W 90	7.035	100	100	100	110.2	50.0	27.40	2	0	0.00	0.00	24	Member X
DIAG	PX - 3" DIA PIPE	-13.20	1.2D + 1.6W 90	12.59	100	100	100	132.6	50.0	38.81	3	0	0.00	0.00	34	Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use		
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls	
Max Tension Member		Load Case						(kip)	(kip)	(kip)			
LEG	PX - 8" DIA PIPE	130.77	0.9D + 1.6W 60	50	65	576.00	0	0	0.00	0.00		22	Member
HORIZ	PX - 2" DIA PIPE	7.38	1.2D + 1.6W 90	50	65	66.60	2	0	0.00	32.73	0.00	22	Bolt Bear
DIAG	PX - 3" DIA PIPE	11.82	0.9D + 1.6W 90	50	65	135.90	3	0	0.00	73.13	0.00	16	Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		115.62	0.9D + 1.6W 180	0.00	0	0	
Top Compression		153.67	1.2D + 1.6W	0.00	0		
Bot Tension		144.84	0.9D + 1.6W 180	654.20	22	12 1 A325	
Bot Compression		195.06	1.2D + 1.6W	0.00	0		

Section: 6		1		Bot Elev (ft): 100.0				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use				
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Num	phiRnv	phiRn	%	Controls			
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)					
LEG	PX - 6" DIA PIPE	-138.24	1.2D + 1.6W	6.68	100	100	100	36.5	50.0	342.89	0	0	0.00	0.00	40	Member X
HORIZ	PST - 2" DIA PIPE	-6.78	1.2D + 1.6W 90	6.072	100	100	100	92.6	50.0	25.73	2	0	0.00	0.00	26	Member X
DIAG	PST - 2-1/2" DIA PIP	-11.41	1.2D + 1.6W 90	9.257	100	100	100	117.3	50.0	27.97	3	0	0.00	0.00	40	Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use		
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls	
Max Tension Member		Load Case						(kip)	(kip)	(kip)			
LEG	PX - 6" DIA PIPE	104.14	0.9D + 1.6W 60	50	65	378.00	0	0	0.00	0.00		27	Member
HORIZ	PST - 2" DIA PIPE	7.50	1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	0.00	39	Bolt Bear
DIAG	PST - 2-1/2" DIA PIP	10.70	0.9D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00	26	Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		78.70	0.9D + 1.6W 180	0.00	0	0	
Top Compression		104.56	1.2D + 1.6W	0.00	0		
Bot Tension		115.62	0.9D + 1.6W 180	436.14	27	8 1 A325	
Bot Compression		153.67	1.2D + 1.6W	0.00	0		

Site Number: 411183

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Site Name: WATERFORD CT, CT

Engineering Number: 12605190_C3_01

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Customer: T-Mobile

Force/Stress Summary

Section: 7		1		Bot Elev (ft): 120.0				Height (ft): 20.000							
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	phiRnv	phiRn	%	Controls			
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)				
LEG	PX - 5" DIA PIPE	-87.72 1.2D + 1.6W	6.68	100	100	100	43.6	50.0	239.34	0	0	0.00	0.00	36	Member X
HORIZ	PST - 1-1/2" DIA PIP	-6.82 1.2D + 1.6W 90	5.030	100	100	100	96.9	50.0	18.10	2	0	0.00	0.00	37	Member X
DIAG	PST - 2-1/2" DIA PIP	-12.17 1.2D + 1.6W 90	8.566	100	100	100	108.5	50.0	32.40	3	0	0.00	0.00	37	Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use		
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls	
Max Tension Member		Load Case						(kip)	(kip)	(kip)			
LEG	PX - 5" DIA PIPE	64.08 0.9D + 1.6W 60	50	65	274.95	0	0	0.00	0.00			23	Member
HORIZ	PST - 1-1/2" DIA PIP	7.27 1.2D + 1.6W 90	50	65	35.96	2	0	0.00	18.10	0.00		40	Bolt Bear
DIAG	PST - 2-1/2" DIA PIP	11.20 0.9D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00		27	Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		43.18 0.9D + 1.6W 180	0.00	0	0		
Top Compression		56.60 1.2D + 1.6W	0.00	0			
Bot Tension		78.70 0.9D + 1.6W 180	327.10	24	6	1 A325	
Bot Compression		104.56 1.2D + 1.6W	0.00	0			

Section: 8		1		Bot Elev (ft): 140.0				Height (ft): 20.000							
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	phiRnv	phiRn	%	Controls			
Max Compression Member		Load Case		KL/R				Bolts	Holes	(kip)	(kip)				
LEG	PST - 4" DIA PIPE	-42.08 1.2D + 1.6W	6.67	100	100	100	53.0	50.0	116.18	0	0	0.00	0.00	36	Member X
HORIZ	PST - 2" DIA PIPE	-4.63 1.2D + 1.6W 90	4.325	100	100	100	65.9	50.0	35.03	2	0	0.00	0.00	13	Member X
DIAG	PST - 2-1/2" DIA PIP	-9.55 1.2D + 1.6W 90	7.955	100	100	100	100.8	50.0	36.48	3	0	0.00	0.00	26	Member X

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use		
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls	
Max Tension Member		Load Case						(kip)	(kip)	(kip)			
LEG	PST - 4" DIA PIPE	31.20 0.9D + 1.6W 180	50	65	142.65	0	0	0.00	0.00			21	Member
HORIZ	PST - 2" DIA PIPE	4.96 1.2D + 1.6W 90	50	65	48.15	2	0	0.00	19.22	0.00		25	Bolt Bear
DIAG	PST - 2-1/2" DIA PIP	8.86 1.2D + 1.6W 90	50	65	76.68	3	0	0.00	41.17	0.00		21	Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	Bolt Type	
		(kip)	(kip)	%	Bolts		
Top Tension		9.82 0.9D + 1.6W 180	0.00	0	0		
Top Compression		16.54 1.2D + 1.6W	0.00	0			
Bot Tension		43.18 0.9D + 1.6W 180	218.07	20	4	1 A325	
Bot Compression		56.60 1.2D + 1.6W	0.00	0			

Site Number: 411183

Code: ANSI/TIA-222-G

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Site Name: WATERFORD CT, CT

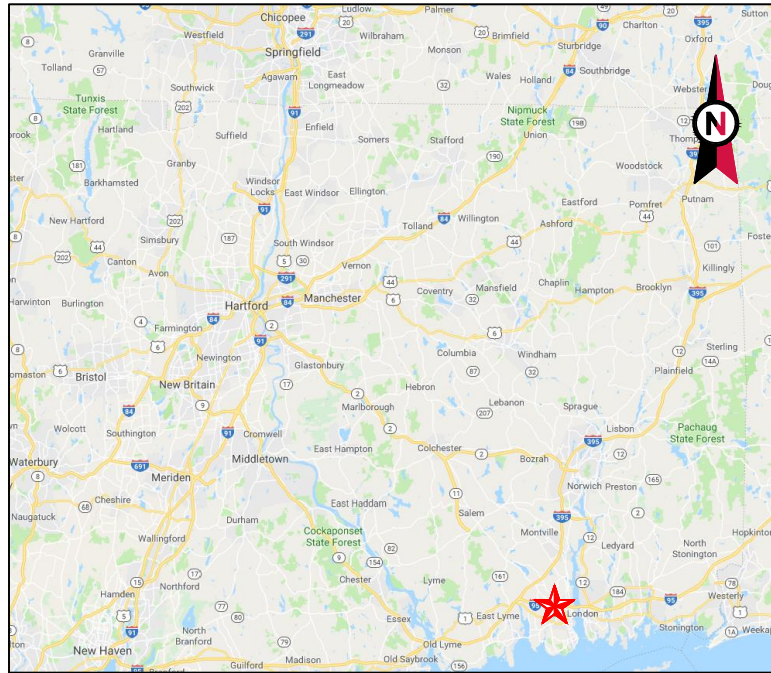
Engineering Number: 12605190_C3_01

11/5/2018 3:56:09 PM

Customer: T-Mobile

Force/Stress Summary

Section: 9		1		Bot Elev (ft): 160.0				Height (ft): 20.000									
														Shear	Bear		
		Pu			Len	Bracing %			F'y	Phic Pn Num	Num	phiRnv	phiRn	Use			
		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	%	Controls	
<hr/>																	
Max Compression Member																	
LEG	PST - 3" DIA PIPE	-8.43	1.2D + 1.6W	6.67	100	100	100	69.0	50.0	70.87	0	0	0.00	0.00	11	Member X	
HORIZ	PST - 1-1/2" DIA PIP	-2.23	1.2D + 1.6W	4.280	100	100	100	82.4	50.0	21.87	2	0	0.00	0.00	10	Member X	
DIAG	PST - 2" DIA PIPE	-4.49	1.2D + 1.6W	7.930	100	100	100	120.9	50.0	16.53	3	0	0.00	0.00	27	Member X	
<hr/>																	
Max Tension Member																	
		Pu			Fy	Fu	Phit Pn Num	Num	Shear		Bear	Blk Shear		Use			
		(kip)	Load Case	(ksi)	(ksi)	(kip)	Bolts	Holes	(kip)	(kip)	(kip)	(kip)	(kip)	%	Controls		
<hr/>																	
LEG	PST - 3" DIA PIPE	4.20	1.2D + 1.6W 180	50	65	100.35	0	0	0.00	0.00			4	Member			
HORIZ	PST - 1-1/2" DIA PIP	2.31	1.2D + 1.6W 60	50	65	35.96	2	0	0.00	18.10			12	Bolt Bear			
DIAG	PST - 2" DIA PIPE	4.23	1.2D + 1.6W 90	50	65	48.15	3	0	0.00	31.23			13	Bolt Bear			
<hr/>																	
Max Splice Forces																	
		Pu			phiRnt		Use	Num									
		(kip)	Load Case	(kip)		%	Bolts	Bolt Type									
<hr/>																	
Top Tension		0.00			0.00		0	0									
Top Compression		1.34	1.2D + 1.0Di +		0.00		0										
Bot Tension		9.82	0.9D + 1.6W 180		166.22		6	4	0.875" A325								
Bot Compression		16.54	1.2D + 1.6W		0.00		0										



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: WATERFORD CT
 ATC SITE NUMBER: 411183
 T-MOBILE SITE ID: CT11041D
 SITE ADDRESS: 53 DAYTON RD.
 WATERFORD, CT 06385



LOCATION MAP

AMERICAN TOWER®
 A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	08/29/18
1	ANTENNA MODEL	TC	10/12/18
2	RAD HEIGHT	TC	10/26/18
3	HYBRID CABLES	TC	11/20/18

ATC SITE NUMBER:
411183
 ATC SITE NAME:
WATERFORD CT
 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385

SEAL:



DRAWN BY:	TC
APPROVED BY:	KRF
DATE DRAWN:	08/29/18
ATC JOB NO:	12607172

TITLE SHEET

SHEET NUMBER: G-001	REVISION: 3
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COMPLIANCE CODE

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

- INTERNATIONAL BUILDING CODE (IBC)
- NATIONAL ELECTRIC CODE (NEC)
- LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: NORTHEAST
 PHONE: (860) 665-6792

TELEPHONE COMPANY: UNKNOWN
 PHONE: N/A



PROJECT SUMMARY

SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385
 COUNTY: NEW LONDON

GEOGRAPHIC COORDINATES:
 LATITUDE: 41.377778
 LONGITUDE: -72.141389
 GROUND ELEVATION: 186' AMSL

PROJECT TEAM

TOWER OWNER:
 AMERICAN TOWER
 10 PRESIDENTIAL WAY
 WOBURN, MA 01801

ENGINEER:
 ATC TOWER SERVICES, LLC
 3500 REGENCY PKWY STE 100
 CARY, NC 27518

PROPERTY OWNER:
 COHANZIE VOLUNTEER FIRE
 SERVICE BENEFIT ASSOC
 53 DAYTON RD
 WATERFORD, CT 06385

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (3) PANELS, (3) RRU's, AND (1) 1-5/8" HYBRID CABLE

INSTALL (3) NEW PANELS, (3) RRU's, AND (2) 1-1/4" HYBRID CABLES

EXISTING (6) PANELS, (1) 1-5/8" HYBRID CABLES AND (12) 1-5/8" COAX CABLES TO REMAIN

PROJECT NOTES

- THE FACILITY IS UNMANNED.
- A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
- THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
- NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
- HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM HARTFORD, CT:

GET ON I-84 E FROM MAIN ST AND MORGAN ST S. AFTER 0.6 MILES FOLLOW CT-2 E AND CT-11 S TO CT-82 E IN SALEM. TAKE EXIT 4 FROM CT-11 S. AFTER 31.9 MILES TAKE CT-85 S TO DAYTON PL IN WATERFORD. YOU WILL ARRIVE AT YOUR DESTINATION AFTER 11.2 MILES.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	3	11/20/18	TC
G-002	GENERAL NOTES	0	08/29/18	TC
C-101	DETAILED SITE PLAN & TOWER ELEVATION	2	10/26/18	TC
C-501	ANTENNA INFORMATION & SCHEDULE	3	11/20/18	TC
E-501	GROUNDING DETAILS	0	08/29/18	TC
R-601	SUPPLEMENTAL			

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GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH T-MOBILE WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY T-MOBILE WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE WIRELESS REP. ANY WORK FOUND BY THE T-MOBILE WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
 - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
 - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
 - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
 - C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
 - D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
 - E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
 - F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
 - G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	08/29/18

ATC SITE NUMBER:
411183

ATC SITE NAME:
WATERFORD CT

SITE ADDRESS:
53 DAYTON RD.
WATERFORD, CT 06385

SEAL:



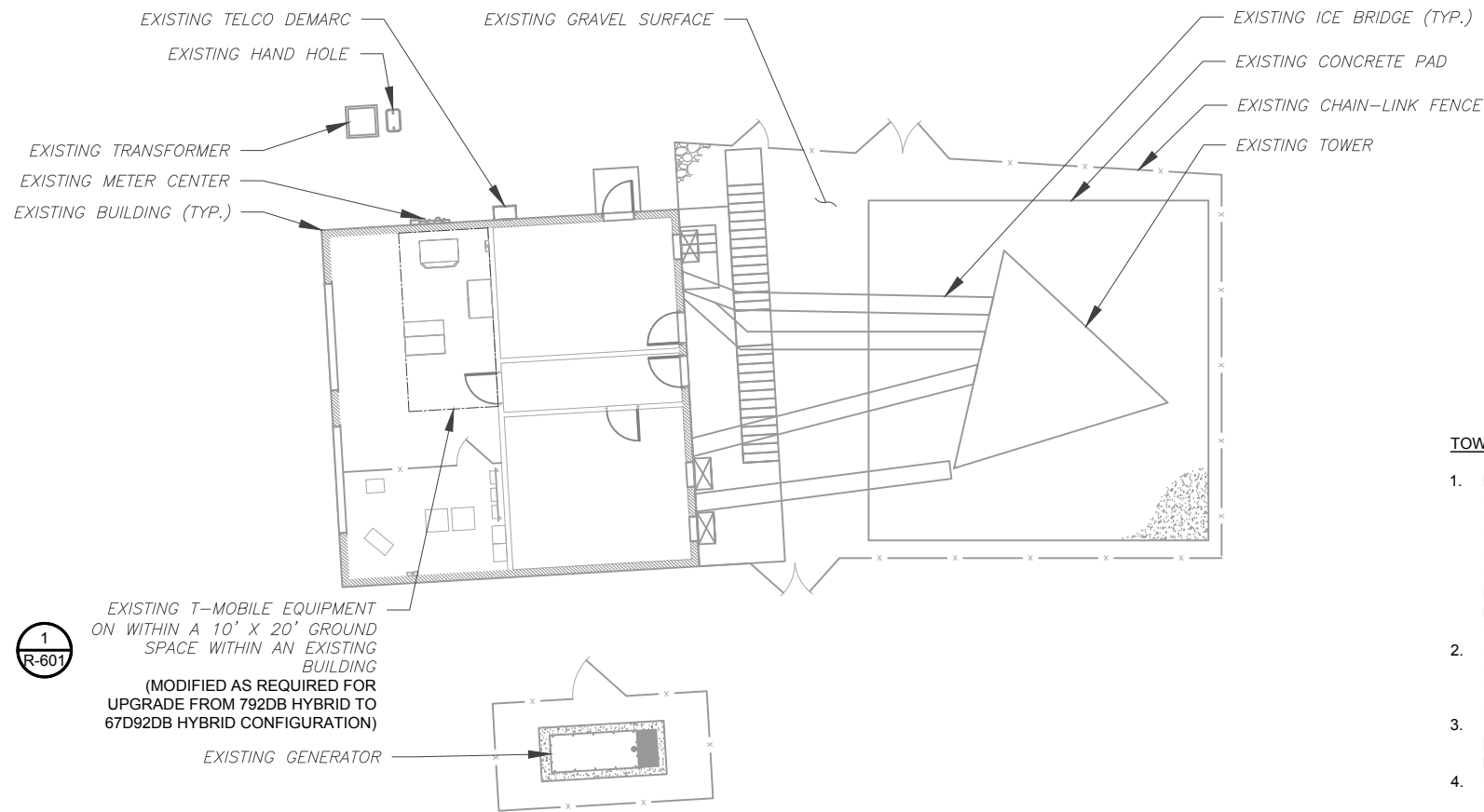
DRAWN BY:	TC
APPROVED BY:	KRF
DATE DRAWN:	08/29/18
ATC JOB NO:	12607172

GENERAL NOTES

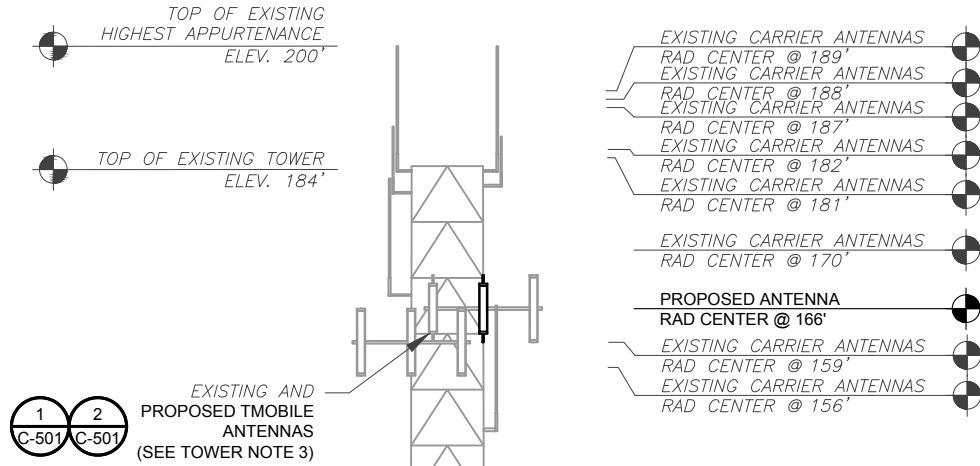
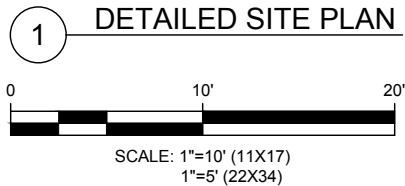
SHEET NUMBER: G-002	REVISION: 0
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SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

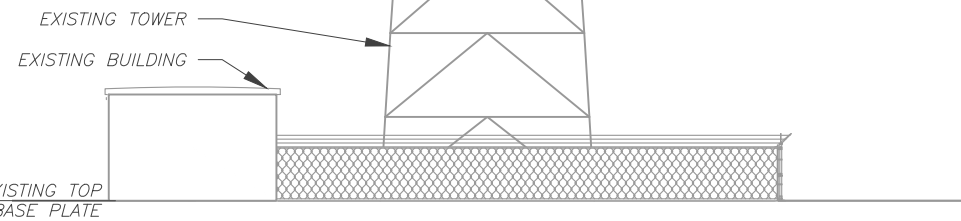


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R-601



TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
3. THE PROPOSED PROJECT INCLUDES MODIFYING TOWER MOUNTED EQUIPMENT AS INDICATED ON SHEET C-501.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)



2 TOWER ELEVATION
SCALE: NOT TO SCALE



A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	08/29/18
1	ANTENNA MODEL	TC	10/12/18
2	RAD HEIGHT	TC	10/26/18

ATC SITE NUMBER:

411183

ATC SITE NAME:

WATERFORD CT

SITE ADDRESS:

53 DAYTON RD.
WATERFORD, CT 06385

SEAL:

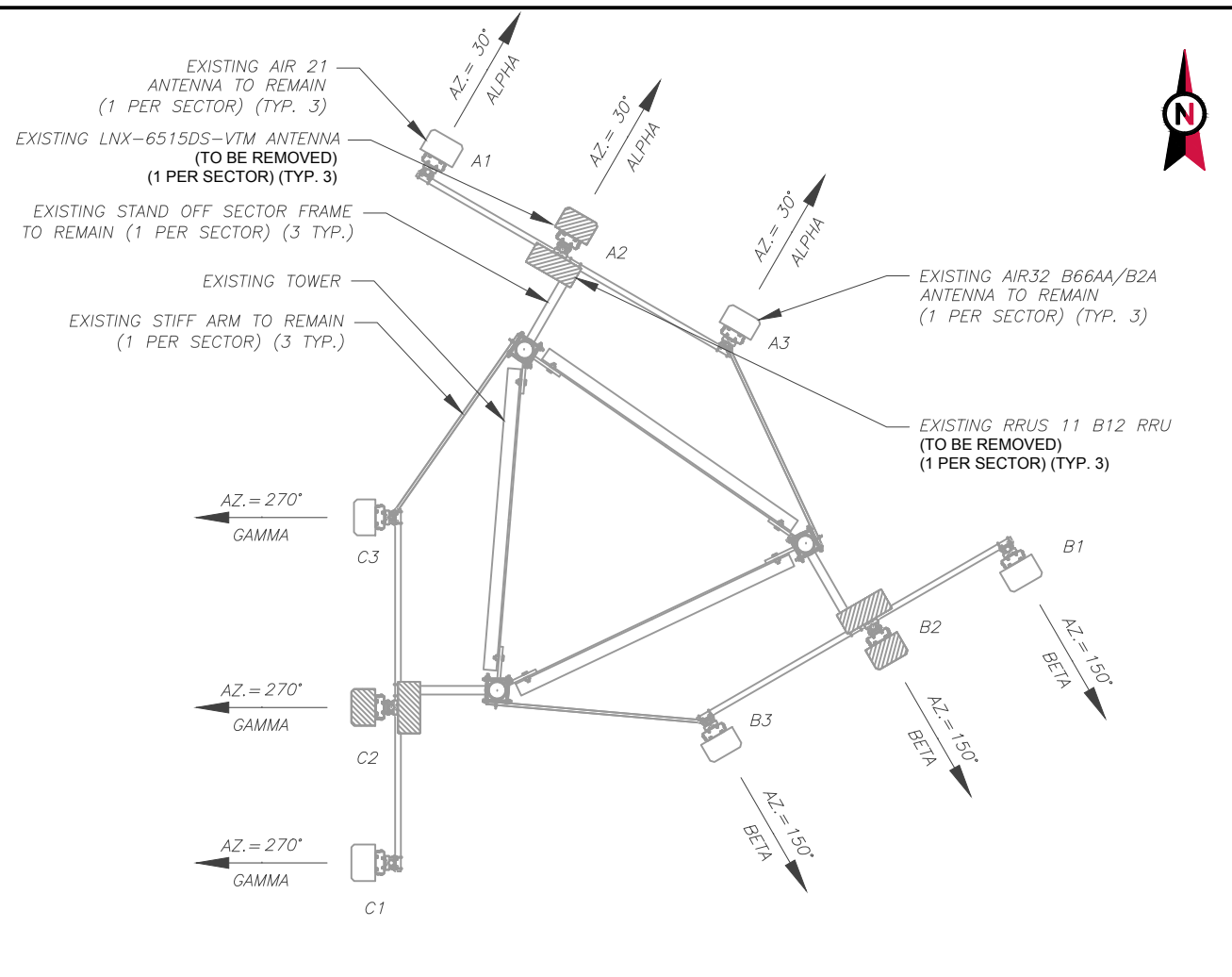


DRAWN BY:	TC
APPROVED BY:	KRF
DATE DRAWN:	08/29/18
ATC JOB NO:	12607172

DETAILED SITE PLAN & TOWER ELEVATION

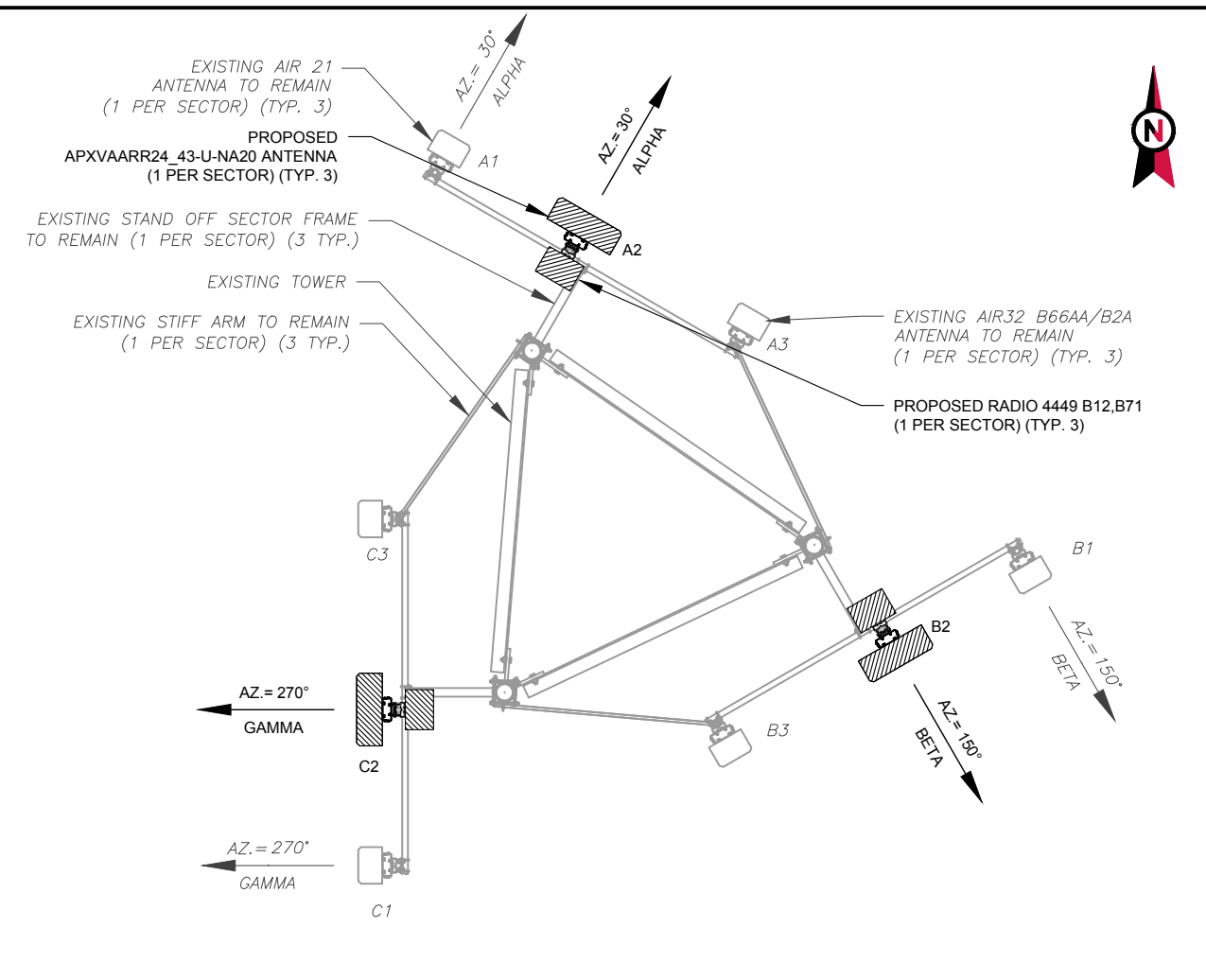
SHEET NUMBER:	REVISION:
C-101	2

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1 EXISTING ANTENNA PLAN

NOTES:
 1. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIGURATION OR MOUNT CONFIGURATION. CONTRACTOR TO VERIFY MOUNT CONFIGURATION HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (I.E. CLEARANCES, MOUNT PIPE OR SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.



2 FINAL ANTENNA PLAN

NOTES:
 1. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE ATC CM.
 2. SPACING OF PROPOSED EQUIPMENT SHALL BE CONFIRMED FOR TOWER CONFLICTS AND PROPOSED MOUNTS SHALL NOT IMPEDE TOWER CLIMBING PEGS.

EXISTING ANTENNA/ COAX SCHEDULE								
SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	ANTENNA COAX DESCRIPTION
ALPHA	A1	AIR 21	164'-0"	30°	0°	3°	-	(4) 1-5/8"
ALPHA	A2	LNx-6515DS-VTM	164'-0"	30°	0°	2°	RRUS11 B12	-
ALPHA	A3	AIR32 B66AA/B2A	164'-0"	30°	0°	2°	-	-
BETA	B1	AIR 21	164'-0"	150°	0°	3°	-	(4) 1-5/8"
BETA	B2	LNx-6515DS-VTM	164'-0"	150°	0°	2°	RRUS11 B12	-
BETA	B3	AIR32 B66AA/B2A	164'-0"	150°	0°	2°	-	-
GAMMA	C1	AIR 21	164'-0"	270°	0°	3°	-	(4) 1-5/8"
GAMMA	C2	LNx-6515DS-VTM	164'-0"	270°	0°	2°	RRUS11 B12	-
GAMMA	C3	AIR32 B66AA/B2A	164'-0"	270°	0°	2°	-	-

1. (2) EXISTING 1-5/8" HYBRID CABLE TO REMAIN
 2. (1) EXISTING 1-5/8" HYBRID CABLE (TO BE REMOVED)

3 ANTENNA SCHEDULE

FINAL ANTENNA/ COAX SCHEDULE								
SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	ANTENNA COAX DESCRIPTION
ALPHA	A1	AIR 21	166'-0"	30°	0°	3°	-	(4) 1-5/8"
ALPHA	A2	APXVAARR24_43-U-NA20	166'-0"	30°	0°	2°	RADIO 4449 B12,B71	-
ALPHA	A3	AIR32 B66AA/B2A	166'-0"	30°	0°	2°	-	-
BETA	B1	AIR 21	166'-0"	150°	0°	3°	-	(4) 1-5/8"
BETA	B2	APXVAARR24_43-U-NA20	166'-0"	150°	0°	2°	RADIO 4449 B12,B71	-
BETA	B3	AIR32 B66AA/B2A	166'-0"	30°	0°	2°	-	-
GAMMA	C1	AIR 21	166'-0"	270°	0°	3°	-	(4) 1-5/8"
GAMMA	C2	APXVAARR24_43-U-NA20	166'-0"	270°	0°	2°	RADIO 4449 B12,B71	-
GAMMA	C3	AIR32 B66AA/B2A	166'-0"	30°	0°	2°	-	-

1. BASED ON APPROVED ATC APPLICATION 12605190, DATED 08-15-2018. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
 2. (2) PROPOSED 1-1/4" HYBRID CABLE (250±)
 3. (1) EXISTING 1-5/8" HYBRID CABLE TO REMAIN

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	08/29/18
1	ANTENNA MODEL	TC	10/12/18
2	RAD HEIGHT	TC	10/26/18
3	HYBRID CABLES	TC	11/20/18

ATC SITE NUMBER:
411183
 ATC SITE NAME:
WATERFORD CT
 SITE ADDRESS:
 53 DAYTON RD.
 WATERFORD, CT 06385

SEAL:

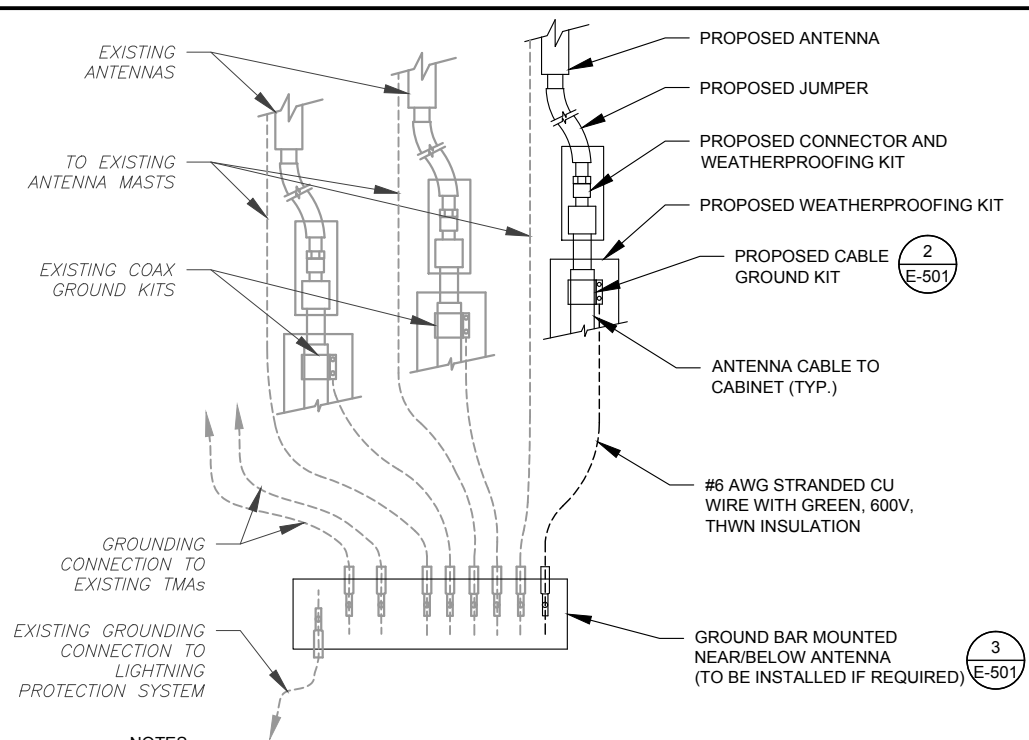


DRAWN BY:	TC
APPROVED BY:	KRF
DATE DRAWN:	08/29/18
ATC JOB NO:	12607172

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-501	3

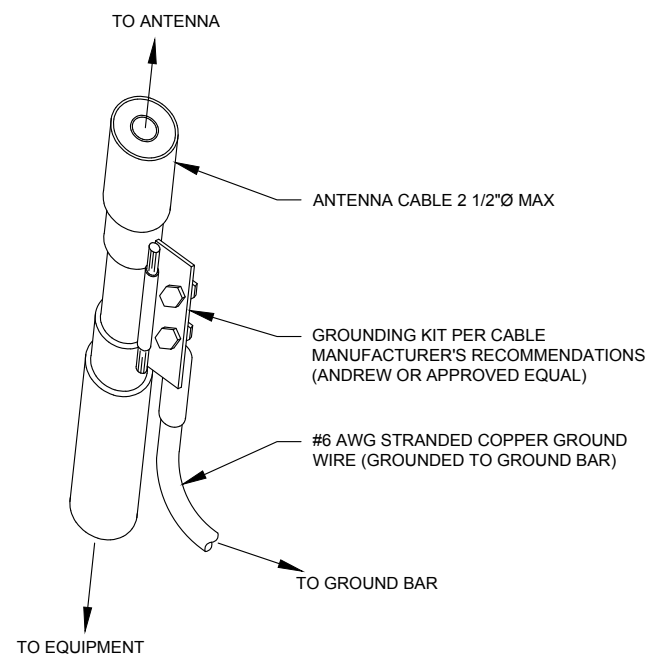
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NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

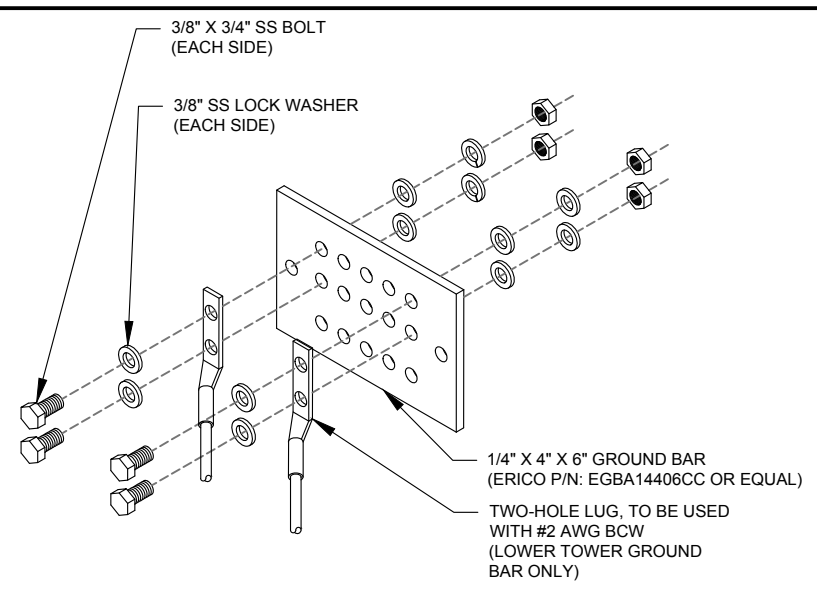
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: NOT TO SCALE



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: NOT TO SCALE

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	TC	08/29/18

ATC SITE NUMBER:
411183

ATC SITE NAME:
WATERFORD CT

SITE ADDRESS:
53 DAYTON RD.
WATERFORD, CT 06385

SEAL:



DRAWN BY:	TC
APPROVED BY:	KRF
DATE DRAWN:	08/29/18
ATC JOB NO:	12607172

GROUNDING DETAILS

SHEET NUMBER: E-501	REVISION: 0
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Existing RAN Equipment

Template: 792DB Hybrid

Enclosure	1	2
Enclosure Type	RBS 6102	Ancillary Equipment
Baseband	BB 5216 L2100 L1900 L700 DUW30 U1900 DUW30 U2100 (DECOMMISSIONED) DUG20 G1900	
Hybrid Cable System		Ericsson 9x18 HCS 70m Ericsson 6x12 HCS 6AWG 80m
Multiplexer	XMU	
Radio	RUS01 B4 (x6) U2100 (DECOMMISSIONED)	

Proposed RAN Equipment

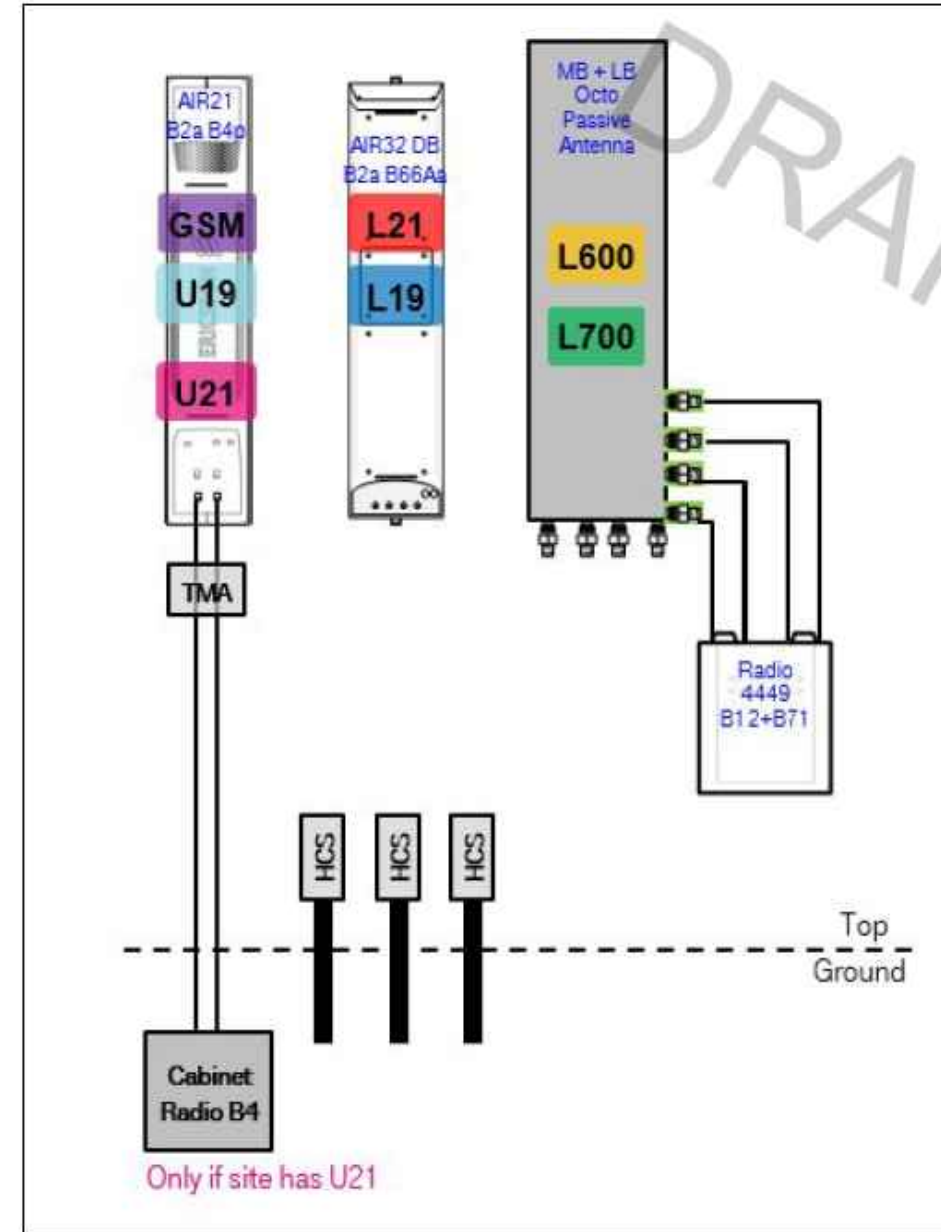
Template: 87D92DB Hybrid

Enclosure	1	2
Enclosure Type	RBS 6102	Ancillary Equipment
Baseband	BB 5216 L2100 L1900 L700 L600 DUW30 U1900 DUW30 U2100 (DECOMMISSIONED) DUG20 G1900	
Hybrid Cable System		Ericsson 9x18 HCS 70m Ericsson 6x12 HCS 6AWG 80m (x2)
Multiplexer	XMU	
Radio	RUS01 B4 (x6) U2100 (DECOMMISSIONED)	

RAN Scope of Work:

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

67D92DB_2xAIR+1OP.JPG



Notes:

2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

SUPPLEMENTAL

SHEET NUMBER: REVISION:

R-601 0

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.