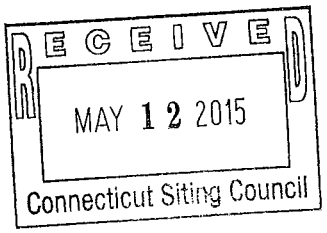
T-Mobile



Please Reply To:
Sam Simons
35 Griffin Road South
Bloomfield, CT 06002
203-482-5156
Sam.Simons@T-Mobile.com

May 5, 2015

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

Re: EM-T-Mobile-155-120629
T-Mobile Site CT11178D
467 South Quaker Lane (Church of St. Mark)
West Hartford CT
Notice of Construction Completion

Dear Attorney Bachman:

The Connecticut Siting Council ("Council") acknowledged the above referenced T-Mobile Northeast LLC ("T-Mobile") notice of exempt modification on July 18, 2012. T-Mobile hereby notifies the Council that construction of the acknowledged modifications were complete as of October 17, 2013.

Please don't hesitate to contact me with any questions.

Sincerely,

Sam Simons

Samuel Simons, T-Mobile

cc: Mark Richard, T-Mobile

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

July 18, 2012

Julie D. Kohler, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604

RE: **EM-T-MOBILE-155-120629** - T-Mobile Northeast LLC notice of intent to modify an existing telecommunications facility located at 467 South Quaker Lane, West Hartford, Connecticut.

Dear Attorney Kohler:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated June 28, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/jbw

c: The Honorable Scott Slifka, Mayor, Town of West Hartford
Barry M. Feldman, Town Manager, Town of West Hartford
Mila Limson, Town Planner, Town of West Hartford
Church of St. Mark

COHEN and WOLF P.C.
ATTORNEYS AT LAW

EM-T-MOBILE-155-120629

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

June 28, 2012

ORIGINAL

RECEIVED
JUN 29 2012
CONNECTICUT SITING COUNCIL

Ms. Linda Roberts,
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
Church of St. Mark/T-Mobile co-location
T-Mobile Site ID CT11178D
467 South Quaker Lane, West Hartford CT

Dear Ms. Roberts:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, Church of St. Mark owns the existing telecommunications tower and related facility at 467 South Quaker Lane, West Hartford Connecticut (Latitude: 41.74882, Longitude: -72.73132). T-Mobile intends to replace six antennas and add related equipment at this existing facility in West Hartford ("West Hartford Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Mayor, Scott Slifka.

The existing West Hartford Facility consists of a 120 foot tower. T-Mobile plans to replace six antenna mounted on the tower at a centerline of 120 feet. T-Mobile will also remove one equipment cabinet, install one replacement cabinet and run fiber conduit along coaxial cable, all within the existing compound area near the base of the tower. (See the plans dated April 4, 2012 attached hereto as Exhibit A). The existing tower is structurally capable of supporting T-Mobile's proposed use, as indicated in the structural analysis report dated June 6, 2012 and attached hereto as Exhibit B.

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601-1821
Tel: (203) 368-0211
Fax: (203) 394-9901

158 Deer Hill Avenue
Danbury, CT 06810
Tel: (203) 792-2771
Fax: (203) 791-8149

320 Post Road West
Westport, CT 06880
Tel: (203) 222-1034
Fax: (203) 227-1373

657 Orange Center Road
Orange, CT 06477
Tel: (203) 298-4066
Fax: (203) 298-4068

COHEN and WOLF P.C. ATTORNEYS AT LAW

The planned modifications to the West Hartford Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at the 120 foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2. The replacement of the T-Mobile equipment in the existing compound, as reflected on the attached site plan, will not require an extension of the site boundaries. T-Mobile's proposed equipment will be located entirely within the existing compound area.

3. The proposed modification to the Facility will not increase the noise levels at the existing facility by six decibels or more.

4. The operation of the replacement antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated June 27, 2012 T-Mobile's operations would add 0.802% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 49.022% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

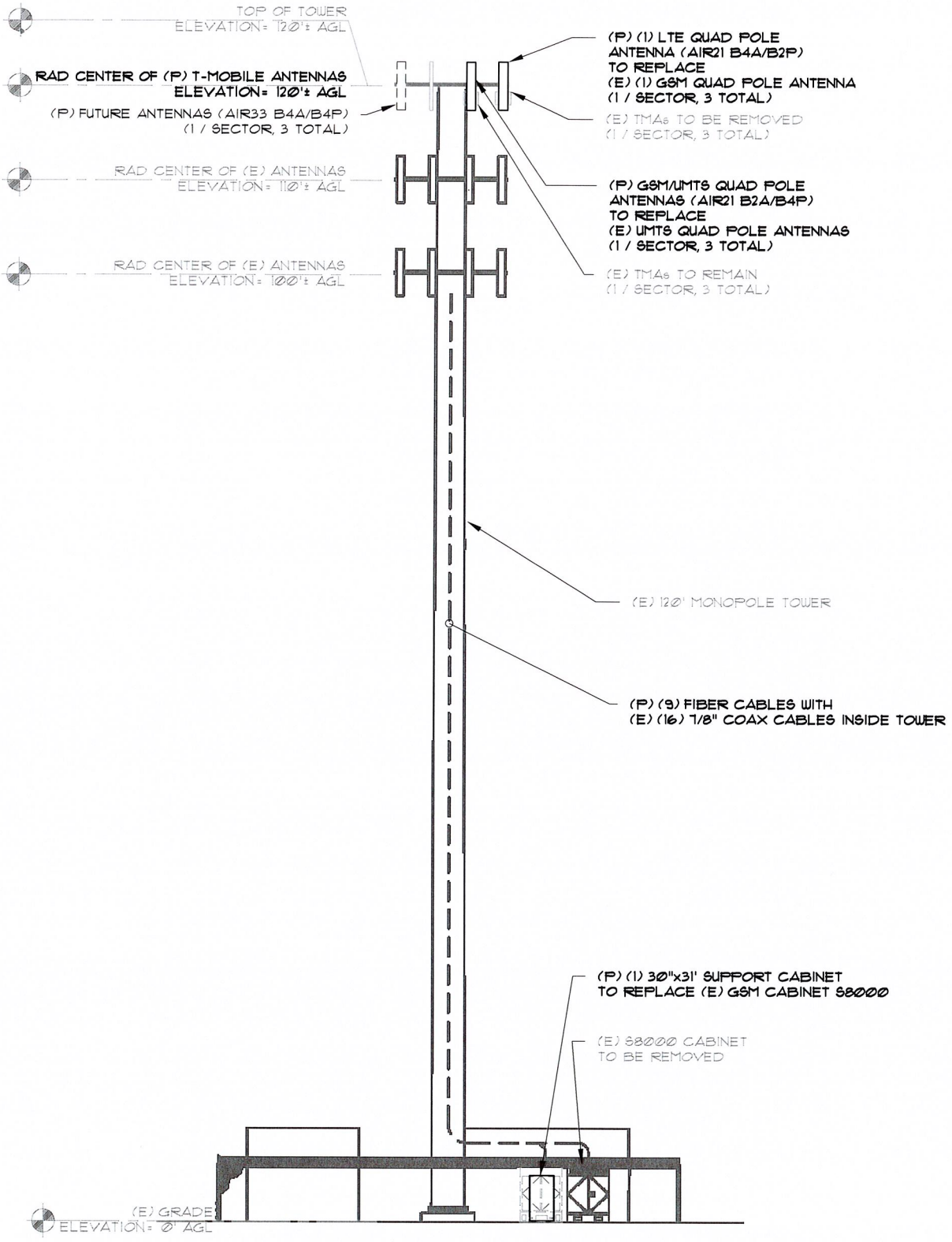
For the foregoing reasons, T-Mobile respectfully submits that the proposed replacement antennas and equipment at the West Hartford Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Julie D. Kohler, Esq.

cc: Mayor Scott Slifka, Town of West Hartford
Scott Chase, Northeast Site Solutions, (via e-mail)

EXHIBIT A



EAST ELEVATION

N.T.S

1
LE-2

Configuration

2C

SUBMITTALS	
LE REV A	04.03.12
LE REV 0	04.03.12
LE REV 1	04.04.12

ATLANTIS GROUP
1340 Centre Street
Suite 203
Newton, MA 02459
Office: 617-965-0789
Fax: 617-213-5056

LEASE EXHIBIT

SITE NUMBER:
CT11178D

SITE NAME:
WESTHARTFORD_I-84_X43

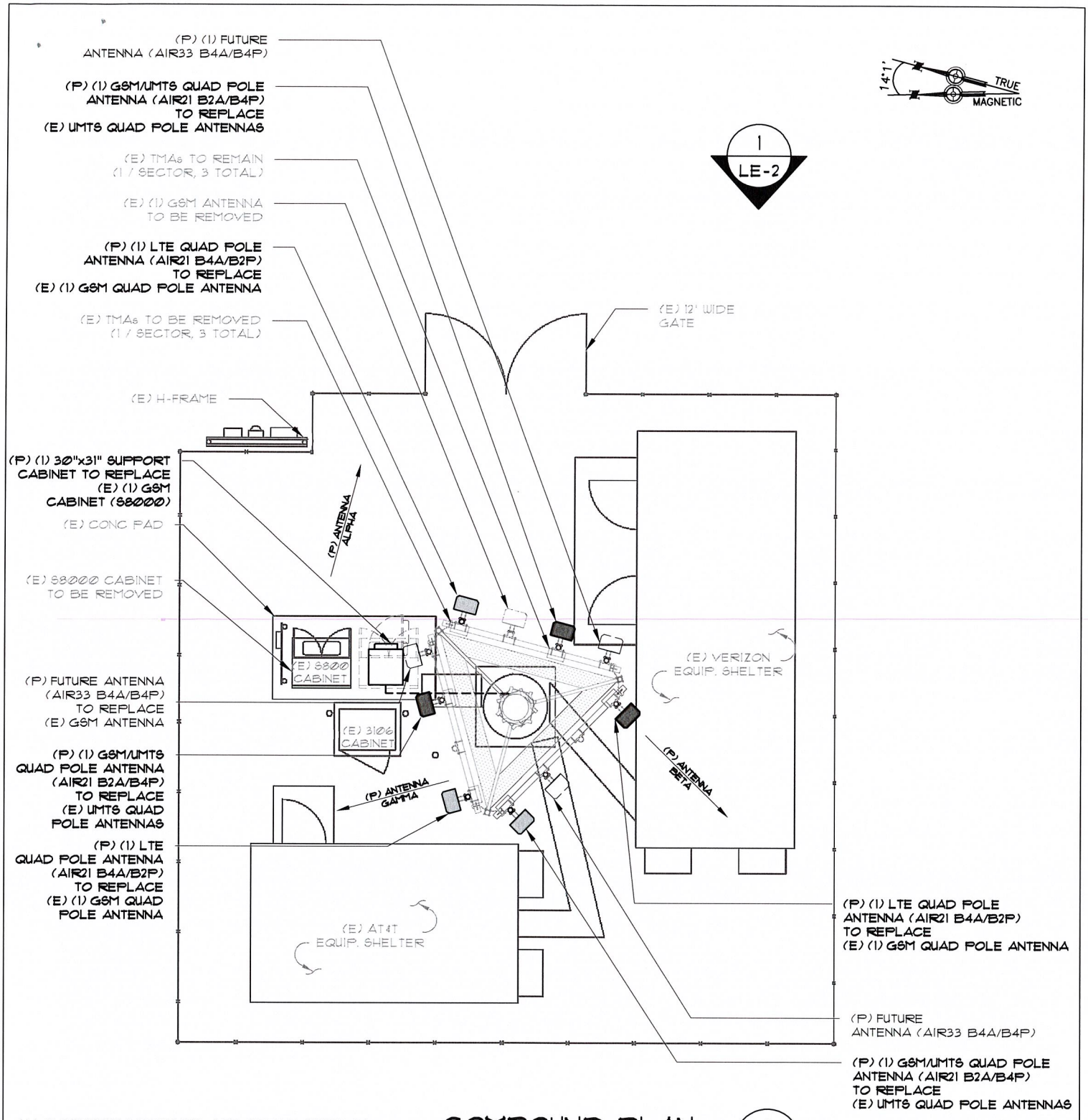
SITE ADDRESS:
467 SOUTH QUAKER LANE
(CHURCH OF ST. MARK)
WEST HARTFORD, CT 06110

NORTHEAST TOWERS
199 BRICKYARD ROAD
FARMINGTON, CT 06032
OFFICE: (860) 677-1999

FOR

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

DRAWN BY: SB | CHECKED BY: SM



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

COMPOUND PLAN

N.T.S.

1 LE-1

Configuration

2C

SUBMITTALS	
LE REV A	04.03.12
LE REV 0	04.03.12
LE REV 1	04.04.12

ATLANTIS GROUP
1340 Centre Street
Suite 203
Newton, MA 02459
Office: 617-965-0789
Fax: 617-213-5056

LEASE EXHIBIT

SITE NUMBER:
CT11178D

SITE NAME:
WESTHARTFORD_I-84_X43

SITE ADDRESS:
467 SOUTH QUAKER LANE
(CHURCH OF ST. MARK)
WEST HARTFORD, CT 06110

NORTHEAST TOWERS
199 BRICKYARD ROAD
FARMINGTON, CT 06032
OFFICE: (860) 677-1999

FOR

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

DRAWN BY: SB | CHECKED BY: SM

EXHIBIT B

REVIEWED
By JACKIE DONAHUE at 4:43 am, Jun 08, 2012

Date: **June 6, 2012**

MeganJo MacLeod
T-Mobile Towers
12920 SE 38th Street
Bellevue, WA 98006
(425) 383-5335

Tower Engineering Professionals
3703 Junction Blvd
Raleigh, NC 27603
(919) 661-6351
dsmith@tepgroup.net

Subject: **Structural Analysis Report**

T-Mobile Designation:	***T-Mobile Network Modernization***	
	T-Mobile Site Number:	CT11178D
	T-Mobile Site Name:	St. Mark's Church
Engineering Firm Designation:	**TEP Project Number:**	123480
Site Data:	**467 South Quaker Lane (Church of St. Mark)** **West Hartford, Hartford County, CT 06110** **Latitude N *41° 44' 55.8"*, Longitude W *72° 43' 52.8"*** **120 Foot – Monopole Tower**	

Dear Ms. MacLeod,

Tower Engineering Professionals is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine structural acceptability of the structure stress level. Based on our analysis we have determined the stress level for the structure and foundation, under the following load case, to be:

LC1: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table 1 for the existing and proposed loading.

Structure Capacity	Controlling Component
100.0%	Foundation (Bearing)

The analysis has been performed in accordance with the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, ASCE 7-05 Minimum Design Loads for Buildings and Other Structures, and the 2005 Connecticut State Building Code.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Table 1 and the attached drawings for the determined available structural capacity to be effective.

We at *Tower Engineering Professionals* appreciate the opportunity of providing our continuing professional services to you and *T-Mobile Towers*. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Andrew T. Haldane, P.E.

STATE OF CONNECTICUT
ANDREW T. HALDANE
No. 26583
LICENSED
PROFESSIONAL ENGINEER
06/06/2012

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 120-ft monopole tower designed by Pirod Inc. in May of 2000. The tower was originally designed for a fastest mile wind speed of 80 mph without ice, 69 mph with 0.5 inch ice, and 50 mph under service loads per TIA/EIA-222-F-1996 for the appurtenances listed in Table 2. TEP did not visit the site. All information provided to TEP was to be assumed accurate and complete.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures using a fastest mile wind speed of 80 mph with no ice, 28 mph with 1.0 inch ice thickness increasing with height, and 50 mph under service loads.

Table 1 - Existing and Proposed Antenna and Cable Information

Existing/ Proposed	Elevation (Ft)	Qty	Antenna Model	Mount Type	Qty Coax	Coax Size	Coax[1] Location	Owner/ Tenant
Proposed	***120***	***9***	***Ericsson AIR 22***	***13' LP Platform***	***25***	***1 5/8***	***Inside***	***T-Mobile***
		3	***Ericsson AIR 33***		***2***	***1 5/8 Hybrid***		
		3	***AWS ATMAA1412D***					
		1	***DC4-48-60-8-20F***					
		1	***2' MW Dish***					
Existing	110	6	Powerwave 7770.00	13' LP Platform	12	1 5/8	Inside	AT&T
		12	TMA's					
		2	LNX-6514DS-T4M					
		1	BXA-70063/6CF					
Existing	100	6	LPA-80080/4CF	LP Platform	12	1 5/8	Inside	Verizon
		3	MG D3-/800T2		1	1/2		
		6	FD9R6004 2C-3L Diplexers					
		1	GPS					
Existing	90	3	Kathrein 742 213	Flush	6	1 5/8	Outside	Pocket
Existing	80	3	LLPX310R	(3) Pipe mounts on collar	3	1/2	Outside	Clearwire
		3	A-ANT18G-2-C		3[2]	1/4[2]		
		3	Horizon ODU's		3[2]	5/8[2]		
		3	Samsung Wimax DapHead		1[2]	5/16[2]		

Notes:
1) See Appendix B – "Coax Configuration" for feed line configuration
2) Coax inside (2) 2" flexible conduits

Table 2 - Design Antenna and Cable Information

Mounting Level (Ft)	Center Line Elevation (Ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Qty Coax	Coax Size	Coax Location
120	120	12	Unknown	1'x4' Panels	12	1 5/8	Inside
110	110	12	Unknown	1'x4' Panels	12	1 5/8	Inside
100	100	12	Unknown	1'x4' Panels	12	1 5/8	Inside

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Tower and Foundation Drawings	Pirod Inc. dated May 1, 2000 Eng. File No: A-116876	-	T-Mobile
Modification Installation Report	Natcomm, Inc. dated November 9, 2007 Project No: 06115.00	-	T-Mobile
Geotechnical Report	Dr. Clarence Welti, P.E. dated April 4, 2000	-	T-Mobile
Correspondence	Correspondence from T-Mobile with regards to the existing and proposed loading, SAW dated May 22, 2012	-	T-Mobile

3.1) Analysis Method

tnxTower (version 6.0.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) The tower and foundation were built in accordance with the manufacturer's specifications.
2) The tower and foundation have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 1 and Appendix B – "Coax Configuration."
4) All unused antennas, mounts, coax, hardware, and appurtenances shall be removed.
5) When applicable, transmission cables are considered as structural components for calculating wind loads as allowed by the Standard.
6) Tower Engineering Professionals, Inc. shall assume that all tower components are in sufficient condition to carry their full design capacity.
7) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance. See Table 6.
8) Tower Engineering Professionals, Inc (TEP) did not analyze antenna supporting mounts as part of this structural analysis report. TEP assumes that all antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not perform a site visit to verify the size, condition or capacity of the antenna mounts.
9) This report is not a construction document.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	SF*P_allow (lb)	% Capacity	Pass / Fail
L1	119.08 - 101.08	Pole	TP26x22.27x0.25	1	-6143.800	1042527.260	17.6	Pass
L2	101.08 - 66.4967	Pole	TP34.063x24.896x0.313	2	-13865.60	1700521.359	47.6	Pass
L3	66.4967 - 32.83	Pole	TP41.75x32.5x0.375	3	-21009.00	2501454.376	55.8	Pass
L4	32.83 - 0	Pole	TP49.063x39.848x0.375	4	-30828.80	3027842.724	65.7	Pass
						Summary		

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	SF*P_allow (lb)	% Capacity	Pass / Fail
						Pole (L4)	65.7	Pass
						RATING =	**65.7**	**Pass**

Table 5 - Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
-	Anchor Rods	-	63.8	Pass
2	Pad and Pier Foundation w/ Rock Anchors	-	100.0	Pass

Notes:
2) See additional documentation in Appendix C - "Additional Calculations" for calculations supporting the % capacity listed.

Structure Rating (max from all components) =	100.0%

Table 6 - Dish Twist/Sway Results for 50 mph Service Wind Speed

Elevation (ft)	Dish Model	Beam Deflection		
		Deflection (in)	Tilt (deg)	Twist (deg)
120	***2' MW Dish***	***17.650***	***1.234***	***0.001***
80	A-ANT-18G-2-C	8.344	0.965	0.000

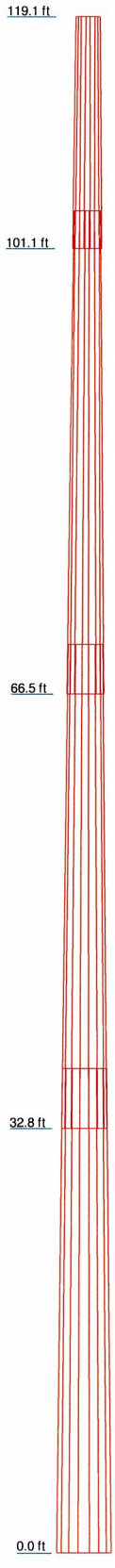
4.1) Recommendations

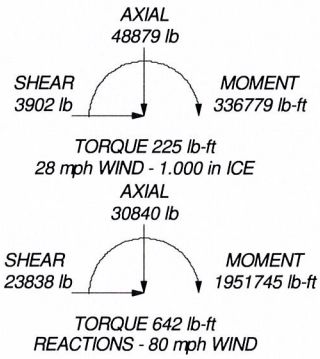
1) If the load differs from that described in Table 1 of this report, Appendix B – "Coax Configuration" or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	18.000	16	0.250	2.917	22.270	26.000		1166.7
2	37.500	16	0.313	3.833	24.896	34.063		3710.2
3	37.500	16	0.375	4.670	32.500	41.750	A572-65	5609.8
4	37.500	16	0.375		39.848	49.063		6728.7
								17215.4





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(3) AIR 21 w/ Mount Pipe	120	MG D3-800T2 w/ Pipe Mount	100
(3) AIR 21 w/ Mount Pipe	120	(2) FD9R6004	100
(3) AIR 21 w/ Mount Pipe	120	(2) FD9R6004	100
AIR 33 w/ mount pipe	120	(2) FD9R6004	100
AIR 33 w/ mount pipe	120	GPS_A	100
AIR 33 w/ mount pipe	120	Platform Mount [LP 403-1]	100
ATMAA1412D-1A20 (TMA)	120	LNX-6514DS-T4M w/ Mount Pipe	100
ATMAA1412D-1A20 (TMA)	120	742 213 w/ Mount Pipe	90
ATMAA1412D-1A20 (TMA)	120	742 213 w/ Mount Pipe	90
HCS Fiber/DC box (Large)	120	742 213 w/ Mount Pipe	90
4.5" x 3' Dish Mount	120	LLPX310R w/ Mount Pipe	80
Platform Mount [LP 403-1]	120	LLPX310R w/ Mount Pipe	80
2-ft HP Dish	120	3.5" Dia x 6' Pipe	80
(2) 7770.00 w/ Mount Pipe	110	3.5" Dia x 6' Pipe	80
(2) 7770.00 w/ Mount Pipe	110	3.5" Dia x 6' Pipe	80
(4) TMA	110	Horizon Duo	80
(4) TMA	110	Horizon Duo	80
(4) TMA	110	Horizon Duo	80
Platform Mount [LP 403-1]	110	WIMAX DAP HEAD	80
(2) 7770.00 w/ Mount Pipe	110	WIMAX DAP HEAD	80
LNX-6514DS-T4M w/ Mount Pipe	100	WIMAX DAP HEAD	80
BXA-70063-6CF-2 w/ Mount Pipe	100	Side Arm Mount [SO 101-3]	80
(2) LPA-80080/4CF w/ Mount Pipe	100	LLPX310R w/ Mount Pipe	80
(2) LPA-80080/4CF w/ Mount Pipe	100	A-ANT-18G-2-C	80
(2) LPA-80080/4CF w/ Mount Pipe	100	A-ANT-18G-2-C	80
MG D3-800T2 w/ Pipe Mount	100	A-ANT-18G-2-C	80
MG D3-800T2 w/ Pipe Mount	100		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 28 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 65.7%

Tower Engineering Professionals
3703 Junction Blvd.
Raleigh, NC 27603
Phone: (919) 661-6351
FAX: (919) 661-6350

Job: CT11178D - St. Mark's Church			
Project: TEP# 123480			
Client: T-Mobile	Drawn by: Dustin Smith, E.I.	App'd:	
Code: TIA/EIA-222-F	Date: 06/06/12	Scale: NTS	
Path: Q:\3480_CT11178\Structural\Rev 0\tnxTower\Rev F\CT11178D.eri		Dwg No. E-1	

Tower Input Data

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

Tower is located in Hartford County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 28 mph is used in combination with ice.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	119.080-101.080	18.000	2.917	16	22.270	26.000	0.250	1.000	A572-65 (65 ksi)
L2	101.080-66.497	37.500	3.833	16	24.896	34.063	0.313	1.250	A572-65 (65 ksi)
L3	66.497-32.830	37.500	4.670	16	32.500	41.750	0.375	1.500	A572-65 (65 ksi)
L4	32.830-0.000	37.500		16	39.848	49.063	0.375	1.500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	22.706	17.561	1075.714	7.839	11.358	94.712	2167.717	8.683	3.934	15.737
	26.509	20.536	1720.191	9.167	13.260	129.728	3466.428	10.154	4.676	18.706
L2	26.110	24.506	1870.962	8.752	12.697	147.358	3770.253	12.117	4.332	13.864
	34.730	33.645	4841.461	12.015	17.372	278.695	9756.227	16.635	6.157	19.701
L3	34.101	38.430	5010.529	11.437	16.575	302.290	10096.923	19.002	5.721	15.257
	42.568	49.495	10704.104	14.730	21.293	502.717	21570.282	24.473	7.562	20.165
L4	41.799	47.220	9294.814	14.052	20.323	457.365	18730.363	23.348	7.184	19.156
	50.024	58.242	17441.697	17.333	25.022	697.058	35147.483	28.798	9.017	24.046

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 119.080-101.080				1	1	1		
L2 101.080-66.497				1	1	1		
L3 66.497-32.830				1	1	1		
L4 32.830-0.000				1	1	1		

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
*****										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
PiRod Ladder	C	No	CaAa (Out Of Face)	119.080 - 0.000	1	No Ice	0.054	2.000
						1/2" Ice	0.154	2.635
						1" Ice	0.254	3.881
						2" Ice	0.454	8.206
						4" Ice	0.854	24.187
Safety Line 3/8	C	No	CaAa (Out Of Face)	119.080 - 0.000	1	No Ice	0.037	0.220
						1/2" Ice	0.137	0.750
						1" Ice	0.238	1.280
						2" Ice	0.437	2.340
						4" Ice	0.838	4.460
****								
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	119.080 - 0.000	27	No Ice	0.000	0.820
						1/2" Ice	0.000	0.820

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						1" Ice	0.000	0.820
						2" Ice	0.000	0.820
						4" Ice	0.000	0.820
*****								
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	110.000 - 0.000	12	No Ice	0.000	0.820
						1/2" Ice	0.000	0.820
						1" Ice	0.000	0.820
						2" Ice	0.000	0.820
						4" Ice	0.000	0.820
*****								
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	100.000 - 0.000	12	No Ice	0.000	0.820
						1/2" Ice	0.000	0.820
						1" Ice	0.000	0.820
						2" Ice	0.000	0.820
						4" Ice	0.000	0.820
LDF4RN-50A (1/2 FOAM)	C	No	Inside Pole	100.000 - 0.000	1	No Ice	0.000	0.150
						1/2" Ice	0.000	0.150
						1" Ice	0.000	0.150
						2" Ice	0.000	0.150
						4" Ice	0.000	0.150
*****								
LDF7-50A (1-5/8 FOAM)	C	No	CaAa (Out Of Face)	90.000 - 0.000	1	No Ice	0.198	0.820
						1/2" Ice	0.298	2.335
						1" Ice	0.398	4.461
						2" Ice	0.598	10.545
						4" Ice	0.998	30.044
LDF7-50A (1-5/8 FOAM) - Ice Weight Only	C	No	CaAa (Out Of Face)	90.000 - 0.000	5	No Ice	0.000	0.820
						1/2" Ice	0.000	2.335
						1" Ice	0.000	4.461
						2" Ice	0.000	10.545
						4" Ice	0.000	30.044
*****								
2" Flexible Conduit	C	No	CaAa (Out Of Face)	80.000 - 0.000	1	No Ice	0.200	0.340
						1/2" Ice	0.300	1.867
						1" Ice	0.400	4.005
						2" Ice	0.600	10.114
						4" Ice	1.000	29.662
2" Flexible Conduit (Ice Weight Only)	C	No	CaAa (Out Of Face)	80.000 - 0.000	1	No Ice	0.000	0.340
						1/2" Ice	0.000	1.867
						1" Ice	0.000	4.005
						2" Ice	0.000	10.114
						4" Ice	0.000	29.662
LDF4.5-50 (5/8 FOAM) - Ice Weight Only	C	No	CaAa (Out Of Face)	80.000 - 0.000	3	No Ice	0.000	0.150
						1/2" Ice	0.000	0.987
						1" Ice	0.000	1.824
						2" Ice	0.000	3.498
						4" Ice	0.000	6.845
LDF4-50A (1/2 FOAM) - Ice Weight Only	C	No	CaAa (Out Of Face)	80.000 - 0.000	3	No Ice	0.000	0.150
						1/2" Ice	0.000	0.840
						1" Ice	0.000	1.530
						2" Ice	0.000	2.911
						4" Ice	0.000	5.672
1/4 Coax - Ice Weight Only	C	No	CaAa (Out Of Face)	80.000 - 0.000	3	No Ice	0.000	0.100
						1/2" Ice	0.000	0.558
						1" Ice	0.000	1.016
						2" Ice	0.000	1.932
						4" Ice	0.000	3.765
5/16" Coax - Ice Weight Only	C	No	CaAa (Out Of Face)	80.000 - 0.000	1	No Ice	0.000	0.088
						1/2" Ice	0.000	0.584
						1" Ice	0.000	1.080
						2" Ice	0.000	2.072

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						4" Ice	0.000	4.057
*****								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	119.080-101.080	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.647	526.253
L2	101.080-66.497	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	10.519	1659.658
L3	66.497-32.830	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	16.480	1719.623
L4	32.830-0.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	16.070	1676.887

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	119.080-101.080	A	1.155	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	9.965	594.247
L2	101.080-66.497	A	1.117	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	35.050	2762.799
L3	66.497-32.830	A	1.050	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	46.575	3500.157
L4	32.830-0.000	A	1.000	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	43.641	3264.328

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	119.080-101.080	-0.114	0.066	-0.525	0.303
L2	101.080-66.497	-0.367	0.212	-0.911	0.526
L3	66.497-32.830	-0.550	0.318	-1.197	0.691
L4	32.830-0.000	-0.563	0.325	-1.233	0.712

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(3) AIR 21 w/ Mount Pipe	A	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.533 6.978 7.432 8.365 10.336	5.334 6.017 6.727 8.201 11.465	107.425 159.255 220.165 363.653 762.855
(3) AIR 21 w/ Mount Pipe	B	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.533 6.978 7.432 8.365 10.336	5.334 6.017 6.727 8.201 11.465	107.425 159.255 220.165 363.653 762.855
(3) AIR 21 w/ Mount Pipe	C	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.533 6.978 7.432 8.365 10.336	5.334 6.017 6.727 8.201 11.465	107.425 159.255 220.165 363.653 762.855
AIR 33 w/ mount pipe	A	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.386 6.821 7.264 8.177 10.107	5.181 5.862 6.561 8.013 11.232	121.425 172.242 232.036 372.978 765.835
AIR 33 w/ mount pipe	B	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.386 6.821 7.264 8.177 10.107	5.181 5.862 6.561 8.013 11.232	121.425 172.242 232.036 372.978 765.835
AIR 33 w/ mount pipe	C	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.386 6.821 7.264 8.177 10.107	5.181 5.862 6.561 8.013 11.232	121.425 172.242 232.036 372.978 765.835
ATMAA1412D-1A20 (TMA)	A	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.167 1.314 1.469 1.806 2.584	0.467 0.575 0.691 0.951 1.573	13.000 20.616 30.111 55.519 137.444
ATMAA1412D-1A20 (TMA)	B	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.167 1.314 1.469 1.806 2.584	0.467 0.575 0.691 0.951 1.573	13.000 20.616 30.111 55.519 137.444
ATMAA1412D-1A20 (TMA)	C	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.167 1.314 1.469 1.806 2.584	0.467 0.575 0.691 0.951 1.573	13.000 20.616 30.111 55.519 137.444
HCS Fiber/DC box (Large)	A	From Centroid-Leg	4.000 0.000 0.000		0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.224 3.467 3.717 4.245 5.404	1.162 1.337 1.521 1.915 2.807	19.000 38.056 60.061 113.697 264.913
4.5" x 3' Dish Mount	C	From Centroid-Le	4.000 0.000		0.000	120.000	No Ice 1/2" Ice	0.925 1.131	0.925 1.131	32.370 42.303

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
		g	0.000				1" Ice 2" Ice 4" Ice	1.372 1.889 3.056	1.372 1.889 3.056	54.679 87.373 188.802
Platform Mount [LP 403-1]	C	None			0.000	120.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.850 24.300 29.750 40.650 62.450	18.850 24.300 29.750 40.650 62.450	1500.000 1796.560 2093.120 2686.240 3872.480
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(2) 7770.00 w/ Mount Pipe	A	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.218 6.769 7.296 8.385 10.691	4.353 5.198 5.919 7.411 10.763	56.900 102.995 159.009 293.014 679.745
(2) 7770.00 w/ Mount Pipe	B	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.218 6.769 7.296 8.385 10.691	4.353 5.198 5.919 7.411 10.763	56.900 102.995 159.009 293.014 679.745
(2) 7770.00 w/ Mount Pipe	C	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.218 6.769 7.296 8.385 10.691	4.353 5.198 5.919 7.411 10.763	56.900 102.995 159.009 293.014 679.745
(4) TMA	A	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.280 1.500 1.720 2.160 3.040	0.310 0.500 0.690 1.070 1.830	15.000 19.500 24.000 33.000 51.000
(4) TMA	B	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.280 1.500 1.720 2.160 3.040	0.310 0.500 0.690 1.070 1.830	15.000 19.500 24.000 33.000 51.000
(4) TMA	C	From Centroid-Leg	4.000 0.000 0.000		0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.280 1.500 1.720 2.160 3.040	0.310 0.500 0.690 1.070 1.830	15.000 19.500 24.000 33.000 51.000
Platform Mount [LP 403-1]	C	None			0.000	110.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.850 24.300 29.750 40.650 62.450	18.850 24.300 29.750 40.650 62.450	1500.000 1796.560 2093.120 2686.240 3872.480
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LNX-6514DS-T4M w/ Mount Pipe	A	From Centroid-Leg	4.000 0.000 0.000		0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.682 9.312 9.931 11.198 13.852	7.418 8.452 9.345 11.181 15.216	79.330 149.395 229.857 420.014 938.257
LNX-6514DS-T4M w/ Mount Pipe	B	From Centroid-Leg	4.000 0.000 0.000		0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.682 9.312 9.931 11.198 13.852	7.418 8.452 9.345 11.181 15.216	79.330 149.395 229.857 420.014 938.257
BXA-70063-6CF-2 w/ Mount Pipe	C	From Centroid-Le	4.000 0.000		0.000	100.000	No Ice 1/2" Ice	7.969 8.609	5.801 6.953	42.246 100.217

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
		g	0.000			1" Ice	9.216	7.819	169.877
						2" Ice	10.459	9.601	335.132
						4" Ice	13.066	13.366	803.420
(2) LPA-80080/4CF w/ Mount Pipe	A	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.110 3.585 4.022 5.013 7.153	7.482 8.378 9.152 10.752 14.168	33.900 80.485 136.660 269.993 651.414
(2) LPA-80080/4CF w/ Mount Pipe	B	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.110 3.585 4.022 5.013 7.153	7.482 8.378 9.152 10.752 14.168	33.900 80.485 136.660 269.993 651.414
(2) LPA-80080/4CF w/ Mount Pipe	C	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.110 3.585 4.022 5.013 7.153	7.482 8.378 9.152 10.752 14.168	33.900 80.485 136.660 269.993 651.414
MG D3-800T2 w/ Pipe Mount	A	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.477 3.853 4.237 5.126 7.041	3.325 3.956 4.599 5.934 8.903	35.850 66.613 105.974 204.179 505.827
MG D3-800T2 w/ Pipe Mount	B	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.477 3.853 4.237 5.126 7.041	3.325 3.956 4.599 5.934 8.903	35.850 66.613 105.974 204.179 505.827
MG D3-800T2 w/ Pipe Mount	C	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.477 3.853 4.237 5.126 7.041	3.325 3.956 4.599 5.934 8.903	35.850 66.613 105.974 204.179 505.827
(2) FD9R6004	A	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.367 0.451 0.543 0.755 1.281	0.085 0.136 0.196 0.343 0.740	3.100 5.399 8.787 19.608 62.872
(2) FD9R6004	B	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.367 0.451 0.543 0.755 1.281	0.085 0.136 0.196 0.343 0.740	3.100 5.399 8.787 19.608 62.872
(2) FD9R6004	C	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.367 0.451 0.543 0.755 1.281	0.085 0.136 0.196 0.343 0.740	3.100 5.399 8.787 19.608 62.872
GPS_A	C	From Centroid-Le g	4.000 0.000 0.000	0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.297 0.374 0.459 0.655 1.151	0.297 0.374 0.459 0.655 1.151	0.870 4.658 9.758 24.672 78.797
Platform Mount [LP 403-1]	C	None		0.000	100.000	No Ice 1/2" Ice 1" Ice 2" Ice	18.850 24.300 29.750 40.650	18.850 24.300 29.750 40.650	1500.000 1796.560 2093.120 2686.240

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						4" Ice	62.450	62.450	3872.480
*****									
742 213 w/ Mount Pipe	A	From Leg	0.500 0.000 0.000	0.000	90.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.373 5.950 6.501 7.611 9.933	4.620 6.000 6.982 8.852 12.794	48.919 90.561 144.110 277.119 682.430
742 213 w/ Mount Pipe	B	From Leg	0.500 0.000 0.000	0.000	90.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.373 5.950 6.501 7.611 9.933	4.620 6.000 6.982 8.852 12.794	48.919 90.561 144.110 277.119 682.430
742 213 w/ Mount Pipe	C	From Leg	0.500 0.000 0.000	0.000	90.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.373 5.950 6.501 7.611 9.933	4.620 6.000 6.982 8.852 12.794	48.919 90.561 144.110 277.119 682.430
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LLPX310R w/ Mount Pipe	A	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.982 5.376 5.780 6.618 8.437	2.874 3.398 3.937 5.125 7.894	43.868 79.254 122.333 226.490 531.181
LLPX310R w/ Mount Pipe	B	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.982 5.376 5.780 6.618 8.437	2.874 3.398 3.937 5.125 7.894	43.868 79.254 122.333 226.490 531.181
LLPX310R w/ Mount Pipe	C	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.982 5.376 5.780 6.618 8.437	2.874 3.398 3.937 5.125 7.894	43.868 79.254 122.333 226.490 531.181
3.5" Dia x 6' Pipe	A	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.928 2.293 2.667 3.442 5.111	1.928 2.293 2.667 3.442 5.111	45.480 60.656 80.007 131.841 292.320
3.5" Dia x 6' Pipe	B	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.928 2.293 2.667 3.442 5.111	1.928 2.293 2.667 3.442 5.111	45.480 60.656 80.007 131.841 292.320
3.5" Dia x 6' Pipe	C	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.928 2.293 2.667 3.442 5.111	1.928 2.293 2.667 3.442 5.111	45.480 60.656 80.007 131.841 292.320
Horizon Duo	A	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.547 0.648 0.759 1.005 1.601	0.343 0.426 0.518 0.728 1.252	7.000 11.778 18.028 35.719 97.313
Horizon Duo	B	From Leg	2.000 0.000 0.000	0.000	80.000	No Ice 1/2" Ice 1" Ice 2" Ice	0.547 0.648 0.759 1.005	0.343 0.426 0.518 0.728	7.000 11.778 18.028 35.719

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
							4" Ice	1.601	1.252	97.313
Horizon Duo	C	From Leg	2.000		0.000	80.000	No Ice	0.547	0.343	7.000
			0.000				1/2" Ice	0.648	0.426	11.778
			0.000				1" Ice	0.759	0.518	18.028
							2" Ice	1.005	0.728	35.719
							4" Ice	1.601	1.252	97.313
WIMAX DAP HEAD	A	From Leg	2.000		0.000	80.000	No Ice	1.804	0.778	33.000
			0.000				1/2" Ice	1.988	0.918	44.576
			0.000				1" Ice	2.180	1.067	58.459
							2" Ice	2.589	1.391	93.926
							4" Ice	3.512	2.143	201.104
WIMAX DAP HEAD	B	From Leg	2.000		0.000	80.000	No Ice	1.804	0.778	33.000
			0.000				1/2" Ice	1.988	0.918	44.576
			0.000				1" Ice	2.180	1.067	58.459
							2" Ice	2.589	1.391	93.926
							4" Ice	3.512	2.143	201.104
WIMAX DAP HEAD	C	From Leg	2.000		0.000	80.000	No Ice	1.804	0.778	33.000
			0.000				1/2" Ice	1.988	0.918	44.576
			0.000				1" Ice	2.180	1.067	58.459
							2" Ice	2.589	1.391	93.926
							4" Ice	3.512	2.143	201.104
Side Arm Mount [SO 101-3]	C	None			0.000	80.000	No Ice	7.500	7.500	252.000
							1/2" Ice	8.900	8.900	333.000
							1" Ice	10.300	10.300	414.000
							2" Ice	13.100	13.100	576.000
							4" Ice	18.700	18.700	900.000
*****										

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
2-ft HP Dish	C	Paraboloid w/Shroud (HP)	From Centroid -Face	4.000		0.000		120.000	2.000	No Ice	3.142	200.000
				0.000						1/2" Ice	3.409	17.499
				0.000						1" Ice	3.676	0.000
										2" Ice	4.211	0.000
										4" Ice	5.280	0.000
A-ANT-18G-2-C	A	Paraboloid w/Shroud (HP)	From Leg	2.000		0.000		80.000	2.175	No Ice	3.720	27.150
				0.000						1/2" Ice	4.010	47.730
				0.000						1" Ice	4.300	68.320
										2" Ice	4.880	109.490
										4" Ice	6.040	191.830
A-ANT-18G-2-C	B	Paraboloid w/Shroud (HP)	From Leg	2.000		0.000		80.000	2.175	No Ice	3.720	27.150
				0.000						1/2" Ice	4.010	47.730
				0.000						1" Ice	4.300	68.320
										2" Ice	4.880	109.490
										4" Ice	6.040	191.830
A-ANT-18G-2-C	C	Paraboloid	From	2.000		0.000		80.000	2.175	No Ice	3.720	27.150

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
		w/Shroud (HP)	Leg	0.000								
				0.000								
										1/2" Ice	4.010	47.730
										1" Ice	4.300	68.320
										2" Ice	4.880	109.490
										4" Ice	6.040	191.830

Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice
15	Dead+Wind 0 deg+Ice
16	Dead+Wind 30 deg+Ice
17	Dead+Wind 60 deg+Ice
18	Dead+Wind 90 deg+Ice
19	Dead+Wind 120 deg+Ice
20	Dead+Wind 150 deg+Ice
21	Dead+Wind 180 deg+Ice
22	Dead+Wind 210 deg+Ice
23	Dead+Wind 240 deg+Ice
24	Dead+Wind 270 deg+Ice
25	Dead+Wind 300 deg+Ice
26	Dead+Wind 330 deg+Ice
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	119.08 - 101.08	17.650	33	1.234	0.001
L2	103.997 - 66.4967	13.811	33	1.182	0.001
L3	70.33 - 32.83	6.461	33	0.850	0.000
L4	37.5 - 0	1.882	33	0.458	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
120.000	2-ft HP Dish	33	17.650	1.234	0.001	25886
110.000	(2) 7770.00 w/ Mount Pipe	33	15.318	1.209	0.001	14254
100.000	LNX-6514DS-T4M w/ Mount Pipe	33	12.833	1.158	0.001	7911
90.000	742 213 w/ Mount Pipe	33	10.498	1.073	0.000	6614
80.000	A-ANT-18G-2-C	33	8.344	0.965	0.000	5683

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	119.08 - 101.08	45.051	8	3.145	0.002
L2	103.997 - 66.4967	35.265	8	3.017	0.001
L3	70.33 - 32.83	16.507	8	2.172	0.001
L4	37.5 - 0	4.809	8	1.170	0.001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
120.000	2-ft HP Dish	8	45.051	3.145	0.002	10314
110.000	(2) 7770.00 w/ Mount Pipe	8	39.109	3.083	0.002	5679
100.000	LNX-6514DS-T4M w/ Mount Pipe	8	32.772	2.955	0.001	3143
90.000	742 213 w/ Mount Pipe	8	26.812	2.739	0.001	2615
80.000	A-ANT-18G-2-C	8	21.314	2.464	0.001	2239

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	KL/r	F_a ksi	A in^2	Actual P lb	Allow. P_a lb	Ratio $\frac{P}{P_a}$
L1	119.08 - 101.08 (1)	TP26x22.27x0.25	18.000	0.000	0.0	39.000	20.054	-6143.800	782091.000	0.008
L2	101.08 - 66.4967 (2)	TP34.063x24.896x0.313	37.500	0.000	0.0	39.000	32.710	-13865.600	1275710.000	0.011
L3	66.4967 - 32.83 (3)	TP41.75x32.5x0.375	37.500	0.000	0.0	39.000	48.117	-21009.000	1876560.000	0.011
L4	32.83 - 0 (4)	TP49.063x39.848x0.375	37.500	0.000	0.0	39.000	58.242	-30828.801	2271450.000	0.014

Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M_x lb-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y lb-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	119.08 - 101.08 (1)	TP26x22.27x0.25	90931.667	8.823	39.000	0.226	0.000	0.000	39.000	0.000
L2	101.08 - 66.4967 (2)	TP34.063x24.896x0.313	533368.333	24.302	39.000	0.623	0.000	0.000	39.000	0.000
L3	66.4967 - 32.83 (3)	TP41.75x32.5x0.375	1131550.000	28.587	39.000	0.733	0.000	0.000	39.000	0.000
L4	32.83 - 0 (4)	TP49.063x39.848x0.375	1951741.667	33.600	39.000	0.862	0.000	0.000	39.000	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V lb	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T lb-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L1	119.08 - 101.08 (1)	TP26x22.27x0.25	7843.180	0.391	26.000	0.030	145.082	0.007	26.000	0.000
L2	101.08 - 66.4967 (2)	TP34.063x24.896x0.313	16486.900	0.504	26.000	0.039	66.693	0.001	26.000	0.000
L3	66.4967 - 32.83 (3)	TP41.75x32.5x0.375	19931.801	0.414	26.000	0.032	222.793	0.003	26.000	0.000
L4	32.83 - 0 (4)	TP49.063x39.848x0.375	23839.400	0.409	26.000	0.032	425.300	0.004	26.000	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	119.08 - 101.08 (1)	0.008	0.226	0.000	0.030	0.000	0.234 ✔	1.333	H1-3+VT ✔
L2	101.08 - 66.4967 (2)	0.011	0.623	0.000	0.039	0.000	0.634 ✔	1.333	H1-3+VT ✔

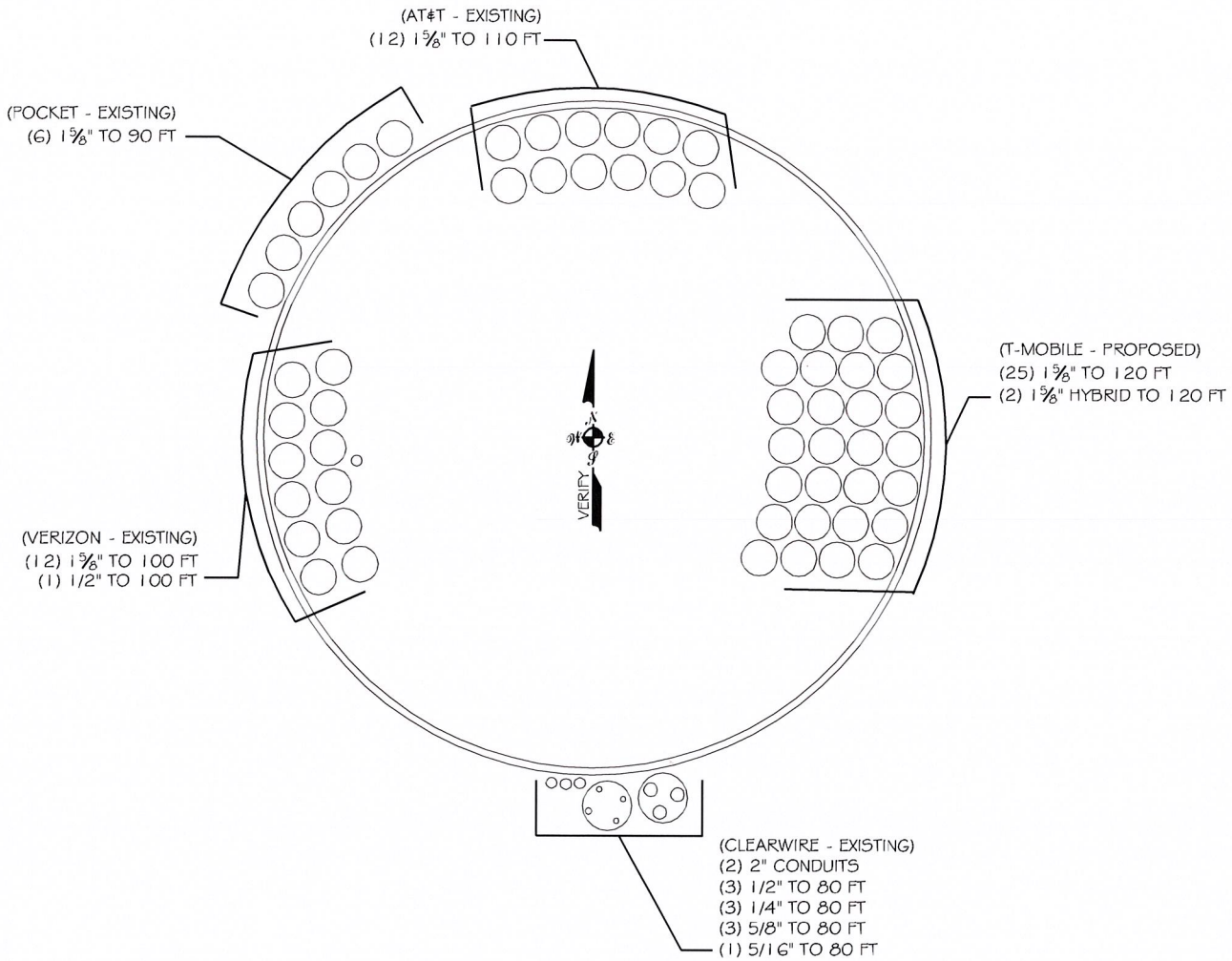
Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L3	66.4967 - 32.83 (3)	0.011	0.733	0.000	0.032	0.000	0.744 ✔	1.333	H1-3+VT ✔
L4	32.83 - 0 (4)	0.014	0.862	0.000	0.032	0.000	0.875 ✔	1.333	H1-3+VT ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
L1	119.08 - 101.08	Pole	TP26x22.27x0.25	1	-6143.800	1042527.260	17.6	Pass
L2	101.08 - 66.4967	Pole	TP34.063x24.896x0.313	2	-13865.600	1700521.359	47.6	Pass
L3	66.4967 - 32.83	Pole	TP41.75x32.5x0.375	3	-21009.000	2501454.376	55.8	Pass
L4	32.83 - 0	Pole	TP49.063x39.848x0.375	4	-30828.801	3027842.724	65.7	Pass
							Summary	
						Pole (L4)	65.7	Pass
						RATING =	**65.7**	**Pass**

APPENDIX B

COAX CONFIGURATION



COAX CONFIGURATION - N.T.S.

PREPARED BY:	PREPARED FOR:	PROJECT INFORMATION:	
TOWER ENGINEERING PROFESSIONALS 3703 JUNCTION BOULEVARD RALEIGH, NC 27603-5263 (919) 661-6351 www.tepgroup.net	T-Mobile T-MOBILE TOWERS 12920 SE 38TH STREET BELLEVUE, WA 98006	**SITE # CT11178D** **ST. MARK'S CHURCH** 467 SOUTH QUAKER LN. WEST HARTFORD, CT 06110 (HARTFORD COUNTY)	REVISION: 0 TEP JOB #: 123480 SHEET NUMBER: **S-1**

APPENDIX C

ADDITIONAL CALCULATIONS

TOWER ENGINEERING PROFESSIONALS, INC.
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: 919.661.6351
FAX: 919.661.6350
WWW.TEPGROUP.NET

JOB NAME: CT111780
JOB NUMBER: 123480
SHEET NO. 1 OF 2
CALCULATED BY: DTS DATE: 6/6/12
CHECKED BY: DATE:

FOUNDATION LOADS FOR 3D MODEL

- MAX MOMENT AT BASE OF PAD

$M + V \cdot h = 1951.7 + 23.8 \cdot 7ft = \underline{2118.3\ k\text{-}ft}$

- MOMENT VECTORS FOR 45° WIND

$2118.3 \cos(45) = 1497.9\ k\text{-}ft$

$2118.3 \sin(45) = 1497.9\ k\text{-}ft$

- WEIGHT OF SOIL (BACKFILL)

$VOL = (16.5^2 - 6^2)4 = 945\ ft^3$

$WT = 945\ ft^3 \times 0.125\ kcf = 118.1\ K$

- WEIGHT OF PIER

$36\ ft^2 \cdot 4.5\ ft \times 0.15\ kcf = 24.3\ K$

TOTAL WEIGHT OF SOIL & CONCRETE ABOVE MAT:

$118.1 + 24.3 = 142.4\ K$

DISTRIBUTED EVENLY TO MAT:

$$\frac{142.4}{16.5^2} = \underline{0.523\ ksf}$$

TOWER ENGINEERING PROFESSIONALS, INC.
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263
OFFICE: 919.661.6351
FAX: 919.661.6350
WWW.TEPGROUP.NET

JOB NAME: CT11178D
JOB NUMBER: 123480
SHEET NO. 2 OF 2
CALCULATED BY: DTS DATE: 6/6/12
CHECKED BY: DATE:

FOUNDATION CAPACITY

- ANCHOR ROD 1" Ø, 150 ksi UH, F_y = 128 ksi

- ALLOWABLE TENSILE STRENGTH

$A_n = 0.85\ in^2$

$T_a = 0.6 F_y A_n = 0.6(0.85)(128) = 65.3\ K$ controls

NOTE: PROOF LOADED TO 60 K

- CHECK BOND (ROCK-GROUT)

ALLOWABLE BOND STRESS = 50 psi
HOLE DIA: 3.5"
PER GEOTECH, IGNORE TOP 4'
MIN. EMBEDMENT: 15' ⟶ 15'-4' = 11' x 12"/' = 132"

$R_a = (3.5\ in)\pi(132\ in)\frac{50\ psi}{1000} = 72.6\ K$

- CHECK ROCK BREAKOUT CONE

VOL = $\frac{1}{3}\pi r^2 h$ $r = h \sin 30 = 15' \tan(30) = 8.66'$

$= \frac{1}{3}\pi(8.66)^2(15) = 1178\ ft^3$

WEIGHT OF ROCK = $1178\ ft^3 \times 0.16\ kcf = 188.4\ K$

AS ALLOWABLE EXCEEDS PROOF LOAD, USE T_a = PROOF = 60 K

- MAX LOAD TO ANCHOR ROD PER RISA-3D: 48.83 K

$T/T_a = \frac{48.83}{60} = 81.4\%$

- MAX CORNER LOAD TO FOUNDATION SPRING: 2.74 K
SPRING TRIBUTARY = $1.35^2/4 = 0.456$

$q = 2.74/0.456\ ft^2 = 6.0\ ksf$

CAPACITY = $q/q_A = \frac{6.0}{6.0} = 100\%$ CONTROLS

EXHIBIT C

EBI CONSULTING
www.ebiconsulting.com

21 B Street

Burlington, MA 01803

Tel: (781) 273.2500

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

T-Mobile Existing Facility

Site ID: CT11178D

West Hartford - I84 / x43
467 South Quaker Lane
West Hartford, CT 06110

June 27, 2012

EBI CONSULTING
www.ebiconsulting.com

21 B Street

Burlington, MA 01803

Tel: (781) 273.2500

June 27, 2012

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

Re: Emissions Values for Site CT11178D –West Hartford – I84 / x43

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 467 South Quaker Lane, West Hartford, CT, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μW/cm2). The general population exposure limit for the cellular band is 567 μW/cm2, and the general population exposure limit for the PCS band is 1000 μW/cm2. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

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 467 South Quaker Lane, West Hartford, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

For all calculations, all equipment was calculated using the following assumptions:

1) 2 GSM channels (1935.000 MHz—to 1945.000 MHz) were considered for each sector of the proposed installation.
2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications

EBI CONSULTING
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21 B Street

Burlington, MA 01803

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7) The antenna mounting height centerline of the proposed antennas is 120 feet above ground level (AGL)
8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

Site ID	CT11178D - West Hartford I84 / x43
Site Addresss	467 South Quaker Lane
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	120	114	None	0	0	48.326044	1.336834	0.13368%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	120	114	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	120	114	None	0	0	24.163022	0.668417	0.06684%
2B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	120	114	1-5/8"	0	0	24.163022	0.668417	0.06684%
														Sector total Power Density Value:			0.26737%

Sector 2

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	120	114	None	0	0	48.326044	1.336834	0.13368%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	120	114	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	120	114	None	0	0	24.163022	0.668417	0.06684%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	120	114	1-5/8"	0	0	24.163022	0.668417	0.06684%
														Sector total Power Density Value:			0.26737%

Sector 3

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	120	114	None	0	0	48.326044	1.336834	0.13368%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-			0	-3.95	120	114	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	120	114	None	0	0	24.163022	0.668417	0.06684%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	120	114	1-5/8"	0	0	24.163022	0.668417	0.06684%
														Sector total Power Density Value:			0.26737%

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.80210%
AT&T	11.70000%
Clearwire	2.90000%
Pocket	8.40000%
Verizon Wireless	25.22000%
Total Site MPE %	**49.022%**

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Summary

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

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.802% (0.267% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **49.022%** 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