

RACHEL A. SCHWARTZMAN

Please Reply To: Bridgeport
Writer's Direct Dial: (203) 337-4110
E-Mail: rschwartzman@cohenandwolf.com

September 11, 2014

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

**Re: Notice of Exempt Modification
Town of Burlington/MetroPCS co-location
CTHA539A
719 George Washington Tpke., Burlington, CT**

Dear Attorney Bachman:

This office represents MetroPCS Massachusetts, LLC a Delaware limited liability company ("MetroPCS") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, the Town of Burlington owns the existing monopole telecommunications tower and related facility at 719 George Washinton Tpke., Burlington, CT (41.766390/-72.96167). MetroPCS intends to replace 3 existing antennas with 6 new antennas and related equipment at this existing telecommunications facility in Burlington ("Burlington 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 First Selectman Theodore Shafer, and the property owner, the Town of Burlington.

The existing Burlington Facility consists of a 179 foot monopole tower.¹ MetroPCS plans to replace 3 existing antennas on low profile platforms with 6 new antennas on low profile platforms at a centerline of 175 feet. (See the plans revised to May 12, 2014 attached hereto as **Exhibit A**). MetroPCS will also install a battery backup unit, replace a Nortel cabinet with a 6201 ODE cabinet, install a 6x6' concrete pad within the lease area, install fiber cable, and reuse existing coax cables.

¹ While the online docket for the Connecticut Siting Council does not provide a docket or petition number for approval of this structure, it does reference this structure in connection with a notices of intent captioned EM-VER-008-020-025-108-130-131-050315, TS-CING-020-050913, TS-CING-020-050913, EM-POCKET-020-080930, EM-VER-020-111202, EM-VER-020-111228, EM-AT&T-020-121001, EM-AT&T-020-140114.

September 11, 2014
CTHA507A
Page 2

The existing Burlington Facility is structurally capable of supporting MetroPCS' proposed modifications, as indicated in the structural analysis dated May 28, 2014, and attached hereto as **Exhibit B**.

The planned modifications to the Burlington 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. MetroPCS' existing antennas are at a centerline of 175 feet; the replacement antennas will be installed at the same 175 foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2. The proposed modifications will not require an extension on the site boundaries or lease area, as depicted on Sheet 2 of Exhibit A. MetroPCS' 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 September 11, 2014. MetroPCS' operations would add 0.365% 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 35.945% 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, MetroPCS respectfully submits that the proposed replacement antennas and equipment at the Burlington Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement of this exempt modification, MetroPCS shall commence construction approximately sixty days from the receipt of the Council's decision.

Sincerely,



Rachel A. Schwartzman, Esq.

cc: Town of Burlington, First Selectman Theodore Shafer
Sheldon J. Freinle, Northeast Site Solutions

EXHIBIT A



KEY PLAN

N.T.S.

CONFIGURATION

5A

SUBMITTALS	
LE REV A	05-12-14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT
 SITE NUMBER:
 CTHA539A
 SITE NAME:
 BURLINGTON FIRE DEP. MONOPOLE
 SITE ADDRESS:
 719 GEORGE
 WASHINGTON TPKE,
 BURLINGTON, CT 06013

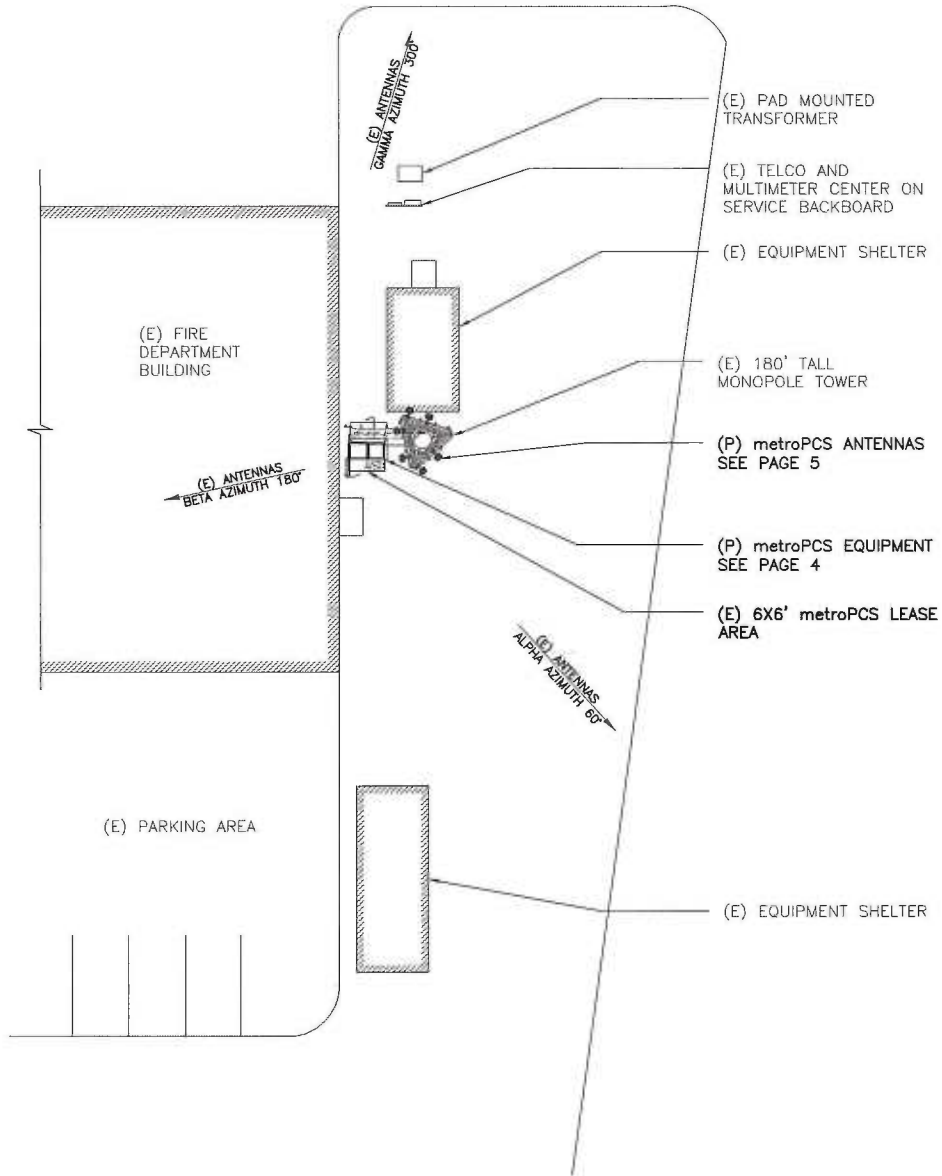
NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237
 FOR
metroPCS.
 metroPCS WIRELESS, INC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002

DRAWN BY: MA

CHECKED BY: SM

PAGE 1 OF 5

GEORGE WASHINGTON TPKE



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.

SITE PLAN

SCALE: N.T.S.



CONFIGURATION

5A

SUBMITTALS

LE REV A	05-12-14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT

SITE NUMBER:
 CTHA539A
 SITE NAME:
 BURLINGTON FIRE DEP. MONOPOLE
 SITE ADDRESS:
 719 GEORGE
 WASHINGTON TPKE.
 BURLINGTON, CT 06013

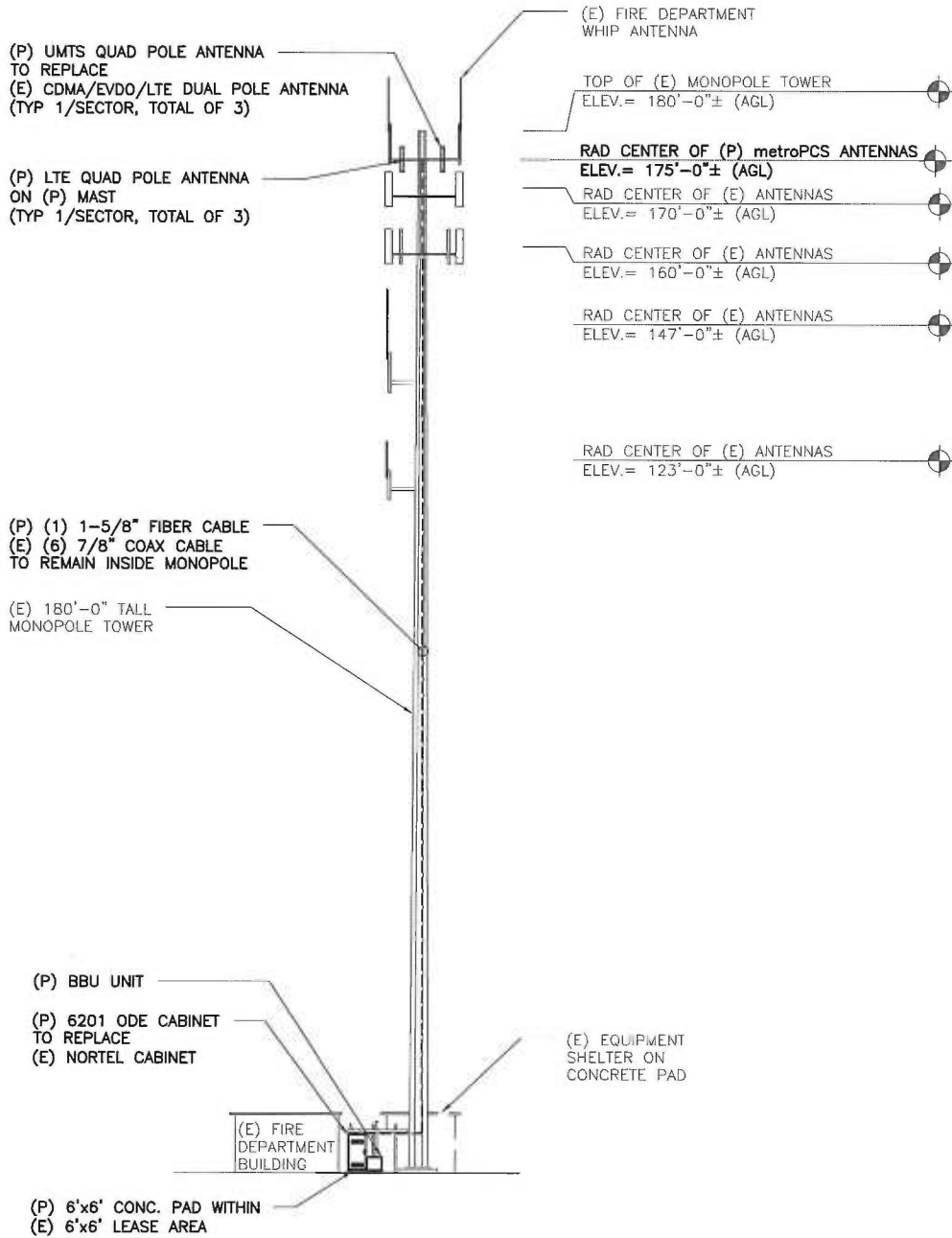
NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237

FOR
metroPCS.
 metroPCS WIRELESS, INC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002

DRAWN BY: MA

CHECKED BY: SM

PAGE 2 OF 5



ELEVATION

N.T.S.

1
LE-3

CONFIGURATION

5A

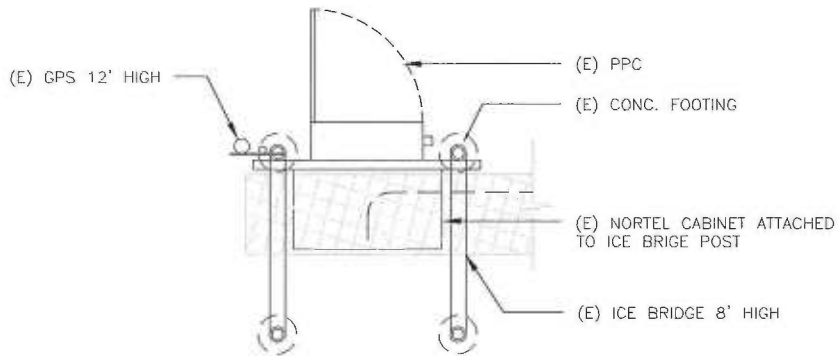
SUBMITTALS	
LE REV A	05-12-14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

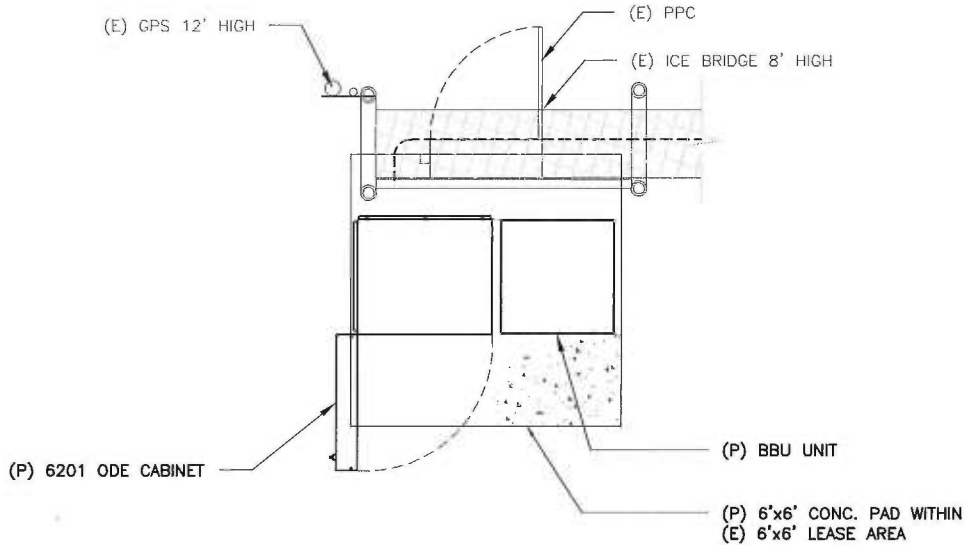
LEASE EXHIBIT
 SITE NUMBER:
 CTHA539A
 SITE NAME:
 BURLINGTON FIRE DEP. MONOPOLE
 SITE ADDRESS:
 719 GEORGE
 WASHINGTON TPKE.
 BURLINGTON, CT 06013

NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237

FOR
metroPCS.
 metroPCS WIRELESS, INC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002



EXISTING EQUIPMENT



PROPOSED EQUIPMENT

CONFIGURATION

5A

SUBMITTALS	
LE REV A	05-12-14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

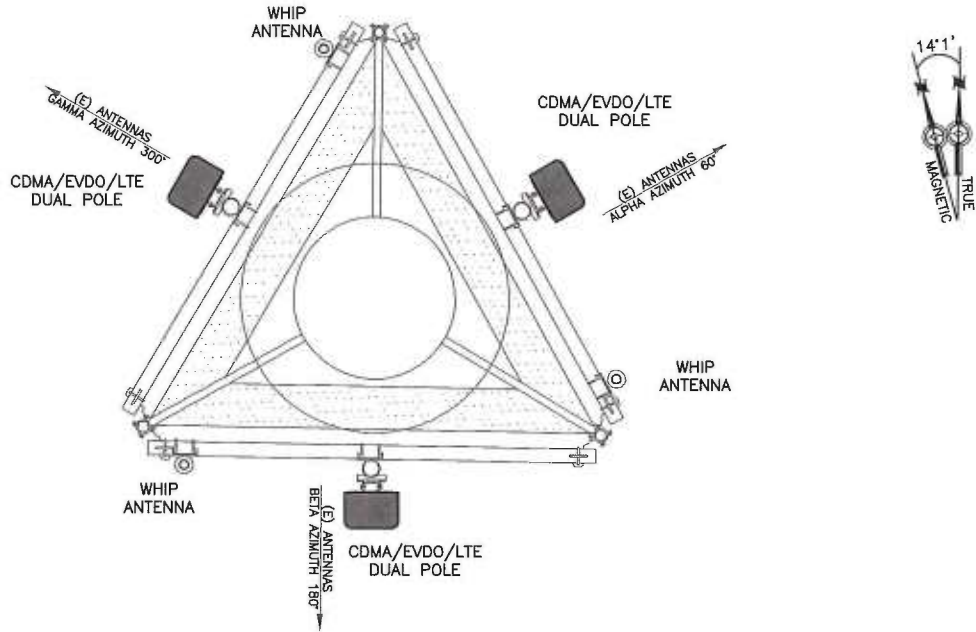
LEASE EXHIBIT
 SITE NUMBER:
 CTHA539A
 SITE NAME:
 BURLINGTON FIRE DEP. MONOPOLE
 SITE ADDRESS:
 719 GEORGE
 WASHINGTON TPKE.
 BURLINGTON, CT 06013

NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237
 FOR
metroPCS.
 metroPCS WIRELESS, INC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002

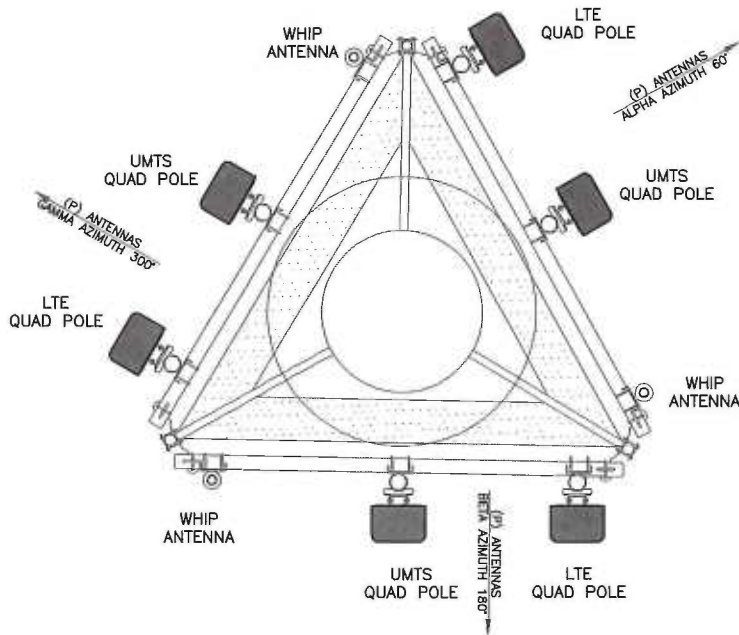
DRAWN BY: MA

CHECKED BY: SM

PAGE 4 OF 5



EXISTING ANTENNA CONFIGURATION



PROPOSED ANTENNA CONFIGURATION

CONFIGURATION

5A

SUBMITTALS

LE REV A	05-12-14

ATLANTIS GROUP
 1340 Centre Street
 Suite 212
 Newton, MA 02459
 Office: 617-965-0789
 Fax: 617-213-5056

LEASE EXHIBIT

SITE NUMBER:
 CTHA539A
 SITE NAME:
 BURLINGTON FIRE DEP. MONOPOLE
 SITE ADDRESS:
 719 GEORGE
 WASHINGTON TPKE.
 BURLINGTON, CT 06013

NORTHEAST SITE SOLUTIONS
 54 MAIN STREET, UNIT 3
 STURBRIDGE, MA 01566
 (508) 434-5237

FOR
metroPCS.
 metroPCS WIRELESS, INC.
 35 GRIFFIN ROAD SOUTH
 BLOOMFIELD, CT 06002

DRAWN BY: MA

CHECKED BY: SM

PAGE 5 OF 5

EXHIBIT B

**STRUCTURAL ANALYSIS REPORT
MONOPOLE**



Prepared For:



**35 Griffin Road South
Bloomfield, CT 06002**



Monopole Rating

Monopole: Pass (99.1 %)

Foundation: Pass

Sincerely,
Atlantis Group, Inc.
5-28-2014



Ahmet Colakoglu, PE
CT Professional Engineer
License No: 27057

**Site ID: CTHA539A
Site Name: Burlington Fire Dep., Monopole
719 George Washington TPKE.,
Burlington, CT 06013**

May 28, 2014

Prepared By:
Atlantis Group, Inc.
1340 Centre Street, Suite 212
Newton, Massachusetts 02459
Phone: 617-965-0789, Fax: 617-213-3123

CONTENTS

1.0 – SUBJECT AND REFERENCES

2.0 – PROPOSED ADDITION

3.0 - CODES AND LOADING

4.0 - STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES

5.0 - ANALYSIS AND ASSUMPTIONS

6.0 – RESULTS AND CONCLUSION

APPENDICES

A – CALCULATIONS

1.0 SUBJECT AND REFERENCES

The purpose of this analysis is to evaluate the structural capacity of the existing 179 feet tall monopole, located at 719 George Washington Tpke., Burlington, CT 06013, for the additions and alterations proposed by MetroPCS.

The structural analysis of the site is based on the following documents provided to us:

1. Structural Analysis Report prepared by Hudson Design Group LLC, dated 09/26/2012.
2. Existing and proposed antenna information provided by MetroPCS.

1.1 STRUCTURE

The structure is a 179 feet high, 18-sided monopole, which is attached to the foundation with a base plate and anchor bolts. It is formed by the following sections:

SECTION LENGTH (FEET)	LAP SPLICE (IN)	SHAFT THICKNESS (IN)	TOP DIAMETER (IN)	BOTTOM DIAMETER (IN)	YIELD STRENGTH (KSI)
39.83	0.00	0.1875	19.69	28.04	65
45.96	0.00	0.2500	28.04	37.65	65
47.00	0.00	0.3750	37.65	47.10	65
46.21	-	0.3750	47.10	57.50	65

2.0 PROPOSED CONFIGURATION
Antennas and Appurtenances:
Existing Configuration of MetroPCS Appurtenances:

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	*FEED LINES
ALPHA	175	CDMA/EVDO/LTE	(1) APXV18-206517S	(1) Low Profile Platform	(2) 7/8"
BETA	175	CDMA/EVDO/LTE	(1) APXV18-206517S	(1) Low Profile Platform	(2) 7/8"
GAMMA	175	CDMA/EVDO/LTE	(1) APXV18-206517S	(1) Low Profile Platform	(2) 7/8"

*Feedlines Inside monopole shaft.

Proposed & Final Configuration of MetroPCS Appurtenances:

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	*FEED LINES
ALPHA	175	UMTS Antenna LTE Antenna	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P	(1) Low Profile Platform	(1) New 1-5/8" Fiber Cable + (6) Existing 7/8"
BETA	175	UMTS Antenna LTE Antenna	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P	(1) Low Profile Platform	
GAMMA	175	UMTS Antenna LTE Antenna	(1) AIR21 B2A/B4P (1) AIR21 B4A/B2P	(1) Low Profile Platform	

*Feedlines Inside monopole shaft.

Existing and Remaining Appurtenances by Others:

RAD CENTER (FT) CARRIER	ANTENNA & TMA	MOUNT	*FEED LINES
182.1	(1) Lightning Rod	-	-
191.5	(3) 20' Omni	-	-
170 AT&T	(6) Powerwave 7770 Antenna (6) LGP 21400 TMAs (6) LGP 13519 (3) P65-17-XLH-RR Antenna (6) RRH (1) DC6-48-60-18-8F	(1) Low Profile Platform	(12) 1-5/8" + (1) Fiber Cable + (2) DC Power Cables
160	(6) APL 866513 Antenna (3) BXA 171063 Antenna (3) BXA 70063 Antenna (6) FD9R6004 Diplexers	(1) Low Profile Platform	(12) 1-5/8" (Inside Shaft)
138.6	20' Dipole	(1) 6' Standoff Mount	(1) 1-5/8"
132.5	8' Omni	(1) 6' Standoff Mount	(1) 1-5/8"
128.5	3' Yagi	(1) 6' Standoff Mount	(1) 1/2"
112.7	10' Dipole	(1) 6' Standoff Mount	(1) 1-5/8"

***Feedlines Inside monopole shaft.**

3.0 CODES AND LOADING

The monopole was analyzed per ANSI/TIA-222-F as referenced by the 2005 Connecticut Building Code with 2011 Supplement, which is the adopted building code in the county. The following wind loading was used in compliance with the standard for Hartford County, CT.

- Basic wind speed 80 mph (W) without ice.
- Basic wind speed 69.3 mph (W_i) with 1/2" radial and escalating ice.

The following load combinations were used with wind blowing at 0°, 60° and 90°, measured from a line normal to the face of the monopole.

- D + W
- D + W_i + I

D: Dead Load of structure and appurtenances

W: Wind Load, without ice

W_i : Wind Load, with ice

I: Ice Gravity Load

4.0 STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES

The analysis is based on the information provided to Atlantis Group and is assumed to be current and correct. Unless otherwise noted, the structure and the foundation system are assumed to be in good condition, free of defects and can achieve theoretical strength.

It is assumed that the structure has been maintained and shall be maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents. Atlantis Group will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance. Contractor should inspect the condition of the existing structure, mounts and connections and notify Atlantis Group for any discrepancies and deficiencies before proceeding with the construction.

The analysis does not include a qualification of the mounts attached on the structure or their connections. The analysis is performed to verify the capacity of the main structural members, which is the current practice in the tower industry.

The evaluation results presented in this report are only applicable for the previously mentioned existing and proposed additions and alterations. Any deviation of the proposed equipment and placement, etc., will require Atlantis Group to generate an additional structural evaluation.

5.0 ANALYSIS and ASSUMPTIONS

The monopole was analyzed by utilizing tnxTower, a non-linear 3-Dimensional finite element software, a product of Tower Numerics, Inc. Software output for this analysis is provided in Appendix-A of this report.

6.0 RESULTS and CONCLUSION

The existing monopole is found to have **adequate** structural capacity for the proposed loading by MetroPCS. For the aforementioned load combinations and as a maximum, the monopole shaft will be stressed to **99.1%** of capacity.

The base plate, anchor rods and the foundation system were assumed to be designed to have at least the capacity of the main structure, hence have adequate structural strength.

Reactions:

Maximums	Hudson Analysis	Atlantis Analysis
Base Shear (kips)	24.1	24.7
Base Compression (kip)	36.5	40.7
Base Moment (kip*ft)	3041	3193

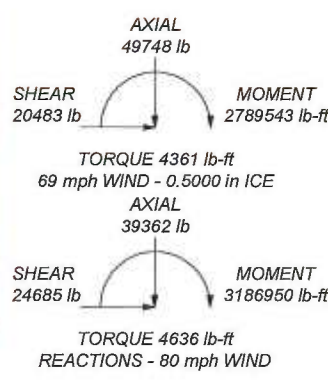
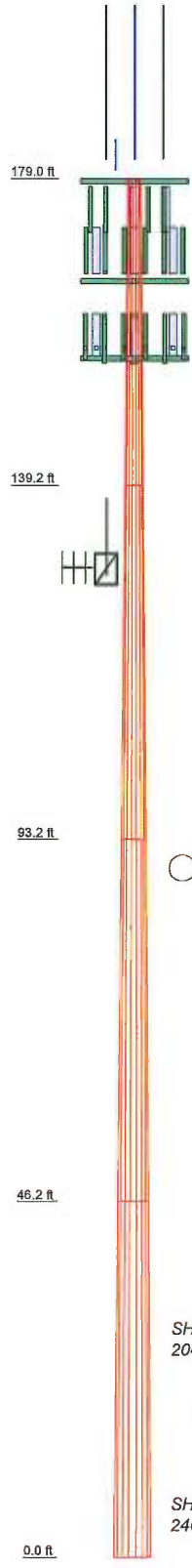
Therefore, the proposed additions and alterations by MetroPCS can be implemented as intended with the conditions outlined in this report.

Should you have any questions or need any clarifications about this report, please contact Ahmet Colakoglu at (617) 965-0789.

Sincerely,
Atlantis Group, Inc.

**APPENDIX A
CALCULATIONS**

Section	1	2	3	4	
Length (ft)	39.83	45.96	47.00	46.21	23668.0
Number of Sides	18	18	18	18	
Thickness (in)	0.1875	0.2500	0.3750	0.3750	
Top Dia (in)	19.6900	28.0400	37.6500	47.1000	
Bot Dia (in)	28.0400	37.6500	47.1000	57.5000	
Grade			A572-65		
Weight (lb)	1909.8	4045.0	7995.0	9718.2	



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
3" Dia 20' Omni	191.5	Ring Mount	167
3" Dia 20' Omni	191.5	14'-0" Platform	166
3" Dia 20' Omni	191.5	DC6-48-60-18-8F	164.5
3/4"x5' Lightning Rod	182.1	(2) APL866513 w/Mount Pipe	158.5
14'-0" Platform	179	BXA-171063-8BF-EDIN-2 w/ Mount Pipe	158.5
AIR21 B2A/B4P with pipe	175		
AIR21 B2A/B4P with pipe	175	(2) APL866513 w/Mount Pipe	158.5
AIR21 B2A/B4P with pipe	175	BXA-171063-8BF-EDIN-2 w/ Mount Pipe	158.5
AIR21 B4A/B2P with pipe	175		
AIR21 B4A/B2P with pipe	175	(2) APL866513 w/Mount Pipe	158.5
AIR21 B4A/B2P with pipe	175	BXA-171063-8BF-EDIN-2 w/ Mount Pipe	158.5
P65-17-XLH-RR with Pipe	170		
P65-17-XLH-RR with Pipe	170	BXA-70063/6CF w/ Mount Pipe	158
P65-17-XLH-RR with Pipe	170	BXA-70063/6CF w/ Mount Pipe	158
P65-17-XLH-RR with Pipe	170	BXA-70063/6CF w/ Mount Pipe	158
(2) Ericsson RRU	170	(2) FRS FD9R6004 Diplexer	157
(2) Ericsson RRU	170	(2) FRS FD9R6004 Diplexer	157
(2) Ericsson RRU	170	(2) FRS FD9R6004 Diplexer	157
(2) Powerwave LGP13519 diplexer	169.7	14'-0" Platform	156
(2) Powerwave LGP13519 diplexer	169.7	20' Dipole	138.6
(2) Powerwave LGP13519 diplexer	169.7	Omni 1"x8'	132.5
(2) 7770.00 w/ Mount Pipe	169.7	3' Yagi	128.5
(2) 7770.00 w/ Mount Pipe	169.7	Pirot 6' Side Mount Standoff (1)	128.3
(2) 7770.00 w/ Mount Pipe	169.7	Pirot 6' Side Mount Standoff (1)	127.5
(2) Powerwave TMA LGP21400	169.7	10' Dipole	112.7
(2) Powerwave TMA LGP21400	169.7	Pirot 6' Side Mount Standoff (1)	107.8
(2) Powerwave TMA LGP21400	169.7		

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 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 99.1%

	Atlantis Group, Inc.		Job: CTHA539A		
	1340 Centre Street, Suite 212		Project: CTHA539A		
	Newton, Massachusetts 02459		Client: metroPCS	Drawn by: Ahmet Colakoglu	App'd:
	Phone: 617-965-0789		Code: TIA/EIA-222-F	Date: 05/28/14	Scale: NTS
	FAX: 617-213-3123		Path: Z:\projects\2014\17 - Atlantis\1417030 - CTHA539A - HFC\52BAR\atg\CTHA539A.dwg		Dwg No. E-1

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	1 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

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 0.5000 in.

Ice density of 56 pcf.

A wind speed of 69 mph is used in combination with ice.

Temperature drop of 50 °F.

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, feed line supports, and appurtenance mounts are not considered.

Options

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

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	179.00-139.17	39.83	0.00	18	19.6900	28.0400	0.1875	0.7500	A572-65 (65 ksi)
L2	139.17-93.21	45.96	0.00	18	28.0400	37.6500	0.2500	1.0000	A572-65 (65 ksi)
L3	93.21-46.21	47.00	0.00	18	37.6500	47.1000	0.3750	1.5000	A572-65 (65 ksi)
L4	46.21-0.00	46.21		18	47.1000	57.5000	0.3750	1.5000	A572-65 (65 ksi)

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 2 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	19.9937	11.6064	557.7204	6.9234	10.0025	55.7580	1116.1746	5.8043	3.1354	16.722
	28.4726	16.5757	1624.5691	9.8876	14.2443	114.0503	3251.2759	8.2894	4.6050	24.56
L2	28.4726	22.0514	2151.5430	9.8654	14.2443	151.0457	4305.9170	11.0278	4.4950	17.98
	38.2308	29.6769	5244.4408	13.2770	19.1262	274.2019	10495.7824	14.8413	6.1864	24.746
L3	38.2308	44.3666	7788.0476	13.2326	19.1262	407.1926	15586.3429	22.1875	5.9664	15.91
	47.8266	55.6144	15339.9368	16.5874	23.9268	641.1194	30700.0583	27.8125	7.6296	20.346
L4	47.8266	55.6144	15339.9368	16.5874	23.9268	641.1194	30700.0583	27.8125	7.6296	20.346
	58.3870	67.9930	28032.0126	20.2794	29.2100	959.6718	56100.9104	34.0030	9.4600	25.227

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontal
ft	ft ²	in					in	in
L1 179.00-139.17				1	1	1		
L2 139.17-93.21				1	1	1		
L3 93.21-46.21				1	1	1		
L4 46.21-0.00				1	1	1		

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _{AA}	Weight
						ft ² /ft	plf
AL5-50(7/8)	A	No	Inside Pole	179.00 - 3.00	6	No Ice 1/2" Ice	0.00 0.26
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	170.00 - 7.00	12	No Ice 1/2" Ice	0.00 1.04
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	158.00 - 11.00	12	No Ice 1/2" Ice	0.00 1.04
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	128.30 - 11.00	1	No Ice 1/2" Ice	0.00 1.04
LDF4-50A (1/2 FOAM)	A	No	Inside Pole	128.30 - 11.00	1	No Ice 1/2" Ice	0.00 0.25
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	127.50 - 11.00	1	No Ice 1/2" Ice	0.00 1.04
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	107.80 - 11.00	1	No Ice 1/2" Ice	0.00 1.04
FB-L98B-002	C	No	Inside Pole	170.00 - 7.00	1	No Ice 1/2" Ice	0.00 0.25
WR-VG112ST-BRDA	C	No	Inside Pole	170.00 - 7.00	2	No Ice 1/2" Ice	0.00 0.25
HS Hybrid 5 Power x 6 Fiber 8 AWG	A	No	Inside Pole	175.00 - 3.00	1	No Ice 1/2" Ice	0.00 1.00

Feed Line/Linear Appurtenances Section Areas

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 3 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
L1	179.00-139.17	A	0.000	0.000	0.000	0.000	717.72
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	23.12
L2	139.17-93.21	A	0.000	0.000	0.000	0.000	1360.92
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	34.47
L3	93.21-46.21	A	0.000	0.000	0.000	0.000	1451.83
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	35.25
L4	46.21-0.00	A	0.000	0.000	0.000	0.000	1158.04
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	29.41

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} In Face ft ²	C_{AA} Out Face ft ²	Weight lb
L1	179.00-139.17	A	0.500	0.000	0.000	0.000	0.000	717.72
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	23.12
L2	139.17-93.21	A	0.500	0.000	0.000	0.000	0.000	1360.92
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	34.47
L3	93.21-46.21	A	0.500	0.000	0.000	0.000	0.000	1451.83
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	35.25
L4	46.21-0.00	A	0.500	0.000	0.000	0.000	0.000	1158.04
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	29.41

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	179.00-139.17	0.0000	0.0000	0.0000	0.0000
L2	139.17-93.21	0.0000	0.0000	0.0000	0.0000
L3	93.21-46.21	0.0000	0.0000	0.0000	0.0000
L4	46.21-0.00	0.0000	0.0000	0.0000	0.0000

Discrete Tower Loads

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	4 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A _A		Weight
			Horz	Lateral			Front	Side	
			ft	ft	°	ft	ft ²	ft ²	lb
3/4"x5' Lightning Rod	A	From Face	2.00	0.0000	182.10	No Ice	0.38	0.38	15.00
			0.00			1/2" Ice	0.89	0.89	18.90
			0.00						
3" Dia 20' Omni	A	From Leg	3.50	0.0000	191.50	No Ice	4.00	4.00	55.00
			0.00			1/2" Ice	6.00	6.00	100.00
			0.00						
3" Dia 20' Omni	B	From Leg	3.50	0.0000	191.50	No Ice	4.00	4.00	55.00
			0.00			1/2" Ice	6.00	6.00	100.00
			0.00						
3" Dia 20' Omni	C	From Leg	3.50	0.0000	191.50	No Ice	4.00	4.00	55.00
			0.00			1/2" Ice	6.00	6.00	100.00
			0.00						
14'-0" Platform	A	None		0.0000	179.00	No Ice	13.92	13.92	3200.00
						1/2" Ice	17.41	17.41	4900.00

(2) 7770.00 w/ Mount Pipe	A	From Leg	3.50	0.0000	169.70	No Ice	6.12	4.25	55.38
			0.00			1/2" Ice	6.63	5.01	102.81
			0.00						
(2) 7770.00 w/ Mount Pipe	B	From Leg	3.50	0.0000	169.70	No Ice	6.12	4.25	55.38
			0.00			1/2" Ice	6.63	5.01	102.81
			0.00						
(2) 7770.00 w/ Mount Pipe	C	From Leg	3.50	0.0000	169.70	No Ice	6.12	4.25	55.38
			0.00			1/2" Ice	6.63	5.01	102.81
			0.00						
(2) Powerwave TMA LGP21400	A	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
(2) Powerwave TMA LGP21400	B	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
(2) Powerwave TMA LGP21400	C	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
(2) Powerwave LGP13519 diplexer	A	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
(2) Powerwave LGP13519 diplexer	B	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
(2) Powerwave LGP13519 diplexer	C	From Leg	3.50	0.0000	169.70	No Ice	1.23	0.41	14.10
			0.00			1/2" Ice	1.38	0.52	21.29
			0.00						
14'-0" Platform	A	None		0.0000	166.00	No Ice	13.92	13.92	3200.00
						1/2" Ice	17.41	17.41	4900.00

P65-17-XLH-RR with Pipe	A	From Leg	3.50	0.0000	170.00	No Ice	11.70	8.94	102.85
			0.00			1/2" Ice	12.42	10.45	188.61
			0.00						
P65-17-XLH-RR with Pipe	B	From Leg	3.50	0.0000	170.00	No Ice	11.70	8.94	102.85
			0.00			1/2" Ice	12.42	10.45	188.61
			0.00						
P65-17-XLH-RR with Pipe	C	From Leg	3.50	0.0000	170.00	No Ice	11.70	8.94	102.85
			0.00			1/2" Ice	12.42	10.45	188.61
			0.00						
(2) Ericsson RRU	A	From Face	1.00	0.0000	170.00	No Ice	2.07	1.08	44.00
			0.00			1/2" Ice	2.26	1.23	58.64
			0.00						

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	5 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets:			Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Lateral	Vert					
(2) Ericsson RRU	B	From Face	1.00	0.0000	170.00	No Ice	2.07	1.08	44.00	
			0.00			1/2" Ice	2.26	1.23	58.64	
(2) Ericsson RRU	C	From Face	1.00	0.0000	170.00	No Ice	2.07	1.08	44.00	
			0.00			1/2" Ice	2.26	1.23	58.64	
DC6-48-60-18-8F	A	From Face	1.00	0.0000	164.50	No Ice	1.29	1.29	32.00	
			0.00			1/2" Ice	1.49	1.49	47.38	
Ring Mount	A	None	0.00	0.0000	167.00	No Ice	1.40	1.40	90.00	
						1/2" Ice	2.40	2.40	130.00	

(2) APL866513 w/Mount Pipe	A	From Leg	3.50	0.0000	158.50	No Ice	5.01	5.40	41.25	
			0.00			1/2" Ice	5.69	6.49	91.03	
BXA-171063-8BF-EDIN-2 w/ Mount Pipe	A	From Leg	3.50	0.0000	158.50	No Ice	3.18	3.35	28.90	
			0.00			1/2" Ice	3.56	3.97	61.07	
BXA-70063/6CF w/ Mount Pipe	A	From Leg	3.50	0.0000	158.00	No Ice	7.98	5.41	42.28	
			0.00			1/2" Ice	8.62	6.56	101.23	
(2) FRS FD9R6004 Diplexer	A	From Leg	3.50	0.0000	157.00	No Ice	0.37	0.08	2.60	
			0.00			1/2" Ice	0.45	0.14	4.90	
(2) APL866513 w/Mount Pipe	B	From Leg	3.50	0.0000	158.50	No Ice	5.01	5.40	41.25	
			0.00			1/2" Ice	5.69	6.49	91.03	
BXA-171063-8BF-EDIN-2 w/ Mount Pipe	B	From Leg	3.50	0.0000	158.50	No Ice	3.18	3.35	28.90	
			0.00			1/2" Ice	3.56	3.97	61.07	
BXA-70063/6CF w/ Mount Pipe	B	From Leg	3.50	0.0000	158.00	No Ice	7.98	5.41	42.28	
			0.00			1/2" Ice	8.62	6.56	101.23	
(2) FRS FD9R6004 Diplexer	B	From Leg	3.50	0.0000	157.00	No Ice	0.37	0.08	2.60	
			0.00			1/2" Ice	0.45	0.14	4.90	
(2) APL866513 w/Mount Pipe	C	From Leg	3.50	0.0000	158.50	No Ice	5.01	5.40	41.25	
			0.00			1/2" Ice	5.69	6.49	91.03	
BXA-171063-8BF-EDIN-2 w/ Mount Pipe	C	From Leg	3.50	0.0000	158.50	No Ice	3.18	3.35	28.90	
			0.00			1/2" Ice	3.56	3.97	61.07	
BXA-70063/6CF w/ Mount Pipe	C	From Leg	3.50	0.0000	158.00	No Ice	7.98	5.41	42.28	
			0.00			1/2" Ice	8.62	6.56	101.23	
(2) FRS FD9R6004 Diplexer	C	From Leg	3.50	0.0000	157.00	No Ice	0.37	0.08	2.60	
			0.00			1/2" Ice	0.45	0.14	4.90	
14'-0" Platform	A	None	0.00	0.0000	156.00	No Ice	17.30	17.30	1500.00	
						1/2" Ice	22.10	22.10	2030.00	

Pirod 6' Side Mount Standoff (1)	C	From Leg	3.00	0.0000	128.30	No Ice	4.97	4.97	70.00	
			0.00			1/2" Ice	6.12	6.12	130.00	
3' Yagi	C	From Leg	5.00	0.0000	128.50	No Ice	2.08	2.08	30.95	
			0.00			1/2" Ice	3.79	3.79	52.87	
			0.00							

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	6 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight	
			ft ft ft	°	ft	ft ²	ft ²	lb	
Omni 1"x8'	C	From Leg	3.00 0.00 0.00	0.0000	132.50	No Ice 1/2" Ice	0.80 1.62	0.80 1.62	20.00 27.43
Pirod 6' Side Mount Standoff (1)	A	From Leg	3.00 0.00 0.00	0.0000	127.50	No Ice 1/2" Ice	4.97 6.12	4.97 6.12	70.00 130.00
20' Dipole	A	From Leg	6.00 0.00 0.00	0.0000	138.60	No Ice 1/2" Ice	8.00 10.04	8.00 10.04	60.00 115.61
Pirod 6' Side Mount Standoff (1)	A	From Leg	3.00 0.00 0.00	0.0000	107.80	No Ice 1/2" Ice	4.97 6.12	4.97 6.12	70.00 130.00
10' Dipole	A	From Leg	6.00 0.00 0.00	0.0000	112.70	No Ice 1/2" Ice	4.00 4.97	4.00 4.97	25.00 53.13

AIR21 B2A/B4P with pipe	A	From Leg	3.50 0.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.87 7.38	6.29 7.05	134.62 201.01
AIR21 B2A/B4P with pipe	B	From Leg	3.50 0.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.87 7.38	6.29 7.05	134.62 201.01
AIR21 B2A/B4P with pipe	C	From Leg	3.50 0.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.87 7.38	6.29 7.05	134.62 201.01
AIR21 B4A/B2P with pipe	A	From Leg	3.50 4.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.85 7.41	5.78 6.70	126.90 184.69
AIR21 B4A/B2P with pipe	B	From Leg	3.50 4.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.85 7.41	5.78 6.70	126.90 184.69
AIR21 B4A/B2P with pipe	C	From Leg	3.50 4.00 0.00	0.0000	175.00	No Ice 1/2" Ice	6.85 7.41	5.78 6.70	126.90 184.69

Tower Pressures - No Ice

$$G_H = 1.690$$

Section Elevation	z	K _Z	q _z	A _G	F _a	A _F	A _R	A _{leg}	Leg %	C _A A _A In Face	C _A A _A Out Face
ft	ft		psf	ft ²	c	ft ²	ft ²	ft ²		ft ²	ft ²
L1 179.00-139.17	158.10	1.565	26	79.212	A	0.000	79.212	79.212	100.00	0.000	0.000
					B	0.000	79.212		100.00	0.000	0.000
					C	0.000	79.212		100.00	0.000	0.000
L2 139.17-93.21	115.39	1.43	23	125.796	A	0.000	125.796	125.796	100.00	0.000	0.000
					B	0.000	125.796		100.00	0.000	0.000
					C	0.000	125.796		100.00	0.000	0.000
L3 93.21-46.21	69.41	1.237	20	165.969	A	0.000	165.969	165.969	100.00	0.000	0.000

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	7 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Section Elevation	z	K _Z	q _z	A _G	F _a	A _F	A _R	A _{leg}	Leg %	C _d A _A In Face	C _d A _A Out Face
ft	ft		psf	ft ²	c	ft ²	ft ²	ft ²		ft ²	ft ²
L4 46.21-0.00	22.41	1	16	201.399	B	0.000	165.969		100.00	0.000	0.000
					C	0.000	165.969		100.00	0.000	0.000
					A	0.000	201.399	201.399	100.00	0.000	0.000
					B	0.000	201.399		100.00	0.000	0.000
					C	0.000	201.399		100.00	0.000	0.000

Tower Pressure - With Ice

$$G_H = 1.690$$

Section Elevation	z	K _Z	q _z	t _z	A _G	F _a	A _F	A _R	A _{leg}	Leg %	C _d A _A In Face	C _d A _A Out Face
ft	ft		psf	in	ft ²	c	ft ²	ft ²	ft ²		ft ²	ft ²
L1 179.00-139.17	158.10	1.565	19	0.5000	82.531	A	0.000	82.531	82.531	100.00	0.000	0.000
						B	0.000	82.531		100.00	0.000	0.000
						C	0.000	82.531		100.00	0.000	0.000
L2 139.17-93.21	115.39	1.43	18	0.5000	129.626	A	0.000	129.626	129.626	100.00	0.000	0.000
						B	0.000	129.626		100.00	0.000	0.000
						C	0.000	129.626		100.00	0.000	0.000
L3 93.21-46.21	69.41	1.237	15	0.5000	169.885	A	0.000	169.885	169.885	100.00	0.000	0.000
						B	0.000	169.885		100.00	0.000	0.000
						C	0.000	169.885		100.00	0.000	0.000
L4 46.21-0.00	22.41	1	12	0.5000	205.249	A	0.000	205.249	205.249	100.00	0.000	0.000
						B	0.000	205.249		100.00	0.000	0.000
						C	0.000	205.249		100.00	0.000	0.000

Tower Pressure - Service

$$G_H = 1.690$$

Section Elevation	z	K _Z	q _z	A _G	F _a	A _F	A _R	A _{leg}	Leg %	C _d A _A In Face	C _d A _A Out Face
ft	ft		psf	ft ²	c	ft ²	ft ²	ft ²		ft ²	ft ²
L1 179.00-139.17	158.10	1.565	10	79.212	A	0.000	79.212	79.212	100.00	0.000	0.000
					B	0.000	79.212		100.00	0.000	0.000
					C	0.000	79.212		100.00	0.000	0.000
L2 139.17-93.21	115.39	1.43	9	125.796	A	0.000	125.796	125.796	100.00	0.000	0.000
					B	0.000	125.796		100.00	0.000	0.000
					C	0.000	125.796		100.00	0.000	0.000
L3 93.21-46.21	69.41	1.237	8	165.969	A	0.000	165.969	165.969	100.00	0.000	0.000
					B	0.000	165.969		100.00	0.000	0.000
					C	0.000	165.969		100.00	0.000	0.000
L4 46.21-0.00	22.41	1	6	201.399	A	0.000	201.399	201.399	100.00	0.000	0.000
					B	0.000	201.399		100.00	0.000	0.000
					C	0.000	201.399		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 8 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	2228.97	55.96	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	3231.74	70.32	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	3674.43	78.18	C
			B	1	0.65	1	1	1	165.969			
			C	1	0.65	1	1	1	165.969			
L4 46.21-0.00	1187.44	9718.21	A	1	0.65	1	1	1	201.399	3646.11	78.90	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	1062067.0 0 lb-ft	12781.25		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	2228.97	55.96	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	3231.74	70.32	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	3674.43	78.18	C
			B	1	0.65	1	1	1	165.969			
			C	1	0.65	1	1	1	165.969			
L4 46.21-0.00	1187.44	9718.21	A	1	0.65	1	1	1	201.399	3646.11	78.90	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	1062067.0 0 lb-ft	12781.25		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	2228.97	55.96	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	3231.74	70.32	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	3674.43	78.18	C
			B	1	0.65	1	1	1	165.969			

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 9 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L4 46.21-0.00	1187.44	9718.21	C	1	0.65	1	1	1	165.969			
			A	1	0.65	1	1	1	201.399	3646.11	78.90	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	1062067.0	12781.25		
									0 lb-ft			

Tower Forces - With Ice - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	2508.74	A	1	0.65	1	1	1	82.531	1741.77	43.73	C
			B	1	0.65	1	1	1	82.531			
			C	1	0.65	1	1	1	82.531			
L2 139.17-93.21	1395.39	4990.78	A	1	0.65	1	1	1	129.626	2497.60	54.34	C
			B	1	0.65	1	1	1	129.626			
			C	1	0.65	1	1	1	129.626			
L3 93.21-46.21	1487.08	9238.71	A	1	0.65	1	1	1	169.885	2820.85	60.02	C
			B	1	0.65	1	1	1	169.885			
			C	1	0.65	1	1	1	169.885			
L4 46.21-0.00	1187.44	11224.02	A	1	0.65	1	1	1	205.249	2786.87	60.31	C
			B	1	0.65	1	1	1	205.249			
			C	1	0.65	1	1	1	205.249			
Sum Weight:	4810.76	27962.26						OTM	821825.42	9847.09		
									lb-ft			

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	2508.74	A	1	0.65	1	1	1	82.531	1741.77	43.73	C
			B	1	0.65	1	1	1	82.531			
			C	1	0.65	1	1	1	82.531			
L2 139.17-93.21	1395.39	4990.78	A	1	0.65	1	1	1	129.626	2497.60	54.34	C
			B	1	0.65	1	1	1	129.626			
			C	1	0.65	1	1	1	129.626			
L3 93.21-46.21	1487.08	9238.71	A	1	0.65	1	1	1	169.885	2820.85	60.02	C
			B	1	0.65	1	1	1	169.885			
			C	1	0.65	1	1	1	169.885			
L4 46.21-0.00	1187.44	11224.02	A	1	0.65	1	1	1	205.249	2786.87	60.31	C
			B	1	0.65	1	1	1	205.249			
			C	1	0.65	1	1	1	205.249			
Sum Weight:	4810.76	27962.26						OTM	821825.42	9847.09		
									lb-ft			

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	10 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Tower Forces - With Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	2508.74	A	1	0.65	1	1	1	82.531	1741.77	43.73	C
			B	1	0.65	1	1	1	82.531			
			C	1	0.65	1	1	1	82.531			
L2 139.17-93.21	1395.39	4990.78	A	1	0.65	1	1	1	129.626	2497.60	54.34	C
			B	1	0.65	1	1	1	129.626			
			C	1	0.65	1	1	1	129.626			
L3 93.21-46.21	1487.08	9238.71	A	1	0.65	1	1	1	169.885	2820.85	60.02	C
			B	1	0.65	1	1	1	169.885			
			C	1	0.65	1	1	1	169.885			
L4 46.21-0.00	1187.44	11224.02	A	1	0.65	1	1	1	205.249	2786.87	60.31	C
			B	1	0.65	1	1	1	205.249			
			C	1	0.65	1	1	1	205.249			
Sum Weight:	4810.76	27962.26						OTM	821825.42 lb-ft	9847.09		

Tower Forces - Service - Wind Normal To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	870.69	21.86	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	1262.40	27.47	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	1435.32	30.54	C
			B	1	0.65	1	1	1	165.969			
			C	1	0.65	1	1	1	165.969			
L4 46.21-0.00	1187.44	9718.21	A	1	0.65	1	1	1	201.399	1424.26	30.82	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	414869.92 lb-ft	4992.68		

Tower Forces - Service - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	870.69	21.86	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	1262.40	27.47	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 11 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	1435.32	30.54	C
			B	1	0.65	1	1	1	165.969			
			C	1	0.65	1	1	1	165.969			
L4 46.21-0.00	1187.44	9718.21	A	1	0.65	1	1	1	201.399	1424.26	30.82	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	414869.92 lb-ft	4992.68		

Tower Forces - Service - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	R _R	D _F	D _R	A _E	F	w	Ctrl. Face
ft	lb	lb							ft ²	lb	plf	
L1 179.00-139.17	740.84	1909.81	A	1	0.65	1	1	1	79.212	870.69	21.86	C
			B	1	0.65	1	1	1	79.212			
			C	1	0.65	1	1	1	79.212			
L2 139.17-93.21	1395.39	4044.95	A	1	0.65	1	1	1	125.796	1262.40	27.47	C
			B	1	0.65	1	1	1	125.796			
			C	1	0.65	1	1	1	125.796			
L3 93.21-46.21	1487.08	7995.04	A	1	0.65	1	1	1	165.969	1435.32	30.54	C
			B	1	0.65	1	1	1	165.969			
			C	1	0.65	1	1	1	165.969			
L4 46.21-0.00	1187.44	9718.21	A	1	0.65	1	1	1	201.399	1424.26	30.82	C
			B	1	0.65	1	1	1	201.399			
			C	1	0.65	1	1	1	201.399			
Sum Weight:	4810.76	23668.01						OTM	414869.92 lb-ft	4992.68		

Force Totals

Load Case	Vertical Forces	Sum of Forces X	Sum of Forces Z	Sum of Overturning Moments, M _x	Sum of Overturning Moments, M _z	Sum of Torques
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Leg Weight	23668.01					
Bracing Weight	0.00					
Total Member Self-Weight	23668.01			-989.13	590.06	
Total Weight	39361.95			-989.13	590.06	
Wind 0 deg - No Ice		0.00	-24685.38	-3014113.09	590.06	-1467.45
Wind 30 deg - No Ice		12342.69	-21378.17	-2610431.03	-1505971.92	-3566.31
Wind 60 deg - No Ice		21378.17	-12342.69	-1507551.11	-2608851.84	-4709.58
Wind 90 deg - No Ice		24685.38	0.00	-989.13	-3012533.90	-4590.92
Wind 120 deg - No Ice		21378.17	12342.69	1505572.85	-2608851.84	-3242.13
Wind 150 deg - No Ice		12342.69	21378.17	2608452.77	-1505971.92	-1024.61
Wind 180 deg - No Ice		0.00	24685.38	3012134.83	590.06	1467.45
Wind 210 deg - No Ice		-12342.69	21378.17	2608452.77	1507152.04	3566.31
Wind 240 deg - No Ice		-21378.17	12342.69	1505572.85	2610031.96	4709.58
Wind 270 deg - No Ice		-24685.38	0.00	-989.13	3013714.02	4590.92
Wind 300 deg - No Ice		-21378.17	-12342.69	-1507551.11	2610031.96	3242.13

<p>tnxTower</p> <p><i>Atlantis Group, Inc.</i> 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123</p>	Job	CTHA539A	Page	12 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Load Case	Vertical Forces lb	Sum of Forces X lb	Sum of Forces Z lb	Sum of Overturning Moments, M_x lb-ft	Sum of Overturning Moments, M_z lb-ft	Sum of Torques lb-ft
Wind 330 deg - No Ice		-12342.69	-21378.17	-2610431.03	1507152.04	1024.61
Member Ice	4294.25					
Total Weight Ice	49747.94			-1927.13	993.05	
Wind 0 deg - Ice		0.00	-20482.83	-2565325.94	993.05	-1659.45
Wind 30 deg - Ice		10241.42	-17738.65	-2221895.62	-1280706.36	-3512.31
Wind 60 deg - Ice		17738.65	-10241.42	-1283626.53	-2218975.44	-4424.06
Wind 90 deg - Ice		20482.83	0.00	-1927.13	-2562405.77	-4150.38
Wind 120 deg - Ice		17738.65	10241.42	1279772.28	-2218975.44	-2764.62
Wind 150 deg - Ice		10241.42	17738.65	2218041.37	-1280706.36	-638.07
Wind 180 deg - Ice		0.00	20482.83	2561471.69	993.05	1659.45
Wind 210 deg - Ice		-10241.42	17738.65	2218041.37	1282692.45	3512.31
Wind 240 deg - Ice		-17738.65	10241.42	1279772.28	2220961.54	4424.06
Wind 270 deg - Ice		-20482.83	0.00	-1927.13	2564391.86	4150.38
Wind 300 deg - Ice		-17738.65	-10241.42	-1283626.53	2220961.54	2764.62
Wind 330 deg - Ice		-10241.42	-17738.65	-2221895.62	1282692.45	638.07
Total Weight	39361.95			-989.13	590.06	
Wind 0 deg - Service		0.00	-9642.73	-1177990.68	590.06	-573.22
Wind 30 deg - Service		4821.36	-8350.85	-1020302.37	-587910.72	-1393.09
Wind 60 deg - Service		8350.85	-4821.36	-589489.90	-1018723.18	-1839.68
Wind 90 deg - Service		9642.73	0.00	-989.13	-1176411.49	-1793.33
Wind 120 deg - Service		8350.85	4821.36	587511.65	-1018723.18	-1266.46
Wind 150 deg - Service		4821.36	8350.85	1018324.11	-587910.72	-400.24
Wind 180 deg - Service		0.00	9642.73	1176012.42	590.06	573.22
Wind 210 deg - Service		-4821.36	8350.85	1018324.11	589090.83	1393.09
Wind 240 deg - Service		-8350.85	4821.36	587511.65	1019903.30	1839.68
Wind 270 deg - Service		-9642.73	0.00	-989.13	1177591.61	1793.33
Wind 300 deg - Service		-8350.85	-4821.36	-589489.90	1019903.30	1266.46
Wind 330 deg - Service		-4821.36	-8350.85	-1020302.37	589090.83	400.24

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+Temp
15	Dead+Wind 0 deg+Ice+Temp
16	Dead+Wind 30 deg+Ice+Temp
17	Dead+Wind 60 deg+Ice+Temp
18	Dead+Wind 90 deg+Ice+Temp
19	Dead+Wind 120 deg+Ice+Temp
20	Dead+Wind 150 deg+Ice+Temp
21	Dead+Wind 180 deg+Ice+Temp
22	Dead+Wind 210 deg+Ice+Temp
23	Dead+Wind 240 deg+Ice+Temp

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	13 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Comb. No.	Description
24	Dead+Wind 270 deg+Ice+Temp
25	Dead+Wind 300 deg+Ice+Temp
26	Dead+Wind 330 deg+Ice+Temp
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 Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force lb	Major Axis Moment lb-ft	Minor Axis Moment lb-ft
L1	179 - 139.17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-19585.48	176.03	154.55
			Max. Mx	11	-11656.45	396325.30	228.10
			Max. My	2	-11656.32	148.66	396262.96
			Max. Vy	11	-14321.14	396325.30	228.10
			Max. Vx	2	-14320.30	148.66	396262.96
			Max. Torque	16			181.88
L2	139.17 - 93.21	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-26610.61	1083.81	2080.14
			Max. Mx	11	-17829.17	1162526.80	938.41
			Max. My	2	-17829.06	597.55	1162836.71
			Max. Vy	11	-18537.04	1162526.80	938.41
			Max. Vx	2	-18535.66	597.55	1162836.71
			Max. Torque	4			4664.05
L3	93.21 - 46.21	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-37336.45	1067.08	2052.14
			Max. Mx	11	-27822.28	2111866.75	1018.93
			Max. My	2	-27822.19	629.38	2112092.35
			Max. Vy	11	-21869.04	2111866.75	1018.93
			Max. Vx	2	-21867.43	629.38	2112092.35
			Max. Torque	4			4653.98
L4	46.21 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-49747.94	1048.93	2021.78
			Max. Mx	11	-39345.58	3186067.06	1016.67
			Max. My	2	-39345.45	630.58	3186204.25
			Max. Vy	11	-24709.24	3186067.06	1016.67
			Max. Vx	2	-24707.35	630.58	3186204.25
			Max. Torque	4			4639.92

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
----------	-----------	-----------------	-------------	------------------	------------------

<p>tnxTower</p> <p><i>Atlantis Group, Inc.</i> 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123</p>	Job	CTHA539A	Page	14 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	14	49747.94	-0.35	-0.59
	Max. H _x	11	39361.81	24683.38	0.01
	Max. H _z	2	39361.67	0.01	24681.50
	Max. M _x	2	3186204.25	0.01	24681.50
	Max. M _z	5	3184769.82	-24683.38	0.01
	Max. Torsion	4	4635.67	-21378.06	12342.63
	Min. Vert	2	39361.67	0.01	24681.50
	Min. H _x	5	39361.81	-24683.38	0.01
	Min. H _z	8	39361.68	0.01	-24681.50
	Min. M _x	8	-3184045.11	0.01	-24681.50
	Min. M _z	11	-3186067.06	24683.38	0.01
	Min. Torsion	10	-4635.58	21377.95	-12342.57

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	39361.95	0.03	0.04	-986.64	588.16	0.00
Dead+Wind 0 deg - No Ice	39361.67	-0.01	-24681.50	-3186204.25	630.30	-1438.89
Dead+Wind 30 deg - No Ice	39361.93	12342.57	-21377.95	-2759943.91	-1592240.24	-3507.03
Dead+Wind 60 deg - No Ice	39361.94	21378.06	-12342.63	-1593878.05	-2758290.35	-4635.67
Dead+Wind 90 deg - No Ice	39361.81	24683.38	-0.01	-1015.85	-3184769.82	-4522.20
Dead+Wind 120 deg - No Ice	39361.93	21377.95	12342.57	1591807.04	-2758216.50	-3196.79
Dead+Wind 150 deg - No Ice	39361.93	12342.57	21377.95	2757816.87	-1592183.58	-1014.99
Dead+Wind 180 deg - No Ice	39361.68	-0.01	24681.50	3184045.11	630.34	1438.97
Dead+Wind 210 deg - No Ice	39361.94	-12342.63	21378.06	2757850.71	1593461.57	3507.18
Dead+Wind 240 deg - No Ice	39361.93	-21377.95	12342.57	1591823.72	2759504.31	4635.58
Dead+Wind 270 deg - No Ice	39361.81	-24683.38	-0.01	-1015.77	3186067.06	4522.07
Dead+Wind 300 deg - No Ice	39361.94	-21378.06	-12342.63	-1593894.65	2759578.15	3196.72
Dead+Wind 330 deg - No Ice	39361.93	-12342.57	-21377.95	-2759960.51	1593508.84	1014.86
Dead+Ice+Temp	49747.94	0.35	0.59	-2021.78	1048.93	0.02
Dead+Wind 0 deg+Ice+Temp	49747.72	-0.00	-20479.78	-2788734.02	1120.11	-1626.18
Dead+Wind 30 deg+Ice+Temp	49747.93	10241.31	-17738.46	-2415835.40	-1392435.27	-3456.31
Dead+Wind 60 deg+Ice+Temp	49747.93	17738.45	-10241.31	-1395664.00	-2412551.95	-4360.55
Dead+Wind 90 deg+Ice+Temp	49747.83	20481.22	-0.01	-2130.08	-2785644.83	-4096.35
Dead+Wind 120 deg+Ice+Temp	49747.93	17738.46	10241.31	1391366.26	-2412483.96	-2734.37
Dead+Wind 150 deg+Ice+Temp	49747.93	10241.31	17738.46	2411459.28	-1392367.21	-639.81
Dead+Wind 180 deg+Ice+Temp	49747.72	-0.00	20479.79	2784320.01	1120.25	1626.35
Dead+Wind 210 deg+Ice+Temp	49747.93	-10241.31	17738.46	2411486.22	1394622.11	3456.57
Dead+Wind 240 deg+Ice+Temp	49747.93	-17738.46	10241.31	1391393.28	2414769.82	4360.50
Dead+Wind 270 deg+Ice+Temp	49747.83	-20481.22	-0.01	-2129.89	2787945.81	4096.19
Dead+Wind 300 deg+Ice+Temp	49747.93	-17738.45	-10241.31	-1395690.73	2414837.72	2734.26
Dead+Wind 330 deg+Ice+Temp	49747.93	-10241.31	-17738.46	-2415862.20	1394689.95	639.73
Dead+Wind 0 deg - Service	39361.90	0.00	-9641.09	-1247719.83	654.44	-569.91
Dead+Wind 30 deg - Service	39361.90	4820.55	-8349.44	-1080700.33	-622664.17	-1388.24
Dead+Wind 60 deg - Service	39361.92	8350.12	-4820.95	-624459.58	-1079066.34	-1834.63
Dead+Wind 90 deg - Service	39361.90	9641.10	-0.00	-1082.12	-1245970.82	-1789.41
Dead+Wind 120 deg - Service	39361.90	8349.44	4820.56	622229.37	-1078951.47	-1264.70
Dead+Wind 150 deg - Service	39361.90	4820.56	8349.44	1078521.63	-622655.79	-401.15
Dead+Wind 180 deg - Service	39361.90	0.00	9641.10	1245536.31	654.46	569.93
Dead+Wind 210 deg - Service	39361.92	-4820.95	8350.12	1078630.49	624027.25	1388.28
Dead+Wind 240 deg - Service	39361.90	-8349.44	4820.55	622231.84	1080264.59	1834.62
Dead+Wind 270 deg - Service	39361.90	-9641.09	-0.00	-1082.09	1247285.34	1789.40
Dead+Wind 300 deg - Service	39361.90	-8349.43	-4820.55	-624400.85	1080272.96	1264.71
Dead+Wind 330 deg - Service	39361.90	-4820.55	-8349.44	-1080702.76	623974.47	401.12

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	15 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-39361.95	0.00	-0.03	39361.95	-0.04	0.000%
2	0.00	-39361.95	-24685.38	0.01	39361.67	24681.50	0.008%
3	12342.69	-39361.95	-21378.17	-12342.57	39361.93	21377.95	0.001%
4	21378.17	-39361.95	-12342.69	-21378.06	39361.94	12342.63	0.000%
5	24685.38	-39361.95	0.00	-24683.38	39361.81	0.01	0.004%
6	21378.17	-39361.95	12342.69	-21377.95	39361.93	-12342.57	0.001%
7	12342.69	-39361.95	21378.17	-12342.57	39361.93	-21377.95	0.001%
8	0.00	-39361.95	24685.38	0.01	39361.68	-24681.50	0.008%
9	-12342.69	-39361.95	21378.17	12342.63	39361.94	-21378.06	0.000%
10	-21378.17	-39361.95	12342.69	21377.95	39361.93	-12342.57	0.001%
11	-24685.38	-39361.95	0.00	24683.38	39361.81	0.01	0.004%
12	-21378.17	-39361.95	-12342.69	21378.06	39361.94	12342.63	0.000%
13	-12342.69	-39361.95	-21378.17	12342.57	39361.93	21377.95	0.001%
14	0.00	-49747.94	0.00	-0.35	49747.94	-0.59	0.001%
15	0.00	-49747.94	-20482.83	0.00	49747.72	20479.78	0.006%
16	10241.42	-49747.94	-17738.65	-10241.31	49747.93	17738.46	0.000%
17	17738.65	-49747.94	-10241.42	-17738.45	49747.93	10241.31	0.000%
18	20482.83	-49747.94	0.00	-20481.22	49747.83	0.01	0.003%
19	17738.65	-49747.94	10241.42	-17738.46	49747.93	-10241.31	0.000%
20	10241.42	-49747.94	17738.65	-10241.31	49747.93	-17738.46	0.000%
21	0.00	-49747.94	20482.83	0.00	49747.72	-20479.79	0.006%
22	-10241.42	-49747.94	17738.65	10241.31	49747.93	-17738.46	0.000%
23	-17738.65	-49747.94	10241.42	17738.46	49747.93	-10241.31	0.000%
24	-20482.83	-49747.94	0.00	20481.22	49747.83	0.01	0.003%
25	-17738.65	-49747.94	-10241.42	17738.45	49747.93	10241.31	0.000%
26	-10241.42	-49747.94	-17738.65	10241.31	49747.93	17738.46	0.000%
27	0.00	-39361.95	-9642.73	-0.00	39361.90	9641.09	0.004%
28	4821.36	-39361.95	-8350.85	-4820.55	39361.90	8349.44	0.004%
29	8350.85	-39361.95	-4821.36	-8350.12	39361.92	4820.95	0.002%
30	9642.73	-39361.95	0.00	-9641.10	39361.90	0.00	0.004%
31	8350.85	-39361.95	4821.36	-8349.44	39361.90	-4820.56	0.004%
32	4821.36	-39361.95	8350.85	-4820.56	39361.90	-8349.44	0.004%
33	0.00	-39361.95	9642.73	-0.00	39361.90	-9641.10	0.004%
34	-4821.36	-39361.95	8350.85	4820.95	39361.92	-8350.12	0.002%
35	-8350.85	-39361.95	4821.36	8349.44	39361.90	-4820.55	0.004%
36	-9642.73	-39361.95	0.00	9641.09	39361.90	0.00	0.004%
37	-8350.85	-39361.95	-4821.36	8349.43	39361.90	4820.55	0.004%
38	-4821.36	-39361.95	-8350.85	4820.55	39361.90	8349.44	0.004%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	17	0.00009362	0.00011613
3	Yes	21	0.00000001	0.00014359
4	Yes	22	0.00000001	0.00008042
5	Yes	18	0.00004862	0.00010833
6	Yes	21	0.00000001	0.00014387
7	Yes	21	0.00000001	0.00014996
8	Yes	17	0.00009364	0.00011601

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	16 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

9	Yes	22	0.00000001	0.00007936
10	Yes	21	0.00000001	0.00014203
11	Yes	18	0.00004861	0.00010840
12	Yes	22	0.00000001	0.00007914
13	Yes	21	0.00000001	0.00014774
14	Yes	9	0.00000001	0.00000527
15	Yes	18	0.00009794	0.00014184
16	Yes	22	0.00000001	0.00010779
17	Yes	22	0.00000001	0.00011723
18	Yes	19	0.00005236	0.00009941
19	Yes	22	0.00000001	0.00010810
20	Yes	22	0.00000001	0.00011163
21	Yes	18	0.00009796	0.00014148
22	Yes	22	0.00000001	0.00011582
23	Yes	22	0.00000001	0.00010672
24	Yes	19	0.00005235	0.00009955
25	Yes	22	0.00000001	0.00011527
26	Yes	22	0.00000001	0.00011140
27	Yes	17	0.00010082	0.00005090
28	Yes	17	0.00010036	0.00012022
29	Yes	18	0.00005244	0.00008571
30	Yes	17	0.00010081	0.00006036
31	Yes	17	0.00010035	0.00012075
32	Yes	17	0.00010035	0.00013663
33	Yes	17	0.00010081	0.00005074
34	Yes	18	0.00005245	0.00008239
35	Yes	17	0.00010036	0.00011686
36	Yes	17	0.00010082	0.00006049
37	Yes	17	0.00010036	0.00014913
38	Yes	17	0.00010036	0.00013052

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	179 - 139.17	56.022	38	3.0701	0.0112
L2	139.17 - 93.21	31.992	38	2.5010	0.0107
L3	93.21 - 46.21	13.060	38	1.4048	0.0044
L4	46.21 - 0	3.023	38	0.6454	0.0015

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.50	3" Dia 20' Omni	38	56.022	3.0701	0.0112	17130
182.10	3/4"x5' Lightning Rod	38	56.022	3.0701	0.0112	17130
179.00	14'-0" Platform	38	56.022	3.0701	0.0112	17130
175.00	AIR21 B2A/B4P with pipe	38	53.461	3.0243	0.0113	17130
170.00	P65-17-XLH-RR with Pipe	38	50.274	2.9659	0.0114	9516
169.70	(2) 7770.00 w/ Mount Pipe	38	50.084	2.9624	0.0114	9209
167.00	Ring Mount	38	48.376	2.9299	0.0114	7137
166.00	14'-0" Platform	38	47.747	2.9176	0.0115	6587
164.50	DC6-48-60-18-8F	38	46.806	2.8989	0.0115	5906
158.50	(2) APL866513 w/Mount Pipe	38	43.094	2.8203	0.0115	4176

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job	CTHA539A	Page	17 of 19
	Project	CTHA539A	Date	16:42:39 05/28/14
	Client	metroPCS	Designed by	Ahmet Colakoglu

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	°	"	ft
158.00	BXA-70063/6CF w/ Mount Pipe	38	42.788	2.8134	0.0115	4077
157.00	(2) FRS FD9R6004 Diplexer	38	42.180	2.7995	0.0114	3891
156.00	14'-0" Platform	38	41.576	2.7853	0.0114	3722
138.60	20' Dipole	38	31.691	2.4895	0.0106	2194
132.50	Omni 1"x8'	38	28.587	2.3588	0.0100	2236
128.50	3' Yagi	38	26.660	2.2665	0.0095	2292
128.30	Pirod 6' Side Mount Standoff (1)	38	26.566	2.2617	0.0095	2295
127.50	Pirod 6' Side Mount Standoff (1)	38	26.192	2.2427	0.0094	2307
112.70	10' Dipole	38	19.851	1.8736	0.0072	2546
107.80	Pirod 6' Side Mount Standoff (1)	38	17.985	1.7499	0.0065	2637

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load	Tilt	Twist
	ft	in	Comb.	°	"
L1	179 - 139.17	142.515	2	7.8142	0.0283
L2	139.17 - 93.21	81.482	2	6.3684	0.0270
L3	93.21 - 46.21	33.307	2	3.5820	0.0112
L4	46.21 - 0	7.716	13	1.6472	0.0038

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	°	"	ft
191.50	3" Dia 20' Omni	2	142.515	7.8142	0.0283	6936
182.10	3/4"x5' Lightning Rod	2	142.515	7.8142	0.0283	6936
179.00	14'-0" Platform	2	142.515	7.8142	0.0283	6936
175.00	AIR21 B2A/B4P with pipe	2	136.013	7.6978	0.0285	6936
170.00	P65-17-XLH-RR with Pipe	2	127.921	7.5496	0.0288	3852
169.70	(2) 7770.00 w/ Mount Pipe	2	127.437	7.5405	0.0288	3728
167.00	Ring Mount	2	123.101	7.4579	0.0289	2888
166.00	14'-0" Platform	2	121.502	7.4267	0.0289	2665
164.50	DC6-48-60-18-8F	2	119.113	7.3793	0.0289	2389
158.50	(2) APL866513 w/Mount Pipe	2	109.685	7.1796	0.0289	1688
158.00	BXA-70063/6CF w/ Mount Pipe	2	108.910	7.1621	0.0289	1647
157.00	(2) FRS FD9R6004 Diplexer	2	107.366	7.1267	0.0289	1572
156.00	14'-0" Platform	2	105.830	7.0907	0.0289	1503
138.60	20' Dipole	2	80.718	6.3392	0.0268	882
132.50	Omni 1"x8'	2	72.826	6.0071	0.0253	896
128.50	3' Yagi	2	67.927	5.7724	0.0241	918
128.30	Pirod 6' Side Mount Standoff (1)	2	67.688	5.7604	0.0240	919
127.50	Pirod 6' Side Mount Standoff (1)	2	66.736	5.7121	0.0237	923
112.70	10' Dipole	2	50.601	4.7741	0.0182	1014
107.80	Pirod 6' Side Mount Standoff (1)	2	45.850	4.4595	0.0163	1048

Compression Checks

tnxTower Atlantis Group, Inc. 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 18 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

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	179 - 139.17 (1)	TP28.04x19.69x0.1875	39.83	0.00	0.0	39.000	16.5757	-11655.70	646453.00	0.018
L2	139.17 - 93.21 (2)	TP37.65x28.04x0.25	45.96	0.00	0.0	39.000	29.6769	-17828.70	1157400.00	0.015
L3	93.21 - 46.21 (3)	TP47.1x37.65x0.375	47.00	0.00	0.0	39.000	55.6144	-27822.10	2168960.00	0.013
L4	46.21 - 0 (4)	TP57.5x47.1x0.375	46.21	0.00	0.0	38.747	67.9930	-39345.70	2634530.00	0.015

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	179 - 139.17 (1)	TP28.04x19.69x0.1875	396385.00	-41.706	39.000	1.069	0.00	0.000	39.000	0.000
L2	139.17 - 93.21 (2)	TP37.65x28.04x0.25	1163225.00	-50.907	39.000	1.305	0.00	0.000	39.000	0.000
L3	93.21 - 46.21 (3)	TP47.1x37.65x0.375	2112658.33	-39.543	39.000	1.014	0.00	0.000	39.000	0.000
L4	46.21 - 0 (4)	TP57.5x47.1x0.375	3186950.00	-39.850	38.747	1.028	0.00	0.000	38.747	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Size	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	179 - 139.17 (1)	TP28.04x19.69x0.1875	0.018	1.069	0.000	1.087	1.333	H1-3 ✓
L2	139.17 - 93.21 (2)	TP37.65x28.04x0.25	0.015	1.305	0.000	1.321	1.333	H1-3 ✓
L3	93.21 - 46.21 (3)	TP47.1x37.65x0.375	0.013	1.014	0.000	1.027	1.333	H1-3 ✓
L4	46.21 - 0 (4)	TP57.5x47.1x0.375	0.015	1.028	0.000	1.043	1.333	H1-3 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail
L1	179 - 139.17	Pole	TP28.04x19.69x0.1875	1	-11655.70	861721.81	81.6	Pass
L2	139.17 - 93.21	Pole	TP37.65x28.04x0.25	2	-17828.70	1542814.14	99.1	Pass
L3	93.21 - 46.21	Pole	TP47.1x37.65x0.375	3	-27822.10	2891223.56	77.0	Pass
L4	46.21 - 0	Pole	TP57.5x47.1x0.375	4	-39345.70	3511828.34	78.3	Pass

tnxTower <i>Atlantis Group, Inc.</i> 1340 Centre Street, Suite 212 Newton, Massachusetts 02459 Phone: 617-965-0789 FAX: 617-213-3123	Job CTHA539A	Page 19 of 19
	Project CTHA539A	Date 16:42:39 05/28/14
	Client metroPCS	Designed by Ahmet Colakoglu

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P _{allow} lb	% Capacity	Pass Fail	
							Summary		
							Pole (L2)	99.1	Pass
							RATING =	99.1	Pass

EXHIBIT C

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

MetroPCS Existing Facility

Site ID: CTHA539A

Burlington Fire Dept. Monopole
791 George Washington Turnpike
Burlington, CT 06013

September 11, 2014

EBI Project Number: 62143640

September 11, 2014

MetroPCS
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Re: Emissions Values for Site: **CTHA539A - Burlington Fire Dept. Monopole**

EBI Consulting was directed to analyze the proposed MetroPCS facility located at 791 George Washington Turnpike, Burlington, CT, for the purpose of determining whether the emissions from the Proposed MetroPCS 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the cellular band is $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS and AWS bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed MetroPCS Wireless antenna facility located at 791 George Washington Turnpike, Burlington, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since MetroPCS 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.

- 7) The antenna mounting height centerline of the proposed antennas is **175 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 calculations were done with respect to uncontrolled / general public threshold limits.

Site ID	CTHA539A - Burlington Fire Dept. Monopole
Site Address	791 George Washington Turnpike, Burlington, CT 06013
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)	Antenna 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	175	169	None	0	0	48.326044	0.608294	0.06083%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	175	169	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
														Sector total Power Density Value: 0.122%			
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)	Antenna 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	175	169	None	0	0	48.326044	0.608294	0.06083%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	175	169	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
														Sector total Power Density Value: 0.122%			
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)	Antenna 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	175	169	None	0	0	48.326044	0.608294	0.06083%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	175	169	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	175	169	1.5/8"	0	0	24.163022	0.304147	0.03041%
														Sector total Power Density Value: 0.122%			

Site Composite MPE %	
Carrier	MPE %
MetroPCS	0.365%
Public Safety	7.620%
AT&T	11.920%
Verizon Wireless	13.820%
Pocket	2.220%
Total Site MPE %	35.945%

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 MetroPCS facility are **0.365% (0.122% 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 **35.945%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



Scott Heffernan
RF Engineering Director

EBI Consulting

21 B Street
Burlington, MA 01803