COHEN and WOLF P.C.
ATTORNEYS AT LAW

JULIE D. KOHLER

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

May 22, 2013

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
Town of Portland/T-Mobile co-location
Site ID CTHA242A
95 High Street, Portland CT

Dear Attorney Bachman:

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, the Town of Portland ("Portland" or the "Town") owns the existing telecommunications tower and related facility at 95 High Street, Portland Connecticut (latitude 41.58112 / longitude -72.62222). T-Mobile intends to replace three antennas and related equipment at this existing telecommunications facility in Portland ("Portland 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 First Selectwoman Susan Bransfield. The Town of Portland is also the property owner.

The existing Portland Facility consists of a 120 foot tall lattice tower. T-Mobile plans to replace three antennas at an elevation of 110 feet, and remove 3 TMAs (tower mounted amplifiers). (See the plans revised to April 24, 2013 attached hereto as Exhibit A). T-Mobile will also replace one of its equipment cabinets within the existing compound area near the base of the structure, as well as install hybrid line and reuse existing coax cables. The existing Facility is structurally capable of supporting T-Mobile' proposed modifications, as indicated in the structural analysis dated May 13, 2013 and attached hereto as Exhibit B.

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

COHEN and WOLF P.C. ATTORNEYS AT LAW

1. The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at the 110 foot level. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2. The installation of the T-Mobile replacement 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 May 17, 2013 T-Mobile's operations would add 0.728% 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 8.738% 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 Portland Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Julie D. Kohler, Esq.

cc: Town of Portland, First Selectwoman Susan Bransfield
Scott Chase, Northeast Site Solutions

T-MOBILE USA, INC.
12920 SE 38TH STREET
BELLEVUE, WA 98006
(425) 378-4000

2599817
5/6/2013
2000011160

Invoice Number	Inv. Date	Description	Deductions	Voucher	Amount Paid
CTHA242A-1	4/17/2013	Exempt Mod Filing Fees	0.00	1100836011	625.00

DO NOT ACCEPT THIS CHECK UNLESS THE FACE FADES FROM BLACK TO RED WITH LOGO IN BACKGROUND. THE BACK OF THIS DOCUMENT HAS HEAT-SENSITIVE INK THAT CHANGES FROM ORANGE TO YELLOW.

COPYBAN CAPTURE ANTI-FRAUD PROTECTION

T-MOBILE USA, INC.
12920 SE 38th Street
Bellevue, WA 98006
(425) 378-4000

The Bank of New York Mellon
Pittsburgh, PA
60-160/433

2599817
5/6/2013
VID 2000011160

PAY $625 00 CTS CTS
SIX TWO FIVE

*$625.00

Six Hundred Twenty Five Dollars Only*******

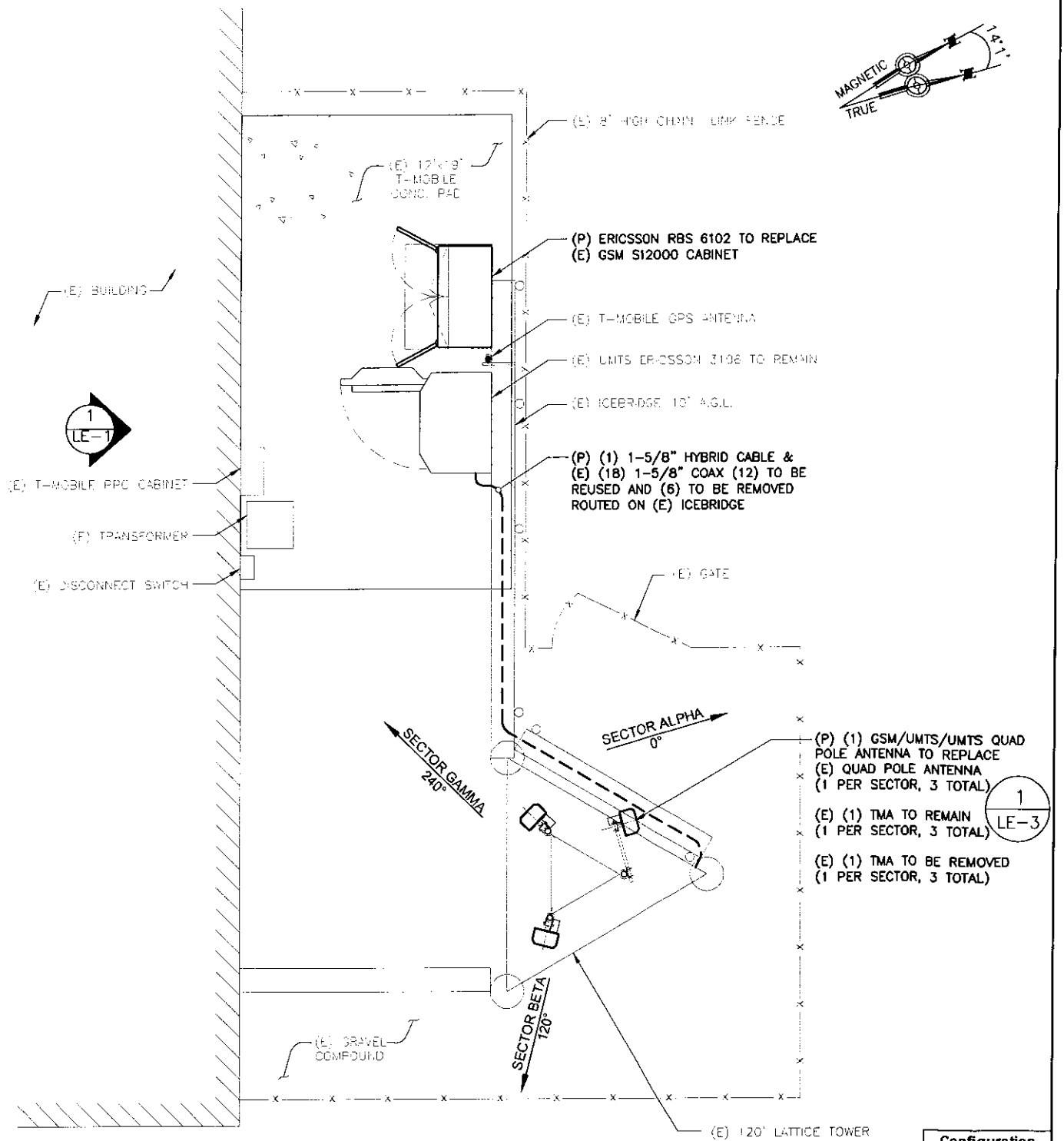
To The Order Of
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN, CT 06051

VOID AFTER 180 DAYS
THIS CHECK CLEARS THROUGH POSITIVE PAY

⑈000259981 7⑈ ⑆043301601⑆ 013⑈8430⑈

THE ORIGINAL DOCUMENT HAS A REFLECTIVE WATERMARK ON THE BACK — HOLD AT AN ANGLE TO VIEW. DO NOT CASH IF MISSING

EXHIBIT A



SITE PLAN 1/LE-1
N.T.S.

Configuration

1B

SUBMITTALS	
LE REV A	04.24.13

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

LEASE EXHIBIT

SITE NUMBER:
CTHA242A

SITE NAME:
HA242/PORTLANDHS_SST

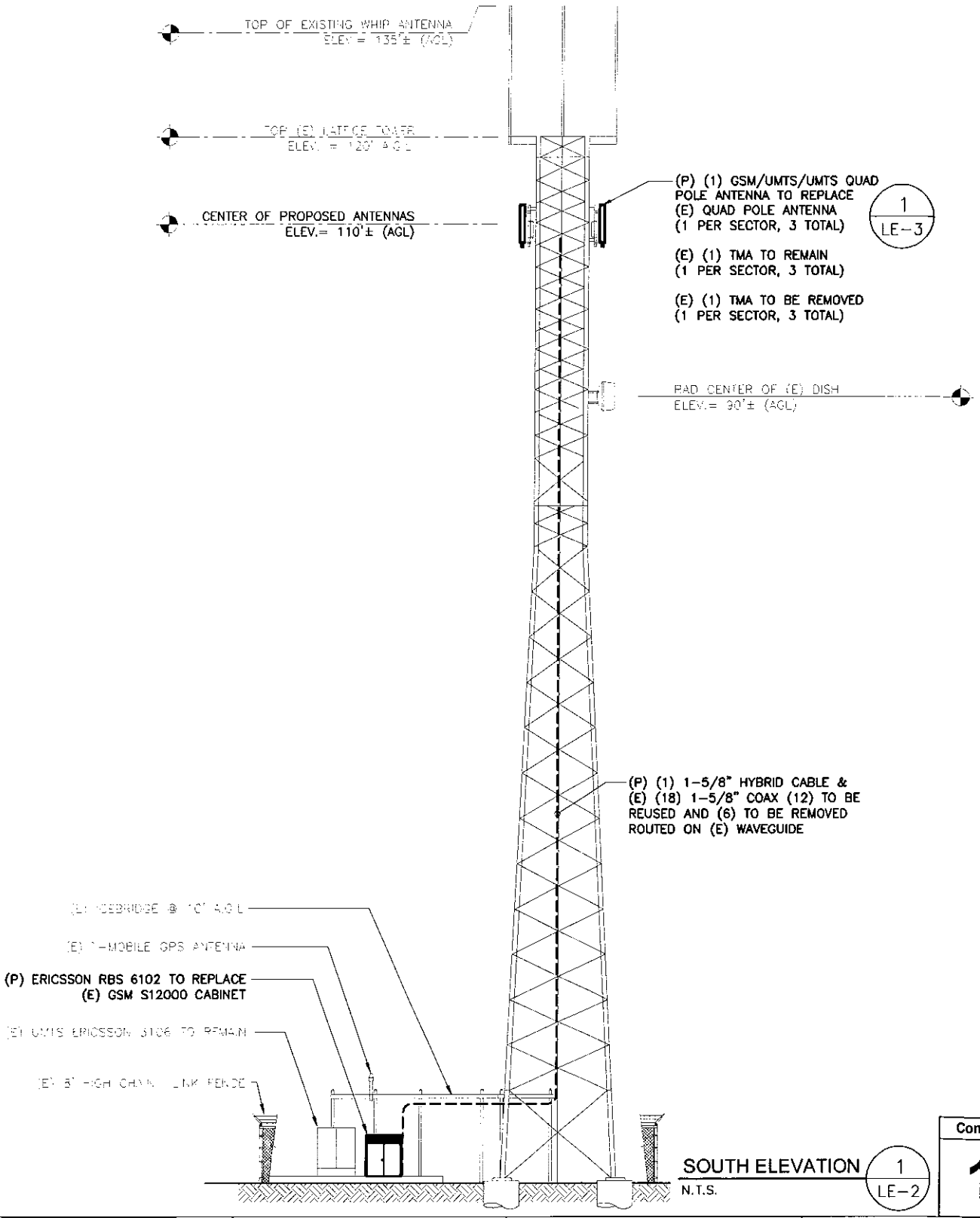
SITE ADDRESS:
95 HIGH STREET
PORTLAND, CT 06480

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: MB | CHECKED BY: SM



SOUTH ELEVATION
N.T.S.

1
LE-2

Configuration

1B

SUBMITTALS	
LE REV A	04.24.13

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

LEASE EXHIBIT

SITE NUMBER:
CTHA242A

SITE NAME:
HA242/PORTLANDHS_SST

SITE ADDRESS:
95 HIGH STREET
PORTLAND, CT 06480

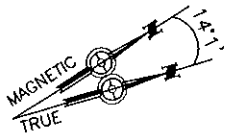
NORTHEAST TOWERS
199 BRICKYARD ROAD
FARMINGTON, CT 06032
OFFICE: (860) 677-1999

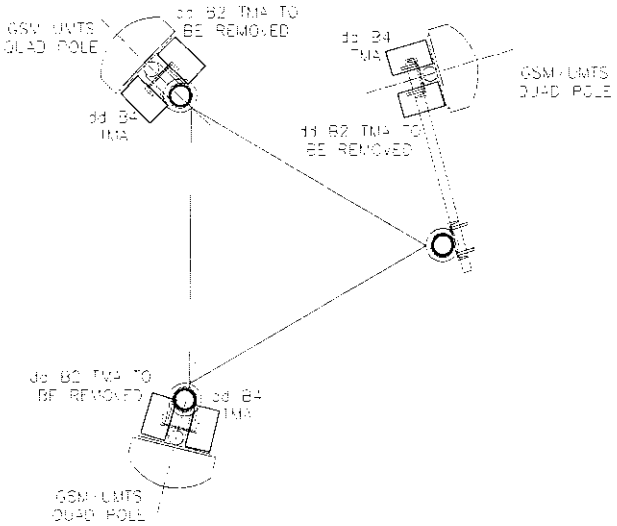
FOR

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

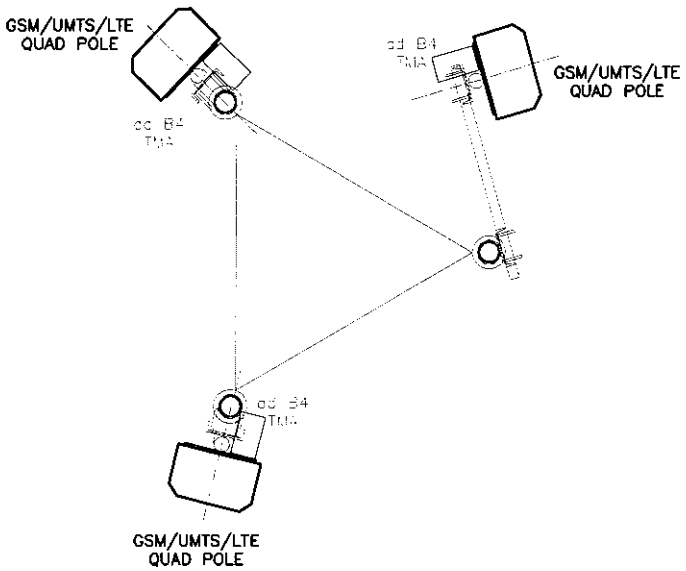
DRAWN BY: MB | CHECKED BY: SM

EXISTING ANTENNA CONFIGURATION





PROPOSED ANTENNA CONFIGURATION



Configuration

1B

SUBMITTALS	
LE REV A	04.24.13

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

LEASE EXHIBIT

SITE NUMBER:
CTHA242A

SITE NAME:
HA242/PORTLANDHS_SST

SITE ADDRESS:
95 HIGH STREET
PORTLAND, CT 06480

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

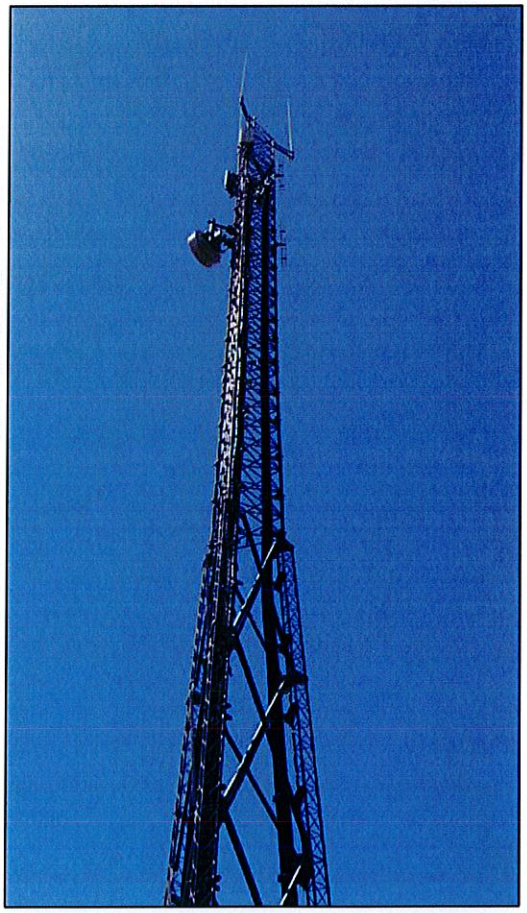
DRAWN BY: MB | CHECKED BY: SM

EXHIBIT B

STRUCTURAL ANALYSIS REPORT
SELF SUPPORT TOWER

Prepared For:

35 Griffin Road South
Bloomfield, CT 06002



Tower Rating

Tower: **Pass (61.4 %)**
Foundation: **Pass**

Sincerely,
Atlantis Group, Inc.
5-13-2013

STATE OF CONNECTICUT
AHMET COLAKOGLU
PEN. 27057
LICENSED
PROFESSIONAL ENGINEER

Ahmet Colakoglu, PE
CT Professional Engineer
License No: 27057

Site ID: CTHA242A
Site Name: HA242/PORTLANDHS_SST
95 High Street,
Portland, CT 06480

Prepared By:

Atlantis Group, Inc.
1340 Centre Street, Suite 203
Newton, Massachusetts 02459
Phone: 617-965-0789, Fax: 617-965-0103
May 13, 2013

CONTENTS

1340 Centre Street, Suite 203
Newton, Massachusetts 02459
Phone: 617-965-0789
Fax: 617-965-0103

1.0 SUBJECT AND REFERENCES

The purpose of this analysis is to evaluate the structural capacity of the existing 120 feet tall self-support tower, located at 95 High Street, Portland, CT 06480 for the additions and alterations proposed by T-Mobile.

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

1. Structural Analysis Report prepared by Velocitel, dated 05/04/2009.
2. Existing and proposed antenna information provided by T-Mobile.

1.1 STRUCTURE

The structure is a 120 feet tall, triangular based self-support tower. Truss legs and solid rod legs are X-braced along its elevation. The tower is 4.5 feet wide at the top and 10 feet wide at the bottom. Please refer to the software output in Appendix A, for tower geometry, member sizes and other details.

2.0 PROPOSED CONFIGURATION

Antennas and Appurtenances:

Existing Configuration of T-MOBILE Appurtenances:

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	FEED LINES
ALPHA	110	GSM/UMTS TMA	(1) TMZXXX-6516-R2M (1) dd B2 & (1) dd B4	(1) Leg Mount	(18) 1⅝"
BETA	110	GSM/UMTS TMA	(1) TMZXXX-6516-R2M (1) dd B2 & (1) dd B4	(1) Leg Mount	
GAMMA	110	GSM/UMTS TMA	(1) TMZXXX-6516-R2M (1) dd B2 & (1) dd B4	(1) Leg Mount	

Proposed Configuration of T-MOBILE Appurtenances:

SECTOR	RAD CENTER (FT)	ANTENNA & TMA		MOUNT	FEED LINES
ALPHA	110	GSM/UMTS/LTE TMA	(1) AIR21 B2A/B4P (1) dd B4	(1) Leg Mount	(12) 1⅝" + (1) 1⅝" Hybrid Cable
BETA	110	GSM/UMTS/LTE TMA	(1) AIR21 B2A/B4P (1) dd B4	(1) Leg Mount	
GAMMA	110	GSM/UMTS/LTE TMA	(1) AIR21 B2A/B4P (1) dd B4	(1) Leg Mount	

Existing and Remaining Appurtenances by Others:

RAD CENTER (FT)	ANTENNA & TMA	MOUNT	FEED LINES
120	(3) PD220	(3) Side Arms	(3) ⅞"
100	(1) 6' Dish	(1) Leg Mount	(1) ⅝"
40	(1) GPS Antenna	(1) Side Mount	(1) ½"

3.0 CODES AND LOADING

The tower was analyzed per ANSI/TIA-222-F as referenced by the 2005 Connecticut Building Code with 2009 Supplement, which is the adopted building code in the county. The following wind loading was used in compliance with the standard for Middlesex County, CT.

- Basic wind speed 85 mph (W) without ice.
- Basic wind speed 73.6 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 tower.

- D + W
- D + W_i + I

D: Dead Load
W_i: Wind Load with ice
W: Wind Load, without 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 tower 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

Tower: The existing tower is found to have **adequate** structural capacity for the proposed loading by T-mobile. For the aforementioned load combinations and as a maximum, the tower legs between 40-50 feet AGL will be stressed to **61.4%** of its capacity. Maximum usage of tower bracing is 38.1%.

Based on the stress level of the legs and assuming the foundation system was designed to have at least the capacity of the superstructure, tower foundation system is considered to have adequate structural strength.

Reactions:

Maximums	Atlantis Analysis	Velocitel Structural Analysis
Leg Compression (kips)	104	144.3
Leg Uplift (kip)	82.2	128.4
Leg Shear (kips)	8.6	13.5
Total Moment (kip*ft)	699.7	1062

Therefore, the proposed additions and alterations by T-Mobile 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.

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: CTHA242A

Portland HS
95 High Street
Portland, CT 06480

May 17, 2013

EBI Project Number: 62136368

EBI CONSULTING
www.ebiconsulting.com

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

May 17, 2013

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

Re: Emissions Values for Site: **CTHA242A - Portland HS**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 95 High Street, Portland, 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 95 High Street, Portland, 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
www.ebiconsulting.com

21 B Street

Burlington, MA 01803

Tel: (781) 273.2500

7) The antenna mounting height centerline of the proposed antennas is **110 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	CTHA242A - Portland HS
Site Addresss	95 High Street. Portland, CT 06480
Site Type	Self Support Toweer

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 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	110	104	None	0	0	24.163022	0.803139	0.08031%
1B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	110	104	1-5/8"	1.2	0	48.878738	1.624648	0.16246%
														Sector total Power Density Value:			0.243%

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 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	110	104	None	0	0	24.163022	0.803139	0.08031%
1B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	110	104	1-5/8"	1.2	0	48.878738	1.624648	0.16246%
														Sector total Power Density Value:			0.243%

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 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	110	104	None	0	0	24.163022	0.803139	0.08031%
1B	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS/LTE	40	4	160	-3.95	110	104	1-5/8"	1.2	0	48.878738	1.624648	0.16246%
														Sector total Power Density Value:			0.243%

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.728%
Clearwire	1.690%
Whip antenna	1.460%
212-1 Dipole	4.860%
Andrew Dish	0.000%
Total Site MPE %	**8.738%**

EBI CONSULTING
www.ebiconsulting.com

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

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 **0.728% (0.243% 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 **8.738%** 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