

**JULIE D. KOHLER**

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

September 12, 2014

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

**Re: Notice of Exempt Modification  
Integrated Wireless Services LLC/T-Mobile co-location  
Site ID CTHA140A  
785 Park Avenue, Bloomfield**

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, Integrated Wireless Services LLC owns the existing telecommunications tower and related facility at 785 Park Avenue, Bloomfield Connecticut (latitude 41.828455, longitude -72.7335635). T-Mobile intends to replace six existing antennas, add three antennas and related equipment at this existing telecommunications facility in Bloomfield ("Bloomfield 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 Town Manager, Philip K. Schenck, Jr.. The Town of Bloomfield is also the property owner.

The existing Bloomfield Facility consists of a 136 foot tall monopole tower.<sup>1</sup> T-Mobile plans to replace six existing antennas and 3 TMAs (tower mounted amplifiers) with six antennas and three TMAs, and add three antennas, and three RRUs all on a proposed low profile platform at a centerline of 138 feet. (See the plans revised to September 11, 2014 attached hereto as Exhibit A). T-Mobile will also install fiber cable, and reuse existing coax cables. The existing Bloomfield Facility is structurally capable of supporting T-Mobile's proposed modifications, as indicated in the structural analysis dated August 26, 2014 and attached hereto as Exhibit B.

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<sup>1</sup> The Council's online database does not contain a docket or petition approving this facility but does include several notices of intent, the most recent being EM-METROPCS-011-130215MA, EM-VER-011-130214 and EM-CLEARWIRE-011-100401.

September 12, 2014  
Site ID CTHA140A  
Page 2

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

1. The proposed modification will not increase the height of the tower. T-Mobile's replacement and proposed antennas will be installed at a centerline of 138 feet merely adding to and replacing existing antennas at that height. (Further, there are antennas mounted as high as 160 feet on the top of the tower.) The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

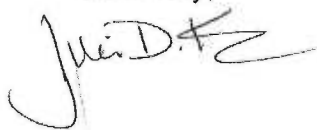
2. The proposed modifications will not require an extension of the site boundaries. T-Mobile's equipment will be located entirely within the existing compound area.

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

4. The operation of the replacement and additional 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 3, 2014, T-Mobile's operations would add 6.93% 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 59.96% 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 additional antennas and equipment at the Bloomfield Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Upon acknowledgement by the Council of this proposed exempt modification, T-Mobile shall commence construction approximately sixty days from the date of the Council's notice of acknowledgement.

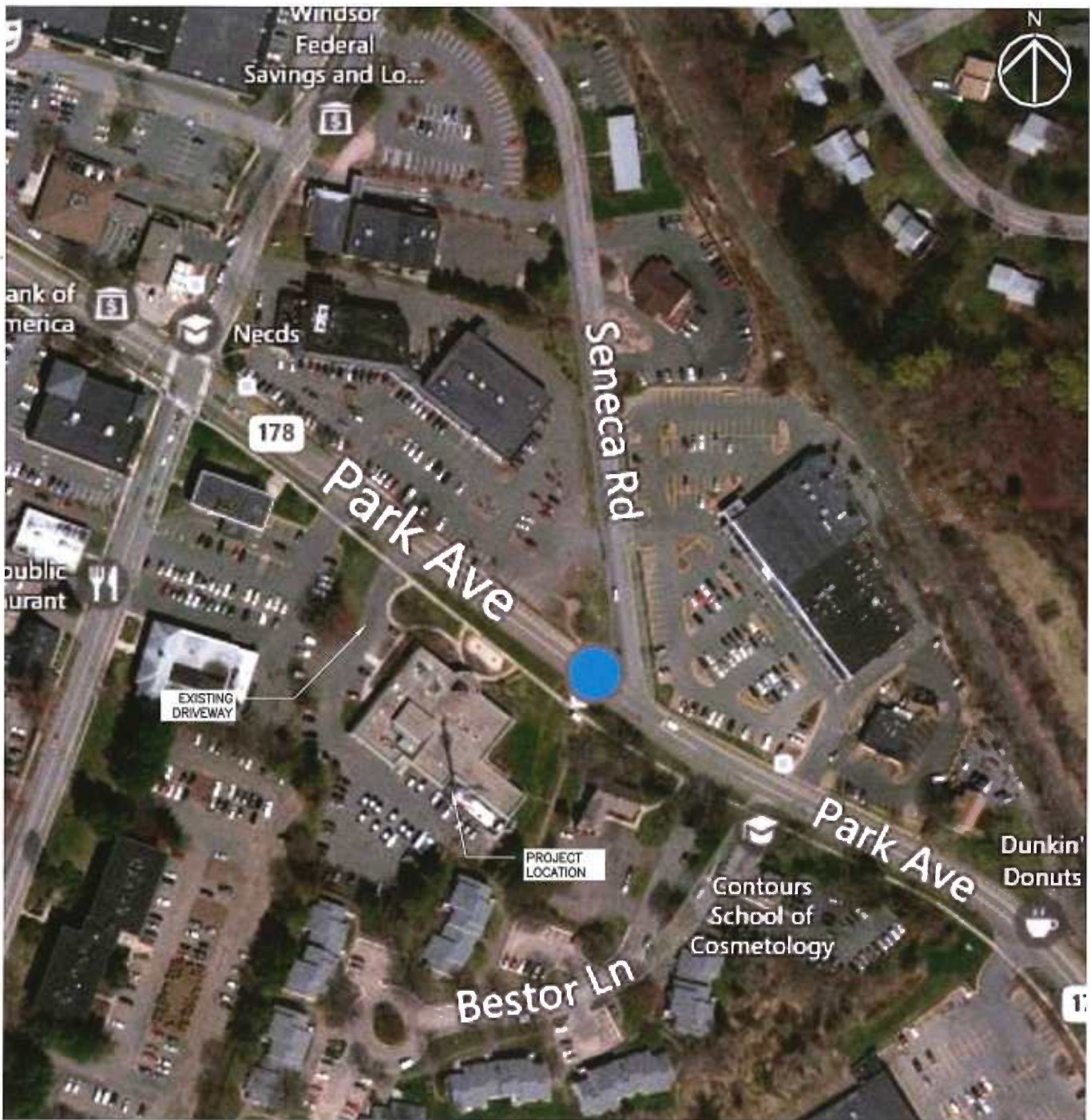
Sincerely,



Julie D. Kohler, Esq.

cc: Town Manager, Philip K. Schenck, Jr.  
Integrated Wireless Services LLC  
Sheldon Freinle, NSS

# **EXHIBIT A**



**KEY PLAN**

N.T.S.

PROJECT : L700

CONFIGURATION

**702CU**

SUBMITTALS	
LE REV A	08.08.14
LE REV 0	09.11.14

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

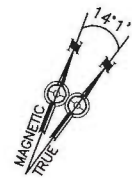
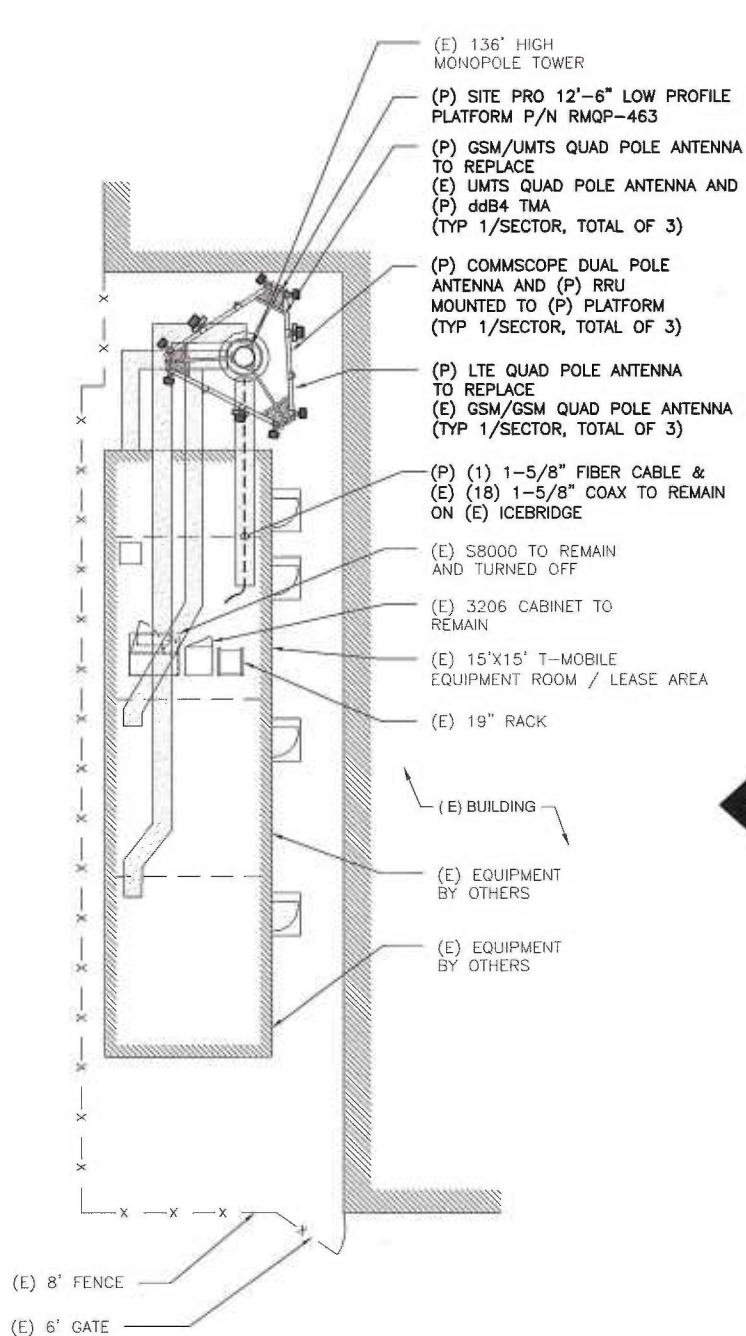
**LEASE EXHIBIT**  
 SITE NUMBER:  
 CTHA140A  
 SITE NAME:  
 HA140/BLOOMFIELD POLICE\_MP  
 SITE ADDRESS:  
 785 PARK AVENUE  
 BLOOMFIELD, CT 06002

NORTHEAST SITE SOLUTIONS  
 54 MAIN STREET, UNIT 3  
 STURBRIDGE, MA 01566  
 (508) 434-5237  
 FOR  
**T-MOBILE NORTHEAST, LLC**  
 35 GRIFFIN ROAD SOUTH  
 BLOOMFIELD, CT 06002  
 OFFICE: (860) 692-7100  
 FAX: (860) 692-7159

DRAWN BY: EB

CHECKED BY: SM

PAGE 1 OF 3



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**

N.T.S.



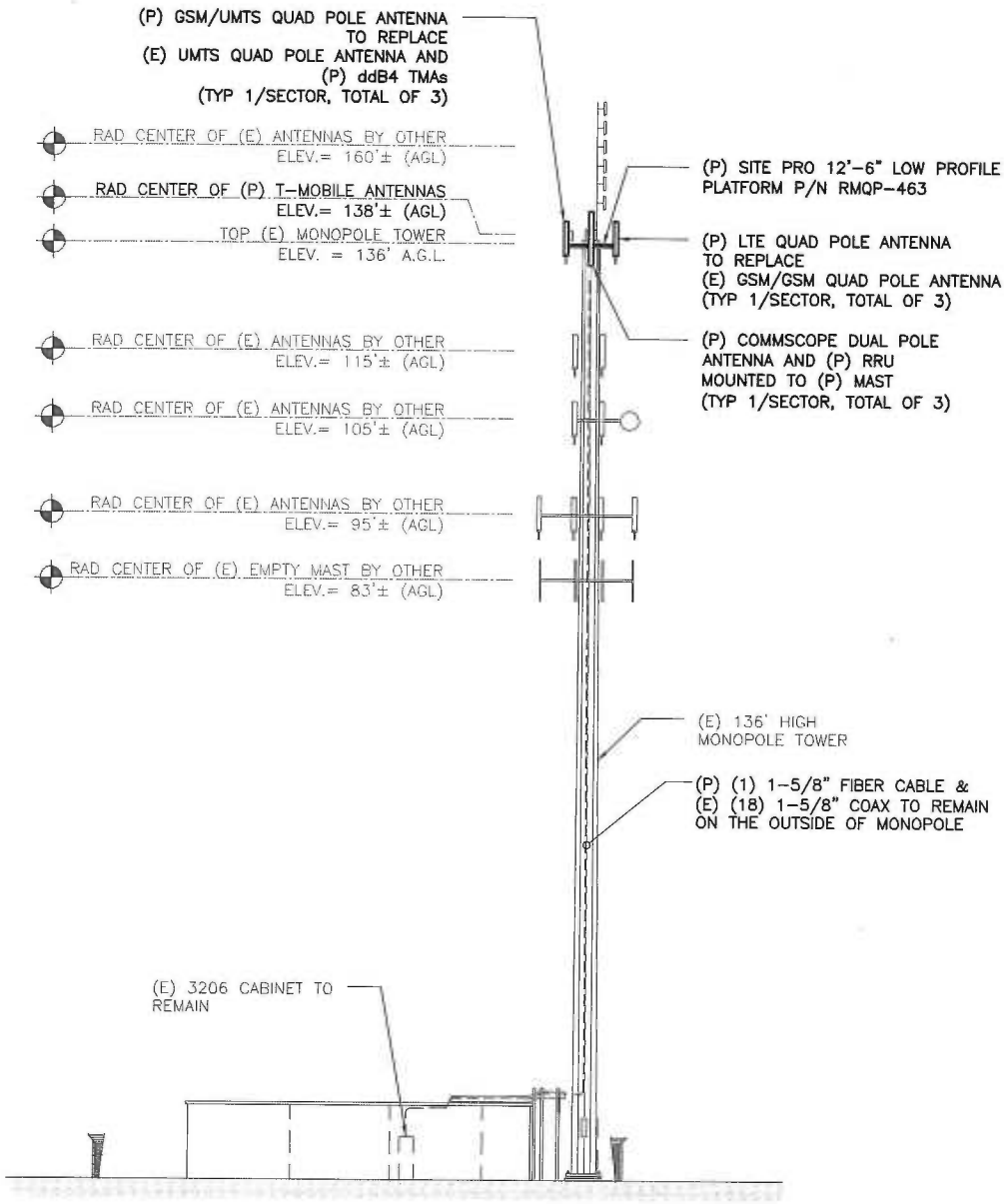
PROJECT : L700
CONFIGURATION
<b>702CU</b>

SUBMITTALS	
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LE REV 0	09.11.14

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ELEVATION  
N.T.S.

1  
LE-3

PROJECT : L700  
CONFIGURATION  
**702CU**

SUBMITTALS	
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LE REV 0	09.11.14

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# **EXHIBIT B**

**Structural Analysis Report**

*136-ft Existing Summit Monopole*

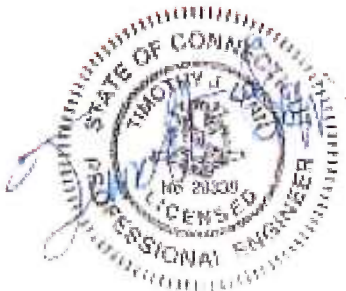
*Proposed T-Mobile  
Antenna Upgrade*

*T-Mobile Site Ref: CTHA140A*

*785 Park Avenue  
Bloomfield, CT*

*Centek Project No. 14203.000*

*Date: August 26, 2014*



**Prepared for:**  
T-Mobile USA  
35 Griffin Road  
Bloomfield, CT 06002



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- tnxTOWER DETAILED OUTPUT.
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*CEN TEK Engineering, Inc.*  
*Structural Analysis - 136-ft Summit Monopole*  
*T-Mobile Antenna Upgrade – CTHA140A*  
*Bloomfield, CT*  
*August 26, 2014*

## *I n t r o d u c t i o n*

The purpose of this report is to summarize the results of the non-linear, P- $\Delta$  structural analysis of the antenna upgrade proposed by T-Mobile on the existing monopole (tower) located in Bloomfield, CT.

The host tower is a 136-ft, three-section, eighteen sided, tapered monopole, originally manufactured by PennSummit Tubular, LLC job no; 18633 dated February 6, 2003 and designed by Paul J. Ford and Company job no; 29202-0288, dated August 20, 2002. The tower geometry, structure member sizes and foundation system information were obtained from the aforementioned design documents.

Antenna and appurtenance information were obtained from a previous structural report prepared by Centek job no. 12124.CO25 dated January 3, 2012 and two (2) T-Mobile RF data sheets.

The tower is made up of three (3) tapered vertical sections consisting of A607-65 pole sections. The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 23.00-in at the top and 43.36-in at the base.

T-Mobile proposes the removal of six (6) panel antennas and nine (9) TMA's and the installation of nine (9) panel antennas, three (3) TMA's and three (3) RRH's mounted to a proposed low profile platform. Refer to the Antenna and Appurtenance Summary below for a detailed description of the proposed antenna and appurtenance configuration.

## *A n t e n n a   a n d   A p p u r t e n a n c e   S u m m a r y*

The existing, proposed and future loads considered in this analysis consist of the following:

- **TOWN (EXISTING):**  
Antennas: One (1) 20-ft 8-bay dipole antenna pipe mounted with an elevation of 143-ft above existing grade.  
Coax Cables: Three (3) 1-5/8"  $\varnothing$  coax cables running on the inside of the existing tower.
- **TOWN (EXISTING):**  
Antennas: One (1) Motorola PTP400 microwave antenna pipe mounted with an elevation of 142-ft above existing grade.  
Coax Cables: One (1) Category 5e cable running on the inside of the existing tower.
- **CLEARWIRE (EXISTING):**  
Antennas: Two (2) Argus LLPX310R and one (1) Kathrein 840-10054 panel antennas, three (3) Andrew VHLP1-23 microwave dishes, one (1) GPS antenna and six (6) RRU's mounted on a universal tri-bracket assembly with three (3) dual standoff mounts with an elevation of 115-ft above existing grade.  
Coax Cables: Two (2) 3"  $\varnothing$  flex conduits running on the exterior of the tower as specified in Section 3 of this report.

- **VERIZON (EXISTING):**  
Antennas: One (1) RFS DB-T1-6Z-8AB-0Z main distribution box flush mounted with a RAD center elevation of 110-ft above existing grade.  
Cables: One (1) 1-5/8"  $\varnothing$  fiber line running on the exterior of the existing monopole.
- **VERIZON (EXISTING):**  
Antennas: One (1) Antel BXA-70063-6CF panel antenna, two (2) Swedcom SLCP 2X6014 panel antennas, one (1) Antel BXA-171063-12BF panel antenna, two (2) Antel BXA-171085-12BF panel antennas, two (2) Antel BXA-171085-8BF panel antennas, one (1) Antel BXA-171063-8BF panel antenna, one (1) Antel BXA-80080-6CF panel antenna, one (1) Antel BXA-80063-4BF panel antenna, one (1) Antel BXA-80080-4CF panel antenna, three (3) Alcatel-Lucent RRH2x40-AWS remote radio heads and six (6) RFS FD9R6004/2C-3L Diplexers mounted on a low profile platform with a RAD center elevation of 105-ft above existing grade.  
Coax Cables: Twelve (12) 1-5/8"  $\varnothing$  coax cables running on the inside of the existing tower.
- **EMPTY MOUNT (EXISTING):**  
Mount: One (1) 13-ft low profile platform with a RAD center elevation of 95-ft above the existing grade.
- **TOWN (EXISTING):**  
Antennas: Three (3) Motorola PTP400 microwave antennas on three (3) 4'-6" by 3"  $\varnothing$  pipe mounts with an elevation of 83-ft above the existing grade.  
Coax Cables: Three (3) Category 5e (1 Wire) cables running on the inside of the existing tower.
- **T-MOBILE (EXISTING TO REMAIN):**  
Coax Cables: Twelve (12) 1-5/8"  $\varnothing$  coax cables running on the inside of the existing tower and six (6) 1-5/8"  $\varnothing$  coax cables running on the exterior of the tower.
- **T-MOBILE (EXISTING TO REMOVE):**  
Antennas: Three (3) RFS APX16PV-16PVL-X panel antennas, three (3) RFS APX16DWV-16DWVS-E-ACU panel antennas, six (6) G200057A1 TMA's and three (3) RFS Twin AWS TMA's mounted on three (3) dual standoff mounts with a RAD center elevation of 138-ft above existing grade.
- **T-MOBILE (PROPOSED):**  
Antennas: Six (6) Ericsson AIR 21 panel antennas, three (3) Andrew LNX6515DS panel antennas, three (3) Ericsson KRY 112 144/1 TMA's and three (3) Ericsson RRUS-11 remote radio heads mounted on one (1) proposed Site Pro 12-ft 6-in low profile platform p/n RMQP-463 with a RAD center elevation of 138-ft above existing grade.  
Cables: One (1) 1-5/8"  $\varnothing$  fiber cables running on the exterior of the existing tower.

### *Primary Assumptions Used in the Analysis*

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All existing coax cables to be installed as indicated in this report.

## Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower shaft, and the model assumes that the shaft members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (fastest mile) with no ice and a 75% reduction of wind force with ½ inch accumulative ice to determine stresses in members as per guidelines of TIA/EIA-222-F-96 entitled “Structural Standards for Steel Antenna Towers and Antenna Supporting Structures”, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix K of the CSBC<sup>1</sup> and the wind speed data available in the TIA/EIA-222-F-96 Standard. The higher of the two wind speeds is utilized in preparation on the tower analysis.

## Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA/EIA-222-F, gravity loads of the tower structure and its components, and the application of ½” radial ice on the tower structure and its components.

Basic Wind Speed:	Hartford; v = 80 mph (fastest mile) Bloomfield; v = 95 mph (3 second gust) equivalent to v = 77.5 mph (fastest mile) <i>TIA/EIA wind speed controls.</i>	<i>[Section 16 of TIA/EIA-222-F-96] [Appendix K of the 2005 CT Building Code Supplement]</i>
Load Cases:	<u>Load Case 1</u> ; 80 mph wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.  <u>Load Case 2</u> ; 69 mph wind speed w/ ½” radial ice plus gravity load – used in calculation of tower stresses. The 69 mph wind speed velocity represents 75% of the wind pressure generated by the 80 mph wind speed.  <u>Load Case 3</u> ; Seismic – not checked	<i>[Section 2.3.16 of TIA/EIA-222-F-96] [Section 2.3.16 of TIA/EIA-222-F-96] [Section 1614.5 of State Bldg. Code 2005] does not control in the design of this structure type</i>

<sup>1</sup> The 2005 Connecticut State Building Code as amended by the 2009 CT State Supplement. (CSBC)

## Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower. Allowable stresses were determined based on Table 5 of the TIA/EIA code with a 1/3 increase per Section 3.1.1.1 of the same code.

- Calculated stresses were found to be within allowable limits. In Load Case 1, per tnxTower "Section Capacity Table", the maximum tower steel usage was found to be at **65.1%** of its total capacity.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Pole Shaft (L1)	88.25'-137.00'	65.1%	<b>PASS</b>
Pole Shaft (L2)	47.25'-88.25'	61.2%	<b>PASS</b>
Pole Shaft (L3)	1.00'-47.25'	64.0%	<b>PASS</b>

## Foundation and Anchors

The existing foundation consists of a 6.0-ft  $\varnothing$  x 45.5-ft long reinforced concrete caisson. The sub-grade conditions used in the analysis of the existing foundation were obtained from the aforementioned PJF design report; project no. 29202-0288 dated August 20, 2002. The base of the tower is connected to the foundation by means of (16) 2.25"  $\varnothing$ , ASTM A615-75 anchor bolts embedded approximately 7-ft into the concrete foundation structure.

- The tower base reactions developed from the governing Load Case 1 were used in the verification of the foundation and its anchors:

Location	Vector	Proposed Reactions
Base	Shear	21 kips
	Compression	31 kips
	Moment	1961 kip-ft

- The foundation was found to be within allowable limits.

Foundation	Design Limit	Proposed Loading	Result
Reinforced Concrete Caisson	Moment Capacity	60.5%	<b>PASS</b>
	Lateral Deflection	1.18 in <sup>(1)</sup>	

Note 1: Lateral deflection limited to 1.86" per Paul J. Ford L-Pile report dated August 20, 2002.

**CEN TEK** Engineering, Inc.  
Structural Analysis - 136-ft Summit Monopole  
T-Mobile Antenna Upgrade – CTHA140A  
Bloomfield, CT  
August 26, 2014

- The anchor bolts and base plate were found to be within allowable limits.

<b>Tower Component</b>	<b>Design Limit</b>	<b>Stress Ratio (percentage of capacity)</b>	<b>Result</b>
Anchor Bolts	Combined Axial and Bending	60.9%	<b>PASS</b>
Base Plate	Bending	57.3%	<b>PASS</b>

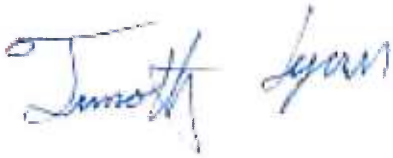
### Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by T-Mobile. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE  
Structural Engineer



# **EXHIBIT C**



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

T-Mobile Existing Facility

Site ID: CTHA140A

Bloomfield Police Dept Monopole  
785 Park Avenue  
Bloomfield, CT 06002

**September 3, 2014**

**EBI Project Number: 62144490**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general public allowable limit:	<b>59.96 %</b>

September 3, 2014

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

Emissions Analysis for Site: **CTHA140A – Bloomfield Police Dept Monopole**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **785 Park Avenue, Bloomfield, 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 97-01 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 700 MHz Band is  $467 \mu\text{W}/\text{cm}^2$ , 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 T-Mobile Wireless antenna facility located at **785 Park Avenue, Bloomfield, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

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

- 1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel
- 2) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.
- 5) 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.

- 6) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antennas used in this modeling are the **Ericsson AIR21 B4A/B2P** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR21 B4A/B2P** has a maximum gain of **15.9 dBd** at its main lobe. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antenna mounting height centerline of the proposed antennas is **138 feet** above ground level (AGL).
- 9) 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.

**T-Mobile Site Inventory and Power Data**

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	2	Channel Count	2	# PCS Channels:	2
Total TX Power:	120	Total TX Power:	120	# AWS Channels:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A1 MPE%	0.96	Antenna B1 MPE%	0.96	Antenna C1 MPE%	0.96
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	120	Total TX Power:	120	Total TX Power:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A2 MPE%	0.96	Antenna B2 MPE%	0.96	Antenna C2 MPE%	0.96
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	CommScope LNX-6515DS-VTM	Make / Model:	CommScope LNX-6515DS-VTM	Make / Model:	CommScope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	138	Height (AGL):	138	Height (AGL):	138
Frequency Bands	700 Mhz	Frequency Bands	700 Mhz	Frequency Bands	700 Mhz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power:	30	Total TX Power:	30	Total TX Power:	30
ERP (W):	445.37	ERP (W):	445.37	ERP (W):	445.37
Antenna A3 MPE%	0.38	Antenna B3 MPE%	0.38	Antenna C3 MPE%	0.38

Site Composite MPE%	
Carrier	MPE%
T-Mobile	6.93
Police UHF	0.60 %
Police Back Up Repeater	0.92 %
Hartford Co. Fire	0.72 %
State Police	3.03 %
NPSAC	0.11 %
RAFS	1.04 %
Verizon Wireless	35.60 %
Nextel	9.60 %
Clearwire	1.41 %
<b>Site Total MPE %:</b>	<b>59.96 %</b>

T-Mobile Sector 1 Total:	2.31 %
T-Mobile Sector 2 Total:	2.31 %
T-Mobile Sector 3 Total:	2.31 %
<b>Site Total:</b>	<b>59.96 %</b>

## Summary

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

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector 1:	2.31 %
Sector 2:	2.31 %
Sector 3 :	2.31 %
T-Mobile Total:	6.93 %
Site Total:	59.96 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **59.96%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



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