STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

April 1, 2009

Jennifer Young Gaudet
HPC Development LLC
53 Lake Avenue Ext.
Danbury, CT 06811

RE: **EM-T-MOBILE-078-090225** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 82 North Eagleville Road, Mansfield, Connecticut.

Dear Mrs. Gaudet:

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

The proposed modifications are to be implemented as specified here and in your notice dated February 24, 2009 and additional information received on March 31, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Elizabeth Patterson, Mayor, Town of Mansfield
Matthew W. Hart, Town Manager, Town of Mansfield
Gregory Padick, Town Planner, Town of Mansfield
George Davis, Tower Manager

Perrone, Michael

From: Jennifer Gaudet [jgaudet@hpcdevelop.com]
Sent: Tuesday, March 31, 2009 3:58 PM
To: Perrone, Michael
Subject: T-Mobile exempt mod - UCONN tower
Attachments: CT11303 revised CSC structural.pdf

Mike –

Attached is the revised structural for this site with TMAs specified. Please let me know if you have any questions or need anything more.

Thanks.

Jennifer

Jennifer Young Gaudet
HPC Development LLC
53 Lake Avenue Extension
Danbury, CT 06811
Cell: (860) 798-7454
Fax: (203) 797-1137
jgaudet@hpcdevelop.com
www.hpcdevelop.com

CONFIDENTIALITY NOTICE:
This message originates from the firm of HPC Development LLC. The information contained in this e-mail and any files transmitted with it may be a confidential communication or may otherwise be privileged and confidential and part of the work product doctrine. If the reader of this message, regardless of the address or routing, is not an intended recipient, you are hereby notified that you have received this transmittal in error and any review, use, distribution, dissemination or copying is strictly prohibited. If you have received this message in error, please delete this e-mail and all files transmitted with it from your system and immediately notify HPC Development LLC by sending a reply e-mail to the sender of this message. Thank you.

March 30, 2009

Jennifer Young Gaudet
HPC Development LLC
53 Lake Avenue Extension
Danbury, CT 06811

Reference: Structural Analysis of Existing Self Support Tower for Antenna Upgrade
CT11303B
82 North Eagleville Road in Storrs, CT
URS Project Number: 36917328/HPC-018 (Rev 1)

Dear Ms. Gaudet,

URS Corporation (URS) has been retained by HPC Development, LLC-T-Mobile to perform a structural review of the existing 248' self support tower located at 82 North Eagleville Road in Storrs, CT. The analysis was conducted in accordance with the 2005 Connecticut State Building Code and the TIA/EIA-222-F standard for a wind velocity of 85 mph (fastest mile) and 74 mph (fastest mile) concurrent with 0.5" ice. The antenna loading considered in this analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in Table 1.

Table 1: Antenna and Mount Configuration

ANTENNA & MOUNT DESCRIPTION	CARRIER	MOUNT	CENTERLINE ELEVATION	CABLE
Lightning Rod	Unknown (Existing)	Leg Mount	249'	N/A
(6) Decibel DB980H	Sprint (Existing)	Rotatable Platform (Existing)	245'	(6) 1-5/8"
(3) TMZXX-6516-R2M with (3) TMAs	**T-Mobile (Proposed)**	**Pipe Mount (Existing)**	**235'**	**(6) 1-5/8" (Proposed)**
(4) ADFD1820-90B-R2DM with (3) TMAs	**T-Mobile (Proposed)**	**Pipe Mount (Existing)**	**235'**	**(16) 1-5/8" (Existing)**
22' Whip Antenna	Unknown (Existing)	Standoff (Existing)	132'6"	(1) 1-1/2"
9' Whip Antenna	Unknown (Existing)	Standoff (Existing)	138'6"	(1) 5/8"
9' Whip Antenna	Unknown (Existing)	Standoff (Existing)	138'	(1) 5/8"
9' Whip Antenna	Unknown (Existing)	Standoff (Existing)	115'6"	(1) 5/8"
4' Dish	Unknown (Existing)	Leg Mount	112'6"	(1) 3/8"
6' Dish	Unknown (Existing)	Leg Mount	104'2"	EW63
Yagi	Unknown (Existing)	Leg Mount	74'3"	(1) 5/8"

Yagi	Unknown (Existing)	Leg Mount	74'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	69'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	62'3"	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	61'	(1) 5/8"
Camera	Unknown (Existing)	Leg Mount	57'	(2) 3/8 & (1) 1/4"
Yagi	Unknown (Existing)	Leg Mount	52'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	51'6"	(1) 5/8"
GPS	Unknown (Existing)	Leg Mount	50'	(1) 3/4"
Yagi	Unknown (Existing)	Leg Mount	42.5'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	38'9"	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	37'6"	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	32'8"	(1) 5/8"

Note: The existing antennas at an elevation of 235' shall be removed prior to the installation of the proposed antennas.

The results of the analysis indicate that the tower structure has the capacity to support the proposed loading conditions as summarized in Table 2. In addition the foundation is considered structurally adequate for the applied loads. **The self support tower structure is considered structurally adequate with the wind load classification specified above and the proposed antenna loading.**

Table 2: Tower Component Stress vs. Capacity Table

COMPONENT/ SECTION NO.	EXISTING COMPONENT SIZE	CONTROLLING ELEVATION	STRESS (% CAPACITY)	PASS/FAIL
Tower Leg (T13)	Pirod 105220	20'-40'	88.0	**Pass**
Diagonal (T13)	L4x4x1/4	20'-40'	92.5	**Pass**
Secondary Horizontal (T9)	Pirod 106128	100'-110'	7.2	**Pass**
Top Girt (T3)	1" dia. Solid Round	190'-210'	23.7	**Pass**
Bottom Girt (T2)	1" dia. Solid Round	210'-230'	27.4	**Pass**
Foundation and Anchor Bolts				
3 Caisson Foundations	5.5' dia. Caisson	Uplift	FOS of 3.63	**Pass**
Anchor Bolts	2" dia.	Tension	27	**Pass**

URS

This analysis is based on:

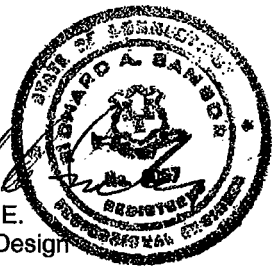
1) The tower structure's theoretical capacity, not including any assessment of the condition of the tower.
2) Tower foundation, geometry and structural member sizes taken from the manufacturers original design documents prepared by Pirod Inc., drawing number 202932-B, dated April 04, 2006.
3) Antenna locations and coaxial cable taken from reanalysis performed by Pirod Inc., prepared for T-Mobile dated November 15, 2002.
4) Drawings prepared by Clough, Harbour & Associates LLP, project number 10585-1004 dated December 16, 2002.
5) Geotechnical information taken from structural analysis performed by URS job number VZ1-064 / 36921548. (Note: not same tower, geotechnical information from 323' guyed tower located less than 250' from lattice tower)
6) Site visit performed by URS Corp on November 26, 2008.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration as well as the physical condition of the tower. Notify the engineer in writing immediately if any of the information in this report is found to be other than specified.

If you should have any questions, please call.

Sincerely,

URS Corporation



Richard Sambor, P.E.
Manager Facilities Design

cc: ICA, MJE, CF/Book - URS
J. Gaudet - HPC

HPC DEVELOPMENT LLC

EM-T-MOBILE-078-090225

ORIGINAL

February 24, 2009

RECEIVED
FEB 25 2009
CONNECTICUT
SITING COUNCIL

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051
Attn: Mr. S. Derek Phelps, Executive Director

Re: Omnipoint Communications, Inc. – exempt modification
82 North Eagleville Road, Mansfield, Connecticut

Dear Mr. Phelps:

This letter and attachments are submitted on behalf of Omnipoint Communications, Inc. (also referred to herein as "T-Mobile"). T-Mobile is enhancing the capabilities of its wireless system in Connecticut by implementing UMTS technology. In order to do so, T-Mobile will modify antenna and equipment configurations at a number of its existing sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the Mayor of Mansfield.

T-Mobile plans to modify the existing facility at 82 North Eagleville Road, Mansfield on the University of Connecticut campus and owned by the University of Connecticut (coordinates 41°48'53" N, -72°15'38" W). Attached are a compound plan and elevation depicting the planned changes, and documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration. Also included is a power density calculation reflecting the modification to T-Mobile's operations at the site.

The changes to the facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected. Both T-Mobile's existing and proposed antennas will be located at an approximate center line of 235' AGL on the approximately 248' tower. T-Mobile will replace three antennas, one per sector, with a UMTS antenna and will remove one antenna; seven antennas will remain. Six TMAs will be replaced with six new TMAs. Six additional coaxial cables also will be installed. The proposed modifications will not extend the height of the tower.

2. The proposed changes will not extend the site boundaries. T-Mobile will extend its concrete pad and install one additional cabinet on the extension. The entire installation will remain the fenced compound. Thus, there will be no effect on the site compound boundaries.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more. The incremental effect of the proposed changes will be negligible.

4. The changes to the facility will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site. As indicated on the attached power density calculation, T-Mobile's operations at the site will result in a power density of 1.0978%; the combined site operations will result in a total power density of 6.9278%.

Please feel free to call me at (860) 798-7454 with questions concerning this matter. Thank you for your consideration.

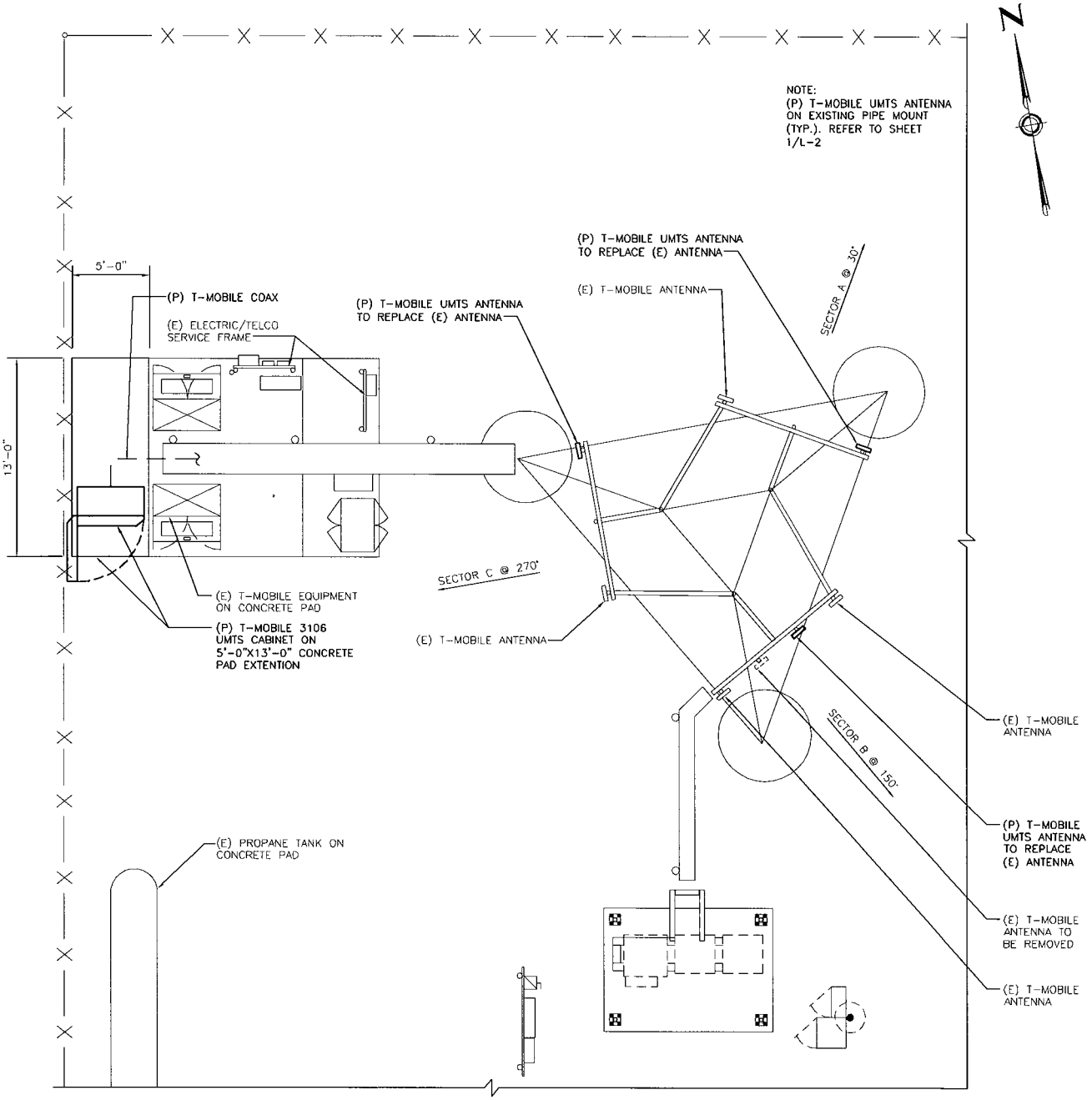
Respectfully yours,

Jennifer Young Gaudet

Jennifer Young Gaudet

cc: Honorable Elizabeth Paterson, Mayor, Town of Mansfield
University of Connecticut (underlying property owner), c/o George Davis

Attachments



1 / L-1 PARTIAL COMPOUND PLAN

SCALE: 1" = 10'-0"

0 5 10 20

CT11303B

SITE ID NO:	36917328
Designed by:	MJE
Drawn by:	KAP
Checked by:	ICA
Approved by:	

URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

HPC DEVELOPMENT LLC
53 LAKE AVENUE EXT.
DANBURY, CONNECTICUT 06811

FOR

Omnipoint dba
T-Mobile USA
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CONNECTICUT 06002

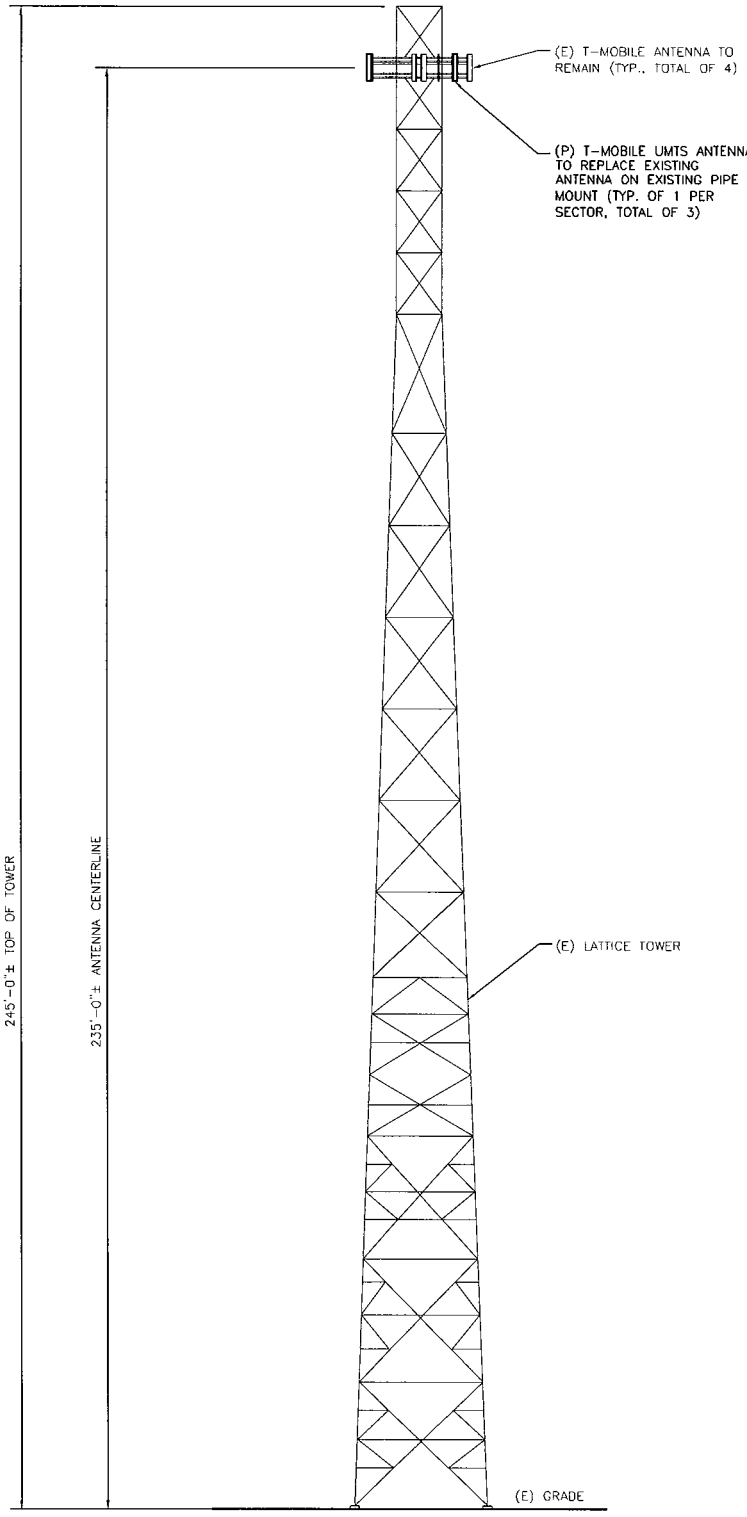
SITE ADDRESS:
UCONN
82 NORTH EAGLEVILLE ROAD
STORRS, CONNECTICUT 06268

REV.	DATE:	DESCRIPTION
V3	02-16-09	FINAL
V2	12-04-08	FINAL

Scale: AS NOTED | Date: 11/26/08

Job No.HPC 018 | File No. L-1 | Dwg. 1 of 2

Dwg. No. L-1



NOTE:
EXISTING ANTENNAS NOT SHOWN FOR CLARITY

1 / L-2 TOWER ELEVATION

SCALE: 1" = 30'-0"

0 15 30 60

CT11303B

SITE ID NO:	36917328
Designed by:	MJE
Drawn by:	KAP
Checked by:	ICA
Approved by:	

URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

HPC DEVELOPMENT LLC
53 LAKE AVENUE EXT.
DANBURY, CONNECTICUT 06811

FOR

Omnipoint dba
T-Mobile USA
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CONNECTICUT 06002

SITE ADDRESS:
UCONN
82 NORTH EAGLEVILLE ROAD
STORRS, CONNECTICUT 06268

REV.	DATE:	DESCRIPTION
V3	02-16-09	FINAL
V2	12-04-08	FINAL

Scale: AS NOTED | Date: 11/26/08

Job No.HPC 018 | File No. L-2 | Dwg. 2 of 2

Dwg. No. L-2

URS

February 4, 2009

Yvonne Mansell
T-Mobile
35 Griffin Road South
Bloomfield, CT 06002

Reference: Structural Analysis of Existing Self Support Tower for Antenna Upgrade
CT11303B
82 North Eagleville Road in Storrs, CT
URS Project Number: 36917328/HPC-018

Dear Ms. Mansell,

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Yagi	Unknown (Existing)	Leg Mount	74'3"	(1) 5/8"

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991

URS

Yagi	Unknown (Existing)	Leg Mount	74'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	69'	(1) 5/8"
Yagi	Unknown (Existing)	Leg Mount	62'3"	(1) 5/8"
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3 Caisson Foundations	5.5' dia. Caisson	Uplift	FOS of 3.63	**Pass**
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URS

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If you should have any questions, please call.

Sincerely,

URS Corporation

Richard Sambor, P.E.
Manager Facilities Design

cc: ICA, MJE, CF/Book - URS
H. Fujimoto - HPC

T-Mobile USA Inc.
35 Griffin Rd South, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: HPC
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11303B
Date: February 13, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Utility Lattice Towe at 82 North Eagleville Road, Storrs, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from T-Mobile transmitters are in the (1935-1944.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 3 antennas per sector.
3) The model number for GSM antenna is ADFD1820-90B-R2DM.
3) The model number for UMTS antenna is TMZXX-6516-R2M.
4) GSM antenna center line height is 235 ft.
4) UMTS antenna center line height is 235 ft.
5) The maximum transmit power from any GSM sector is 1178.15 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 1446.01 Watts Effective Radiated Power (EiRP) assuming 2 channels per sector.
6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
7) Power levels emitting from the antennas 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.
8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a Utility Lattice Towe at 82 North Eagleville Road, Storrs, CT, is 0.01098 mW/cm^2. This value represents 1.098% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

The combined Power Density from other carriers is 5.83%. The combined Power Density for the site is 6.928% of the M.P.E. standard.

VoiceStream Wireless Corporation Proprietary

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11303B**
Site Address:	**82 North Eagleville Road**
Town:	**Storrs**
Tower Height:	**250 ft.**
Tower Style:	**Utility Lattice Towe**

GSM Data		**UMTS Data**	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	8	**Number of channels**	2
Antenna Model	ADFD1820-90B-R2DM	**Antenna Model**	TMZXX-6516-R2M
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	287 ft.	**Cable Length**	287 ft.
Antenna Height	235.0 ft.	**Antenna Height**	235.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	16.5 dBi	**Antenna Gain**	17.4 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	3.3292 dB	**Total Cable Loss**	3.3292 dB
Total Attenuation	7.8292 dB	**Total Attenuation**	4.8292 dB
Total EIRP per Channel	51.68 dBm	**Total EIRP per Channel**	58.59 dBm
(In Watts)	147.27 W	**(In Watts)**	723.00 W
Total EIRP per Sector	60.71 dBm	**Total EIRP per Sector**	61.60 dBm
(In Watts)	1178.15 W	**(In Watts)**	1446.01 W
nsg	8.6708	**nsg**	12.5708
Power Density (S) =	**0.004929 mW/cm^2**	**Power Density (S) =**	**0.006049 mW/cm^2**
T-Mobile Worst Case % MPE =		**1.0978%**	

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	
Sprint	1.2000 %
AT&T Wireless	
Nextel	
MetroPCS	
Other Antenna Systems	4.6300 %
Total Excluding T-Mobile	**5.8300 %**
T-Mobile	1.0978
Total % MPE for Site	**6.9278%**