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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

February 13, 2009

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

RE: **EM-T-MOBILE-089-090113A** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 167 Lester Street, New Britain, 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 January 12, 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 Timothy T. Stewart, Mayor, City of New Britain
Steven P. Schiller, Director of Planning, City of New Britain
Crown Castle USA, Inc.

HPC DEVELOPMENT LLC

January 12, 2009

EM-T-MOBILE-089-090113A

ORIGINAL

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

Re: Omnipoint Communications, Inc. – exempt modification
167 Lester Street, New Britain, 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 New Britain.

T-Mobile plans to modify the existing facility at 167 Lester Street, New Britain (coordinates 41°41'11.08" N, -72°45'27.08" 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 a center line of 167' AGL on the approximately 190' tower. T-Mobile will remove three panel antennas, replace two panel antennas and place the third replacement antenna in a different sector. T-Mobile will also replace its TMAs. None of the modifications will extend the height of the tower.

2. The proposed changes will not extend the site boundaries. T-Mobile will install one additional cabinet on its existing concrete pad within the tower compound. Thus, there will be no effect on the site compound.

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 3.0702%; the combined site operations will result in a total power density of 15.9702%.

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

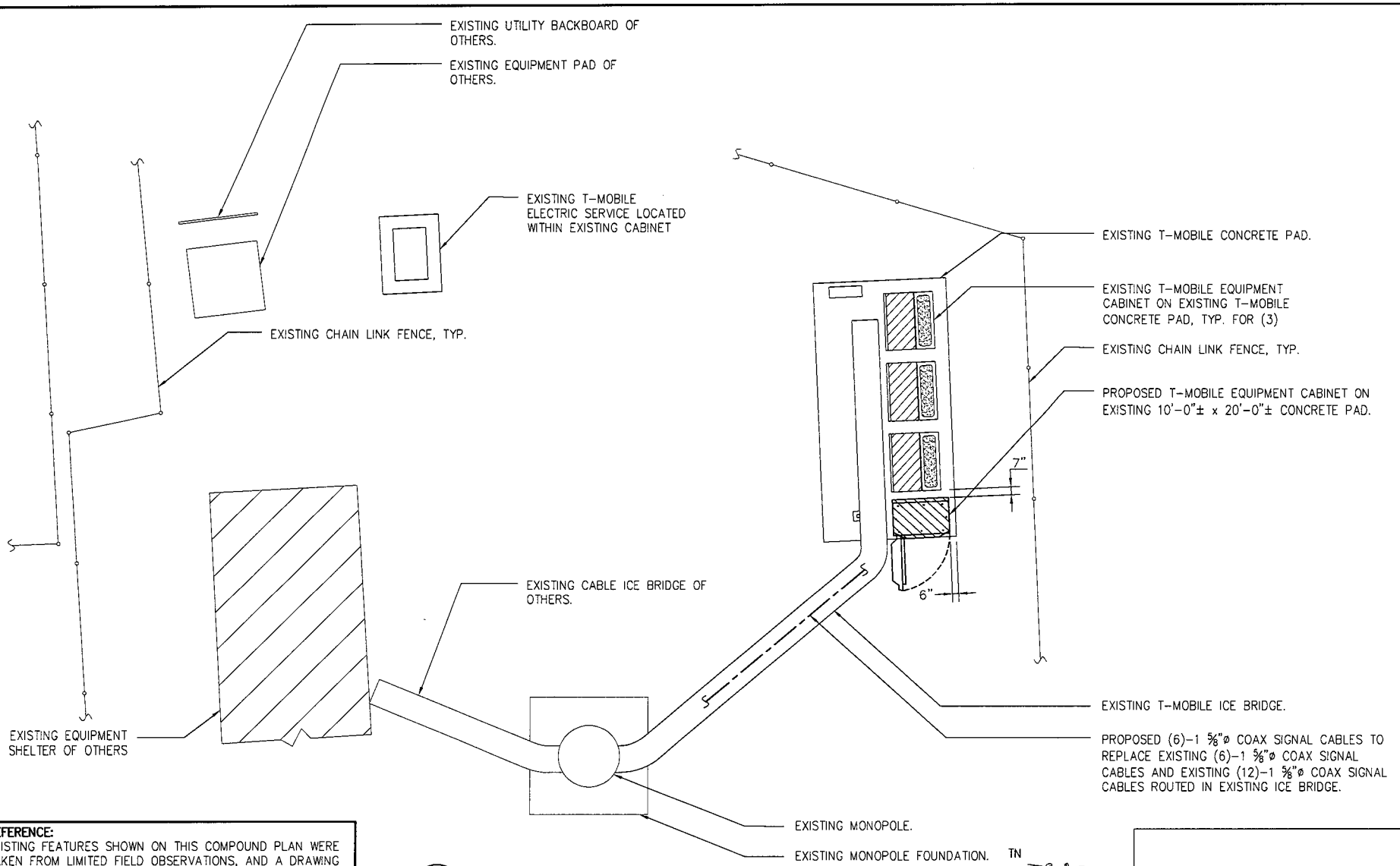
Respectfully yours,

Jennifer Young Gaudet

Jennifer Young Gaudet

cc: Honorable Timothy J. Stewart, Mayor of New Britain
Crown Atlantic Company LLC (underlying property owner)

Attachments



1 PART COMPOUND PLAN
SCALE: 3/32" = 1'-0"

REFERENCE:
EXISTING FEATURES SHOWN ON THIS COMPOUND PLAN WERE TAKEN FROM LIMITED FIELD OBSERVATIONS, AND A DRAWING ENTITLED "PLANS AND ELEVATIONS" PREPARED BY DYNATEK TELECOMMUNICATIONS SERVICES, 5170 BELMONT AVENUE, YOUNGSTOWN, OHIO 44505, (800) 838-3224, FOR T-MOBIL'S CELL SITE INSTALLATION AT THE SUBJECT PROPERTY.

LANDLORD'S INITIALS _____ DATE _____

S C S **STRUCTURAL CONSULTING SERVICES, P.C.**
67 FEDERAL ROAD, BLDG A, BROOKFIELD, CT 06804
TEL: 203.740.7578 FAX: 203.775.5670

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

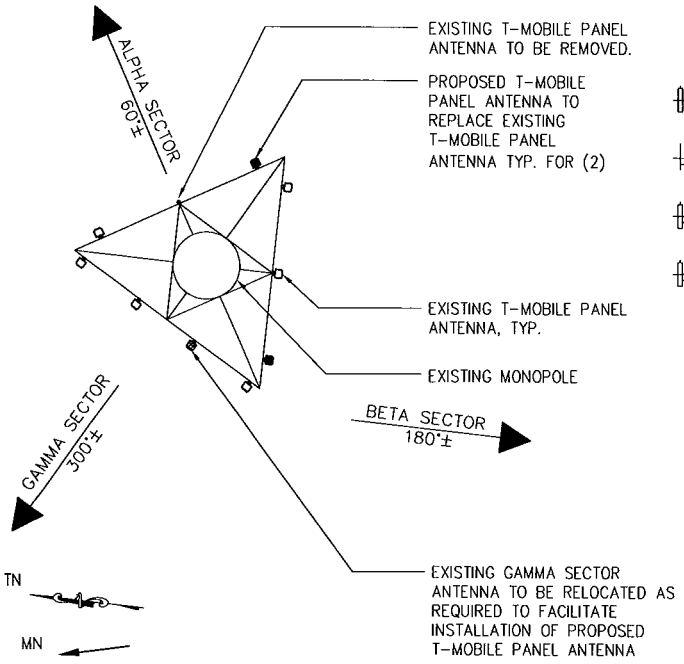
PROJECT TITLE
T-MOBILE ID: CT11783A
CROWN CASTLE MONOPOLE
175 LESTER STREET
NEW BRITAIN, CT 06051

No.	ISSUE OR REVISION	DATE
3	ISSUED FOR REVIEW	12/8/08
2	ISSUED FOR REVIEW	12/4/08
1	ISSUED FOR REVIEW	11/24/08

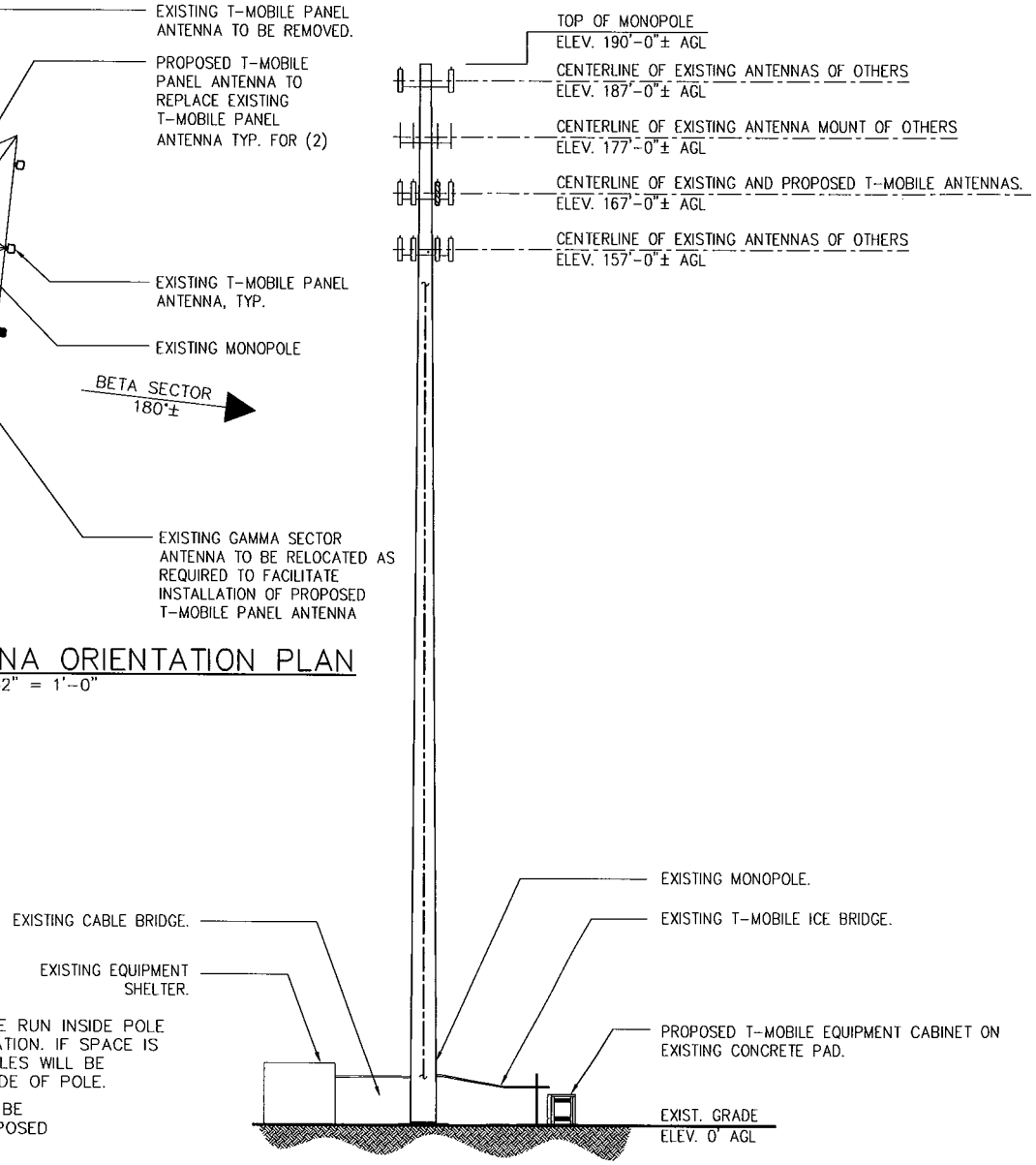
DRAWING TITLE
LEASE EXHIBIT (1 OF 2)

DATE 11/24/08
DRAWN BY JH
CHECKED BY GS
SCALE AS NOTED
PROJECT NO. HCP0015

DRAWING NO.
LE-1



2A ANTENNA ORIENTATION PLAN
SCALE: 3/32" = 1'-0"



NOTES:

1) FEASIBILITY OF SIGNAL CABLE RUN INSIDE POLE WILL REQUIRE FIELD VARIFICATION. IF SPACE IS NOT AVAILABLE, SIGNAL CABLES WILL BE REQUIRED TO RUN ON OUTSIDE OF POLE.
2) STRUCTURAL ANALYSIS WILL BE REQUIRED TO CONFERM PROPOSED ANTENNA CONFIGURATION.
3) STRUCTURAL ANALYSIS WILL BE REQUIRED TO CONFERM SIGNAL CABLE WIND LOADING IF CABLES RUN OUTSIDE OF POLE.

REFERENCE:
EXISTING FEATURES SHOWN ON THIS MONOPOLE ELEVATION WERE TAKEN FROM LIMITED FIELD OBSERVATIONS, AND A DRAWING ENTITLED "PLANS AND ELEVATIONS" PREPARED BY DYNATEK TELECOMMUNICATIONS SERVICES, 5170 BELMONT AVENUE, YOUNGSTOWN, OHIO 44505, (800) 838-3224, FOR T-MOBIL'S CELL SITE INSTALLATION AT THE SUBJECT PROPERTY.

2 WEST SITE ELEVATION
SCALE: 1/32" = 1'-0"

LANDLORD'S INITIALS _____ DATE _____

S C S **STRUCTURAL CONSULTING SERVICES, P.C.**
67 FEDERAL ROAD, BLDG A, BROOKFIELD, CT 06804
TEL: 203.740.7578 FAX: 203.775.5670

CLIENT
Omnipoint dba T-Mobile USA
35 GIFFIN ROAD SOUTH
BLOOMFIELD CT 06002

No.	ISSUE OR REVISION	DATE
3	ISSUED FOR REVIEW	12/8/08
2	ISSUED FOR REVIEW	12/3/08
1	ISSUED FOR REVIEW	11/24/08

PROJECT TITLE
T-MOBILE ID CT11783A
CROWN CASTLE MONOPOLE
175 LESTER STREET
NEW BRITAIN, CT 06051

DRAWING TITLE
LEASE EXHIBIT (2 OF 2)

DATE 11/24/08
DRAWN BY JH
CHECKED BY GS
SCALE AS NOTED
PROJECT NO. HPC0015
DRAWING NO. **LE-2**

Date: **December 11, 2008**

Veronica Harris
Crown Castle USA Inc.
1200 McArthur Blvd.
Mahwah, NJ
(201) 236-9094

PSG Engineering, Ltd.
1006 Thompson Highway
Richmond, TX 77469

Phone: (281) 239-8490
Fax: (281) 239-8515

Subject: **Analysis Structural Report**

Carrier Designation	***T-Mobile* Co-Locate** **Carrier Site Number:** *"CT11783"* **Carrier Site Name:** *"Crown Comm Monopole"*
Crown Castle Designation	**Crown Castle BU Number:** *803175* **Crown Castle Site Name:** *CT NEW BRITAIN 3 CAC 803175* **Crown Castle JDE Job Number:** *113117*
Engineering Firm Designation	**PSG Engineering Project Number:** *0801H191-A060188*
Site Data	**Lester Road, New Britain, CT, Hartford County** **Latitude *41° 41' 11.8"*, Longitude *-72° 45' 27.8"*** *188* **Foot** - *Monopole* **Tower**

Dear Ms. Harris,

PSG Engineering, Ltd. is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 314059, in accordance with application 71556, revision 1.

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

LC1: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table 1 and Table 2 for the proposed and existing/reserved loading.

The analysis has been performed in accordance with the TIA/EIA 222-F standard based upon a wind speed of 80 mph fastest mile (100 mph 3-second gust).

We at *PSG Engineering, Ltd.* appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA, Inc. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Oscar Pedraza, P.E.
President

STATE OF CONNECTICUT OSCAR PEDRAZA No. 21292 LICENSED PROFESSIONAL ENGINEER

DEC 1 1 2008

TABLE OF CONTENTS

1) INTRODUCTION

The tower superstructure analysis is based on the original tower design by Paul J. Ford and Company for Summit Manufacturing, LLC dated December 11, 2000 (TIA/EIA-222-F: 85 mph and with 1/2" radial ice), and a geotechnical report by Crown Atlantic Company LLC, dated October 26, 2000. Since it cannot be determined which one of the two provided foundation design alternatives was built, the tower substructure analysis is based on a comparison with the original design base reactions.

2) ANALYSIS CRITERIA

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

- 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.
- Deflections calculated using a wind speed of 50 mph.
- Feedline torque is considered.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.333

Table Legend
Proposed = (P)
Reserved = (R)

Table 1 – Proposed (P) Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
163	3(P)	RFS/Celwave	APXV18-206516S-C-A20	-	-	-
	3(P)		ATMPP1412D-1CWA			
	3(P)		ATMAA1412D-1A20			

Table 2 – Installed and Reserved (R) Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
190	***CASE A***					
	3	Powerwave Technologies	7770.00	Platform w/Handrail (1)	8 (Internal)	1-5/8
	6		LGP21401			
	****CASE B (Controlling Load Case)***					
	9(R)	MLA	84"x14"x2"	Platform w/Handrail (1)	12(R) (Internal)	1-5/8
177	-	-	-	Low Profile Platform (1)	-	-
**163	**9	**EMS Wireless	**RR90-17-02DP	Low Profile Platform (1)	18 (Internal)	1 5/8
	**6	**Standard	**TMA			
147	***CASE A***					
	6	Antel	WPA-80090/4CF	Low Profile Platform (1)	12 (Internal)	1 5/8
	6	Decibel	DB948F85T2E-M			
	****CASE B (Controlling Load Case)***					
	12(R)	MLA	52"x9"x3"	Low Profile Platform (1)	12(R) (Internal)	1-5/8

*Note: Controlling Load Case results shown in Table 5 and Appendix A.
**Note: (3) Installed antennas and installed TMAs will be removed and replaced with proposed loads. (6) Installed antennas, mount and coax lines will remain to support proposed loading.

Table 3 – Original Tower Manufacturer Design Antenna and Cable Information

Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount	Number Of Feed Lines	Feed Line Size (inches)
190	12	Standard	60"x12"x3" Panel	Platform w/Handrail (1)	Not Available (Internal)	
177	12	Standard	60"x12"x3" Panel	Platform w/Handrail (1)		
162	12	Standard	60"x12"x3" Panel	Platform w/Handrail (1)		
147	12	Standard	60"x12"x3" Panel	Platform w/Handrail (1)		

3) ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Original Tower Design	Paul J. Ford and Company Structural Engineers	679659	Crown Site Data Manager
Original Foundation Design		679660	
Geotechnical Report	Crown Atlantic Company LLC.	679661	
CAD Level Drawing(s)	188',177',162',147' Level Drawing(s)	-	Crown CAD Dept.

3.1) Analysis Method

RISATower (Version 5.3.1.0), a commercially available software program, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/EIA/TIA 222F or the local building code requirements. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with the manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts, and other appurtenances are as specified in Tables 1 and 2 and the Level drawing(s) listed in Table 4.
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222F.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and PSG Engineering should be allowed to review any new information to determine its effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 – Tower Component Stresses vs. Capacity – LC1

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:(Monopole)				
			Summary	
Notes:	**Component**	**Elevation**	**% Capacity**	**Pass/Fail**
	L1	188 - 137	51.6	Pass
	L2	137 - 90.25	70.1	Pass
	L3	90.25 - 44.5	70.0	Pass
	L4	44.5 - 0	57.9	Pass
Individual Components:				
Notes:	**Component**	**Elevation**	**% Capacity**	**Pass/Fail**
	Base Plate	-	64.5	Pass
	Anchor Bolts	-	67.7	Pass
	Base Foundation (Compared w/ Design Loads)	-	72.5	Pass
Structure Rating (max from all components) =				**72.5%**

4.1) Recommendations (if applicable)

No modifications are necessary.

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 CT11783B
Date: January 11, 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 Monopole at 167 Lester Street, New Britain, 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 4 antennas per sector.
3) The model number for GSM antenna is RR90-17-02DP.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 163 ft.
4) UMTS antenna center line height is 163 ft.
5) The maximum transmit power from any GSM sector is 1431.79 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2017.67 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 Monopole at 167 Lester Street, New Britain, CT, is 0.0307 mW/cm^2. This value represents 3.07% 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 12.9%. The combined Power Density for the site is 15.97% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11783B**
Site Address:	**167 Lester Street**
Town:	**New Britain**
Tower Height:	**170 ft.**
Tower Style:	**Monopole**

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	RR90-17-02DP	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	214 ft.	**Cable Length**	214 ft.
Antenna Height	163.0 ft.	**Antenna Height**	163.0 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**	18.0 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	2.4824 dB	**Total Cable Loss**	2.4824 dB
Total Attenuation	6.9824 dB	**Total Attenuation**	3.9824 dB
Total EIRP per Channel	52.53 dBm	**Total EIRP per Channel**	60.04 dBm
(In Watts)	178.97 W	**(In Watts)**	1008.83 W
Total EIRP per Sector	61.56 dBm	**Total EIRP per Sector**	63.05 dBm
(In Watts)	1431.79 W	**(In Watts)**	2017.67 W
nsg	9.5176	**nsg**	14.0176
Power Density (S) =	**0.012744 mW/cm^2**	**Power Density (S) =**	**0.017959 mW/cm^2**
T-Mobile Worst Case % MPE =		**3.0702%**	

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	9.8000 %
Cingular	3.1000 %
Sprint	
AT&T Wireless	
Nextel	
MetroPCS	
Other Antenna Systems	
Total Excluding T-Mobile	**12.9000 %**
T-Mobile	3.0702
Total % MPE for Site	**15.9702%**