

**JULIE D. KOHLER**

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

June 12, 2012

Ms. Linda Roberts,  
Executive Director  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: Notice of Exempt Modification  
Fairfield Police Department/T-Mobile co-location  
Site ID 11401A  
100 Reef Road, Fairfield CT**

Dear Ms. Roberts:

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 Fairfield Police Department owns the existing telecommunications tower and related facility at 100 Reef Road, Fairfield, Connecticut (latitude 41-08-23/longitude 73-15-28). T-Mobile intends to replace six antennas and add associated equipment at this existing facility in Fairfield ("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 Fairfield First Selectman, Michael C. Tetreau.

The Facility consists of a 145 foot tower. The tower currently supports the antennas of T-Mobile (EM-T-MOBILE-051-090416), MetroPCS (TS-METROPCS-051-080523), AT&T (EM-CING-051-111223), and Clearwire (EM-CLEARWIRE-051-100521).

T-Mobile plans to replace six antenna mounted on the tower at a centerline of 133 feet. (See the plans revised to June 11, 2012 attached hereto as Exhibit A). T-Mobile will also mount 2 equipment cabinets (identified as RAC24 and PBC05) on the railing within the Facility compound area and run fiber conduit along existing coaxial cables. The existing tower is structurally capable of supporting T-Mobile's proposed replacement antennas and equipment installation, as indicated in the structural comparative analysis dated June 7, 2012 and attached hereto as Exhibit B.

June 12, 2012  
Site ID CT11401A  
Page 2

The planned modifications to the Fairfield 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' replacement antennas will be installed at the 133 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 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 Facility by six decibels or more.
- 4 . The operation of the 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 RF Exposure Analysis prepared by EBI dated June 4, 2012 T-Mobile' operations would add 0.646% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including the replacement antennas would be 36.286% 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 addition of antennas and equipment at the Fairfield Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Julie D. Kohler, Esq.

cc: First Selectman, Michael C. Tetreau  
Mark Richard, T-Mobile (via e-mail)  
Jamie Ford, HPC Wireless (via e-mail)



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

2331590  
 4/30/2012  
 2000011160

Invoice Number	Inv. Date	Description	Deductions	Voucher	Amount Paid
CKKMB00278	4/25/2012	AL SITE CT11401 FILING FEE	0.00	1100650153	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.



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

Mellon Bank  
 500 Ross Street  
 Pittsburgh, PA 15262  
 60-160/433

2331590  
 4/30/2012  
 VID 2000011160

PAY **\$625.00**  
SIX TWO FIVE CTS CTS

**\*\$625.00**

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

To  
 The  
 Order  
 Of

CONNECTICUT SITING COUNCIL  
 10 FRANKLIN SQ  
 NEW BRITAIN, CT 06051

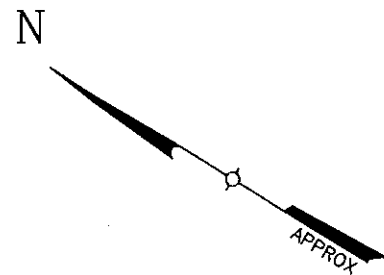
VOID AFTER 180 DAYS  
 THIS CHECK CLEARS THROUGH POSITIVE PAY

*David [Signature]*

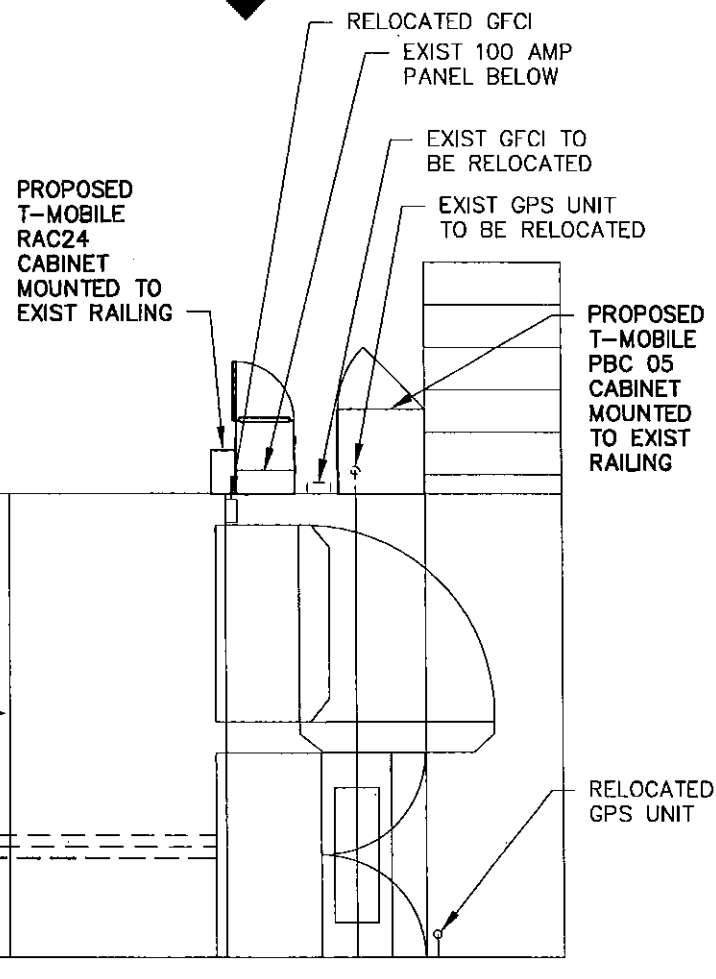
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THE ORIGINAL DOCUMENT HAS A REFLECTIVE WATERMARK ON THE BACK. HOLD AT AN ANGLE TO VIEW, DO NOT CASH IF MISSING.

# **EXHIBIT A**

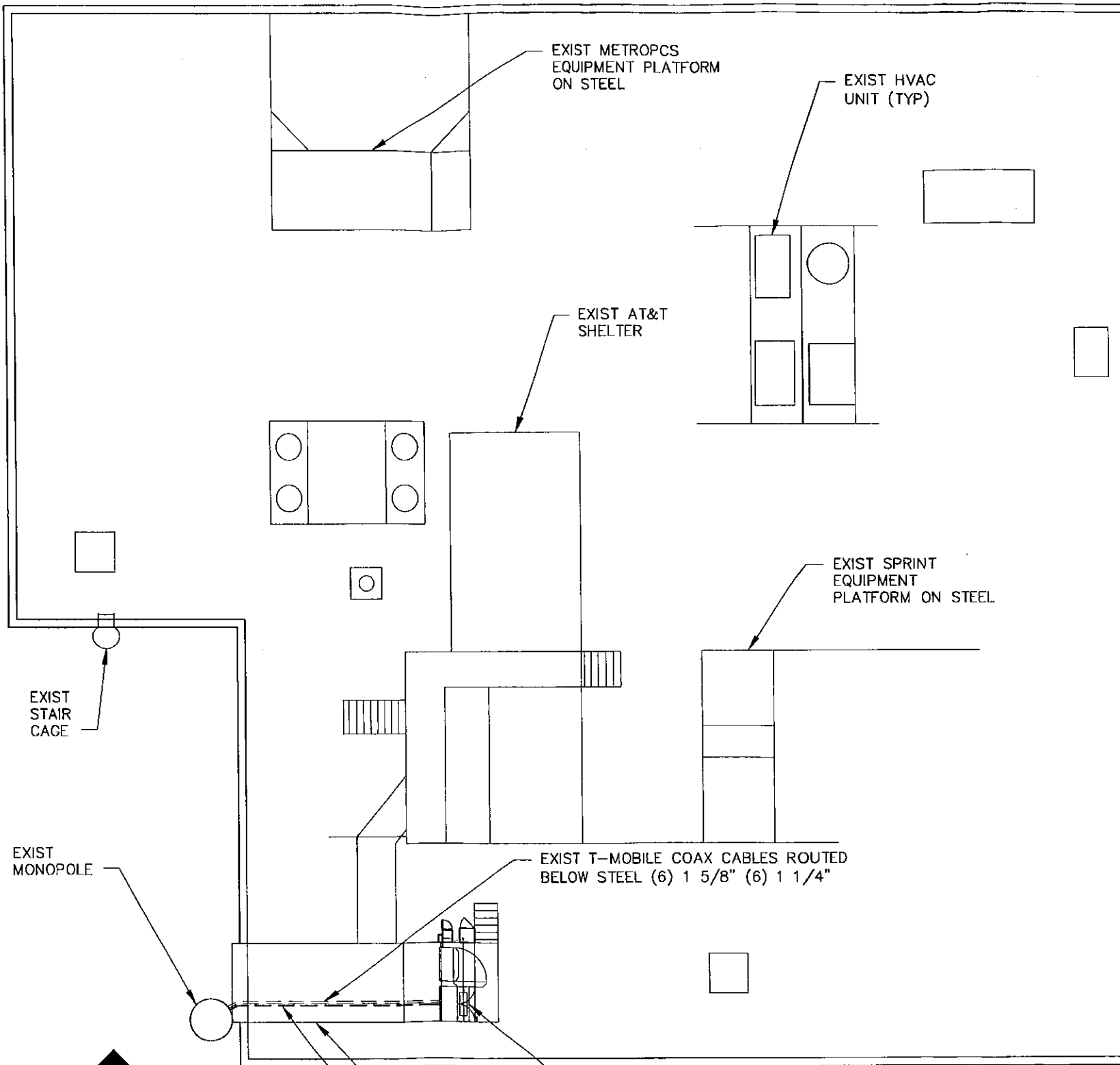


3  
L-2



2  
L-1  
**EQUIPMENT PLAN**  
SCALE: 1/4" = 1'-0"

REEF ROAD



1  
L-2  
**ROOF PLAN**  
SCALE: 1/16" = 1'-0"

NICHOLS STREET

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TECTONIC Engineering & Surveying Consultants P.C.

1279 Route 300  
Newburgh, NY 12550  
Phone: (845) 567-6656  
Fax: (845) 567-8703

**T-Mobile**

NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC. PHONE: (973) 686-8500  
4 SILVAN DRIVE  
PARLISSEY, NJ 07054

APPROVALS

T-MOBILE \_\_\_\_\_  
LANDLORD \_\_\_\_\_  
RF \_\_\_\_\_  
CONSTRUCTION \_\_\_\_\_

PROJECT NUMBER 6203.CT11401A DESIGNED BY GL

REV	DATE	REVISION	DRAWN BY
0	04/12/12	FOR COMMENT	MT
1	5/9/12	PER COMMENT	BW
2	5/18/12	PER COMMENT	BW
3	6/11/12	PER COMMENT	LH

ISSUED BY \_\_\_\_\_ DATE \_\_\_\_\_

SITE INFORMATION

CT11401A  
FAIRFIELD POLICE DEPT.  
100 REEF ROAD  
FAIRFIELD, CT 06824

SHEET TITLE

ROOF PLAN

SHEET NUMBER

L-1

CONFIGURATION

2C



ORIGINAL SIZE IN INCHES

**STRUCTURAL NOTE:**  
EXIST MOUNTS, PLATFORMS, MONOPOLE STRUCTURES TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.

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Newburgh, NY 12550  
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Fax: (845) 567-8703

## ••T••Mobile••

NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC. PHONE: (973) 686-6500  
4 SYLVAN DRIVE  
PARISPPANY, NJ 07054

### APPROVALS

T-MOBILE \_\_\_\_\_  
LANDLORD \_\_\_\_\_  
RF \_\_\_\_\_  
CONSTRUCTION \_\_\_\_\_

PROJECT NUMBER: 6203.CT11401A  
DESIGNED BY: GL

REV	DATE	REVISION	DRAWN BY
0	04/12/12	FOR COMMENT	MT
1	5/9/12	PER COMMENT	BW
2	5/18/12	PER COMMENT	BW
3	6/11/12	PER COMMENT	LH

ISSUED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

### SITE INFORMATION

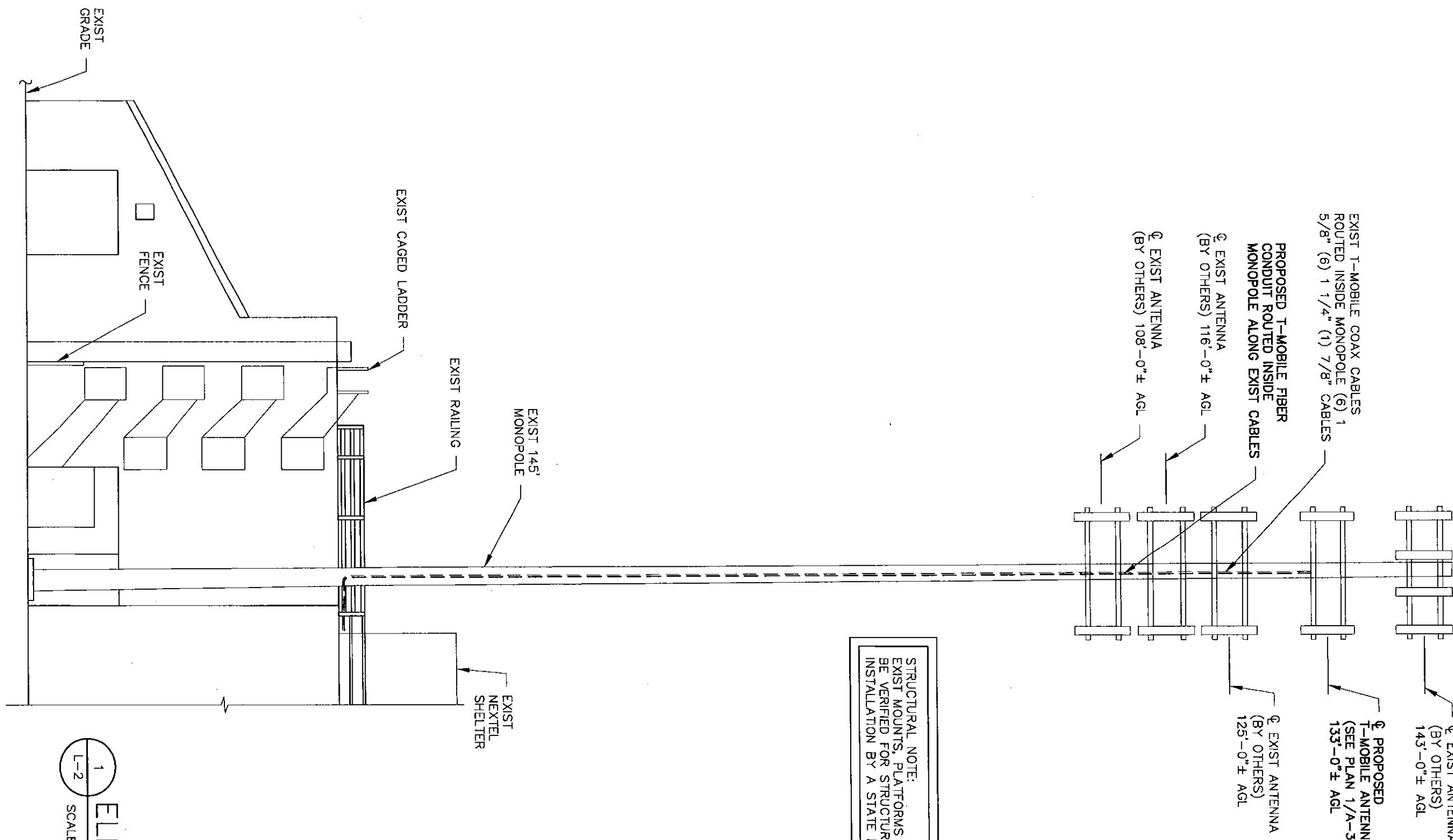
CT11401A  
FAIRFIELD POLICE DEPT.  
100 REEF ROAD  
FAIRFIELD, CT 06824

### SHEET TITLE

ELEVATION

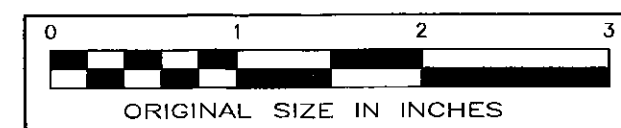
### SHEET NUMBER

L-2



STRUCTURAL NOTE:  
EXIST MOUNTS, PLATFORMS AND BUILDING STRUCTURE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.

CONFIGURATION  
2C



1  
L-2  
ELEVATION  
SCALE: 3/32" = 1'-0"

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1279 Route 300  
Newburgh, NY 12550  
Phone: (845) 567-8658  
Fax: (845) 567-8703

**••T••Mobile••**  
NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC. PHONE: (973) 886-6500  
4 SYLVAN DRIVE  
PARSIPPANY, NJ 07054

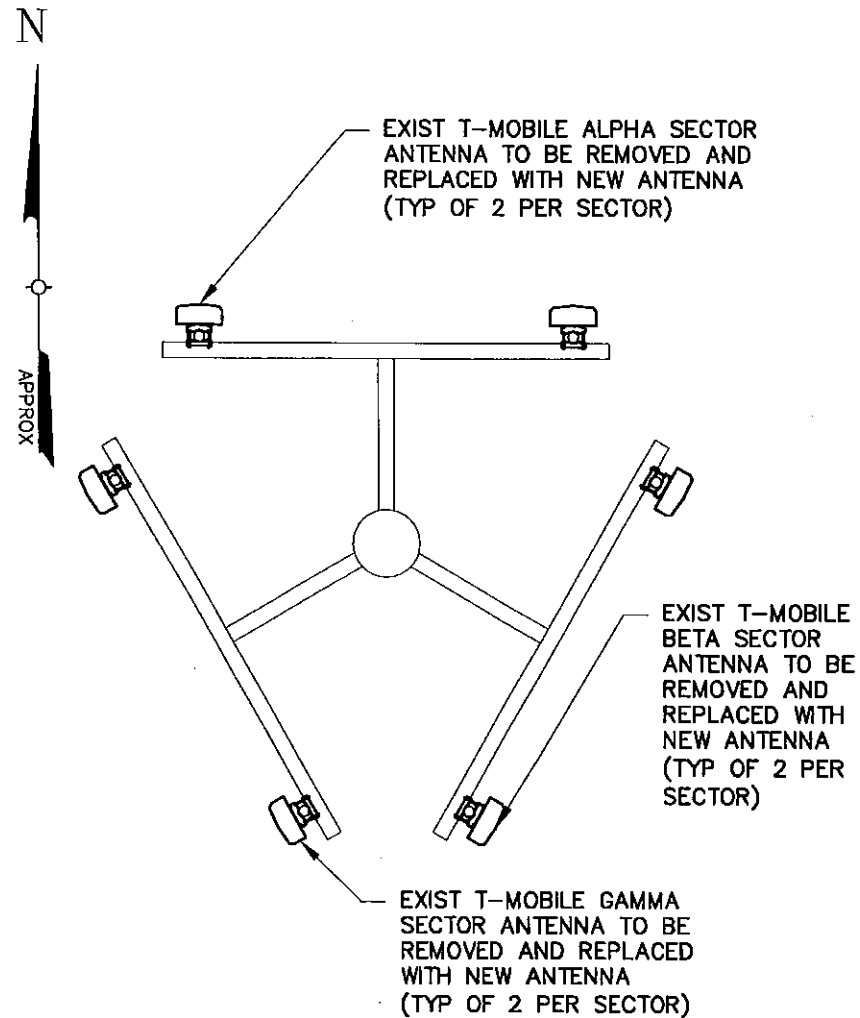
APPROVALS

T-MOBILE \_\_\_\_\_  
LANDLORD \_\_\_\_\_  
RF \_\_\_\_\_  
CONSTRUCTION \_\_\_\_\_

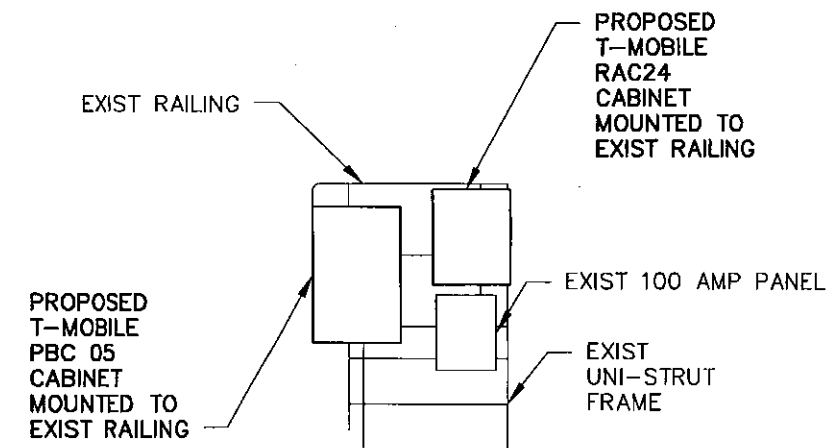
PROJECT NUMBER: 6203.CT11401A      DESIGNED BY: GL

REV	DATE	REVISION	DRAWN BY
△	04/12/12	FOR COMMENT	MT
△	5/9/12	PER COMMENT	BW
△	5/18/12	PER COMMENT	BW
△	6/11/12	PER COMMENT	LH

ISSUED BY: \_\_\_\_\_      DATE: \_\_\_\_\_



**1**  
ANTENNA PLAN  
L-3      SCALE: NTS



**2**  
ELEVATION  
L-3      SCALE: 1/4" = 1'-0"

**STRUCTURAL NOTE:**  
EXIST MOUNTS, PLATFORMS AND BUILDING STRUCTURE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.



CONFIGURATION  
**2C**

SITE INFORMATION

CT11401A  
FAIRFIELD POLICE DEPT.  
100 REEF ROAD  
FAIRFIELD, CT 06824

SHEET TITLE

ANTENNA PLAN & ELEVATION

SHEET NUMBER

L-3

# **EXHIBIT B**





Practical Solutions, Exceptional Service

CORPORATE OFFICE:  
Mountainville, NY (800) 829-6531

TECTONIC Engineering & Surveying Consultants P.C.  
1279 Route 300  
Newburgh, NY 12550

(845) 567-6656 FAX: (845) 567-8703  
www.tectonicengineering.com

Amy English  
HPC Wireless  
46 Mill Plain Rd, (Floor 2)  
Danbury, CT-06811

June 7, 2012

**RE: W.O. 6203-CT11401A  
SITE ID: CT11401A  
100 REEF ROAD  
FAIRFIELD, CT 06824  
STRUCTURAL COMPARATIVE ANALYSIS (MODERNIZATION PROJECT)**

Dear Ms. English,

T Mobile is proposing to replace six (6) antennas at the captioned site. Along with that T-Mobile is proposing to add (1) PBC 05 Cabinet (200 lbs. max weight) and (1) RAC24 Cabinet (185 lbs. max weight).

Existing Antenna Specifications

**(3) Antel RR90-18-00DP**

Height: 72"  
Width: 8"  
Depth: 2.8"  
Weight: 16 lbs  
Wind Area: 4 SF

**(3) APX16DWV-16DWV-S-E-ACU**

Height: 55.9"  
Width: 13.3"  
Depth: 3.15"  
Weight: 41 lbs  
Wind Area: 5.16 SF

**Total WT: 171 lbs  
Total WA: 27.48 SF**

Replacement Antenna Specifications

**(6) AIR21**

Height: 56"  
Width: 12"  
Depth: 8"  
Weight: 105 lbs  
Wind Area: 4.67 SF

**Total WT: 630 lbs  
Total WA: 28.02 SF**

The physical characteristics for the proposed replacement antennas, as outlined above, increases the overall wind area of T-Mobile antennas by approximately 2%, and increases in the overall weight in connection with T-Mobile antennas by 438 lbs.



Based on the review of the previous analysis report prepared by FDH Engineering INC., for KMB Design Group dated 3/23/2009, the pole shafts were rated at 84.1% and the Anchor Bolts and Base Plate were under its allowable stress. In addition, the base reactions were within the Original Design reactions except for Shear. Based on the fact that the increase in the wind area of the proposed antennas is relatively small, we believe the existing pole has sufficient reserve capacity to support the additional loads due to the proposed T-Mobile upgrade.

We believe the previous analysis was per the most stringent criteria of the 2003 IBC (State Building Code, 2005 CT Supplement) and TIA/EIA-222-F-1996 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". This structural comparative analysis is based on a limited visual inspection from ground and information provided by the client. We assume that the original site has been designed, fabricated and constructed in compliance with the applicable building code at the time. Contractor shall field verify existing conditions and recommendations as noted on the construction drawings and notify the design engineer of any discrepancies prior to installation of the proposed upgrade.

Should you have any questions, please do not hesitate to contact Tammy Nosek at 845-567-6656 Ext 807.

Sincerely,

**TECTONIC**



Manojkumar Patel, P.E.  
Sr. Project Manager

# **EXHIBIT C**

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

T-Mobile Existing Facility

Site ID: CT11401A

Fairfield Downtown Area  
100 Reef Road  
Fairfield, CT 06430

**June 04, 2012**

June 04, 2012

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

Re: Emissions Values for Site CT11401A – Fairfield Downtown Area

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 100 Reef Road, Fairfield, 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 cellular band is  $567 \mu\text{W}/\text{cm}^2$ , and the general population exposure limit for the PCS band 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.





Site ID	CT11401A - Fairfield Downtown Area
Site Address	100 Reef Road, Fairfield, CT 06430
Site Type	Self Support Tower

Sector 1																
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	133	127	0	0	48.326044	1.077159	0.10772%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	133	127	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
Sector total Power Density Value:													0.21543%			

Sector 2																
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	133	127	0	0	48.326044	1.077159	0.10772%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	133	127	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
Sector total Power Density Value:													0.21543%			

Sector 3																
Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	Antenna analysis height (ft)	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	133	127	0	0	48.326044	1.077159	0.10772%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	0	0	0	-3.95	133	127	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
2b	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	133	127	0	0	24.163022	0.538579	0.05386%
Sector total Power Density Value:													0.21543%			

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.64630%
Clearwire	0.91000%
AT&T	18.22000%
Metro PCS	16.51000%
<b>Total Site MPE %</b>	<b>36.286%</b>



## 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 **0.646% (0.215% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously.

The anticipated composite MPE value for this site assuming all carriers present is **36.286%** of the allowable FCC established general public limit. 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