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

July 20, 2012

Jennifer Young Gaudet
HPC Wireless Services
46 Mill Plain Road, Floor 2
Danbury, CT 06811

RE: **EM-CING-115-120705** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 54 Waterbury Road, Prospect, Connecticut.

Dear Ms. 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 with the following conditions:

- The proposed equipment be installed in accordance with the recommendations made in the Structural Analysis prepared by Armor Tower Engineering dated May 30, 2012 and stamped by Dmitriy Albul; and
- Following the installation of the proposed equipment, AT&T shall engage an engineer to conduct a post-construction inspection to document that the tower-mounted equipment has been placed in compliance with the requirements of the Structural Analysis and that a copy of such documentation be transmitted to the Council.
- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated July 3, 2012. 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.

CSC
CONNECTICUT SITING COUNCIL

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. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/CDM/cm

c: The Honorable Robert J. Chatfield, Mayor, Town of Prospect
William J. Donovan, Zoning Enforcement Officer, Town of Prospect
Charles Bradshaw

EM-CING-115-120705

HPC Wireless Services
46 Mill Plain Rd.
Floor 2
Danbury, CT, 06811
P.: 203.797.1112

HPC WIRELESS SERVICES

ORIGINAL

July 3, 2012

RECEIVED
JUL - 5 2012
CONNECTICUT
SITING COUNCIL

VIA OVERNIGHT COURIER

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051
Attn: Ms. Linda Roberts, Executive Director

Re: New Cingular Wireless PCS, LLC – exempt modification
54 Waterbury Road, Prospect, Connecticut

Dear Ms. Roberts:

This letter and attachments are submitted on behalf of New Cingular Wireless PCS, LLC ("AT&T. AT&T is making modifications to certain existing sites in its Connecticut system in order to implement LTE technology. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction that 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 the Town of Prospect.

AT&T plans to modify the existing wireless communications facility owned by Charles Bradshaw and located at 54 Waterbury Road in the Town of Prospect (coordinates 41°-30'-40.43" N, 72°-58'-57.07" W). Attached are a compound plan and elevation depicting the planned changes, and documentation of the structural sufficiency of the structure to accommodate the revised antenna configuration. Also included is a power density report reflecting the modification to AT&T'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. AT&T will replace the two (2) existing panel antennas with nine (9) panel antennas, three (3) each for GSM, UMTS and LTE technology. The antennas will be attached to existing mounts, with center lines of approximately 126'. Six (6) RRUs

(remote radio units) and a surge arrestor will be mounted to tower legs at approximately the same height as the antennas. AT&T will also place a DC power and fiber run from the equipment to the antennas along the existing coaxial cable run. The proposed modifications will not extend the height of the approximately 160' guyed structure.

2. The proposed changes will not extend the site boundaries. AT&T will install related equipment in its existing shelter and will mount a GPS antenna on the shelter. These changes will be within the existing compound and will have no effect on the site 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 report prepared by C Squared Systems, LLC, AT&T's operations at the site will result in a power density of approximately 3.23%; the combined site operations will result in a total power density of approximately 56.42%.

Please feel free to contact me by phone at (860) 798-7454 or by e-mail at jgaudet@hpcwireless.com with questions concerning this matter. Thank you for your consideration.

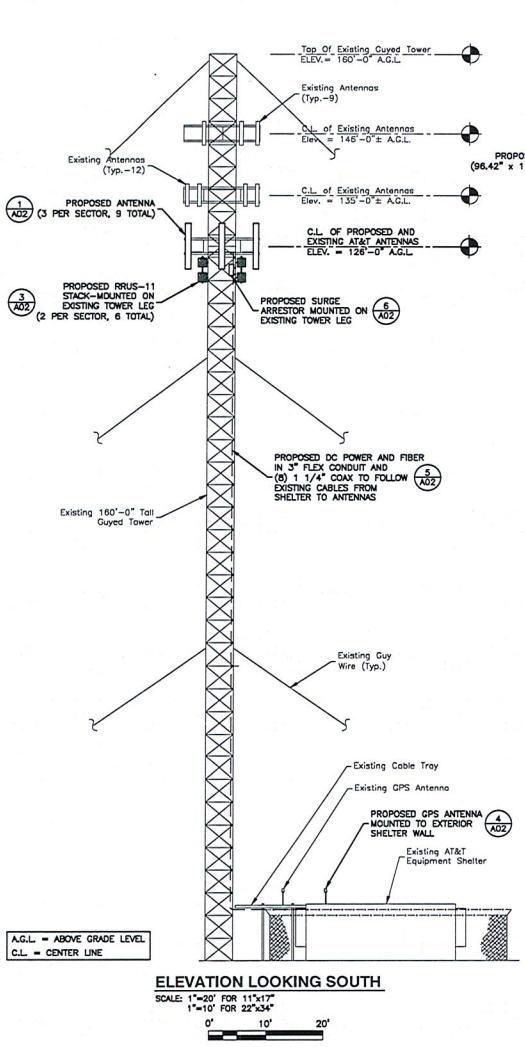
Respectfully yours,

Jennifer Young Gaudet

Jennifer Young Gaudet

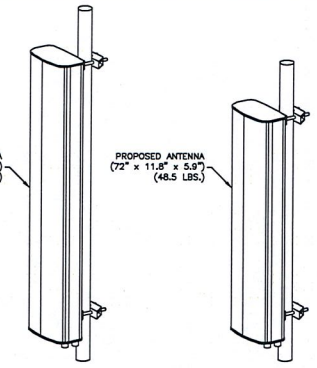
Attachments

cc: Honorable Robert J. Chatfield, Mayor, Town of Prospect
Charles Bradshaw (underlying property owner)



ELEVATION LOOKING SOUTH

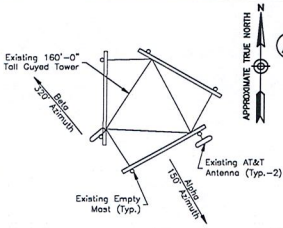
SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"
0' 10' 20'



NOTE:
1. PLEASE SEE RFDS FOR SPECIFIC ANTENNA MODEL.

ISOMETRIC ANTENNA DETAIL 1

SCALE: N.T.S.

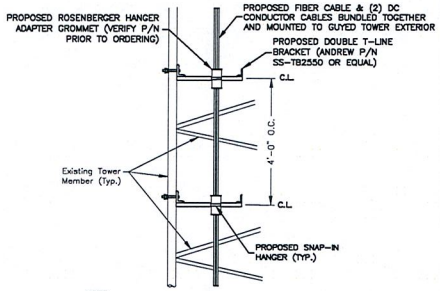


EXISTING PROPOSED

NOTE:
1. AZIMUTHS BASED ON TRUE NORTH.

PLATFORM ANTENNA ORIENTATION 2

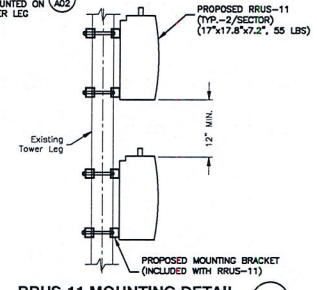
SCALE: N.T.S.



NOTE:
1. MODIFY OR IMPROVE EXISTING CABLE LADDER AS NEEDED.

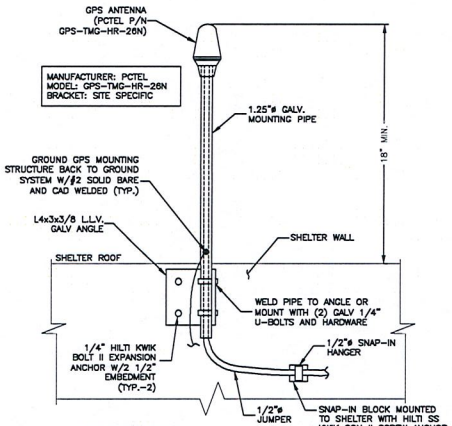
VERTICAL CONDUCTOR DETAIL 5

SCALE: N.T.S.



RRUS-11 MOUNTING DETAIL 3

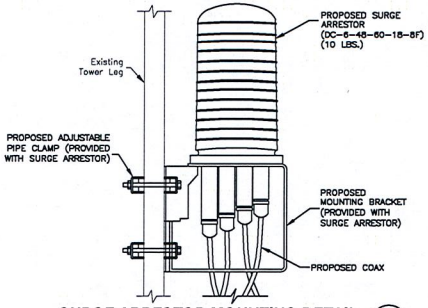
SCALE: N.T.S.



GPS ANTENNA NOTES:
1. GROUND ANTENNAS AND MOUNTS PER MANUFACTURERS RECOMMENDATIONS AND AT&T STANDARDS.
2. FIELD LOCATE GPS ANTENNA A MINIMUM OF 10 FEET HORIZONTALLY FROM EXISTING GPS ANTENNA WITH AT&T CM APPROVAL.
3. SEAL ALL WALL PENETRATIONS WILL SILICONE SEALANT.

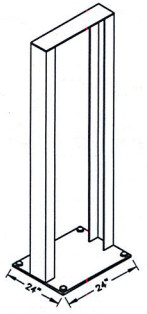
GPS ANTENNA 4

SCALE: N.T.S.



SURGE ARRESTOR MOUNTING DETAIL 6

SCALE: N.T.S.



ISOMETRIC

NOTES:
1. CONTRACTOR SHALL SECURE RACK AS PER MANUFACTURER RECOMMENDATIONS.

24" x 24" INDOOR RACK 7

N.T.S

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

NEXLINK GLOBAL SERVICES
800 MARSHALL PHELPS ROAD, #2A
WINDSOR, CT 06095

PROSPECT-BRADSHAW TOWER
SITE NO. CT2218
54 WATERBURY ROAD
PROSPECT, CT 06712

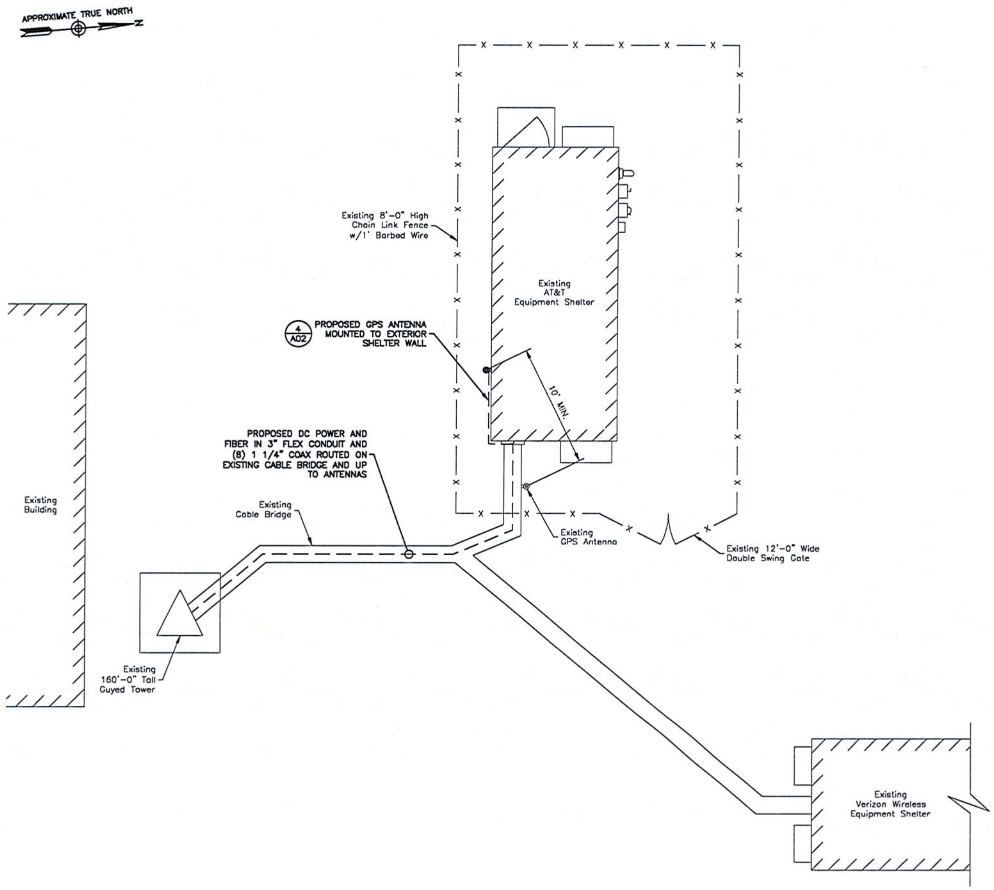
at&t
500 ENTERPRISE DRIVE,
SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	06/26/12	ISSUED FOR CONSTRUCTION	JC	JWS	GHN
0	06/01/12	PRELIMINARY SUBMISSION	JRF	JWS	GHN

SCALE: AS SHOWN | DESIGNED BY: JWS | DRAWN BY: RSA

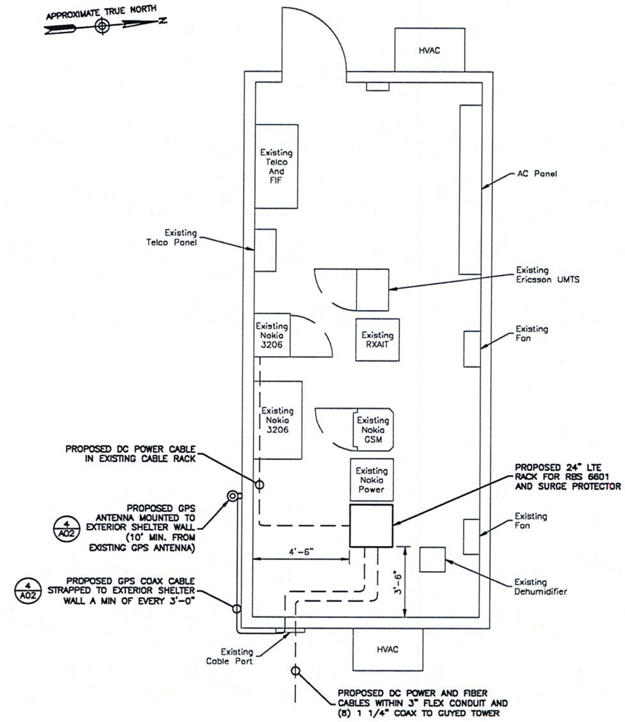
ELEVATION & CONSTRUCTION DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50048347/50048363	A02	1



SITE PLAN

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"
0' 5' 10'



SHELTER LAYOUT DETAIL

SCALE: 3/16" = 1'-0" FOR 11"x17"
3/8" = 1'-0" FOR 22"x34"
0' 2' 4' 6'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. MOUNT ALL ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY OTHERS.
3. NOT ALL INFORMATION SHOWN FOR CLARITY.

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

NEXLINK GLOBAL SERVICES
800 MARSHALL PHELPS ROAD, #2A
WINDSOR, CT 06095

PROSPECT-BRADSHAW TOWER
SITE NO. CT2218
54 WATERBURY ROAD
PROSPECT, CT 06712

at&t
500 ENTERPRISE DRIVE,
SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	06/26/12	ISSUED FOR CONSTRUCTION	JC	JWS	GHN
0	06/01/12	PRELIMINARY SUBMISSION	JRF	JWS	GHN

SCALE: AS SHOWN | DESIGNED BY: JWS | DRAWN BY: RSA

SITE PLAN & SHELTER LAYOUT

DEWBERRY NO.	DRAWING NUMBER	REV
50048347/50048363	A01	1

ARMOR TOWER ENGINEERING

Structural Analysis of 160 ft Guyed Tower

Site Number: CT2218

Site Name: Prospect-Bradshaw Tower
County: New Haven
Location: Prospect, CT

Checked By:

Patrick Botimer
Structural Engineer

STATE OF CONNECTICUT
DMITRIY V. ALBUL
No. 28725
LICENSED
PROFESSIONAL ENGINEER

6/22/2012

Dewberry

600 Parsippany Road, Suite 301

Parsippany, NJ 07054

9 North Main Street, 2nd Floor, Cortland, NY 13045
(607)591-5381 Fax: (866)870-0840 www.ArmorTower.com

May 30, 2012

ARMOR TOWER ENGINEERING

Joanne Slaman
Dewberry
600 Parsippany Road, Suite 301
Parsippany, NJ 07054

RE: AT&T – CT2218
54 Waterbury Road, Prospect, CT 06712

Joanne:

We have completed the structural analysis of the subject tower and **have found it to be adequate within the scope of this analysis to support the proposed antenna loading**. The tower was analyzed according to the requirements of TIA/EIA 222-F standard for New Haven for 85 mph (fastest mile) wind speed with no ice and 74 mph wind with ½" ice.

The tower we analyzed is a 160' guyed tower consisting of welded sections with pipe legs and pipe bracing. Tower face dimension is 30" the full height above an 80" tapered base. The tower mast is laterally supported by three levels of guying attached to one set of three guy anchors. Foundation details have not been provided for our review and are therefore considered unknown.

The loading used in the analysis consisted of the existing antennas/lines as well as the following:

- Remove all existing AT&T antennas at 126'.
- Add (3) KMW AM-X-CD-16-65-00T antennas at 126' for AT&T on the existing antenna frames.
- Add (6) Andrew SBNH-1D6565C antennas at 126' for AT&T on the existing antenna frames.
- Add (6) Ericsson RRUs at 126' for AT&T on the tower legs.
- Add (6) CCI DTMABP7819VG12A units at 126' for AT&T.

Proposed feed lines are to be located as shown on drawing E-7.

The results of the analysis showed all tower elements to be loaded within allowable limits. Note that this analysis assumes tower modifications that were outlined in our previous structural analysis for Verizon Wireless dated 02/28/2012. We recommend a post-construction inspection be completed by an engineer to document that tower-mounted equipment has been placed in compliance with the requirements of this analysis. For a detailed listing of the tower performance, please see page 20 of 21 of the calculations.

We appreciate the opportunity to provide our services to Dewberry and AT&T and if you have any questions concerning this analysis, please contact us.

Sincerely,

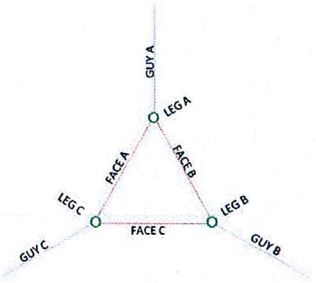
Alexander Smirnov
ARMOR TOWER, INC.

STATE OF CONNECTICUT
DMITRIY V. ALBUL
No. 26725
LICENSED PROFESSIONAL ENGINEER

6/22/2012

9 North Main Street, 2nd Floor, Cortland, NY 13045
(607)591-5381 Fax: (866)870-0840 www.ArmorTower.com

PRIMARY ASSUMPTIONS USED IN THE ANALYSIS

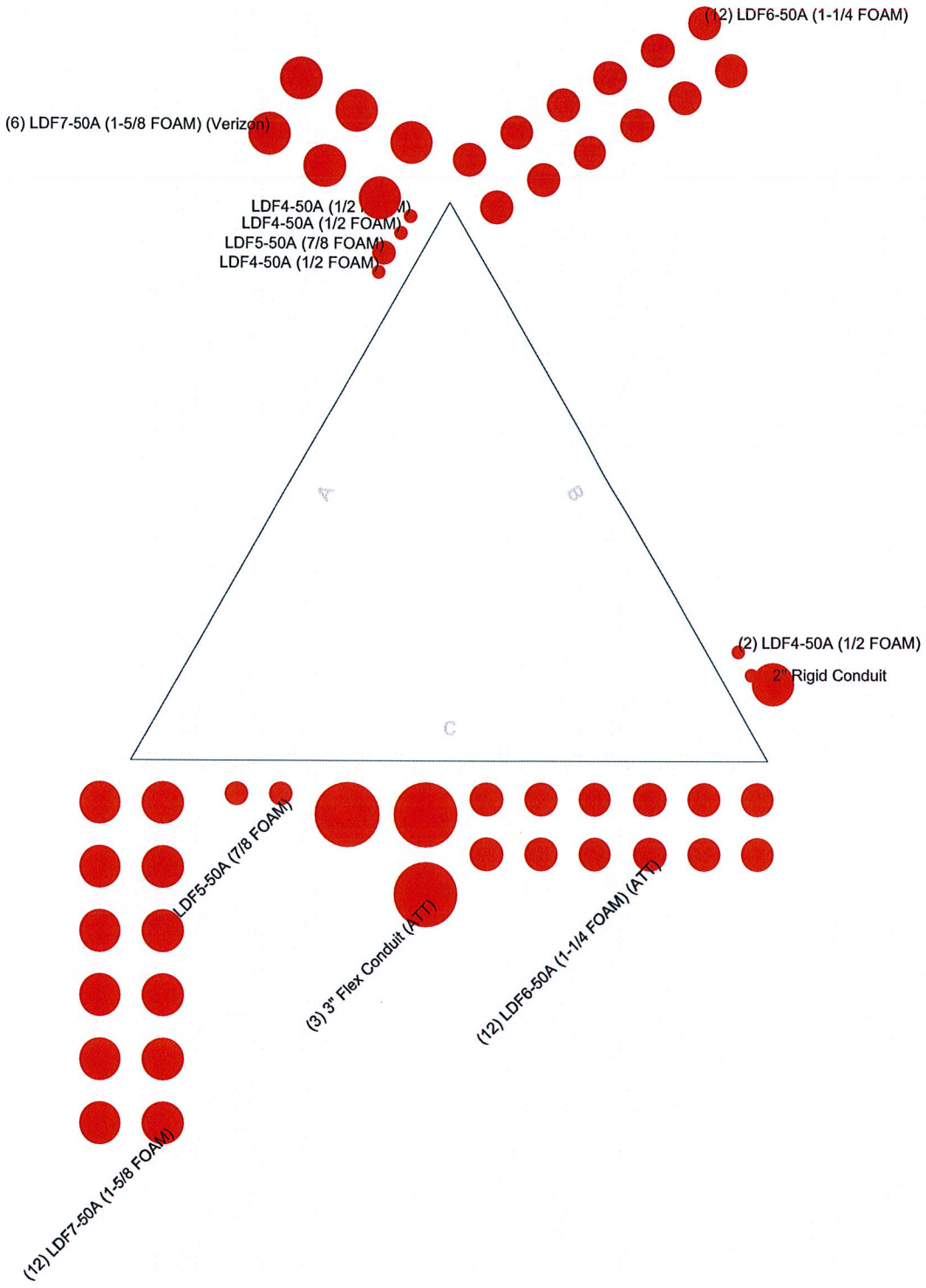


1. Leg A is assumed to be oriented North.
2. Allowable steel stresses are defined by AISC-ASD 9th Edition and all welds conform to AWS D1-1 specifications.
3. Armor Tower has been commissioned to analyze the tower according to the requirements of TIA/EIA 222-F for New Haven County, CT. Per this code, a basic wind speed of 85 mph (fastest mile) without ice and 74 mph with ½" ice is recommended. This site is not within a special wind region. It is the client's responsibility to check with local authorities or the tower owner if a greater wind or ice loading is required to be considered in the analysis. Note that Section 3108.4 of the International Building Code states that "Towers shall be designed to resist wind loads according to TIA/EIA-222".
4. The acceptability of the analyzed antenna loading is the responsibility of AT&T and its affiliates to confirm with the respective carriers or the tower owner.
5. Any deviation from the analyzed antenna loading will require a re-analysis of the tower for verification of structural integrity. Proposed feed lines must be located as shown on drawing E-7.
6. This analysis assumes all tower members are galvanized adequately to prevent corrosion of the steel and that all tower members are in "like new" condition with no physical deterioration. This analysis also assumes the tower has been maintained properly per TIA/EIA 222-F Annex E recommended inspection and maintenance procedures for tower owners and is in a plumb condition. Armor Tower has not completed a condition assessment of the tower.
7. No accounting for residual stresses due to incorrect tower erection can be made. This analysis assumes all bolts are appropriately tightened providing necessary connection continuity and that the installation of the tower was performed by a qualified tower erector.
8. This certification does not include foundations. Geotechnical or foundation information was not provided to Armor Tower to complete a foundation review. Armor Tower therefore does not accept responsibility for foundation adequacy.
9. No conclusions, expressed or implied, shall indicate that Armor Tower has made an evaluation of the original design, materials, fabrication, or potential erection deficiencies. Any information contrary to that assumed for the purpose of preparing this analysis could alter the findings and conclusions stated.
10. Tower member sizes and geometry are based on a tower structural analysis by Bay State Design in 11/05/11. Note that this is not a condition assessment of the tower. Existing antenna loading is based on customer supplied data.
11. This analysis assumes tower modifications that were recommended in our previous structural analysis for Verizon Wireless dated 02/28/2012.
12. The investigation of the load carrying capacities of the antenna supporting frames/mounts is outside the scope of this analysis. Antenna mount certification can be completed under separate contract.

9 North Main Street, 2nd Floor, Cortland, NY 13045
(607)591-5381 Fax: (866)870-0840 www.ArmorTower.com

Feedline Plan

Round Flat App In Face App Out Face



ARMOR TOWER Armor Tower, Inc.	*Armor Tower* 9 North Main Street Cortland, NY Phone: (607) 591-5381 FAX: (866) 870-0840	Job: ***STRUCTURAL ANALYSIS OF 160' GUYED TOWE***	
		Project: ***AT&T CT2218, Prospect CT***	
		Client: Dewberry	Drawn by: AAS / App'd:
		Code: TIA/EIA-222-F	Date: 06/07/12 / Scale: NTS
		Path: Y:\Dewberry\AT&T\ProspectCT\RisaCalcs\CT81XC010 AS BUILT.eri	Dwg No. E-7

Torque-Arm Bottom Design Data

Section No.	Elevation ft	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P lb	Allow. P_a lb	Ratio $\frac{P}{P_a}$
T1	160 - 140 (327)	4.16	3.96	52.0	21.600	2.1100	430.12	45576.00	0.009 ✓
T1	160 - 140 (328)	4.16	3.96	52.0	21.600	2.1100	194.99	45576.00	0.004 ✓
T1	160 - 140 (333)	4.16	3.96	52.0	21.600	2.1100	420.91	45576.00	0.009 ✓
T1	160 - 140 (334)	4.16	3.96	52.0	21.600	2.1100	322.93	45576.00	0.007 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
T1	160 - 140	Leg	3	-39554.10	53293.87	74.2	Pass
		Diagonal	20	-6324.40	7065.42	89.5	Pass
		Horizontal	34	-996.42	8315.21	12.0	Pass
		Secondary Horizontal	13	-0.01	12071.65	0.0	Pass
		Bottom Girt	7	915.48	9577.50	9.6	Pass
		Guy A@160	336	8629.56	10400.00	83.0	Pass
		Guy B@160	329	8765.54	10400.00	84.3	Pass
		Guy C@160	324	8477.74	10400.00	81.5	Pass
		Top Guy Pull-Off@160	4	-3336.99	28820.79	11.6	Pass
		Torque Arm Top@160	325	6866.28	60752.81	11.3	Pass
		Torque Arm Bottom@160	334	-10143.90	42912.07	23.6	Pass
T2	140 - 120	Leg	41	-42022.70	75941.27	55.3	Pass
		Diagonal	49	-5176.60	7090.28	73.0	Pass
		Horizontal	87	2463.55	13302.07	18.5	Pass
		Secondary Horizontal	54	-0.02	12071.65	0.0	Pass
		Top Girt	42	897.25	9577.50	9.4	Pass
		Bottom Girt	45	649.22	9577.50	6.8	Pass
T3	120 - 113.3	Leg	97	-26818.50	57191.83	46.9	Pass
		Diagonal	102	-5715.78	7085.31	80.7	Pass
		Horizontal	108	1805.18	13302.07	13.6	Pass
		Secondary Horizontal	107	-0.02	12071.65	0.0	Pass
		Top Girt	98	750.06	9577.50	7.8	Pass
T4	113.3 - 106.7	Leg	117	-39930.70	57225.69	69.8	Pass
		Diagonal	134	-6263.46	7100.21	88.2	Pass
		Secondary Horizontal	128	-0.01	12071.65	0.0	Pass
		Top Girt	119	2471.47	9577.50	25.8	Pass
		Guy A@110	345	23436.60	29150.00	80.4	Pass
		Guy B@110	344	23368.20	29150.00	80.2	Pass
		Guy C@110	341	23124.60	29150.00	79.3	Pass
		Top Guy Pull-Off@110	129	8040.81	49075.06	16.4	Pass
T5	106.7 - 100	Leg	138	-39024.10	41433.50	94.2	Pass
		Diagonal	152	-4705.36	7085.31	66.4	Pass
		Horizontal	150	-675.92	8315.21	8.1	Pass
		Secondary Horizontal	149	-0.01	12071.65	0.0	Pass
		Top Girt	141	2794.03	9577.50	29.2	Pass
		Bottom Girt	144	603.62	9577.50	6.3	Pass
T6	100 - 80	Leg	156	-32093.30	41466.30	77.4	Pass
		Diagonal	185	-3909.45	7090.28	55.1	Pass
		Horizontal	167	-555.87	8315.21	6.7	Pass
		Top Girt	159	358.33	9577.50	3.7	Pass
		Bottom Girt	162	278.89	9577.50	2.9	Pass
T7	80 - 60	Leg	187	-29372.90	41466.30	70.8	Pass

ARMOR TOWER
Armor Tower
9 North Main Street
Cortland, NY
Phone: (607) 591-5381
FAX: (866) 870-0840

Job	Page
STRUCTURAL ANALYSIS OF 160' GUYED TOWER	21 of 21
Project	**Date**
AT&T CT2218, Prospect CT	16:54:41 06/07/12
Client	**Designed by**
Dewberry	AAS

Section No.	Elevation ft	Component Type	Critical Element	P lb	$SF*P_{allow}$ lb	% Capacity	Pass Fail
		Diagonal	196	-3072.77	7090.28	43.3	Pass
		Horizontal	203	-508.75	8315.21	6.1	Pass
		Top Girt	190	277.81	9577.50	2.9	Pass
		Bottom Girt	195	-139.67	6744.62	2.1	Pass
T8	60 - 40	Leg	221	-37954.70	41466.30	91.5	Pass
		Diagonal	243	-3991.53	7090.28	56.3	Pass
		Horizontal	247	-656.89	8315.21	7.9	Pass
		Secondary Horizontal	246	0.02	13302.07	0.0	Pass
		Top Girt	222	320.56	9577.50	3.3	Pass
		Bottom Girt	226	374.36	9577.50	3.9	Pass
		Guy A@50	350	8190.93	10400.00	78.8	Pass
		Guy B@50	349	8177.26	10400.00	78.6	Pass
		Guy C@50	346	8203.38	10400.00	78.9	Pass
		Top Guy Pull-Off@50	242	4542.82	49075.06	9.3	Pass
T9	40 - 20	Leg	258	-37101.60	41466.30	89.5	Pass
		Diagonal	287	-2516.31	7090.28	35.5	Pass
		Horizontal	273	-642.62	8315.21	7.7	Pass
		Top Girt	261	248.35	9577.50	2.6	Pass
		Bottom Girt	264	292.83	9577.50	3.1	Pass
T10	20 - 6.7	Leg	290	-37102.20	41728.50	88.9	Pass
		Diagonal	298	-2792.68	7129.90	39.2	Pass
		Horizontal	301	-642.63	8315.21	7.7	Pass
		Top Girt	292	288.17	9577.50	3.0	Pass
		Bottom Girt	297	2457.79	9577.50	25.7	Pass
T11	6.7 - 0	Leg	313	-34647.40	40529.20	85.5	Pass
		Diagonal	320	-1479.35	8099.31	18.3	Pass
		Horizontal	319	-610.35	11710.24	5.2	Pass
		Top Girt	317	2602.30	9577.50	27.2	Pass
						Summary	
					Leg (T5)	94.2	Pass
					Diagonal (T1)	89.5	Pass
					Horizontal (T2)	18.5	Pass
					Secondary Horizontal (T8)	0.0	Pass
					Top Girt (T5)	29.2	Pass
					Bottom Girt (T10)	25.7	Pass
					Guy A (T1)	83.0	Pass
					Guy B (T1)	84.3	Pass
					Guy C (T1)	81.5	Pass
					Top Guy Pull-Off (T4)	16.4	Pass
					Torque Arm Top (T1)	11.3	Pass
					Torque Arm Bottom (T1)	23.6	Pass
					Bolt Checks	25.9	Pass
					RATING =	**94.2**	**Pass**

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Calculated Radio Frequency Emissions

at&t

CT2218 – Prospect-Bradshaw Tower

54 Waterbury Road, Prospect, CT 06712

June 25, 2012

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List of Figures

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modifications to the existing AT&T antenna arrays mounted on the guy wire tower located at 54 Waterbury Road in Prospect, CT. The coordinates of the tower are 41° 30' 40.35" N, 72° 58' 57.09" W.

AT&T is proposing the following modifications:

1) Remove two existing dual-band (850/1900 MHz) panel antennas (1 per sector, 2 sectors currently)
2) Install six multi-band (700/850/1900/2100) antennas (2 per sector, 3 sectors proposed)

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{1.6^2 \times EIRP}{4\pi \times R^2} \right) \text{x Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

4. Calculation Results

Table 1 below outlines the power density information for the site. Because the proposed AT&T antennas are directional in nature, the majority of the RF power is focused out towards the horizon. As a result, there will be less RF power directed below the antennas relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical pattern of the proposed AT&T antennas. The calculated results for AT&T in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm^2)	Limit	%MPE
Cingular TDMA	*124*	*880*	*16*	*100*	*0.0374*	*0.5867*	*6.38%*
Cingular GSM	*124*	*880*	*2*	*296*	*0.0138*	*0.5867*	*2.36%*
Cingular GSM	*124*	*1930*	*2*	*427*	*0.0200*	*1.0000*	*2.00%*
Verizon cellular	135	869	9	348	0.0618	0.5793	10.67%
Verizon PCS	135	1970	7	370	0.0511	1.0000	5.11%
Verizon LTE	135	757	1	722	0.0142	0.5047	2.82%
F&S Oil	-	451	-	-	0.0031	0.3007	1.03%
New Haven Transit	-	451	-	-	0.0031	0.3007	1.03%
US Post Office	-	415	-	-	0.0031	0.2767	1.12%
Central Comm.	-	452	-	-	0.0031	0.3013	1.03%
CT Motor Club	-	150.92	-	-	0.0381	0.2000	19.05%
Sprint-Nextel iDEN	146	851	9	100	0.0152	0.5673	2.68%
Sprint-Nextel CDMA	146	1962.5	11	421	0.0781	1.0000	7.81%
Clearwire	146	2496	2	153	0.0052	1.0000	0.52%
Clearwire	151	23 GHz	1	211	0.0033	1.0000	0.33%
AT&T UMTS	126	880	2	1077	0.0049	0.5867	0.83%
AT&T UMTS	126	1900	2	1556	0.0070	1.0000	0.70%
AT&T LTE	126	734	1	1375	0.0031	0.4893	0.64%
AT&T GSM	126	880	1	538	0.0012	0.5867	0.21%
AT&T GSM	126	1900	4	934	0.0085	1.0000	0.85%
						Total	**56.42%**

Table 1: Carrier Information[1] [2] [3]

[1] The existing CSC filing for Cingular should be removed and replaced with the updated AT&T technologies and values provided in Table 1. The power density information for carriers other than AT&T was taken directly from the CSC database dated 3/29/2012. Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

[2] In the case where antenna models are not uniform across all 3 sectors for the same frequency band, the antenna model with the highest gain was used for the calculations to present a worse-case scenario.

[3] Antenna height listed for AT&T is in reference to the Armor Tower Engineering Structural Analysis Report dated 5/30/2012.

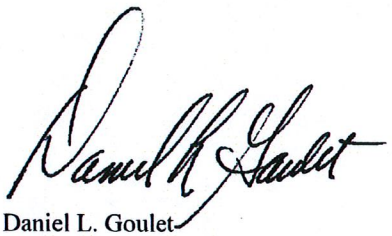
5. Conclusion

The above analysis verifies that emissions from the existing site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **56.42% of the FCC limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished modifications.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Daniel L. Goulet
C Squared Systems, LLC

June 25, 2012
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[4]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[5]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

[4] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[5] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

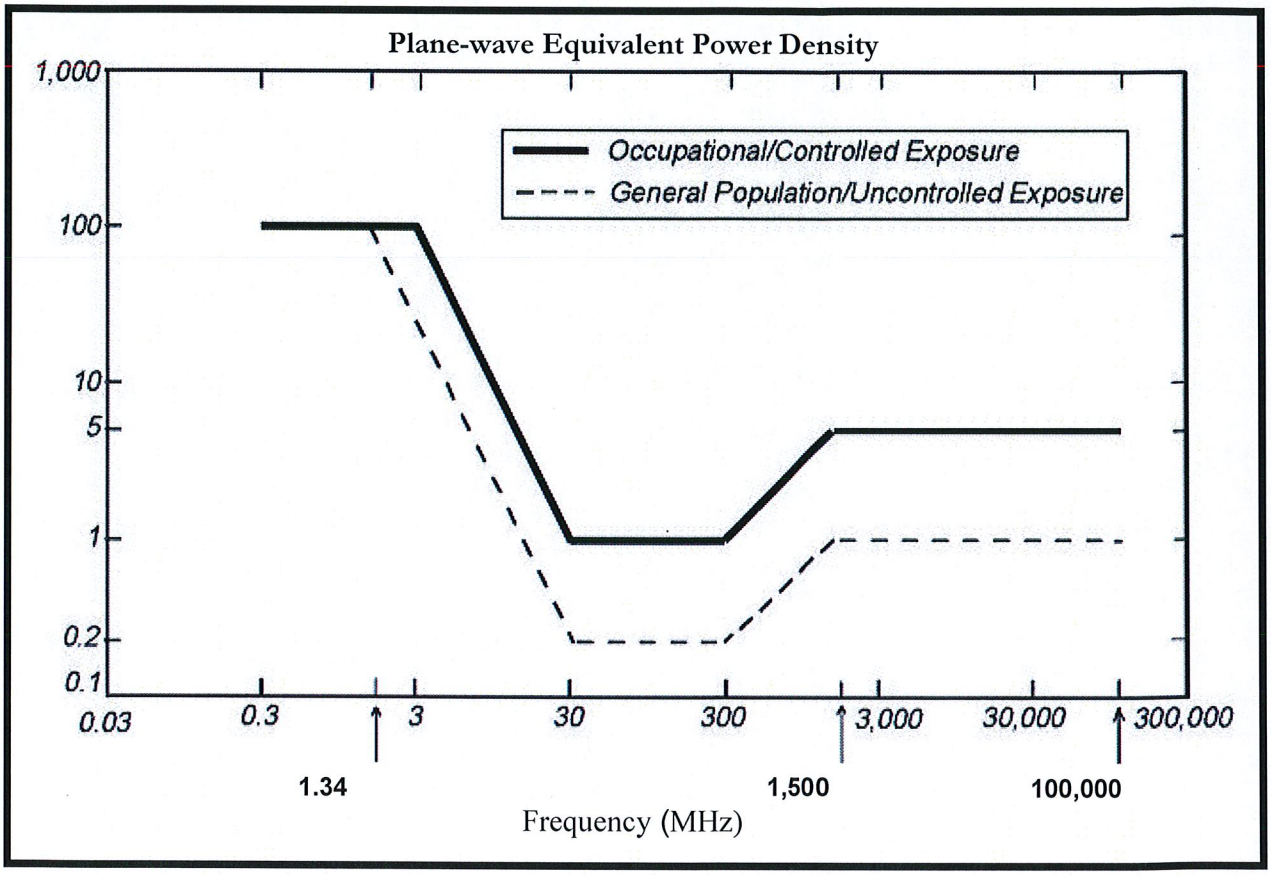
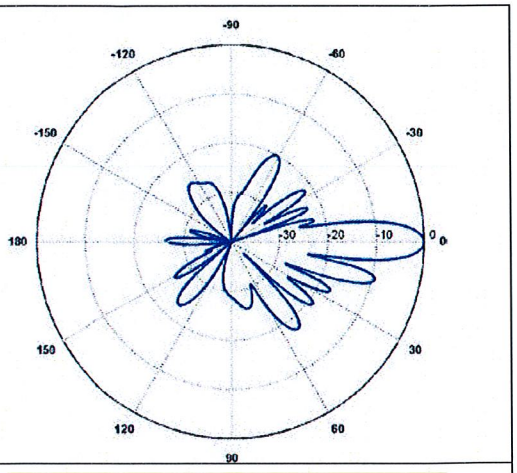


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Antenna Data Sheets and Electrical Patterns

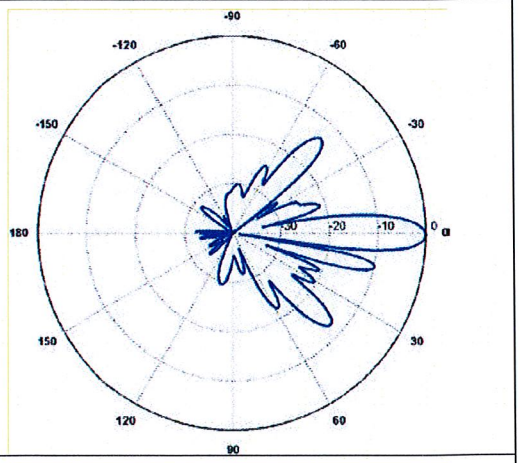
700 MHz

Manufacturer:	Commscope
Model #:	SBNH-1D6565C
Frequency Band:	698-806 MHz
Gain:	13.6 dBd
Vertical Beamwidth:	8.6°
Horizontal Beamwidth:	71°
Polarization:	±45°
Size L x W x D:	96.42" x 11.85" x 7.1"



850 MHz

Manufacturer:	Commscope
Model #:	SBNH-1D6565C
Frequency Band:	806-896 MHz
Gain:	14.3 dBd
Vertical Beamwidth:	7.8°
Horizontal Beamwidth:	67°
Polarization:	±45°
Size L x W x D:	96.42" x 11.85" x 7.1"



1900 MHz

Manufacturer:	Commscope
Model #:	SBNH-1D6565C
Frequency Band:	1850-1990 MHz
Gain:	15.9 dBd
Vertical Beamwidth:	5.1°
Horizontal Beamwidth:	57°
Polarization:	±45°
Size L x W x D:	96.42" x 11.85" x 7.1"