



# 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@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

October 24, 2002

Christopher B. Fisher, Esq.  
Cuddy & Feder & Worby LLP  
90 Maple Avenue  
White Plains, NY 10601-5196

RE: **EM-AT&T-077-031-037-021010** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify existing telecommunications facilities located at 205 Spencer Street, Manchester, 500 Queen Street, Southington, and 86 Voluntown Road, Stonington, Connecticut.

Dear Attorney Fisher:

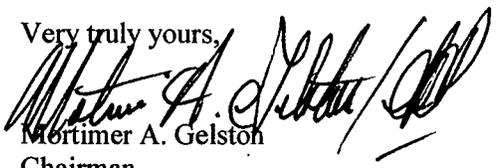
At a public meeting held on October 23, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, with the condition that the equipment cabinets at the Manchester site be painted beige in accordance with town zoning stipulations.

The proposed modifications are to be implemented as specified here and in your notice dated October 9, 2002. 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 sites that would not increase tower heights, extend the boundaries of the tower site, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

This decision is under the exclusive jurisdiction of the Council. Any additional change to these facilities 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,

  
Mortimer A. Gelston  
Chairman

MAG/DM/laf

c: See attached list

List Attachment.

- c: Honorable Stephen T. Cassano, Mayor, Town of Manchester
- Richard J. Sartor, General Manager, Town of Manchester
- Thomas R. O'Marra, Zoning Enforcement Officer, Town of Manchester
- Honorable William V. DePaolo, Town Council Chairman, Town of Southington
- John Weichsel, Town Manager, Town of Southington
- Mary Hughes, Town Planner, Town of Southington
- Honorable Peter Dibble, First Selectman, Town of Stonington
- Edward Donnelly, Town Planner, Town of Stonington



# Town of Manchester

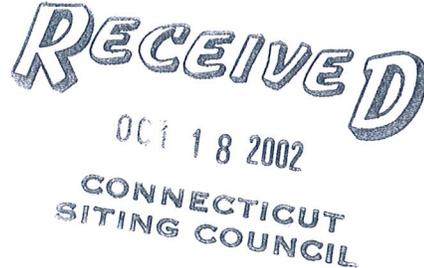
41 Center Street • P.O. Box 191  
Manchester, Connecticut 06045-0191  
www.ci.manchester.ct.us

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KEVIN L. ZINGLER

October 17, 2002



Mr. S. Derek Phelps, Executive Director  
State of Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

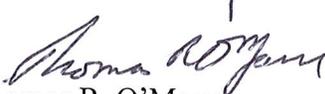
Re: **EM-AT&T-077-031-037-021010** – Modification to Telecommunications Facility  
At 205 Spencer Street, Manchester, Connecticut

Dear Mr. Phelps:

We are in receipt of your notice with regard to the subject modification. The construction of the original "stealth" flagpole tower was originally approved by the Town of Manchester Planning and Zoning Commission and contemplated additional providers sharing the use of the tower. At the time of approval and at subsequent modifications it was requested that all equipment cabinets and similar structures be painted in beige in color. We would respectfully request that this coloring of the cabinets be made a part of the approval of the subject item.

Thank you for your consideration.

Very truly yours,

  
Thomas R. O'Marra  
Zoning Enforcement Officer

TRO'M/s  
R:\SHARON\9\TOM\LETTERS\205 SPENCER STREET.DOC

cc: Steven R. Werbner, General Manager  
Mark Pellegrini, Director of Neighborhood Services and Economic Development



CUDDY & FEDER & WORBY LLP

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JOSHUA E. KIMERLING (also CT)  
DANIEL F. LEARY (also CT)  
BARRY E. LONG

October 9, 2002

VIA FEDERAL EXPRESS

Hon. Mortimer Gelston, Chairman and Members  
of the Siting Council  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

RECEIVED  
OCT 10 2002

CONNECTICUT  
SITING COUNCIL

Re: AT&T Wireless Notice of Exempt Modification  
205 Spencer Street, Manchester, Connecticut  
500 Queen Street, Southington, Connecticut  
86 Voluntown Road, Stonington, Connecticut

Hon. Mortimer Gelston, Chairman and Members of the Siting Council:

On behalf of AT&T Wireless, we respectfully enclose an original and twenty-five copies of its notice of exempt modification with respect to the above mentioned facilities together with a check in the amount of \$500.00. We would appreciate it if these matters were placed on the next available agenda for acknowledgment by the Council. Should the Council or staff have any questions regarding this matter, please do not hesitate to contact us.

Very truly yours,

  
Linda Grant

cc: Christopher B. Fisher, Esq.

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October 9, 2002

VIA FEDERAL EXPRESS

Hon. Mortimer Gelston, Chairman and Members  
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Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

RECEIVED  
OCT 10 2002  
CONNECTICUT  
SITING COUNCIL

Re: AT&T Wireless-TS-AT&T-077-010430  
205 Spencer Street, Manchester, Connecticut  
Notice of Exempt Modification

Hon. Mortimer Gelston, Chairman and Members of the Siting Council:

On May 10, 2001 the Council ruled that AT&T's proposed shared use of the VoiceStream facility located at 205 Spencer Street, in the Town of Manchester complied with Section 16-50aa of the Regulations of Connecticut State Agencies (TS-AT&T-077-010430) permitting AT&T to install panel antennas within the "stealth" flagpole tower, with associated equipment cabinets located on a concrete pad inside the fenced compound.

This notice of exempt modification is being provided pursuant to Section 16-50j-72 of the Council's regulations. AT&T will be replacing three existing antennas "in kind" and installing an additional equipment cabinet (approximately 76"H x 76"W x 30"D) on the existing concrete pad at the facility. There will be no other material infrastructure changes to AT&T's facility.

The proposed replacement antennas and addition of equipment to AT&T Wireless' facility does not constitute a "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d). The proposed modifications to AT&T Wireless' facility will not result in an increase in the Tower's height or extend the boundaries of the existing fenced area

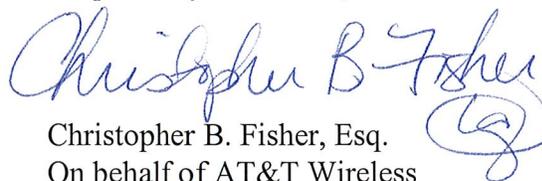
October 9, 2002

Page 2

surrounding the Tower. Further, there will be no increase in noise levels by six (6) decibels or more at the Tower site's boundary. AT&T made measurements of the existing facility to confirm compliance with MPE limits and as set forth in a report prepared by Wireless Facilities, Inc., annexed hereto, the total radio frequency electromagnetic radiation power density at the Tower site's boundary will not be increased to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes. For all the foregoing reasons, the proposed modifications to AT&T Wireless' existing facility constitutes an exempt modification which will not have a substantially adverse environmental effect.

AT&T Wireless respectfully submits that the proposed replacement antennas and addition of the equipment to the Spencer Street Facility meets the Council's exemption criteria and requests an acknowledgment of same.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Christopher B. Fisher". The signature is written in a cursive style and includes a circular flourish at the end.

Christopher B. Fisher, Esq.  
On behalf of AT&T Wireless

cc: Mayor, Town of Manchester  
Darryl Hendrickson, Bechtel Telecommunications



Wireless Facilities, Inc.  
 1840 Michael Faraday Drive  
 Suite 200  
 Reston, VA 20190

September 26, 2002

Mr. Mortimer A. Gelston, Chairman  
 Connecticut Siting Council  
 10 Franklin Square  
 New Britain, CT 06051

**RE: FCC Compliance Statement for AT&T Site CT-245 (Manchester West Flagpole)**

Dear Mr. Gelston:

On behalf of AT&T Wireless, Wireless Facilities Inc. has performed office analyses for the above referenced site to determine compliance with FCC mandated Maximum Permissible Exposure (MPE) limits as defined in 47 CFR § 1.1310.

The table below gives a brief summary of the site location, its configuration and associated technical parameters.

<i><u>Summary of Site Parameters</u></i>	
Site ID	CT-245
Site Name	Manchester West
Latitude	41.77130
Longitude	-72.56970
Address of Structure	205 Spencer Street Manchester, CT 06040
Type of Structure	Flagpole
FCC Class and Type of Service	PCS TDMA (IS-136) PCS GSM
Operating Frequency	PCS Band
Azimuths (deg.)	25, 145, 265
Antenna Radiation Center, AGL	99 ft.
Antenna Configuration	1 Antenna per Sector
Antenna Type	Panel

The mathematical equations used in evaluating the power density values are exactly as outlined in the Office of Engineering & Technology (OET) Bulletin Number 65, which contains the FCC guidelines for evaluating human exposure to radio-frequency electromagnetic fields.

In the case of a single radiating antenna, a prediction for power density in the far field of the antenna can be written as:

$$S = \frac{EIRP}{4\pi D^2} = \frac{1.64 * ERP}{4\pi D^2}$$

Where: S = Power density in W/m<sup>2</sup>  
EIRP = Effective isotropic radiated power (W)  
ERP = Effective radiated power (W)  
D = Distance in meters

Using the EPA's recommended factor of 1.6 for 100 % reflection, the worst-case power density can be obtained by incorporating this factor into the above equation. If the distance, D, is in centimeters, the ERP is in Watts, then the worst case power density in mW/cm<sup>2</sup> is given by:

$$S = \frac{(1.64)(.64)(ERP)(1000 \text{ mW} / \text{W})}{\pi D^2}$$

Where: S = Power density in mW/cm<sup>2</sup>  
ERP = Effective radiated power in Watts (# of channels x ERP/channel)  
D = Distance in centimeters

The results presented in this analysis are based on the following:

- WFI's analysis considered the transmit parameters for AT&T's existing TDMA system, for the future GSM deployment they are proposing, and for all other existing carriers.
- The formula utilized for the calculations is taken directly from the FCC OET Bulletin 65 as shown above.
- A 100% duty cycle with maximum power and the maximum number of channels for each system was assumed.
- A worst-case scenario was assumed with all antennas for the existing and future installations pointing directly at the base of the tower. No antenna discrimination was considered.

The following transmission parameters were used throughout this analysis.

Carrier / Agency	Operating Frequency (MHz)	Maximum ERP/Ch (Watts)	Maximum No. of Xmtrs per Sector	Maximum ERP per Sector (Watts)	Antenna Centerline (ft.)
AT&T, Current	1930	110.17	8	881.35	99
AT&T, Future	1930	275	4	1100	99
Voicestream	1930	100	8	800	119

The maximum worst-case values for power density calculated in this analysis are outlined below:

Carrier / Agency	Point of Worst Case Predicted Level	Predicted Value ( $\mu\text{W}/\text{cm}^2$ )	Maximum Limit for Uncontrolled Environment Set by FCC ( $\mu\text{W}/\text{cm}^2$ )	% of the Standard
AT&T, Current PCS TDMA	Base of the tower	36.617	1000	3.662
AT&T, Future PCS GSM	Base of the tower	45.700	1000	4.570
Voicestream PCS	Base of the tower	22.513	1000	2.251
<b>Total % of Standard</b>				<b>10.483</b>

The results of these analyses indicate that output power levels for the AT&T owned equipment deployed at the above referenced facility meet FCC approved exposure limits for all uncontrolled areas where general population exposure may exist. Thus, the maximum level of RF radiation contributed by AT&T in all uncontrolled areas, assuming a worst case scenario and a 100% duty cycle for all transmitters, is equal to or less than 8.232% (3.662 + 4.570) of the maximum permissible exposure limit mandated by the FCC and endorsed by the NCRP and ANSI/IEEE.

Based on the transmit parameters indicated on the table above, the worst-case composite level of RF radiation in all uncontrolled areas for all identified systems operating at this facility is equal to or less than 10.483% of the FCC maximum permissible exposure limit.

To the best of my knowledge, the statements made and information disclosed in this study are complete and accurate.

Sincerely,  
Wireless Facilities, Inc:



Dan Hardiman  
Senior Engineer II  
Fixed Network Engineering