



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
Web Site: www.state.ct.us/csc/index.htm

January 29, 2003

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

RE: **EM-AT&T-086-030108** - AT&T Wireless PCS LLC notice of intent to modify an existing telecommunications facility located at 557 Route 82, Montville, Connecticut.

Dear Attorney Fisher:

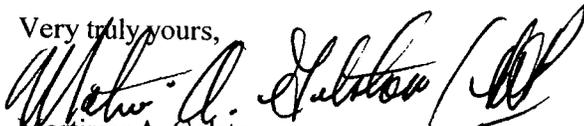
At a public meeting held on January 28, 2003, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received in our office on January 8, 2003. 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. 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,


Mortimer A. Gelston
Chairman

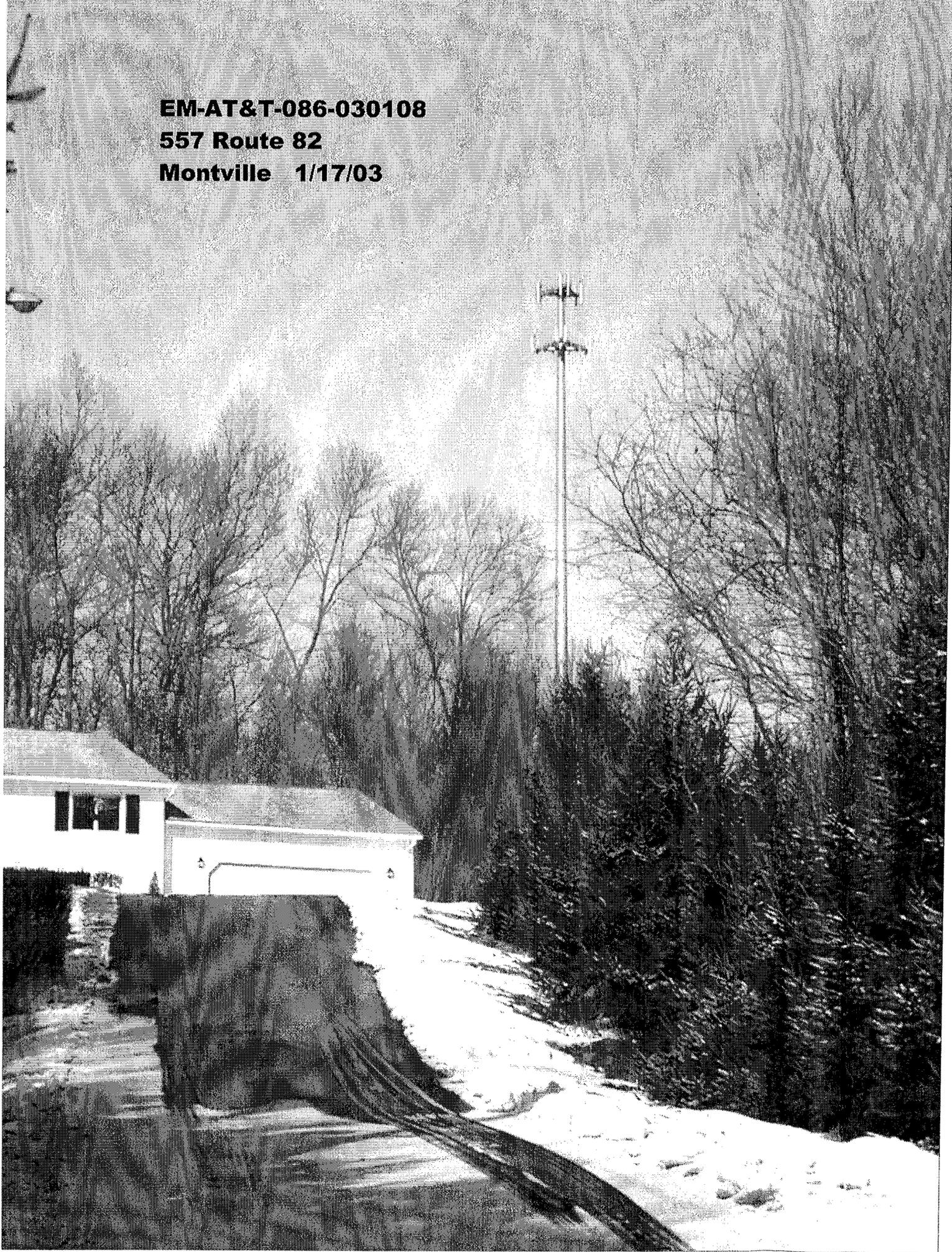
MAG/laf

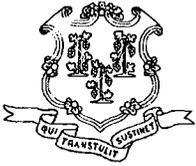
c: Honorable Howard R. Beetham, Jr., Mayor, Town of Montville
Marcia Vlaun, Town Planner, Town of Montville
Julie Donaldson Kohler, Esq., Hurwitz & Sagarin LLC
Sandy M. Carter, Verizon Wireless

EM-AT&T-086-030108

557 Route 82

Montville 1/17/03





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January 9, 2003

Honorable Howard R. Beetham, Jr.

Mayor

Town of Montville

Town Hall

310 Norwich New London Turnpike

Uncasville, CT 06382

RE: ⁰⁸⁶⁻⁰³⁰¹⁰⁸ **EM-AT&T-038-020626** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 557 Route 82, Montville, Connecticut.

Dear Mayor Beetham:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting tentatively scheduled for January 28, 2003, at 1:30 p.m., in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Marcia Vlaun, Town Planner, Town of Montville

RECEIVED

JAN - 8 2003

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
557 ROUTE 82, MONTVILLE, CONNECTICUT
CONNECTICUT SITING COUNCIL**

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. seq. ("PUESA"), and Sections 16-50j-72(b) of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, AT&T Wireless PCS, LLC d/b/a AT&T Wireless ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 557 Route 82, Montville, Connecticut (the "Route 82 Facility"), owned by Sprint Sites USA ("Sprint"). AT&T Wireless and Sprint have agreed to share the use of the Route 82 Facility, as detailed below.

The Route 82 Facility

The Route 82 Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used for wireless communications use by Sprint and Verizon. A chain link fence surrounds the Tower compound. The current surrounding land uses are predominantly rural residential.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Route 82 Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets needed to provide personal communications services ("PCS") within the existing fenced compound. AT&T Wireless will install 6 panel antennas at approximately the 160 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76" H x 30" W x 30" D) on a concrete pad within the fenced compound. As evidenced in the letter of structural integrity prepared by URS Corporation, annexed hereto as Exhibit A, AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas.

AT&T Wireless' Facility Constitutes An Exempt Modification

The proposed addition of AT&T Wireless' antennas and equipment to the Route 82 Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas and equipment to the Tower will not result in an increase of the Tower's height nor extend the site boundaries. Further, there will be no increase in noise levels by six (6) decibels or more at the Tower site's boundary. As set forth in an Emissions Report prepared by Satish Bhandare, Radio Frequency Engineer, annexed hereto as Exhibit B, 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 and MPE limits established by the Federal Communications Commission. For all the foregoing reasons, addition of AT&T Wireless' facility to the Tower constitutes an exempt modification which will not have a substantially adverse environmental effect.

Conclusion

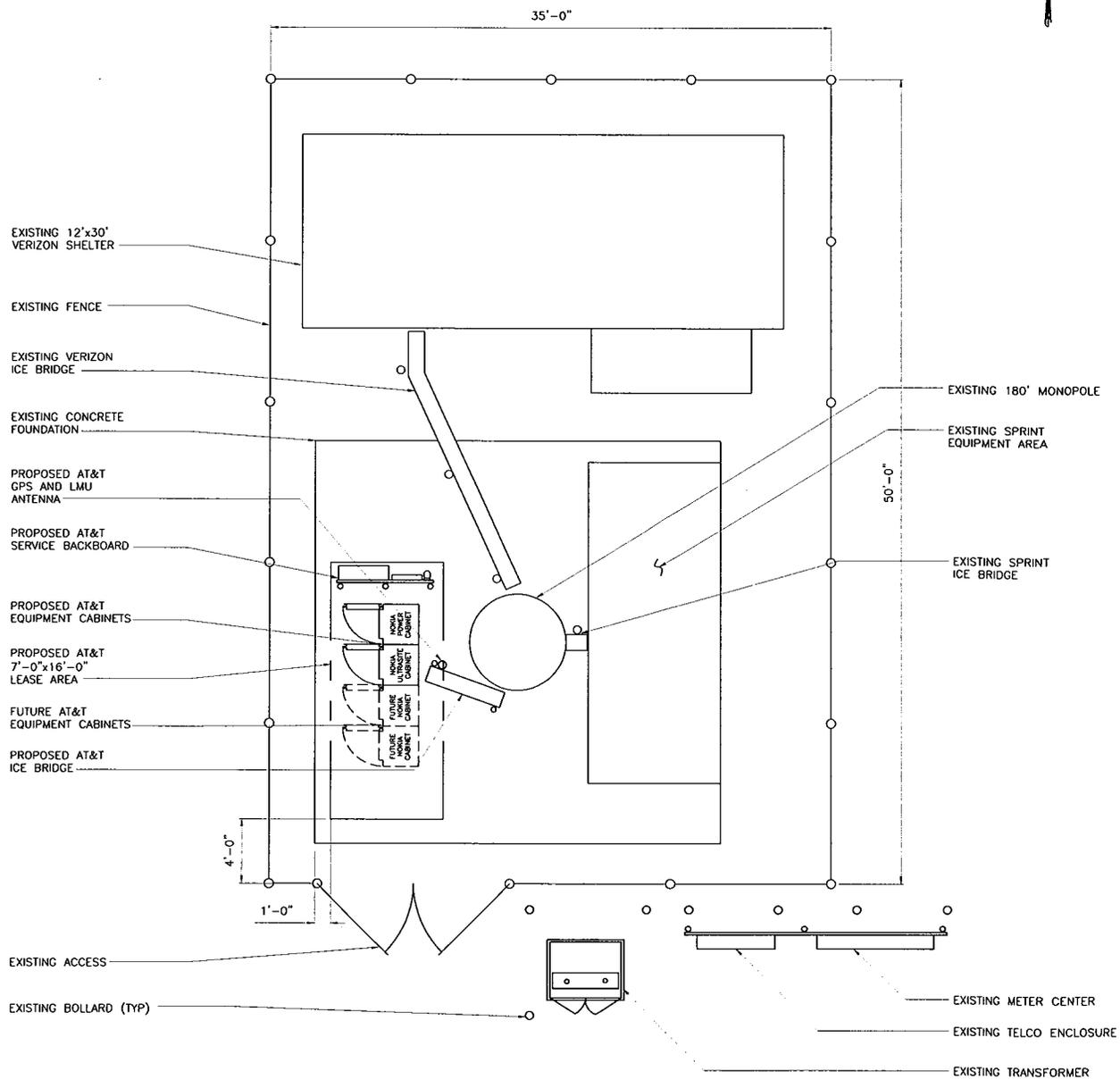
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Route 82 Facility meets the Council's exemption criteria.

Respectfully Submitted,



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

cc: Mayor, Town of Montville
Sue Silva, Bechtel



1 **COMPOUND PLAN**
 SC-1 SCALE: 1" = 10'-0"

ISSUED FOR SITING COUNCIL

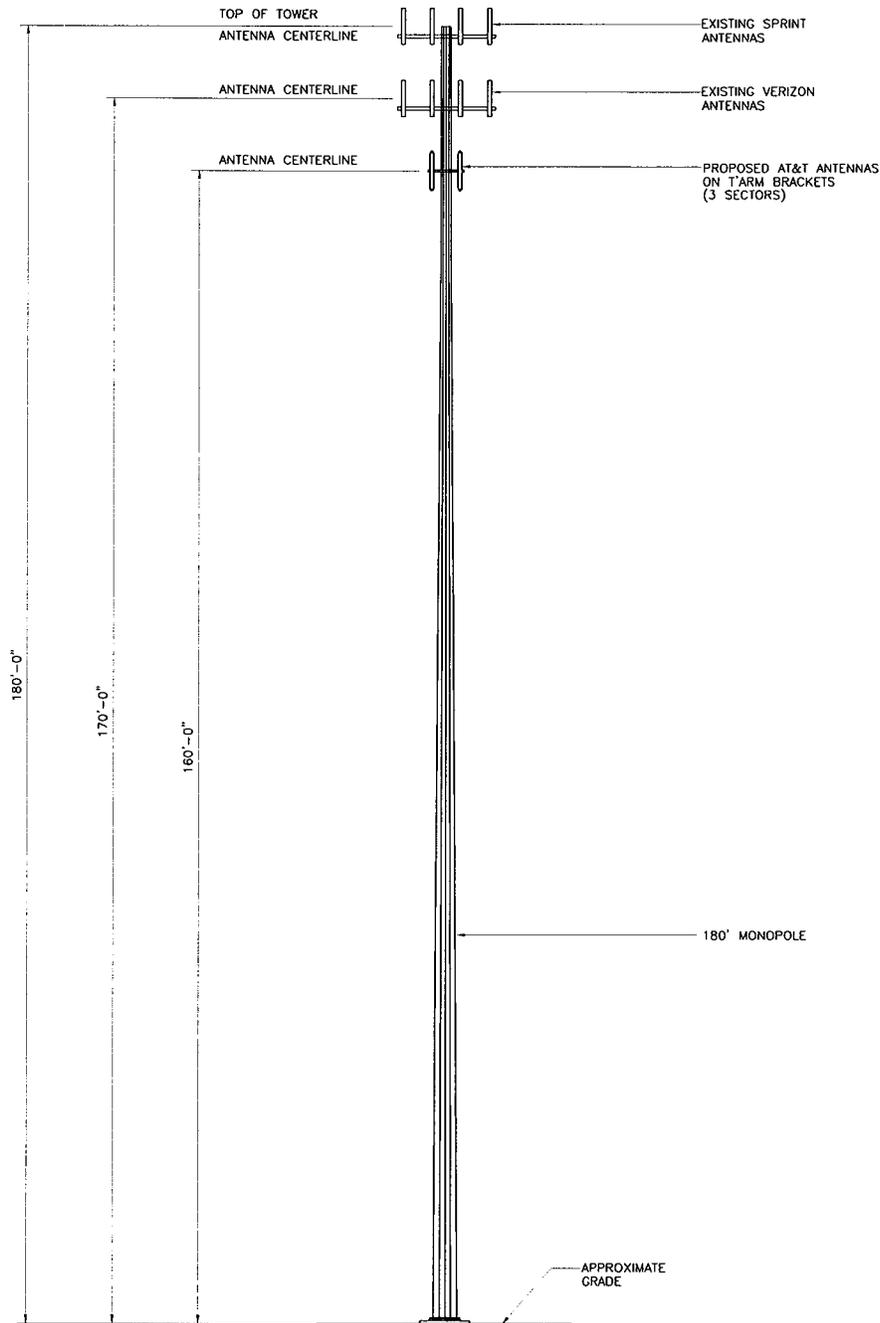
LATITUDE: 41.505628 (NAD 83)
 LONGITUDE: 72.197497 (NAD 83)

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 1-(860)-529-5566 (FAX)

AT&T
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE: COMPOUND PLAN
PROJECT INFORMATION: MONTVILLE EAST
 CT-734
 557 ROUTE 82
 MONTVILLE, CONNECTICUT 06353
PROPERTY OWNER: SPRINT SITES USA
 535 EAST CRESCENT AVENUE
 RAMSEY, NEW JERSEY 07446

DRAWING TITLE	
907-007-734A-SC1	
REVISION NO. 0	DRAWN BY: HLM
DATE ISSUED: 12/26/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
	SHEET NO. 1 OF 2
URS JOB NO.: BA1034 (36915063)	



1 TOWER ELEVATION
 SC-2 SCALE: 1" = 25'-0"



ISSUED FOR SITING COUNCIL

LATITUDE: 41.505628 (NAD 83)
 LONGITUDE: 72.197497 (NAD 83)

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 1-(860)-529-5566 (FAX)

 **AT&T**
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE: TOWER ELEVATION
PROJECT INFORMATION: MONTVILLE EAST
 CT-734
 557 ROUTE 82
 MONTVILLE, CONNECTICUT 06353
PROPERTY OWNER: SPRINT SITES USA
 535 EAST CRESCENT AVENUE
 RAMSEY, NEW JERSEY 07446

DRAWING TITLE: 907-007-734A-SC2

REVISION NO. 0	DRAWN BY: HLM
DATE ISSUED: 12/26/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
SHEET NO. 2 OF 2	

 URS JOB NO.: BA1034 (36915063)



December 23, 2002

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

Reference: Proposed Telecommunications Facility
AT&T Site No.: CT-734
557 Route 82
Montville, Connecticut
BA1034 (36915068)

Dear Mr. Gelston:

URS Corporation (URS) conducted a review and evaluated the existing 180' monopole structure located at 557 Route 82 in Montville, Connecticut. The purpose of this review was to evaluate the affect of the proposed AT&T Wireless antennas and mount on the monopole structure. The monopole and its foundation were designed by Engineered Endeavors, Inc., File No.: 6063, dated November 22, 1999. The structure is designed to support three telecommunications carriers between the elevations of 160' - 180'. The tower currently supports one carrier at 180' antenna center elevation and a second carrier at 170' antenna center elevation. The proposed AT&T antennas and mount considered in this review are as listed below:

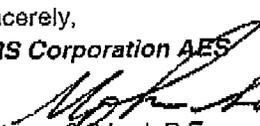
Antenna and Mount	Carrier	Antenna Center Elevation
(6) Allgon 7250.03 on (3) T-arms with (12) 1 5/8" coax cables within the monopole	AT&T	160'

This evaluation is based on the requirements that all carrier antenna cables are to be placed within the monopole. It is our determination that the existing monopole and it's foundation have sufficient structural capacity to support the existing carrier and the AT&T installation as specified above. This evaluation is based on requirements of the TIA/EIA-222-F dated March 1996 and the Connecticut State Building Code dated 1996 and the latest supplement and amendments.

If you should have any questions,

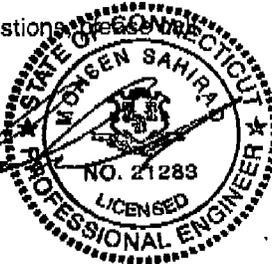
Sincerely,

URS Corporation AES


Mohsen Sahirad, P.E.
Senior Structural Engineer

MS/jcf

cc: Donald Huntley, P.E. - Bechtel Telecommunications
Christopher Fisher - Cuddy Feder Worby
Ignacio Artaiz, AIA - URS
A.A., D.R. - URS
CF/Book





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-009-734

January 02, 2003

Prepared by AT&T Wireless Services, Inc.
Satish Bhandare, RF Engineer

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1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 557 Route 82, Montville, CT 06370. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

2. Site Data

Site Name: <i>Montville - Highway 82</i>	
Number of simultaneously operating channels	12
Type of antenna	Allgon 7250.03
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	160.00 feet
Antenna Aperture Length	5 feet

3. RF Exposure Prediction

The following equations established by the FCC, in conjunction with the site data, were used to determine the levels of RF electromagnetic energy present in the vicinity of the proposed facility¹:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2) \quad Eq. 1-Far-field$$

Where, N = Number of channels, R = distance in cm from the antenna centerline, and $EIRP(\theta)$ = The isotropic power expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

$$PowerDensity = \frac{P_{in} / ch * N * 10^3}{2 * \pi * R * h * \alpha / 360} (mW/cm^2) \quad Eq. 2-Near-field$$

Where P_{in}/ch = Input power to antenna terminals in watts/ch, R = distance to antenna centerline, h = aperture height in meters, α = 3 dB beam-width of horizontal pattern.

¹ RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts (μ W), a millionth of a watt, per square centimeter (cm^2). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

4. FCC Guidelines for Evaluating the Environmental Effects of RF Emissions

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 a Second Memorandum Opinion and Order. These new rules represent a consensus of the federal agencies responsible for the protection of public health and the environment, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the National Institute for Occupational Health and Safety (NIOSH), and the Occupational Safety and Health Administration (OSHA).

Under the laws that govern the delivery of wireless communications services in the United States, as amended by the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over RF emissions from personal wireless antenna facilities, which include cellular, PCS, messaging and aviation sites.² Pursuant to its authority under federal law, the FCC has established rules to regulate the safety of emissions from these facilities.

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.002133 mW/cm² which occurs at 160 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000100 mW/cm² at a distance of 4 feet. Table 1 below shows the Maximum Permissible Exposure (MPE) limits established by the FCC. There are different MPE limits for public/uncontrolled and occupational/controlled environments.

Table 1: Maximum Permissible Exposure limits for RF Emissions

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.002133 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.34% of the public MPE limit for all frequencies in use.

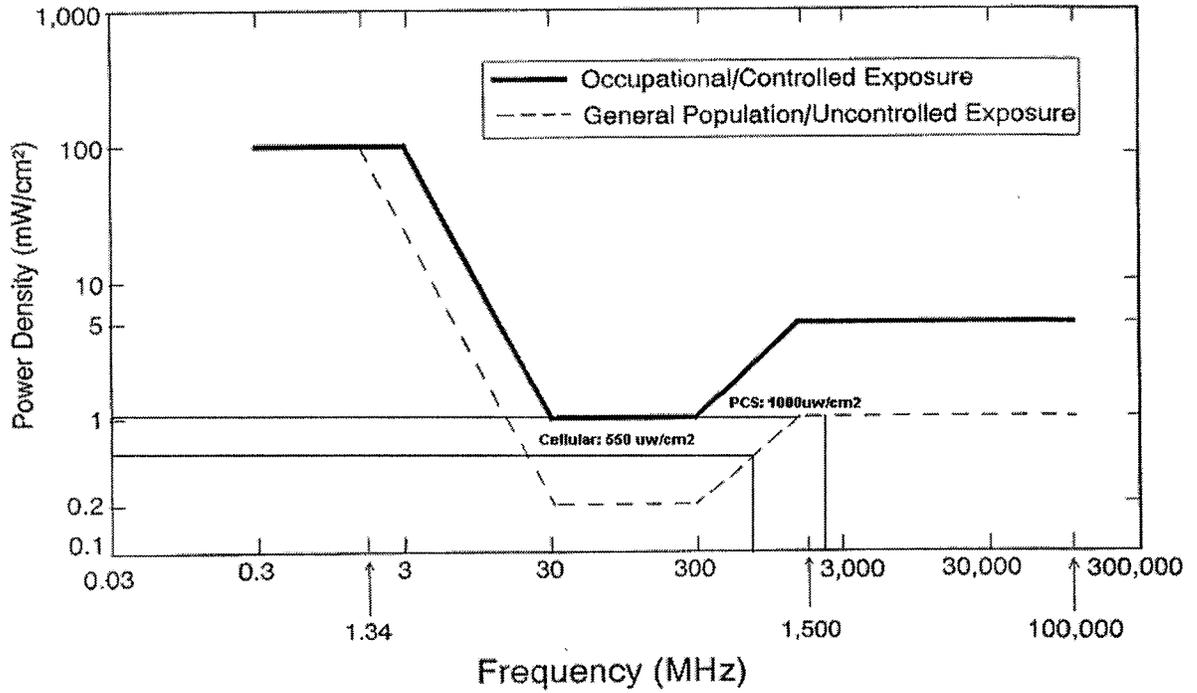
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.002133 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

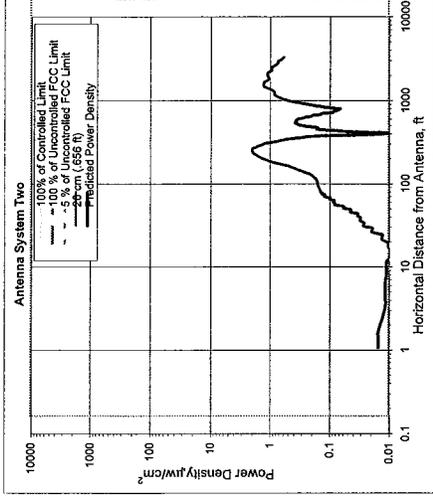
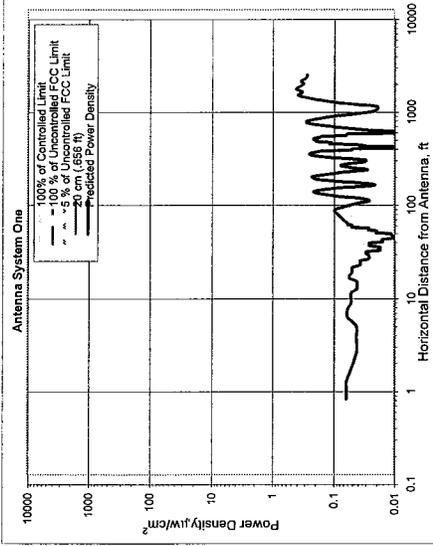
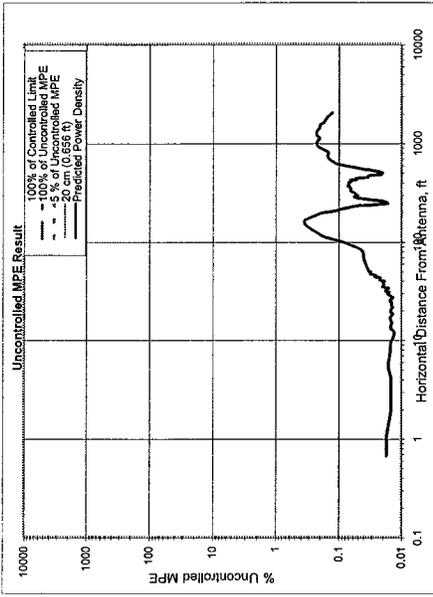
² 47 U.S.C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.”

7. FCC Limits for Maximum Permissible Exposure

FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



8. Exhibit A



Number of Antenna Systems: 3
Meets FCC Controlled Limits for The Antenna Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Analysis Required.

Power Density	Power Density	@ Horiz. Dist.
nW/cm²	% of limit	feet
Maximum Power Density = 0.002133	0.34	160.00
290.95 times lower than the MPE limit for uncontrolled environment		
Composite Power (ERP) = 13,500.00 Watts		

Site ID: 907-009-734
Site Name: Montville - Highway 82
Site Location: 557 Route 82
Montville, CT 06370

Performed By: Satish Bhandare
Date: 1/3/03

Antenna System One

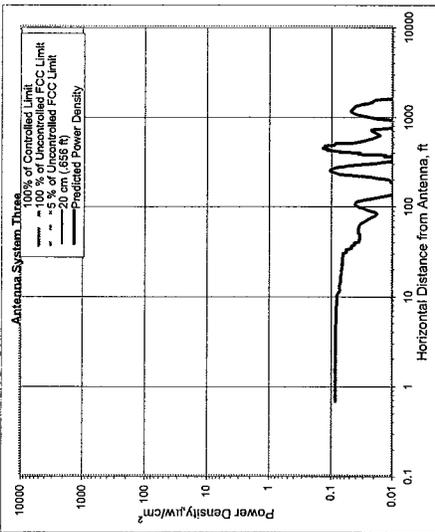
Parameter	Value
Frequency	1945.00 MHz
# of Channels	12
Max ERP/Ch	250.00 Watts
Max Pwr/Ch Into Ant.	5.88 Watts
(Center of Emission)	163.00 feet
Calculation Point (above ground or roof surface)	5.55 feet
Antenna Model No.	0.00
Max Ant Gain	Align: 7259.03 dBd
Down tilt	16.30 degrees
Miscellaneous Att.	2.00 dB
Height of aperture	0.00 feet
Ant HBW	5.11 degrees
Distance to Ant _{base}	65.00 feet
WOS?	157.95 Y/N?

Ant System ONE Owner: AT&T
Sector: 3
Azimuth: 0/120/240

Antenna System Two

Parameter	Value
Frequency	890.00 MHz
# of Channels	30
Max ERP/Ch	250.00 Watts
Max Pwr/Ch Into Ant.	15.77 Watts
(Center of Emission)	173.00 feet
Calculation Point (above ground or roof surface)	5.55 feet
Antenna Model No.	0.00
Max Ant Gain	0.9844480-XY dBd
Down tilt	12.00 degrees
Miscellaneous Att.	2.00 dB
Height of aperture	0.00 feet
Ant HBW	4.00 degrees
Distance to Ant _{base}	80.00 feet
WOS?	182.50 Y/N?

Ant System TWO Owner: Verizon
Sector: 3
Azimuth: 0/120/240



Antenna System Three

Parameter	Units	Value
Frequency	MHz	1975.00
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant. (Center of Radiation)	Watts	7.73
Calculation Point (above ground or roof surface)	feet	480.00
	feet	3.66
		0.66
		0.00
Antenna Model No.		DB980G90E-M
Max Ant Gain	dBi	15.10
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	90.00
Distance to Ant _{system}	feet	172.60
WOS?	Y/N?	N

Ant System Three Owner: Sprint PCS
Sector: 3
Azimuth 0/120/240

9. For Further Information

Additional information about the environmental impact of RF energy from personal wireless antenna facilities can be obtained from the Federal Communications Commission:

Dr. Robert Cleveland
Federal Communications Commission
Office of Engineering and Technology
Washington, DC 20554

RF Safety Program: 202-418-2464
Internet address: rfsafety@fcc.gov
RF Safety Web Site: www.fcc.gov/oet/rfsafety

10. References

[1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).

[2] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Notice of Proposed Rulemaking, ET Docket 93-62, 8 FCC Rcd 2849 (1993).

[3] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Report and Order, ET Docket 93-62, FCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).

[4] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Second Memorandum Opinion and Order, ET Docket 93-62, adopted August 25, 1997.

[5] *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields*, OET Bulletin 65, August, 1997.