



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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

January 10, 2003

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

RE: **TS-AT&T-155-021216** - AT&T Wireless PCS LLC d/b/a AT&T Wireless request for an order to approve tower sharing at an existing telecommunications rooftop facility located at 29 South Main Street, West Hartford, Connecticut.

Dear Attorney Fisher:

At a public meeting held January 8, 2003, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. 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 may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated December 13, 2002.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston  
Chairman

MAG/laf

c: Honorable Robert R. Bouvier, Mayor, Town of West Hartford  
Barry M. Feldman, Town Manager, Town of West Hartford  
Mila Limson, Senior Planner, Town of West Hartford  
Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP  
Julie Donaldson Kohler, Hurwitz & Sagarin LLC

**CUDDY & FEDER & WORBY LLP**

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

December 13, 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**

DEC 16 2002

**CONNECTICUT  
SITING COUNCIL**

Re: Tower Sharing Request by AT&T Wireless Services  
Existing Rooftop Tower Facility at  
29 South Main Street, West Hartford, Connecticut

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

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, AT&T Wireless PCS LLC, by and through its agent AT&T Wireless Services, Inc., ("AT&T Wireless" or the "Applicant") hereby requests an order from the Connecticut Siting Council (the "Council") to approve the proposed shared use of an existing communications facility, located at 29 South Main Street in the Town of West Hartford (the "South Main Street Facility"). AT&T Wireless, Sprint and the property owner have agreed to share the use of the South Main Street Facility, as detailed below.

The South Main Street Facility

The South Main Street Facility consists of an approximately forty foot (40') "stub" lattice tower (the "Tower") and equipment located on the roof-top of a parking garage being used for wireless communications by Sprint. The surrounding land uses are predominantly commercial.

December 13, 2002

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AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, AES, including a site plan, equipment shelter layout and tower elevation, AT&T Wireless proposes shared use of the Facility to provide FCC licensed services. AT&T Wireless will install six (6) panel antennas at approximately 89' -8" above ground level on the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) located on the roof of the garage structure within a fenced compound.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1)). Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required C.G.S. § 16-50x. Shared use of the South Main Street Facility satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

- A. Technical Feasibility AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas as set forth the Structural Analysis prepared by URS Corporation annexed hereto as Exhibit A. The proposed shared use of this tower is therefore technically feasible.
- B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving shared use of the existing South Main Street Facility. (C.G.S. § 16-50aa(c)(1)).<sup>1</sup> Under the authority vested in the Council by C.G.S. § 16-50aa, an order by the Council approving the shared use of the tower would permit the Applicant to obtain a building permit for the proposed installation.
- C. Environmental Feasibility The proposed shared use would have a minimal environmental effect, for the following reasons:

---

<sup>1</sup> Sprint received approval from the Town of West Hartford for the existing roof-top tower in April of 1997. After meeting with the Town Planner, we have been advised that the Town believes the "tower" is subject to the Siting Council's jurisdiction and has indicated that upon the granting of any Tower Sharing approval from the Council, a building permit for the facility will be issued. While it is not clear that the Council's jurisdiction extends to this facility, we are submitting this tower sharing request at the Town's direction.

## CUDDY & FEDER & WORBY LLP

December 13, 2002

Page 3

1. The proposed installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing facility;
  2. The proposed installation by AT&T Wireless would not increase the height of the tower itself;
  3. The proposed installation would not increase the noise levels at the existing facility boundaries by six decibels or more;
  4. Operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The "worst case" exposure calculated for the operation of this facility for all carriers, would be approximately 0.47% of the standard. See Cumulative Emissions Compliance Report dated December 11, 2002, prepared by Galen Belen, Radio Frequency Engineer, annexed hereto as Exhibit B; and
  5. The proposed shared use of the South Main Street Facility would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.
- D. Economic Feasibility The Applicant and the tower owner have entered into a mutual agreement to share use of the South Main Street Facility on terms agreeable to both parties. The proposed tower sharing is therefore economically feasible.
- E. Public Safety As stated above and evidenced in the Cumulative Emissions Compliance Report annexed hereto as Exhibit B, the operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and the Connecticut Department of Health. Further, the addition of AT&T Wireless' telecommunications service in the West Hartford area through shared use of the South Main Street Facility is expected to enhance the safety and welfare of local residents and travelers through the area resulting in an improvement to public safety in this area of West Hartford.

CUDDY & FEDER & WORBY LLP

December 13, 2002

Page 4

Conclusion

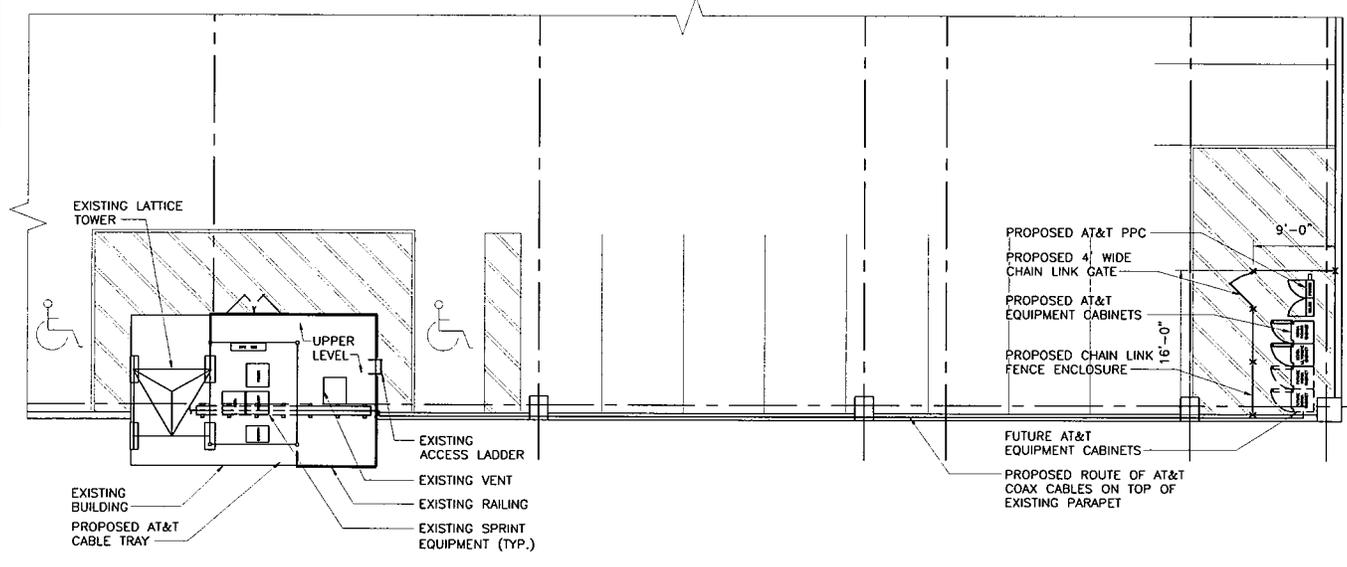
As delineated above, the proposed shared use of the South Main Street Facility satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of towers in the State of Connecticut. AT&T Wireless therefore requests the Siting Council issue an order approving the proposed shared use of the South Main Street Facility.

Respectfully submitted,

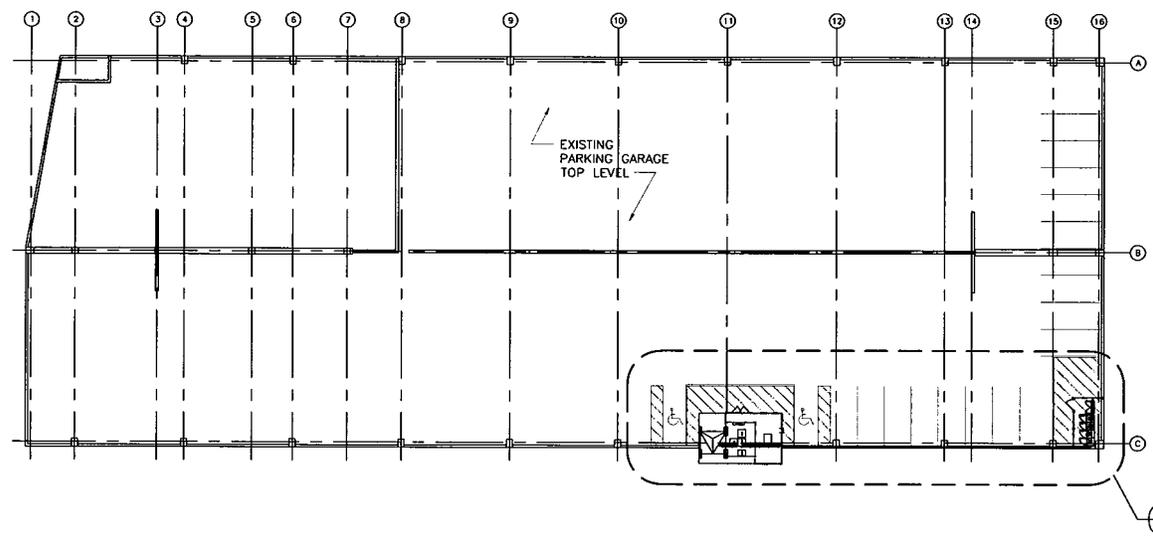


Christopher B. Fisher, Esq.  
On behalf of AT&T Wireless

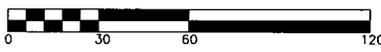
cc: Barry M. Feldman, Town Manager, Town of West Hartford  
Milagros T. Limson, Town Senior Planner  
Patrick Alair, Esq., Deputy Corporation Counsel  
Anthony B. Gioffre III, Esq.



**2 PARTIAL GARAGE TOP LEVEL PLAN**  
 LE-1 SCALE: 1" = 20'-0"



**1 GARAGE TOP LEVEL PLAN**  
 LE-1 SCALE: 1" = 60'-0"



ISSUED FOR LEASE

LATITUDE: 41.76014 (NAD 83)  
 LONGITUDE: 72.74312 (NAD 83)

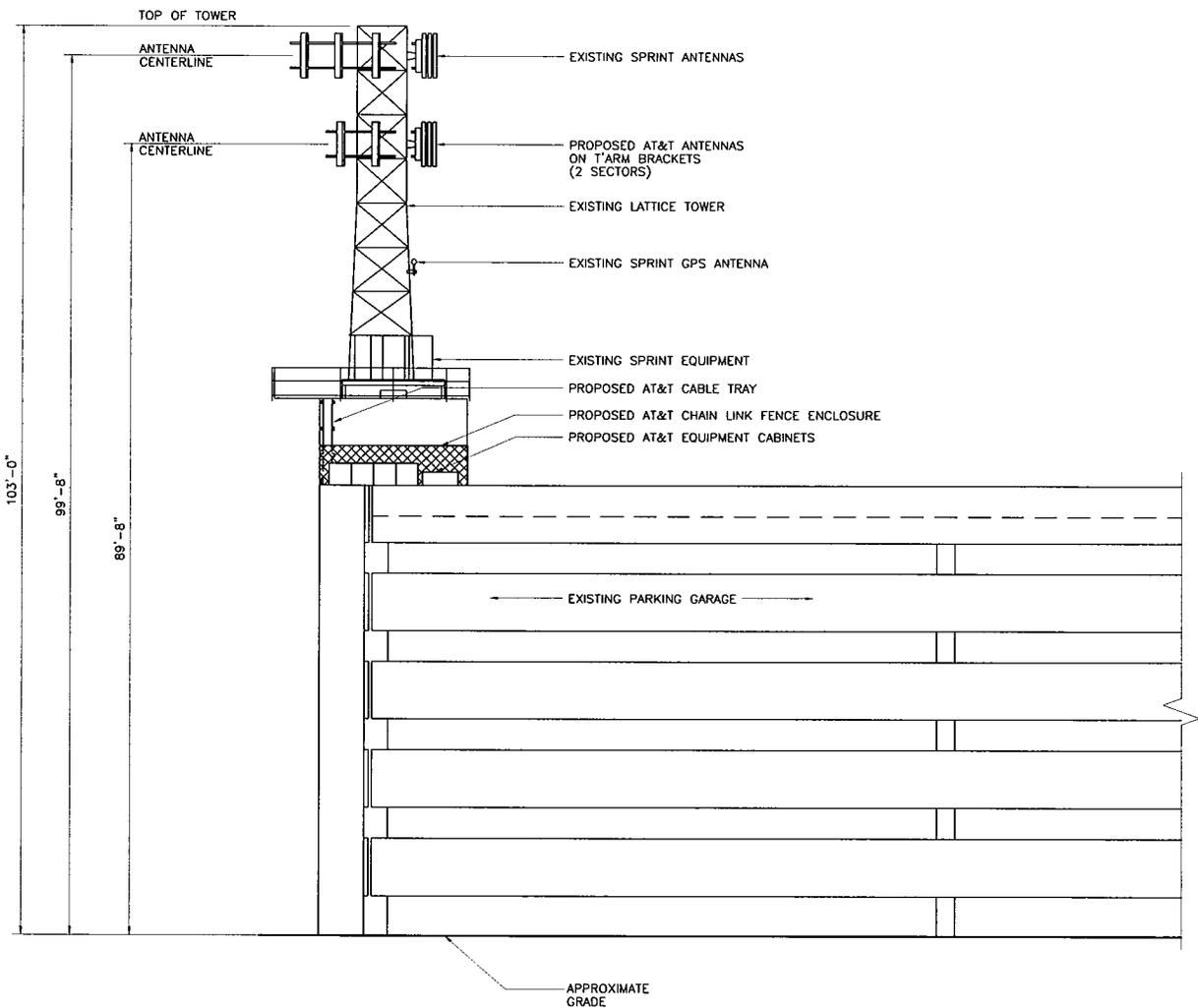
DRAWING TITLE:  
 907-007-843A-LE1

REVISION NO. 0	DRAWN BY: PD
DATE ISSUED: 11/13/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
SHEET NO. 1 OF 2	
URS JOB NO.: F302224.47	

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 1-(860)-529-8882  
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 **AT&T**  
 AT&T WIRELESS PCS LLC  
 12 OMEGA DRIVE  
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE:  
 GARAGE TOP LEVEL PLAN  
 PROJECT INFORMATION:  
 WEST HARTFORD - CENTRAL  
 CT-843  
 29 SOUTH MAIN STREET  
 WEST HARTFORD, CONNECTICUT 06107  
 PROPERTY OWNER:  
 J & S DEVELOPMENT AND MANAGEMENT CORP.  
 29 SOUTH MAIN STREET  
 WEST HARTFORD, CONNECTICUT 06107



1 PARTIAL ELEVATION  
LE-2 SCALE: 1" = 20'-0"



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LATITUDE: 41.76014 (NAD 83)  
LONGITUDE: 72.74312 (NAD 83)

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

**DRAWING TITLE:** PARTIAL ELEVATION  
**PROJECT INFORMATION:** WEST HARTFORD - CENTRAL  
CT-843  
29 SOUTH MAIN STREET  
WEST HARTFORD, CONNECTICUT 06107  
**PROPERTY OWNER:** J & S DEVELOPMENT AND MANAGEMENT CORP.  
29 SOUTH MAIN STREET  
WEST HARTFORD, CONNECTICUT 06107

**DRAWING TITLE:** 907-007-843A-LE2  
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**DATE ISSUED: 11/13/02** CHECKED BY: JCF  
**SCALE:** AS NOTED **APPROVED BY:**  
SHEET NO. 2 OF 2  
URS JOB NO.: F302224.47

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# DETAILED STRUCTURAL ANALYSIS AND EVALUATION OF 40' EXISTING ROOFTOP LATTICE TOWER WITH NEW ANTENNA ARRANGEMENT

29 South Main Street  
West Hartford, Connecticut  
AT&T Site No.: CT-843

---



AT&T WIRELESS PCS  
12 OMEGA DRIVE, 2<sup>ND</sup> FLOOR  
STAMFORD, CT 06902  
TEL. 203-602-7029

*prepared by*

# URS

URS CORPORATION  
795 BROOK STREET, BUILDING  
ROCKY HILL, CT 06067  
TEL. 860-529-8882

F300002224.47

August 06, 2002

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- 1. EXECUTIVE SUMMARY**
- 2. INTRODUCTION**
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- 6. DRAWINGS AND DATA**
  - ERI TOWER OUTPUT DATA FOR PROPOSED ANTENNA LOADING**

1. **EXECUTIVE SUMMARY**

This report summarizes the structural analysis of the 40' lattice tower located on the rooftop of the parking garage on 29 South Main Street in West Hartford, Connecticut. The analysis was conducted in accordance with the TIA/EIA-222-F standard for wind velocity of 80 mph bare and 70 mph concurrent with ½" ice design wind loads. The antenna loading considered in the analysis consists of all existing and proposed antennas, transmission lines, and ancillary items as outlined in the Analysis Methodology and Loading Condition Section of this report. The proposed AT&T Wireless modification is to add the AT&T Wireless antennas listed below:

- (6) Allgon 7250.03 antennas with @ 89'-8" elevation
- (3) T-Frame mounts and (12) 1-1/4" coax cables

The results of the analysis indicate the tower structure to be in compliance with the proposed loading conditions. The tower is considered feasible with the TIA/EIA-222-F wind load classification specified above and all the existing and proposed antenna loading.

This analysis is based on:

- 1) Tower report prepared by Rohn Industries Incorporated engineering file no. 34589SW and drawing no. B971773 dated April 15, 1997.
- 2) Antenna inventory as specified in section 2 and 6 of this report.
- 3) TIA/EIA-222-F wind load classification.

This report is only valid as per the assumptions and data utilized in this report for antenna inventory, mounts and associated cables. The user of this report shall field verify the assumption of the antenna and mount configuration. Notify the engineer immediately if any of the assumptions in this report are found to be other than specified.

If you should have any questions, please call.

Sincerely,  
**URS Corporation AES**



Mohsen Sahirad, P.E.  
Senior Structural Engineer

MS/rmn

- cc: Don Huntley – Bechtel
- Naish Artaiz – URS
- D.R. – URS
- A.A. – URS
- CF/Book

## 2. INTRODUCTION

The subject tower is located on the rooftop of the parking garage on 29 South Main Street in West Hartford, Connecticut. The structure is a self supporting 40' steel triangular tapered lattice tower manufactured by Rohn Industries Incorporated.

The tower is constructed of pipe legs and diagonal angle braces. The tower sections are all bolted together. The width of the face is 6'-6 3/4" at the top and 8'-6 3/4" at the bottom. The tower geometry and structural member sizes were taken from Rohn Industries Incorporated engineering file no. 34589SW and drawing no. B971773 dated April 15, 1997.

The existing structure supports communication antennas. The antenna and mount configuration as specified below:

<b>Antenna Type</b>	<b>Carrier</b>	<b>Mount</b>	<b>Elevation</b>	<b>Cable</b>
(9) DB980H90	Sprint	(3) Boom Gate	99'-8"	(9) 7/8" coax cable
* (6) Allgon 7250.03	AT&T	(3) T-Frame	89'-8"	(12) 1 1/4" coax cable
GPS	Spirnt	Stand off	76'	(1) 1/2" coax cable

\* proposed

This structural analysis of the communications tower was performed by URS Corporation, AES (URS) for AT&T Wireless. The purpose of this analysis was to investigate the structural integrity of the existing tower with its existing and proposed antenna loads. This analysis was conducted to evaluate twist (rotation), sway (deflection) and stress on the tower, and the effect of forces to the foundation of the tower resulting from existing and proposed antenna arrangements.

## 3. ANALYSIS METHODOLOGY AND LOADING CONDITIONS

### Methodology:

The structural analysis was done in accordance with TIA/EIA-222-F June 1996, Structural Standard for Steel Antenna Towers and Antenna Supporting Structures, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Allowable Stress Design (ASD).

The analysis was conducted using ERI Tower 2.0. Two load conditions were evaluated as shown below which were compared to allowable stresses according to AISC and TIA/EIA. The two load combinations were investigated in ERI Tower 2.0 to determine the stress, sway and rotation.

Load Condition 1 = 80 mph Wind Load (without ice) + Tower Dead Load

Load Condition 2 = 70 mph Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits one-third increase in allowable stresses for towers and monopoles less than 700 feet tall. For purposes of this analysis, allowable stresses of tower members were increased by one-third in computing the load capacity; in addition, the appropriate "k" factors were assigned to each member.

## 4. FINDINGS AND EVALUATION

The combined axial and bending stresses on the tower structure were evaluated to compare with the allowable stress in accordance with AISC. The analysis indicates that the tower legs and diagonal members have sufficient capacity to carry the loads applied.

The tower base reactions are as follows:

<b>Original Design Tower Reactions</b>	
Compression (kips)	32.4
Uplift (kips)	27.1
Total Shear (kips)	8
Moment (kips-ft)	212

<b>Proposed Tower Reactions</b>	
Compression (kips)	30
Uplift (kips)	26
Total Shear (kips)	8
Moment (kips-ft)	209

For detailed proposed tower reactions, see drawing no. E-1 in section 6 of this report.

The analysis indicates that the reactions of the tower base are below the Original Design prepared by Rohn Industries Incorporated.

## 5. CONCLUSIONS

The results of the analysis indicate the structure to be in compliance with the loading conditions and the materials and member sizes for the tower. The tower is considered feasible with the TIA/EIA-222-F wind load classification specified above and all the existing and proposed antenna loading.

### Limitations/Assumptions:

This report is based on the following:

- A. Tower is properly installed and maintained.
- B. All members were as specified in the original Construction Documents and are in good condition.
- C. All required members are in place.
- D. All bolts are in place and are properly tightened.
- E. Tower is in plumb condition.
- F. All members are galvanized.
- G. All tower members were properly designed, detailed, fabricated, installed, and have been properly maintained since erection.

URS is not responsible for any modifications completed prior to or hereafter in which URS is not or was not directly involved. Modifications include but are not limited to:

- A. Adding antennas
- B. Adding mounts
- C. Adding coax cables

URS hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact URS. URS disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

## **6.) DRAWINGS AND DATA**

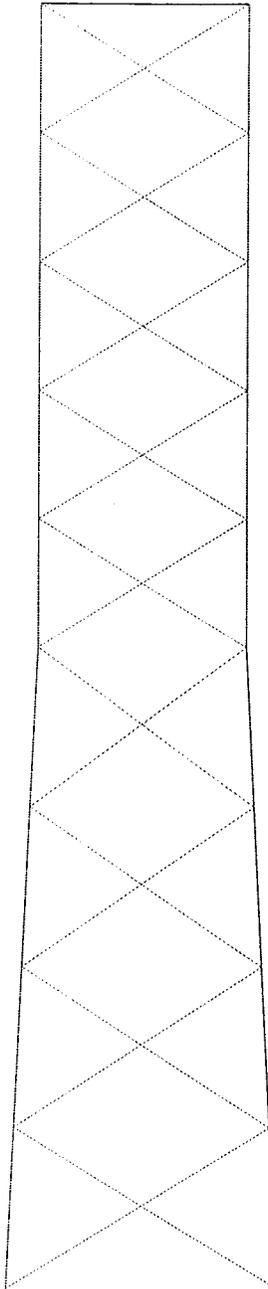
## **ERI TOWER OUPUT DATA FOR PROPOSED ANTENNA LOADING**

Section	T2	T1
Legs	ROHN 2.5 STD	
Diagonals	L1 3/4x1 3/4x3/16	
Top Girts	N.A.	L1 3/4x1 3/4x3/16
Face Width (ft)	8.5625	6.5625
# Panels @ (ft)	4 @ 5	5 @ 4
Weight (K)	1.7	0.8

103.0 ft

83.0 ft

63.0 ft

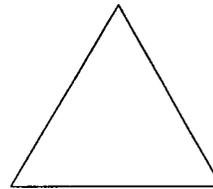


### DESIGNED APPURTENANCE LOADING

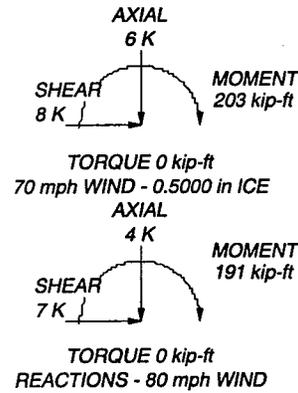
TYPE	ELEVATION	TYPE	ELEVATION
(3) DB980H90	101.834	T-Frame	91.834
(3) DB980H90	101.834	(2) Allgon 7250.03	91.834
(3) DB980H90	101.834	(2) Allgon 7250.03	91.834
Boom Gate	101.834	(2) Allgon 7250.03	91.834
Boom Gate	101.834	T-Frame	91.834
Boom Gate	101.834	GPS	78.167
T-Frame	91.834	Side arm	78.167

### TOWER DESIGN NOTES

1. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 70 mph basic wind with 0.50 in ice.
3. Deflections are based upon a 50 mph wind.
4. TOWER RATING: 56.3%



MAX PIER FORCES:  
DOWN: 29 K  
UPLIFT: -25 K  
SHEAR: 5 K



<b>URS CORPORATION</b> 795 Brook Street, Building 5 Rocky Hill, Connecticut 06067 Phone: (860) 529-8882 FAX: (860) 529-5566	Job: <b>West Hartford, Connecticut</b>		
	Project: <b>F300002224.47</b>		
	Client: <b>AT&amp;T Wireless</b>	Drawn by: <b>Robert M. Niemied</b>	App'd:
	Code: <b>TIA/EIA-222-F</b>	Date: <b>08/06/02</b>	Scale: <b>NTS</b>
	Path: <b>P:\Telecom\F12\west hartford ori</b>		Dwg No. <b>E-1</b>



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**RF Exposure Analysis for Proposed  
AT&T Wireless Antenna Facility**

SITE ID: 907-007-843

December 12, 2002

**Prepared by AT&T Wireless Services, Inc.**  
Galen Belen **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 29 South Main Street, West Hartford, CT 06107. 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>West Hartford Central</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)	40.00 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 facility<sup>1</sup>:

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

Where,  $N$ = Number of channels,  $R$ = distance in cm from the RC (Radiation Center) of antenna, 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 center of radiation,  $h$  = aperture height in meters,  $\alpha$  = 3 dB beam-width of horizontal pattern.

<sup>1</sup> RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts ( $\mu$ 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 Radiation

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.<sup>2</sup> 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 0.004691 mW/cm<sup>2</sup> which occurs at 120 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.002243 mW/cm<sup>2</sup> 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 radiation*

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm <sup>2</sup>	2.9 mW/cm <sup>2</sup>	0.004691 mW/cm <sup>2</sup>
PCS	1 mW/cm <sup>2</sup>	5 mW/cm <sup>2</sup>	

The maximum power density at the proposed facility represents only 0.47% of the public MPE limit for all frequencies in use.

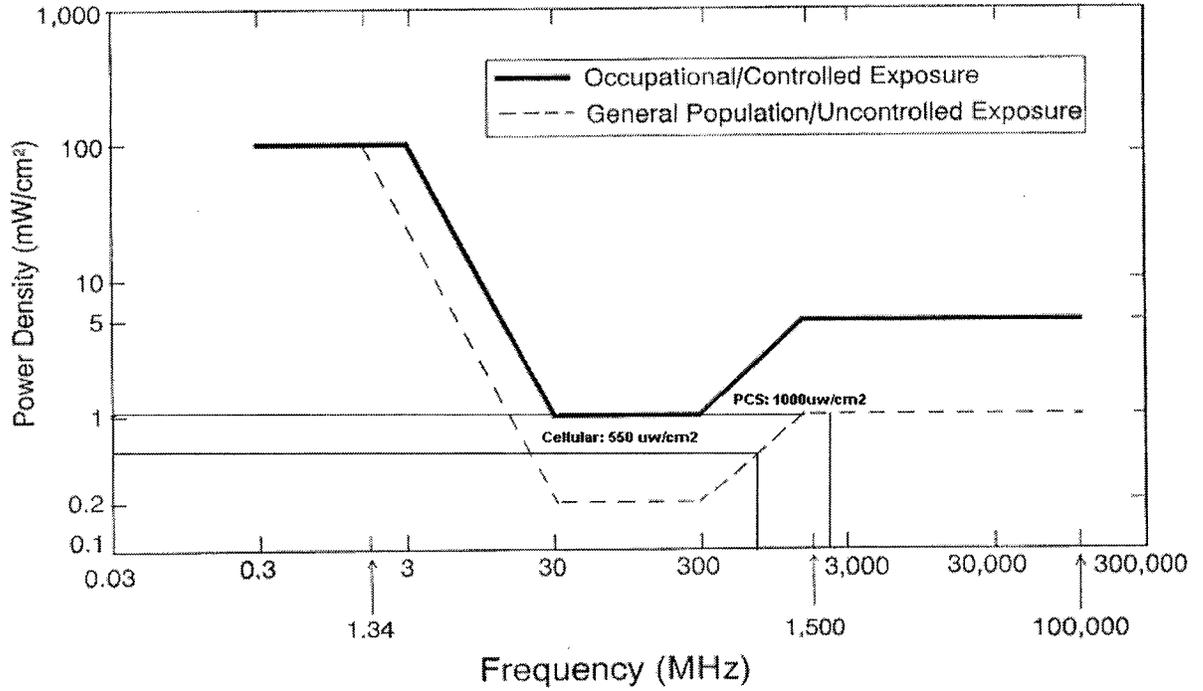
#### 6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.004691 mW/cm<sup>2</sup>, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

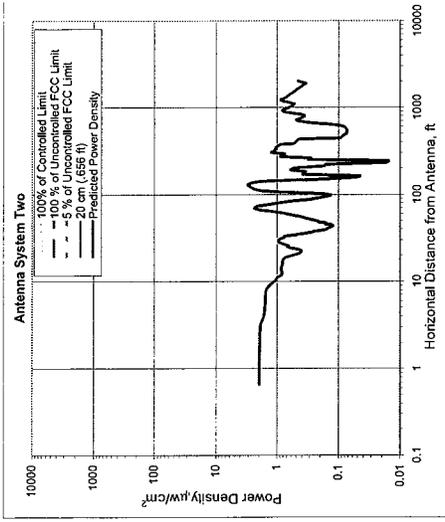
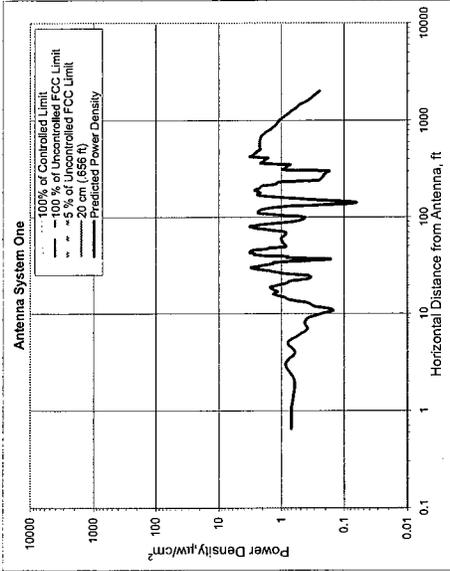
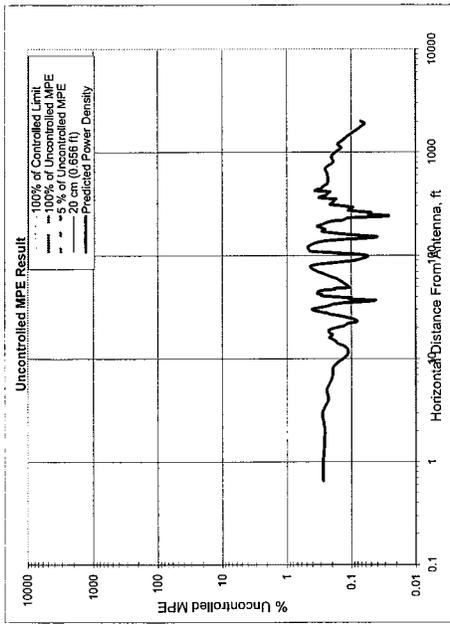
<sup>2</sup> 47 U.S. C. Section 332 ( c ) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the 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: 2  
Meets FCC Controlled Limits for The Antennas 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	Power Density
at Horiz. Dist.	at Horiz. Dist.	at Horiz. Dist.
feet	feet	feet
Maximum Power Density = 0.004691	0.47	120.00
213.19 times lower than the MPE limit for uncontrolled environment		
Composite Power (ERP) = 9,000.00	Watts	

Site ID: 907-007-843  
Site Name: West Hartford Central  
Site Location: 29 South Main Street  
West Hartford, CT 06107

Performed By: Galen Belen  
Date: 12/12/02

#### Antenna System One

Parameter	units	Value
Frequency	MHz	1945.00
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	5.86
(Center of Radiator)	feet	40.00
Calculation Point (above ground or roof surface)	feet	0.00
Antenna Model No.		Aligon 7250.03
Max Ant Gain	dBd	16.30
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.11
Ant HBW	degrees	65.00
Distance to Ant location	feet	37.45
WOS?	Y/N?	n

Ant System ONE Owner: AT&T  
Sector: 3  
Azimuth: 10/130/250

#### Antenna System Two

Parameter	units	Value
Frequency	MHz	1950.00
# of Channels	#	12
Max ERP/Ch	Watts	500.00
Max Pwr/Ch into Ant.	Watts	15.45
(Center of Radiator)	feet	50.00
Calculation Point (above ground or roof surface)	feet	0.00
Antenna Model No.		DB990G90
Max Ant Gain	dBd	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 location	feet	47.50
WOS?	Y/N?	n

Ant System TWO Owner: Sprint  
Sector: 3  
Azimuth: 30/150/270

## 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](mailto:rfsafety@fcc.gov)  
RF Safety Web Site: [www.fcc.gov/oet/rfsafety](http://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.