

# 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)

[www.ct.gov/csc](http://www.ct.gov/csc)

November 18, 2004

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597

RE: **EM-VER-077-041102** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 60 Adams Street, Manchester, Connecticut.

Dear Attorney Baldwin:

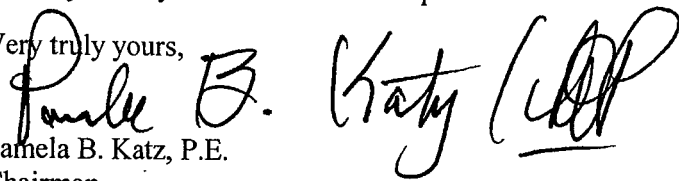
At a public meeting held on November 17, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated November 2, 2004, including the placement of all necessary equipment and shelters within the tower compound. 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,

  
Pamela B. Katz, P.E.  
Chairman

PBK/laf

- c: The Honorable Stephen T. Cassano, Mayor, Town of Manchester  
Thomas R. O'Marra, Zoning Enforcement Officer, Town of Manchester  
William Thornton  
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP  
Thomas F. Flynn III, Nextel Communications  
Michele G. Briggs, Southwestern Bell Mobile Systems, LLC

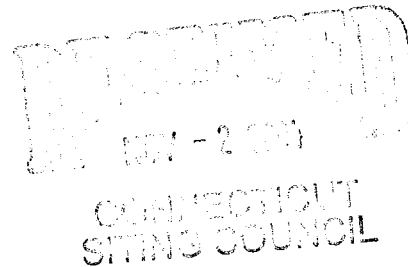
280 Trumbull Street  
Hartford, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

EM-VER-077-041102

November 2, 2004

*Via Hand Delivery*

S. Derek Phelps  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051



Re: **Notice of Exempt Modification – Antenna Swap  
60 Adams Street Telecommunications Facility  
Manchester, Connecticut**

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility on an existing tower owned by William B. Thornton, 60 Adams Street in Manchester. This facility consists of twelve (12) panel-type cellular antennas at the 90-foot level of the 140-foot tower. Equipment associated with the antennas is located in an equipment shelter near the base of the tower.

The Connecticut Siting Council (“the Council”) approved Cellco’s shared use of the Adams Street facility on December 17, 1998 (TS-BAM/SCLP-077-981208). Cellco now intends to modify its facility by replacing six (6) cellular antennas with six (6) PCS antennas at the same 90-foot level on the tower. Attached behind Tab 1 are specifications for the existing cellular antennas and the proposed PCS antennas for the Adams Street facility.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Manchester General Manager, Steve Werbner.

The planned modifications to the Adams Street facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).



*Law Offices*

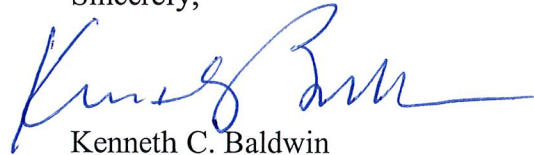
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S. Derek Phelps  
November 2, 2004  
Page 2

1. The proposed modifications will not result in any increase in the overall height of the existing structure. Cellco's replacement antennas will be mounted at the same 90-foot level on the 140-foot tower.
2. The proposed modifications will not affect associated equipment and will not require the extension of the site boundaries.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more.
4. The proposed modifications will not result in radio frequency (RF) power density levels at the facility that exceed the Federal Communications Commission (FCC) adopted safety standard. Attached behind Tab 2 is a new Power Density Calculation Table.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

Enclosures

cc Steve Werbner, General Manager  
Sandy M. Carter



## ALP 6014-N

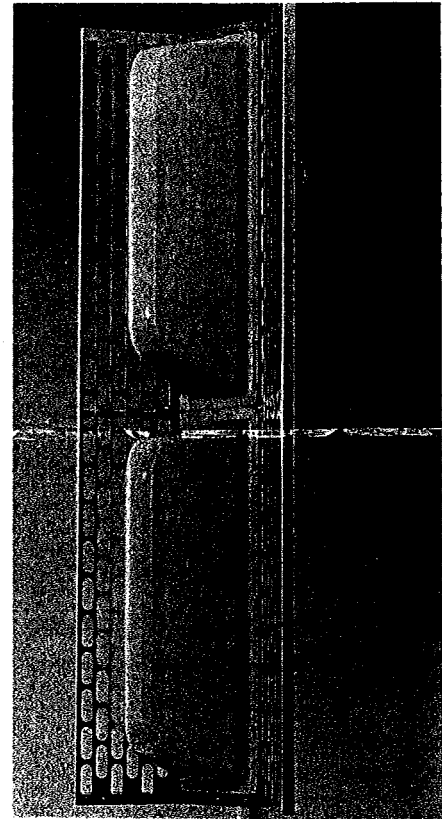
Log-Periodic Reflector Antenna

60 Degrees 14 dBd

### Features:

- Broadbanded. (800-900 MHz)
- Low backlobe radiation. Front-to-back ratio better than 30 dB
- Low Intermodulation Products.
- Low Wind-load.
- Low weight.
- Small size.
- Rugged design.

Please see the following pages including radiation patterns/tables for ALP 6014-N.



### Electrical Specifications:

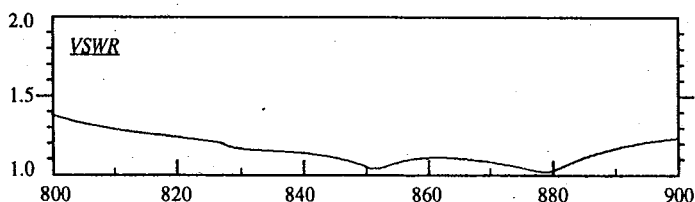
Frequency range:	806-896 MHz
Impedance:	50 ohm
Connector:	N-female or 7/8" EIA
VSWR:	Typ. 1.3:1 max 1.5:1
Polarization:	Vertical
Gain:	14 dBd
Front to back ratio:	>30 dB
Side-lobe suppression:	>17 dB
Intermodulation: (2x25W):	IM3 >146 dB IM5 >153 dB IM7 & IM9 >163 dB
Power Rating:	500 W
H-Plane:	-3 dB 60°
E-Plane:	-3 dB 15°
Lightning Protection:	DC Grounded

### Mechanical Specifications:

Overall Height:	52 in	(1320 mm)
Width:	17.3 in	(440 mm)
Depth:	11.4 in	(290 mm)
Weight including brackets:	28.9 lbs	(13 Kg)
Rated wind velocity:	113 mph	(180 Km/h)
Wind Area (CxA/Front):	5.4 sq.ft	(0.5 sq.m)
Lateral thrust at rated wind		
<b>Worst case:</b>	780 N	

### Materials:

Radiating elements:	Aluminum
Element housing:	Grey PVC
Back-plate:	Aluminum
Mounting hardware	
clamps:	Hot dip galvanized steel
bolts:	Stainless steel



Manufactured by: Allgon System AB

**DECIBEL**  
Base Station Antennas

**950G65VTZE-M**

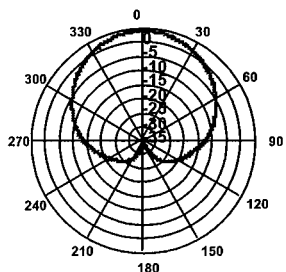
18.1 dBi, Directed Dipole Antenna  
1850-1990 MHz

**1850-1990 MHz**

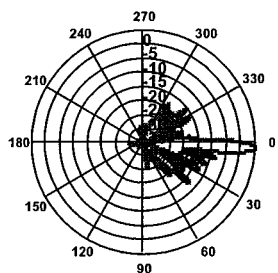
**VARI-TILT®**  
**ZoneMaster™**

- Field adjustable electrical downtilt, featuring linear phase shifter, no wheels or gears
- Exceptional elevation and azimuth pattern shaping
- Strong Front to Back and Front to Side ratio reduces soft hand-offs

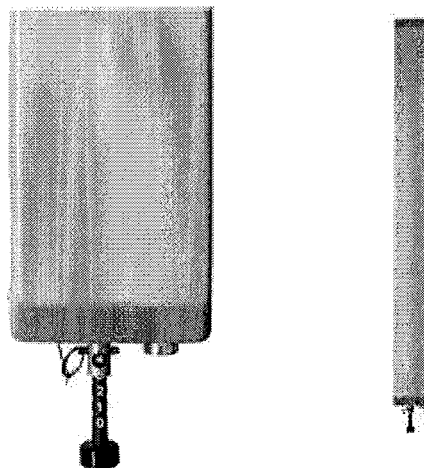
65°



Azimuth 1950 MHz (Tilt=3)



Vertical 1950 MHz (Tilt=3)



**ELECTRICAL**

<b>Frequency (MHz):</b>	1850-1990
<b>Polarization:</b>	Vertical
<b>Gain (dBd/dBi):</b>	16/18.1
<b>Azimuth BW:</b>	65°
<b>Elevation BW:</b>	6.5°
<b>Beam Tilt:</b>	0-7°
<b>USLS* (dB):</b>	>17
<b>Null Fill* (dB):</b>	20
<b>Front-to-Back Ratio* (dB):</b>	40
<b>VSWR:</b>	<1.4:1
<b>IM Suppression - Two 20 Watt Carriers:</b>	-145 dBc
<b>Impedance:</b>	50 Ohms
<b>Max Input Power:</b>	250 Watts
<b>Lightning Protection:</b>	DC Ground

**MECHANICAL**

<b>Weight:</b>	10 lbs (4.5 kg)
<b>Dimensions (LxWxD):</b>	60 X 6.5 X 5 in (1524 X 165 X 127 mm)
<b>Max. Wind Area:</b>	1.51 ft² (0.14 m²)
<b>Max. Wind Load (@ 100mph):</b>	85 lbf (378 N)
<b>Max. Wind Speed:</b>	125 mph (201 km/h)
<b>Radiator Material:</b>	Low Loss Circuit Board
<b>Reflector Material:</b>	Aluminum
<b>Radome Material:</b>	ABS, UV Resistant
<b>Mounting Hardware Material:</b>	Galvanized Steel
<b>Connector Type:</b>	7-16 DIN - Female (Bottom)
<b>Color:</b>	Light Gray
<b>Standard Mounting Hardware:</b>	DB390 Pipe Mount Kit, included
<b>Downtilt Mounting Hardware:</b>	DB5098, optional
<b>Opt. Mounting Hardware:</b>	DB5094-AZ Azimuth Wall Mount



**Andrew Corporation**  
8635 Stemmons Freeway  
Dallas, Texas U.S.A 75247-3701  
Tel: 214.631.0310

Fax: 214.631.4706  
Toll Free Tel: 1.800.676.5342  
Fax: 1.800.229.4706  
www.andrew.com

Warranty: 5 years  
Date: 4/8/2004  
\* - Indicates Typical Values

[dbtech@andrew.com](mailto:dbtech@andrew.com)

General Power Density

Site Name: Manchester West, CT  
 Tower Height: 90 ft rad center

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm <sup>2</sup> )	Maximum Permissible Exposure (mW/cm <sup>2</sup> )	Fraction of MPE (%)
Verizon	880	9	200	1800	90	0.0799	0.56733	14.09%
Verizon	1900	3	200	600	90	0.0266	1	2.66%
<b>Total Percentage of Maximum Permissible Exposure</b>								<b>16.75%</b>

\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm<sup>2</sup> = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.

