

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

www.ct.gov/csc

December 22, 2004

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

RE: **EM-VER-028-041206** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 112 Munn Road, Colchester, Connecticut.

Dear Attorney Baldwin:

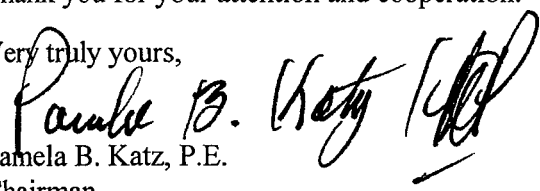
At a public meeting held on December 21, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated December 6, 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 Jenny Contois, First Selectman, Town of Colchester
Christopher Beauchemin, Town Planner, Town of Colchester
Brian Benito, Bureau of Police Support, Telecommunications Section



RECEIVED
DEC 21 2004

December 21, 2004

CONNECTICUT
SITING COUNCIL

Ms. Pamela Katz, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Reference: Existing Telecommunications Facility Modification
Verizon Wireless
112 Munn Road
Colchester, Connecticut
VZ1 126/36930608.00000

Dear Ms. Katz:

URS Corporation (URS) conducted a structural review of the existing 320' lattice tower at 112 Munn Road, Colchester, Connecticut. The purpose of our review was to evaluate the effect of the proposed Verizon Wireless antenna modification on the existing lattice tower structure. Rohn Industries, inc. prepared the lattice tower structure design documents, drawing file #43233MD. The lattice tower was designed to support Verizon Wireless at the 220' elevation with twelve (12) Decibel DB844H90E-XY panel antennas. The proposed Verizon Wireless modification considered in this review is as follows:

Antenna and Mount Modification	Carrier	Antenna Center Elevation
Remove (8) DB844H90E-XY panel antennas and replace with (6) Decibel DB948F85T2E-M panel antennas and (2) DB844H80E-XY panel antennas on existing supports.	Verizon Wireless	220' A.G.L.

The results of this review indicate the structure to be in compliance with the loading conditions and the material and member sizes for the lattice tower structure and its foundation. The lattice tower is considered feasible with the applicable TIA/EIA-222-F wind load classification specified and proposed Verizon Wireless and existing antenna loading. The structure and its foundation are in compliance with the BOCA 1996 and Connecticut State Building Code supplement 1999 including the latest amendments.

If you should have any questions, please call.

Sincerely,

URS Corporation AES

Richard A. Sambor

Richard A. Sambor, P.E.
Manager Facilities Design

RAS

cc: Sandy Carter - Verizon Wireless
Rachel A. Mayo - Robinson & Cole LLP
Douglas Roberts, AIA - URS
CF/Book

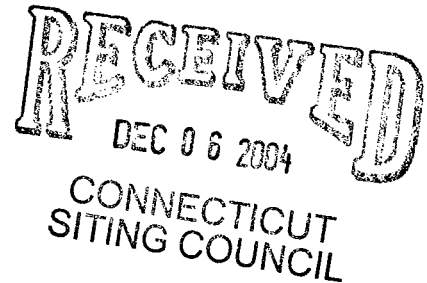
URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991

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

December 6, 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 Modification
112 Munn Road Telecommunications Facility (State Police Tower)
Colchester, Connecticut**

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility on an existing tower owned by the Connecticut State Police, 112 Munn Road in Colchester. This facility consists of twelve (12) panel-type antennas at the 220-foot level of the 320-foot tower. Equipment associated with the antennas is located on the ground near the base of the tower.

The Connecticut Siting Council (“the Council”) approved Cellco’s use of the tower on November 30, 2000. Cellco now intends to modify its facility by removing eight (8) cellular antennas (DB844H90E-XY) and installing six (6) PCS antennas (DB948F85T2E-M) and two (2) new cellular antennas (DB844H80E-XY) at the same height on the tower. Attached behind Tab 1 are specifications for the existing cellular antennas and the proposed PCS and cellular antennas for the Munn Road 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 Colchester First Selectman, Jenny Contois.

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



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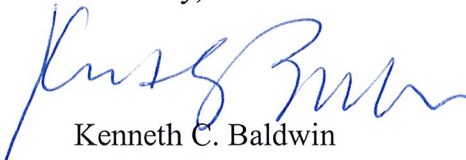
ROBINSON & COLE LLP

S. Derek Phelps
December 6, 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 height on the tower.
2. The proposed modifications will not affect ground-mounted 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: Jenny Contois, First Selectman
Sandy M. Carter



DECIBEL
Base Station Antennas

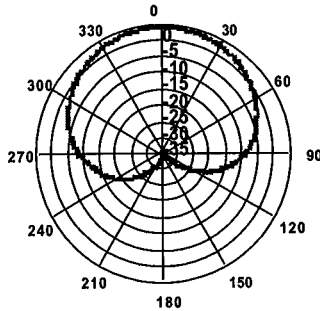
DB844H90E-XY

12 dBd, Directed Dipole Antenna
806-896, 870-960 MHz

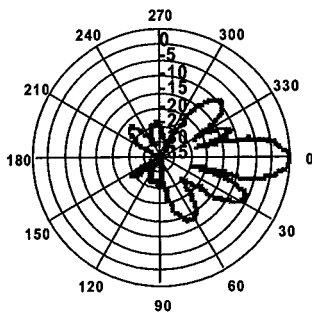
806-896 MHz
870-960 MHz

- Excellent azimuth roll-off, 15-20% reduction in cell to cell overlap
- Superior front to back ratio
- Low profile, low wind load for easy zoning
- Outstanding field record, with thousands of units deployed, world wide

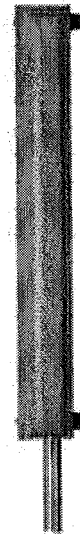
90°



Horizontal 940 MHz (Tilt=0)



Vertical 940 MHz (Tilt=0)



ELECTRICAL

MECHANICAL

Frequency (MHz):	806-896	870-960
Polarization:	Vertical	Vertical
Gain (dBd/dBi):	12/14.1	12.4/14.5
Azimuth BW:	90°	90°
Elevation BW:	15°	15°
Beam Tilt:	0°	0°
USLS* (dB):	>15	>15
Front-to-Back Ratio* (dB):	40	40
VSWR:	<1.35:1	<1.35:1
Impedance:	50 Ohms	50 Ohms
Max Input Power:	500 Watts	500 Watts
Lightning Protection:	DC Ground	DC Ground
Opt Electrical Tilt:	6°	6°

Weight:	14 lbs (6.4 kg)
Dimensions (LxWxD):	48 X 6.5 X 8 in (1219 X 165 X 203 mm)
Max. Wind Area:	1.08 ft² (0.10 m²)
Max. Wind Load (@ 100mph):	59 lbf (262 N)
Max. Wind Speed:	125 mph (201 km/h)
Radiator Material:	Brass
Reflector Material:	Aluminum
Radome Material:	ABS, UV Resistant
Mounting Hardware Material:	Galvanized Steel
Connector Type:	7-16 DIN - Female (Back)
Alt. Connectors:	N Type - Female
Color:	Light Gray
Standard Mounting Hardware:	DB380 Pipe Mount Kit, included
Downtilt Mounting Hardware:	DB5083, optional
Opt. Mounting Hardware:	DB5084-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

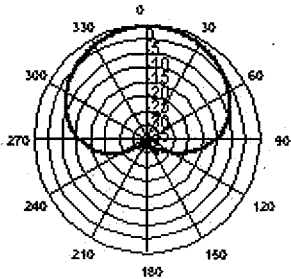
Warranty: Five years
Date: 4/23/2004
* - Indicates Typical Values

dbtech@andrew.com

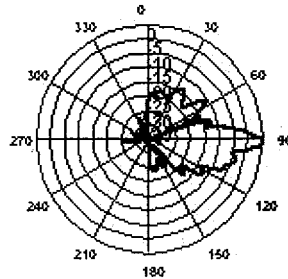
DECIBEL' <i>Base Station Antennas</i>	948F85T2E-M 16.1 dBi, Directed Dipole Antenna 1850-1990 MHz	1850-1990 MHz
		MaxFill™ dB Director®

- Exceptional azimuth roll-off reducing soft hand-offs and improving capacity
- Excellent upper side lobe suppression
- Deep null filling below the horizon assures improved signal intensity
- Low profile appearance and low wind loading profile for easier zoning approvals

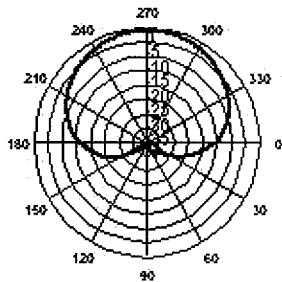
850



Azimuth 1850 MHz (Tilt=2)



Vertical 1850 MHz (Tilt=2)



Horizontal 1850 MHz (Tilt=2)



ELECTRICAL		MECHANICAL	
Frequency (MHz):	1850-1990	Weight:	8.5 lbs (3.9 kg)
Polarization:	Vertical	Dimensions (LxWxD):	48 X 3.5 X 7 in (1219 X 89 X 178 mm)
Gain (dBd/dBi):	14/16.1	Max. Wind Area:	1.18 ft ² (0.11 m ²)
Azimuth BW:	85°	Max. Wind Load (@ 100mph):	65 lbf (289 N)
Elevation BW:	8°	Max. Wind Speed:	125 mph (201 km/h)
Beam Tilt:	2°	Radiator Material:	Low Loss Circuit Board
USLS* (dB):	>18	Reflector Material:	Aluminum
Null Fill* (dB):	15	Radome Material:	ABS, UV Resistant
Front-to-Back Ratio* (dB):	40	Mounting Hardware Material:	Galvanized Steel
VSWR:	<1.33:1	Connector Type:	7-16 DIN - Female (Bottom)
IM Suppression - Two 20 Watt Carriers:	-150 dBc	Color:	Light Gray
Impedance:	50 Ohms	Standard Mounting Hardware:	DB390 Pipe Mount Kit, included
Max Input Power:	250 Watts	Downtilt Mounting Hardware:	DB5098, optional
Lightning Protection:	DC Ground	Opt. Mounting Hardware:	DB5094-AZ Azimuth Wall Mount
Opt Electrical Tilt:	0°, 4°, 6°		



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 www.andrew.com

Date: 4/29/2004
 * - Indicates Typical Values

dbtech@andrew.com

DECIBEL
Base Station Antennas

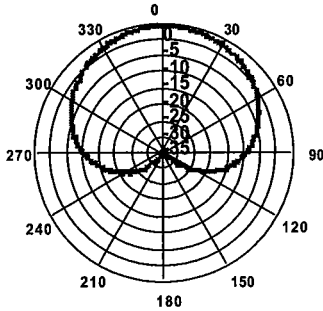
DB844H80E-XY

12.5 dBd, Directed Dipole Antenna
806-896, 870-960 MHz

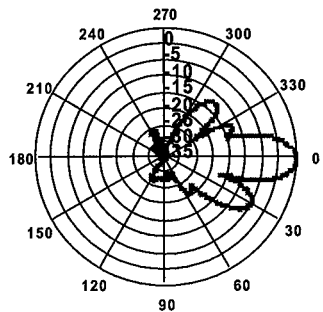
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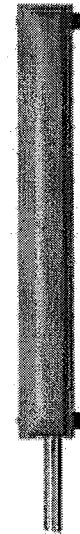
80°



Horizontal 835 MHz (Tilt=0)



Vertical 835 MHz (Tilt=0)



ELECTRICAL

MECHANICAL

Frequency (MHz):	806-896	870-960	Weight:	14 lbs (6.4 kg)
Polarization:	Vertical	Vertical	Dimensions (LxWxD):	48 X 6.5 X 8 in (1219 X 165 X 203 mm)
Gain (dBd/dBi):	12.5/14.6	12.8/14.9	Max. Wind Area:	1.08 ft ² (0.10 m ²)
Azimuth BW:	80°	80°	Max. Wind Load (@ 100mph):	59 lbf (262 N)
Elevation BW:	15°	15°	Max. Wind Speed:	125 mph (201 km/h)
Beam Tilt:	0°	0°	Radiator Material:	Brass
USLS* (dB):	>15	>15	Reflector Material:	Aluminum
Front-to-Back Ratio* (dB):	40	40	Radome Material:	ABS, UV Resistant
VSWR:	<1.5:1	<1.5:1	Mounting Hardware Material:	Galvanized Steel
Impedance:	50 Ohms	50 Ohms	Connector Type:	7-16 DIN - Female (Back)
Max Input Power:	500 Watts	500 Watts	Alt. Connectors:	N Type - Female
Lightning Protection:	DC Ground	DC Ground	Color:	Light Gray
Opt Electrical Tilt:	6°	6°	Standard Mounting Hardware:	DB380 Pipe Mount Kit, included
			Downtilt Mounting Hardware:	DB5083, optional
			Opt. Mounting Hardware:	DB5084-AZ Azimuth Wall Mount



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Date: 4/23/2004
* - Indicates Typical Values

dbtech@andrew.com

General Power Density

Site Name: Colchester
 Tower Height: 220 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 ²)	Maximum Permissible Exposure (mW/cm ²)	Fraction of MPE (%)
Verizon	880	9	200	1800	220	0.0134	0.56733	2.36%
Verizon	1900	3	255	765	220	0.0057	1	0.57%
Total Percentage of Maximum Permissible Exposure								2.93%

*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/cm² = milliwatts per square centimeter
 ERP = Effective Radiated Power
 Absolute worst case scenario, maximum values used.

