# ROBINSON & COLEIIP

KENNETH C. BALDWIN

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

# ORIGINAL

April 19, 2006

Michael Perrone Siting Analyst Connecticut Siting Council Ten Franklin Square New Britain, CT 06051

Re: Cellco Partnership d/b/a Verizon Wireless Wireless Telecommunications Facility American School for the Deaf 139 North Main Street, West Hartford, CT



Dear Mr. Perrone:

This letter will confirm our telephone conversation of earlier today regarding the existing Verizon Wireless telecommunications facility at the American School for the Deaf, 139 North Main Street, West Hartford, Connecticut.

As we discussed, this site was originally approved by the Siting Council in Petition No. 307 in 1993. In 2004, the Council approved a modification to the facility authorizing the replacement of three of the six cellular antennas with three PCS antennas (EM-VER-155-040708).

Recently, we discovered that the antenna height referenced in the 1993 petition was incorrect. In that petition and in subsequent filings with the Council, Verizon Wireless represented that the height of its antennas on the copula were 62 feet for the cellular antennas and 66 feet for the PCS antennas. A more accurate survey of the cupola has recently been completed. The Verizon Wireless cellular antennas are actually at the 71 foot level and the PCS antennas are at the 76 foot level. These antennas have not moved since the 1993 approval. The height at which they are located was simply incorrectly stated in the original submission. Those same incorrect antenna heights were simply carried forward in subsequent filings.



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### ROBINSON & COLEIIP

Michael Perrone April 19, 2006 Page 2

In addition, since its July 8, 2004 Exempt Modification filing, Verizon Wireless has changed the PCS antenna that it intends to use at this location. The Council approved the installation of the BXA-185063-8CF antenna. Verizon Wireless installed the BXA-185085/12CF antenna.

So that the Council's records for this site are accurate, I have attached copies of the antenna specifications for the correct PCS antenna attached to the cupola and a revised power density calculation table that accurately reflects the height of the cellular and PCS antennas. As we discussed, because the antennas are higher than we had originally thought, the power density emission levels have actually decreased.

I apologize for this confusion and thank you for your assistance in clarifying these points. If you need any additional information from me regarding this facility, please do not hesitate to contact me.

Sincerely,

Kenneth C. Baldwin

KCB/kj

Copy to: Alexandria M. Carter

Maria Montrose



### Mechanical specifications

	Length	1840	mm	72.44	in
	Width	154	mm	6.06	in
	Depth	105	mm	4.13	in
4)	Weight	5.897	kg	13	lbs
	Wind Area				

Front 0.283 m<sup>2</sup> 3.05 ft<sup>2</sup> Side 0.195 m<sup>2</sup> 2.1 ft2

Rated Wind Velocity (Safety factor 2.0)

>237 km/hr >148 mph

Wind load @ 100 mph (161 km/hr)

Front 460 N 103.4 lbs Side 372 N 83.5 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

### **Mounting & Downtilting:**

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

### **Electrical specifications**

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector	NE, E-DIN
1) VSWR	≤1.4:1
Polarization	Slant ± 45°
1) Isolation Between Ports	< -30 dB
1) Gain	18 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	85°
E-Plane	5°
1) Electrical Downtilt	0°
1) Null Fill	5%
Lightning Protection	Direct Ground

#### Patented Dipole Design: U.S. Patent No. 6,597,324 B2

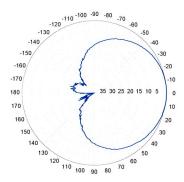
1) Typical Values

improvements to mechanical and/or electrical performance of the antenna may be made without notice.

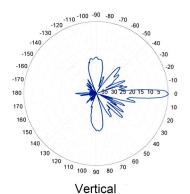
# BXA-185085/12CF

When ordering, replace "\_\_\_" with connector type.

### Radiation-pattern<sup>1)</sup>

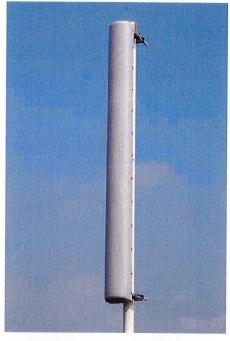


Horizontal



Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.





Amphenol Antel's **Exclusive 3T (True Transmission Line** Technology) Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

1850-1990 MHz



Power Rating limited by connector only.
 NE indicates an elongated N Connector.

E-DIN indicates an elongated DIN Connector.

<sup>&</sup>lt;sup>4)</sup> The antenna weight listed above does not include the

Site Name: W Hartford W, CT Tower Height: 76 & 71 ft rad center

27.34%				posure	nissible Ex	mum Pern	<b>Cotal Percentage of Maximum Permissible Exposure</b>	Total Percen
5.32%	1.0	0.0532	76	855	285	ω	1900	Verizon PCS
22.01%	0.5833	0.1284	71	1800	200	9	875	Verizon
(%)	(mW/cm^2)	(mW/cm^2)	(feet)	(watts)	(watts)		(MHz)	
TEEN:	Maximum Permissable Exposure	Caleubitei Lower Thensik	Distance (o Targe)	TotalibiRP	BRP Per Trans	Number of Trans.	Operating Frequency	Operator

\*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^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.





# 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.ct.gov/csc

August 13, 2004

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

RE: **EM-VER-155-040708** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 139 North Main Street, West Hartford, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on August 12, 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 July 8, 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.

Pamela B. Katz, P.E.

Chairman

PBK/cm

c: Honorable Jonathan Harris, Mayor, Town of West Hartford Mila Limson, Town Planner, Town of West Hartford



# **ROBINSON & COLE**

EM-VER-155-040708

KENNETH C. BALDWIN

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

July 8, 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 American School for the Deaf, 139 North Main Street Telecommunications Facility West Hartford, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the American School for the Deaf, 139 North Main Street in West Hartford. This facility consists of six (6) panel-type cellular antennas attached to the building cupola; three antennas at 62 feet above ground level ("AGL") and three antennas at 66 feet AGL. Equipment associated with the antenna is located inside the school building.

The Connecticut Siting Council ("the Council") approved this facility on September 23, 1993, in Petition No. 307. Cellco now intends to modify its facility by replacing the existing antennas with three (3) new cellular antennas at 62 feet AGL and three (3) PCS antennas at 66 feet AGL. Attached behind Tab 1 are specifications for the existing cellular antennas and the proposed cellular and PCS antennas for the North Main 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 West Hartford Town Manager, Barry M. Feldman.

As the Council knows, on May 23, 2003, Cellco acquired, from Northcoast Communications, a license to provide PCS service throughout Connecticut. The



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### ROBINSON & COLE LLP

S. Derek Phelps July 8, 2004 Page 2

proposed modifications to the North Main Street facility will allow Cellco to provide its customers in the West Hartford area with enhanced wireless voice and data services.

The planned modifications to the North Main Street facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(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 attached to the building cupola at the same height and location as the existing antennas.
- 2. The proposed modifications will not affect associated equipment areas 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 <u>Tab 2</u> is a 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

KCB/kmd Enclosures

cc: Barry M. Feldman, West Hartford Town Manager Sandy M. Carter



# Wideband 120° Sector Antennas

### 820-960 MHz

### PD10188 10.5 dBd Gain AMPS/TACS PD10189 13.5 dBd Gain AMPS/TACS

These panel antennas have been specifically designed for low density, three sector AMPS/TACS cell sites and where AMPS/TACS/GSM systems are combined into a single antenna. Their wide bandwidth allows their use for transmit, receive and full duplex applications. Both feature a side-fed dipole design and low loss air dielectric strip-line feed. All aluminum alloy components are irridited and all screws are double secured stainless steel to eliminate non-linear joints. A high impact, low loss, UV stabilized radome protects radiating elements from environmental hazards.

Slim profile

Aesthetically pleasing, can be painted to blend with architecture.\*

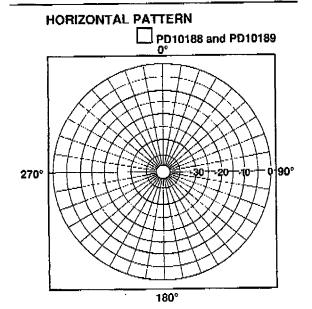
Weathertight radome

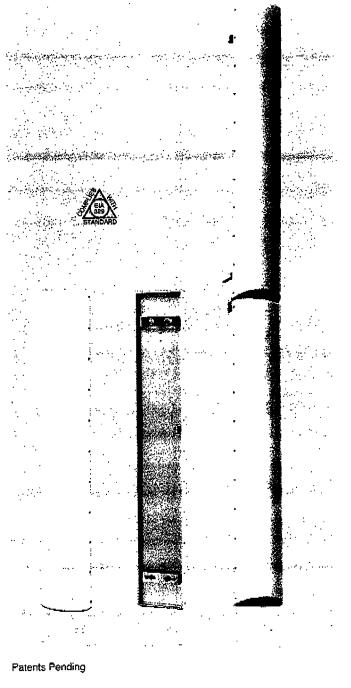
Protects radiating elements from environment, minimizes pattern distortion due to ice build-up.

Irridited components

Inhibits corrosion.

\*Contact our Sales Engineering department for painting instructions.



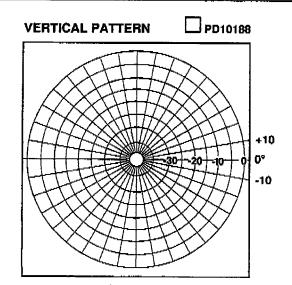


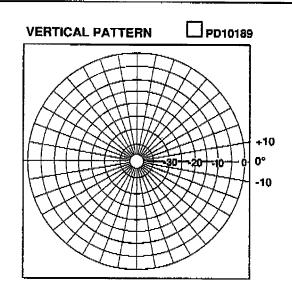
CELWAVE DIVISION OF RADIO FREQUENCY SYSTEMS

Route 79, Mariboro, NJ 07746 • Tel. (908)462-1880 • (800)321-4700 • FAX (908)462-6919

# Wideband 120° Sector Antennas

ELECTRICAL SPECIFICATIONS	PD10188	~ PD10189
Frequency Range - MHz	820-960	820-960
Gain - d8d	10.5	13.5
Bandwidth - MHz for 1.5:1 VSWR	140	140
Horizontal Beamwidth 1/2 Power Points	120°	120°
Vertical Beamwidth 1/2 Power Points	14°	7°
Maximum Power Input - Watts	500	500
Front-to-Back Ratio - dBd	20	20
Lighting Protection	Direct Ground	Direct Ground
Termination - Direct	N-female	N-female
Note: All VSWR data referenced to 50 Ohi	ns.	
MECHANICAL SPECIFICATIONS	PD10188	PD10189
Width - in. (mm)	7.625 (194)	7.625 (194)
leight - in. (mm)	48.5 (1232)	98 (2489)
Depth - in. (mm)	5.0 (127)	5.0 (127)
Weight - Ibs. (kg)	22 (10)	46 (20.8)
Radiating Element Material	Irridited Aluminum Alloy	Irridited Aluminum Alloy
Radome Material	UV Stabilized High Impact ABS Plastic	UV Stabilized High Impact ABS Plastic
Reflector Material	5052-H32 Irridited Aluminum	5052-H32 Irridited Aluminum
Wind Loading Area Flat Plate Equivalent - ft.º (m²)	2.57 (.239)	5.19 (.482)
Rated Wind Velocity - mph (km/hr)	100 (161)	100 (161)
ateral Thrust at 100 mph - lbs. (kg)	68.5 (31.1)	138.4 (62.8)
orsional Moment at 100 mph v/std. Mounting - ft./lbs (m/kg)	15.87 (2.19)	32.06 (4.43)
Nounting Hardware - Supplied	PD1253 Clamp Set Fits Support Pipe 1-3/4	in. (44 mm) to 4 in. (102 mm) Outer Diameter
Shipping Mode	UPS	Common Carrier or UPS (Must Specify "Unassembled" for UPS)







Route 79, Mariboro, NJ 07746 • Tel. (908)462-1880 • (800)321-4700 • FAX (908)462-6919

# Slant +/- 45° Dual Polarized, Panel 90° / 11 dBd

# **BXA-80090/4CF**

When ordering, replace "\_\_\_" with connector type.

### Mechanical specifications

Lengt	h	1205	mm	47	.4 in
147:30		005			
Width		205	mm	8	.1 in
Depth		145	mm	5	.7 in
		=			
4) Weigh	nt	5.4	kg	12	.0 lbs
Wind	Area				9

		ï													í												
																							2				
		ì													ï								ı				

### Rated Wind Velocity (Safety factor 2.0)

>679 km/hr >422 mph

Wind load @ 100 mph (161 km/hr)

Front 362 N 81.4 lbs Side 264 N 59.4 lbs

Antenna consisting of aluminum alloy with brass feed-lines covered by a UV safe fiberglass radome.

#### Mounting & Downtilting:

Mounting brackets attach to a pipe diameter of Ø50-160 mm (2.0-6.3 in).

Mounting bracket kit #36210002 Downtilt bracket kit #36114003

### **Electrical specifications**

	Frequency Range	806-900 MHz*
	Impedance	50Ω
3)	Connector	NE, E-DIN
1)	VSWR	≤1.4:1
	Polarization	Slant ± 45°
1)	Isolation Between Ports	<-30 dB
1)	Gain	11 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	90°
	E-Plane	15°
1)	Electrical Downtilt	0.
1)	Null Fill	5%
	Lightning Protection	Direct Ground

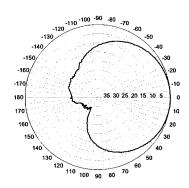
\*Also available up to 960 MHz. Consult your sales director for more information.

## Patented Dipole Design: U.S. Patent No. 6,608,600 B2

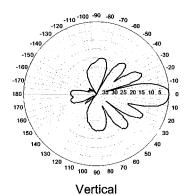
<sup>0</sup>Typical Values

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

### Radiation-pattern<sup>1)</sup>

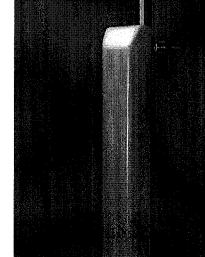


Horizontal



Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.





Amphenol Antel's **Exclusive 3T (True Transmission Line** Technology) Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

806-960 MHz



Power Rating limited by connector only, NE indicates an elongated N Connector,

E-DIN indicates an elongated DIN Connector.
The antenna weight listed above does not include the bracket weight.

### Slant +/- 45° Dual Polarized, Panel 63° / 18.5 dBi

### **Mechanical specifications**

	Length 1	278	mm	50.32	in
	Width	154	mm	6,06	in
	Depth	80	mm	3.15	in
4)	Weight	4.5	kg	10.0	lbs
	Wind Area				
		197 102		2.12 1.10	ft <sup>2</sup>
	Side. U.	. 102	(11	1.10	11

Rated Wind Velocity (Safety factor 2.0)

>321.9 km/hr >200 mph

Wind load @ 100 mph (161 km/hr)

Front 298 N 67 lbs Side 175 N 39 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

#### **Mounting & Downtilting:**

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket klt #26799999

The downtilt bracket kit includes the mounting bracket kit.

### Electrical specifications

Frequency Rang	e 1850-1990 MHz
Impedance	50Ω
3) Connector	NE, E-DIN
1) VSWR	≤1.4:1
Polarization	Slant ± 45°
1) Isolation Between	n Ports < -30 dB
1) Gain	18.5 dBi
2) Power Rating	250 W
1) Half Power Angl	9 ( 18 ) ( 18 ) ( 18 )
H-Plane	63°
E-Plane	7°
1) Electrical Downti	lt 0°
1) Null Fill	5%
Lightning Protec	tion Direct Ground

Patented Dipole Design: U.S. Patent No. 6,597,324 B2

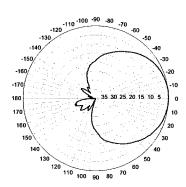
bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

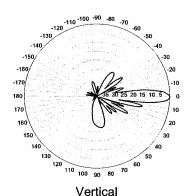
# **BXA-185063/8CF**

When ordering, replace "\_\_\_\_" with connector type.

### Radiation-pattern<sup>1)</sup>



Horizontal

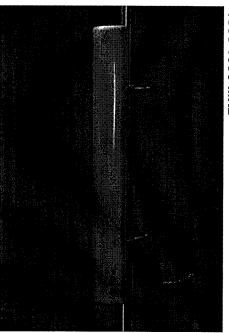


Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.

CF Denotes a Center-Fed Connector.

1850-1990 MHz





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Antenna available with center-fed connector only.



<sup>&</sup>lt;sup>1)</sup>Typical Values

<sup>&</sup>lt;sup>2)</sup>Power Rating limited by connector only.

<sup>&</sup>quot;NE indicates an elongated N Connector.

E-DIN indicates an elongated DIN Connector.

The antenna weight listed above does not include the

West Hartford West, CT Site Name:

Tower Height: 62/66 ft rad center

34.02%				posure	imum Permissible Exposure	mum Pern	otal Percentage of Maxi	<b>Total Percen</b>
4.95%	1 1	0.0495	99	009	200	က	1900	Verizon
29.07%	0.5793 2	0.1684	62	1800	200	6	869	Verizon
(%)	(mW/cm^2)	(mW/cm^2) (mW/cm^2)	(feet)	(watts)	(watts)		(MHz)	
action of MPE	Maximum Fr. Permissable Exposure*	Calculated Power: Density	Distance to Target	Total ERP	f ERP Per Trans.	Number of Trans.	Operating Frequency	Operator

\*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>^</sup>2 = milliwatts per square centimeter ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.

