

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@ct.gov

www.ct.gov/csc

November 7, 2011

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

RE: **EM-VER-047-111020** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at Chamberlain Road, East Windsor, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated October 19, 2011. 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. Please be advised that the validity of this action shall expire one year from the date of this letter. 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. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts
Executive Director

LR/CDM/laf

c: The Honorable Denise Sabotka Menard, First Selectman, Town of East Windsor
Laurie Whitten, Town Planner, Town of East Windsor
Crop Production Services

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

ORIGINAL

October 19, 2011

RECEIVED
 OCT 20 2011
 CONNECTICUT
 SITING COUNCIL

Linda Roberts
 Executive Director
 Connecticut Siting Council
 10 Franklin Square
 New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification
 Chamberlain Road, East Windsor, Connecticut**

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains fifteen (15) wireless telecommunications antennas on the existing water tank at 15 Chamberlain Road in the Broad Brook section of East Windsor, Connecticut (the “Broad Brook Facility”). On February 14, 2011, the Council approved Notice of Exempt Modification EM-VER-047-110126, calling for the replacement of all of Cellco’s antennas at the Broad Brook Facility. Since that time, Cellco has decided to utilize a different cellular antenna model and will install six (6) model APL868013-42T0 cellular antennas at the Broad Brook Facility. Attached behind Tab 1 are the specifications for the new cellular antennas.



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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 Denise Menard, First Selectman for the Town of East Windsor. Pursuant to a Council directive, a copy of this letter is also being sent to Crop Production Services, Inc., the owner of the property on which the water tank is located.

The planned modifications to the 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 height of the water tank or a change in Cellco’s antenna centerline height.

Linda Roberts
October 19, 2011
Page 2

2. The proposed modifications will not involve any changes to ground equipment and therefore, will not require extension of the site boundary.

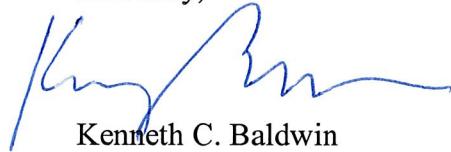
3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The proposed cellular antenna model change will not result in an increase in radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. An updated worst-case power density table for the Broad Brook Facility is included behind Tab 2.

Also attached is a Structural Letter confirming that the water tank can support Cellco's antennas, identifying the new cellular antenna model. (See Tab 3).

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Denise Menard, East Windsor First Selectman

Crop Production Services, Inc.

Sandy M. Carter



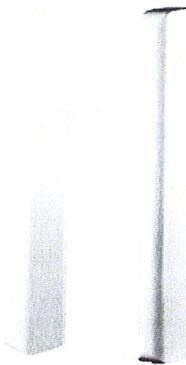
Maximizer® Log Periodic Antenna, 806-894, 80deg, 14.1dBi, 1.2m, FET, 0deg

Product Description

The Celwave® Maximizer series is a log periodic dipole array which uses a patented design to achieve a front-to-back ratio of 45 dB, the highest front-to-back ratio in the industry. Maximizers are available to cover ESMR, AMPS, PCS and DCS frequency ranges. They use RFS's patented monolithic CELlite® technology, which eliminates cable and soldered joints to reduce the possibility of inter-modulation products. The CELlite technology assures high reliability and excellent repeatability of electrical characteristics. The cellular Maximizers are available in 65°, 80° and 90° horizontal beamwidths and the PCS/DCS Maximizers are available in 65° and 90° horizontal beamwidths. Patent number 6,133,889.

Features/Benefits

- 45 dB front-to-back ratio reduces co-channel interference.
- Monolithic construction reduces IM.
- No solder joints, high reliability.
- Surface treated components prevent galvanic corrosion.
- UV stabilized radome assures long life without radome deterioration due to UV exposure.



Technical Specifications

Electrical Specifications

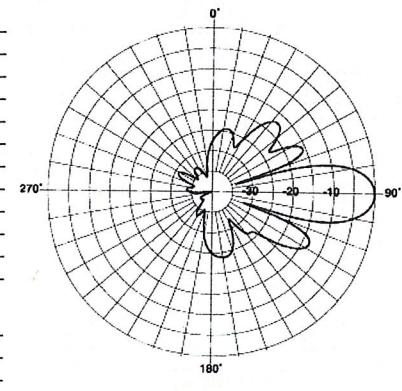
Frequency Range, MHz	806-894
Horizontal Beamwidth, deg	80
Vertical Beamwidth, deg	15
Electrical Downtilt, deg	0
Gain, dBi (dBd)	14.1 (12)
Front-To-Back Ratio, dB	45
Polarization	Vertical
VSWR	< 1.5:1
Impedance, Ohms	50
Maximum Power Input, W	500
Lightning Protection	Direct Ground
Connector Type	7-16 DIN Female

Mechanical Specifications

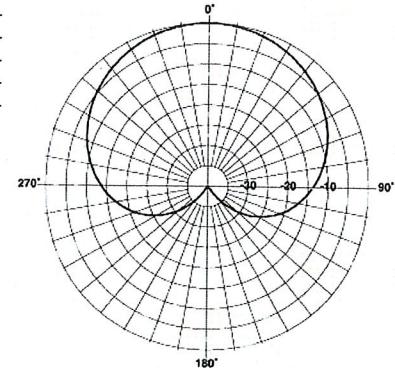
Dimensions - HxWxD, mm (in)	1219 x 152 x 203 (48 x 6 x 8)
Weight w/o Mtg Hardware, kg (lb)	2.8 (6.32)
Survival Wind Speed, km/h (mph)	200 (125)
Rated Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m ² (ft ²)	0.307 (3.3)
Maximum Thrust @ Rated Wind, N (lbf)	916 (206)
Wind Load - Side @ Rated Wind, N (lbf)	743 (167)
Radome Material	UV Stabilized High Impact ABS
Shipping Weight, kg (lb)	7.9 (17.5)
Packing Dimensions, HxWxD, mm (in)	1270 x 305 x 203 (50 x 12 x 8)

Ordering Information

Mounting Hardware	APM21-3
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Vertical Pattern



Horizontal Pattern

Other Documentation

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Product Description

The ShareLite FD9R6004 Series of diplexers are designed to enable feeder sharing between systems in the 698-960 MHz range and in the 1710-2200 MHz range. The diplexer is equipped with in-line connector placement so it can be installed in the BTS cabinet or at the tower top. This is especially valuable in crowded sites or when the feeders are not easily accessible. Due to its wideband design, the FD9R6004 Series can accommodate many combining solutions between 698-960 MHz and 1710-2200 MHz systems such as LTE 700 MHz, Cellular 800 MHz with PCS, GSM900 with GSM1800, or GSM900 with UMTS. This diplexer features a highly selective filter. It provides a high level of isolation between ports, while keeping the insertion loss on both paths at an extremely low level. The FD9R6004 diplexers are available with various DC pass options, helpful in configurations with or without the Tower Mount Amplifiers installed.



Features/Benefits

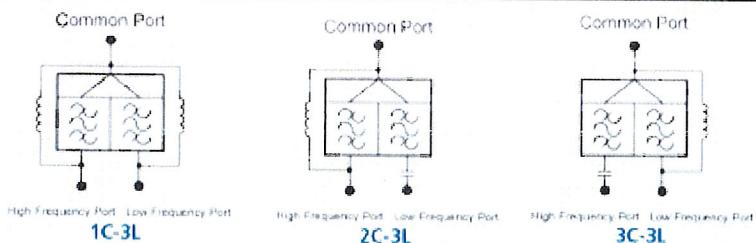
- LTE ready design
- Extremely Low Insertion Loss
- High level of Rejection between bands – Protection against interferences
- Extremely High Power Handling Capability
- Integrated DC block/bypass versions available
- Very compact & small size design – Easy installation and reduced tower load
- In-line long-neck connectors for easy connection & waterproofing
- Exceptional reliability & environmental protection (IP 67)
- Equipped with 1 * Breathable Vent – Prevent any humidity inside the product
- Mounting hardware for Wall and Pole mount provided (P/N SEM2-1A)
- Grounding already provided through the mounting bracket
- Kit available for easy dual mount

Technical Specifications

Product Type	Diplexer/Cross Band Coupler
Frequency Band, MHz	698-2200
Configuration	Sharelite Single diplexer, outdoor, DC pass in the 1710-2170MHz path, with mounting hardware SEM2-1A
Mounting	Wall Mounting: With 4 screws (maximum 6mm diameter); Pole Mounting: With included clamp set 40-110mm (1.57-4.33)
Frequency Range Low Frequency Path, MHz	698-960
Frequency Range High Frequency Path, MHz	1710-2200
Return Loss All Ports Min/Typ, dB	19/23
Power Handling Continuous, Max, W	1250 at common port; 750 in low frequency path & 500 in high frequency path
Power Handling Peak, Max, W	15000 in low frequency path & 8000 in high frequency path
Impedance, Ohms	50
Insertion Loss 698-960 MHz Path, Typ, dB	0.07
Insertion Loss 1710-2200MHz path, Typ, dB	0.13
Rejection Between Bands Min/Typ, dB	58/64@698-960MHz; 60/70@1710-2200MHz
IMP Level at the COM Port, Typ, dBm	-112 @ 2x43
DC Pass in Low Frequency Path	No
DC Pass in High Frequency Path	Yes
Temperature Range, °C (°F)	-40 to +60 (-40 to +140)
Environmental	ETSI 300-019-2-4 Class 4.1E
Ingress Protection	IP 67
Lightning Protection	EN/IEC61000-4-5 Level 4
Connectors	In-line long-neck 7-16-Female
Weight, kg (lb)	1.2 (2.6)
Shipping Weight, kg (lb)	3.2 (7) for 2 * single units in 1 * box, 9.8 (21.6) for 6 * units = 3 * Boxes in 1 * overwrap
Application	LTE 700MHz, GSM900/3G/UMTS, GSM900/GSM1800, Cellular 800/PCS
Dimensions, H x W x D, mm (in)	147 x 164 x 37 (5.8 x 6.5 x 1.5)
Shipping Dimensions, H x W x D, mm (in)	254 x 406 x 82 (10 x 16 x 3.2) for 2 * Single Units in 1 * box, 280 x 406 x 241 (11 x 16 x 9.5) for 6 * units = 3 * Boxes in 1 * overwrap
Volume, L	0.43
Housing	Aluminum
Notes	

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Selection Guide Diplexer 698-960 / 1710-2200MHz					
	Model Number	Full DC Pass	DC Pass High Band	DC Pass Low Band	Mounting Hardware Included
Single	FD9R6004/1C-3L				X
	FD9R6004/2C-3L				X
	FD9R6004/3C-3L				X
Dual	KIT-FD9R6004/1C-DL				X
	KIT-FD9R6004/2C-DL				X
	KIT-FD9R6004/3C-DL				X



The FD9R6004 Series is upgradeable to a Dual Diplexer kit by means of 2 diplexers and mounting hardware kits SEM2-1A and SEM2-3

Mounting Hardware and Ground Cable Ordering Information

Model Number	Description	Image
SEM2-1A	Mounting Hardware, Pole mount ø40-110mm (Included with the Single and Dual Diplexer) Wall Screws M6 (Not included with the product)	
SEM2-3	Assembly kit for 2 pcs of FT9DW/xC-3L (Can be ordered separately but included with the Dual Diplexer Kit)	
CA020-2	Ground Cable, 2m, includes lugs (Optional)	
CA030-2	Ground Cable, 2m, includes lugs (Optional)	
SEM6	Mounting Hardware for 6 Diplexers, Tower Base (Optional)	

Site Name: Broadbrook		General	Power	Density				
Tower Height: Verizon @ 116FT								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*Sprint			104	0.1655	1962.5	1.0000	16.55%	
*Pocket	3	631	106.58	0.0599	2130	1.0000	5.99%	
Verizon	3	394	116	0.0316	1970	1.0000	3.16%	
Verizon	9	287	116	0.0690	869	0.5793	11.91%	
Verizon	1	698	116	0.01865171	757	0.497333	3.75%	41.37%

July 22, 2011

Mr. Tom Nolan
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Re: Structural Certification Letter ~ LTE Antenna Upgrade

*Verizon Wireless Site Ref ~ Broadbrook
15 Chamberlain Road
East Windsor, CT 06016*

Centek Project No. 11001.CO4 Rev. 3

Dear Mr. Nolan,

Centek Engineering Inc., has reviewed the proposed Verizon Wireless antenna upgrade at the above referenced site. The purpose of the review is to determine the structural adequacy of existing 124-ft AGL water tank structure to support the proposed modified antenna configuration. The existing installation consists of five (5) antenna pipe mounts per sector (total of fifteen) welded to the side of the existing water tank. The review considered the effects of wind load, dead load, ice load and seismic forces in accordance with TIA/EIA-222-F and the 2005 Connecticut State Building Code as amended by the 2009 Connecticut State Supplement. Visual verification of the existing antenna mount installation was conducted from grade by Centek personnel on January 18, 2011. Refer to Centek drawing C-1 marked Rev.B, dated 5/19/11 for mounting configuration.

The existing and proposed loads considered in this analysis consist of the following:

- SPRINT (Existing/Reserved)
Antennas: Nine (9) panel antennas mounted to the existing water tank handrail with a RAD center elevation of 106-ft +/- AGL.
Coax Cables: Nine (9) 1-5/8" dia. coax cables vertically supported off the leg of the existing water tank structure.
- MISC(Existing)
GPS: One (1) GPS antenna mounted to the structure with a RAD center elevation of 35-ft +/- AGL and (1) GPS antenna mounted to the water tank leg with a RAD center elevation of 77-ft +/- AGL.
Coax Cables: Two (2) 1/2" dia. coax cables (estimated) vertically supported off the leg of the existing water tank structure.
- Pocket (Existing)
Antennas: Three (3) RFS APXV18-206417S-C panel antennas pipe mounted to the existing water tank handrail with RAD center elevation of 106-ft +/- AGL.
Coax Cables: Six (6) 1-5/8" dia coaxial cables vertically supported off the leg of the existing water tank structure.
- Verizon (Existing to Remain):
Coax: Fifteen (15) 1-5/8-in dia coaxial cables vertically supported off the leg/face of the existing water tank structure.
- Verizon (Existing to Remove):
Antennas: Nine (9) Swedcom ALP9212 and six (6) Decibel 948F85T2E-M_2 panel antennas mounted to the existing antenna pipe mounts on the side of the water tank with a RAD center elevation of 116-ft +/- AGL.

- **Verizon (Proposed):**

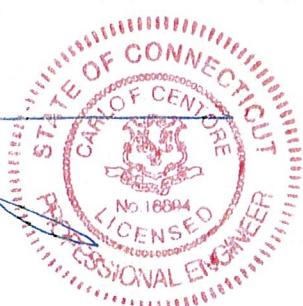
Antennas: Six (6) RFS APL868013-42T0 panel antennas, six (6) LPA-185080/8CF_2 panel antennas, three (3) BXA-70063/6CF panel antennas and three (3) RFS FD9R6004/2C-3L Diplexers mounted to the existing antenna mount pipes on the side of the water tank with a RAD center elevation of 116-ft +/- AGL.

The proposed antenna installation meets the requirements of the TIA/EIA-222-F Standard considering the basic wind speed (fastest mile) of 80 mph for Hartford County which controls over the 2005 Connecticut State Building Code basic wind speed (fastest mile) of 77.5 mph for East Windsor (equivalent to 95 mph 3-second gust wind speed as required in Appendix K of the Connecticut supplement per Table 1609.3). Our findings are based on the assumption that all structural members and appurtenances were properly designed, detailed, fabricated, installed and have been properly maintained since erection.

In conclusion, the proposed Verizon Wireless antenna upgrade will not negatively impact the structural integrity of the existing water tank. If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:


Carlo F. Centore, PE
Principal ~ Structural Engineer



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Hartford, CT 06103-3597
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September 20, 2011

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SEP 21 2011

CONNECTICUT
SITING COUNCIL

Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Completion of Construction Activity**
EM-VER-088-100105 – 585 South Main Street, Naugatuck, Connecticut
EM-VER-013-110408 – 131 Gifford Lane, Bozrah, Connecticut
EM-VER-059-110415 – 68 Groton Long Point, Groton, Connecticut
EM-VER-152-110613 – 45 Fargo Road, Waterford, Connecticut
EM-VER-137-110415 – 86 Volunteer Road, Stonington, Connecticut
✓ **EM-VER-047-110126 – 15 Chamberlain Road, East Windsor, Connecticut**
EM-VER-006-100107 – 60 Rice Lane, Beacon Falls, Connecticut
EM-VER-008-100127 – 719 Amity Road, Bethany, Connecticut

Dear Ms. Roberts:

The purpose of this letter is to notify the Council that construction activity associated with the above-referenced facility modifications have been completed.



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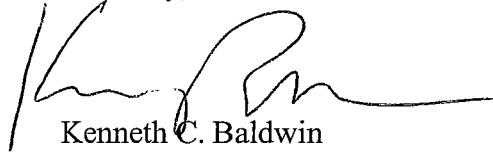
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Sincerely,

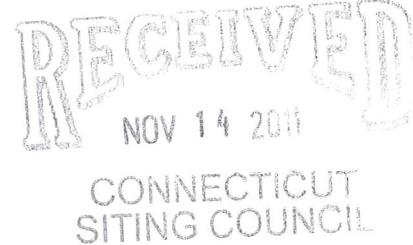

Kenneth C. Baldwin

Copy to:
Sandy M. Carter

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Hartford, CT 06103-3597
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kbaldwin@rc.com
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ORIGINAL

November 10, 2011



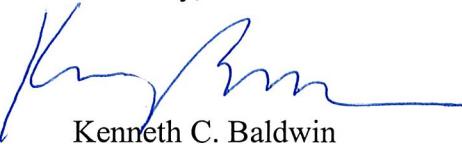
Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Completion of Construction Activity
EM-VER-047-111020 – Chamberlain Road, East Windsor, CT**

Dear Ms. Roberts:

The purpose of this letter is to notify the Council that construction activity associated with the above-referenced facility modifications has been completed. If you have any questions or need any additional information regarding any of these facilities, please do not hesitate to contact me.

Sincerely,



A handwritten signature in blue ink, appearing to read "Ken Baldwin".

Kenneth C. Baldwin

Copy to:

Sandy M. Carter

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