



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

### VIA ELECTRONIC MAIL

June 6, 2019

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597  
[kbaldwin@rc.com](mailto:kbaldwin@rc.com)

RE: **EM-VER-043-180529** - Cellco Partnership, d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 1455 Forbes Street, East Hartford, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) is in receipt of your letter dated June 5, 2019, submitted on behalf of Cellco Partnership d/b/a Verizon Wireless (Verizon), requesting an equipment change and an extension of time to submit a notice of completion of construction and associated post modification inspection report, if applicable, for the above-referenced exempt modification.

The Council hereby grants an extension of time until June 18, 2020, to submit a notice of completion of construction and associated post modification inspection report, if applicable, for the above-referenced exempt modification. Additionally, as specified in your letter dated June 5, 2019, the Council acknowledges the minor project change to install six different model remote radio heads instead of the nine originally acknowledged.

This extension is granted with the understanding that the Council will be notified should Verizon need additional time to submit a notice of completion and associated post modification inspection report, if applicable, or decides not to proceed with construction.

Thank you for your attention to this matter.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/IN/emr



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer

KENNETH C. BALDWIN

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Also admitted in Massachusetts

June 5, 2019

Melanie A. Bachman, Esq.  
Executive Director/Staff Attorney  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: **EM-VER-043-180529– Cellco Partnership d/b/a Verizon Wireless  
1455 Forbes Street, East Hartford, Connecticut**

Dear Ms. Bachman:

On June 18, 2018, the Siting Council acknowledged Cellco's request for modifications to the existing telecommunications facility at 1455 Forbes Street in East Hartford, Connecticut. Cellco has not yet completed the approved modifications at this site. Construction is expected to begin in the later this year. In excess of caution, Cellco now requests an extension of the Council's approval for an additional twelve (12) months, to December 25, 2019.

Additionally, the nine (9) Remote Radio Heads ("RRHs") approved as a part of the May 25, 2018 filing, will not be installed. Cellco will be installing six (6) different model RRHs. Enclosed please find the specification sheet for the new model RRH, an updated General Power Density table and an updated Structural Opinion Letter verifying that the additional RRH modifications described above will satisfy the appropriate structure standards.

If you have any questions please do not hesitate to contact me.

Sincerely,



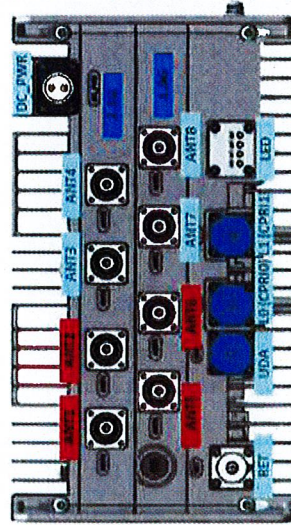
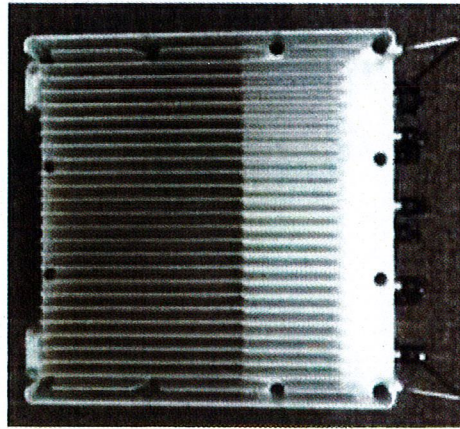
Kenneth C. Baldwin

Enclosures  
Copy to:  
Tim Parks

19450468-v1



# PCS+AWS Dual Band RRH(Model : RFV01U-D1A)

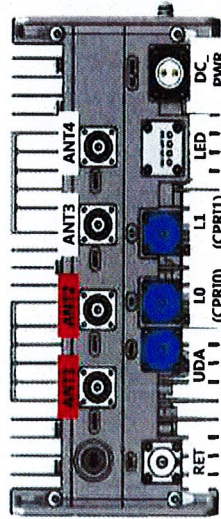
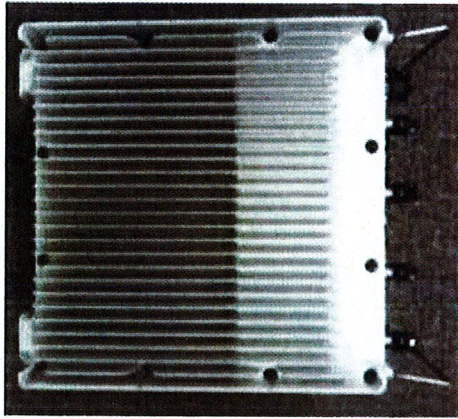


8 port Dual Band

Item	Specification
Band	Band2 (1.9GHz) Band66 (2.1GHz)
Frequency	DL : 1930~1990MHz UL : 1850~1910MHz
IBW	60MHz
OBW	20MHz
Carrier Bandwidth	5MHz, 10MHz, 15MHz, 20MHz
# of carriers	2 carriers
Total # of carriers	4 carriers
RF Chain	4T4R, 2T4R, 2T2R (SW configurable)
RF Output Power	Total : 320W (for OBW 40MHz) 4 x 40W or 2 x 60W 4 x 60W or 2 x 90W
Spectrum Analyzer	TX/RX Support
Noise Figure	Less than 3.0 dB
RX Sensitivity	Typical : -105dBm @1Rx (25RRBs 5MHz)
Modulation	256QAM support
Input Power	-48VDC (-38VDC to -57VDC)
Power Consumption	About 1,270 Watt @ 100% RF load, typical conditions (w/ BAS OOBEx+TMA/RET
Size (WHD)	380 x 380 x 255 mm (15.0" x 15.0" x 10.0") (w/ BAS OOBEx)
Volume	36.8 L
Weight	38.3 kg( 84.4 lb) w/o solar shield(finger guard) & mount bracket 44.2 kg (97.5 lb) with solar shield(finger guard) & mount bracket
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A [B2] : FCC 47 CFR 24.238 [B66] : FCC 47 CFR 27.53 h)
CPRI Cascade	Not supported
Optic Interface	20km, 2_ports (9.8Gbps x 2), SFP, single mode, Duplex
RET & TMA Interface	AISG 2.2
Bias-T	4 ports (2 ports per band) (Max. 49W)
Mounting Options	Pole, wall, tower, side by side, back to back
NB-IoT	Support
PIM Cancellation	Support
# of antenna port	4
External Alarm	4



# 700+850MHz Dual Band RRH(Model : RFV01U-D2A)



Item	Specification
Band	Band13 (700MHz) Band5 (850MHz)
Frequency	DL : 746~756MHz UL : 777~787MHz
IBW	10MHz 25MHz
OBW	10MHz 25MHz
Carrier Bandwidth	10MHz 5MHz, 10MHz
# of carriers	1 carrier 3C
Total # of carriers	4C
RF Chain	4T4R, 2T4R, 2T2R (SW configurable) Total : 320W
RF Output Power	4 x 40W or 2 x 60W 4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support
Noise Figure	Less than 3.0 dB
RX Sensitivity	Typical : -105dBm @1Rx (25RBs 5MHz)
Modulation	256QAM support
Input Power	-48VDC (-38VDC to -57VDC)
Power Consumption	About 1,106Watt @ 100% RF load, typical conditions + TMA/RET 380 x 380 x 207 mm (15.0" x 15.0" x 8.1")
Size (WHD)	
Volume	29.9 L
Weight	31.9 kg(70.3 lb) w/o solar shield(finger guard) & mount bracket 37.2 kg(82.0 lb) with solar shield(finger guard) & mount bracket
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A, 3GPP 36.104 Category A FCC 47 CFR 27.53 c), f) FCC 47 CFR 22.917
CPRI Cascade	Not supported
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP, single mode, Duplex
RET & TMA Interface	AISG 2.2
Bias-T	2 ports (Max. 49W)
Mounting Options	Pole, wall, tower, side by side, back to back
NB-IoT	Support
PIM Cancellation	Support
# of antenna port	4
External Alarm	4

General Power Density

Site Name: Forbes St, CT  
 Cumulative Power Density

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 (%)
VZW PCS	1970	1	6525	6525	111	0.1904	1.0	19.04%
VZW Cellular LTE	869	1	3250	3250	111	0.0949	0.579333333	16.37%
VZW Cellular	869	3	375	1125	111	0.0328	0.579333333	5.67%
VZW AWS	2145	1	6400	6400	111	0.1868	1.0	18.68%
VZW 700	746	1	2825	2825	111	0.0825	0.497333333	16.58%

**Total Percentage of Maximum Permissible Exposure** 76.35%

\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1-1992

MHz = Megahertz  
 mW/cm<sup>2</sup> = milliwatts per square centimeter  
 ERP = Effective Radiated Power

- Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
  2. continuous transmission from all available channels at full power for indefinite time period; and,
  3. all RF energy is assumed to be directed solely to the base of the pole.



Date: May 02, 2019

Denice Nicholson  
Crown Castle  
46 Broadway  
Albany, NY 12204

Paul J. Ford and Company  
250 East Broad st., Suite 600  
Columbus, OH 43215  
(614) 221-6679

**Subject: Structural Opinion Letter**

**Carrier Designation:** Verizon Wireless Co-locate  
Carrier Site Number: 119711  
Carrier Site Name: Forbes ST, CT

**Crown Castle Designation:** Crown Castle BU Number: 806376  
Crown Castle Site Name: HRT 100 943239  
Crown Castle JDE Job Number: 424259  
Crown Castle Work Order Number: 1735202  
Crown Castle Order Number: 378432 Rev. 0

**Engineering Firm Designation:** Paul J. Ford and Company Project Number: 37519-0733.002.7101

**Site Data:** 1455 FORBES STREET, EAST HARTFORD, Hartford County, CT  
Latitude 41° 43' 53.3", Longitude -72° 36' 28"  
131 Foot - Monopole Tower

Dear Denice Nicholson,

Paul J. Ford and Company is pleased to submit this "Structural Opinion Letter" for the structural integrity of the above mentioned monopole.

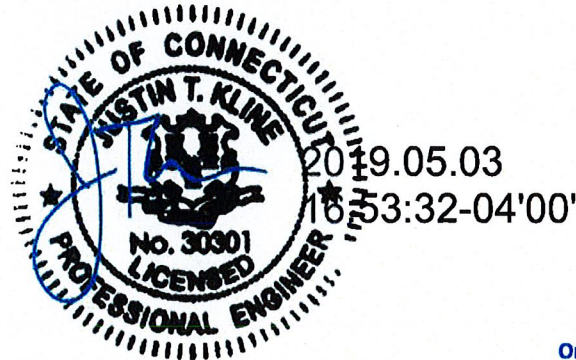
The purpose of the opinion letter is to determine the suitability of the monopole with the proposed, existing, and reserved loading as specified in Tables 1 & 2 on the next page. This opinion is in accordance with the requirements of the 2018 Connecticut State Building Code and Appendix N, an ultimate 3-second gust wind speed of 125 mph with no ice, 30 mph with 2 inch ice thickness and 60 mph under service loads, exposure category C with topographic category 1 and crest height of 0 feet.

Based on a comparison of the previous analysis loads (including wind speeds) from the PJF job number 37519-0733.001.7805, dated 02/27/2019, the current loads, and the proposed loads, we have determined the monopole structure and foundation ARE sufficient for the proposed loading.

We at Paul J. Ford and Company appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

  
Udaykiran Yerra  
Structural Designer  
uyerra@pauljford.com



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**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
107.0	111.0	3	samsung telecommunications	RFV01U-D1A	14	1 5/8
		3	samsung telecommunications	RFV01U-D2A		
		6	andrew	SBNHH-1D65B		
		3	antel	BXA-70063/6CFx4		
		3	antel	BXA-80063/4CF		
		2	rfs celwave	DB-T1-6Z-8AB-0Z		
	107.0	6	rfs celwave	FD9R6004/2C-3L		
		1	tower mounts	Platform Mount (LP 101-1)		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (In)
121.0	121.0	1	tower mounts	T-Arm Mount [TA 601-3]	2 8 6 4	3/8 3/4 1 1/4 Conduits
		1	tower mounts	Side Arm Mount [SO 102-3]		
	120.0	3	ericsson	RRUS 32		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14		
		2	ericsson	RRUS 8843 B2/B66A		
		1	ericsson	RRUS 8843 B2/B66A		
		3	ericsson	RRUS E2 B29		
		3	kathrein	800 10121 w/ Mount Pipe		
		3	kathrein	80010798 w/ Mount Pipe		
		6	kathrein	80010965 w/ Mount Pipe		
		6	powerwave technologies	LGP21401		
	4	raycap	DC6-48-60-18-8F			
99.0	99.0	3	alcatel lucent	800MHz 2X50W RRH W/FILTER	--	--
		3	alcatel lucent	PCS 1900MHz 4x45W-65MHz w/Mount Pipe		
		1	tower mounts	Side Arm Mount [SO 101-3]		
97.0	101.0	1	andrew	VHLP2-18	2 3 3 4	Conduits 5/16 1/2 1 1/4
		1	andrew	VHLP2.5-18		
		2	dragonwave	HORIZON COMPACT		
	98.0	3	alcatel lucent	TD-RRH8x20-25		
		3	argus technologies	LLPX310R-V1 w/ Mount Pipe		
		3	rfs celwave	APXVSPP18-C-A20		
		3	rfs celwave	APXVTM14-ALU-I20		
		3	samsung telecommunications	RRH-2WB		
		3	ericsson	AIR -32 B2A/B66AA w/ Mount Pipe		
97.0	1	motorola	TIMING 2000			
	1	tower mounts	Platform Mount (LP 101-1)			
87.0	87.0	3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	1 1 1 11	7/8 1 3/8 1 5/8 1 1/4
		3	ericsson	KRY 112 144/1		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		3	ericsson	AIR -32 B2A/B66AA w/ Mount Pipe		
		1	tower mounts	T-Arm Mount [TA 602-3]		