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RADIO FREQUENCY EXPOSURE REPORT

LEBANON CENTER

917 EXETER ROAD
LEBANON, CT 06249

November 28, 2017

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the installation of Verizon Wireless antenna arrays on a proposed monopole tower to be located at 917 Exeter Road in Lebanon, CT. The existing Town of Lebanon self-support tower will be removed and all existing antennas will be relocated to the replacement tower. The figure below is an aerial view of the existing and proposed tower locations.

Verizon Wireless is proposing to install the following:

1) Install six quadband 751/875/1900/2100 MHz LTE antennas (two per sector);
2) Install twelve remote radio units (RRUs) for 751/875/1900/2100 MHz LTE (four RRUs per sector).

Figure 1: Aerial View of Existing & Proposed Tower Locations

Site Address	917 Exeter Rd, Lebanon, CT
Latitude	41° 37' 18.19" N
Longitude	72° 14' 14.22" W
Site Elevation AMSL	502'
751 MHz License Information	WQJQ689
875 MHz License Information	KNKA745
1900 MHz License Information	KNLH263
2100 MHz License Information	WQGD494/WQGA906
Name of Individual Conducting Survey	Marc Salas
Date and Time of Survey	2/1/2017; 11:00AM – 1:30PM

Table 1: Site Specific Data

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment provided they are fully aware of the potential for exposure, and are able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels considered acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. Measurement Procedure

Frequencies from 300 KHz to 50 GHz were measured using the Narda Probe EA 5091, E-Field, shaped, FCC probe in conjunction with the NBM550 survey meter. The EA 5091 probe is "shaped" such that in a mixed signal environment (i.e.: more than one frequency band is used in a particular location), it accurately measures the percent of MPE.

From FCC OET Bulletin No. 65 - Edition 97-01 – "A useful characteristic of broadband probes used in multiple-frequency RF environments is a frequency-dependent response that corresponds to the variation in MPE limits with frequency. Broadband probes having such a "shaped" response permit direct assessment of compliance at sites where RF fields result from antennas transmitting over a wide range of frequencies. Such probes can express the composite RF field as a percentage of the applicable MPEs".

Probe Description - As suggested in FCC OET Bulletin No. 65 - Edition 97-01, the response of the measurement instrument should be essentially isotropic, (i.e., independent of orientation or rotation angle of the probe). For this reason, the Narda EA 5091 probe was used for these measurements.

Sampling Description - At each measurement location, a spatially averaged measurement is collected over the height of an average human body. The NBM550 survey meter performs a time average measurement while the user slowly moves the probe over a distance range of 20 cm to 200 cm (about 6 feet) above ground level. The results recorded at each measurement location include average values over the spatial distance.

Instrumentation Information - A summary of specifications for the equipment used is provided in the table below.

Manufacturer	Narda Microwave			
Probe	EA 5091, Serial# 01162			
Calibration Date	December 2016			
Calibration Interval	24 Months			
Meter	NBM550, Serial# F-0147			
Calibration Date	December 2016			
Calibration Interval	24 Months			
Probe Specifications	**Frequency Range**	**Field Measured**	**Standard**	**Measurement Range**
	300 KHz-50 GHz	Electric Field	U.S. FCC 1997 Occupational/Controlled	0.2 – 600 % of Standard

Table 2: Instrumentation Information

Instrument Measurement Uncertainty - The total measurement uncertainty of the NARDA measurement probe and meter is no greater than ±3 dB (0.5% to 6%), ±1 dB (6% to 100%), ±2 dB (100% to 600%). The factors which contribute to this include the probe's frequency response deviation, calibration uncertainty, ellipse ratio, and isotropic response[1]. Every effort is taken to reduce the overall uncertainty during measurement collection including pointing the probe directly at the likely highest source of emissions.

[1] For further details, please refer to Narda Safety Test Solutions NBM550 Probe Specifications, pg. 69
http://www.narda-sts.us/pdf_files/DataSheets/NBM-Probes_DataSheet.pdf

4. RF Exposure Prediction Methods

The emission field calculation results were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{EIRP}{\pi \times R^2} \right) \text{x Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{\left(H^2 + V^2\right)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 2.0

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final site configuration.

The percent of MPE values presented in this report reflect levels that one may encounter from one sector of Verizon's antennas. Most carriers use 3 sectors per site with azimuths approximately 120 degrees apart, therefore one could not be standing in the main beam of all 3 sectors at the same time.

5. Proposed Antenna Inventory

The table below lists the planned Verizon Wireless and Town of Lebanon antenna configurations for the site. The parameters listed in Table 3 were used for the calculated values shown in Table 4.

Operator	Sector/ Azimuth	TX Freq. (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha/ 90	751	120	14.5	3382	JAHH-65B-R3B_2_1	67	0	6.0	140.0
		2100	180	18.5	12743		65			
		875	160	15.8	6083	JAHH-65B-R3B_2_1	65	0	6.0	140.0
		1900	120	18.4	8302		63			
	Beta/ 200	751	120	14.5	3382	JAHH-65B-R3B_2_1	67	0	6.0	140.0
		2100	180	18.5	12743		65			
		875	160	15.8	6083	JAHH-65B-R3B_2_1	65	0	6.0	140.0
		1900	120	18.4	8302		63			
	Gamma/ 330	751	120	14.5	3382	JAHH-65B-R3B_2_1	67	0	6.0	140.0
		2100	180	18.5	12743		65			
		875	160	15.8	6083	JAHH-65B-R3B_2_1	65	0	6.0	140.0
		1900	120	18.4	8302		63			
Town of Lebanon	N/A	33.72	100	2.1	162.2	1142-2AN	360	0	16.0	158.0
		155.895	12.56	8.1	81.1	DS1F06F36U-N	360	0	21.9	161.0
		453.4875	6	12.1	97.3	ANT450F10	360	0	20.3	160.2
		11000	0.027	40.7	316.3	VHLP4-11[2]	1.6	0	4.0	120.0

Table 3: Proposed Antenna Configurations[3] [4]

[2] The Town of Lebanon is currently in the process of filing for a FCC license for this proposed microwave link. The EIRP shown in the table is based on the FCC's maximum allowable power for this frequency band (55 dBm).

[3] Antenna centerline heights are in reference to the All-Points Technology Corporation Lease Exhibit, dated February 15, 2017.

[4] Transmit power assumes 0 dB of cable loss.

6. Measurement & Calculation Results

Measured and calculated results and a description of each survey location are detailed in the table below. Measurements were recorded around the existing tower on February 1, 2017, between 11:00AM and 1:30PM. Please note that the measurements consist of % MPE contributions of the existing Town antennas, along with any other RF sources in the area that are operating within the frequency range of the measurement probe (300 kHz – 50 GHz).

The calculated % MPE contribution from the proposed Verizon Wireless configuration was then added to the measured % MPE values in the "Composite % MPE" column. These calculated values incorporate the antenna patterns of the particular antenna models specified by Verizon Wireless to determine the "Off Beam Loss" factor shown in the power density formula from Section 4. All % MPE values are in reference to the FCC Uncontrolled/General Population exposure limit.

Table 4 below lists 26 measurements recorded in the vicinity of the existing and proposed towers. The highest spatially averaged measurement was **3.98%** (Average Uncontrolled/General Population MPE) and was recorded at Location 4, along the Lyman Memorial High School access road. The highest composite (measured + calculated) % MPE value is calculated to be **4.66%** (Average Uncontrolled/General Population) and is also calculated to occur at Location 4.

Meas. Location	Location Description	Latitude	Longitude	Dist. From Site (feet)	Measured % MPE (Uncontrolled / General)	Calculated % MPE (751MHz LTE)	Calculated % MPE (875MHz LTE)	Calculated % MPE (1900MHz LTE)	Calculated % MPE (2100MHz LTE)	Composite % MPE (Uncontrolled / General)
1	Lyman Memorial High School - Parking Lot	41.62344	-72.24090	1171	< 1.00%	0.16%	0.22%	0.19%	0.29%	<1.85%
2	Lyman Memorial High School - Parking Lot	41.62256	-72.24017	847	1.49%	0.30%	0.40%	0.26%	0.35%	2.79%
3	Lyman Memorial High School - Sidewalk	41.62205	-72.23977	690	1.89%	0.35%	0.44%	0.04%	0.05%	2.78%
4	**Lyman Memorial High School - Access Road**	**41.62198**	**-72.23911**	**509**	**3.98%**	**0.29%**	**0.28%**	**0.04%**	**0.08%**	**4.66%**
5	Lyman Memorial High School - Access Road	41.62231	-72.23813	317	3.45%	0.06%	0.10%	0.04%	0.04%	3.69%
6	Lyman Memorial High School - Garage	41.62259	-72.23774	343	2.11%	0.05%	0.09%	0.05%	0.06%	2.36%
7	Lyman Memorial High School - Near Existing Tower	41.62293	-72.23762	453	2.00%	0.30%	0.26%	0.04%	0.07%	2.68%
8	Lyman Memorial High School - Eastern Door	41.62265	-72.23821	424	< 1.00%	0.23%	0.15%	0.03%	0.05%	<1.46%
9	Lyman Memorial High School - Access Road	41.62293	-72.23840	537	< 1.00%	0.45%	0.52%	0.04%	0.09%	1.09%
10	Lyman Memorial High School - Main Entrance	41.62266	-72.23924	634	< 1.00%	0.46%	0.61%	0.14%	0.13%	1.33%
11	Lyman Memorial High School - Access Road	41.62293	-72.23941	730	1.18%	0.39%	0.52%	0.26%	0.32%	2.67%
12	Lyman Memorial High School - Baseball Diamond	41.62411	-72.23903	995	< 1.00%	0.22%	0.30%	0.26%	0.39%	1.17%
13	Lyman Memorial High School - Windmill	41.62458	-72.23893	1136	< 1.00%	0.17%	0.23%	0.20%	0.31%	<1.91%
14	Lyman Memorial High School - Southern Goalpost	41.62431	-72.23982	1174	< 1.00%	0.16%	0.21%	0.19%	0.29%	<1.85%
15	Lyman Memorial High School - Northern Goalpost	41.62521	-72.24036	1528	1.18%	0.09%	0.13%	0.11%	0.17%	1.68%
16	Lyman Memorial High School - In Field	41.62525	-72.23922	1396	< 1.00%	0.11%	0.15%	0.13%	0.20%	<1.60%
17	Mobil Station	41.62597	-72.23935	1653	< 1.00%	0.08%	0.11%	0.10%	0.14%	<1.43%
18	Lebanon Middle School - Entrance from Exeter Rd	41.62636	-72.23852	1730	< 1.00%	0.07%	0.10%	0.09%	0.13%	<1.39%
19	Lebanon Middle School - Parking Lot	41.62651	-72.23762	1751	< 1.00%	0.07%	0.10%	0.08%	0.13%	<1.38%
20	Lebanon Middle School - Parking Lot	41.62588	-72.23736	1521	< 1.00%	0.10%	0.13%	0.11%	0.17%	<1.51%
21	Lebanon Middle School - Eastern Door	41.62499	-72.23659	1211	< 1.00%	0.15%	0.20%	0.18%	0.27%	<1.80%
22	Lebanon Middle School - Parking Lot	41.62428	-72.23722	936	< 1.00%	0.25%	0.34%	0.27%	0.40%	1.26%
23	Lebanon Middle School - Tennis Courts	41.62350	-72.23643	691	< 1.00%	0.44%	0.59%	0.36%	0.47%	1.87%
24	Lebanon Middle School - Baseball Diamond	41.62392	-72.23731	803	< 1.00%	0.34%	0.45%	0.32%	0.45%	1.56%
25	Lyman Memorial High School - Entrance from Exeter Rd	41.62533	-72.24133	1722	< 1.00%	0.07%	0.10%	0.09%	0.13%	<1.40%
26	Exeter Rd & Mack Rd	41.62469	-72.24337	1986	< 1.00%	0.06%	0.08%	0.07%	0.10%	<1.30%

Table 4: Measured & Calculated Results[5]

[5] Due to measurement uncertainty at low levels, any readings < 1.00% FCC General Population/Uncontrolled MPE are listed as such. See Section 3 for the measurement range of the probe.

The figure below is an aerial view of the existing and proposed Exeter Road tower locations and the surrounding area. Labeled points indicate the locations of the measurements recorded on February 1, 2017, as listed above in Table 4.

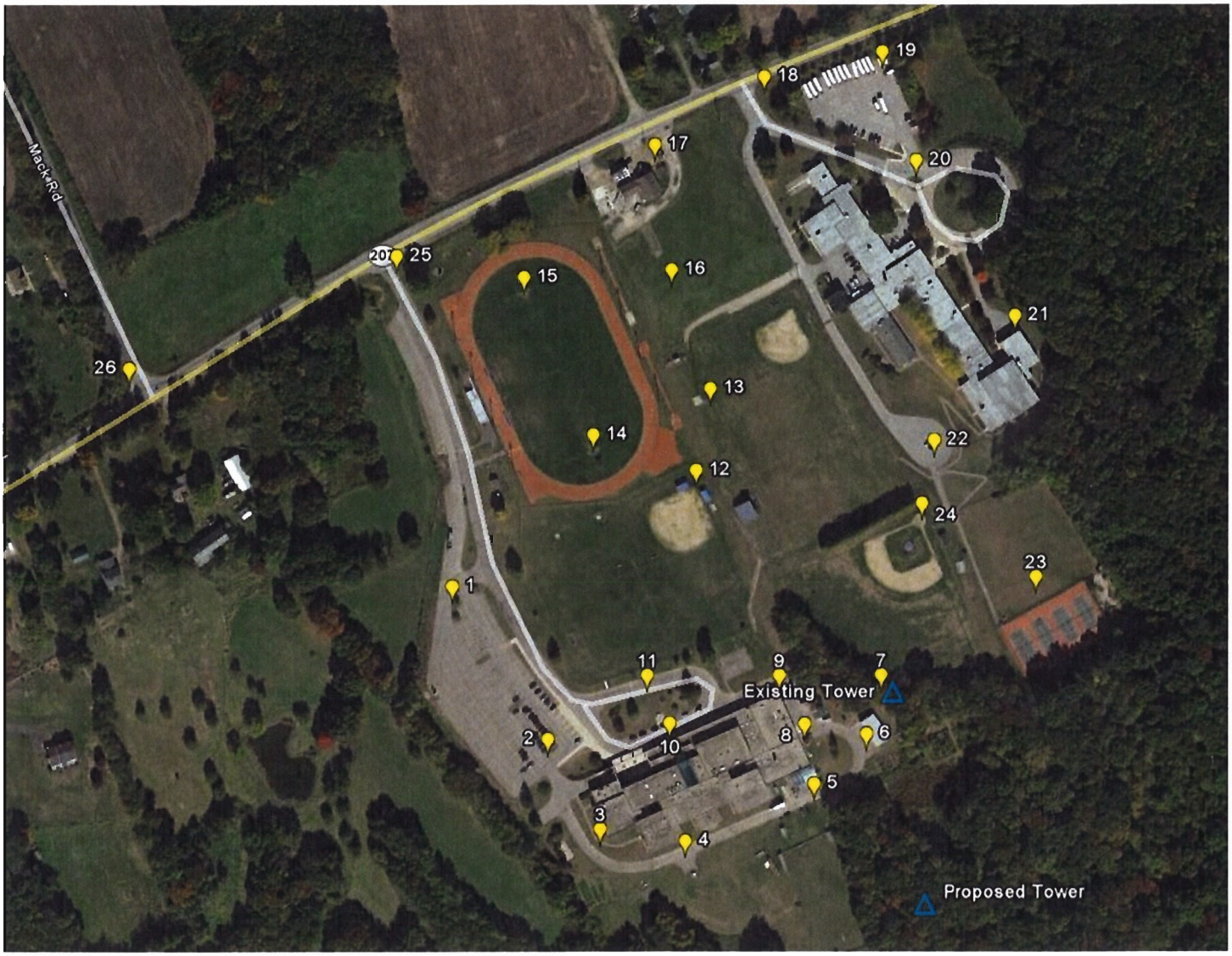

Figure 2: Aerial View of Existing/Proposed Tower Locations & Measurement Locations

7. Calculation Results (Maximum)

Additional calculations were performed to determine the maximum power density for the proposed site configuration. The results of these calculations are shown in the figure below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario. Please note that a local maximum off beam antenna gain adjustment was not included for the Town of Lebanon 11 GHz microwave dish due to the fixed nature, narrow beamwidth, and directionality of the antenna.

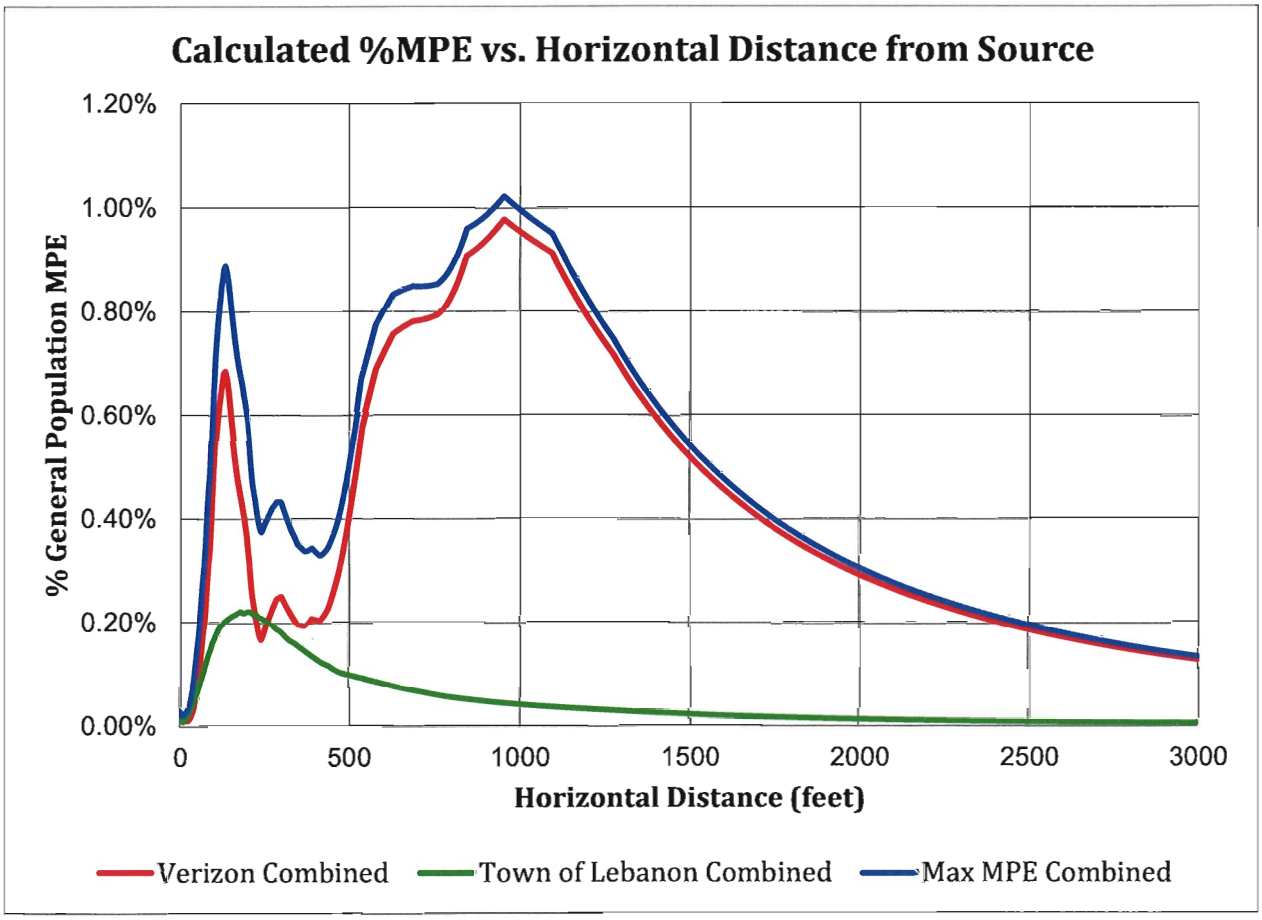

Figure 3: Graph of Percent of General Population MPE vs. Distance

The highest percent of MPE (<1.04% of the General Population limit) was calculated to occur at a horizontal distance of 954 feet from the site. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antenna used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1,400 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 5 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 954 feet from the site (reference Figure 3).

As stated in Section 4, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a 6 foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration.

Carrier	Number of Trans.	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	%MPE	Composite %MPE
Town of Lebanon 11 GHz	1	0.027	120.0	954	<0.000001	1.000	<0.01%	<0.06%
Town of Lebanon 155 MHz	1	12.6	161.0	954	0.000025	0.200	0.01%	
Town of Lebanon 33 MHz	1	100.0	158.0	954	0.000059	0.200	0.03%	
Town of Lebanon 453 MHz	1	6.0	160.2	954	0.000009	0.302	<0.01%	
Verizon LTE 1900 MHz	1	120.0	140.0	954	0.001861	1.000	0.19%	0.98%
Verizon LTE 2100 MHz	1	180.0	140.0	954	0.002478	1.000	0.25%	
Verizon LTE 751 MHz	1	120.0	140.0	954	0.001162	0.501	0.23%	
Verizon LTE 875 MHz	1	160.0	140.0	954	0.001820	0.583	0.31%	
						Total	**<1.04%**	

Table 5: Maximum Percent of General Population Exposure Values[6] [7]

[6] Transmit power assumes 0 dB of cable loss.

[7] Frequencies listed in Table 5 are representative of the operating band of each carrier and are not the carriers' specific operating frequencies.

8. Summary of Findings

A number of publicly accessible areas in the vicinity of the existing and proposed Exeter Road towers were surveyed and found to be well within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3).

The highest spatially averaged % MPE measurement of all surveyed points based on the 1997 FCC standard for exposure to the general population is **3.98%** MPE. This measurement was recorded at Location 4, along the Lyman Memorial High School access road.

The highest composite (measured + calculated) power density with the proposed Verizon Wireless' antenna configuration is **4.66% of the FCC General Population MPE limit**, and is also calculated to occur at Location 4.

The highest calculated power density from the proposed site configuration is **< 1.04% of the FCC General Population MPE limit**, and is calculated to occur 954' away from the new tower.

The above analysis verifies that exposure levels on the ground surrounding the existing and proposed facilities; both currently and with Verizon Wireless' planned design, will be well below the Maximum Permissible Exposure levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01.

9. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The field measurements and calculated results were obtained with properly calibrated equipment using techniques and guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std C95.1, and FCC OET Bulletin 65 Edition 97-01.

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November 28, 2017
Date

Reviewed/Approved By: Keith Vellante
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November 28, 2017
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE Std C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE Std C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[8]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[9]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 6: FCC Limits for Maximum Permissible Exposure

[8] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[9] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

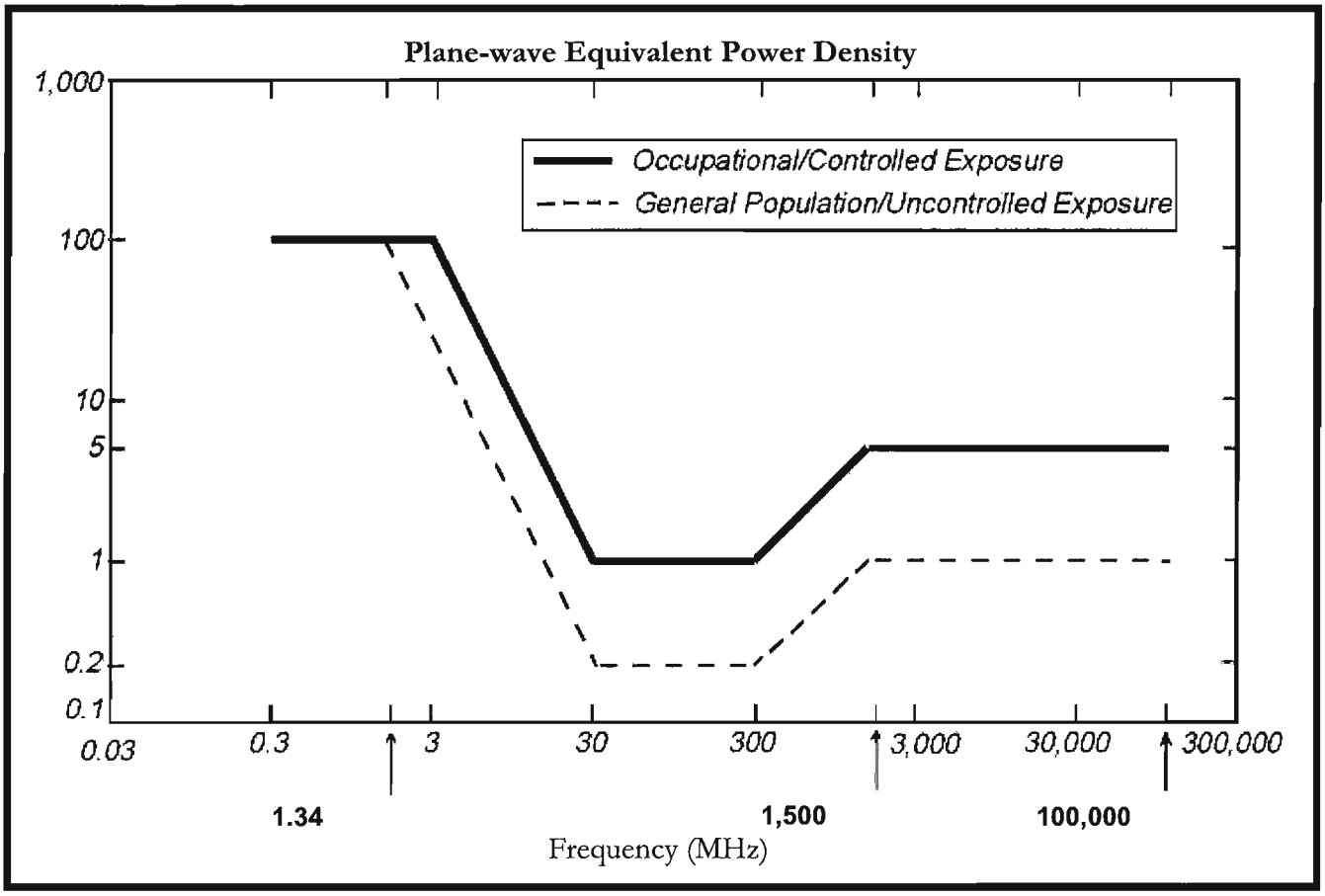
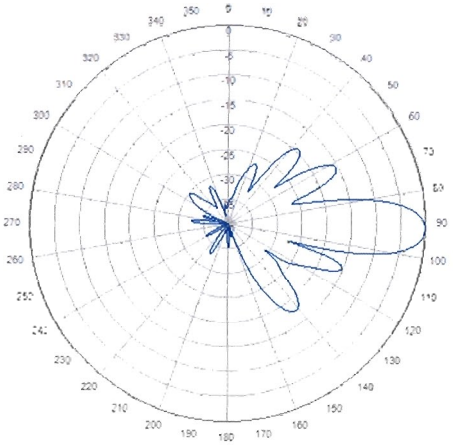


Figure 4: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Wireless Antenna Model Data Sheets and Vertical Patterns

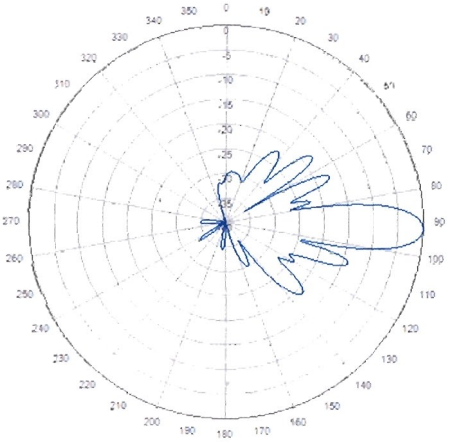
751 MHz LTE

Manufacturer:	Commscope
Model #:	JAHH-65B-R3B_2
Frequency Band:	698-787 MHz
Gain:	14.5 dBi
Vertical Beamwidth:	12.4°
Horizontal Beamwidth:	67°
Polarization:	±45°
Size L x W x D:	72.0" x 13.8" x 8.2"



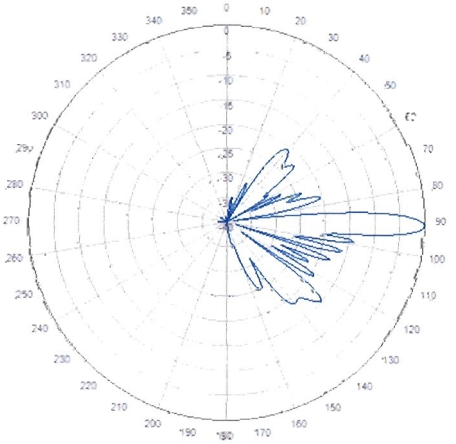
875 MHz LTE

Manufacturer:	Commscope
Model #:	JAHH-65B-R3B_2
Frequency Band:	824-894 MHz
Gain:	15.8 dBi
Vertical Beamwidth:	10.5°
Horizontal Beamwidth:	65°
Polarization:	±45°
Size L x W x D:	72.0" x 13.8" x 8.2"



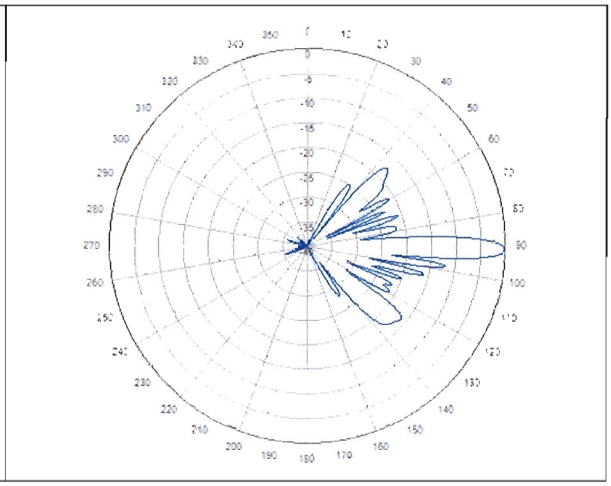
1900 MHz LTE

Manufacturer:	Commscope
Model #:	JAHH-65B-R3B_1
Frequency Band:	1850-1990 MHz
Gain:	18.4 dBi
Vertical Beamwidth:	5.2°
Horizontal Beamwidth:	63°
Polarization:	±45°
Size L x W x D:	72.0" x 13.8" x 8.2"



2100 MHz LTE

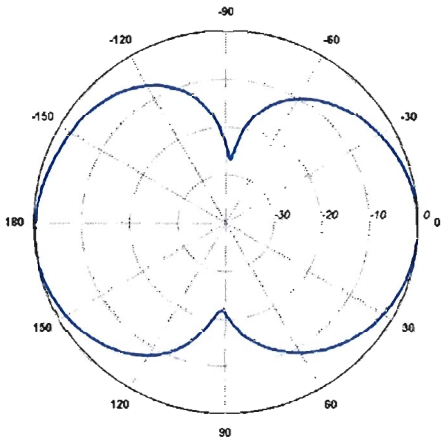
Manufacturer:	Commscope
Model #:	JAHH-65B-R3B_1
Frequency Band:	1920-2200 MHz
Gain:	18.5 dBi
Vertical Beamwidth:	4.9°
Horizontal Beamwidth:	65°
Polarization:	±45°
Size L x W x D:	72.0" x 13.8" x 8.2"



Attachment D: Town of Lebanon Antenna Model Data Sheets and Vertical Patterns

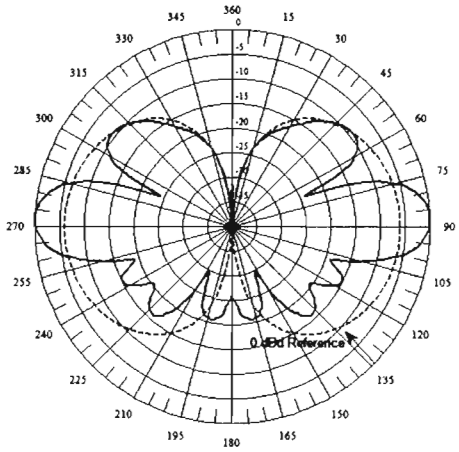
33 MHz

Manufacturer:	Commander Tech.
Model #:	1142-2AN
Frequency Band:	30-35 MHz
Gain:	2.1 dBi
Vertical Beamwidth:	75°
Horizontal Beamwidth:	360°
Polarization:	Vertical
Length:	192.0"



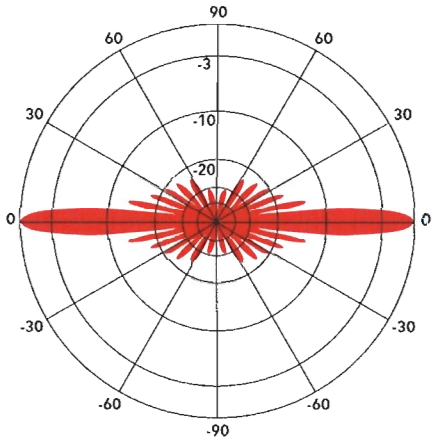
155 MHz

Manufacturer:	dbSpectra
Model #:	DS1F06F36U-N
Frequency Band:	150-164 MHz
Gain:	8.1 dBi
Vertical Beamwidth:	16°
Horizontal Beamwidth:	360°
Polarization:	Vertical
Length:	262.8"



453 MHz

Manufacturer:	Telewave
Model #:	ANT450F10
Frequency Band:	430-475 MHz
Gain:	12.1 dBi
Vertical Beamwidth:	7.0°
Horizontal Beamwidth:	360°
Polarization:	Vertical
Length:	244.0"



11 GHz

Manufacturer:	Commscope
Model #:	VHLP4-11W/A
Frequency Band:	10125-11700 MHz
Gain:	40.7 dBi
Vertical Beamwidth:	1.6°
Horizontal Beamwidth:	1.6°
Polarization:	Single
Diameter:	48.0"