

**WLTE(FM) 240A.CP
Minor Modification**

This technical report is submitted for a minor modification to the WLTE(FM).CP 240A at Pendleton, SC, FCC file no. BMPH-20140331AGK. Changes in tower site, antenna and ERP are requested.

The following exhibits are provided for the form 301 application:

- E-1 WLTE(FM).CP Mod. Spacing Study
- E-2 Interference Plot to WHQC(FM) 241C Lic.
- E-3 Interference Plot to WHQC(FM) 241C Lic. Max. Class
- E-4 FMOver Calculation
- E-5 HAAT Calculation
- E-6 Directional Antenna Pattern
- E-7 WLTE(FM) 70 dBu Community Coverage Plot
- E-8 Longley-Rice Distance to 70 dBu Contour Tabulation
- E-9 Tower ASR 1052699

WLTE(FM).CP Modification Analysis:

WLTE(FM) will be fully-spaced, with the exception to the WHQC(FM) 241C licensed facility at Shelby, NC, FCC facility I.D. 74194 (exhibit E-1). As a result, it is requested that WLTE(FM) is to be designated as a 72.215 short-spaced facility. The modification will not produce an interference overlap to any primary facilities (exhibits E-2 to E-4).

WLTE(FM) is to be located on the existing tower, ASR 1052699, at coordinates:

34-42-07N 82-36-19W NAD27.

The facility will operate at an ERP of 4.1 kW at a COR AGL of 100 meters, 385 meters AMSL, and 121 meter HAAT (exhibit E-5) using a two bay Shively 6810 full-wavelength directional antenna (exhibit E-6). Using the Longley-Rice first occurrence propagation model, the 70 dBu contour covers the Pendleton, SC community of license

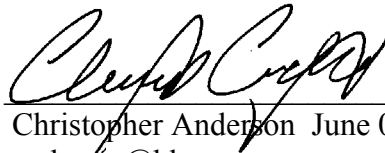
boundary, is within the FCC 60 dBu contour and is greater than 10% of the 70 dBu FCC F(50-50) contour at the azimuths which encompass the city boundary (exhibits E-7 and E-8).

RF Exposure Calculation:

The RF contribution was calculated using the FMModel program, and is calculated to be $3.74 \mu\text{W}/\text{cm}^2$ at a distance of 65 meters from the base of the tower, which is below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure, allowing exclusion from consideration.

Conclusion:

It is submitted the minor modification application to the WLTE(FM) 240A.CP is in full compliance with the Commission rules and policies.



Christopher Anderson June 08, 2014
anderson@bham.rr.com
© 2014 Anderson Associates

E-1 WLTE(FM).CP Mod. Spacing Study

REFERENCE		DISPLAY DATES
34 42 07.0 N.	CLASS = A	DATA 06-04-14
82 36 19.0 W.	Current Spacings to 3rd Adj.	SEARCH 06-04-14
----- Channel 240 - 95.9 MHz -----		

Call	Channel	Location		Azi	Dist	FCC	Margin
WLTE	CP -Z 240A	Pendleton	SC	275.9	3.63	115.0	-111.4
WLTE	CP -N 240A	Pendleton	SC	269.5	32.12	115.0	-82.9
WHQC	CP -D 241C	Shelby	NC	60.5	151.24	165.0	-13.8 (1)
WHQC	LIC-D 241C	Shelby	NC	60.5	151.24	165.0	-13.8 (1)
WYPJ	LIC-Z 237A	Due West	SC	147.5	36.06	31.0	5.1
WQZY	LIC 240C0	Dublin	GA	178.9	224.49	215.0	9.5
WCVP-FM	LIC 240A	Robbinsville	NC	300.0	124.96	115.0	10.0
WXRC	LIC-D 239C0	Hickory	NC	58.8	163.58	152.0	11.6
WGOG	LIC 242A	Walhalla	SC	293.0	45.01	31.0	14.0
WWPW	CP 241C0	Atlanta	GA	238.5	188.05	152.0	36.1
WWPW	LIC 241C0	Atlanta	GA	238.5	188.12	152.0	36.1
WRZK	LIC-Z 240C2	Colonial Heights	TN	0.5	202.45	166.0	36.5
WOXL-FM	CP -Z 243C2	Biltmore Forest	NC	357.6	99.84	55.0	44.8
WRBN	CP -Z 242A	Clayton	GA	287.3	77.54	31.0	46.5
1356789	APP 237A	Dillsboro	NC	319.0	78.84	31.0	47.8
AL8952	VAC 237A	Dillsboro	NC	321.6	80.14	31.0	49.1

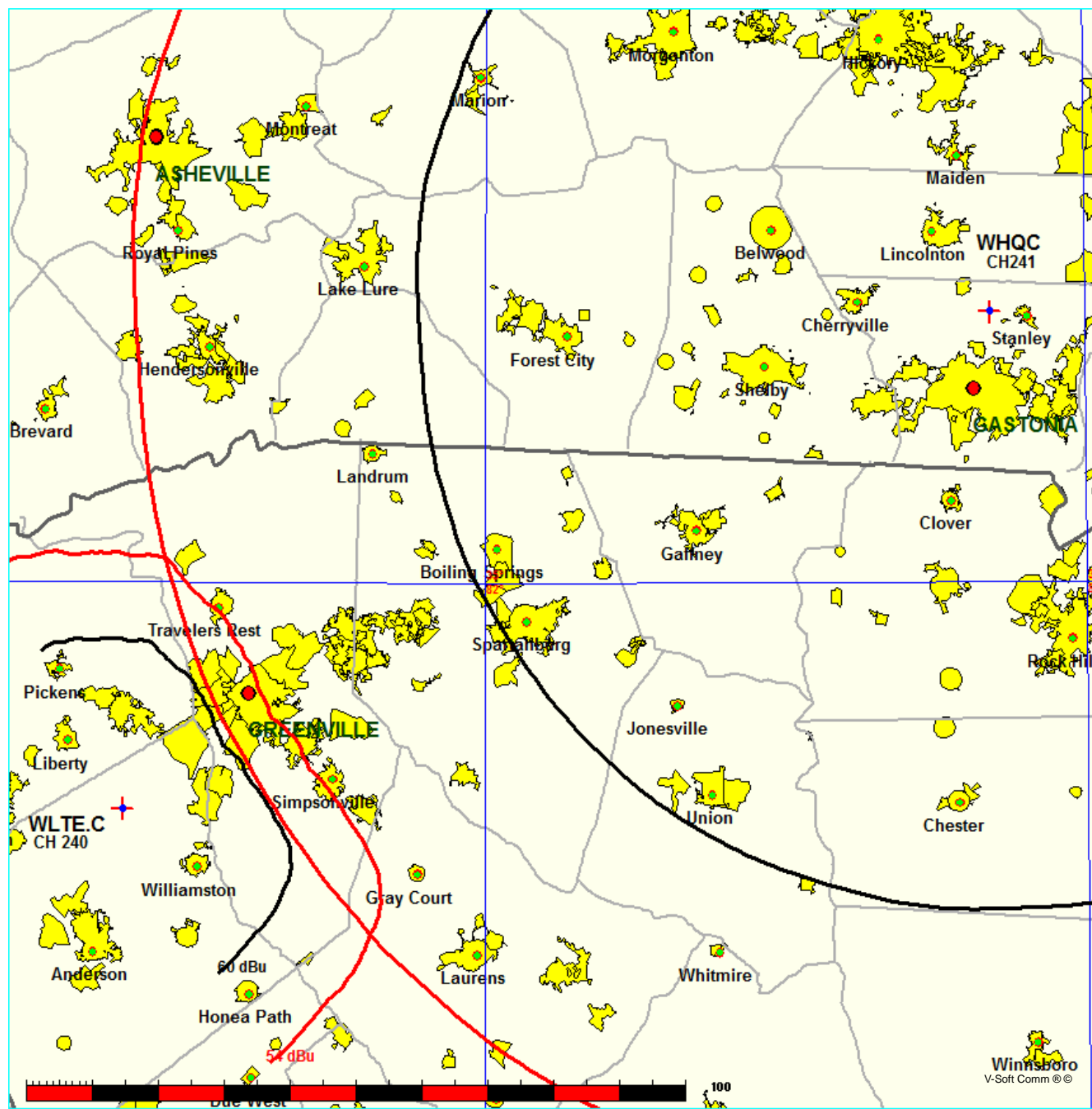
(1) The modification to the WLTE(FM).CP is to be designated as a 73.215 short-spaced facility with respect to the WHQC(FM) 241C Lic. facility. The WHQC(FM)241C.CP (BPH-20101122ABH) has expired and may be ignored.

E-2 WLTE(FM).CP Mod. Interference Plot to WHQC(FM) 241C Lic.

FMCommander Single Allocation Study - 05-30-2014 - FCC NGDC 30 Sec
WLTE.C's Overlaps (In= 0.0 km, Out= 0.0 km)

WLTE.C CH 240 A DA
Lat= 34 42 07.0, Lng= 82 36 19.0
4.1 kW 121 M HAAT, 385 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WHQC CH 241 C DA BLH19870206KJ
Lat= 35 21 44.0, Lng= 81 09 19.0
100.0 kW 530 M HAAT, 766 M COR
Prot.= 60 dBu, Intef.= 54 dBu

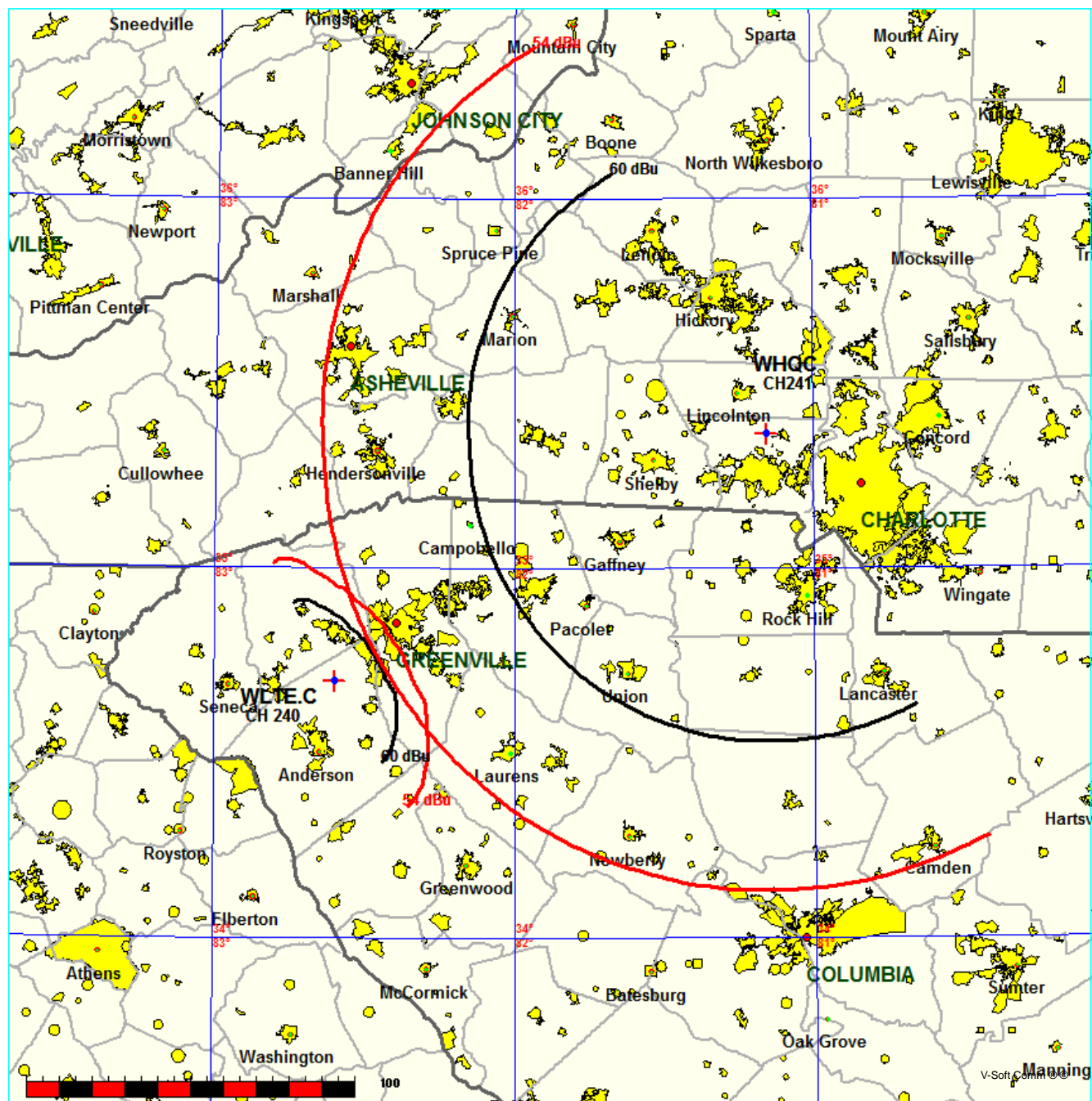


E-3 WLTE(FM).CP Mod. Interference Plot to WHQC(FM) 241C Max. Class

FMCommander Single Allocation Study - 06-05-2014 - FCC NGDC 30 Sec
WLTE.C's Overlaps (In= 0.73 km, Out= 38.15 km)

WLTE.C CH 240 A DA
Lat= 34 42 07.0, Lng= 82 36 19.0
4.1 kW 121 M HAAT, 385 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WHQC^ CH 241 C DA BLH19870206KJ
Lat= 35 21 44.0, Lng= 81 09 19.0
Max Cls: 100.0 kW 600 M HAAT, 836 M COR
Prot.= 60 dBu, Intef.= 54 dBu



E-4 WLTE(FM).CP Mod. FMOver Calculation to WHQC(FM) 241C Lic. Max. Class

06-05-2014	Terrain Data: FCC NGDC 30 Sec	FMOver Analysis
WLTE.CP		WHQC BLH19870206KJ
		(^ Max Class Parameters)
Channel = 240A		Channel = 241C
Max ERP = 4.1 kW		Max ERP = 100 kW
RCAMSL = 385 M		RCAMSL = 836 M
N. Lat. 34 42 07.0		N. Lat. 35 21 44.0
W. Lng. 82 36 19.0		W. Lng. 81 09 19.0
Protected		Interfering
60 dBu		54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
001.0	001.4176	0089.9	019.2	248.0	100.0000	0587.1	142.3	52.36	
002.0	001.3603	0089.5	019.0	247.9	100.0000	0587.3	142.1	52.42	
003.0	001.3042	0090.1	018.8	247.8	100.0000	0587.5	141.8	52.48	
004.0	001.2493	0091.0	018.7	247.7	100.0000	0587.6	141.6	52.54	
005.0	001.1956	0092.2	018.6	247.6	100.0000	0587.8	141.3	52.61	
006.0	001.1430	0093.7	018.6	247.5	100.0000	0587.9	141.1	52.68	
007.0	001.0916	0094.5	018.4	247.4	100.0000	0588.1	140.9	52.74	
008.0	001.0415	0095.3	018.3	247.3	100.0000	0588.2	140.6	52.79	
009.0	000.9925	0095.5	018.1	247.1	100.0000	0588.4	140.5	52.83	
010.0	000.9446	0095.6	017.9	247.0	100.0000	0588.6	140.4	52.87	
011.0	000.9076	0096.1	017.7	246.9	100.0000	0588.8	140.2	52.92	
012.0	000.8713	0096.1	017.5	246.7	100.0000	0588.9	140.0	52.96	
013.0	000.8358	0095.4	017.3	246.6	100.0000	0589.1	140.0	52.98	
014.0	000.8010	0094.9	017.0	246.4	100.0000	0589.3	139.9	53.00	
015.0	000.7669	0095.0	016.8	246.3	100.0000	0589.4	139.8	53.03	
016.0	000.7336	0094.9	016.6	246.1	100.0000	0589.6	139.7	53.05	
017.0	000.7010	0094.7	016.4	246.0	100.0000	0589.7	139.6	53.07	
018.0	000.6692	0095.2	016.2	245.8	100.0000	0589.8	139.5	53.10	
019.0	000.6381	0096.5	016.1	245.7	100.0000	0589.9	139.4	53.14	
020.0	000.6077	0097.5	016.0	245.6	100.0000	0589.9	139.3	53.17	
021.0	000.5843	0098.2	015.9	245.5	100.0000	0590.0	139.2	53.20	
022.0	000.5613	0098.7	015.7	245.4	100.0000	0590.1	139.1	53.22	
023.0	000.5388	0099.7	015.6	245.3	100.0000	0590.2	139.0	53.25	
024.0	000.5167	0101.5	015.6	245.2	100.0000	0590.3	138.8	53.30	
025.0	000.4951	0103.8	015.6	245.1	100.0000	0590.3	138.6	53.35	
026.0	000.4740	0106.0	015.6	245.0	100.0000	0590.4	138.4	53.39	
027.0	000.4533	0107.8	015.6	244.9	100.0000	0590.5	138.3	53.43	
028.0	000.4331	0109.0	015.5	244.8	100.0000	0590.5	138.2	53.45	
029.0	000.4133	0110.0	015.4	244.7	100.0000	0590.6	138.2	53.46	
030.0	000.3940	0111.0	015.2	244.6	100.0000	0590.7	138.1	53.48	
031.0	000.3864	0111.5	015.2	244.4	100.0000	0590.8	138.0	53.51	
032.0	000.3789	0111.4	015.1	244.3	100.0000	0590.9	138.0	53.52	
033.0	000.3715	0110.6	015.0	244.2	100.0000	0590.9	137.9	53.53	
034.0	000.3641	0110.2	014.9	244.1	100.0000	0591.0	137.9	53.54	
035.0	000.3568	0111.1	014.9	244.0	100.0000	0591.1	137.8	53.57	
036.0	000.3496	0113.1	014.9	243.9	100.0000	0591.1	137.6	53.62	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
037.0	000.3424	0115.0	015.0	243.8	100.0000	0591.2	137.5	53.66
038.0	000.3354	0116.2	015.0	243.7	100.0000	0591.3	137.3	53.69
039.0	000.3284	0116.7	014.9	243.6	100.0000	0591.3	137.3	53.70
040.0	000.3214	0117.2	014.9	243.5	100.0000	0591.4	137.2	53.72
041.0	000.3169	0117.6	014.8	243.4	100.0000	0591.4	137.2	53.74
042.0	000.3123	0118.3	014.8	243.3	100.0000	0591.4	137.1	53.76
043.0	000.3078	0118.7	014.8	243.2	100.0000	0591.5	137.0	53.77
044.0	000.3033	0118.6	014.7	243.1	100.0000	0591.5	137.0	53.78
045.0	000.2989	0118.0	014.6	243.0	100.0000	0591.5	137.0	53.78
046.0	000.2945	0117.2	014.5	242.9	100.0000	0591.5	137.0	53.77
047.0	000.2901	0116.4	014.4	242.7	100.0000	0591.5	137.1	53.76
048.0	000.2858	0115.5	014.3	242.6	100.0000	0591.5	137.1	53.75
049.0	000.2814	0114.6	014.2	242.5	100.0000	0591.4	137.2	53.73
050.0	000.2772	0113.9	014.1	242.4	100.0000	0591.4	137.2	53.72
051.0	000.2772	0113.8	014.1	242.3	100.0000	0591.3	137.2	53.73
052.0	000.2772	0114.3	014.1	242.2	100.0000	0591.3	137.1	53.75
053.0	000.2772	0114.8	014.1	242.1	100.0000	0591.2	137.0	53.76
054.0	000.2772	0115.2	014.2	242.0	100.0000	0591.1	137.0	53.78
055.0	000.2772	0115.7	014.2	241.9	100.0000	0591.1	136.9	53.79
056.0	000.2772	0115.8	014.2	241.8	100.0000	0591.0	136.9	53.80
057.0	000.2772	0115.4	014.2	241.7	100.0000	0590.9	136.9	53.80
058.0	000.2772	0114.9	014.1	241.6	100.0000	0590.8	136.9	53.79
059.0	000.2772	0114.8	014.1	241.5	100.0000	0590.7	136.9	53.79
060.0	000.2772	0115.4	014.2	241.4	100.0000	0590.6	136.9	53.80
061.0	000.2772	0116.4	014.2	241.3	100.0000	0590.5	136.8	53.82
062.0	000.2772	0117.7	014.3	241.2	100.0000	0590.5	136.7	53.84
063.0	000.2772	0119.0	014.4	241.1	100.0000	0590.4	136.7	53.85
064.0	000.2772	0120.1	014.5	241.0	100.0000	0590.3	136.6	53.86
065.0	000.2772	0120.9	014.5	240.9	100.0000	0590.2	136.6	53.87
066.0	000.2772	0121.3	014.5	240.8	100.0000	0590.0	136.6	53.87
067.0	000.2772	0122.2	014.6	240.6	100.0000	0589.9	136.6	53.87
068.0	000.2772	0123.5	014.7	240.5	100.0000	0589.8	136.5	53.88
069.0	000.2772	0124.8	014.7	240.4	100.0000	0589.7	136.5	53.89
070.0	000.2772	0125.7	014.8	240.3	100.0000	0589.6	136.5	53.89
071.0	000.2814	0125.6	014.8	240.2	100.0000	0589.6	136.5	53.89
072.0	000.2858	0124.6	014.8	240.1	100.0000	0589.5	136.5	53.88
073.0	000.2901	0123.1	014.8	240.0	100.0000	0589.4	136.6	53.85
074.0	000.2945	0121.4	014.8	239.9	100.0000	0589.3	136.7	53.82
075.0	000.2989	0120.3	014.8	239.8	100.0000	0589.3	136.8	53.80
076.0	000.3033	0119.5	014.8	239.7	100.0000	0589.2	136.9	53.79
077.0	000.3078	0119.2	014.8	239.6	100.0000	0589.2	136.9	53.77
078.0	000.3123	0119.4	014.9	239.5	100.0000	0589.1	136.9	53.77
079.0	000.3169	0119.6	014.9	239.4	100.0000	0589.1	136.9	53.76
080.0	000.3214	0120.1	015.0	239.2	100.0000	0589.1	137.0	53.76
081.0	000.3284	0120.7	015.2	239.1	100.0000	0589.1	136.9	53.76
082.0	000.3354	0121.1	015.3	239.0	100.0000	0589.1	136.9	53.76
083.0	000.3424	0121.1	015.4	238.9	100.0000	0589.2	137.0	53.76
084.0	000.3496	0121.2	015.5	238.8	100.0000	0589.2	137.0	53.75
085.0	000.3568	0120.8	015.5	238.6	100.0000	0589.2	137.1	53.73
086.0	000.3641	0120.3	015.6	238.5	100.0000	0589.3	137.1	53.71
087.0	000.3715	0120.3	015.7	238.4	100.0000	0589.3	137.2	53.70

E-5 WLTE(FM).CP Mod. HAAT Calculation

N. Lat. = 344207.0 W. Lng. = 823619.0
HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	ERP kW	60-F5	70-F5
000	294.8	90.2	1.4760	19.43	10.79
045	267.0	118.0	0.2989	14.62	8.29
090	264.5	120.5	0.3940	15.95	8.97
135	264.6	120.4	2.8930	26.11	14.64
180	240.4	144.6	4.1000	30.51	17.84
225	242.8	142.2	4.1000	30.27	17.67
270	253.7	131.3	4.1000	29.22	16.90
315	283.3	101.7	4.1000	26.18	14.69

Ave El= 263.89 M HAAT= 121.11 M AMSL= 385

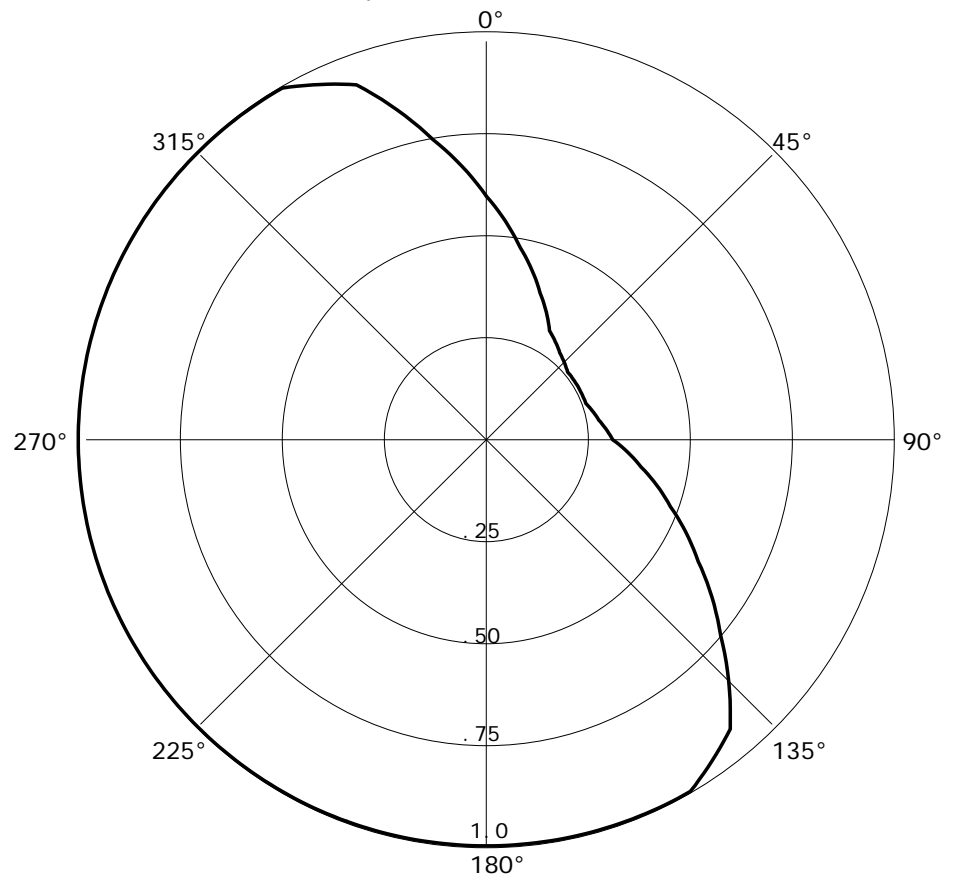
E-6 WLTE(FM).CP Mod. Antenna Pattern

05-30-2014

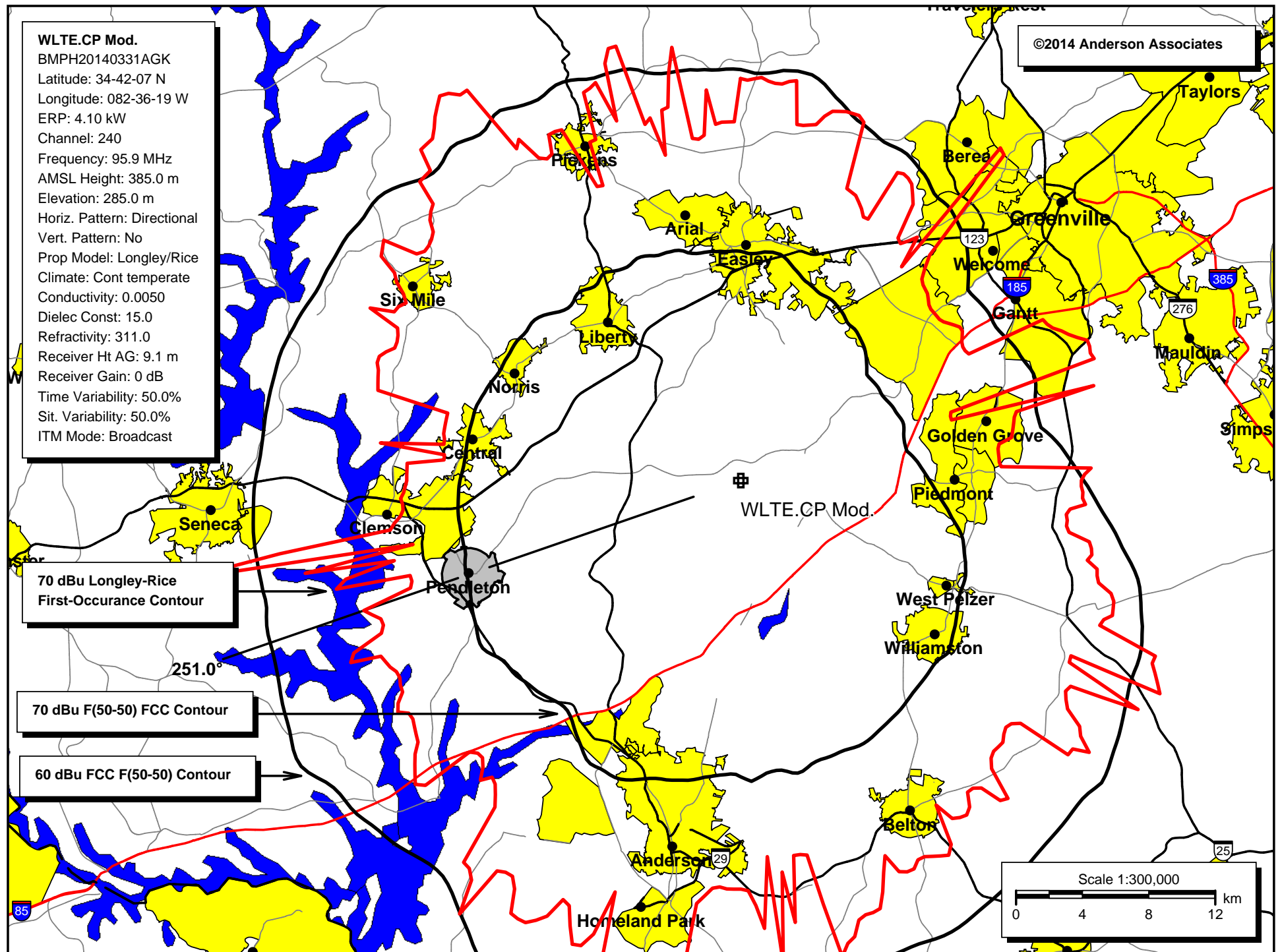
RMS(V)= .814

Graph is Relative Field

Azi	Field	dBk	kW
000	0.600	01.691	1.476
010	0.480	-00.247	0.945
020	0.385	-02.163	0.608
030	0.310	-04.045	0.394
040	0.280	-04.929	0.321
050	0.260	-05.573	0.277
060	0.260	-05.573	0.277
070	0.260	-05.573	0.277
080	0.280	-04.929	0.321
090	0.310	-04.045	0.394
100	0.385	-02.163	0.608
110	0.480	-00.247	0.945
120	0.600	01.691	1.476
130	0.750	03.629	2.306
140	0.930	05.497	3.546
150	1.000	06.128	4.100
160	1.000	06.128	4.100
170	1.000	06.128	4.100
180	1.000	06.128	4.100
190	1.000	06.128	4.100
200	1.000	06.128	4.100
210	1.000	06.128	4.100
220	1.000	06.128	4.100
230	1.000	06.128	4.100
240	1.000	06.128	4.100
250	1.000	06.128	4.100
260	1.000	06.128	4.100
270	1.000	06.128	4.100
280	1.000	06.128	4.100
290	1.000	06.128	4.100
300	1.000	06.128	4.100
310	1.000	06.128	4.100
320	1.000	06.128	4.100
330	1.000	06.128	4.100
340	0.930	05.497	3.546
350	0.750	03.629	2.306



E-7 WLTE(FM).CP Mod. 70 dBu Contour Plot



E-8 Longley-Rice 70 dBu Distance to Contour Report

Call Letters: WLTE.CP Mod.
File Number: BMPH20140331AGK
Latitude: 34-42-07 N
Longitude: 082-36-19 W
ERP: 4.10 kW
Channel: 240
Frequency: 95.9 MHz
AMSL Height: 385.0 m
Elevation: 285.0 m
Horiz. Antenna Pattern: Directional
Vert. Elevation Pattern: No

Type of contour: Signal Calculated
of Radials Calculated: 360
Using the first occurrence method at 70.0 dBu

Azimuth (deg) FCC 70 dBu (km) L-R 70 dBu (km) % Increase

245	17.86	25.90	45.0
246	17.76	25.50	43.6
247	17.66	23.50	33.1
248	17.58	23.20	32.0
249	17.52	23.20	32.4
250	17.47	23.60	35.1
251	17.45	24.00	37.5
252	17.42	20.90	20.0
253	17.36	20.70	19.2
254	17.26	20.70	19.9
255	17.15	25.20	46.9
256	17.10	24.50	43.3
257	17.12	21.40	25.0

E-9 WLTE(FM).CP Mod. Tower ASR

ASR Registration Search

Registration 1052699

 [Map Registration](#)

Registration Detail

Reg Number	1052699	Status	Constructed
File Number	A0732681	Constructed	02/10/1979
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	34-42-07.1 N 082-36-18.3 W	Address	1 MILE N.W. OF STRINGER RIDGE FIRE TOWER NEAR LIBERTY
City, State	LIBERTY , SC		
Zip	29673	County	ANDERSON
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
285.0	306.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
591.0	305.1

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	98-ASO-4725-OE	FAA Issue Date	08/06/1998
-----------	----------------	----------------	------------

Owner & Contact Information

FRN	0014350276	Owner Entity Type
-----	------------	----------------------

Owner

SpectraSite Communications, LLC. through American Towers, LLC. Attention To: Compliance Dept. 1898 Leland Drive, Suite A Marietta , GA 30067	P: (678)265-6770 F: E:
--	------------------------------

Contact

Dept. , Compliance 1898 Leland Drive, Suite A Marietta , GA 30067	P: (678)265-6770 F: E:
---	------------------------------

Last Action Status

Status	Constructed	Received	07/21/2011
--------	-------------	----------	------------