

## **Technical Report W226BY.CP Minor Modification**

This technical report is submitted for a minor modification to W226BY.CP, FCC facility ID 151910. A site move with corresponding changes in antenna and COR is submitted for the translator to serve as a fill-in to rebroadcast the primary WNEG(AM) 630 kHz facility at Toccoa, GA, FCC facility ID 63330.

### **W226BY.CP Modification Analysis:**

An overlap study in exhibit E-1 shows the W226BY.CP modification is within the WFBC-FM 229C third-adjacent protected contour. The +40 100.98 F(50-10) dBu contour calculated within the protected contour (exhibit E-2) does not encompass any buildings, major roads or population (exhibit E-3). The 60 dBu contour overlaps the W226BY licensed 60 dBu contour and is contained within the WNEG(AM) 2.0 mV/m daytime contour (exhibit E-4).

### **Antenna System:**

The W226BY.CP modification will be located on the existing 184.1 meter tower, ASR #1018908 at coordinates:

**34 36 35.7N 083 22 14.3W NAD 83**

A SWR FMEC-1-R single bay, nondirectional antenna will be mounted at a COR AGL of 181.0 meters, 615.3 meters AMSL, 263.2 meter HAAT (exhibit E-5) and operate at 0.250 kW ERP.

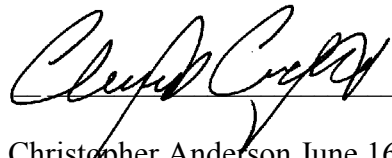
### **RF Exposure Calculation:**

The RF contribution was calculated using FMModel (exhibit E-6). The RF is calculated to be  $0.143 \mu\text{W}/\text{cm}^2$  at a distance of 183.2 meters from the base of the tower, which is less than

5% of the 200  $\mu\text{W}/\text{cm}^2$  maximum permissible for general public exposure allowing exclusion from consideration.

**Conclusion:**

It is concluded that the minor modification application for W226BY.CP complies with all Commission rules and policies.

  
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Christopher Anderson June 16, 2022  
andersce@bham.rr.com

# E-1 W226BY.CP Mod. Overlap Study

REFERENCE		CH#	226D	-	93.1 MHz,	Pwr= 0.25 kW,	HAAT= 263.2 M,	COR= 615.3 M	DISPLAY DATES		
34 36 35.70 N.		Average Protected F(50-50)= 21.19 km							DATA 06-16-22		
83 22 14.30 W.		Omni-directional							SEARCH 06-16-22		
CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
226D Toccoa	W226BY	CP_CN GA	183.0 3.0	9.04 0000116961	34 31 43.10 83 22 33.00	0.250	603	---Reference--- Georgia a-Carol i na		Radi ocast	
226D Toccoa	W226BY	LIC_CN GA	183.0 3.0	8.97 BLFT20160426ABU	34 31 45.60 83 22 32.90	0.250	570	---Reference--- Georgia a-Carol i na		Radi ocast	
227C Forest Ci ty	WTPT	LIC_CN NC	54.3 234.9	127.14 BMLH19950626KB	35 16 19.40 82 13 59.40	93.000 619	122.1 1041	82.3 Audacy Li cense,	-19.0	8.6 LLC	
229C Greenville	WFBC-FM	LIC_CN SC	51.1 231.5	89.30 BLH20021022AAJ	35 06 43.40 82 36 23.50	100.000 552	13.6 1150	91.6 Audacy Li cense,	50.1	-3.4*(1) LLC	
226L1 Blairsv ille	WUCG-LP	LIC_CN GA	298.3 118.0	61.83 0000129766	34 52 21.00 83 58 02.00	0.100 -121	584	25.4 The Mi ssionary Quartermast		0.8	
223C Greenville	WESC-FM	LIC_CN SC	49.6 230.0	90.98 BLH19800811AB	35 08 16.40 82 36 30.40	100.000 610	13.7 1274	87.6 Ihm Li censes,	53.6	1.2 LLC	
225C1 Atlanta	WZGC	LIC_NCN GA	225.2 44.7	126.07 BMLH20080226ABQ	33 48 26.40 84 20 21.50	66.000 340	101.4 612	70.0 Audacy Li cense,	4.1	27.8 LLC	
279C3 Maysv ille	WXKT	LIC_NCN GA	225.8 45.6	36.99 BLH20090918ACK	34 22 39.40 83 39 34.60	4.100 250	19.2 570	5.6 Cox Radi o,	11.5R	25.5M LLC	
227L1 Athens	WPLP-LP	LIC_CN GA	180.3 0.3	72.34 BLL20140701ACD	33 57 33.10 83 22 31.10	0.100 29	253	39.5 The Atheni an Mul ti cul tural		29.7	
226A Warrenton	WCHZ-FM	LIC_CN GA	150.5 330.9	141.50 BLH19970811KB	33 29 59.50 82 37 08.50	4.100 122	86.1 268	29.4 Beasl ey Medi a Group Li cens	31.1	39.4	
226A Benton	WSAA	LIC_CN TN	294.6 113.8	141.89 0000158776	35 07 56.00 84 47 24.00	4.600 114	87.4 384	29.2 Educati onal Medi a Foundati	37.1	56.0	
225D Greenville	W225AZ	LIC_DCN SC	66.9 247.5	95.03 BLFT20130701ADD	34 56 27.40 82 24 40.40	0.250 353	27.0 656	17.3 Tower Above Medi a LLC	43.3	37.7	
228D Suwanee	W228CA	LIC_DCN GA	219.9 39.6	70.03 BLFT20141119AFW	34 07 32.40 83 51 31.60	0.230	1.1 726	25.7 Cox Radi o,	47.8	42.9 LLC	
224D Athens	W224CY	LIC_CN GA	177.5 357.5	69.28 BLFT20160324ABD	33 59 14.40 83 20 16.60	0.250	1.1 280	7.1 Meca Communi cations,	44.1	59.3 Inc.	
225A Abbeville	WZLA-FM	LIC_NCN SC	115.8 296.4	106.88 BLH19930615KA	34 11 13.40 82 19 27.40	6.000 74	33.9 235	22.2 Ronal d Shel ley Rei d	49.1	48.2	
Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent. All separation margins (if shown) include rounding. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) ***affixed to 'IN' or 'OUT' values = site inside restricted contour. « = Station meets FCC minimum distance spacing for its class.											

(1) The +40 100.98 F(50-10) dBu contour within the WFBC-FM 229C third-adjacent protected contour (exhibit E-2) does not encompass any buildings, major roads or population (exhibit E-3).

## E-2 W226BY.CP Mod. +40 F(50-10) dBu Calculation Within WFBC-FM 229C

W226BY.CP Mod. Toccoa, GA, Showing Protection to WFBC-FM , Channel: 229

Geographic Coordinates: N. 343635.70 W. 832214.30

74.1204(d) Study - Using FCC 30 SEC Terrain Database

Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 226

Translator or LPFM Antenna Height AG = 181 meters

W226BY.CP Mod. Antenna Model = SWR FMEC-1

Protected Station's Contour = 60.98269 dBu

Translator's or LPFM's full Interference contour 100.98269

Review Azimuth = 0 Degrees True

Horizontal Relative Field at Review Azimuth = 1.000

Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW

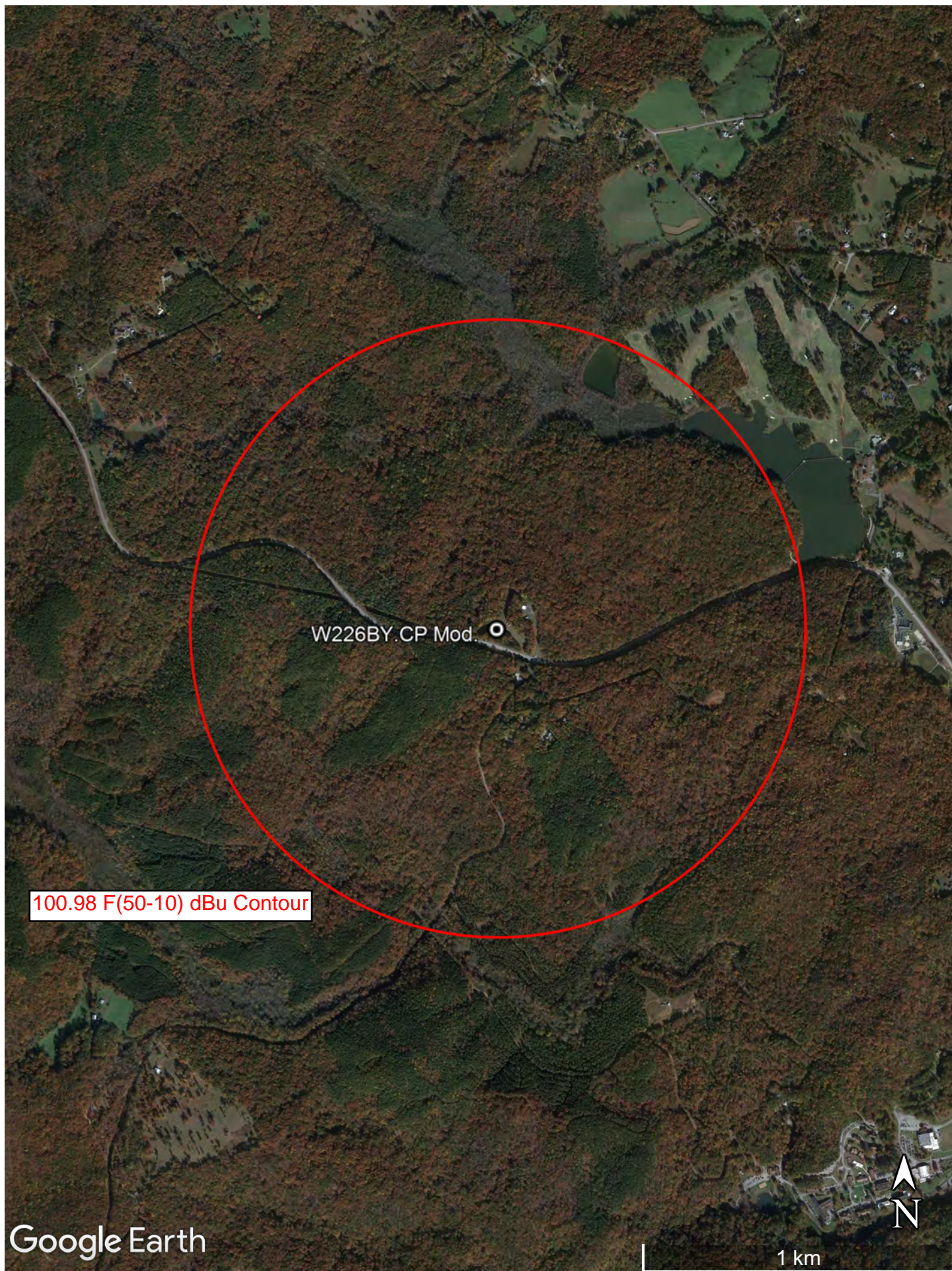
Distance between stations = 89.3 km

Protected Station= WFBC-FM, 100 kW, 1150 M meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)(1)
00.00	1.0	1.0	0.2500	990.4567	990.4567	181.000
05.00	0.997	1.0	0.2485	987.4853	983.7277	094.935
10.00	0.986	1.0	0.2430	976.5903	961.7537	011.417
15.00	0.969	1.0	0.2347	959.7525	927.0498	-067.402
20.00	0.946	1.0	0.2237	936.9720	880.4657	-139.463
25.00	0.916	1.0	0.2098	907.2584	822.2553	-202.424
30.00	0.879	1.0	0.1932	870.6115	753.9716	-254.306
35.00	0.837	1.0	0.1751	829.0123	679.0871	-294.502
40.00	0.789	1.0	0.1556	781.4703	598.6410	-321.319
45.00	0.736	1.0	0.1354	728.9761	515.4640	-334.464
50.00	0.679	1.0	0.1153	672.5201	432.2876	-334.180
55.00	0.615	1.0	0.0946	609.1309	349.3831	-317.971
60.00	0.55	1.0	0.0756	544.7512	272.3756	-290.768
65.00	0.48	1.0	0.0576	475.4192	200.9208	-249.876
70.00	0.408	1.0	0.0416	404.1063	138.2125	-198.736
75.00	0.333	1.0	0.0277	329.8221	085.3642	-137.584
80.00	0.256	1.0	0.0164	253.5569	044.0297	-068.705
85.00	0.178	1.0	0.0079	176.3013	015.3657	005.370
90.00	0.1	1.0	0.0025	099.0457	000.0000	081.954

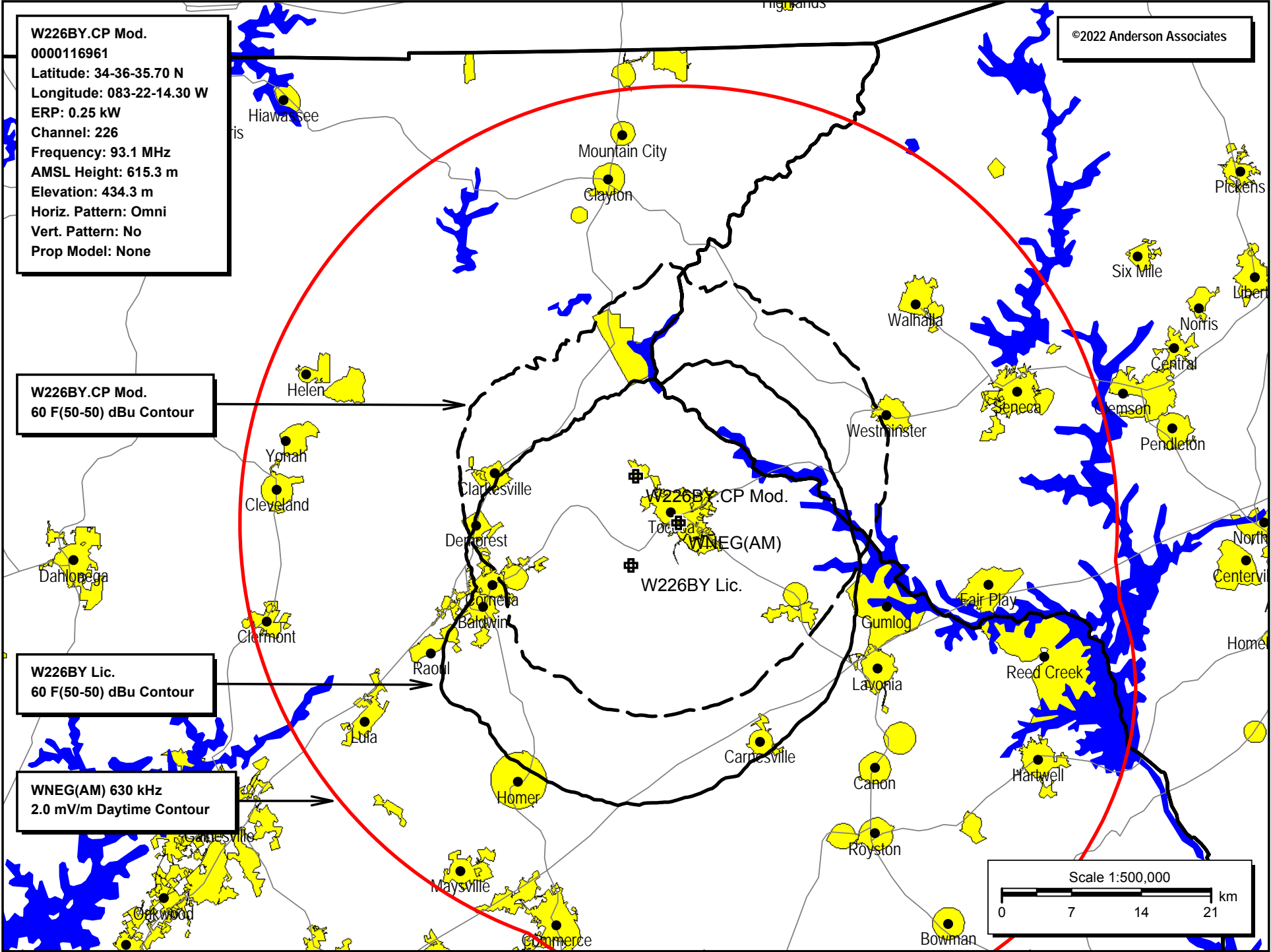
(1) The +40 100.98 F(50-10) dBu contour within the WFBC-FM 229C third-adjacent protected contour does not encompass any buildings, major roads or population (exhibit E-3).







E-4 W226BY.CP Mod. 60 dBu Contour Plot



E-5 W226BY.CP Mod. HAAT

N. Lat. = 343635.7 W. Lng. = 832214.3

HAAT and Distance to Contour,

FCC, FM 2-10 Mi, 51 pts Method - FCC 30 Meter

Azi.	AV EL	HAAT	ERP kW	60-F(50-50)
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000	407.8	207.5	0.2500	18.87
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030	337.4	277.9	0.2500	21.74
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060	269.2	346.1	0.2500	24.16
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090	237.1	378.2	0.2500	25.19
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120	287.4	327.9	0.2500	23.55
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150	269.1	346.2	0.2500	24.16
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180	274.3	341.0	0.2500	23.99
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210	344.1	271.2	0.2500	21.49
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240	440.7	174.6	0.2500	17.36
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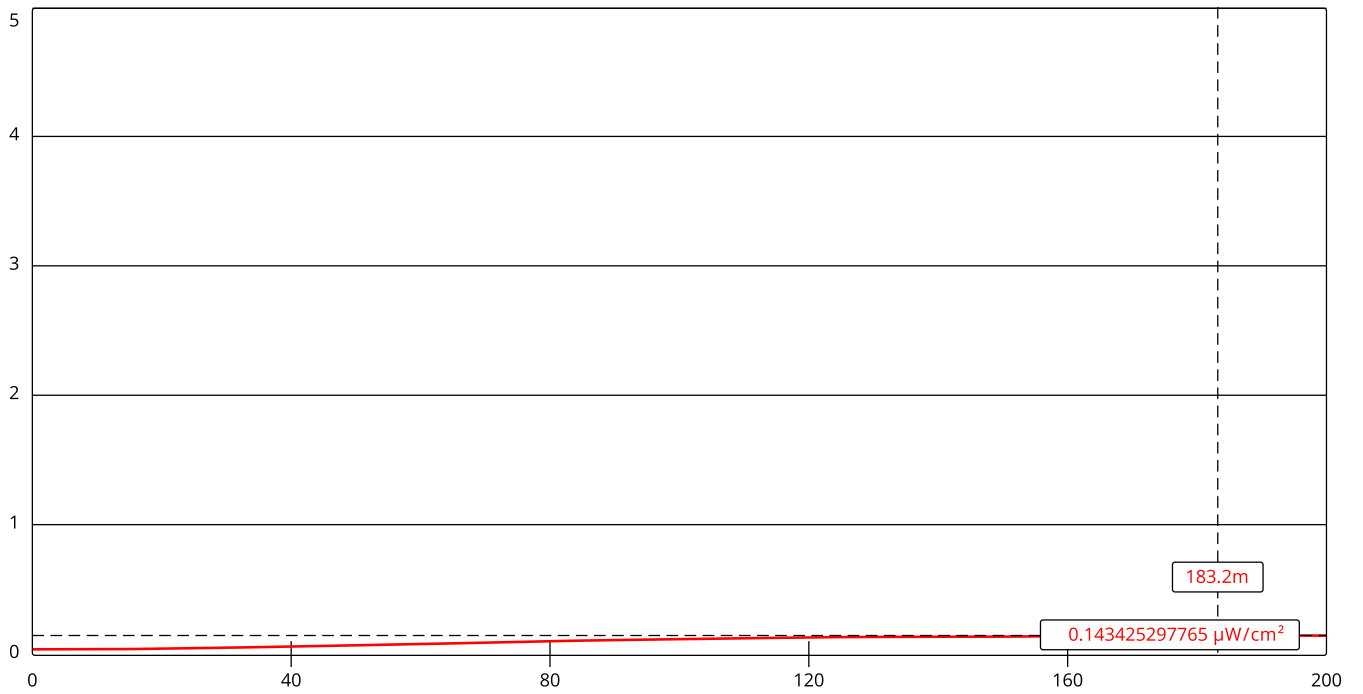
270	435.7	179.6	0.2500	17.61
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300	444.7	170.6	0.2500	17.15
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330	477.5	137.8	0.2500	15.12
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Ave EI= 352.08 M HAAT= 263.22 M AMSL= 615.3

E-6 W226BY.CP Mod. RF Calculation



Channel Selection	Channel 226 (93.1 MHz) ▾		
<a href="#">Antenna Type +</a>	EPA Type 2: Opposed V Dipole ▾		
Height (m)	<input type="text" value="181"/>	Distance (m)	<input type="text" value="200"/>
ERP-H (W)	<input type="text" value="250"/>	ERP-V (W)	<input type="text" value="250"/>
Num of Elements	<input type="text" value="1"/>	$\lambda$	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>		



## ASR Registration 1018908

### Registration Detail

Reg Number	1018908	Status	Constructed
File Number	A1116893	Constructed	01/01/1983
EMI	No	Dismantled	
NEPA	No		

### Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

#### Location (in NAD83 Coordinates)

Lat/Long	34-36-35.7 N 083-22-14.3 W	Address	Approx 200' NNE of SR 17 & 490 ft of the SR 17 & Bend N Hickory Rd intersection.
City, State	TOCCOA , GA		
Zip	30577	County	STEPHENS
Center of AM Array		Position of Tower in Array	

#### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
434.3	184.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
618.4	168.6

### Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12  
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

### FAA Notification

FAA Study	2012-ASO-8110-OE	FAA Issue Date	10/17/2012
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### Owner & Contact Information

FRN	0024469108	Owner Entity Type	Corporation
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#### Owner

Marquee Broadcasting Georgia, Inc. 4400 Brookeville Road Brookeville , MD 20833	P: (703)812-0400 F: E: kirkpatrick@fhhlaw.com
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#### Contact

Kirkpatrick , Daniel 1300 North 17th Street 11TH FLOOR Arlington , VA 22209	P: (703)812-0432 F: E: kirkpatrick@fhhlaw.com
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### Last Action Status

Status	Constructed	Received	10/05/2018
Purpose	Notification	Entered	10/05/2018
Mode	Interactive		

### Related Applications

10/05/2018	A1116893 - Notification (NT)
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