

## **Technical Report W277CA Minor Modification**

This technical report is submitted for a minor modification to W277CA at Union City, TN, FCC file no. BLFT-20090511AWH. A reduction in ERP is requested for the translator to serve as a fill-in to rebroadcast the primary WCMT(AM) 1410 kHz facility at Martin, TN, FCC facility I.D. 67054.

### **W277CA Mod. Analysis:**

An overlap study in exhibit E-1 shows the W277CA modification will not cause any interference overlap to any existing facilities. The translator will be located on an existing tower, ASR 1023191, at coordinates:

**36 24 47N 89 08 59W NAD 27.**

A RVR ACPO-3 three bay, full wavelength-spaced, nondirectional antenna will be mounted at a COR AGL of 145 meters, 298 meters AMSL, and operate at an ERP of 0.050 kW. The modified 60 dBu contour is contained within a 25 mile/40 km radius from the primary WCMT(AM) site (exhibit E-2). The modified 60 dBu contour overlaps less than 50% of the W263BF and W259BT.CP 60 dBu contours, which also serve as fill-in facilities for WCMT(AM).

### **RF Exposure Calculation:**

The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

## Anderson Associates

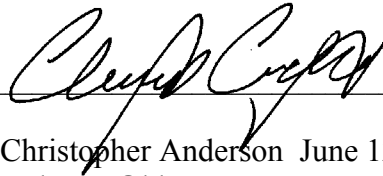
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Broadcast Consultants  
1519 Euclid Avenue  
Bowling Green, KY 42103

Using a worst-case vertical (F) factor of 1.00, the RF is calculated to be  $0.163 \mu\text{W}/\text{cm}^2$  to the ground, which is well below 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 W277CA modification complies with all Commission rules and policies.



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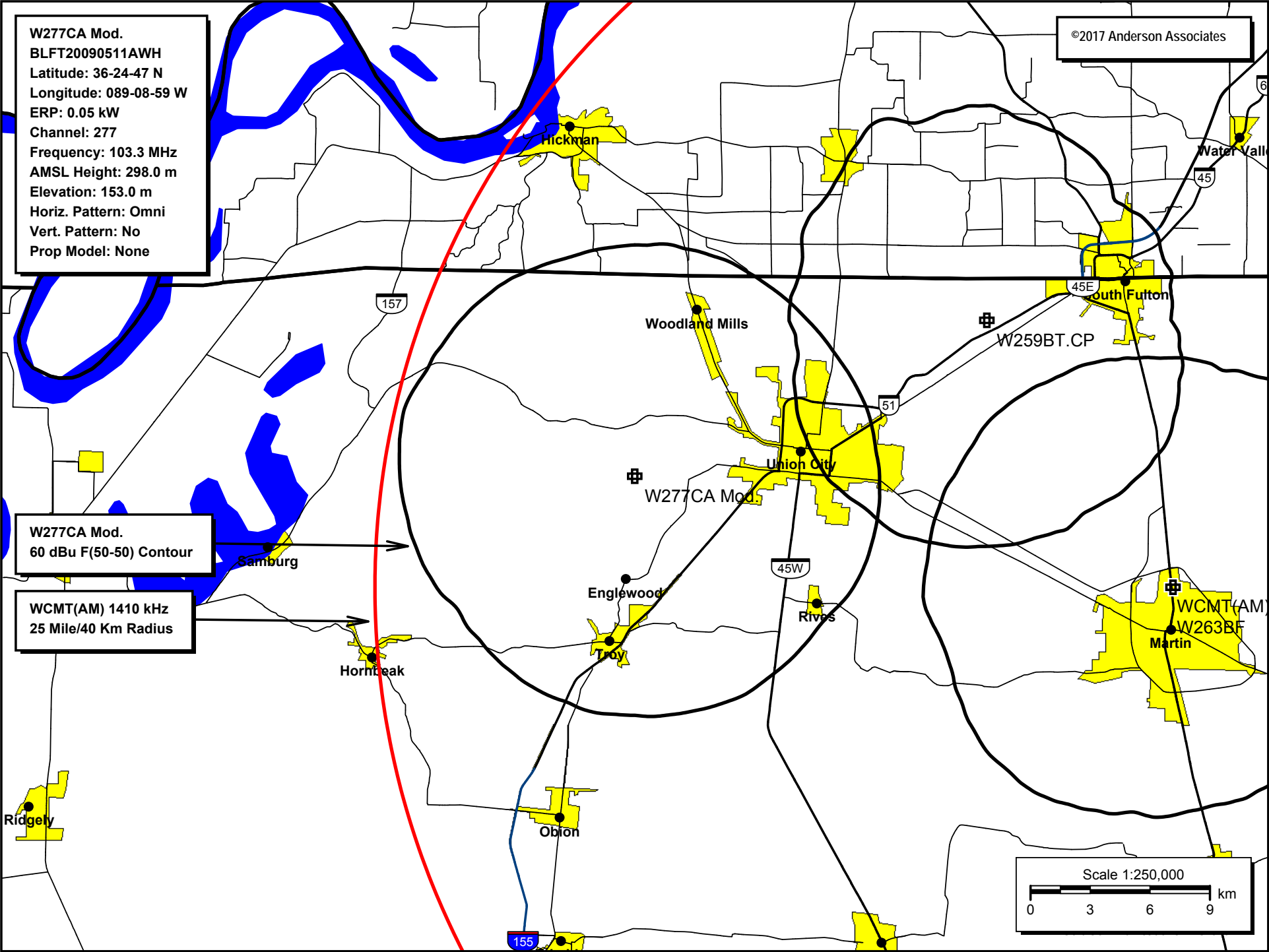
Christopher Anderson June 12, 2017  
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## E-1 W277CA Mod. Overlap Study

REFERENCE	CH#	277D	-	103.3	MHz,	Pwr=	0.05	kW,	HAAT=	184.0	M,	COR=	298	M	DISPLAY DATES
36 24 47.0 N.															DATA 06-12-17
89 08 59.0 W.															SEARCH 06-12-17
Average Protected F(50-50)= 11.83 km															
Omni-di rectional															
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*				
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)				
277D	W277CA	LIC_C_		0.0	0.00	36 24 47.0	0.250	55.3	17.5	-66.8*	-55.9*				
Union	City	TN		0.0	BLFT20090511AWH	89 08 59.0	184	298	Thunderbol t	Broadcasting C					
279C1	WFGS	LIC_CN		78.0	74.73	36 32 58.0	100.000	8.2	63.9	54.3	10.3				
Murray		KY		258.5	BLH19870724KA	88 19 52.0	201	361	Forever	Communi cations, In					
276C2	WMXX-FM	LIC_C_		161.3	101.92	35 32 39.0	42.000	78.6	53.1	11.2	30.9				
Jackson		TN		341.5	BLH20040315AAU	88 47 18.0	164	296	Geral d W.	Hunt					
277C0	WKDF	LIC_CN		100.8	210.58	36 02 08.0	100.000	184.2	81.0	14.0	88.0				
Nashville		TN		282.2	BLH19820818AB	86 50 56.0	376	611	Radi o Li cense Hol di ng Cbc,						
275D	W275BF	LIC_C_		101.7	27.48	36 21 45.0	0.250	1.1	11.8	14.0	15.2				
Martin		TN		281.9	BLFT20070817ACH	88 50 57.0	72	182	Thunderbol t	Broadcasting C					
277D	W277CH	LIC_C_		28.6	92.48	37 08 33.0	0.250	50.6	15.3	30.1	38.4				
Paducah		KY		208.9	BLFT20160127ADN	88 39 02.0		253	Samuel K.	Stratemeyer					
280A	KMIS-FM	LIC_ZCX		271.8	48.48	36 25 31.0	2.500	1.4	15.4	35.3	31.0				
Gi deon		MO		91.4	BLH20080527AAA	89 41 29.0	122	205	Pollack	Broadcasting Co.					
278C2	KLUE	LIC_CN		295.0	115.93	36 50 50.0	50.000	72.7	47.4	31.4	51.3				
Poplar Bl uff		MO		114.3	BLH19960417KA	90 19 52.0	99	218	Benj ami n	Stratemeyer					
275C1	KEZS-FM	LIC_CN		341.8	116.36	37 24 23.0	100.000	10.2	73.0	94.6	42.7				
Cape Gi rardeau		MO		161.5	BLH19870501KC	89 33 44.0	289	435	Mrr Li cense LI c						

Terrain database is FCC NGDC 30 Sec , 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.

E-2 W277CA Mod. 60 dBu Contour Plot



## E-3 ASR 1023191

ASR Registration Search

### Registration 1023191

 [Map Registration](#)

#### Registration Detail

Reg Number	1023191	Status	Constructed
File Number	A0204094	Constructed	12/15/1999
EMI	No	Dismantled	
NEPA	No		

#### Antenna Structure

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

#### Location (in NAD83 Coordinates)

Lat/Long	36-24-47.0 N 089-08-59.0 W	Address	2567 DALLAS HILL ROAD
City, State	WEST UNION CITY , TN		
Zip	38261	County	OBION
Center of AM Array		Position of Tower in Array	

#### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
152.7	177.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
330.1	171.3

#### Painting and Lighting Specifications

FAA Chapters 4, 5, 7, 9, 13

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

#### FAA Notification

FAA Study	98-ASO-3824-OE	FAA Issue Date	08/31/1998
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#### Owner & Contact Information

FRN	0004245569	Owner Entity Type
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#### Owner

WOOD COMMUNICATIONS  
Attention To: WOOD, ROBIN  
421 REELFOOT AVENUE  
UNION CITY , TN 38621

P: (901)885-4792  
F:  
E: rwood@rnet.net

#### Contact

P:  
F:  
E:

#### Last Action Status

Status	Constructed	Received	07/20/2001
Purpose	Notification	Entered	07/20/2001