

**La Grange, North Carolina**  
**Application for Minor Modification of FM Translator W253AX**  
**On Channel 252**  
**by**  
**Conner Media Corporation**

**Exhibit 12**  
**Interference Analysis**

**May 2011**

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## Table of Contents

Description	Page
Declaration.....	2
Narrative .....	3
Allocations .....	3
Undesired to Desired Method .....	4
Height Above Average Terrain Calculations.....	5
Height Above Average Terrain Tabulation.....	5
Source of Data .....	5
Television Channel 6 Protection .....	6
Table 1: Allocations.....	7
Table 2: Facilities Protected by U/D Method.....	8
Licensed and Proposed Contours .....	Figure 1

Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 12, Interference Analysis, for Conner Media Corporation, and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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25 May 2011

### Narrative

This Exhibit supports a minor modification application for FM translator W253AX, La Grange, North Carolina. The modifications proposed are a change of site, a change of frequency to a first adjacent channel, and an increase in Effective Radiated Power.

This a minor modification as shown in Figure 1. Allocation details are provided in this exhibit. This proposal complies fully with the requirements of 74 C.F.R. §74.1204(a), with the exception of facilities protected under 47 C.F.R. §74.1204(d) by the Undesired to Desired (U/D) method described below.

This application is for the modification of a translator first licensed in 2007. Therefore, the requirements of Public Notice DA-03-2095, FM Translator Auction No. 83 Non-Mutually Exclusive Applications dated June 30, 2003, Footnote 8, are not applicable. The proposed modified facilities create no mutual exclusivities as shown in the allocation table in this exhibit.

Figure 1 shows the licensed 60 dBu F(50,50) coverage area and the proposed 60 dBu F(50,50) coverage area. As shown in Figure 1, this application proposes a minor modification.

Figure 1 also shows the 60 dBu F(50,50) contour of the primary station, WAGO, Snow Hill, North Carolina, facility ID 51730. The proposed translator 60 dBu F(50,50) contour is entirely within the primary station 60 dBu F(50,50) service contour.

### Allocations

This application proposes service to La Grange, North Carolina, on channel 252. An updated Table 1: Allocations is included in this exhibit with a list of the stations, construction

permits, allocations, and applications studied. All are protected by this application, with the exception of facilities protected by the Undesired to Desired (U/D) method. Facilities protected by the U/D method are listed in Table 2. The allocations table was prepared using the NED 03 arcsecond terrain database which is described below.

Figure 2 shows the protection of WEQR, 249A, third adjacent, Walnut Creek, North Carolina.

### Undesired to Desired Method

Protection to some facilities is provided through the use of Undesired to Desired Signal Strength Ratio (U/D) calculations. Table 2 lists the parameters studied. The proposed location is also the location of WEQR, the facility protected by U/D calculations. The field strength calculated at ground level at the WEQR site is 127 dBu, using free space calculations. For the translator interference contour, free space calculations are used. The corresponding 167 dBu field strength distance is less than 1 meter. There is no population within the predicted interference area and therefore this facility is permitted under §74.1204(d).

The applicant recognizes that the U/D method is only a tool for predicting likely interference. Should any actual interference be experienced, the applicant will cooperate fully in correcting the interference. Corrective steps may require changes in the transmitting antenna or other steps which would require Commission authorization, may require that the translator cease operation except for brief equipment tests, or may require filtering at the receivers which report interference.

### Height Above Average Terrain Calculations

This is a fill-in translator East of the Mississippi. The height above average terrain (HAAT) was calculated for each of the radials required in §74.1235(b). Elevation data is extracted from the NED03 3 arcsecond terrain database described below. Data is extracted at 0.1 kilometer intervals from 3 to 16 kilometers, inclusive, from the tower site. The HAAT and distance to the 60 dBu F(50,50) contour is tabulated below.

### Height Above Average Terrain Tabulation

Bearing (deg)	Distance (km)	HAAT (m)
0.0	8.9	46.9
30.0	8.8	45.8
60.0	9.0	47.3
90.0	9.1	48.3
120.0	10.4	62.9
150.0	9.7	54.6
180.0	9.1	48.8
210.0	8.9	46.4
240.0	8.7	45.1
270.0	9.7	54.8
300.0	9.0	47.6
330.0	8.5	43.0

### Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDDBS. All contours for existing and proposed facilities are calculated using height above average terrain calculated at one degree horizontal increments.

The contours were also evaluated using terrain extracted from the V-Soft Communications NED 03 terrain database. The NED 03 database is derived from the USGS National Elevation Data 30 meter terrain database. The USGS National Elevation Dataset has

been developed by merging the highest-resolution, best-quality elevation data available across the United States into a seamless raster format. NED is the result of the maturation of the USGS effort to provide 1:24,000-scale Digital Elevation Model (DEM) data for the conterminous US and 1:63,360-scale DEM data for Alaska.

All population data is from 2010 U.S. Census PL data files. Population is counted by considering the location of the centroid of each census block. The data for each block is counted if it falls within the area being counted.

### Television Channel 6 Protection

There are no television channel 6 stations requiring protection. This application proposes a channel which is not subject to television channel 6 separation requirements.

Table 1: Allocations

Timothy L. Warner, Inc.  
Asheville, North Carolina

Conner Media Corporation  
Allocation Study

REFERENCE CH# 252D - 98.3 MHz, Pwr= 0.25 kW, HAAT= 49.3 M, COR= 78 M DISPLAY DATES  
35 17 28.0 N. DATA 05-25-11  
77 49 25.0 W. Average Protected F(50-50)= 9.2 km SEARCH 05-25-11  
Omni-directional

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*
253D Kinston	W253AX	LIC	C NC	100.5 280.6	19.8 BLFT20110405ABN	35 15 31.0 77 36 33.0	0.200 70	14.2 90	10.2 Conner Media, Inc.	-4.2	-4.1
249A Walnut Creek	WEQR	LIC	CX NC	0.0 0.0	0.0 BLH20080501AAS	35 17 28.0 77 49 25.0	2.650 153	2.5 182	28.1 New Age Communications, Inc	-11.4*<	-29.2*<
251C1 Fayetteville	WQSM	LIC	CN NC	257.2 76.5	103.7 BLH19871125KA	35 04 46.0 78 55 58.0	100.000 253	102.3 307	70.0 Cumulus Licensing Llc	-8.0<	20.5
252A Washington	WLGT	LIC	CN NC	72.6 253.1	74.0 BLH19890227KF	35 29 14.0 77 02 42.0	1.350 149	72.1 159	23.9 Media East, Llc	-7.5<	19.0
253C3 Rocky Mount	WDWG	LIC	CN NC	359.1 179.1	68.9 BLH19951122KA	35 54 43.0 77 50 06.0	16.000 125	59.0 163	39.1 First Media Radio, Llc	1.0	17.3
255D Goldsboro	W255AL	LIC	C NC	311.5 131.4	19.8 BLFT20001220ADE	35 24 33.0 77 59 15.0	0.170 32	0.9 66	6.7 Radio Training Network, In	10.2	12.0
254C1 Jacksonville	WRMR	LIC	CN NC	160.9 341.1	93.5 BLH19990401KE	34 29 41.0 77 29 19.0	100.000 297	9.9 303	71.3 Sunrise Broadcasting, Llc	73.9	21.1
255C3 Bethel	WNBR-FM	LIC	C NC	35.6 215.8	68.5 BLH20051028AAW	35 47 29.0 77 22 54.0	11.200 149	3.9 163	39.4 Coastal Carolina Radio, Llc	55.8	28.0
252D Pumpkin Center	W252BO	LIC	C NC	146.7 326.9	67.8 BLFT20070306AAB	34 46 50.0 77 24 56.0	0.055 53	20.8 62	6.2 Educational Media Foundation	37.2	28.8
255C3 Bethel	AL7051	RSV-A	NC	34.9 215.2	70.0 RM10857	35 48 25.0 77 22 44.0	25.000 100	4.1 117	39.7	57.1	29.2
252C3 Oak Island	WUIN	LIC	NC NC	187.2 7.1	148.7 BLH20000807AHJ	33 57 40.0 78 01 37.0	18.500 116	108.5 120	38.2 Sea-comm, Inc.	31.3	81.0
249D Trenton	W249CJ	LIC	DH NC	74.3 254.6	41.2 BLFT20110405ABM	35 23 25.0 77 23 13.0	0.250 8	0.2 19	3.3 Conner Media Corporation	31.6	36.8
254D Winterville	651863	APP	C NC	53.4 233.7	45.7 BNPFT20030317MGU	35 32 06.0 77 25 06.0	0.100 24	0.7 36	5.6 Ctc Media Group	36.1	38.9
252C3 Clarksville	WLUS-FM	LIC	ZCN VA	334.0 153.6	149.1 BLH20011017ACH	36 29 45.0 78 33 16.0	17.500 119	100.4 236	34.9 Lakes Media Holding Compan	40.0	85.6
254D Greenville	650387	APP	C NC	52.1 232.4	50.8 BNPFT20030317KFO	35 34 15.0 77 22 49.0	0.027 90	0.4 101	6.7 Conner Media Corporation	41.6	43.0
250D Wilson	W250AZ	CP	C NC	354.4 174.4	53.1 BPFT20100611ADR	35 46 02.0 77 52 52.0	0.019 109	0.3 145	7.2 Conner Media, Inc.	44.2	44.8
250D Wilson	W250AZ	LIC	C NC	352.8 172.8	53.3 BLFT20071005AAI	35 46 02.0 77 53 52.0	0.013 112	0.3 149	6.8 Conner Media, Inc.	44.5	45.4
250C2 Bayboro	WNBB	LIC	ZCX NC	109.4 290.0	95.9 BLH20071005AAC	35 00 02.0 76 49 58.0	50.000 132	4.7 135	44.0 Coastal Carolina Radio, LI	81.1	50.8

Terrain database is NED 03 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
adjacent. Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtlt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.  
< = Contour Overlap

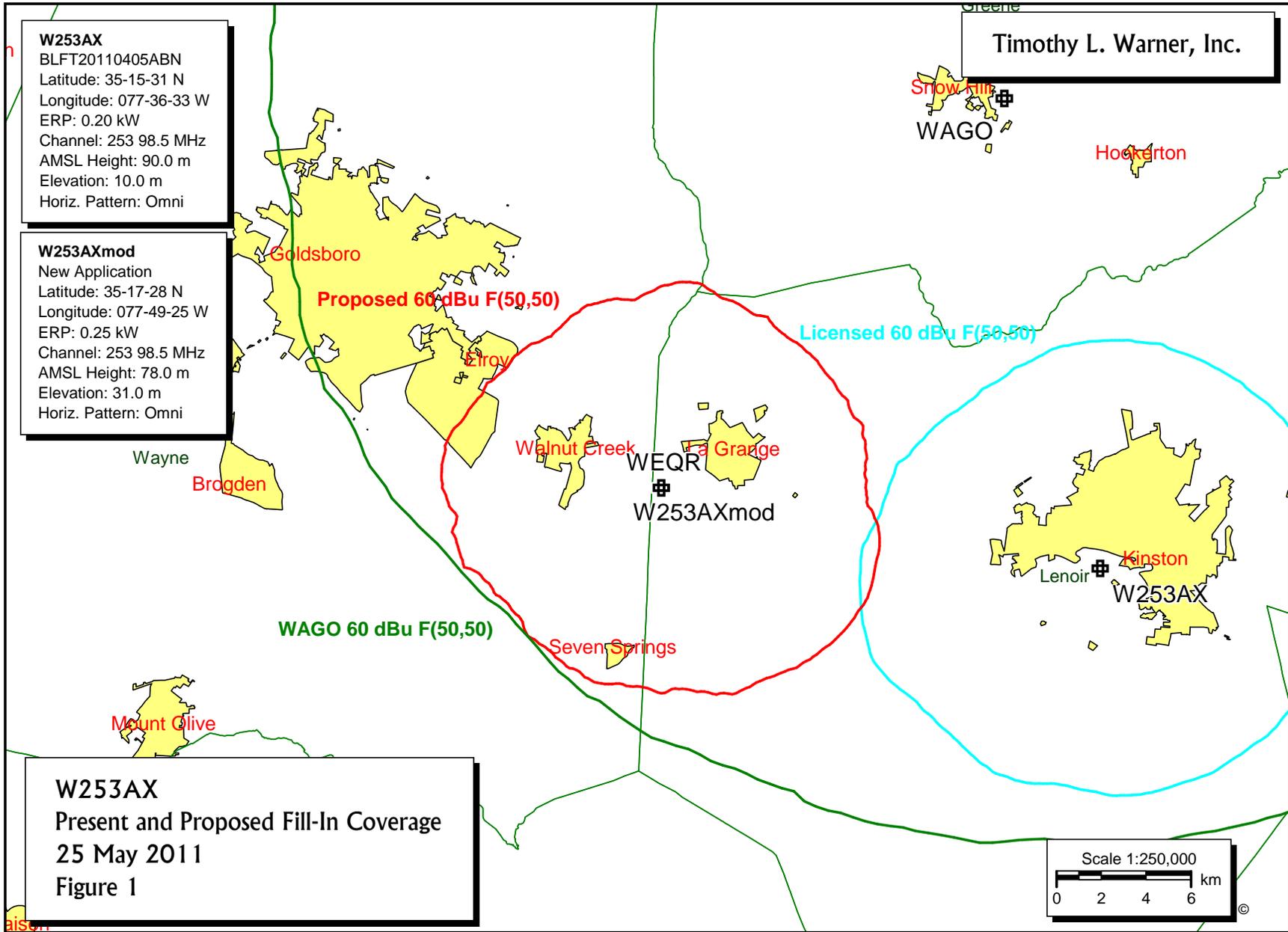
Table 2: Facilities Protected by U/D Method

Facility	WEQR Walnut Creek, North Carolina
Relationship	249A, third adjacent
Distance (km)	0.0
Bearing (degrees)	0
ERP (kW, on azimuth)	2.65
HAAT (m, on azimuth)	153
Ratio	40
Signal Strength (dBu)	127
Translator Signal Strength	167
Translator distance (km)	.001

**W253AX**  
BLFT20110405ABN  
Latitude: 35-15-31 N  
Longitude: 077-36-33 W  
ERP: 0.20 kW  
Channel: 253 98.5 MHz  
AMSL Height: 90.0 m  
Elevation: 10.0 m  
Horiz. Pattern: Omni

**W253AXmod**  
New Application  
Latitude: 35-17-28 N  
Longitude: 077-49-25 W  
ERP: 0.25 kW  
Channel: 253 98.5 MHz  
AMSL Height: 78.0 m  
Elevation: 31.0 m  
Horiz. Pattern: Omni

Timothy L. Warner, Inc.



**W253AX**  
Present and Proposed Fill-In Coverage  
25 May 2011  
Figure 1

