

[Exhibit 13]

## **Non-Interference Compliance**

Regarding Facility id 150276

Channel 287

### **Description of Exhibit 13 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Page 4 includes a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

## Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dB $\mu$  for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

<b>Application_id</b>	<b>File Number</b>	<b>Callsign</b>	<b>Contour at Tower</b>	<b>Min. Contour</b>
1672296	BLH20150302AAP	WLUB	95.1	93.9
	Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour			<b>93.9</b>

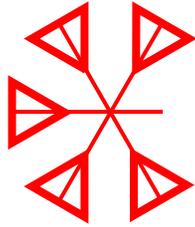
FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **93.9 dB $\mu$** , this makes the proposed translator's worst-case interfering contour **133.9 dB $\mu$** . By the free-space equation, this contour is calculated to extend a maximum of **22.4 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 6 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **55.9 m** at the lowest point.

**Note: The tallest building within the zone of predicted interference is 15ft (4.6m). This proposal provides 55.9m (183.4ft) ground clearance so in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>TEL</b>
<b>Antenna Model:</b>	<b>ANT90D</b>
<b>CORAGL:</b>	<b>65 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>133.9 dB<math>\mu</math></b>
<b>Max Int. Contour Distance:</b>	<b>22.4 m</b>
<b>Min Ground Clearance:</b>	<b>55.9 m</b>

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.824	169.7	18.4	18.4	63.4
10	.813	165.2	18.2	17.9	61.8
15	.795	158.0	17.8	17.2	60.4
20	.772	149.0	17.3	16.2	59.1
25	.743	138.0	16.6	15.1	58.0
30	.708	125.3	15.8	13.7	57.1
35	.668	111.6	15.0	12.2	56.4
40	.623	97.0	13.9	10.7	56.0
45	.572	81.8	12.8	9.1	55.9
50	.517	66.8	11.6	7.4	56.1
55	.458	52.4	10.3	5.9	56.6
60	.396	39.2	8.9	4.4	57.3
65	.332	27.6	7.4	3.1	58.3
70	.266	17.7	6.0	2.0	59.4
75	.198	9.8	4.4	1.1	60.7
80	.131	4.3	2.9	0.5	62.1
85	.065	1.1	1.5	0.1	63.6
90	.000	0.0	0.0	0.0	65.0
Minimum Clearance above TGL:					<b>55.9 m</b>



# TELEWAVE, INC.



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## Telewave ANT90D @ 3/8 spacing

Elevation Azimuth	Relative Voltage	Elevation Azimuth	Relative Voltage
0	0.829	185	0.610
5	0.824	190	0.600
10	0.813	195	0.584
15	0.795	200	0.564
20	0.772	205	0.539
25	0.743	210	0.511
30	0.708	215	0.481
35	0.668	220	0.450
40	0.623	225	0.417
45	0.572	230	0.382
50	0.517	235	0.346
55	0.458	240	0.307
60	0.396	245	0.265
65	0.332	250	0.220
70	0.266	255	0.171
75	0.198	260	0.117
80	0.131	265	0.061
85	0.065	270	0.000
90	0.000	275	0.064
95	0.063	280	0.130
100	0.122	285	0.198
105	0.179	290	0.267
110	0.231	295	0.335
115	0.279	300	0.403
120	0.324	305	0.468
125	0.364	310	0.530
130	0.400	315	0.588
135	0.434	320	0.640
140	0.465	325	0.687
145	0.493	330	0.727
150	0.520	335	0.761
155	0.545	340	0.788
160	0.568	345	0.808
165	0.586	350	0.822
170	0.601	355	0.829
175	0.610		
180	0.613		

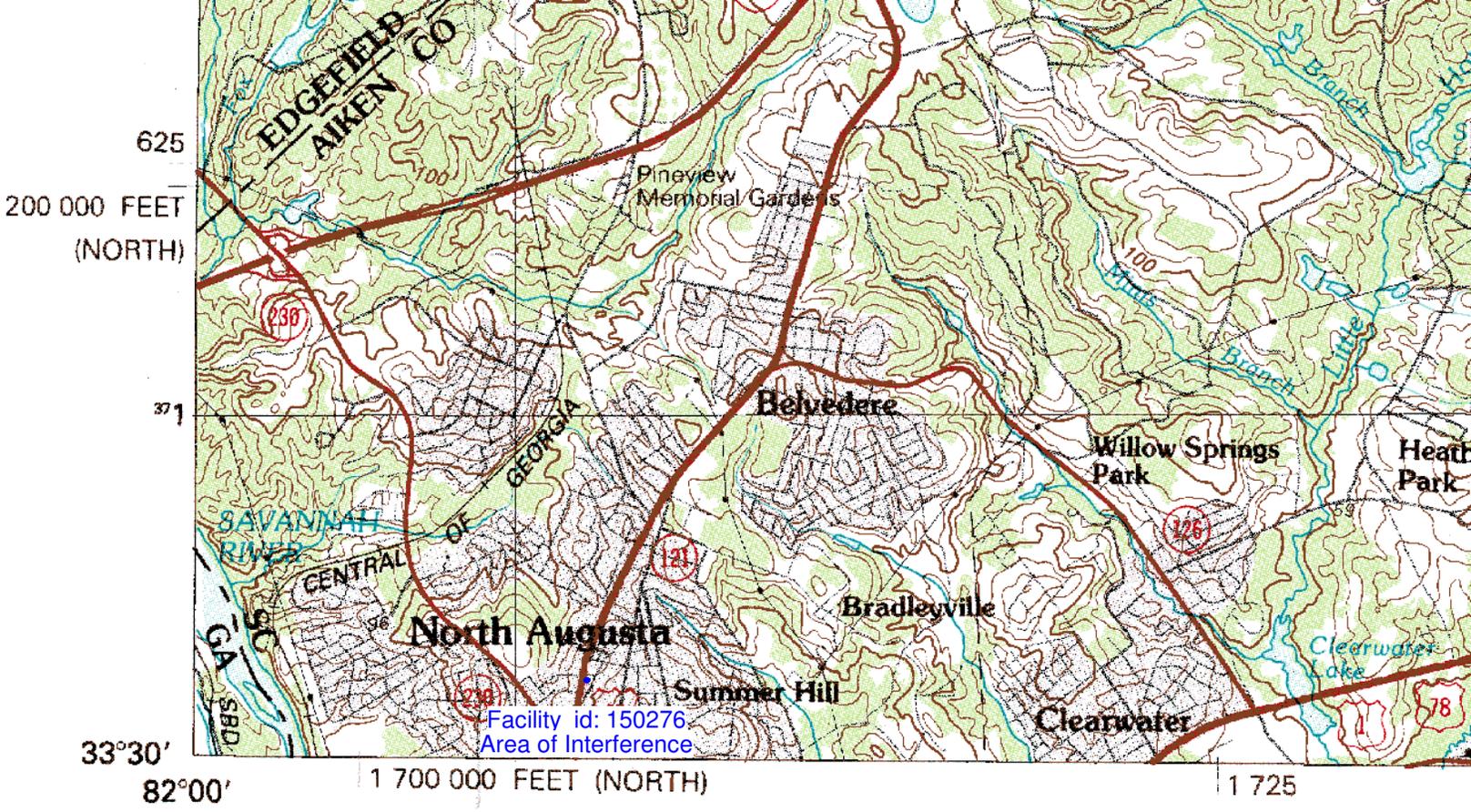
**Adjacent Channel Study  
For Station W287CG, Facility\_id: 150276**

**Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1672296	59250	BLH-20150302AAP	WLUB	CAPSTAR TX, LLC, AS DEBTOR II	C0	AUGUSTA	GA	LIC	100	454	289	2	14.8	1.4918
1726021	150411	BLFT-20160407ABN	W285FJ	EDGEWATER BROADCASTING, II	D	AIKEN	SC	LIC	0.092	209	285	2	25	0
1782202	202713	BNPFT-20180418AHI	W284DJ	GOSPEL RADIO, INC.	D	AUGUSTA	GA	CP	0.25	171	284	3	32.9	0
1521102	151804	BLFT-20121019AAG	W285EP	CAMELLIA CITY COMMUNICATIOI	D	THOMSON	GA	LIC	0.25	265	285	2	51.6	0
1750126	84438	BPED-20170227ABS	WGFJ	RADIO TRAINING NETWORK, INC	A	CROSS HILL	SC	CP	3.6	272	286	1	77.8	0
1693094	198616	BLH-20151015AFY	WSGC-FM	GEORGIA-CAROLINA RADIOCAS'	A	TIGNALL	GA	LIC	6	242	287	0	92.2	0
1757280	147585	BPFT-20170531ADS	W286CT	GLORY COMMUNICATIONS, INC.	D	COLUMBIA	SC	CP	0.099	219	286	1	102.3	0
1752869	147585	BLFT-20170313ACB	W286CT	GLORY COMMUNICATIONS, INC.	D	COLUMBIA	SC	LIC	0.075	219	286	1	102.3	0
1798642	146223	BPFT-20190107ACN	W290CY	FAMILY FIRST	D	COLUMBIA	SC	CP	0.24	264	290	3	104.2	0
1798383	146223	BLFT-20190102ABU	W290CY	FAMILY FIRST	D	COLUMBIA	SC	LIC	0.085	101	290	3	106	0
1731187	139935	BMLFT-20160615AAE	W288CX	CAPSTAR TX, LLC, AS DEBTOR II	D	COLUMBIA	SC	LIC	0.25	266	288	1	107.4	0
1345471	6485	BLH-20091216ACT	WGFG	COMMUNITY BROADCASTERS, L	C3	BRANCHVILLE	SC	LIC	12.5	193.6	287	0	107.6	0
696386	19472	BLH-20031030AAR	WNOK	CAPSTAR TX, LLC, AS DEBTOR II	C1	COLUMBIA	SC	LIC	90	419	284	3	120.8	0
1773319	201678	BNPFT-20171221ACX	W290DI	RADIOJONES, LLC	D	METTER	GA	CP	0.25	163	290	3	123.4	0
1667715	24481	BLH-20150112ABL	WCCP-FM	BYRNE ACQUISITION GROUP, LL	C3	CLEMSON	SC	LIC	20	352	288	1	143.3	0
1772536	40705	BLH-20171130AAE	WLHH	SAGA SOUTH COMMUNICATIONS	C3	RIDGELAND	SC	LIC	16	128	285	2	153.8	0
1732636	64757	BLH-20160706AAH	WMCG	TEL-DODGE BROADCASTING, IN	C2	MILAN	GA	LIC	49	244.9	285	2	165.1	0
1140697	56390	BMLH-20060726APQ	WFSH-FM	SALEM COMMUNICATIONS HOLL	C1	ATHENS	GA	LIC	24	772	284	3	177.3	0

**Intermediate Frequencies (53 and 54 channels difference):**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
904852	4094	BLH-20040109ACF	WAAW	WISDOM, LLC	A	WILLISTON	SC	LIC	2.55	273	234	53	31.3	21.3
1521794	183349	BLH-20121026AAB	WULK	WYCHE SERVICES CORPORATIO	A	CRAWFORDVILLE	GA	LIC	3.8	301	234	53	89	79



● INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1984

