

[Exhibit 13]

## **Non-Interference Compliance**

Regarding Facility id 83640

Channel 222

### **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.

Pages 4 through 5 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 6 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 dB $\mu$  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 7 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 8 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 dBμ 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>
1236158	BMLH20080226ABQ	WZGC	103.7	103.7
1524159	BLED20130403AAI	WCLK	82	82

Minimum F(50,50) Contour of Adjacent Station within  
Proposed Translator's Standard Interfering Contour **82**

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 **82 dBμ**, this makes the proposed translator's worst-case interfering contour **122 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **15.3 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 7 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 **281.3 m** at the lowest point.

**Note: The tallest building within the zone of predicted interference which extends 15.3 m from the base of the tower is 15 ft (4.6m) in height. This proposal provides 281.3m (922.9ft) 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.**

**Antenna Manufacturer:** PSI  
**Antenna Model:** FML-1-DA  
**CORAGL:** 289 m  
**Maximum ERP:** 0.0075 kW  
**Interfering Contour:** 122 dBμ  
**Max Int. Contour Distance:** 15.3 m  
**Min Ground Clearance:** 281.3 m

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	1.000	7.5	15.3	15.2	287.7
10	.990	7.4	15.1	14.9	286.4
15	.970	7.1	14.8	14.3	285.2
20	.940	6.6	14.3	13.5	284.1
25	.910	6.2	13.9	12.6	283.1
30	.870	5.7	13.3	11.5	282.4
35	.820	5.0	12.5	10.2	281.8
40	.770	4.4	11.7	9.0	281.4
45	.710	3.8	10.8	7.7	281.3
50	.640	3.1	9.8	6.3	281.5
55	.570	2.4	8.7	5.0	281.9
60	.500	1.9	7.6	3.8	282.4
65	.420	1.3	6.4	2.7	283.2
70	.340	0.9	5.2	1.8	284.1
75	.260	0.5	4.0	1.0	285.2
80	.170	0.2	2.6	0.5	286.4
85	.090	0.1	1.4	0.1	287.6
90	.000	0.0	0.0	0.0	289.0
Minimum Clearance above TGL:					<b>281.3 m</b>



Relative Field Elevation Pattern  
Model: PSIFML-1  
Type: 1-Bay FM Antenna  
Polarization: Circular  
Gain: .46 (-3.37 dB)





**Propagation Systems Inc.**  
 Elevation Pattern Tabulation  
 Antenna: PSIFML-1

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.00	0.001	-60.000	-50.00	0.643	-3.839	-10.00	0.985	-0.134
-89.00	0.017	-35.177	-49.00	0.656	-3.663	-9.00	0.988	-0.109
-88.00	0.035	-29.156	-48.00	0.669	-3.490	-8.00	0.990	-0.086
-87.00	0.052	-25.634	-47.00	0.682	-3.325	-7.00	0.992	-0.066
-86.00	0.070	-23.136	-46.00	0.695	-3.166	-6.00	0.994	-0.049
-85.00	0.087	-21.198	-45.00	0.707	-3.012	-5.00	0.996	-0.034
-84.00	0.104	-19.626	-44.00	0.719	-2.862	-4.00	0.997	-0.022
-83.00	0.122	-18.286	-43.00	0.731	-2.719	-3.00	0.998	-0.013
-82.00	0.139	-17.134	-42.00	0.743	-2.580	-2.00	0.999	-0.007
-81.00	0.156	-16.117	-41.00	0.755	-2.445	-1.00	1.000	-0.003
-80.00	0.174	-15.207	-40.00	0.766	-2.316	0.00	1.000	0.000
-79.00	0.191	-14.390	-39.00	0.777	-2.190	1.00	1.000	-0.003
-78.00	0.208	-13.644	-38.00	0.788	-2.071	2.00	0.999	-0.007
-77.00	0.225	-12.962	-37.00	0.798	-1.955	3.00	0.998	-0.013
-76.00	0.242	-12.330	-36.00	0.809	-1.842	4.00	0.997	-0.022
-75.00	0.259	-11.741	-35.00	0.819	-1.733	5.00	0.996	-0.034
-74.00	0.276	-11.194	-34.00	0.829	-1.630	6.00	0.994	-0.049
-73.00	0.292	-10.684	-33.00	0.839	-1.529	7.00	0.992	-0.066
-72.00	0.309	-10.203	-32.00	0.848	-1.432	8.00	0.990	-0.086
-71.00	0.325	-9.750	-31.00	0.857	-1.339	9.00	0.988	-0.109
-70.00	0.342	-9.320	-30.00	0.866	-1.251	10.00	0.985	-0.134
-69.00	0.358	-8.914	-29.00	0.875	-1.164	11.00	0.982	-0.162
-68.00	0.375	-8.530	-28.00	0.883	-1.082	12.00	0.978	-0.193
-67.00	0.391	-8.165	-27.00	0.891	-1.003	13.00	0.974	-0.227
-66.00	0.407	-7.815	-26.00	0.899	-0.928	14.00	0.970	-0.263
-65.00	0.423	-7.482	-25.00	0.906	-0.855	15.00	0.966	-0.301
-64.00	0.438	-7.164	-24.00	0.913	-0.786	16.00	0.961	-0.344
-63.00	0.454	-6.860	-23.00	0.920	-0.720	17.00	0.956	-0.389
-62.00	0.469	-6.569	-22.00	0.927	-0.657	18.00	0.951	-0.436
-61.00	0.485	-6.291	-21.00	0.933	-0.598	19.00	0.945	-0.487
-60.00	0.500	-6.023	-20.00	0.940	-0.542	20.00	0.940	-0.540
-59.00	0.515	-5.764	-19.00	0.945	-0.487	21.00	0.933	-0.598
-58.00	0.530	-5.517	-18.00	0.951	-0.437	22.00	0.927	-0.657
-57.00	0.545	-5.279	-17.00	0.956	-0.389	23.00	0.920	-0.720
-56.00	0.559	-5.050	-16.00	0.961	-0.344	24.00	0.913	-0.786
-55.00	0.573	-4.830	-15.00	0.966	-0.301	25.00	0.906	-0.855
-54.00	0.588	-4.616	-14.00	0.970	-0.263	26.00	0.899	-0.927
-53.00	0.602	-4.413	-13.00	0.974	-0.227	27.00	0.891	-1.003
-52.00	0.616	-4.214	-12.00	0.978	-0.193	28.00	0.883	-1.082
-51.00	0.629	-4.024	-11.00	0.982	-0.162	29.00	0.875	-1.164
						30.00	0.866	-1.251

file: FML 1-bay elevation tabulation

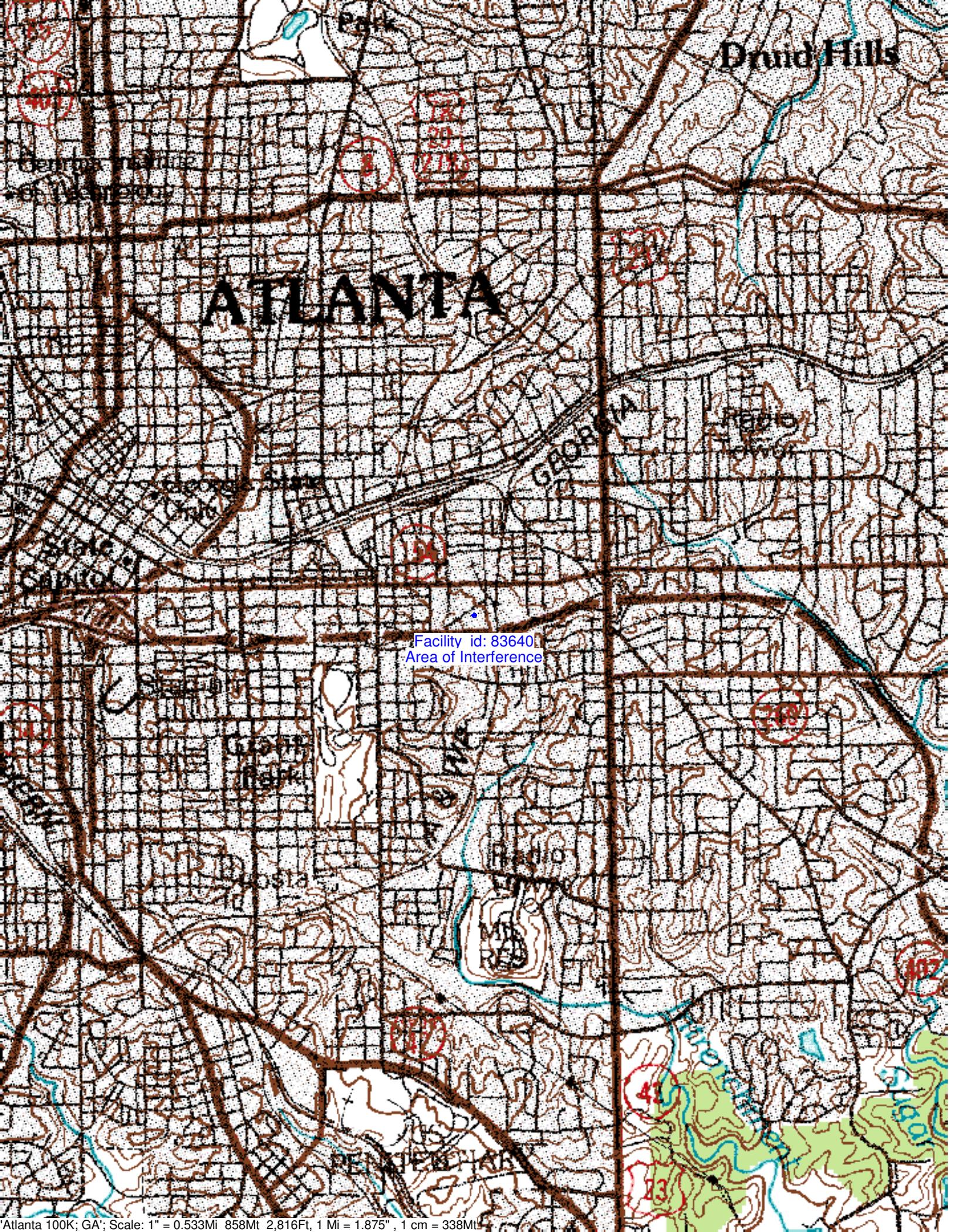
revision: A

Date: 1/28/08

**Adjacent Channel Study  
For Station W222AF, Facility\_id: 83640**

**Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1524159	11675	BLED-20130403AAI	WCLK	CLARK ATLANTA UNIVERSITY	A	ATLANTA	GA	LIC	0.48	588	220	2	7.2	0.0448
1236158	13805	BMLH-20080226ABQ	WZGC	CBS RADIO OF ATLANTA, LLC	C1	ATLANTA	GA	LIC	64	612.3	225	3	7.2	0.0448
1761174	67214	BLFT-20170717ABH	W223CQ	RADIO TRAINING NETWORK, INC	D	LILBURN	GA	LIC	0.027	372	223	1	22.5	0
1491221	148961	BLFT-20120313AAR	W223BP	IMMANUEL BROADCASTING NET	D	LITHIA SPRINGS	GA	LIC	0.12	324	223	1	30.8	0
1737027	139418	BPFT-20160728AFT	W290AS	EDUCATIONAL MEDIA FOUNDAT	D	BAINBRIDGE	GA	CP	0.25	429	223	1	31.7	0
1761375	67214	BPFT-20170718AAV	W223CQ	RADIO TRAINING NETWORK, INC	D	LILBURN	GA	CP	0.25	388	223	1	38	0
1359470	86333	BLED-20100510AKQ	WMVW	LIFE RADIO MINISTRIES INC	C3	PEACHTREE CITY	GA	LIC	13	323.1	219	3	56	0
1750683	197628	BPL-20170206AAU	WESI-LP	IGLESIA DE CRISTO ELIM GEORC	L1	SUGARHILL	GA	CP	0	610	222	0	57.8	0
1058536	28335	BLFT-20050420ABJ	W221AW	IMMANUEL BROADCASTING NET	D	NORTH CANTON	GA	LIC	0.01	602	221	1	60.8	0
1748724	197628	BLL-20170111AAS	WESI-LP	IGLESIA DE CRISTO ELIM GEORC	L1	SUGARHILL	GA	LIC	0	381	222	0	62.3	0
1753187	18179	BPH-20170228AAP	WJGA-FM	EARNHART BROADCASTING CO.	A	JACKSON	GA	CP	5.5	300	221	1	63.5	0
93836	18179	BLH-19861029KB	WJGA-FM	EARNHART BROADCASTING CO.	A	JACKSON	GA	LIC	2.15	304	221	1	63.5	0
1752148	9118	BPH-20170228AAQ	WBTR-FM	WYAI, INC.	A	CARROLLTON	GA	CP	1.65	498	221	1	64	0
93837	9118	BLH-19861029KC	WBTR-FM	WYAI, INC.	A	CARROLLTON	GA	LIC	0.58	498	221	1	64	0
1140087	61617	BLH-20060714AAC	WEKS	LEGACY MEDIA - SOUTH ATLANT	C3	ZEBULON	GA	LIC	12	380	223	1	69.1	0
1753449	6479	BPH-20170228AAS	WMOQ	BOSTWICK BROADCASTING GRC	A	BOSTWICK	GA	CP	5.9	324	222	0	74.3	0
1223071	6479	BLH-20071022BXC	WMOQ	BOSTWICK BROADCASTING GRC	A	BOSTWICK	GA	LIC	3	324	222	0	74.3	0
562134	28333	BLED-20010327AAC	WCCV	IMMANUEL BROADCASTING NET	C2	CARTERSVILLE	GA	LIC	7.3	518	219	3	77.6	0



Druid Hills

ATLANTA

GEORGIA

Facility id: 83640  
Area of Interference

