

**Non-Interference Compliance for
Reach Communications, Incorporated
Regarding Facility ID 139105 Channel 233**

Description of Exhibit 12 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. The applicant acknowledges that it will comply with 47 C.F.R. § 74.1203 in regards to resolving any interference that may occur.

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 tabulations 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.

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. The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the vicinity.

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.

Application ID	File Number	Callsign	Contour at Tower	Min. Contour
1047786	BLH20050225AAH	WMIA-FM	88.14	87.92
1047792	BLH20050225AAG	WMGE	88.14	87.92

Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour:
87.92 dBμ.¹

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 **87.92 dBμ**, this makes the proposed translator's worst-case interfering contour **127.92 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **28.03 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 8 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 ground level is **83.92 m** from the tower. The applicant has taken into account USGS quadrangles and relevant aerial photography instating that no structures, except possibly tower support structures, puncture the area of interference. Hence, 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:	NICOM
Antenna Model:	BKG77 1/2
CORAGL:	92 m
Maximum ERP:	0.099 kW
Interfering Contour:	87.92 dBμ
Max Int. Contour Distance:	28.03 m
Ground Clearance:	83.92 m

¹ This translator shall become a "fill-in" translator to WMGE. 74.1204 (e) exempts protection to WMGE.

NICOM BKG77/2 Depression Propagation Elevations - Two Bay Half Wave Spaced

Depress Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour (m)	Horizontal Distance to Contour from Antenna (m)	Vertical Clearance of Interfering Contour (m)
0	1	99.00	28.03	28.03	92.00
5	0.988	96.64	27.70	27.59	89.59
10	0.947	88.78	26.55	26.14	87.39
15	0.871	75.11	24.42	23.58	85.68
20	0.792	62.10	22.20	20.86	84.41
25	0.682	46.05	19.12	17.33	83.92
30	0.565	31.60	15.84	13.72	84.08
35	0.469	21.78	13.15	10.77	84.46
40	0.376	14.00	10.54	8.07	85.22
45	0.273	7.38	7.65	5.41	86.59
50	0.188	3.50	5.27	3.39	87.96
55	0.131	1.70	3.67	2.11	88.99
60	0.079	0.62	2.21	1.11	90.08
65	0.047	0.22	1.32	0.56	90.81
70	0.022	0.05	0.62	0.21	91.42
75	0.01	0.01	0.28	0.07	91.73
80	0.003	0.00	0.08	0.01	91.92
85	0.001	0.00	0.03	0.00	91.97
90	0	0.00	0.00	0.00	92.00



BAG 77

Vertical	-66	0.297	54	0.479	174	0.488
Values	-63	0.345	57	0.436	177	0.479
-180	0.487	-60	0.391	60	0.391	
-177	0.478	-57	0.436	63	0.345	
-174	0.467	-54	0.479	66	0.297	
-171	0.460	-51	0.523	69	0.253	
-168	0.454	-48	0.568	72	0.211	
-165	0.447	-45	0.616	75	0.176	
-162	0.439	-42	0.661	78	0.145	
-159	0.429	-39	0.706	81	0.120	
-156	0.419	-36	0.745	84	0.105	
-153	0.402	-33	0.783	87	0.100	
-150	0.385	-30	0.818	90	0.105	
-147	0.369	-27	0.852	93	0.118	
-144	0.359	-24	0.881	96	0.134	
-141	0.350	-21	0.910	99	0.151	
-138	0.338	-18	0.934	102	0.168	
-135	0.326	-15	0.954	105	0.185	
-132	0.314	-12	0.972	108	0.202	
-129	0.303	-9	0.987	111	0.219	
-126	0.290	-6	0.999	114	0.236	
-123	0.278	-3	0.999	117	0.252	
-120	0.265	0	1.000	120	0.265	
-117	0.251	3	0.999	123	0.278	
-114	0.236	6	0.999	126	0.290	
-111	0.218	9	0.987	129	0.304	
-108	0.202	12	0.972	132	0.314	
-105	0.185	15	0.954	135	0.327	
-102	0.168	18	0.934	138	0.338	
-99	0.151	21	0.910	141	0.350	
-96	0.134	24	0.881	144	0.360	
-93	0.118	27	0.852	147	0.370	
-90	0.105	30	0.818	150	0.386	
-87	0.100	33	0.783	153	0.403	
-84	0.105	36	0.745	156	0.420	
-81	0.120	39	0.706	159	0.430	
-78	0.145	42	0.661	162	0.440	
-75	0.176	45	0.616	165	0.448	
-72	0.211	48	0.568	168	0.455	
-69	0.253	51	0.523	171	0.461	

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Facility ID	File Number	Callsign	Licensee	Sts	City	St	Cls	ERP	AMSL	Ch	Adj	Dist
51978	BLH20050225AAH	WMIA-FM	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	MIAMI BEACH	FL	C0	98000	308	230	-3	20.99
51979	BLH20050225AAG	WMGE	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	MIAMI BEACH	FL	C0	98000	308	235	2	20.99
51979	BXLH20041227ABB	WMGE	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	MIAMI BEACH	FL	C0	69260	215	235	2	20.99
51978	BXLH20041227ABC	WMIA-FM	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	MIAMI BEACH	FL	C0	67690	215	230	-3	20.99
72982	BLH20050224ABK	WHQT	COX RADIO, INC.	LIC	CORAL GABLES	FL	C0	98000	308	286	53	20.99
72982	BXLH20041229AAW	WHQT	COX RADIO, INC.	LIC	CORAL GABLES	FL	C0	66080	215	286	53	20.99
36544	BLH20021231AAE	WZZR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	RIVIERA BEACH	FL	C2	50000	142	232	-1	68.01
66224	BLH19881007KA	WARO	MERIDIAN BROADCASTING, INC.	LIC	NAPLES	FL	C0	99000	309	233	0	155.58
40988	BLH20031015ACY	WSYR-FM	ALOHA STATION TRUST, LLC	LIC	GIFFORD	FL	C2	50000	106	234	1	156.55
65663	BLH19980121KD	WGMX	THE GREAT MARATHON RADIO COMPANY	LIC	MARATHON	FL	C2	50000	84	232	-1	187.44



