

**Non-Interference Compliance for  
Calvary Chapel Church, Inc.**  
Regarding Facility ID 138510 Channel 269

**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
692776	BMLH20031010ADE	WJRR	61.48	61.32

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

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 **61.32 dBμ**, this makes the proposed translator's worst-case interfering contour **101.32 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **60.24 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 by **26.64 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<sup>1</sup>.

<b>Antenna Manufacturer:</b>	<b>Nicomm</b>
<b>Antenna Model:</b>	<b>BKG77 1/2</b>
<b>CORAGL:</b>	<b>44 m</b>
<b>Maximum ERP:</b>	<b>0.001 kW</b>
<b>Interfering Contour:</b>	<b>101.32 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>60.24 m</b>
<b>Ground Clearance:</b>	<b>26.64 m</b>

<sup>1</sup> THIS INSTANT APPLICATION IS NOW A SINGLETON APPLICATION WITH RESPECTS TO ITS MX GROUP AND ALL OTHER EXISTING AUTHORIZATIONS AS DEMOSTARTED WITHIN THIS EXHIBIT. THUS, THIS INSTANT APLPLICATION IS GRANTABLE AND THE APPLICANT RESPECTFULLY REQUESTS A GRANT OF AUTHORIZATION OF A CONSTRUCTION PERMIT.

# **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	1.00	60.24	60.24	44.00
5	0.988	0.98	59.51	59.29	38.81
10	0.947	0.90	57.04	56.18	34.09
15	0.871	0.76	52.47	50.68	30.42
20	0.792	0.63	47.71	44.83	27.68
25	0.682	0.47	41.08	37.23	26.64
30	0.565	0.32	34.03	29.47	26.98
35	0.469	0.22	28.25	23.14	27.80
40	0.376	0.14	22.65	17.35	29.44
45	0.273	0.07	16.44	11.63	32.37
50	0.188	0.04	11.32	7.28	35.33
55	0.131	0.02	7.89	4.53	37.54
60	0.079	0.01	4.76	2.38	39.88
65	0.047	0.00	2.83	1.20	41.43
70	0.022	0.00	1.33	0.45	42.75
75	0.01	0.00	0.60	0.16	43.42
80	0.003	0.00	0.18	0.03	43.82
85	0.001	0.00	0.06	0.01	43.94
90	0	0.00	0.00	0.00	44.00

TX station:  
Frequency: 100.00 MHz

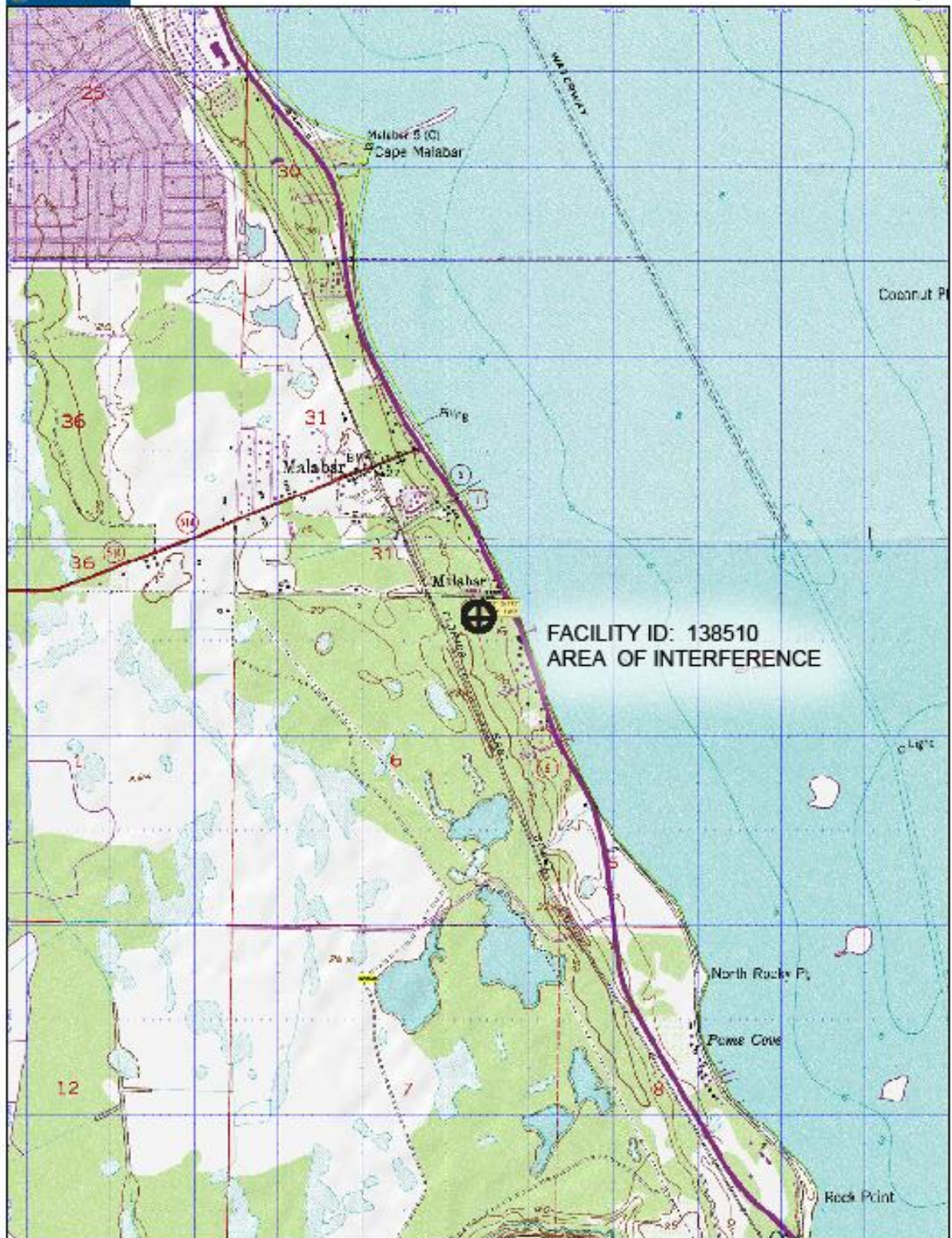
Site name: 2 BAY 1/2

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	747.3	54.0	14.2	15.0	108.0	1.8	0.2
0.9	100.0	746.6	54.9	13.1	12.9	108.9	2.1	0.3
1.8	99.8	745.0	55.8	12.2	11.0	109.8	2.3	0.4
2.7	99.7	742.5	56.7	11.2	9.4	110.7	2.6	0.5
3.6	99.4	739.1	57.6	10.3	8.0	111.6	2.9	0.6
4.5	99.2	734.7	58.5	9.5	6.7	112.5	3.2	0.8
5.4	98.8	729.5	59.4	8.7	5.6	113.4	3.5	0.9
6.3	98.3	721.9	60.3	7.9	4.7	114.3	3.9	1.1
7.2	97.5	710.3	61.2	7.2	3.9	115.2	4.3	1.4
8.1	96.6	698.0	62.1	6.5	3.2	116.1	4.7	1.6
9.0	95.7	685.1	63.0	5.9	2.6	117.0	5.1	1.9
9.9	94.7	670.3	63.9	5.3	2.1	117.9	5.5	2.3
10.8	93.6	655.0	64.8	4.7	1.7	118.8	5.9	2.6
11.7	92.5	639.2	65.7	4.2	1.3	119.7	6.4	3.1
12.6	91.2	622.1	66.6	3.7	1.0	120.6	6.9	3.6
13.5	89.9	604.2	67.5	3.3	0.8	121.5	7.4	4.1
14.4	88.6	586.1	68.4	2.9	0.6	122.4	7.9	4.7
15.3	87.1	567.5	69.3	2.5	0.5	123.3	8.5	5.4
16.2	85.7	548.5	70.2	2.2	0.4	124.2	9.0	6.1
17.1	84.2	529.4	71.1	1.9	0.3	125.1	9.6	6.9
18.0	82.6	510.3	72.0	1.6	0.2	126.0	10.2	7.8
18.9	80.9	489.6	72.9	1.4	0.1	126.9	10.9	8.8
19.8	79.2	469.1	73.8	1.2	0.1	127.8	11.5	9.9
20.7	77.5	448.8	74.7	1.0	0.1	128.7	12.2	11.1
21.6	75.7	428.2	75.6	0.8	0.1	129.6	12.9	12.4
22.5	73.8	407.5	76.5	0.7	0.0	130.5	13.6	13.7
23.4	72.0	387.3	77.4	0.6	0.0	131.4	14.3	15.2
24.3	70.1	367.4	78.3	0.5	0.0	132.3	15.0	16.8
25.2	68.2	347.8	79.2	0.4	0.0	133.2	15.8	18.6
26.1	66.3	328.7	80.1	0.3	0.0	134.1	16.5	20.5
27.0	64.4	310.1	81.0	0.2	0.0	135.0	17.3	22.5
27.9	62.4	291.2	81.9	0.2	0.0	135.9	18.1	24.6
28.8	60.4	273.0	82.8	0.1	0.0	136.8	19.0	26.9
29.7	58.5	255.5	83.7	0.1	0.0	137.7	19.8	29.3
30.6	56.5	238.7	84.6	0.1	0.0	138.6	20.6	31.9
31.5	54.6	222.6	85.5	0.0	0.0	139.5	21.5	34.6
32.4	52.7	207.2	86.4	0.0	0.0	140.4	22.4	37.5
33.3	50.7	192.3	87.3	0.0	0.0	141.3	23.3	40.5
34.2	48.8	177.8	88.2	0.0	0.0	142.2	24.2	43.6
35.1	46.9	164.0	89.1	0.0	0.0	143.1	25.0	46.8
36.0	45.0	151.0	90.0	0.0	0.0	144.0	25.9	50.2
36.9	43.1	138.7	90.9	0.0	0.0	144.9	26.8	53.8
37.8	41.2	127.1	91.8	0.0	0.0	145.8	27.7	57.5
38.7	39.4	116.2	92.7	0.0	0.0	146.7	28.6	61.3
39.6	37.6	105.6	93.6	0.0	0.0	147.6	29.6	65.6
40.5	35.8	95.7	94.5	0.1	0.0	148.5	30.7	70.3
41.4	34.0	86.4	95.4	0.1	0.0	149.4	31.7	75.1
42.3	32.3	77.8	96.3	0.1	0.0	150.3	32.7	80.1
43.2	30.6	69.9	97.2	0.2	0.0	151.2	33.8	85.4
44.1	28.9	62.5	98.1	0.3	0.0	152.1	34.9	90.8
45.0	27.3	55.8	99.0	0.3	0.0	153.0	35.9	96.4
45.9	25.8	49.6	99.9	0.4	0.0	153.9	37.0	102.2
46.8	24.3	44.0	100.8	0.5	0.0	154.8	38.0	108.1
47.7	22.8	38.8	101.7	0.6	0.0	155.7	39.1	114.2
48.6	21.4	34.2	102.6	0.7	0.0	156.6	40.0	119.8
49.5	20.1	30.1	103.5	0.9	0.1	157.5	41.0	125.3
50.4	18.8	26.3	104.4	1.0	0.1	158.4	41.9	130.9
51.3	17.5	23.0	105.3	1.2	0.1	159.3	42.7	136.5
52.2	16.4	20.0	106.2	1.4	0.1	160.2	43.6	142.1
53.1	15.2	17.3	107.1	1.6	0.2	161.1	44.5	147.8

NicomUsa, Inc

Facility ID	File Number	Callsign	Licensee	Sts	City	St	Cls	ERP	AMSL	Ch	Adj	Dist
51983	BMLH20031010ADE	WJRR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	COCOA BEACH	FL	C	95000	500	266	-3	76.33
41066	BLH19980715KB	WCZR	ALOHA STATION TRUST, LLC	LIC	VERO BEACH	FL	A	4200	123	269	0	35.92
156923	BNPFT20030317MBK	NEW	ACE OF HEARTS DISC JOCKEY SERVICE INC.	APP	PALM BAY	FL	D	150	47	271	2	10.75
145230	BNPFT20030313BBB	NEW	NATIONAL CHRISTIAN NETWORK	APP	MELBOURNE	FL	D	80	51	268	-1	7.05
156440	BNPFT20030317HIZ	NEW	CORNERSTONE COMMUNITY RADIO, INC.	APP	MELBOURNE	FL	D	250	30	270	1	11.27
51983	BXLH20081231AAG	WJRR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	COCOA BEACH	FL	C	9000	462	266	-3	76.33
51983	BXLH20070920ACK	WJRR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	COCOA BEACH	FL	C	9000	401	266	-3	76.33
73137	BMLH20081010ATQ	WJHM	CBS RADIO STATIONS INC.	LIC	DAYTONA BEACH	FL	C	90000	493	270	1	120.65
25756	BMLH20120529ADE	WMBX	PALM BEACH BROADCASTING LICENSE LLC	LIC	JENSEN BEACH	FL	C1	100000	299	272	3	119.21
139883	BNPFT20030314BQU	NEW	CAPSTAR TX LIMITED PARTNERSHIP	APP	ROCKLEDGE	FL	D	250	57	270	1	20.75
73137	BXLH20000328AHR	WJHM	CBS RADIO STATIONS INC.	LIC	DAYTONA BEACH	FL	C	100000	172	270	1	120.82
66013	BMLH20110307ABQ	WPOI	COX RADIO, INC.	LIC	ST. PETERSBURG	FL	C	97100	491	268	-1	164.5
144133	BMLFT20120717ACG	W272BA	NATIONAL CHRISTIAN NETWORK, INC.	LIC	COCOA BEACH	FL	D	97	81	272	3	28.92
51983	BXPH20130215ABB	WJRR	CLEAR CHANNEL BROADCASTING LICENSES, INC.	CP	COCOA BEACH	FL	C	20000	146	266	-3	99.78
25756	BXPH20120215AAV	WMBX	PALM BEACH BROADCASTING LICENSE LLC	CP	JENSEN BEACH	FL	C1	35000	126	272	3	119.22
66013	BXLH20011107AAK	WPOI	COX RADIO, INC.	LIC	ST. PETERSBURG	FL	C	100000	360	268	-1	164.5
27674	BLH19981202KA	WHLG	WHLG FM, LLC	LIC	PORT ST. LUCIE	FL	A	6000	92	267	-2	96.84
66013	BXMLH20111018AAB	WPOI	COX RADIO, INC.	LIC	ST. PETERSBURG	FL	C	18000	472	268	-1	164.5
56985	BLH20060508ABR	WWGR	RENDA BROADCASTING CORPORATION OF NEVADA	LIC	FORT MYERS	FL	C0	100000	343	270	1	205.03
41066	0	WCZR	ALOHA STATION TRUST, LLC	USE	VERO BEACH	FL	A	0	0	269	0	48.12
25756	BXPH20121205ADP	WMBX	PALM BEACH BROADCASTING LICENSE LLC	CP	JENSEN BEACH	FL	C1	24500	109	272	3	146.19
1154	BLH20070713AAF	WAVV	ALPINE BROADCASTING CORP., INC.	LIC	NAPLES PARK	FL	C1	100000	299	266	-3	226.19



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