

The Church in Baton Rouge Interference Area Baton Rouge, LA

The proposed LPFM station will broadcast on channel 205, which is within the 53 kilometers, second-adjacent minimum distance separation of station WJFM on channel 203 and the 73 kilometers, second-adjacent minimum distance separation of station WRKF on channel 207. The WJFM interfering contour at the LPFM tower site is 104.0 dB μ F(50,50) and the WRKF interfering contour at the LPFM tower site is 94.4 dB μ F(50,50). Using the ratio of 100:1 (LPFM to WJFM & WRKF) on the second-adjacent channel, the population within the proposed LPFM 144.0 & 134.4 dB μ contour respectively is zero. Applying the antenna manufacturer's vertical radiation pattern the area of interference can be more accurately calculated geometrically, rather than just by using the free space equation alone. This particular antenna is a single bay Nicom BKG77. It was determined from the manufacturer's vertical plan that at 40 degrees below horizontal the interference area would reach down 5.8 meters and extend 6.9 meters horizontally. We have proposed the antenna radiation center will be 28 meters above ground with an Effective Radiated Power of 100 watts. There are no occupied structures or roadways within the interference area of the station. Therefore, the application is in compliance with §73.807(e)(1) *Waiver of the second-adjacent channel separations.*

Figure 1

Minimum Ground Clearance

ERP: 100

AGL: 28

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	0.999	99.8	13	13.0	26.9
10	0.982	96.4	13	12.8	25.7
15	0.954	91.0	13	12.6	24.6
20	0.918	84.3	12	11.3	23.9
25	0.872	76.0	12	10.9	22.9
30	0.818	66.9	11	9.5	22.5
35	0.758	57.5	10	8.2	22.3
40	0.691	47.7	9	6.9	22.2
45	0.616	37.9	8	5.7	22.3
50	0.538	28.9	7	4.5	22.6
55	0.465	21.6	6	3.4	23.1
60	0.391	15.3	5	2.5	23.7
65	0.313	9.8	4	1.7	24.4
70	0.239	5.7	3	1.0	25.2
75	0.176	3.1	2	0.5	26.1
80	0.129	1.7	2	0.3	26.0
85	0.103	1.1	1	0.1	27.0
90	0.104	1.1	1	0.0	27.0
Minimum Clearance above TGL:					22.2 m

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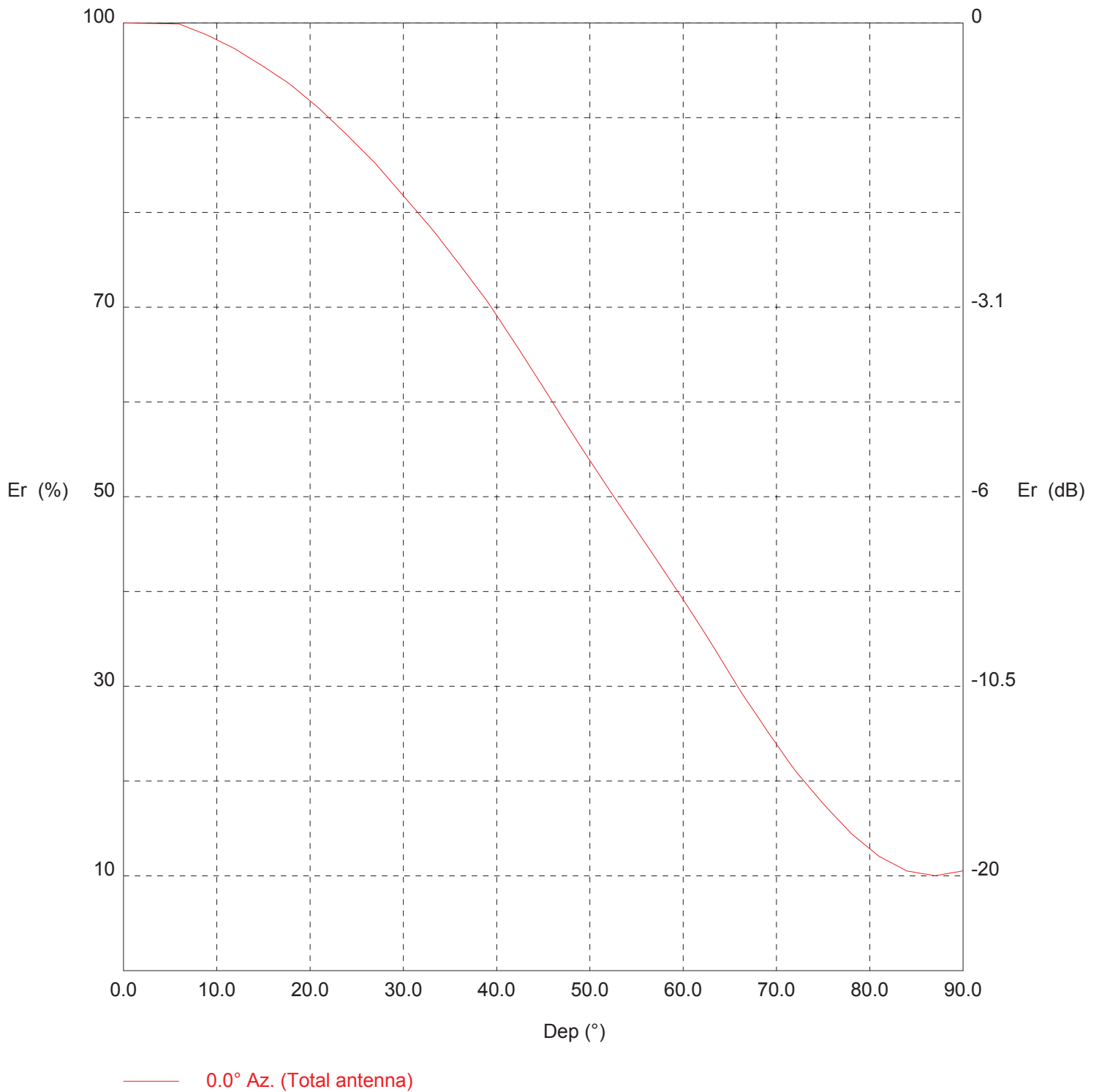
Figure 2 Page 1

TX station:

Site name: 1 BAY ANTENNA

Frequency: 104.10 MHz

Vertical diagram



The Church in Baton Rouge

Figure 2 Page 2

TX station:

Site name: 1 BAY ANTENNA

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Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	373.6	30.0	81.8	249.8	60.0	39.1	57.2
0.5	100.0	373.6	30.5	81.2	246.3	60.5	38.4	55.0
1.0	100.0	373.5	31.0	80.6	242.9	61.0	37.6	52.8
1.5	100.0	373.4	31.5	80.1	239.5	61.5	36.8	50.7
2.0	100.0	373.4	32.0	79.5	236.1	62.0	36.1	48.6
2.5	100.0	373.3	32.5	78.9	232.7	62.5	35.3	46.6
3.0	99.9	373.3	33.0	78.3	229.3	63.0	34.5	44.6
3.5	99.9	373.2	33.5	77.7	225.6	63.5	33.7	42.5
4.0	99.9	373.1	34.0	77.1	222.0	64.0	32.9	40.5
4.5	99.9	373.0	34.5	76.4	218.3	64.5	32.1	38.6
5.0	99.9	372.9	35.0	75.8	214.7	65.0	31.3	36.6
5.5	99.9	372.8	35.5	75.2	211.1	65.5	30.5	34.8
6.0	99.9	372.8	36.0	74.5	207.6	66.0	29.7	33.0
6.5	99.7	371.3	36.5	73.9	204.0	66.5	29.0	31.4
7.0	99.5	369.9	37.0	73.2	200.4	67.0	28.2	29.8
7.5	99.3	368.4	37.5	72.6	196.8	67.5	27.5	28.3
8.0	99.1	367.0	38.0	71.9	193.3	68.0	26.8	26.8
8.5	98.9	365.5	38.5	71.3	189.8	68.5	26.0	25.3
9.0	98.7	364.1	39.0	70.6	186.3	69.0	25.3	23.9
9.5	98.5	362.3	39.5	69.9	182.4	69.5	24.6	22.6
10.0	98.2	360.5	40.0	69.1	178.6	70.0	23.9	21.3
10.5	98.0	358.7	40.5	68.4	174.7	70.5	23.2	20.1
11.0	97.7	356.9	41.0	67.6	170.9	71.0	22.5	18.9
11.5	97.5	355.1	41.5	66.9	167.2	71.5	21.8	17.7
12.0	97.2	353.3	42.0	66.1	163.5	72.0	21.1	16.6
12.5	96.9	351.1	42.5	65.4	159.7	72.5	20.5	15.7
13.0	96.6	348.9	43.0	64.6	156.0	73.0	19.9	14.8
13.5	96.3	346.7	43.5	63.9	152.3	73.5	19.3	14.0
14.0	96.0	344.5	44.0	63.1	148.7	74.0	18.8	13.2
14.5	95.7	342.3	44.5	62.3	145.1	74.5	18.2	12.4
15.0	95.4	340.1	45.0	61.6	141.6	75.0	17.6	11.6
15.5	95.1	337.8	45.5	60.8	138.0	75.5	17.1	10.9
16.0	94.7	335.4	46.0	60.0	134.4	76.0	16.6	10.2
16.5	94.4	333.1	46.5	59.2	130.9	76.5	16.0	9.6
17.0	94.1	330.8	47.0	58.4	127.5	77.0	15.5	9.0
17.5	93.8	328.4	47.5	57.6	124.1	77.5	15.0	8.4
18.0	93.4	326.1	48.0	56.8	120.7	78.0	14.5	7.8
18.5	93.0	323.3	48.5	56.1	117.5	78.5	14.1	7.4
19.0	92.6	320.4	49.0	55.3	114.4	79.0	13.7	7.0
19.5	92.2	317.5	49.5	54.6	111.3	79.5	13.3	6.6
20.0	91.8	314.7	50.0	53.8	108.2	80.0	12.9	6.2
20.5	91.4	311.9	50.5	53.1	105.2	80.5	12.5	5.8
21.0	91.0	309.1	51.0	52.3	102.2	81.0	12.0	5.4
21.5	90.5	305.9	51.5	51.6	99.4	81.5	11.8	5.2
22.0	90.0	302.7	52.0	50.8	96.6	82.0	11.5	5.0
22.5	89.5	299.6	52.5	50.1	93.8	82.5	11.3	4.8
23.0	89.1	296.5	53.0	49.4	91.1	83.0	11.0	4.5
23.5	88.6	293.4	53.5	48.6	88.4	83.5	10.8	4.3
24.0	88.1	290.3	54.0	47.9	85.8	84.0	10.5	4.1
24.5	87.6	287.0	54.5	47.2	83.2	84.5	10.4	4.1
25.0	87.2	283.8	55.0	46.5	80.7	85.0	10.3	4.0
25.5	86.7	280.6	55.5	45.7	78.2	85.5	10.3	3.9
26.0	86.2	277.4	56.0	45.0	75.7	86.0	10.2	3.9
26.5	85.7	274.2	56.5	44.3	73.3	86.5	10.1	3.8
27.0	85.2	271.1	57.0	43.6	71.0	87.0	10.0	3.7
27.5	84.6	267.5	57.5	42.8	68.6	87.5	10.1	3.8
28.0	84.0	263.9	58.0	42.1	66.2	88.0	10.2	3.9
28.5	83.5	260.3	58.5	41.4	63.9	88.5	10.3	3.9
29.0	82.9	256.8	59.0	40.6	61.6	89.0	10.4	4.0
29.5	82.3	253.3	59.5	39.9	59.4	89.5	10.4	4.1

Figure 3
Aerial Photo of the 6.9 meter Vicinity Surrounding the Proposed Tower Site

