

**Exhibit 11 Page 1**  
**The Church in Atlanta**  
**Second-Adjacent Waiver Request**  
**Atlanta, GA**

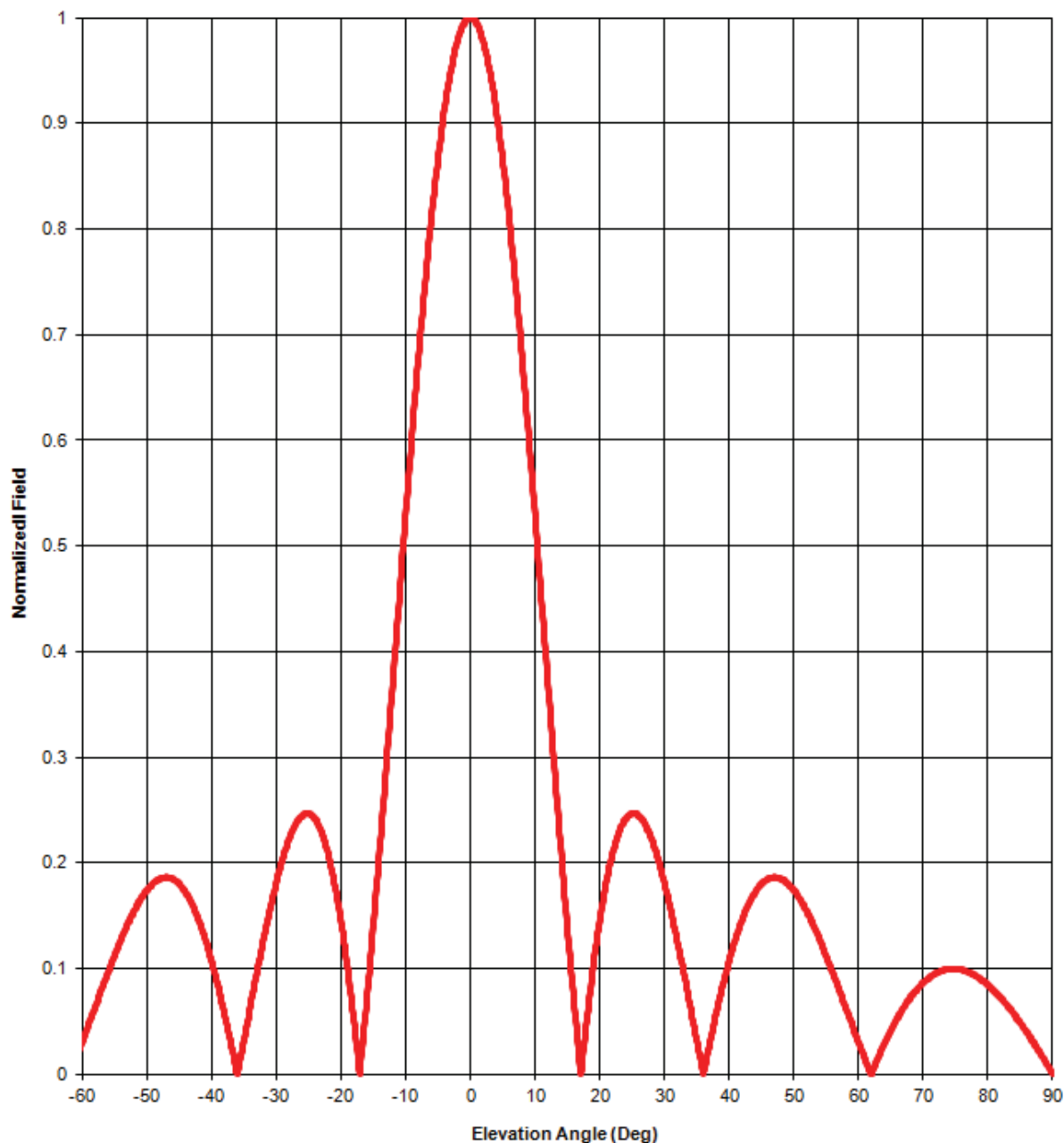
The proposed LPFM station will broadcast on channel 279, which is within the 84 kilometers second-adjacent minimum distance separation of station WVEE on channel 277 and the 84 kilometers second-adjacent minimum distance separation of station WALR-FM (Lic. and App) on channel 281. The WVEE interfering contour at the LPFM tower site is 89.7 dBμ F(50,50). The WALR-FM interfering contour at the LPFM tower site is 62.8 dBμ F(50,50). Using the ratio of 100:1 (LPFM to WVEE and WALR-FM) on the second-adjacent channel, the population within the proposed LPFM 129.7 dBμ contour and 102.8 dBμ contour 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 four bay full-wave spaced Shively 6812b antenna. It was determined from the manufacturer's vertical plan that at 45 degrees below horizontal the interference area would extend 25.5 meters toward the ground. We have proposed the antenna radiation center will be 35 meters above ground, thus the interference area will never reach the ground. There are no occupied structures or elevated roadways within the interference area. Therefore, the application is in compliance with §73.807(e)(1) *Waiver of the second-adjacent channel separations.*

# Exhibit 11 Figure 1

## Minimum Ground Clearance

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	0.886	11.0	169	168.4	20.3
10	0.529	3.9	100	98.5	17.6
15	0.140	0.3	28	27.0	27.8
20	0.146	0.3	28	26.3	25.4
25	0.247	0.9	48	43.5	14.7
30	0.181	0.5	36	31.2	17.0
35	0.032	0.0	0	0.0	35.0
40	0.108	0.2	12	9.2	27.3
45	0.180	0.5	36	25.5	9.5
50	0.174	0.4	32	20.6	10.5
55	0.112	0.2	23	13.2	16.2
60	0.030	0.0	0	0.0	35.0
65	0.042	0.0	0	0.0	35.0
70	0.087	0.1	16	5.5	20.0
75	0.100	0.1	16	4.1	19.5
80	0.084	0.1	16	2.8	19.2
85	0.049	0.0	0	0.0	35.0
90	0.000	0.0	0	0.0	35.0
Minimum Clearance above TGL:					9.5

## Elevation pattern



Antenna model: 6812b, 4-bay full-wave-spaced

Test frequency: 98.1 MHz

Gain (maximum):

Power	dB
2.09	3.19 dB

Document No. 6812b 4-bay fw (130701)

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Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field
1	0.994	19	0.102	37	0.029	55	0.112	73	0.098
2	0.978	20	0.146	38	0.057	56	0.096	74	0.100
3	0.951	21	0.181	39	0.084	57	0.080	75	0.100
4	0.913	22	0.209	40	0.108	58	0.063	76	0.099
5	0.866	23	0.229	41	0.128	59	0.047	77	0.097
6	0.811	24	0.242	42	0.146	60	0.030	78	0.093
7	0.748	25	0.247	43	0.161	61	0.014	79	0.089
8	0.680	26	0.245	44	0.172	62	0.001	80	0.084
9	0.606	27	0.237	45	0.180	63	0.016	81	0.079
10	0.529	28	0.223	46	0.185	64	0.029	82	0.072
11	0.450	29	0.204	47	0.186	65	0.042	83	0.065
12	0.370	30	0.181	48	0.185	66	0.053	84	0.057
13	0.291	31	0.155	49	0.181	67	0.064	85	0.049
14	0.214	32	0.126	50	0.174	68	0.073	86	0.040
15	0.140	33	0.096	51	0.165	69	0.080	87	0.030
16	0.070	34	0.064	52	0.154	70	0.087	88	0.021
17	0.006	35	0.032	53	0.142	71	0.092	89	0.011
18	0.051	36	0.001	54	0.127	72	0.096	90	0.000

### Elevation Pattern Tabulation

Antenna model: 6812b, 4-bay full-wave-spaced

Relative Field at 0° Depression = 1.000

## Exhibit 11 Figure 2 Page 2 Manufacturer Elevation Pattern



**Exhibit 11 Figure 3**  
**Aerial Photo of the Vicinity Surrounding the Proposed Tower Site**

