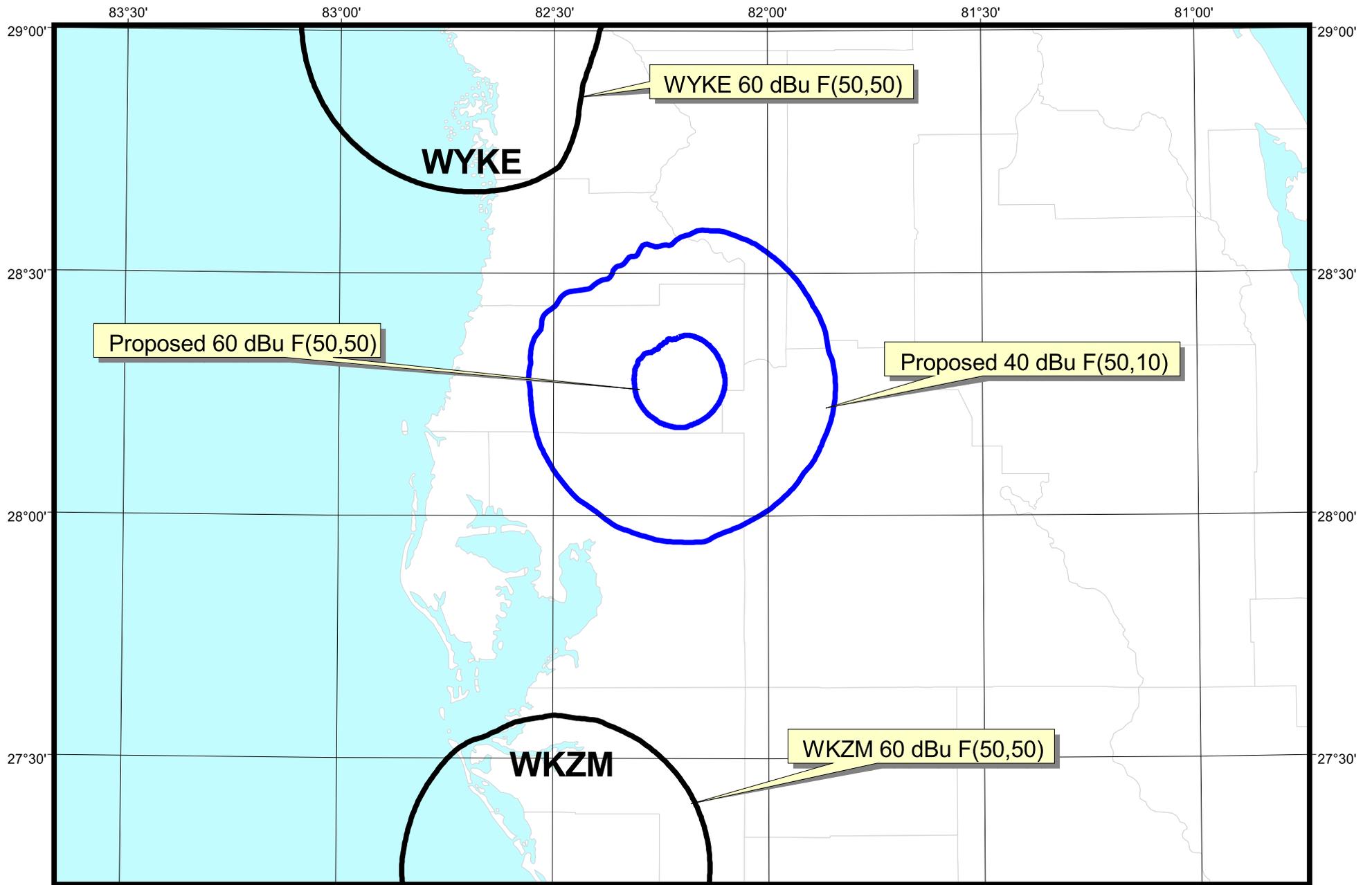


0 7 14 Kilometers

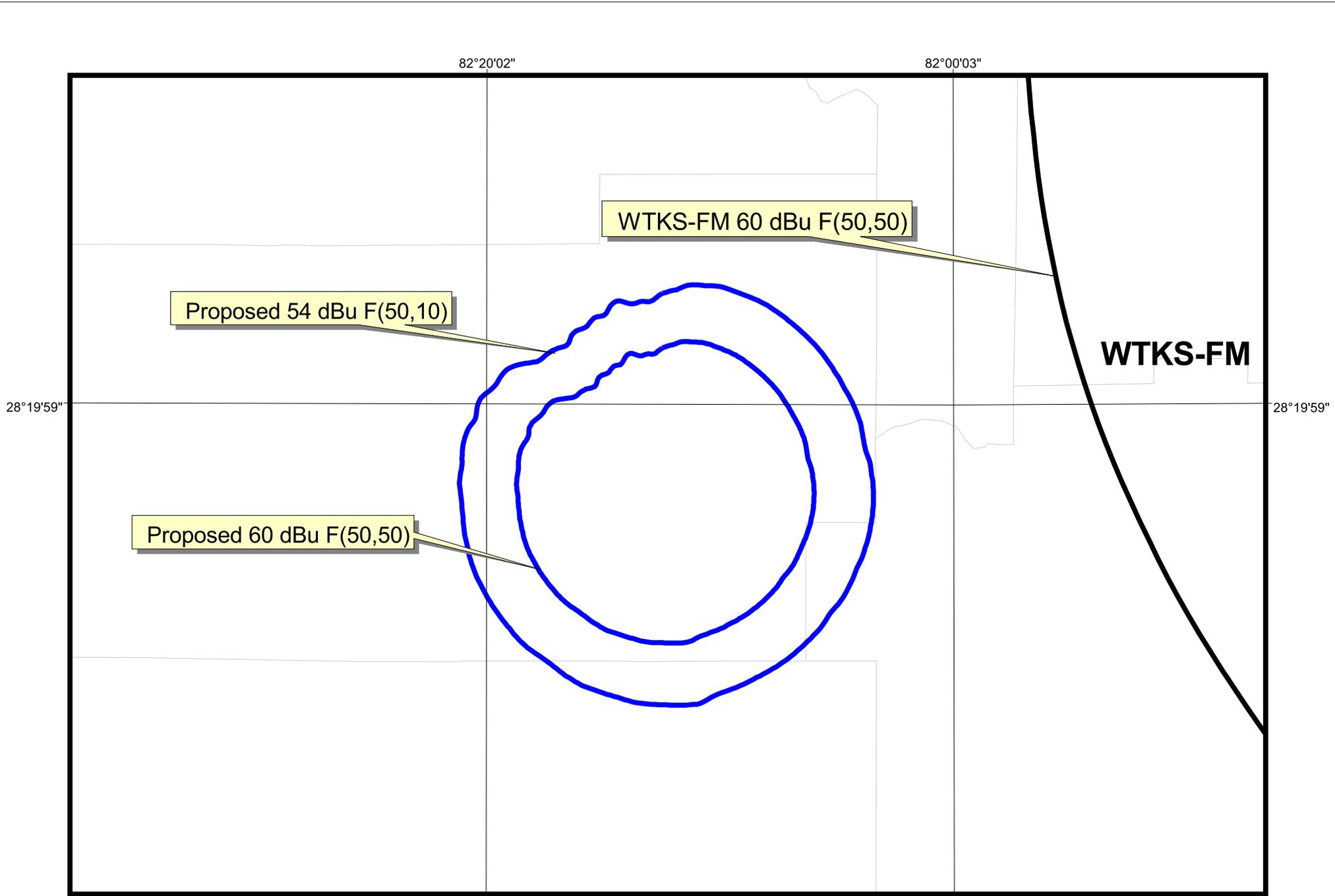
Figure 1

**MINOR CHANGE TO LICENSED FACILITY (250-mile window application)  
 Demonstration of 60 dBu contour within lesser of 2 mV or 25-mile radius of WZHR-AM**



**MINOR CHANGE TO LICENSED FACILITY (250-mile window application)  
Co-channel study**

**Figure 2**



0 9 18 Kilometers

**MINOR CHANGE TO LICENSED FACILITY (250-mile window application)  
1st adjacent channel study**

Figure 3

**Table 1**

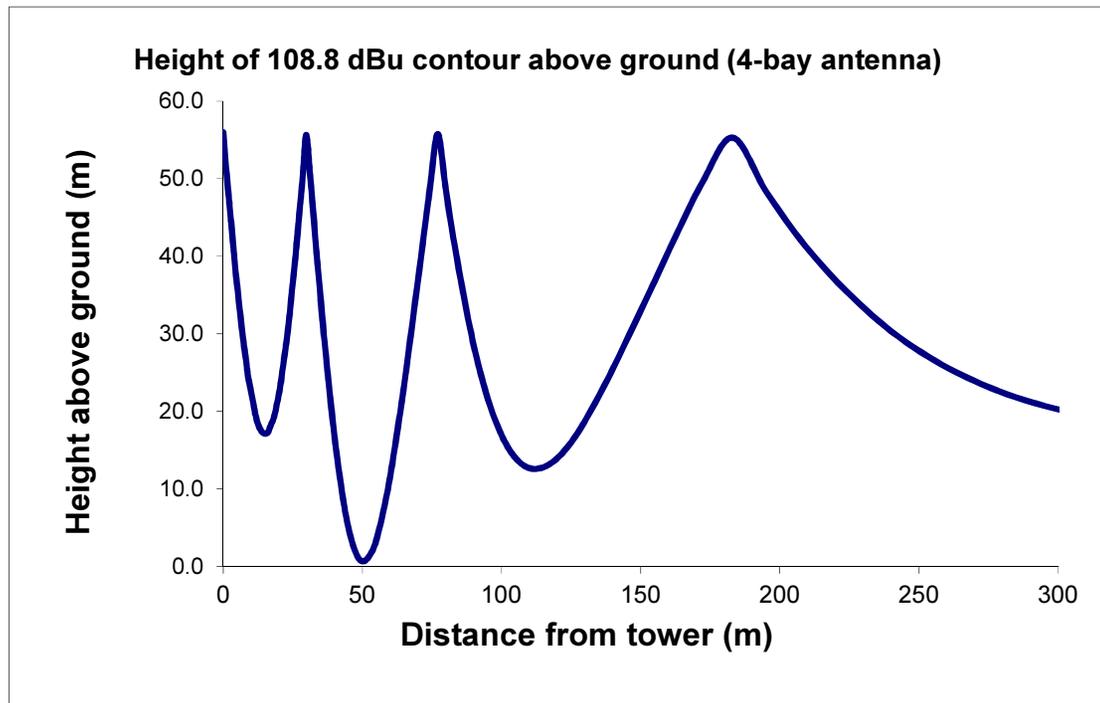
**MINOR CHANGE TO LICENSED FACILITY (250-mile window application): Proposed Channel 282**

**Channel Study**

Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Distance (km)	Bearing TO (deg)	Req. Dist. (km)	Clearance (km)	Field Strength (dBu)
280	D	W280DW	FX	LIC	TAMPA	FL	US	UNIVERSITY OF SOUTH FLORIDA E	31.4	220.6	14.6	16.8	
280	D	W280DK	FX	LIC	SPRING HILL	FL	US	HERNANDO BROADCASTING COM	40.3	314.6	12.6	27.7	
281	L1	WZIG-LP	FL	LIC	PALM HARBOR	FL	US	PALM HARBOR RADIO INC	54.9	249.5	20.0	34.9	
281	C	WTKS-FM	FM	LIC	COCOA BEACH	FL	US	CLEAR CHANNEL BROADCASTING	115.8	73.0	99.7	16.1	
282	C3	WYKE	FM	LIC	INGLIS	FL	US	CITRUS COUNTY ASSOCIATION FC	94.5	330.4	68.2	26.4	
282	C3	WKZM	FM	LIC	SARASOTA	FL	US	THE MOODY BIBLE INSTITUTE OF (	114.8	193.6	71.5	43.3	
<b>284</b>	<b>C1</b>	<b>WRBQ-FM</b>	<b>FM</b>	<b>LIC</b>	<b>TAMPA</b>	<b>FL</b>	<b>US</b>	<b>WXTU LICENSE LIMITED PARTNER</b>	<b>43.2</b>	<b>206.0</b>	<b>62.3</b>	<b>-19.1</b>	<b>68.8 (see NOTE)</b>

**NOTE:**

**(No interference CAUSED to WRBQ-FM)** 2nd adjacent WRBQ-FM has a field strength of 68.8 dBu F(50,50) at the proposed site. Therefore the proposed translator's interfering contour is the 108.8 dBu F(50,10) contour. At 250 watts ERP, the proposed translator's 108.8 dBu F(50,10) extends 403 meters horizontally from the antenna. However, using a 4-bay SHIVELY 6812B-4 antenna mounted at 56 meters AGL, the antenna's vertical elevation pattern is such that the interfering contour does not reach any lower than 12.8 meters above ground level (42 feet AGL) beyond 115 meters from the tower, and does not reach any occupied structures or population. Therefore this proposal is compliant with the allowance of Rule 74.1204(d). (See Figure 4 below and Figure 5)

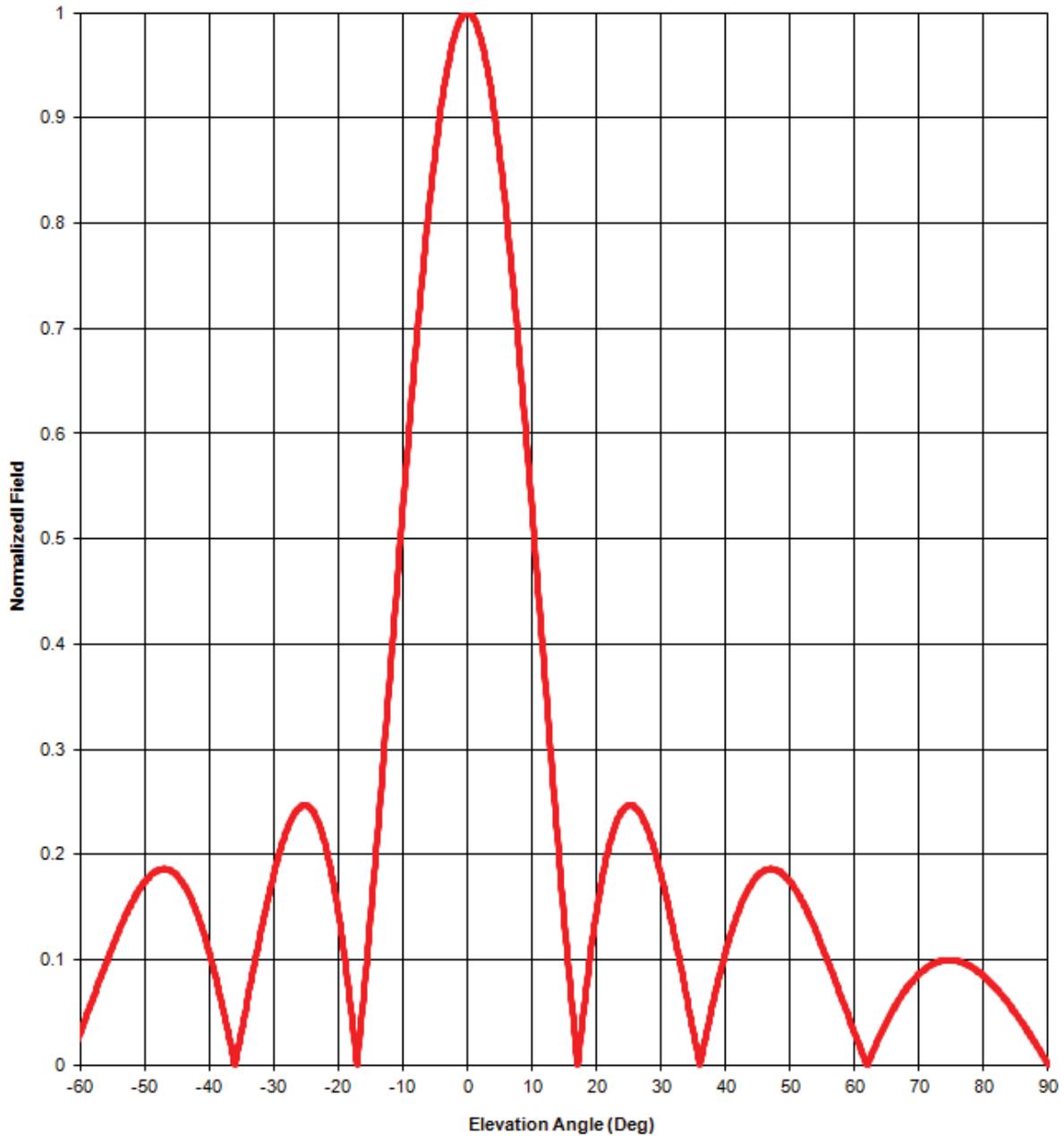




**MINOR CHANGE TO LICENSED FACILITY (250-mile window application)  
2nd adjacent channel study with respect to WRBQ-FM**

**Figure 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)

A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA

(207) 647-3327

1-888-SHIVELY

Fax: (207)647-8273

An Employee-Owned Company

www.shively.com

sales@shively.com

Certified to ISO-9001

Degrees	Rel. Field
1	0.994
2	0.978
3	0.951
4	0.913
5	0.866
6	0.811
7	0.748
8	0.680
9	0.606
10	0.529
11	0.450
12	0.370
13	0.291
14	0.214
15	0.140
16	0.070
17	0.006
18	0.051

Degrees	Rel. Field
19	0.102
20	0.146
21	0.181
22	0.209
23	0.229
24	0.242
25	0.247
26	0.245
27	0.237
28	0.223
29	0.204
30	0.181
31	0.155
32	0.126
33	0.096
34	0.064
35	0.032
36	0.001

Degrees	Rel. Field
37	0.029
38	0.057
39	0.084
40	0.108
41	0.128
42	0.146
43	0.161
44	0.172
45	0.180
46	0.185
47	0.186
48	0.185
49	0.181
50	0.174
51	0.165
52	0.154
53	0.142
54	0.127

Degrees	Rel. Field
55	0.112
56	0.096
57	0.080
58	0.063
59	0.047
60	0.030
61	0.014
62	0.001
63	0.016
64	0.029
65	0.042
66	0.053
67	0.064
68	0.073
69	0.080
70	0.087
71	0.092
72	0.096

Degrees	Rel. Field
73	0.098
74	0.100
75	0.100
76	0.099
77	0.097
78	0.093
79	0.089
80	0.084
81	0.079
82	0.072
83	0.065
84	0.057
85	0.049
86	0.040
87	0.030
88	0.021
89	0.011
90	0.000

## Elevation Pattern Tabulation

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

Relative Field at 0° Depression = 1.000

## Radiofrequency Electromagnetic Exposure Analysis

Source	Height AGL(m)	Antenna type	Bays	Horizontal ERP (kw)	Vertical ERP (kw)	Power Density $\mu\text{W}/\text{cm}^2$ at 2 meters AGL				
						within 10 meters distance	% controlled environment limit (1000 $\mu\text{W}/\text{cm}^2$ )	Max. PD	% uncontrolled environment limit (200 $\mu\text{W}/\text{cm}^2$ )	Distance to maximum PD (m)
Proposed translator	56	SHIVELY 6812B-4	4	0.250	0.250	0.140	0.0140%	0.42	0.21%	24.4
						0.140	<b>0.0140%</b>	0.42	<b>0.21%</b>	24.4

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

Calculations made using FCC FMModel