

Exhibit 11 Page 1
Temple De Dios, Org 3
Second-Adjacent Waiver Request
Houston, Texas

The proposed LPFM station will broadcast on channel 235, which is within the 93 kilometers second-adjacent minimum distance separation of station KTBZ-FM (License) on channel 233. The KTBZ-FM (License) interfering contour at the LPFM tower site is 86.1 dBμ F(50,50). Using the ratio of 100:1 (LPFM to KTBZ-FM) on the second-adjacent channel, the population within the proposed LPFM 126.1 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 Jampro JLLP. It has been determined from the manufacturer's vertical plan that at 70 degrees below horizontal the interference area would extend 9.4 meters toward the ground and extend 3.4 meters horizontally. We have proposed the antenna radiation center will be 30 meters above ground with an Effective Radiated Power of 100 watts, thus the interference area will not reach the ground. Further, 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.*

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude **29° 50' 41"** North
Longitude **95° 24' 22"** West (NAD 27)

These coordinates convert to NAD 83 coordinates of
29° 50' 41.81", North, 95° 24' 22.78" West (NAD 83).

Height of antenna radiation center above mean sea level: **52 meters** AMSL

Number of Evenly Spaced Radials = **8** 0° is referenced to True North

Results

Calculated HAAT = **30 meters**

Antenna Height Above Average Terrain calculated
using 1 km [GLOBE terrain data](#)

Individual "Radial HAAT" Values, in meters

0°	24.4 m
45°	29.7 m
90°	34.9 m
135°	37.8 m
180°	35.3 m
225°	31.3 m
270°	24.3 m
315°	21.1 m

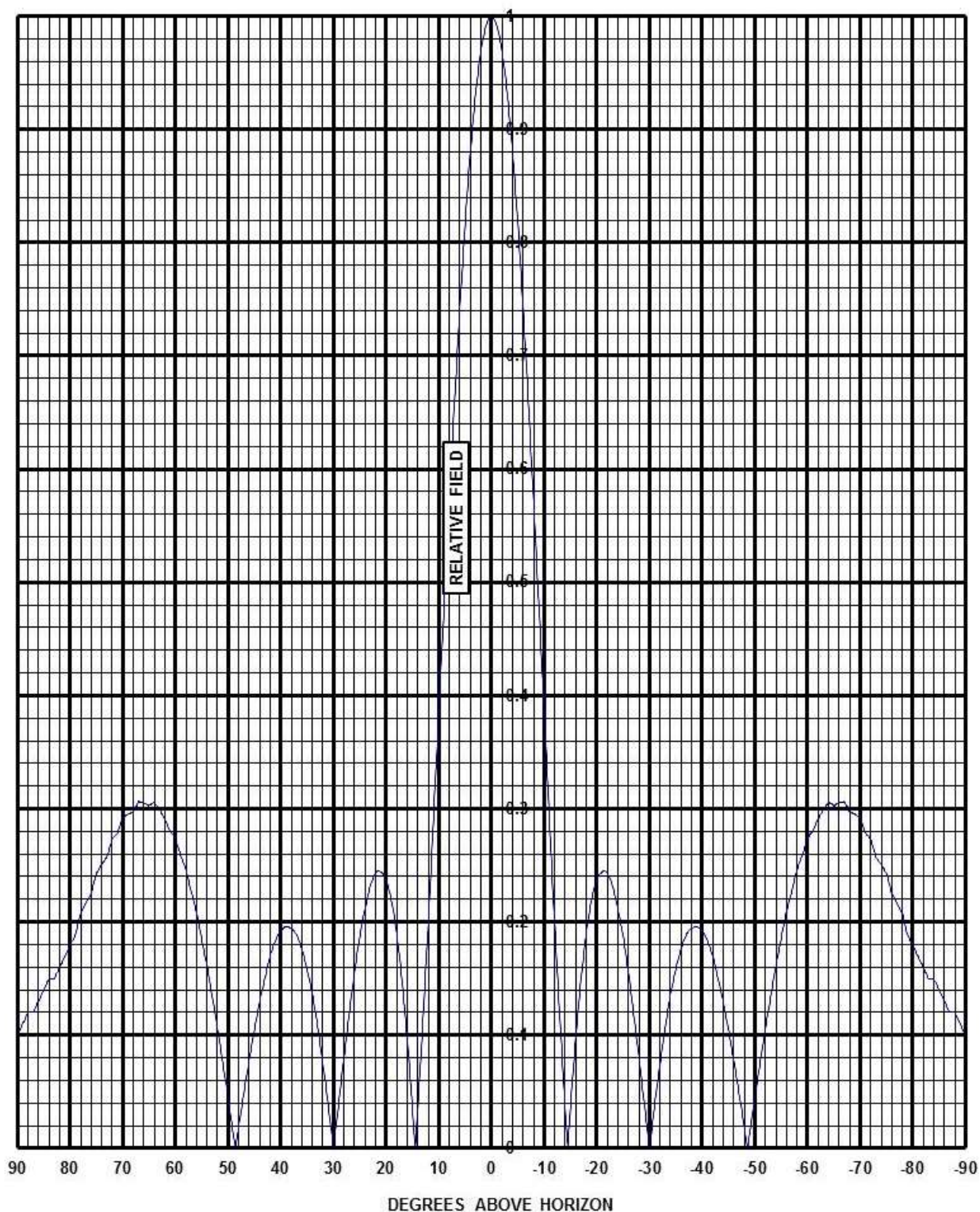
Print Results?

New Calculation?

Exhibit 11 Figure 2

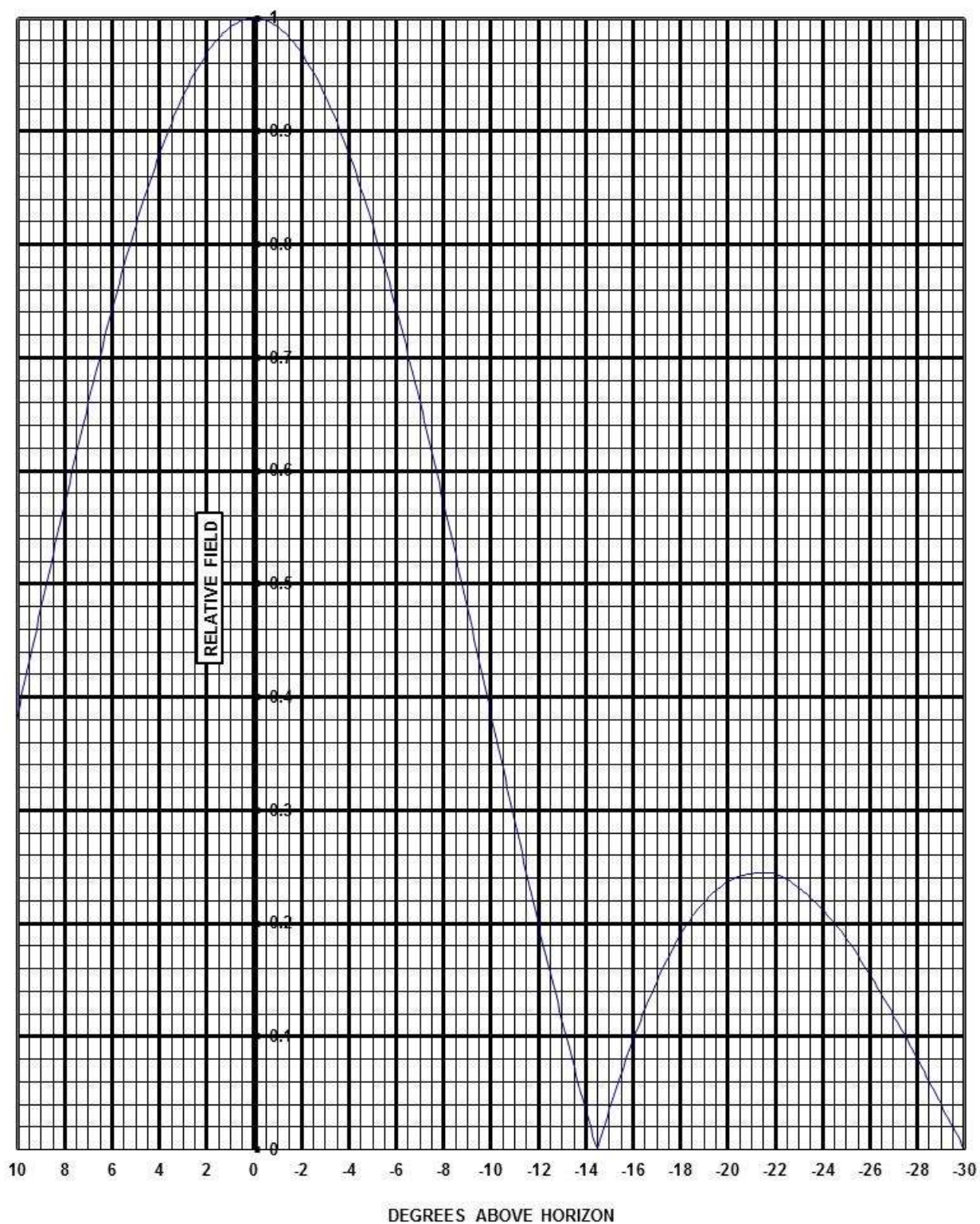
Minimum Ground Clearance

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	0.817	66.7	29	28.9	27.5
10	0.385	14.8	14	13.8	27.6
15	0.036	0.1	1	1.0	29.7
20	0.237	5.6	8	7.5	27.3
25	0.187	3.5	7	6.3	27.0
30	0.000	0.0	0	0.0	30.0
35	0.158	2.5	6	4.9	26.6
40	0.192	3.7	7	5.4	25.5
45	0.105	1.1	4	2.8	27.2
50	0.045	0.2	2	1.3	28.5
55	0.185	3.4	6	3.4	25.1
60	0.274	7.5	10	5.0	21.3
65	0.032	0.1	1	0.4	29.1
70	0.292	8.5	10	3.4	20.6
75	0.243	5.9	9	2.3	21.3
80	0.179	3.2	6	1.0	24.1
85	0.140	2.0	5	0.4	25.0
90	0.100	1.0	4	0.0	26.0
Minimum Clearance above TGL:					20.6 m



Frequency: 98.3 MHz

Model: JLLP-4
Description: FM Sidemount Antenna
-0° Beam Tilt, 0% Null Fill



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Elevation Pattern Tabulation

RELATIVE FIELD VS ELEVATION ANGLE

<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>	<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>	<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>
10	0.385	-26	0.155	-61	0.280
9	0.479	-27	0.119	-62	0.291
8	0.572	-28	0.081	-63	0.299
7	0.661	-29	0.040	-64	0.306
6	0.743	-30	0.000	-65	0.302
5	0.817	-31	0.039	-66	0.305
4	0.880	-32	0.075	-67	0.306
3	0.932	-33	0.107	-68	0.297
2	0.969	-34	0.136	-69	0.295
1	0.992	-35	0.158	-70	0.292
0	1.000	-36	0.176	-71	0.278
-1	0.992	-37	0.189	-72	0.273
-2	0.969	-38	0.194	-73	0.257
-3	0.932	-39	0.196	-74	0.250
-4	0.880	-40	0.192	-75	0.243
-5	0.817	-41	0.183	-76	0.225
-6	0.743	-42	0.170	-77	0.216
-7	0.661	-43	0.150	-78	0.208
-8	0.572	-44	0.129	-79	0.188
-9	0.479	-45	0.105	-80	0.179
-10	0.385	-46	0.078	-81	0.169
-11	0.291	-47	0.049	-82	0.160
-12	0.199	-48	0.018	-83	0.150
-13	0.114	-49	0.013	-84	0.150
-14	0.035	-50	0.045	-85	0.140
-15	0.036	-51	0.075	-86	0.130
-16	0.098	-52	0.106	-87	0.120
-17	0.149	-53	0.133	-88	0.120
-18	0.190	-54	0.162	-89	0.110
-19	0.219	-55	0.185	-90	0.100
-20	0.237	-56	0.209		
-21	0.244	-57	0.227		
-22	0.244	-58	0.246		
-23	0.232	-59	0.258		
-24	0.212	-60	0.274		
-25	0.187				

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Exhibit 11 Figure 4
Aerial Photo of the 3.4 meter Vicinity Surrounding the Proposed Tower site

