J. Jireh Development Corp.
Interference Area
Columbus, Ohio

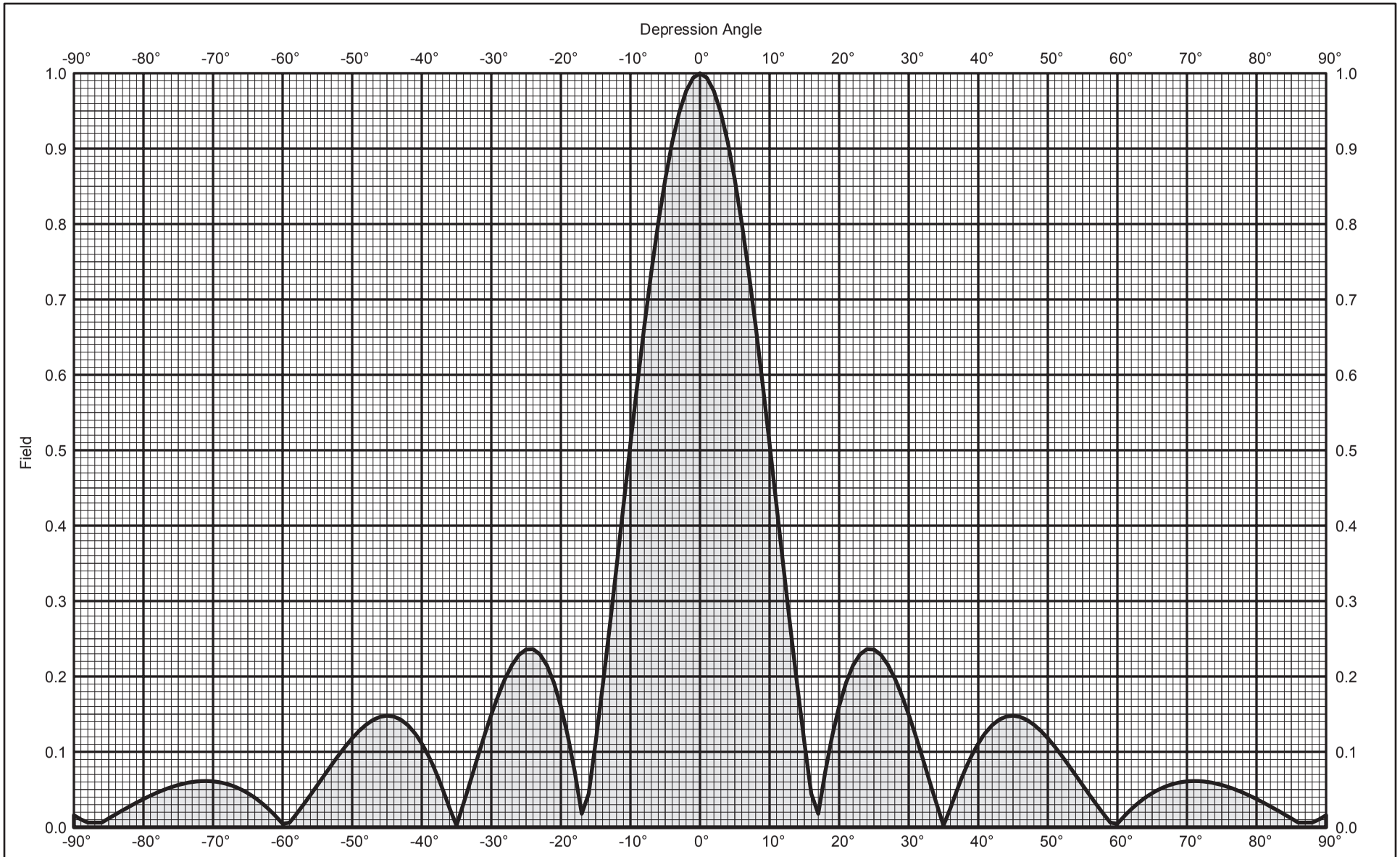
The proposed LPFM station will broadcast on channel 236, which is within the 67 kilometers, second-adjacent minimum distance separation of station WSNY on channel 234 and the 67 kilometers, second-adjacent minimum distance separation of station WXMG on channel 238. The WSNY interfering contour at the LPFM tower site is 101.1 dBµ F(50,50) and the WXMG interfering contour at the LPFM tower site is 62.6 dBµ F(50,50). Using the ratio of 100:1 (LPFM to WSNY & WXMG) on the second-adjacent channel, the population within the proposed LPFM 141.0 & 102.6 dBµ 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 4 bay Scala FMV-MP. It was determined from the manufacturer's vertical plan that at 25 degrees and 45 degrees below horizontal the interference area would reach down within 2 meters of the ground and extend 78.8 meters horizontally. We have proposed the antenna radiation center will be 37 meters above ground with an Effective Radiated Power of 51 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: 51
AGL 37

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	0.859	37.6	319	317.8	9.2
10	0.509	13.2	189	186.1	4.2
15	0.113	0.7	44	42.5	25.6
20	0.161	1.3	59	55.4	16.8
25	0.236	2.8	87	78.8	0.2
30	0.149	1.1	55	47.6	9.5
35	0.010	0.0	0	0.0	37.0
40	0.111	0.6	40	30.6	11.3
45	0.148	1.1	55	38.9	-1.9
50	0.118	0.7	44	28.3	3.3
55	0.056	0.2	23	13.2	18.2
60	0.010	0.0	0	0.0	37.0
65	0.045	0.1	16	6.8	22.5
70	0.061	0.2	23	7.9	15.4
75	0.056	0.2	23	6.0	14.8
80	0.037	0.1	16	2.8	21.2
85	0.012	0.0	0	0.0	37.0
90	0.016	0.0	0	0.0	37.0
				Minimum Clearance above TGL:	-1.9

Figure 2 Page 1



FMVMP-4

FM

Maximum gain: 6.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

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26-Oct-2011

Figure 2 Page 2

KATHREIN
SCALA DIVISION

FMVMP-4
FM
Maximum gain: 6.0 dBd
Vertical polarization

Vertical radiation pattern
0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.016	-35.93	-29.93	0.00	-45	0.148	-16.59	-10.59	0.09
-89	0.010	-39.61	-33.61	0.00	-44	0.147	-16.66	-10.66	0.09
-88	0.010	-40.00	-34.00	0.00	-43	0.143	-16.91	-10.91	0.08
-87	0.010	-40.00	-34.00	0.00	-42	0.135	-17.37	-11.37	0.07
-86	0.010	-40.00	-34.00	0.00	-41	0.125	-18.07	-12.07	0.06
-85	0.012	-38.58	-32.58	0.00	-40	0.111	-19.08	-13.08	0.05
-84	0.017	-35.29	-29.29	0.00	-39	0.094	-20.54	-14.54	0.04
-83	0.023	-32.93	-26.93	0.00	-38	0.074	-22.63	-16.63	0.02
-82	0.028	-31.14	-25.14	0.00	-37	0.051	-25.88	-19.88	0.01
-81	0.033	-29.70	-23.70	0.00	-36	0.025	-31.93	-25.93	0.00
-80	0.037	-28.53	-22.53	0.01	-35	0.010	-40.00	-34.00	0.00
-79	0.042	-27.54	-21.54	0.01	-34	0.031	-30.06	-24.06	0.00
-78	0.046	-26.73	-20.73	0.01	-33	0.061	-24.23	-18.23	0.02
-77	0.050	-26.04	-20.04	0.01	-32	0.092	-20.75	-14.75	0.03
-76	0.053	-25.49	-19.49	0.01	-31	0.121	-18.33	-12.33	0.06
-75	0.056	-25.03	-19.03	0.01	-30	0.149	-16.51	-10.51	0.09
-74	0.058	-24.68	-18.68	0.01	-29	0.175	-15.14	-9.14	0.12
-73	0.060	-24.43	-18.43	0.01	-28	0.198	-14.09	-8.09	0.16
-72	0.061	-24.29	-18.29	0.01	-27	0.216	-13.32	-7.32	0.19
-71	0.061	-24.24	-18.24	0.02	-26	0.229	-12.81	-6.81	0.21
-70	0.061	-24.30	-18.30	0.01	-25	0.236	-12.55	-6.55	0.22
-69	0.060	-24.49	-18.49	0.01	-24	0.236	-12.53	-6.53	0.22
-68	0.057	-24.82	-18.82	0.01	-23	0.229	-12.79	-6.79	0.21
-67	0.054	-25.30	-19.30	0.01	-22	0.215	-13.36	-7.36	0.18
-66	0.050	-25.98	-19.98	0.01	-21	0.192	-14.34	-8.34	0.15
-65	0.045	-26.89	-20.89	0.01	-20	0.161	-15.89	-9.89	0.10
-64	0.039	-28.15	-22.15	0.01	-19	0.121	-18.35	-12.35	0.06
-63	0.032	-29.89	-23.89	0.00	-18	0.073	-22.69	-16.69	0.02
-62	0.024	-32.43	-26.43	0.00	-17	0.018	-34.89	-28.89	0.00
-61	0.015	-36.59	-30.59	0.00	-16	0.044	-27.06	-21.06	0.01
-60	0.010	-40.00	-34.00	0.00	-15	0.113	-18.95	-12.95	0.05
-59	0.010	-40.00	-34.00	0.00	-14	0.187	-14.58	-8.58	0.14
-58	0.018	-35.01	-29.01	0.00	-13	0.264	-11.56	-5.56	0.28
-57	0.030	-30.44	-24.44	0.00	-12	0.345	-9.24	-3.24	0.47
-56	0.043	-27.37	-21.37	0.01	-11	0.427	-7.40	-1.40	0.72
-55	0.056	-25.05	-19.05	0.01	-10	0.509	-5.87	0.13	1.03
-54	0.069	-23.21	-17.21	0.02	-9	0.588	-4.61	1.39	1.38
-53	0.082	-21.70	-15.70	0.03	-8	0.665	-3.55	2.45	1.76
-52	0.095	-20.46	-14.46	0.04	-7	0.736	-2.66	3.34	2.16
-51	0.107	-19.42	-13.42	0.05	-6	0.801	-1.92	4.08	2.56
-50	0.118	-18.56	-12.56	0.06	-5	0.859	-1.32	4.68	2.94
-49	0.128	-17.87	-11.87	0.07	-4	0.908	-0.84	5.16	3.28
-48	0.136	-17.33	-11.33	0.07	-3	0.947	-0.47	5.53	3.57
-47	0.142	-16.93	-10.93	0.08	-2	0.976	-0.21	5.79	3.79
-46	0.146	-16.68	-10.68	0.09	-1	0.994	-0.05	5.95	3.93
					0	1.000	0.00	6.00	3.98

Figure 2 Page 3

KATHREIN
SCALA DIVISION

FMVMP-4
FM
Maximum gain: 6.0 dBd
Vertical polarization

Vertical radiation pattern
0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	6.00	3.98	45	0.148	-16.59	-10.59	0.09
1	0.994	-0.05	5.95	3.93	46	0.146	-16.68	-10.68	0.09
2	0.976	-0.21	5.79	3.79	47	0.142	-16.93	-10.93	0.08
3	0.947	-0.47	5.53	3.57	48	0.136	-17.33	-11.33	0.07
4	0.908	-0.84	5.16	3.28	49	0.128	-17.87	-11.87	0.07
5	0.859	-1.32	4.68	2.94	50	0.118	-18.56	-12.56	0.06
6	0.802	-1.92	4.08	2.56	51	0.107	-19.42	-13.42	0.05
7	0.736	-2.66	3.34	2.16	52	0.095	-20.46	-14.46	0.04
8	0.665	-3.55	2.45	1.76	53	0.082	-21.70	-15.70	0.03
9	0.588	-4.61	1.39	1.38	54	0.069	-23.21	-17.21	0.02
10	0.509	-5.87	0.13	1.03	55	0.056	-25.05	-19.05	0.01
11	0.427	-7.40	-1.40	0.73	56	0.043	-27.37	-21.37	0.01
12	0.345	-9.24	-3.24	0.47	57	0.030	-30.44	-24.44	0.00
13	0.264	-11.56	-5.56	0.28	58	0.018	-35.01	-29.01	0.00
14	0.187	-14.58	-8.58	0.14	59	0.010	-40.00	-34.00	0.00
15	0.113	-18.95	-12.95	0.05	60	0.010	-40.00	-34.00	0.00
16	0.044	-27.06	-21.06	0.01	61	0.015	-36.60	-30.60	0.00
17	0.018	-34.90	-28.90	0.00	62	0.024	-32.43	-26.43	0.00
18	0.073	-22.69	-16.69	0.02	63	0.032	-29.89	-23.89	0.00
19	0.121	-18.35	-12.35	0.06	64	0.039	-28.15	-22.15	0.01
20	0.161	-15.89	-9.89	0.10	65	0.045	-26.89	-20.89	0.01
21	0.192	-14.35	-8.35	0.15	66	0.050	-25.98	-19.98	0.01
22	0.215	-13.36	-7.36	0.18	67	0.054	-25.30	-19.30	0.01
23	0.229	-12.79	-6.79	0.21	68	0.057	-24.82	-18.82	0.01
24	0.236	-12.53	-6.53	0.22	69	0.060	-24.49	-18.49	0.01
25	0.236	-12.55	-6.55	0.22	70	0.061	-24.30	-18.30	0.01
26	0.229	-12.81	-6.81	0.21	71	0.061	-24.24	-18.24	0.02
27	0.216	-13.32	-7.32	0.19	72	0.061	-24.29	-18.29	0.01
28	0.198	-14.09	-8.09	0.16	73	0.060	-24.43	-18.43	0.01
29	0.175	-15.14	-9.14	0.12	74	0.058	-24.68	-18.68	0.01
30	0.149	-16.51	-10.51	0.09	75	0.056	-25.03	-19.03	0.01
31	0.121	-18.33	-12.33	0.06	76	0.053	-25.49	-19.49	0.01
32	0.092	-20.75	-14.75	0.03	77	0.050	-26.04	-20.04	0.01
33	0.061	-24.23	-18.23	0.02	78	0.046	-26.73	-20.73	0.01
34	0.031	-30.05	-24.05	0.00	79	0.042	-27.54	-21.54	0.01
35	0.010	-40.00	-34.00	0.00	80	0.037	-28.53	-22.53	0.01
36	0.025	-31.94	-25.94	0.00	81	0.033	-29.70	-23.70	0.00
37	0.051	-25.88	-19.88	0.01	82	0.028	-31.14	-25.14	0.00
38	0.074	-22.63	-16.63	0.02	83	0.023	-32.93	-26.93	0.00
39	0.094	-20.54	-14.54	0.04	84	0.017	-35.29	-29.29	0.00
40	0.111	-19.09	-13.09	0.05	85	0.012	-38.58	-32.58	0.00
41	0.125	-18.07	-12.07	0.06	86	0.010	-40.00	-34.00	0.00
42	0.135	-17.37	-11.37	0.07	87	0.010	-40.00	-34.00	0.00
43	0.143	-16.91	-10.91	0.08	88	0.010	-40.00	-34.00	0.00
44	0.147	-16.66	-10.66	0.09	89	0.010	-39.61	-33.61	0.00
					90	0.016	-35.93	-29.93	0.00

Figure 3 Page 1
Aerial Photo of the 78.8 meter Vicinity Surrounding the Proposed Tower Site

Figure 3 Page 2
Quadrangle Map of the 78.8 meter Vicinity Surrounding the Proposed Tower Site