

New LPFM Application
Channel 288-LP100 Erlanger KY
Technical Exhibit

Site Information:

Tower Structure - Guyed Tower ASR 1030838
Structure Coordinates: 39-1-4.7 N 84-35-56.6 W (NAD 83)
Ground Elevation: 278.9 m Overall Structure Height: 60.6 m
Antenna: Vertical Antenna Height: 46.8 m.

The Proposed location meets all distance separation requirements with respect to co-channel first adjacent facilities.

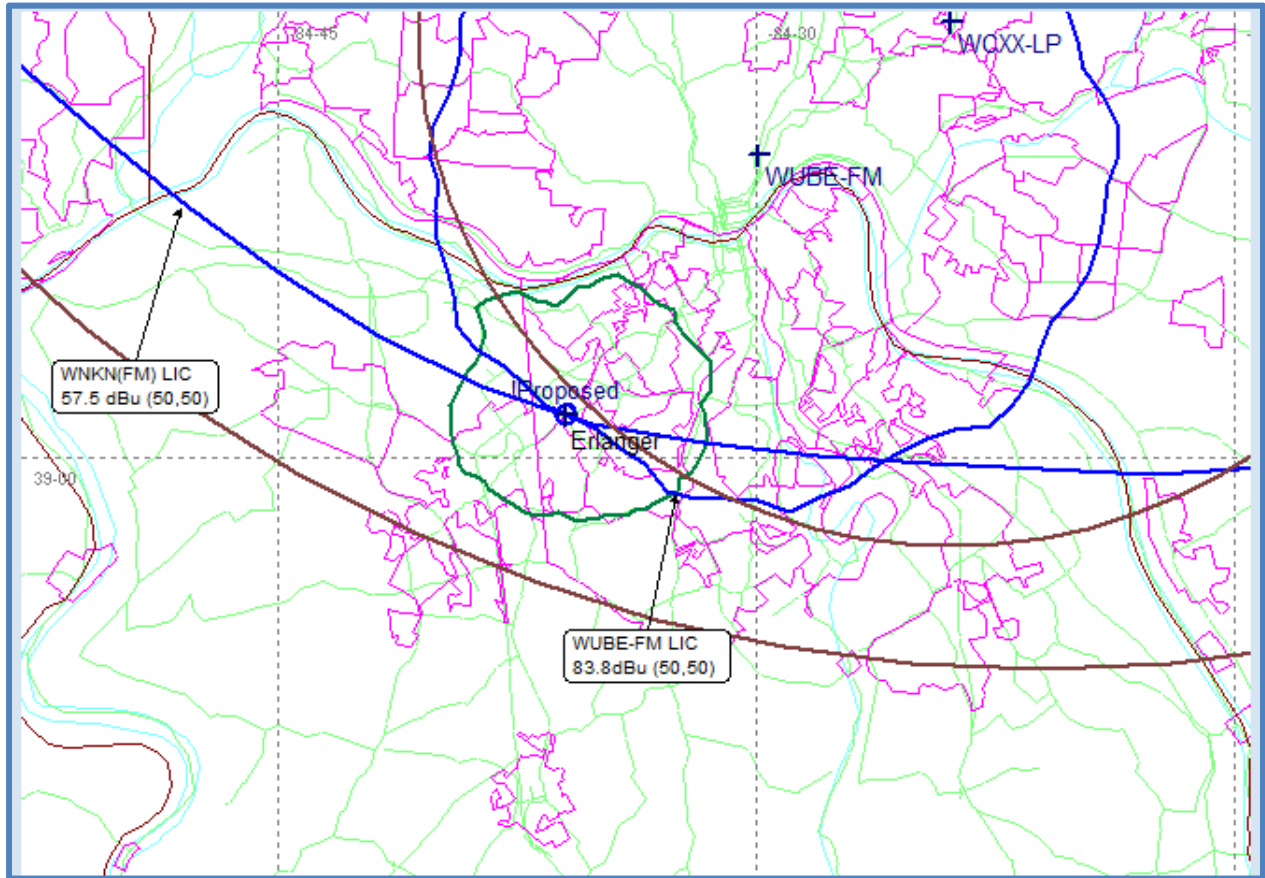
CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
WUBE-FM	CINCINNATI	OH 286 B	14.73	67.00	35.9	-52.3
	Adjacent Channel waiver	Requested				
WNKN	MIDDLETOWN	OH 290 B	59.28	67.00	21.0	-7.7
	Adjacent Channel waiver	Requested				
WCXX-LP	CINCINNATI	OH 288 LP100	24.99	24.00	43.9	1.0
WLXO	MOUNT STERLING	KY 288 C3	108.24	78.00	166.6	30.2
WHBE-FM	EMINENCE	KY 289 A	89.78	56.00	214.7	33.8

The proposed 100dBu contour is located inside the protected 54dBu contour of WUBE-FM Channel 286-B which is located 14.73km away; and WNKN(FM) Channel 290-B located 59.28km from the proposed facility. An interference analysis has been conducted based on the U/D ratio of +40 dB at the proposed site. The signal of WUBE-FM is 83.8dBu (50,50) and WNKN(FM) is 57.5dBu (50,10) making the relevant interfering contour of the proposed facility 123.8 (50,10) dBu and 97.5 (50,10). The free space distance to the larger of these contours – the 97.5dBu – utilizing the assigned ERP of 11 watts in a worse-case scenario utilizing a single dipole antenna is 309.0 meters from the aperture of the antenna.

The applicant proposes the use of the 3-bay Scala FM-V array with the vertical radiation characteristics shown in the attached chart. The field values were provided by the manufacturer and the calculations demonstrate that the 97.5 dBu (50,10) contour will not reach a point 2 meters above the ground at any depression angle.

A waiver to operate on a second adjacent channel to WUBE-FM and WNKN(FM) is respectfully requested on the basis of zero population in the area of real interference.

Allocation Distances & Second Adjacent Waiver Contour Map :



SCALA

Model FMV 3-Bay Vertically Polarized FM Antenna

Frequency = 105.5 Mhz
Interfering Contour 97.5 dBu (50,10)

Height = 11 watts
44.8 m AGL

Depression Angle	Relative Field (o)	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
1	0.996	10.9	309.00	2,566.98	2258
2	0.987	10.7	306.21	1,283.69	977
3	0.971	10.4	301.24	856.01	555
4	0.949	9.9	294.42	642.23	348
5	0.921	9.3	285.73	514.02	228
6	0.888	8.7	275.49	428.59	153
7	0.850	7.9	263.70	367.61	104
8	0.807	7.2	250.36	321.90	72
9	0.759	6.3	235.47	286.38	51
10	0.708	5.5	219.65	257.99	38
11	0.654	4.7	202.90	234.79	32
12	0.597	3.9	185.21	215.48	30
13	0.538	3.2	166.91	199.15	32
14	0.478	2.5	148.29	185.18	37
15	0.418	1.9	129.68	173.09	43
16	0.357	1.4	110.76	162.53	52
17	0.297	1.0	92.14	153.23	61
18	0.238	0.6	73.84	144.98	71
19	0.181	0.4	56.15	137.61	81
20	0.126	0.2	39.09	130.99	92
21	0.074	0.1	22.96	125.01	102
22	0.025	0.0	7.76	119.59	112
23	0.021	0.0	6.52	114.66	108
24	0.063	0.0	19.55	110.14	91
25	0.100	0.1	31.02	106.01	75
26	0.134	0.2	41.57	102.20	61
27	0.163	0.3	50.57	98.68	48
28	0.188	0.4	58.32	95.43	37
29	0.208	0.5	64.53	92.41	28
30	0.224	0.6	69.49	89.60	20
31	0.235	0.6	72.91	86.98	14
32	0.242	0.6	75.08	84.54	9
33	0.246	0.7	76.32	82.26	6
34	0.246	0.7	76.32	80.12	4
35	0.242	0.6	75.08	78.11	3
36	0.236	0.6	73.22	76.22	3
37	0.227	0.6	70.42	74.44	4
38	0.215	0.5	66.70	72.77	6
39	0.201	0.4	62.36	71.19	9
40	0.186	0.4	57.70	69.70	12
41	0.169	0.3	52.43	68.29	16
42	0.150	0.2	46.54	66.95	20
43	0.132	0.2	40.95	65.69	25
44	0.112	0.1	34.75	64.49	30
45	0.093	0.1	28.85	63.36	35

Depression Angle	Relative Field		Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
46	0.073	11.000	0.1	22.65	62.28	40
47	0.054	11.000	0.0	16.75	61.26	45
48	0.036	11.000	0.0	11.17	60.28	49
49	0.018	11.000	0.0	5.58	59.36	54
50	0.010	11.000	0.0	3.10	58.48	55
51	0.016	11.000	0.0	4.96	57.65	53
52	0.031	11.000	0.0	9.62	56.85	47
53	0.045	11.000	0.0	13.96	56.10	42
54	0.058	11.000	0.0	17.99	55.38	37
55	0.069	11.000	0.1	21.41	54.69	33
56	0.079	11.000	0.1	24.51	54.04	30
57	0.088	11.000	0.1	27.30	53.42	26
58	0.096	11.000	0.1	29.78	52.83	23
59	0.103	11.000	0.1	31.95	52.27	20
60	0.108	11.000	0.1	33.51	51.73	18
61	0.112	11.000	0.1	34.75	51.22	16
62	0.115	11.000	0.1	35.68	50.74	15
63	0.117	11.000	0.2	36.30	50.28	14
64	0.118	11.000	0.2	36.61	49.84	13
65	0.118	11.000	0.2	36.61	49.43	13
66	0.117	11.000	0.2	36.30	49.04	13
67	0.116	11.000	0.1	35.99	48.67	13
68	0.113	11.000	0.1	35.06	48.32	13
69	0.111	11.000	0.1	34.44	47.99	14
70	0.098	11.000	0.1	30.40	47.68	17
71	0.103	11.000	0.1	31.95	47.38	15
72	0.098	11.000	0.1	30.40	47.11	17
73	0.093	11.000	0.1	28.85	46.85	18
74	0.088	11.000	0.1	27.30	46.61	19
75	0.082	11.000	0.1	25.44	46.38	21
76	0.076	11.000	0.1	23.58	46.17	23
77	0.070	11.000	0.1	21.72	45.98	24
78	0.063	11.000	0.0	19.55	45.80	26
79	0.057	11.000	0.0	17.68	45.64	28
80	0.050	11.000	0.0	15.51	45.49	30
81	0.043	11.000	0.0	13.34	45.36	32
82	0.036	11.000	0.0	11.17	45.24	34
83	0.029	11.000	0.0	9.00	45.14	36
84	0.022	11.000	0.0	6.83	45.05	38
85	0.015	11.000	0.0	4.65	44.97	40
86	0.010	11.000	0.0	3.10	44.91	42
87	0.010	11.000	0.0	3.10	44.86	42
88	0.010	11.000	0.0	3.10	44.83	42
89	0.013	11.000	0.0	4.03	44.81	41
90	0.020	11.000	0.0	0.00	44.80	45

NOTE:

- HEIGHT OF C.O.R. HAS BEEN REDUCED BY 2 METERS TO ALLOW FOR HUMAN EXPOSURE
AS SUCH, DISTANCE FROM ANTENNA TO GROUND IS ACTUALLY TO A POINT 2 METERS ABOVE GROUND