

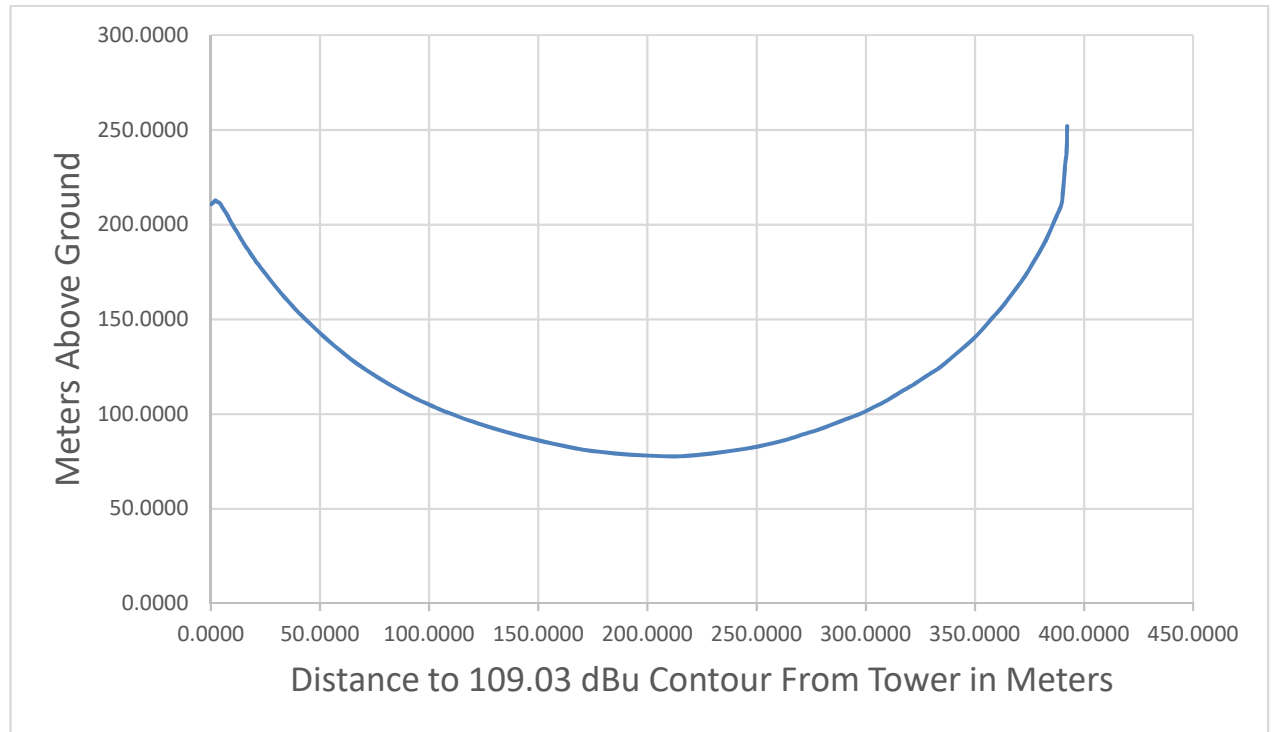
Second-Adjacent Channel Protection

The proposed facility is located within the 60 dBu contour of second-adjacent channel stations KNOU (242C1, FCC ID 27022), St. Louis, Missouri and KFTK-FM (246C1, FCC ID 73890), Florissant, Missouri which are protected in accordance with §74.1204(d) at a +40 dB level. The proposed antenna will be mounted 252 meters above ground on an existing tower.

KNOU is located 12.03 kilometers distant with a calculated field of 96.78 dBu at the proposed site based on an ERP of 92 KW and height above average terrain along a 212° radial from KNOU to the proposed site of 305.5 meters. The translator would require a field intensity of 136.78 dBu to cause interference to the KNOU signal. Using the free-space formula to calculate distance to the proposed 136.78 dBu using an ERP of 250 watts we arrive at a worst-case potential interference area radius around the antenna of 16 meters at any depression angle from horizontal. This is far above any occupied space.

KFTK-FM is located 43.76 kilometers distant with a calculated field of 69.03 dBu at the proposed site based on an ERP of 100 KW and height above average terrain along a 139° radial from KFTK-FM to the proposed site of 185 meters. The translator would require a field intensity of 109.03 dBu to cause interference to the KFTK signal. Using the free-space formula to calculate distance to the proposed 109.03 dBu using an ERP of 250 watts and the vertical plane pattern of the antenna we arrive at a minimum contour distance above ground of 77.73 meters at 215.2 meters from the tower. There are no occupied spaces at this height.

Therefore, there is zero population inside these predicted interference contours and the proposed operation is in compliance with §74.1204(d).



Dep (°)	Er(%)	DTC (m)	X (m)	Y (m)	Dep (°)	Er(%)	DTC (m)	X (m)	Y (m)	Dep (°)	Er(%)	DTC (m)	X (m)	Y (m)
0.0	100	392.24	392.2388	252.0000	30.0	81.8	320.85	277.8654	91.5743	60	39.1	153.37	76.6827	119.1817
1.0	100	392.24	392.1790	245.1545	31.0	80.6	316.14	270.9887	89.1736	61	37.6	147.48	71.5006	123.0095
2.0	100	392.24	391.9998	238.3111	32.0	79.5	311.83	264.4467	86.7554	62	36.1	141.60	66.4763	126.9762
3.0	99.9	391.85	391.3095	231.4923	33.0	78.3	307.12	257.5750	84.7288	63	34.5	135.32	61.4351	131.4269
4.0	99.9	391.85	390.8920	224.6662	34.0	77.1	302.42	250.7143	82.8911	64	32.9	129.05	56.5703	136.0137
5.0	99.9	391.85	390.3554	217.8483	35.0	75.8	297.32	243.5478	81.4660	65	31.3	122.77	51.8852	140.7319
6.0	99.9	391.85	389.7000	211.0409	36.0	74.5	292.22	236.4092	80.2386	66	29.7	116.49	47.3828	145.5766
7.0	99.5	390.28	387.3685	204.4371	37.0	73.2	287.12	229.3033	79.2076	67	28.2	110.61	43.2193	150.1817
8.0	99.1	388.71	384.9257	197.9022	38.0	71.9	282.02	222.2345	78.3713	68	26.8	105.12	39.3786	154.5344
9.0	98.7	387.14	382.3733	191.4380	39.0	70.6	276.92	215.2077	77.7282	69	25.3	99.24	35.5631	159.3548
10.0	98.2	385.18	379.3268	185.1145	40.0	69.1	271.04	207.6264	77.7808	70	23.9	93.75	32.0627	163.9085
11.0	97.7	383.22	376.1765	178.8787	41.0	67.6	265.15	200.1138	78.0437	71	22.5	88.25	28.7326	168.5545
12.0	97.2	381.26	372.9247	172.7324	42.0	66.1	259.27	192.6750	78.5146	72	21.1	82.76	25.5750	173.2883
13.0	96.6	378.90	369.1914	166.7654	43.0	64.6	253.39	185.3150	79.1910	73	19.9	78.06	22.8212	177.3551
14.0	96	376.55	365.3641	160.9045	44.0	63.1	247.50	178.0385	80.0702	74	18.8	73.74	20.3257	181.1157
15.0	95.4	374.20	361.4454	155.1510	45.0	61.6	241.62	170.8505	81.1495	75	17.6	69.03	17.8673	185.3183
16.0	94.7	371.45	357.0608	149.6145	46.0	60.0	235.34	163.4832	82.7082	76	16.6	65.11	15.7519	188.8225
17.0	94.1	369.10	352.9689	144.0866	47.0	58.4	229.07	156.2236	84.4707	77	15.5	60.80	13.6764	192.7612
18.0	93.4	366.35	348.4205	138.7913	48.0	56.8	222.79	149.0767	86.4336	78	14.5	56.87	11.8249	196.3682
19.0	92.6	363.21	343.4247	133.7494	49.0	55.3	216.91	142.3045	88.2974	79	13.7	53.74	10.2534	199.2506
20.0	91.8	360.08	338.3600	128.8470	50.0	53.8	211.02	135.6439	90.3459	80	12.9	50.60	8.7864	202.1699
21.0	91	356.94	333.2297	124.0851	51.0	52.3	205.14	129.0993	92.5756	81	12.0	47.07	7.3632	205.5108
22.0	90	353.01	327.3097	119.7583	52.0	50.8	199.26	122.6750	94.9831	82	11.5	45.11	6.2777	207.3315
23.0	89.1	349.48	321.7024	115.4454	53.0	49.4	193.77	116.6113	97.2516	83	11.0	43.15	5.2582	209.1753
24.0	88.1	345.56	315.6869	111.4471	54.0	47.9	187.88	110.4345	100.0000	84	10.5	41.19	4.3050	211.0405
25.0	87.2	342.03	309.9865	107.4509	55.0	46.5	182.39	104.6152	102.5940	85	10.3	40.40	3.5211	211.7531
26.0	86.2	338.11	303.8911	103.7824	56.0	45.0	176.51	98.7017	105.6687	86	10.2	40.01	2.7908	212.0891
27.0	85.2	334.19	297.7632	100.2821	57.0	43.6	171.02	93.1420	108.5738	87	10.0	39.22	2.0528	212.8299
28.0	84	329.48	290.9141	97.3182	58.0	42.1	165.13	87.5069	111.9597	88	10.2	40.01	1.3963	212.0160
29.0	82.9	325.17	284.3965	94.3564	59.0	40.6	159.25	82.0193	115.4970	89	10.4	40.79	0.7119	211.2134