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ENGINEERING REPORT

K217GJ, to Austin, TX, Channel 217D Minor

ENGINEERING STATEMENT

PROTECTION TO K215FD

All contour non-overlap protection requirements are met with the exception of K215FD, Round Rock, TX (217D), discussed below.

K215FD (4.0 kilometers at 46 degrees True) is second adjacent-channel to the proposed channel 217D facility. The 60 dBu F50,50 service contour of K215FD extends beyond the proposed 207D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to K215FD.

Note that a rule waiver of Section 74.1204 for this second/third adjacent-channel protection using the well-established *Living Way Ministries* Methodology is respectfully requested if such a rule waiver is deemed necessary for protection to any station.

The F50,50 signal strength from K215FD at the proposed 217D transmitter site is at least 73 dBu (the “desired” signal). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to K215FD from the proposed 217D facility is a signal of greater than or equal to 113 dBu.

Figure EE1 is the vertical plane relative field pattern for the proposed Scala CL-FM(V) one-bay antenna. By adjusting for the vertical plane downward relative field values of the proposed antenna, the attached tabulation results demonstrates that the 113 dBu interfering signal (using a free space field determination) does not exist at any point at ground level—the clearance to ground level is 11.2 meters. The tallest nearby building is a 4-story with the top floor at 9 meters AGL. Therefore, the clearance to a person on the top floor is made. Therefore, pursuant to Section 74.1204(d) of the FCC Rules, K215FD is adequately protected by the proposed facility.

FIGURE EE1 (Page 1 of 2)

Antenna: CL-FM

Horizontal Polarization (**Vertical Pattern** for V-Pol Antenna)

Azimuth	Field	Rel.dB	dBd	Pwr Gain
0	1.000	0.0	7.0	5.012
1	0.996	-0.0	7.0	5.012
2	0.992	-0.1	6.9	4.898
3	0.988	-0.1	6.9	4.898
4	0.984	-0.1	6.9	4.898
5	0.980	-0.2	6.8	4.786
6	0.974	-0.2	6.8	4.786
7	0.968	-0.3	6.7	4.677
8	0.962	-0.3	6.7	4.677
9	0.956	-0.4	6.6	4.571
10	0.950	-0.4	6.6	4.571
11	0.939	-0.5	6.5	4.467
12	0.928	-0.6	6.4	4.365
13	0.917	-0.8	6.2	4.169
14	0.906	-0.9	6.1	4.074
15	0.895	-1.0	6.0	3.981
16	0.880	-1.1	5.9	3.890
17	0.865	-1.3	5.7	3.715
18	0.850	-1.4	5.6	3.631
19	0.835	-1.6	5.4	3.467
20	0.820	-1.7	5.3	3.388
21	0.803	-1.9	5.1	3.236
22	0.786	-2.1	4.9	3.090
23	0.769	-2.3	4.7	2.951
24	0.752	-2.5	4.5	2.818
25	0.735	-2.7	4.3	2.692
26	0.717	-2.9	4.1	2.570
27	0.699	-3.1	3.9	2.455
28	0.681	-3.3	3.7	2.344
29	0.663	-3.6	3.4	2.188
30	0.645	-3.8	3.2	2.089
31	0.628	-4.0	3.0	1.995
32	0.612	-4.3	2.7	1.862
33	0.595	-4.5	2.5	1.778
34	0.579	-4.7	2.3	1.698
35	0.563	-5.0	2.0	1.585
36	0.544	-5.3	1.7	1.479
37	0.525	-5.6	1.4	1.380
38	0.507	-5.9	1.1	1.288
39	0.488	-6.2	0.8	1.202
40	0.470	-6.6	0.4	1.096
41	0.448	-7.0	0.0	1.000
42	0.426	-7.4	-0.4	0.912
43	0.404	-7.9	-0.9	0.813
44	0.382	-8.4	-1.4	0.724

FIGURE EE1 (Page 2 of 2)

Antenna: CL-FM

Horizontal Polarization (**Vertical Pattern** for V-Pol Antenna)

Azimuth	Field	Rel.dB	dBd	Pwr Gain
45	0.360	-8.9	-1.9	0.646
46	0.338	-9.4	-2.4	0.575
47	0.316	-10.0	-3.0	0.501
48	0.294	-10.6	-3.6	0.437
49	0.272	-11.3	-4.3	0.372
50	0.250	-12.0	-5.0	0.316
51	0.231	-12.7	-5.7	0.269
52	0.212	-13.5	-6.5	0.224
53	0.193	-14.3	-7.3	0.186
54	0.174	-15.2	-8.2	0.151
55	0.155	-16.2	-9.2	0.120
56	0.141	-17.0	-10.0	0.100
57	0.127	-17.9	-10.9	0.081
58	0.113	-18.9	-11.9	0.065
59	0.099	-20.1	-13.1	0.049
60	0.085	-21.4	-14.4	0.036
61	0.077	-22.3	-15.3	0.030
62	0.069	-23.2	-16.2	0.024
63	0.061	-24.3	-17.3	0.019
64	0.053	-25.5	-18.5	0.014
65	0.045	-26.9	-19.9	0.010
66	0.040	-28.0	-21.0	0.008
67	0.035	-29.1	-22.1	0.006
68	0.030	-30.5	-23.5	0.004
69	0.025	-32.0	-25.0	0.003
70	0.020	-34.0	-27.0	0.002
71	0.018	-34.9	-27.9	0.002
72	0.016	-35.9	-28.9	0.001
73	0.014	-37.1	-30.1	0.001
74	0.012	-38.4	-31.4	0.001
75	0.010	-40.0	-33.0	0.001
76	0.010	-40.0	-33.0	0.001
77	0.010	-40.0	-33.0	0.001
78	0.010	-40.0	-33.0	0.001
79	0.010	-40.0	-33.0	0.001
80	0.010	-40.0	-33.0	0.001
81	0.010	-40.0	-33.0	0.001
82	0.010	-40.0	-33.0	0.001
83	0.010	-40.0	-33.0	0.001
84	0.010	-40.0	-33.0	0.001
85	0.010	-40.0	-33.0	0.001
86	0.010	-40.0	-33.0	0.001
87	0.010	-40.0	-33.0	0.001
88	0.010	-40.0	-33.0	0.001
89	0.010	-40.0	-33.0	0.001
90	0.010	-40.0	-33.0	0.001

74.1204(d) Showing

K217GJ, Austin, TX, 217D

ERP (kw)	0.25
Height of Antenna above Ground (m)	91.4
Translator's IX Contour	113

Scala CLFM(V) one bay

Depression Angle from Horizon	**Antenna Relative Field**	**ERP (kw) from the Antenna RF**	**Dist. To IX Contour (m)**	**Height IX Contour Above Ground (m)**
0	1	0.2500	248.2962	91.400
5	0.98	0.2401	243.3302	70.192
10	0.95	0.2256	235.8814	50.440
15	0.895	0.2003	222.2251	33.884
20	0.82	0.1681	203.6029	21.764
25	0.735	0.1351	182.4977	14.273
30	0.645	0.1040	160.1510	11.324
35	0.563	0.0792	139.7907	11.219
40	0.47	0.0552	116.6992	16.387
45	0.36	0.0324	89.3866	28.194
50	0.25	0.0156	62.0740	43.849
55	0.155	0.0060	38.4859	59.874
60	0.085	0.0018	21.1052	73.122
65	0.045	0.0005	11.1733	81.274
70	0.02	0.0001	4.9659	86.734
75	0.01	0.0000	2.4830	89.002
80	0.01	0.0000	2.4830	88.955
85	0.01	0.0000	2.4830	88.926
90	0.01	0.0000	2.4830	88.917

Note: Input the ERP, Height of the antenna above Ground, the Calculated Translator IX contour, and the specified Antenna Relative Field Pat