

## **ENGINEERING STATEMENT – SECOND ADJACENT CHANNEL PROTECTION**

KCFX, Harrisonville, MO, 266C0, is second adjacent-channel to the proposed channel 264 LPFM facility and is located only 15.3 kilometers (at 87 degrees True bearing) from the proposed LPFM transmitter site. The 60 dBu F50,50 service contour extends well beyond the LPFM transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KCFX.

Note that a rule waiver of Section 73.807 for this second 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 this station.

The F50,50 signal strength from KCFX at the proposed LPFM transmitter site is greater than 93 dBu (the “desired” signal). The second/third adjacent-channel protection is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to KCFX from the proposed LPFM facility is a signal of greater than or equal to 133 dBu.

The 133 dBu signal based on a free space field determination is predicted to extend out to 7 meters from the proposed LPFM transmit antenna. The interfering signal level will not reach any point at ground level or at 2 meters above ground level. Therefore, KCFX is adequately protected by the proposed facility.