

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

WCTQ (43.4 kilometers at 225 degrees True from LPFM site) and WXGL (45.7 kilometers at 302 degrees True from LPFM site) (Sarasota, FL, 293C2 and St. Petersburg, FL, 297C1, respectively) are second adjacent-channel stations to the proposed channel 295 LPFM facility. The 60 dBu F50,50 service contour of each extends to or beyond the LPFM transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to WCTQ or WXGL.

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 WCTQ at the proposed LPFM transmitter site is 60 dBu (the “desired” signal for WCTQ). The F50,50 signal strength from WXGL at the proposed LPFM transmitter site is 68 dBu (the “desired” signal for WXGL). The second/third adjacent-channel protection is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to the worst-case of the above two protected facilities is to that of WCTQ and is a LPFM signal of greater than or equal to 100 dBu.

The 100 dBu signal based on a free space field determination is predicted to extend out to 122 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, both WCTQ and WXGL are adequately protected by the proposed facility.