ENGINEERING STATEMENT – SECOND ADJACENT CHANNEL PROTECTION

WRUB (45 kilometers at 227 degrees True from LPFM site) and WXGL (47 kilometers at 301 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 WRUB falls more than 1 km short of the proposed site and is, therefore, protected.

The 60 dBu F50,50 service contour of WXGL extends beyond the LPFM transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to 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 any station.

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 WXGLis a LPFM signal of greater than or equal to 108 dBu.

The applicant will limit the LPFM's ERP to 50 watts. The 108 dBu signal based on a free space field determination is predicted to extend out to 198 meters from the proposed LPFM transmit antenna. A Scala CL-FM (H-Pol) one bay antenna aimed at 90 degrees True (due East, the relative field value of 1.0) is proposed in order to aid with the second adjacent-channel protection. The pattern is attached.

Also attached is an aerial map that shows the 108 dBu Free Space Loss contour and that it does not contain within it any homes, buildings or major roads.

Therefore, both WCTQ (since its 60 dBu contour does not reach the proposed site) and WXGL are adequately protected by the proposed facility.

Scala CL-FM (H-Pol Install)

Azimuth (deg T)	Relative Field	
0.0	1.000	(for this install, the main beam is to be aimed East)
10.0	.950	
20.0	.820	
30.0	.645	
40.0	.470	
50.0	.250	
60.0	.085	
70.0	.020	
80.0	.010	
90.0	.010	
100.0	.010	
110.0	.010	
120.0	.015	
130.0	.025	
140.0	.034	
150.0	.038	
160.0	.040	
170.0	.040	
180.0	.040	
190.0	.040	
200.0	.040	
210.0	.038	
220.0	.034	
230.0	.025	
240.0	.015	
250.0	.010	
260.0	.010	
270.0	.010	
280.0	.010	
290.0	.020	
300.0	.085	
310.0	.250	
320.0	.470	
330.0	.645	
340.0	.820	
350.0	.950	


Proposed 108 dBu
Free Space Loss Contour
N 27 49 25.3 W 82 14 25
Google Earth
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N
600 ft