

TECHNICAL SUMMARY
APPLICATION FOR CONSTRUCTION PERMIT
FM TRANSLATOR STATION W290DB
NAPLES, FLORIDA
CHANNEL 290 (105.9 MHZ) 0.25 KW (ND)

1. Purpose of Application: Minor change CP application for W290DB to change site and facilities.

2. Fill-in Translator Coverage & Minor Change Compliance: The proposal will be a fill-in translator for AM station WNOG on 1270 kHz at Naples, FL (Facility ID 51333). Figure 1 is a map demonstrating that the proposed 60 dBu contour is entirely within the greater of the WNOG daytime 2 mV/m contour and a 25 mile circle from the WNOG transmitter site as required for fill-in compliance. In addition, the herein proposed 60 dBu contour overlaps the 60 dBu contour for currently licensed W290DB operation (BLFT-20170412AAM) which complies with the FCC's minor change rules.

3. Section 74.1204 compliance: Figure 2 is an allocation study for channel 290 based on Section 74.1204. Figure 2 lists the results of a numerical analysis of the potential for contour overlap to all nearby co-channel, first, second and third-adjacent channel facilities as well as IF related stations. For the purposes of the numerical study, the maximum HAAT (317 meters) and ERP (0.25 kW) values were used in determining the maximum distance in any direction to the predicted coverage and interfering contours. Figure 3 demonstrates that the proposal complies with the contour overlap provisions of Section 73.1204 of the FCC rules, except with respect to stations WBTT and WJPT.

Specifically, the proposal does not comply with the contour overlap provisions of Section 73.1204 of the FCC rules with respect to second adjacent channel stations WBTT (Ch. 288C2, Naples Park, FL) and WJPT (Ch. 292C2, Fort Myers, FL). However, based on the undesired-to-desired (U/D) signal strength interference ratio methodology, which is permitted by the FCC per *Living Way Ministries, Inc.*, it has been determined that no actual interference would occur due to lack of population under Section 73.1204(d). Specifically, the calculated WBTT f(50,50) field strength at the proposed site is 94.5 dBu. Using the 40 dB U/D ratio contained in Section 73.1204 of the FCC rules, the proposed f(50,10) interfering signal is 134.5 dBu. Similarly, the calculated WJPT f(50,50) field strength at the proposed site is 72.9 dBu. Using the 40 dB U/D ratio contained in section 73.1204 of the FCC's rules, the proposed f(50,10) interfering signal is 112.9 dBu.

As the 112.9 dBu interfering signal to WJPT is the lowest it is the most critical. The proposed antenna will be located 312 meters (1025 feet) above ground level on the tower. Assuming free-space propagation and a vertical plane relative field of 1.0 (worst case assumption), the interfering 112.9 dBu signal will extend only 259 meters from the transmitting antenna. Thus, the proposed W290DB interfering signal to WJPT will not reach ground level and, therefore, will contain no population.

4. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed antenna will be located 312 meters above ground level. The total ERP is 0.5 kW (horizontal & vertical polarization). A worst-case vertical plane relative field value of 1.0 is presumed for the antenna's downward radiation (for angles below 60 degrees downward). The calculated power density at a point 2 meters above ground level is 0.174 uW/cm^2 which is only 0.09% of the FCC's recommended limit of 200 uW/cm^2 for FM frequencies for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site is restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.