

TECHNICAL SUMMARY

FM TRANSLATOR STATION W257CS
MORRISVILLE, NORTH CAROLINA
CHANNEL 257

The attached allocation study tabulation exhibit summarizes the allocation study for the proposed W257CS facility. It is noted that the intermediate-frequency (I.F.) related separation requirements are met for the instant proposal.

The tabulation exhibit lists the results of a numerical analysis of the potential for contour overlap for all nearby co-channel, first-, second-, and third-adjacent-channel facilities. For the purposes of the numerical study, the maximum HAAT and maximum ERP values for each station record were used in determining the maximum distance in any direction to the predicted protected and interfering contours

Facilities that were short based on the numerical study were evaluated based on a contour analysis. The attached allocation analysis map exhibit demonstrates compliance with the contour overlap requirements with respect to stations: W255AM, Raleigh, NC (Ch. 255); W256AH, Durham, NC (Ch. 256); WZAX, Nashville, NC (Ch. 257A); and WMAG, High Point, NC (Ch. 258C). It is noted that the U.S.G.S. high-resolution 3-second terrain database was employed in the contour overlap analysis.

The contour overlap requirements are not met with respect to third-adjacent-channel station WCMC-FM, Holly Springs, NC (Ch. 260C2). A continuing waiver of Section 74.1204 of the FCC Rules is requested to the extent necessary since it has been demonstrated that no actual interference will occur with respect to WCMC-FM.

In particular, based on the undesired-to-desired (U/D) signal strength interference ratio methodology, which is permitted by the FCC (per *Living Way*

Ministries, Inc., 17 FCC Rcd 17054, 17056 (2002), it has been determined that no actual interference would occur due to lack of population under Section 73.1204(d).

The calculated $f(50,50)$ desired field strength of WCMC-FM at the W257CS transmitter site is 77.8 dBu. Using the 40 dB U/D ratio contained in Section 73.1204 of the FCC Rules, the proposed $f(50,10)$ undesired interfering signal is 117.8 dBu with respect to the WCMC-FM facility.

As demonstrated in the interference analysis tabulation attached hereto, the predicted interference zone with respect to the WCMC-FM facility does not reach ground level; and it is completely devoid of population, buildings and publicly accessible roads. Therefore, the proposal meets the requirements of Section 74.1204(d) of the FCC Rules for such circumstances as clarified in the *Living Way Ministries, Inc.*, *Memorandum Opinion and Order*, Released: September 9, 2002.