

## Exhibit 12

### Interference Analysis Overlap Requirements

According to CFR 47 §74.1204(a), translators are required to protect all existing FM stations from interference due to overlap of the protected contours of the existing stations with the interfering contours of the new translators.

#### US Stations

In the attached tabular printout, only WBLM, W272BV and WPOR all have outgoing contour overlaps from the proposed translator, so no interference to other stations is anticipated.

WBLM and WPOR are third and second adjacent to the proposed translator, and, according to §74.1204(d),

**"The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to ... lack of population ... ."**

The F(50,50) signal from WPOR at the proposed site is 87.9 dBu, computed from the 33 kW ERP and 205.1 meter HAAT in the direction toward the reference 12.68 km away. The F(50,50) signal from WBLM at the proposed site is 85.1 dBu, computed from the 100 kW ERP and 441 meter HAAT in the direction toward the reference 28.46 km away. Thus WBLM is the controlling case here since its signal is weaker than WPOR.

The antenna will be mounted on a 50 foot pole atop a church. The church is itself 35 feet at the top of the peaked roof. It has no attic. Rather than simply protecting people on the ground and the floor of the church, this application protects people on the rooftop from interference due to the translator.

A 40 dB ratio of undesired to desired signal strength gives an allowable interfering F(50,10) field strength of 125.1 dBu for WBLM. With 80 Watts ERP and a 3-bay half wave spaced Shively 6812-3HW antenna, the attached spreadsheet shows that the interfering contour reaches down to at most 4.66 meters (over 8 feet) above the roof of the church, so **this contour does not reach the rooftop**.

Similar arguments apply to the other entries in the search listing, and all are summarized below:

Call	Dist km	ERP Kw	HAAT meters	F(50,50) dBu	F(50,10) dBu	Dist above roof m
WPOR	12.68	33	205	87.9	127.9	6.96
WBLM	28.46	100	441	85.1	125.1	4.66

Hence §74.1204(d) applies, and the predicted area of interference is acceptable to the Commission.

W272BV is the current application, and need not be protected.

No other entries are sufficiently close to the proposed translator to require analysis.

#### IF Separation

WSJBFM is 24.69 km from the proposed site and the site is required to be over 10 km distant. Similarly WRBC is 33.45 km from the proposed site and the site is required to be over 10 km distant.

## **Channel 6 Television Stations**

Since this is an application for a commercial band translator, TV6 considerations do not apply.

## **MERP Evaluation**

The maximum HAAT is 52.0 m, so the maximum ERP is 80 Watts per CFR 47 73.1235(b)(1).

## **Canadian Consideration**

The proposed translator is 168.7738 km from the nearest point in Canada, within the 320 km limit established by treaty. The 0.080 kW ERP does not exceed the maximum 250 Watts, and the maximum 33.9 km F(50,10) 34 dBu contour (see Terrain and Contour Data printout) does not exceed the statutory 60 km. No Canadian stations were found in the above search. Because the 34 dBu F(50,10) contour does not cross the common border (33.9 km maximum contour distance is less than the 168.7738 km minimum distance to Canada), no Canadian concurrence is required. The relevant document for this analysis is the July 9, 1997 modification to the February 25, 1991 agreement.