

Comprehensive Engineering Exhibit

Minor Modification of WEBG Facility ID 53971

Exchanging Main and Auxiliary Antenna Elevations

April 2015

Presently WEBG is authorized for a main (BLH-19881011KC / BMLH-19891114KB)¹ and auxiliary antenna (BXLH-20030620AAB)² both mounted on support structure 1009012, commonly known as “The John Hancock Center”. This application seeks to “swap” these antennas, specifically to modify the facility of WEBG to operate with an increased antenna elevation of 68 meters, with a reduction of power to from the licensed auxiliary power of 5.6 kw to 5.3 kw to maintain allowable interference contour distances with no change in geographic location. Concurrent with licensing of if this instant proposal the current main license will be modified for auxiliary service.

Spacing and Overlap Concerns

Attached as **Figure 1** is a spacing study, where it can be seen that WEBG is and will remain “73.207 short spaced” to: WRIT-FM 239B Milwaukee, WERV-FM 240A Aurora, WJDK-FM 239A Seneca, and WEFM 240A Michigan City.

With respect to **second-adjacent** channel station WERV-FM 240A Aurora, IL, this short spacing has existed since prior to November 16, 1964, thus there are no distance separation or interference protection requirement.

With respect to **second-adjacent** channel station WEFM 240A Michigan City, IN, this short-spacing has existed since prior to November 16, 1964, thus there are no distance separation or interference protection requirement.

With respect to Class A **first-adjacent** channel station WJDK-FM 239A Seneca, IL, this short-spacing was created by the revision in the spacing rules adopted in the *Second Report and Order* in MM Docket 88-375, 4 FCC Rcd 6375 (1989). Consequently, the stations are grandfathered with respect to each other and are governed by the provisions of 47 CFR ' 73.213(c). As this application proposes to maintain the existing distance separation between stations, the proposal is compliant.

With respect to **first-adjacent** channel station WRIT-FM 239B Milwaukee, WI, this short-spacing has existed since prior to November 16, 1964 and is subject to the rules of 73.213. As this application proposes to maintain the existing distance to proposed contours as shown in **Figure 2**, compliance is demonstrated.

¹ Main: Effective Radiated Power (ERP): 8.3 kW, with Antenna Height Above Average Terrain: 358 meters

² Auxiliary: Effective Radiated Power (ERP): 5.6 kW, with Antenna Height Above Average Terrain: 425 meters

Spurious Emissions and RF Fields

As this is an existing facility, compliance with rules and guidelines for spurious emissions and radio frequency electromagnetic field exposure has been demonstrated in the licensing as BXLH - 20030620AAB.

Figure 2. WEBG - WRIT-FM Contour Map

