

ENGINEERING REPORT

MINOR CHANGE APPLICATION Power Increase Application

**WMFN(AM) – Zeeland, MI
640 kHz**

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DISCUSSION

This firm was retained to prepare this engineering report in support of a minor change application for the facilities of AM broadcast station WMFN(AM), 640 kHz, Zeeland, MI, File No. BL-19941014AE. Currently WMFN holds a license for 1.2 kW of daytime non-directional power and 0.230 kW of nighttime non-directional power. This application seeks to increase daytime power to 2.5 kW through the use of a two tower array located at the present site. Nighttime operation will remain unchanged. The data and exhibit numbering contained herein is responsive to Section III-A of FCC Form 301.

Broadcast Facility. The broadcast facility remains in compliance with all applicable rules contained in *C.F.R. Chapter 47, Part 73, Subpart A*. The proposed WMFN(AM) antenna system will consist of two daytime towers, one of which will continue to serve as the nighttime tower. Nighttime operation will remain unchanged. Details of the proposed antenna system are located in **Exhibit(s) 10.1-5**. Tower 1 has currently been assigned ASR No. 1060574. The FCC TOWAIR program has been consulted and Antenna Structure Registration is required for Tower 2. FAA Form 7460-1 has been filed concurrently. A map depicting the present 0.5 mV/m, 2.0 mV/m, and 5.0 mV/m daytime service contours for WMFN has been included as **Exhibit 10.6(a)**. A map depicting the proposed daytime service contours from the new antenna system has been included as **Exhibit 10.6(b)**. Present and proposed 1.0 V/m "Blanket" Contours have been included as **Exhibit 10.7(a-b)**.

Community Coverage. Community coverage remains in compliance with the requirements of §73.24(i). Zeeland, MI will continue to receive daytime primary service as seen in **Exhibit 10.6b**.

Main Studio Location. The main studio location remains in compliance with the requirements of §73.1125. Studios for WMFN(AM) will remain unchanged from the present facilities.

Groundwave Interference. The proposed allocation remains in compliance with the requirements of §73.37. **Exhibit(s) 14.1-4** are relevant allocation studies for the present and proposed operations. All existing or proposed overlap falls or will fall over water.

Skywave Interference. The proposed allocation remains in compliance with the requirements of §73.182. No changes in Nighttime Operation are proposed.

Critical Hours Interference. The proposed allocation is in compliance with the requirements of §73.187. A critical hours study has been included as **Exhibit 16**.

Environmental Protection Act. The proposed allocation is in compliance with OET Bulletin No. 65. Full protection is afforded by the proposal. An RF Radiation study has been included in **Exhibit 17**.