

**APPLICATION FOR STATION LICENSE**  
**GREAT LAKES RADIO, INC.**  
**WFXD (FM) RADIO STATION**  
**CH 277C1 - 103.3 MHZ - 100.0 KW**  
**MARQUETTE, MICHIGAN**  
**December 2001**

**EXHIBIT A**

**WFXD Transmission System Calculations**

Effective Radiated Power:

Horizontal	100.0 kilowatts
Vertical	100.0 kilowatts

Antenna:

Electronics Research SHP-10AC  
10 bay full wavelength  
Horizontal gain 5.68

Transmission Line:  
(620 feet)

Andrew HJ8-50B  
3 inch air dielectric  
81.5% efficiency

Required Transmitter Power Output  
To Reach Effective Radiated Power:

21.598 kilowatts

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Facilities Authorized:

Channel 277C1 - 103.3 MHz

Effective Radiated Power:

100.0 kilowatts (H/V)

Geographic Coordinates:

North Latitude 46° 36' 14"  
West Longitude 87° 37' 15"

Antenna Center of Radiation:

Above Ground	185.0 meters
Above MSL	667.0 meters
HAAT	286.0 meters

FCC Tower Registration Number:

1230855