

**Engineering Exhibit to KMXA-FM  
Application for Minor Change  
Minot, North Dakota  
Facility ID: 34996**

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This exhibit presents the technical details of a change in antenna location made necessary due to the failure of the present location support tower. The distance of this relocation is south approximately 16.14 kilometers along a bearing of 152°T from the presently licensed location. No change in principal community, power, class, or channel is proposed.

**Antenna Location**

It is proposed to share the existing KIZZ/KZPR antenna, the 3 stations being combined into the existing 2 station combined antenna. The proposed antenna for KMXA-FM is mounted 135 meters above ground on the tower identified by antenna structure registration number 1205086.

**Spacing Compliance**

Attached as Figure 1 is a spacing study from the proposed antenna location indicating compliance with the Commission's Section 73.207.

**Radio Frequency Radiation Study and Statement**

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed 3 station combined antenna system is an ERI SHPX-12AC6-SP 12 bay array with full wavelength spacing between elements, which has been evaluated using the FCC Page "FM Model" set for this type of radiating element; an EPA type 3 "Rototiller" mounted with its center of radiation 135 meters above ground level, and operated with a combined effective radiated power of 242 kilowatts in both the horizontal and vertical. At 2 meters above ground, at 29 meters from the base of the tower, this proposal will contribute worst case,

42.6 microwatts per square centimeter, or 4.2 percent of the allowable ANSI limit for controlled exposure, and 21.0 percent of the allowable limit for uncontrolled exposure. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for

Figure 1 - Antenna Location Spacing Study

KMXA at KIZZ/KZPR  
 Ihm Licenses, LLC

REFERENCE  
 48 03 11.10 N. CLASS = C1 Int = C1  
 101 26 05.10 W. Current Spacings to 3rd Adj.  
 ----- Channel 260 - 99.9 MHz -----

DISPLAY DATES  
 DATA 05-14-20  
 SEARCH 05-14-20

Call	Channel	Location	Azi	Dist	FCC	Margin
KMXA-FM	LIC 260C1	Minot	ND 333.2	16.14	244.5	-228.4
AL9743	DEL 260C1	Winnipeg	MB 54.9	345.26	292.0	53.3
R10618	ADD 260C1	Winnipeg	MB 55.9	361.36	292.0	69.4
R42839	ADD 258C1	Brandon	MB 29.6	207.71	134.0	73.7
CKSB8F	LIC-D 258B	Brandon	MB 29.6	207.71	115.0	92.7
R43119	DEL 258B	Brandon	MB 29.6	207.71	115.0	92.7
KATQ-FM	LIC 261A	Plentywood	MT 290.2	243.61	132.5	111.1

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 Reference station has protected zone issue: Canada  
 All separation margins include rounding