

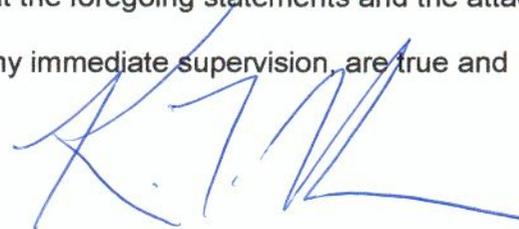
ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of television translator K56ET in Fargo, North Dakota, in support of this application for modification of Construction Permit BPTT-20050615ACB to specify a reduction in effective radiated power and an antenna model change on Channel 35 (its authorized displacement channel). No change in site location or effective antenna height is proposed herein.

It is proposed to mount a standard Andrew directional antenna at the authorized height on the side of the existing 214-meter communications tower. Exhibit B is a map upon which the predicted service contours are plotted. It is important to note that the newly proposed 51 dBu contour encompasses a significant portion of the Grade A contour that obtains from the licensed K56ET facility. Operating parameters for the proposed facility are tabulated in Exhibit C. An interference study is provided in Exhibit D, and a power density calculation follows as Exhibit E.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1024630 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

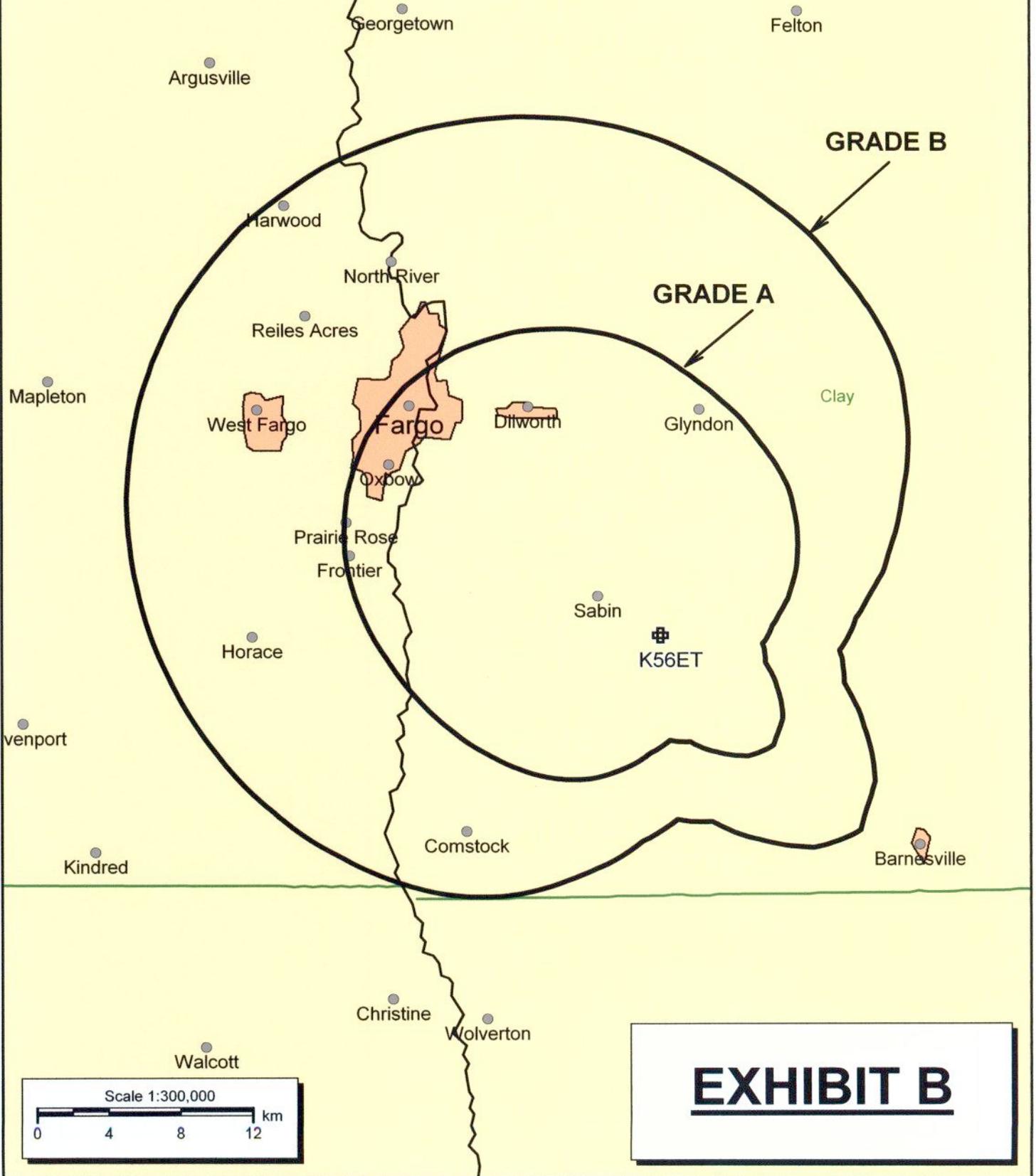


KEVIN T. FISHER

August 24, 2006

**CONTOUR POPULATION**  
**GRADE A (74 DBU) : 85,606**  
**GRADE B (64 DBU) : 154,379**

**SMITH and FISHER**



**EXHIBIT B**

## PROPOSED OPERATING PARAMETERS

PROPOSED K56ET  
CHANNEL 35 – FARGO, NORTH DAKOTA  
[MODIFICATION OF BPTT-20050615ACB]

Transmitter Power Output:	1.0 kw
Transmission Line Efficiency:	57.9%
Antenna Power Gain – Toward Horizon:	34.12
Antenna Power Gain – Main Lobe:	34.12
Effective Radiated Power – Toward Horizon:	19.8 kw
Effective Radiated Power – Main Lobe:	19.8 kw
Transmitter Make and Model:	Type-accepted
Rated Output	1.0 kw
Transmission Line Make and Model:	Andrew HJ7-50A
Size and Type:	1-5/8" air heliax
Length:	450 feet
Antenna Make and Model:	Andrew AL8N
Orientation	315°T
Beam Tilt	1.75 degrees
Radiation Center Above Ground:	126 meters
Radiation Center Above Mean Sea Level:	407 meters

CONTOUR OVERLAP AND  
LONGLY-RICE INTERFERENCE STUDIES  
PROPOSED K56ET  
CHANNEL 35 – FARGO, NORTH DAKOTA  
[MODIFICATION OF BPTT-20050615ACB]

We conducted a computer analysis of the interference situation for the proposed facility, the results of which are shown in Exhibit D-2. The study is based on contour protection requirements of Sections 74.705, 74.706, 74.707, 74.708, 74.709 and 74.710 of the FCC's Rules with respect to analog and digital full-power, analog and digital low power television stations, and Land Mobile allotments. It concludes that the facility proposed herein meets these requirements to all stations.

SMITH AND FISHER

EXHIBIT D-2

PROPOSED K56ET  
 CH. 35 - FARGO, ND

REFERENCE  
 46 45 35 N  
 96 36 27 W

LPTV Pwr = 19.8 kW, HAMS L COR= 407 M

DISPLAY DATES  
 DATA 08-19-06  
 SEARCH 08-24-06

..... Channel 35Z, 596 MHz .....

Call	Channel	Location	Dist	Azi	FCC	Margin
NEW	AP 35	Walker	MN 158.83	75.7	> 119.73	39.10
K35HT	CP 35-	Jamestown	ND 146.46	278.4	> 089.78	56.68
KSAX-D	GRR 36	Alexandria	MN 161.47	136.4	> 104.26	57.21
KSAX-D	CPM 36	Alexandria	MN 161.47	136.4	> 104.16	57.31
ALK17F	AL 20-	Wadena	MN 118.32	107.0	> 059.49	58.83
KSAX	LI 42Z	Alexandria	MN 161.47	136.4	> 100.00	61.47
NEW	AP 35	Aberdeen	SD 205.95	226.7	> 144.23	61.72
KARE-D	LI 35	Minneapolis	MN 328.66	123.9	> 259.45	69.21
NEW-DT	AP 35Z	Killarney	MB 356.19	320.8	> 285.85	70.34
NEW	AP 35Z	Winnipeg	MB 334.50	353.4	> 260.33	74.17

POWER DENSITY CALCULATION

PROPOSED K56ET  
CHANNEL 35 – FARGO, NORTH DAKOTA  
[MODIFICATION OF BPTT-20050615ACB]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Fargo facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 19.8 kw, an antenna radiation center 126 meters above ground, and the vertical pattern of the Andrew antenna, maximum power density two meters above ground of  $0.00020 \text{ mw/cm}^2$  is calculated to occur 112 meters northwest of the base of the tower. Since this is less than 0.1 percent of the  $0.40 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 35 (596-602 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.