

**Engineering Statement in Support of a Request  
For a Waiver of the 48 Km Limitation on a  
Minor Change Move by K23LB-D**

**Background**

CP BNPDTL-20100422ACS exists to construct this station at a site approximately 22 km southeast of Fargo, ND. The subject application requests a change of location to a site approximately 35 km northwest of Fargo. While the distance of the move is 32.8 miles and exceeds the allowable 30 miles there is only a trivial change in the area served. The actual coverages corresponding to the CP and the modification application are illustrated by coverage plots included with this modification application. This move will allow the use of an antenna left over from full service station KFME's temporary operation on Ch 23 during the digital transition. The new antenna height will be 327 m (1072 ft) compared to 100m (328 ft) for the CP.

**Discussion of the 30 mile Minor Change Restriction**

FCC Rule 74.787(a)(4) defines any change in the transmitter location greater than 30 miles as a major change. This new rule was instituted as part of the Second Report & Order in MB Docket 03-185 and discussed in Para 58 & 59.

Para 58 states: "To ensure that the low power television applications remain just that and to ensure that stations continue to provide coverage to viewers that rely on their service we adopt our proposal and expand the "30 mile" rule currently applied to digital displacement applications to all low power television applications."

Given that there is almost no change in coverage, the requested move is not in conflict with the stated purpose of the 30 mile limit. Further the original selection of 30 miles was arbitrary and not based on any engineering calculations. See the attached interference free coverage plots of the CP and this application. The application coverage totally overlaps and slightly exceeds the CP coverage. The total interference free population count of the application is virtually unchanged at 289,931 compared to 290,427 for the CP.

**Advantages of the Move**

The move would be to the KFME-DT tower which station is the Fargo, ND PBS outlet. Prairie Public Broadcasting, licensee of KFME-DT, has provided a letter outlining some of the public interest advantages of the proposed move. The letter is attached as an exhibit.

The move will allow K23LB-LD to take over an already installed but unused antenna at greater, than usual height for an LPTV station of 327 meters above ground. This is not only economically advantageous by reducing the construction cost but the height improved reception by better looking over local obstructions. The KFME letter also points out that most outdoor receiving antennas in the area are pointed in the general direction of the KFME tower which also effectively improves the coverage of the subject station.

The plan for K23LB-LD is to present intense local news coverage of events and issues of public interest by utilizing the news gathering facilities of an existing local organization, "Informed TV". This coverage will be expanded beyond the news provided by the local full service stations.

### **Conclusion**

The requested waiver is not contrary to the intent of the 30 mile rule which number was arbitrary in the first place. Further while the OET Bulletin 69 coverage does not significantly change, the actual reception by the public will improve. Also the reduced cost of construction of the transmitter plant will allow better production facilities to be built.

It is respectfully suggested that it is in fact in the public interest to grant the waiver.

Respectfully submitted,

Byron W. St. Clair

Engineering Consultant

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### K23LB (KFME Antenna)

Latitude: 47-00-45 N  
Longitude: 097-11-41 W  
ERP: 15.00 kW  
Channel: 23  
Frequency: 527.0 MHz  
AMSL Height: 614.0 m  
Elevation: 287.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 0.7  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 301.0  
Receiver Ht AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 90.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

**Digital LPTV Station K23LB-LD @ KFME Tower**  
CH 23, ERP 15.0 kW, KFME CH 23 Antenna @ 160°  
Radiation Cener 327 m (1073 ft.) Above Ground  
Interference Free Terrain Depandent Coverage  
Calculated Per FCC OET Bulletin 69

### Interference Free Breakdown:

White:	263,073	[ 90.7% ]
Black:	4,628	[ 1.6% ]
Hispanic:	6,594	[ 2.3% ]
Native American:	5,811	[ 2.0% ]
Asian:	4,671	[ 1.6% ]
Pacific Islander:	92	[ 0.0% ]
Mixed Race:	4,863	[ 1.7% ]
Other:	199	[ 0.1% ]

Total: 289,931

### K23LB (KFME Antenna)

Edgemoor

> 39.7 dBu

Scale 1:1,500,000

0 20 40 60 km

04/14/2014

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**K23LB-D.C**

BNPDTL20100422ACS  
Latitude: 46-45-35 N  
Longitude: 096-36-27 W  
ERP: 15.00 kW  
Channel: 23  
Frequency: 527.0 MHz  
AMSL Height: 381.0 m  
Elevation: 281.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: Yes  
Elec Tilt: 0.0  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 301.0  
Receiver Ht AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 90.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast


**Digital LPTV Station K23LB-LD Construction Permit**

CH 23, ERP 15.0 kW Omni-directional Pattern  
Radiation Center 100 m ( 328 ft.) Above Ground  
Interference Free Terrain Dependant Coverage  
Calculated Per FCC OET Bulletin 69

## Interference Free Breakdown:

White:	263,042	[ 90.6% ]
Black:	4,713	[ 1.6% ]
Hispanic:	7,512	[ 2.6% ]
Native American:	5,332	[ 1.8% ]
Asian:	4,774	[ 1.6% ]
Pacific Islander:	124	[ 0.0% ]
Mixed Race:	4,725	[ 1.6% ]
Other:	205	[ 0.1% ]

Total: 290,427

 > 39.7 dBu

Scale 1:1,500,000



03/06/2014

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Prairie Public Broadcasting, Inc.

Television  
Radio  
Education Services  
Enterprises

July 10, 2014

Federal Communications Commission  
Washington, D.C. 20554

Re: LPTV Station K23LB-LD Waiver Request

Prairie Public Broadcasting, Inc. hereby supports Frank Digital Broadcasting, LLC application to the FCC to amend its Construction Permit for LPTV Station K23LB-LD Channel 23, Fargo, ND that would allow operation using our existing tower/antenna and transmission line. The existing Channel 23 antenna and transmission line was utilized during Prairie Public's digital transition for station KFME, which currently operates on VHF Channel 13.

Although their CP relocation amendment request exceeds the 30-mile limitation by 2.8 miles, it would greatly enhance the general public's ability to receive more off-air programming. Furthermore, most UHF off-air antennas in this market are already aimed in the general direction of our existing Channel 23 antenna, providing good reception for viewers. In addition, Prairie Public would financially benefit from any tower rental revenue generated and would be used to further support its noncommercial educational programming mission.

Sincerely,

Jack W. Anderson  
Director of Engineering  
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