

TECHNICAL STATEMENT IN SUPPORT OF AN  
APPLICATION FOR A NEW NCE STATION  
CONSTRUCTION PERMIT: JAMESTOWN, NORTH DAKOTA

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## **Introduction**

This is an application by Jamestown College (the Applicant) for a new noncommercial station operating on Channel 201 (88.1 MHz) with a proposed community of license of Jamestown, ND.

## ***Antenna Location***

It is proposed to locate the proposed facility on an existing tower uniquely located by the NAD-27 coordinates of North Latitude 46 degrees 54 minutes 37 seconds, West Longitude 98 degrees 42 minutes 28 seconds. The tower does not possess an Antenna Structure Registration Number and is exempt from registration. The applicant has obtained reasonable assurance from the tower owner that the site is available for the proposed facility.

## ***Basis of Calculations***

All exhibits accompanying the application were prepared using USGS 3-arc-second terrain data except where noted.

All population measurements were made using the most recent census block data available from the United States Bureau of the Census. That data is from the 2000 Census.

## ***Technical Parameters***

The proposed facility's 60 dBu contour encompasses 780 square kilometers. No large bodies of water exist within the area.

The U.S. population within the proposed facility's 60 dBu contour is estimated to be 17,852 people.

## ***Technical Facilities***

The applicant proposes at this time to utilize a two-bay, nondirectional, vertically-polarized antenna. The FM antenna system will be side-mounted on the existing tower such that the radiation centerline is 25 meters above ground level (454 meters above mean sea level). The overall height of the tower is 30 meters above ground (459 meters above mean sea level).

A type-approved transmitter of adequate power for the required transmitter power output (TPO) will be installed at the time of construction. The appropriate TPO will be determined at license application filing to achieve an effective radiated power of 6 kilowatts taking into consideration the losses in transmission line, transmission system losses and the power gain of the antenna system.

## ***Blanketing and Intermodulation Interference***

There are no known commercial or government receiving stations or cable head-end facilities located within the blanketing contour. In the event that blanketing or intermodulation interference, including RITOE, occurs with any facilities or to radio receivers in use prior to grant of their application, the applicant will accept the responsibility to alleviate any interference resulting from the proposal as required by Section 73.318 of the FCC Rules.

## Tech Box Data

- 1) Channel 201
- 2) Class A
- 3) 46° 54' 37" N  
98° 42' 28" W
- 4) Not Applicable
- 5) Not Applicable
- 6) 30 meters AGL
- 7) 454 meters (H) 454 meters (V) AMSL
- 8) 25 meters (H) 25 meters (V) AGL
- 9) 1 meters (H) 1 meters (V) HAAT
- 10) 0.0 kW (H) 6 kW (V)
- 11) Not Applicable
- 12) Nondirectional
- 13) Yes. See Exhibit 13.
- 14) Yes. See Exhibit 14.
- 15) Yes.
  - a) Checked. See Exhibit 15a – Contour Overlap Requirements
  - b) Checked.
  - c) Not Checked.
  - d) Not Checked.
  - e) Checked. See Exhibit 15e. – Television Channel 6 Protection
- 16) Not Applicable
- 17) No. See Exhibit 17.
- 18) Yes. See Exhibit 18.
- 19) Not Applicable

## **Exhibit 13 – Main Studio Location**

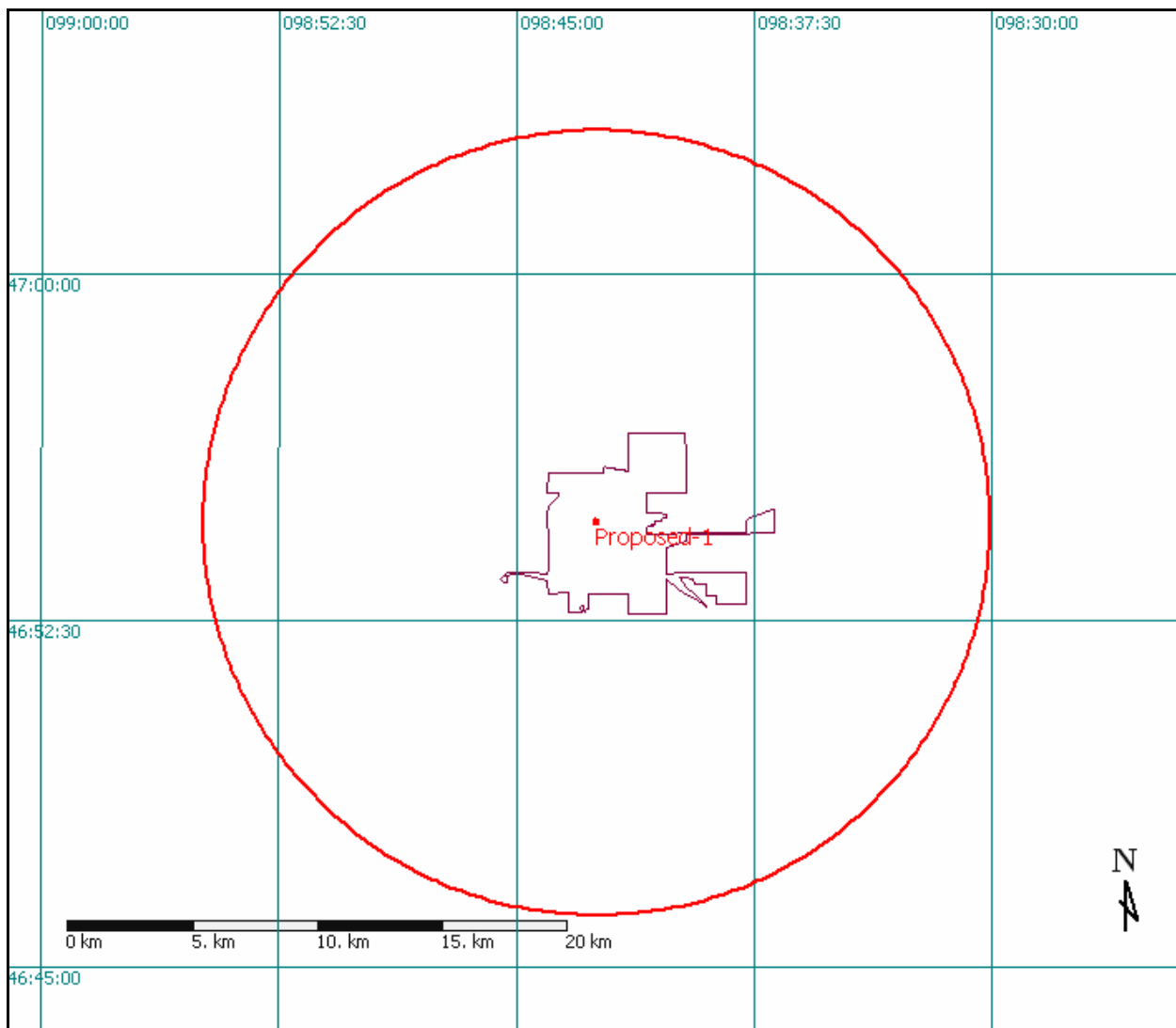
47 C.F.R. 73.1125 requires that the broadcast station's main studio be located within the station's community of license; at a location within the principal community contour of the station; or within twenty-five miles from the reference coordinates of the center of its community of license.

The instant application proposes a facility specified a community of license of Jamestown, ND. The applicant proposes to locate the main studio for the station on its campus located at 6000 College Lane within the corporate boundaries of Jamestown, ND. Therefore, the proposed location for the main studio meets the Commission's requirements by virtue of its location within the station's community of license.

## Exhibit 14 – Community Coverage

The proposed facility is subject to 47 C.F.R. 73.515 because the instant application requests a channel in the reserved band. 47 C.F.R. 73.515 requires that a minimum field strength of 1 mV/m (60 dBu) be provided to at least 50 percent of the community of license or reach 50 percent of the population within the community.

The instant application identifies Jamestown, ND as the community of license. As demonstrated in the following illustration, that community lies entirely within the 60 dBu contour of the proposed facility. Therefore, the instant application complies with 47 C.F.R. 73.515.



*Illustration 14: Community of License (in purple) within 60dBu contour of proposed facility.*

## Exhibit 15a – Contour Overlap Requirements

The following contour study demonstrates that the proposed facility complies with the provisions of 47 C.F.R. 73.509 in regards to each potentially affected NCE station.

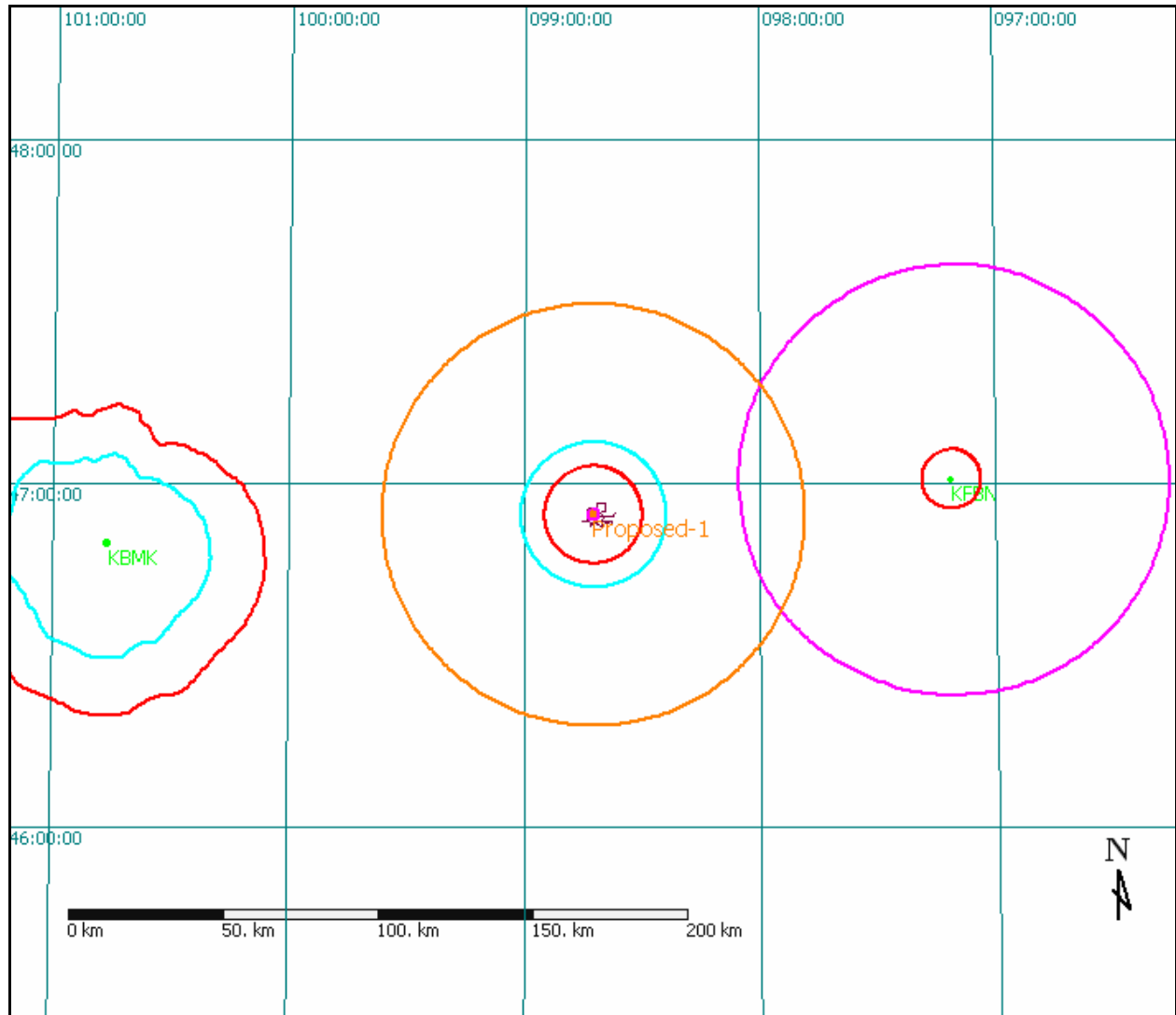
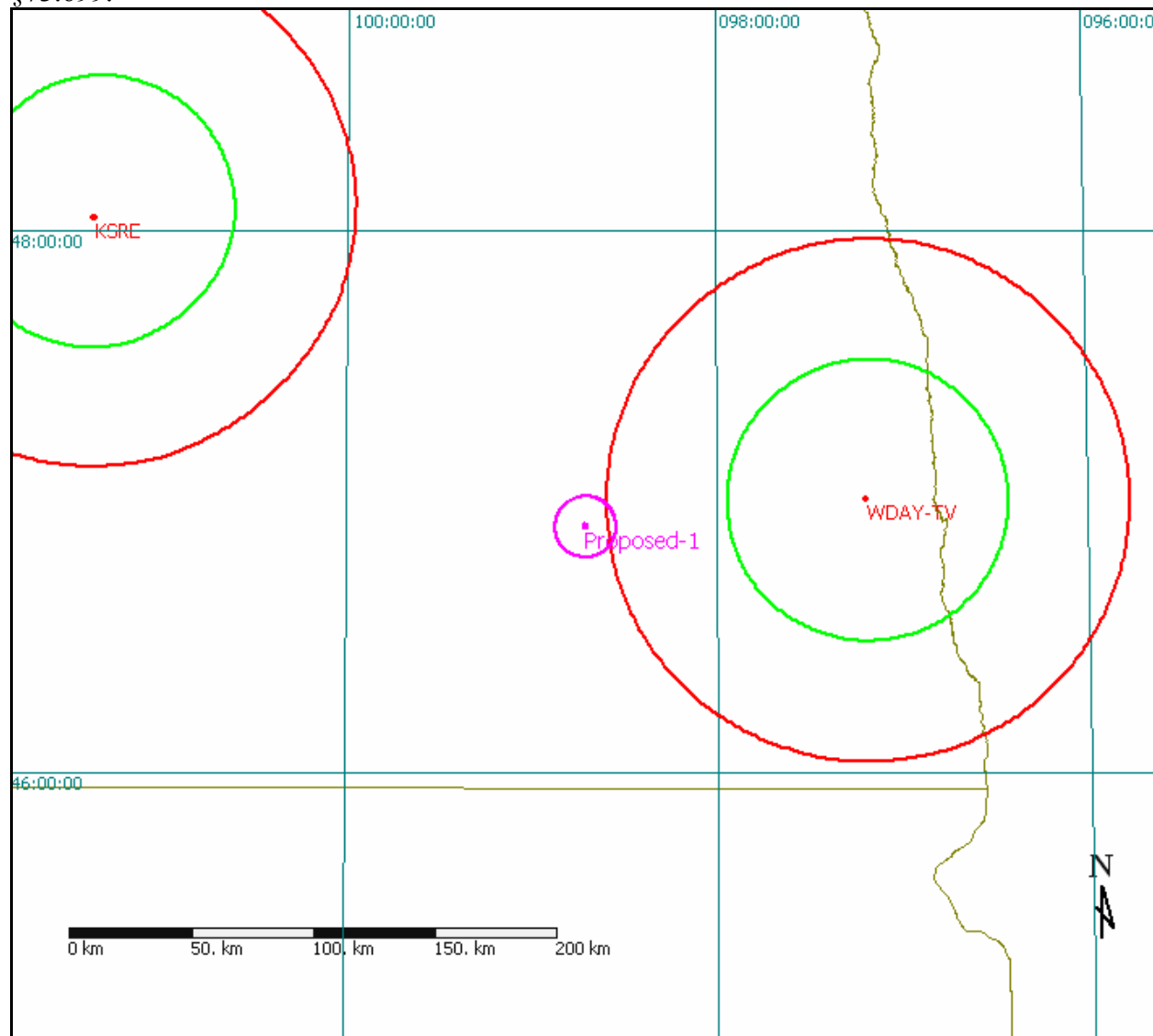


Illustration 15a(1): This map is color coded so that prohibited overlap is indicated by LIKE color contours overlapping.

## Exhibit 15e - Television Channel 6 Protection

The instant application proposes a facility that will broadcast on channel 201. Two stations meeting the definition of an “[a]ffected TV Channel 6 Station” (47 C.F.R. 73.525(a)) by virtue of a location within 265 kilometers of the proposed station’s antenna: WDAY-TV and KSRE.

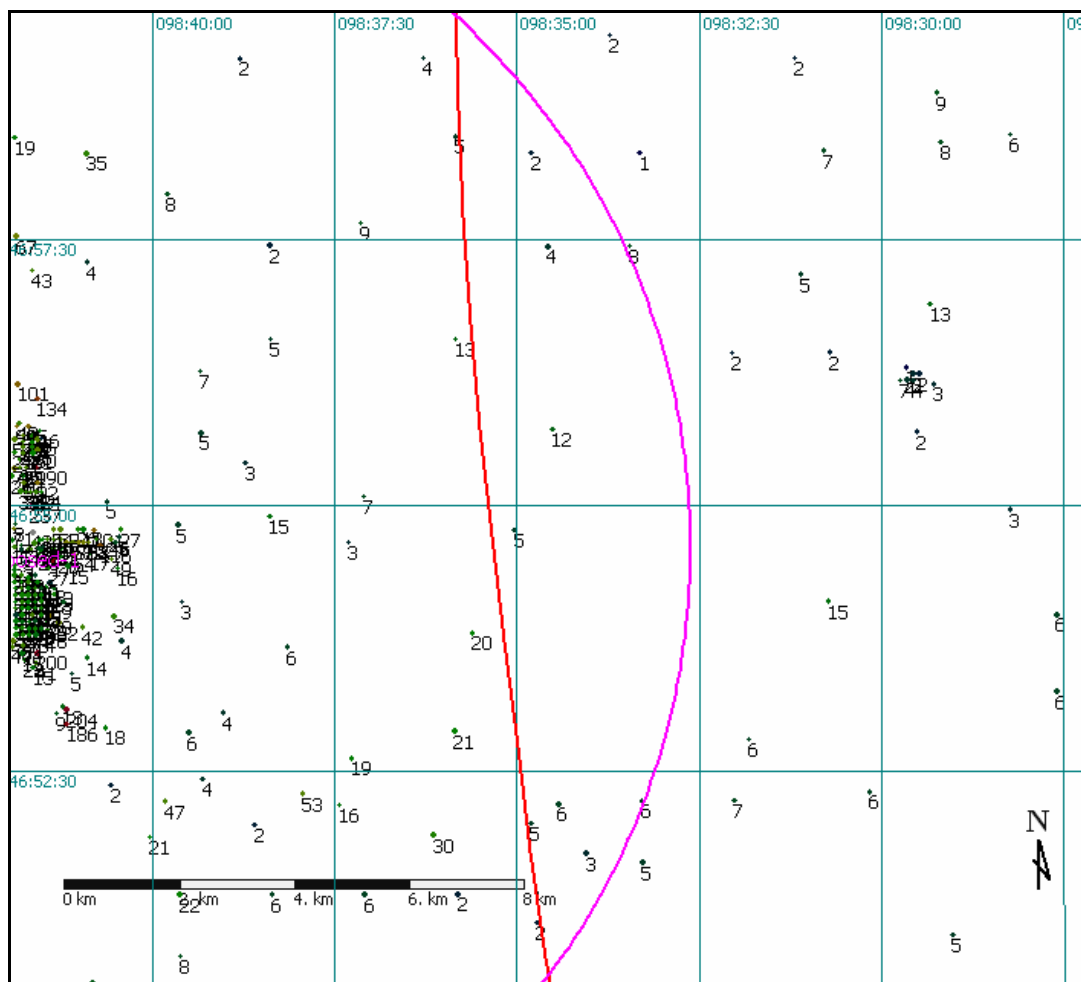
The illustration below displays the 47 dBu contour of the potentially affected television stations in red. The contours were determined according to the procedures specified in §73.684 of the Commission’s Rules, “Prediction of Coverage,” using the F(50,50) curves in Figure 9 of §73.699.



The associated worse-case FM interfering contour F(50,10) of 48.0 dBu was obtained from Figure 1 of §73.599. The interfering contour is displayed in purple on the illustration. The distances to this contour were predicted according to the procedures specified in “Prediction of Coverage,” using the F(50,10) curves in Figure 1 of §73.333 of the Rules.

Since the proposed FM antenna is of vertical polarization, a power correction was made for the polarization. The resulting ERP for the purposes of this analysis is 0.15 kW (6 kW /40) since the Area of Just Perceptible Interference does not cross into a community of over 50,000 people.

The area of predicted interference caused by the proposed facility does not overlap any part of the Grade B service area of KSRE. Therefore, the instant application complies with the requirements of 47 C.F.R. 73.525(c) in regard to that station.



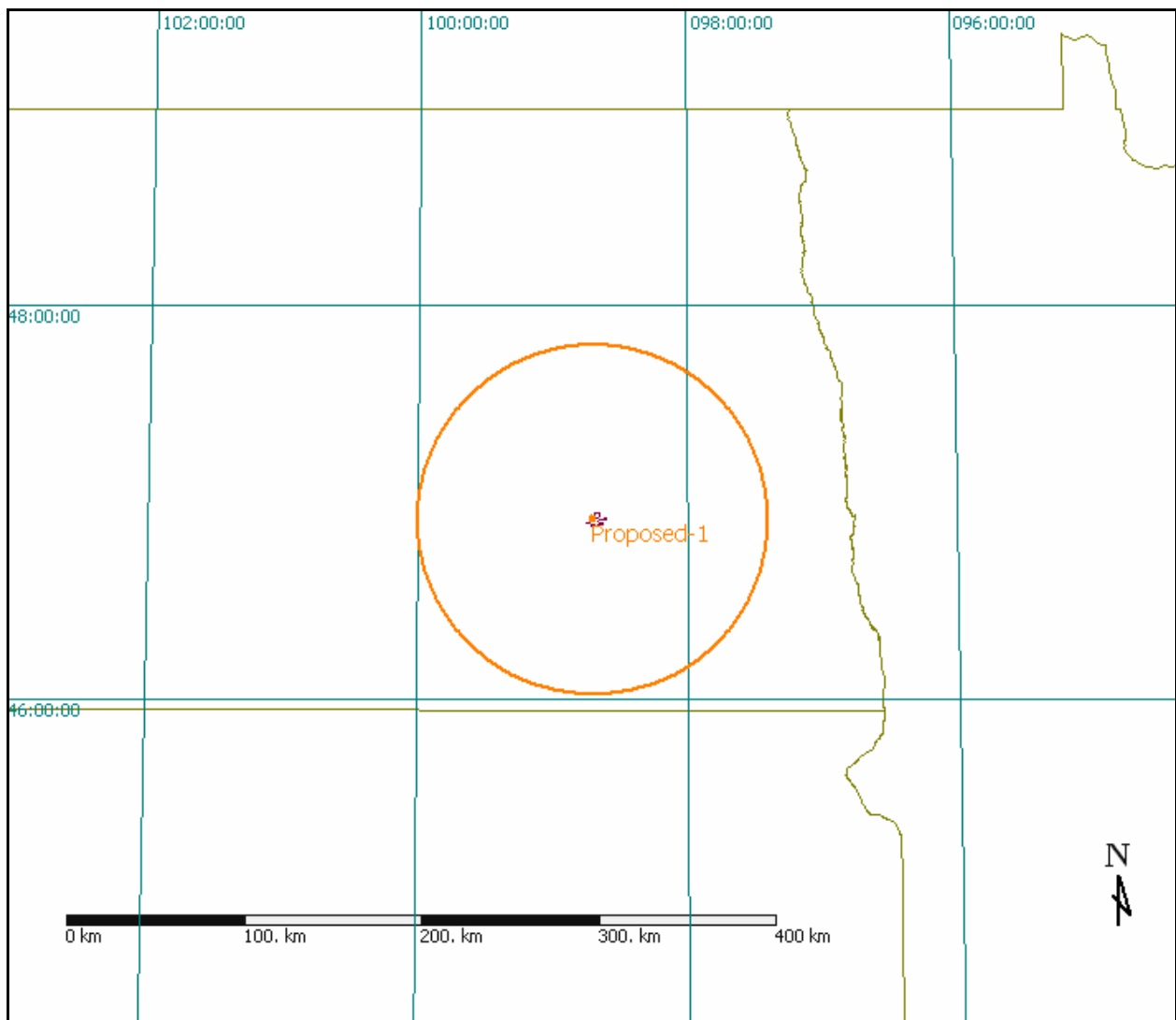
The area of predicted interference caused by the proposed facility slightly overlaps the Grade B service area of WDAY-TV. That overlap is illustrated in the previous illustration. The number of individuals within this area is 43. Therefore, the instant application complies with the requirements of 47 C.F.R. 73.525(c) in regard to WDAY-TV because fewer than 3,000 people exist in the area of overlap.



## Exhibit 17

### ***International Borders***

The proposed facility is located within 320 kilometers of the Canadian border. The proposed facility conforms to the Table of Minimum Distance Separations as set forth in the Agreement, therefore further negotiations with the Canadian Administration should not be required. It is respectfully requested that the Commission, on behalf of Jamestown College, notify the Canadian Administration of the proposed facility if deemed necessary and seek concurrence. Furthermore, the following map demonstrates that the 34 dBu contour is completely contained within the continental United States.



*Illustration 17: This map demonstrates that the proposed facility's 34 dBu interfering contour is entirely contained within the United States.*

## **Exhibit 18**

Operation of this facility will not have a significant environmental impact. To the best knowledge of the Applicant:

1. The existing structure is not located in an officially designated wilderness area or wildlife preserve, nor does it threaten the existence or habitat of endangered species.
2. The proposed changes will not affect districts, sites, buildings, structures or objects significant in American history, architecture, engineering or culture that are listed in the National Register of Historic Places, or eligible for listing.
3. The site is not located in a flood plain. Nothing is proposed that would require significant changes in surface features such as wetland fill, deforestation or water diversion.
4. The structure is marked in accordance with FAA requirements.

### ***Radiofrequency Radiation Impact***

The proposed facility will not result in human exposure to radiofrequency (RF) radiation in excess of safety standards specified in Section 1.1307(b). Effective October 15, 1997, the FCC adopted revised guidelines and procedures for evaluating the environmental effects of RF emissions. These revised guidelines incorporate two tiers of exposure limits based on whether exposure occurs in a "controlled" (occupational) situation or an "uncontrolled" (general population) situation. Based on the methods published in OET Bulletin No. 65 (entitled "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields"), the predicted power density value produced by the proposed facility will be well below the established ANSI guideline limits.

Verification of compliance with FCC-specified guidelines for human exposure to RF radiation was determined utilizing the worksheets provided by the Commission.

Furthermore, the applicant will ensure protection to station personnel working in the vicinity of their antenna. Access to the antenna supporting tower base will be restricted to authorized personnel only. The applicant will reduce power or cease operation, when appropriate and deemed necessary, during times of service or maintenance of the transmitting system or when work is being performed on the tower to avoid potentially harmful exposure to station personnel or workers. The applicant will initiate joint procedures with common users to be followed during times of service or maintenance of the transmission systems when necessary to avoid potentially harmful exposure to personnel.

It is submitted that the proposed facility will not constitute a potential hazard to the quality of the human environment. Accordingly, the instant application should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Rules.

## Summary

It is submitted that the proposed station described herein complies with the Rules and Regulations of the Federal Communications Commission.

This statement and attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

DATED: October 20, 2007

A handwritten signature in black ink, appearing to read "Jason Bennett", is written over a faint, circular official stamp.

Jason Bennett  
FM Expansion Group, LLC