

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of television translator K41JC, Channel 41 in Pocatello, Idaho, in support of this Application for Construction Permit to specify digital operation on Channel 41 from the licensed K41JC site, as a "flashcut" proposal.

It is proposed to mount a standard Andrew directional antenna at the authorized height on the side of the existing 18-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 K41JC 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.

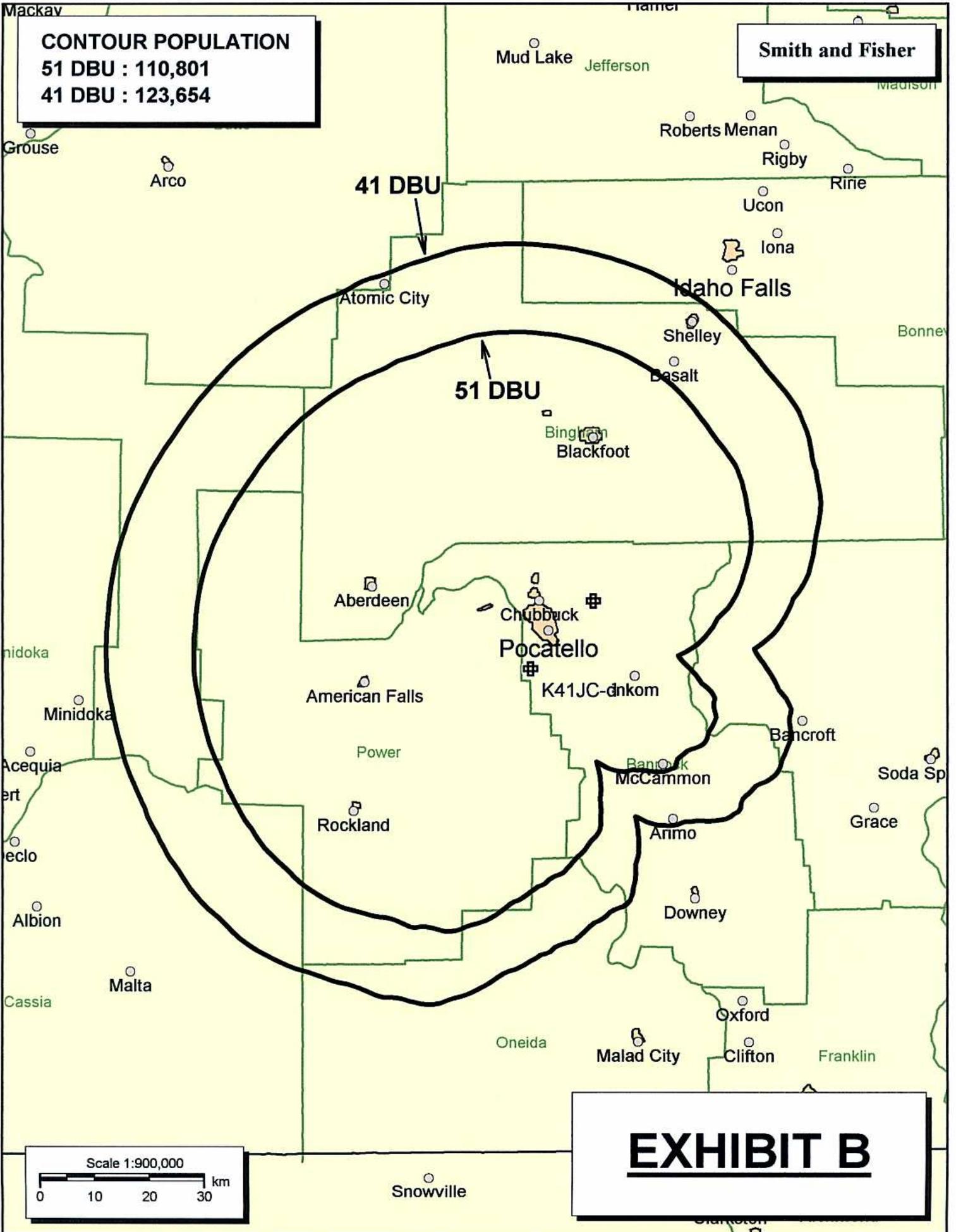
Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. Due to the diminutive height of the tower and its proximity to the nearest airport runway, FCC antenna structure registration is not required. This conclusion is supported by the Commission's TOWAIR Program.

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.

  
KYLE T. FISHER

**CONTOUR POPULATION**  
51 DBU : 110,801  
41 DBU : 123,654

**Smith and Fisher**



**EXHIBIT B**

PROPOSED OPERATING PARAMETERS

PROPOSED K41JC-D  
CHANNEL 41 – POCA TELLO, IDAHO

Transmitter Power Output:	0.2 kw
Transmission Line Efficiency:	91.7%
Antenna Power Gain – Toward Horizon:	17.47
Antenna Power Gain – Main Lobe:	17.47
Effective Radiated Power – Toward Horizon:	4.0 kw
Effective Radiated Power – Main Lobe:	4.0 kw
Transmitter Make and Model:	Type-accepted
Rated Output	0.5 kw
Transmission Line Make and Model:	Andrew LDF7-50A
Size and Type:	1-5/8" foam heliax
Length:	60 feet
Antenna Make and Model:	Andrew ALP8L1-HSER
Orientation	295 degrees true
Beam Tilt	0.25 degrees
Radiation Center Above Ground:	13 meters
Radiation Center Above Mean Sea Level:	2,231 meters

LONGLEY-RICE INTERFERENCE STUDIES  
PROPOSED K41JC-D  
CHANNEL 41 – POCA TELLO, IDAHO

We conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 0.1 kilometer increments along each radial studied, and employs the 1990 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than proposed K41JC-D) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-2. They conclude that the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, it is believed that the proposed K41JC-D facility complies with the requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.

## INTERFERENCE SUMMARY

PROPOSED K41JC-D  
CHANNEL 41 – POCATELLO, IDAHO

<u>Call Sign</u>	<u>Status</u>	<u>City, State</u>	<u>Ch.</u>	<u>Longley-Rice Service Population</u>	<u>Unmasked Interference From Proposed Facility</u>	<u>%</u>
New BNPTTL-20000829ALX	Appl.	Pocatello, ID	41	95,391	0	0 *
New BNPTT-20000830ATJ	Appl.	Burley, ID	41	4,215	0	0 *

\*Interference is completely masked by the authorized analog station K41JC.

EXHIBIT E

POWER DENSITY CALCULATION  
PROPOSED K41JC-D  
CHANNEL 41 – POCA TELLO, IDAHO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Pocatello facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 4 kw, an antenna radiation center 13 meters above ground, and the vertical pattern of the Andrew antenna, maximum power density two meters above ground of  $0.010 \text{ mw/cm}^2$  is calculated to occur 4 meters west-northwest of the base of the tower. Since this is only 2.4 percent of the  $0.42 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 41 (632-638 MHz), this proposal may be considered a minor environmental action 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.