

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of KNAT-DT, Channel 24 in Albuquerque, New Mexico, in support of its Application for Construction Permit to operate with a maximized post-transition DTV facility.

It is proposed to mount the existing Andrew omnidirectional antenna at the 33-meter level of the existing 41-meter tower on which the antenna is presently mounted. Exhibit B provides elevation pattern data for the licensed antenna. Exhibit C is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. An interference study is included as Exhibit D, and a power density calculation is provided in Exhibit E.

Although the proposed effective radiated power is greater than that allowed in Section 73.622(f)(8)(i) of the Commission's Rules, the coverage of the proposed facility does not exceed that of the largest station in the market (the allotment facility of KOAT-DT, Channel 7 in Albuquerque) as allowed in Section 73.622(f)(5) of the Rules.

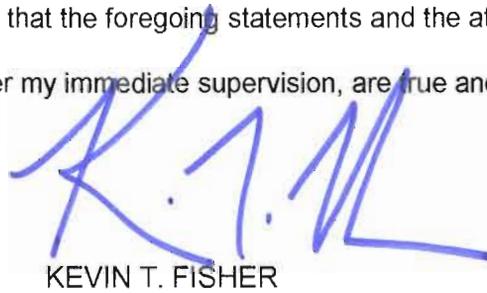
It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station authorized to operate at or near the KNAT-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

Since no change in overall height or location of the existing tower is proposed herein, 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, no FCC antenna structure registration is 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.



Handwritten signature in blue ink, appearing to read 'K. T. Fisher'.

KEVIN T. FISHER

June 2, 2008



ELEVATION PATTERN

Type:	ATW22H3H	
Directivity:	Numeric	dBd
Main Lobe:	22.00	13.42
Horizontal:	16.16	12.68
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	24	
Location:		
Note:		

Relative Field

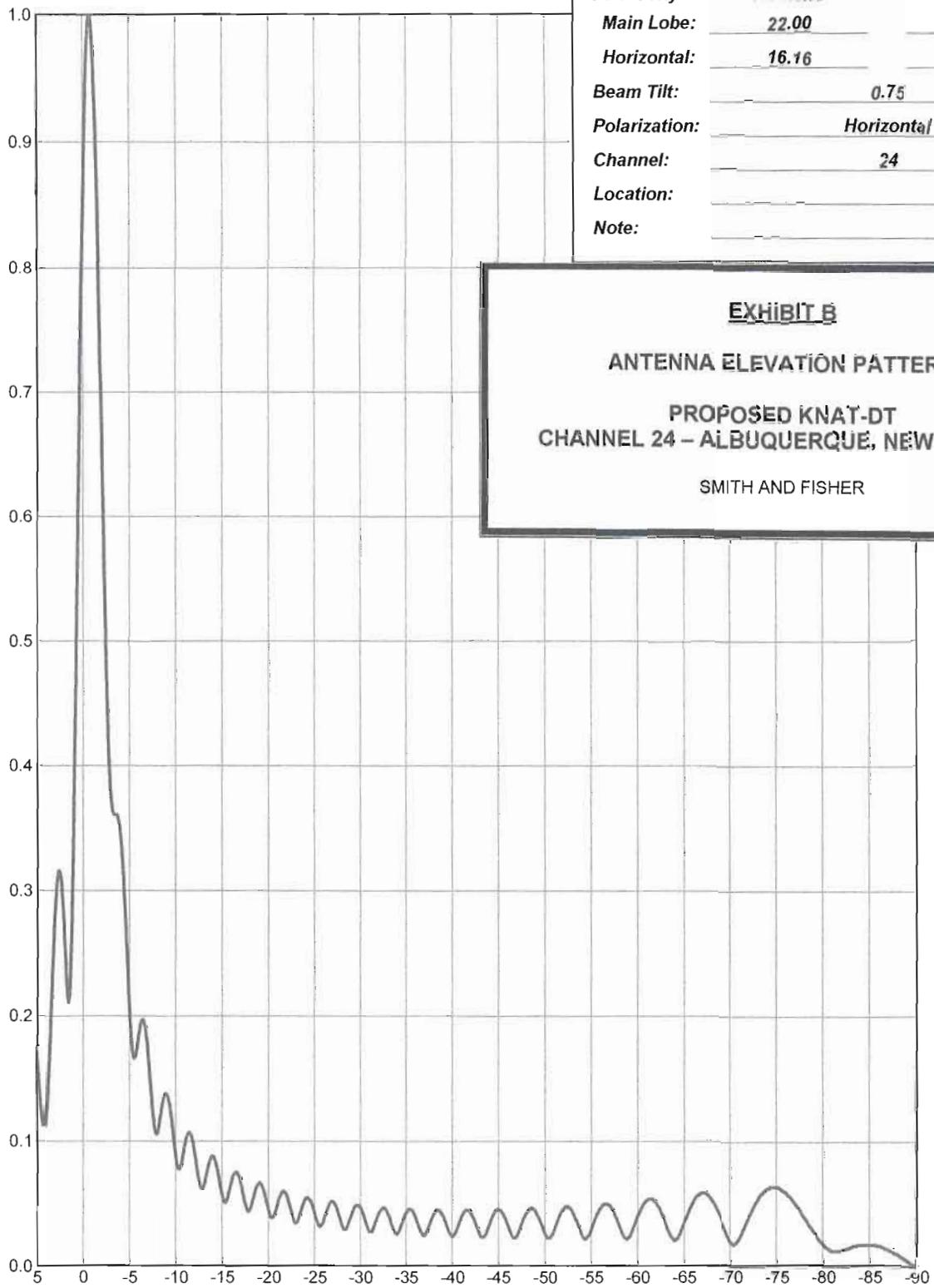
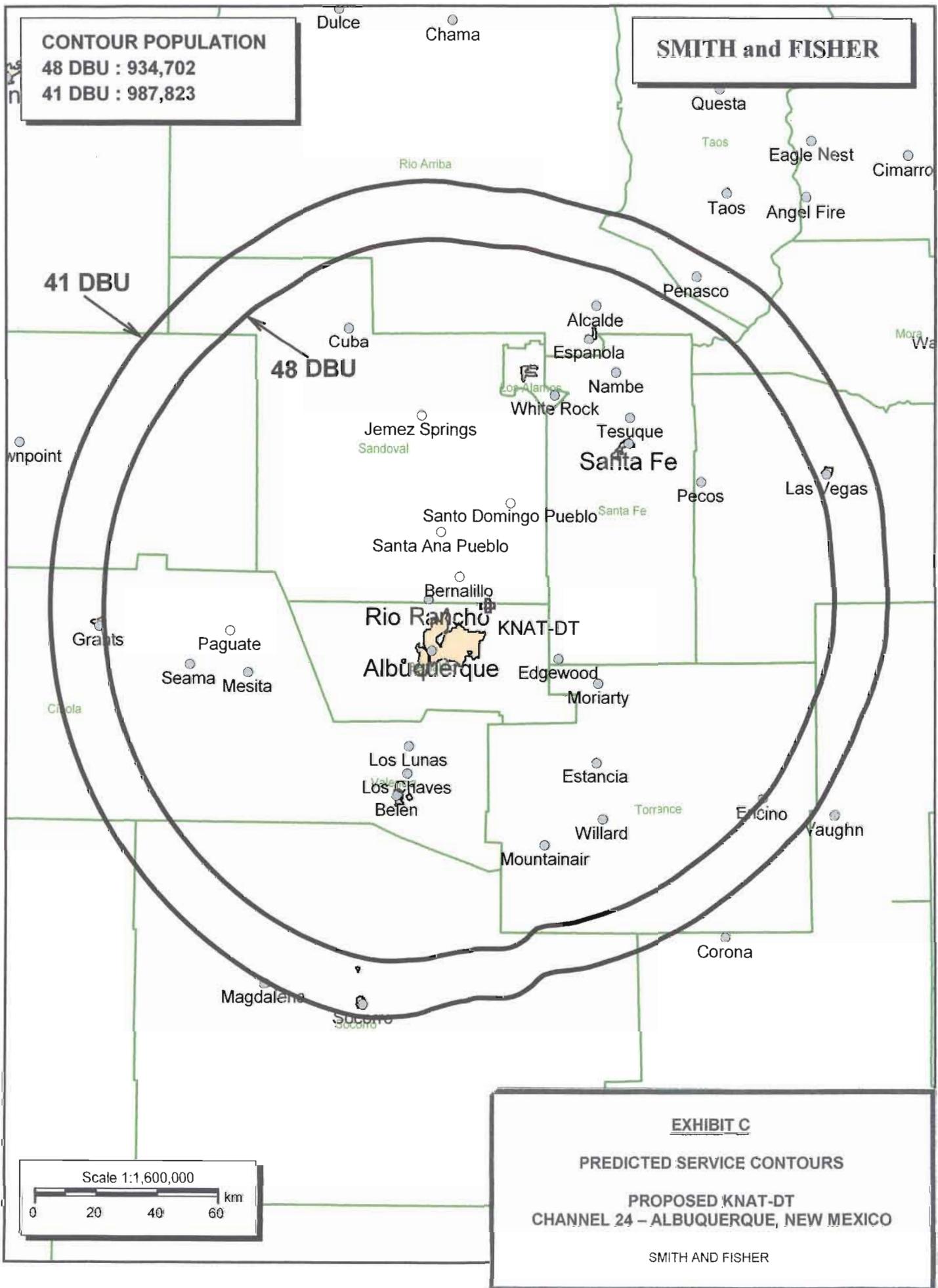


EXHIBIT B
ANTENNA ELEVATION PATTERN
PROPOSED KNAT-DT
CHANNEL 24 - ALBUQUERQUE, NEW MEXICO
SMITH AND FISHER



Electronics Research, Inc.
7777 Gardner Road
Chandler, Indiana U.S.A 47610



CONTOUR POPULATION
 48 DBU : 934,702
 41 DBU : 987,823

SMITH and FISHER

41 DBU

48 DBU

EXHIBIT C

PREDICTED SERVICE CONTOURS

**PROPOSED KNAT-DT
 CHANNEL 24 - ALBUQUERQUE, NEW MEXICO**

SMITH AND FISHER



INTERFERENCE STUDY
PROPOSED KNAT-DT
CHANNEL 24, ALBUQUERQUE, NEW MEXICO

The instant application specifies an ERP of 360 kw (omnidirectional) at 1,259 meters above average terrain, which we have determined to be allowable under the FCC's recently approved interference standards with respect to various post-transition digital television facilities as they will exist on or before February 17, 2009, the date by which all stations must operate with the parameters recently adopted in the Commission's DTV Table of Allotments.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe III" computer program, which has been found generally to mimic the FCC's program. In conducting our studies, we employed a cell size of 2 kilometers and an increment spacing of 1 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed KNAT-DT to other pertinent stations are tabulated in Exhibit D-2.

As shown, the proposed KNAT-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted KNAT-DT facility) to the service population of any potentially affected post-transition DTV station.

A Longley-Rice interference study also reveals that the proposed KNAT-DT facility does not cause significant (0.5%) interference within the protected service contour of any potentially affected Class A low power television station.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

INTERFERENCE STUDY SUMMARY
PROPOSED KNAT-DT
CHANNEL 24 – ALBUQUERQUE, NEW MEXICO

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From KNAT-DT*</u>	<u>%</u>
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[NO STATIONS AFFECTED]

*Above that caused by the allotment facility.

POWER DENSITY CALCULATION

PROPOSED KNAT-DT
CHANNEL 24 – ALBUQUERQUE, NEW MEXICO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Albuquerque facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 360 kw, and antenna radiation center 33 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of 0.047 mw/cm² is calculated to occur 8 meters from the base of the tower. This is only 2.6 percent of the 1.8 mw/cm² reference for controlled environments (areas without public access) surrounding a facility operating on Channel 24 (530-536 MHz). Since the Sandia Crest antenna farm is secure from unauthorized public access, a grant of this occupational ground-level 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.