#### **ENGINEERING STATEMENT**

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of KDOR-DT, Channel 15 in Bartlesville, Oklahoma, in support of its Application for Construction Permit to operate on Channel 17 with a maximized post-transition DTV facility.

It is proposed to mount a standard ERI directional antenna at the 322-meter level of the existing 332-meter tower on which the present KDOR-DT antenna is mounted. Exhibit B provides antenna azimuth and elevation pattern data for the proposed 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 in Exhibit D, and a power density calculation is provided in Exhibit E.

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 KDOR-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. In addition, the FCC issued Antenna Structure Registration Number 1201051 to this tower.

## EXHIBIT A

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

June 2, 2008

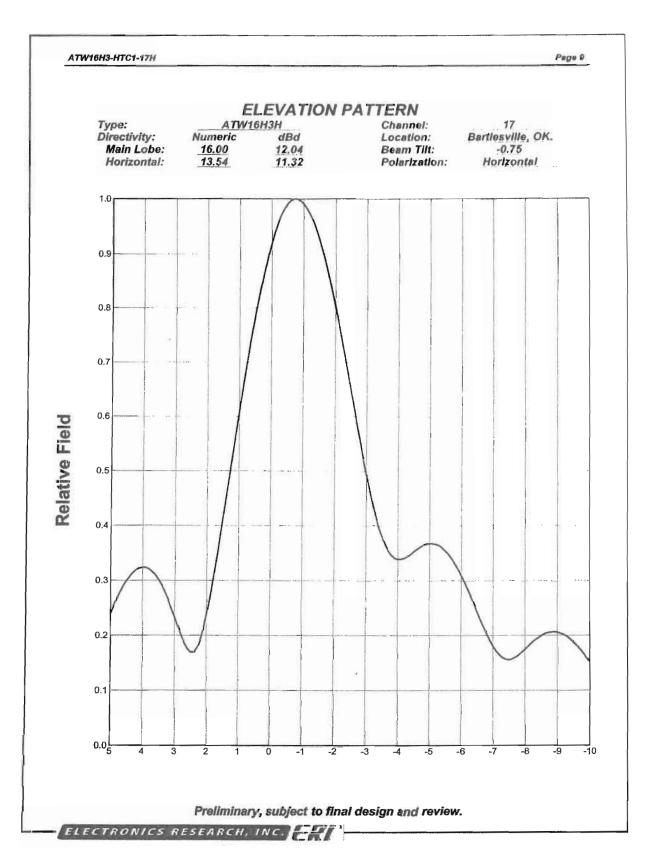


EXHIBIT B-1

ANTENNA ELEVATION PATTERN

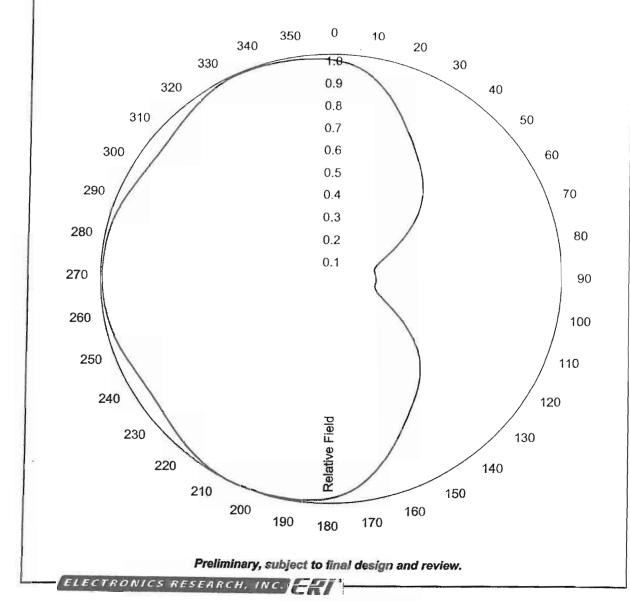
PROPOSED KDOR-DT CHANNEL 17 - BARTILESVILLE, OKLAHOMA

SMITH AND FISHER

#### AZIMUTH PATTERN

Type: ATW-C1 Channel
Numeric dBd Location
Directivity: 1.52 1.82 Polarizat
Peak(s) at: Note: Pette

Channel: 17
Location: Bartiesville, OK.
Polarization: Horizontal
Note: Pettern shape and directivity may vary with channel and mouting configuration.



### EXHIBIT B-2

ANTENNA AZIMUTH PATTERN

PROPOSED KOOR-DT CHANNEL 17 - BARTLESVILLE, OKLAHOMA

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# **EXHIBIT B-3**

## ANTENNA RELATIVE FIELD VALUES

PROPOSED KDOR-DT CHANNEL 17 - BARTLESVILLE, OKLAHOMA

SMITH AND FISHER



Type:

ATW-C1

Polarization: Horizontal

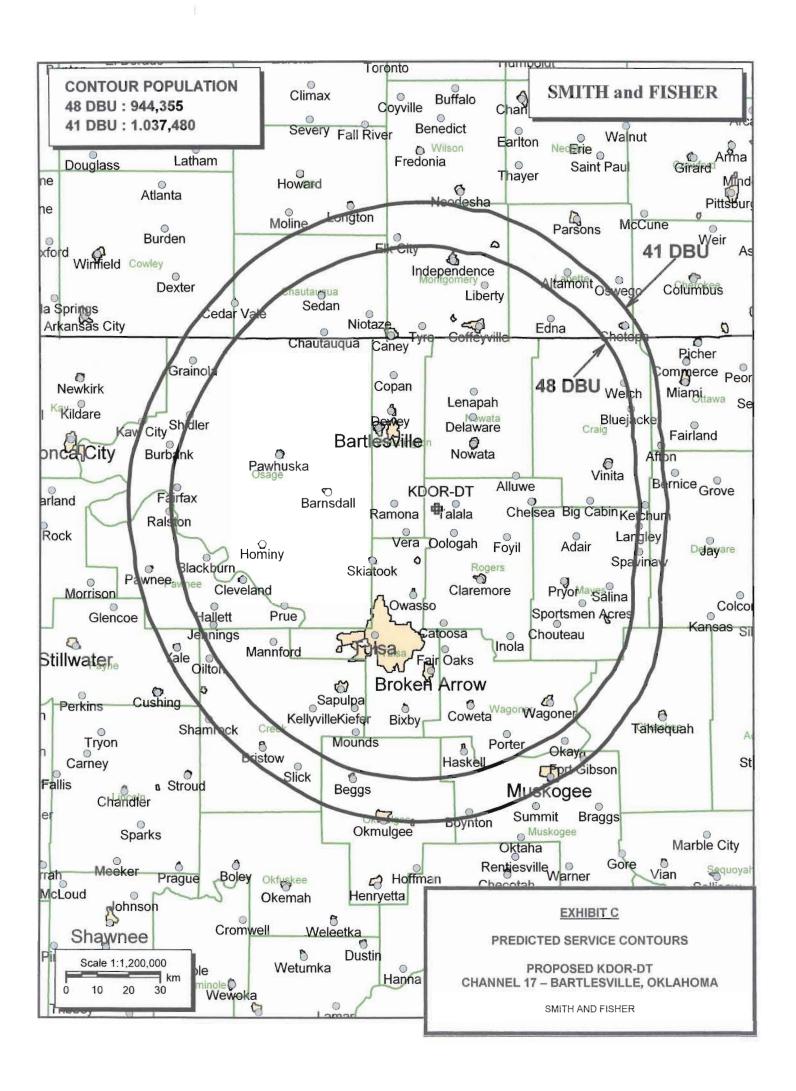
Angle	Field	ERP (kW)	ERP (dBk)
0	0.974	948.668	29.771
10	0.921	848.234	29.285
20	0.811	657.715	28.180
30	0.695	483.021	26.840
40	0.604	364.813	25.621
50	0.504	254.014	24.049
60	0.363	131.768	21.198
70	0.235	55.225	17.421
80	0.190	36.100	15.575
90	0.195	38.025	15.801
100	0.193	37.249	15.711
110	0.228	51.984	17.159
120	0.348	121.103	20.832
130	0.495	245.023	23.892
140	0.602	362.401	25.592
150	0.691	477.477	26.790
160	0.803	644.804	28.094
170	0.917	840.882	29.247
180	0.979	958.433	29.816
190	0.993	986.041	29.939
200	0.999	997.992	29.991
210	0.996	992.008	29.965
220	0.972	944.776	29.753
230	0.941	885.473	29.472
240	0.937	877.962	29.435
250	0.963	927.361	29.672
260	0.985	970.217	29.869
270	0.992	984.056	29.930
280	0.987	974.161	29.886
290	0.966	933.148	29.700
300	0.938	879.837	29.444
310	0.935	874.218	29.416
320	0.963	927.361	29.672
330	0.989	978.113	29.904
340	0.994	988.028	29.948
350	0.987	974.161	29.886



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

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6.2.08



#### INTERFERENCE STUDY

#### PROPOSED KDOR-DT CHANNEL 17 – BARTLESVILLE, OKLAHOMA

The instant application specifies an ERP of 1000 kw (directional) at 318 meters above average terrain, which we have determined to be allowable under the FCC's recently approved interference standards with respect to various 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 2.0 kilometers and an increment spacing of 1.0 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed KDOR-DT to other pertinent stations are tabulated in Exhibit D-2.

As shown, the proposed KDOR-DT facility would not contribute any interference to the service population of any potentially affected post-transition DTV station.

A Longley-Rice interference study also reveals that the proposed KDOR-DT facility does not cause any 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.

### EXHIBIT D-2

#### INTERFERENCE STUDY SUMMARY

# PROPOSED KDOR-DT CHANNEL 17 – BARTLESVILLE, OKLAHOMA

Interference
Population
Coverage From
Call Sign City, State CH. Population KDOR-DT %

[NO STATIONS AFFECTED]

### **EXHIBIT E**

#### POWER DENSITY CALCULATION

#### PROPOSED KDOR-DT CHANNEL 17 – BARTLESVILLE, OKLAHOMA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Bartlesville facility. Employing the methods set forth in *OET Bulletin No.* 65 and considering a main-lobe effective radiated power of 1000 kw, an antenna radiation center 322 meters above ground, and the elevation pattern of the ERI antenna, maximum power density two meters above ground of 0.0021 mw/cm² is calculated to occur 113 meters west of the base of the tower. Since this is only 0.6 percent of the 0.33 mw/cm² reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 17 (488-494 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and 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.