

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KTBC LICENSE, INC., licensee of KTBC-DT, Channel 56 in Austin, Texas, in support of this application for Modification of Construction Permit BPCDT-20080317ADZ, which specifies post-transition operation on Channel 7, its allotment channel. The purpose of this modification is to specify a different antenna orientation and an increase in effective radiated power.

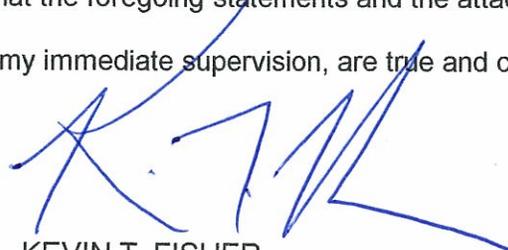
It is still intended to mount a standard ERI elliptically-polarized directional antenna at the 319-meter level of the existing 339-meter tower on which the present KTBC-DT antenna is mounted. Exhibit B provides azimuth and elevation pattern data for the proposed antenna with the desired orientation. 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 43 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 KTBC-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 1043248 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.

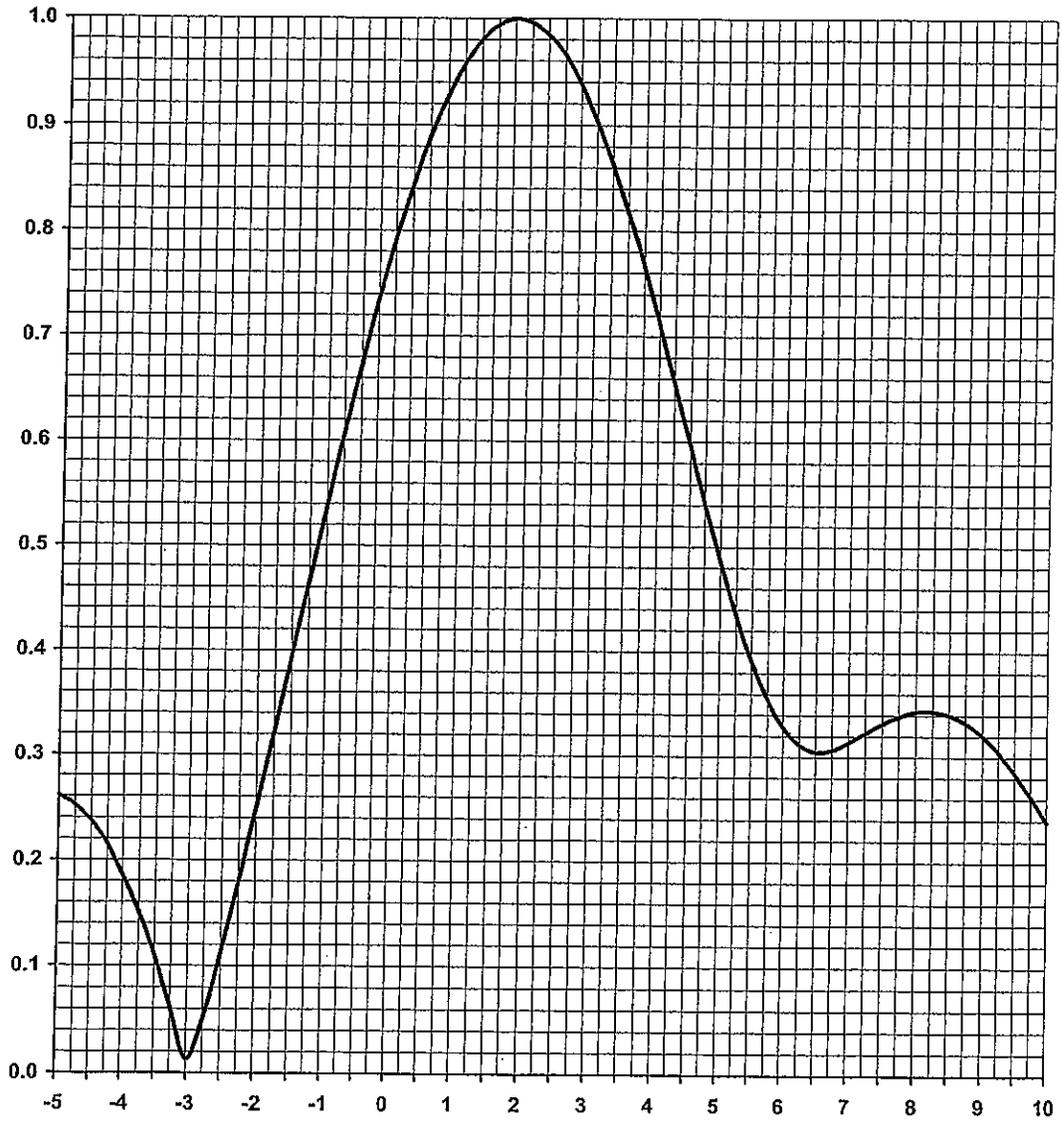


KEVIN T. FISHER

September 26, 2008

### ELEVATION PATTERN

<b>TYPE:</b>	<b>ATW12V7H</b>		<b>Frequency:</b>	<b>7 (Digital)</b>
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>	<b>Location:</b>	<b>Austin, TX</b>
<b>Main Lobe:</b>	<b>12.00</b>	<b>10.79</b>	<b>Beam Tilt:</b>	<b>1.75</b>
<b>Horizontal:</b>	<b>7.55</b>	<b>8.78</b>	<b>Polarization:</b>	<b>Horizontal</b>



**ELECTRONICS RESEARCH, INC. ERI**

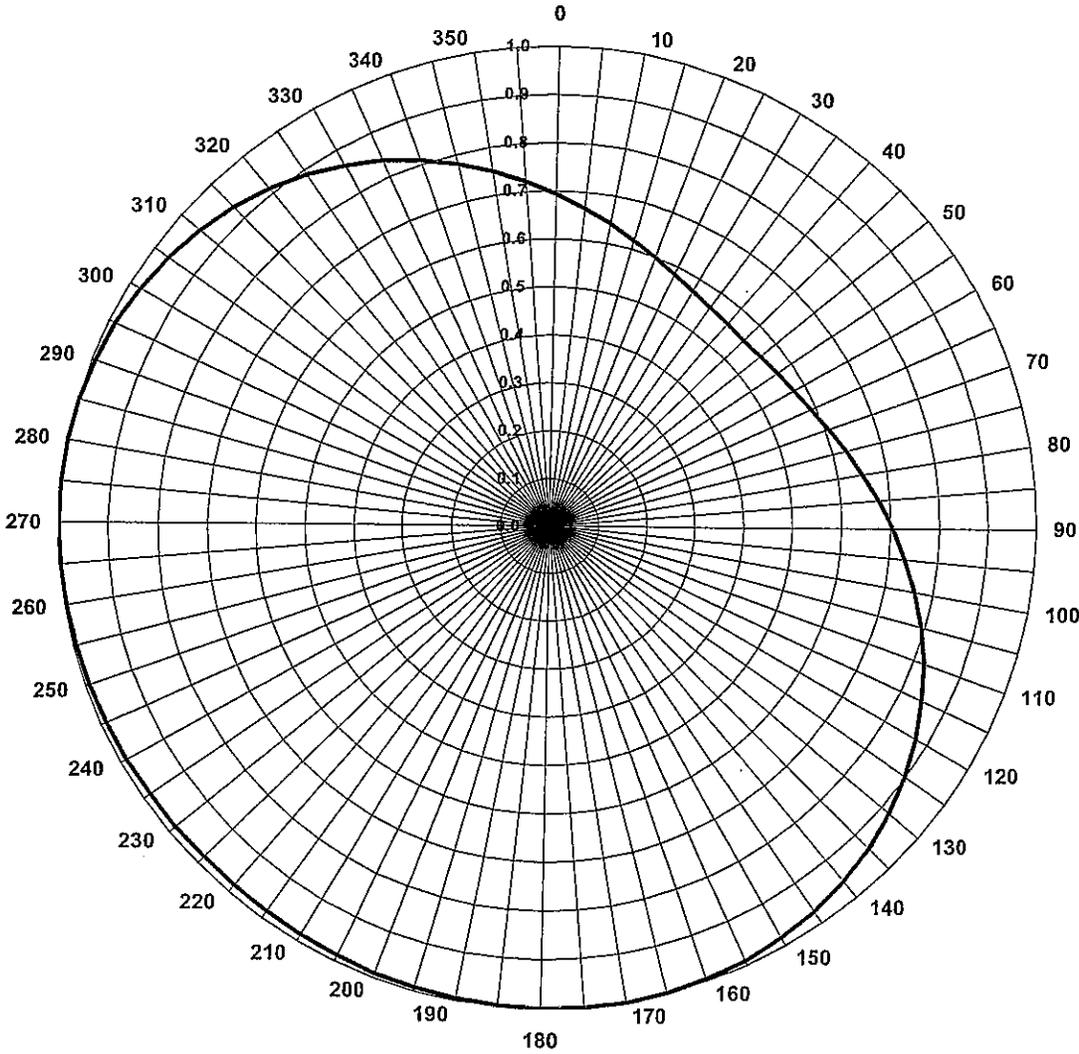
**EXHIBIT B-1**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED KTBC-DT**  
**CHANNEL 7 – AUSTIN, TEXAS**  
**[MODIFICATION OF BPCDT-20080317ADZ]**  
 SMITH AND FISHER

### AZIMUTH PATTERN

TYPE: CH7HAZ-CX  
Numeric 1.37 dB 1.37  
Directivity:  
Peak(s) at:

Polarization: Horizontal  
Frequency: 7 (Digital)  
Location: Austin, TX

Note: Pattern shape and directivity may vary with channel and mounting configuration.



**ELECTRONICS RESEARCH, INC. ERI**

**EXHIBIT B-2**  
**ANTENNA AZIMUTH PATTERN**  
**PROPOSED KTBC-DT**  
**CHANNEL 7 – AUSTIN, TEXAS**  
**[MODIFICATION OF BPCDT-20080317ADZ]**  
**SMITH AND FISHER**

ANTENNA AZIMUTH PATTERN DATA  
 PROPOSED KTBC-DT  
 CHANNEL 7 – AUSTIN, TEXAS  
 [MODIFICATION OF BPCDT-20080317ADZ]

<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.981	18.3	180	0.555	13.4
10	0.983	18.3	190	0.563	13.5
20	0.987	18.4	200	0.586	13.8
30	0.992	18.4	210	0.623	14.4
40	0.997	18.4	220	0.672	15.0
50	1.000	18.5	230	0.727	15.7
60	0.998	18.5	240	0.786	16.4
70	0.987	18.4	250	0.843	17.0
80	0.967	18.2	260	0.894	17.5
90	0.936	17.9	270	0.936	17.9
100	0.894	17.5	280	0.967	18.2
110	0.843	17.0	290	0.987	18.4
120	0.786	16.4	300	0.998	18.5
130	0.727	15.7	310	1.000	18.5
140	0.672	15.0	320	0.997	18.4
150	0.623	14.4	330	0.992	18.4
160	0.586	13.8	340	0.987	18.4
170	0.563	13.5	350	0.983	18.3

NOTE: Antenna will be mounted such that 0° on tabulation will be oriented at 224° T.

**CONTOUR POPULATION**

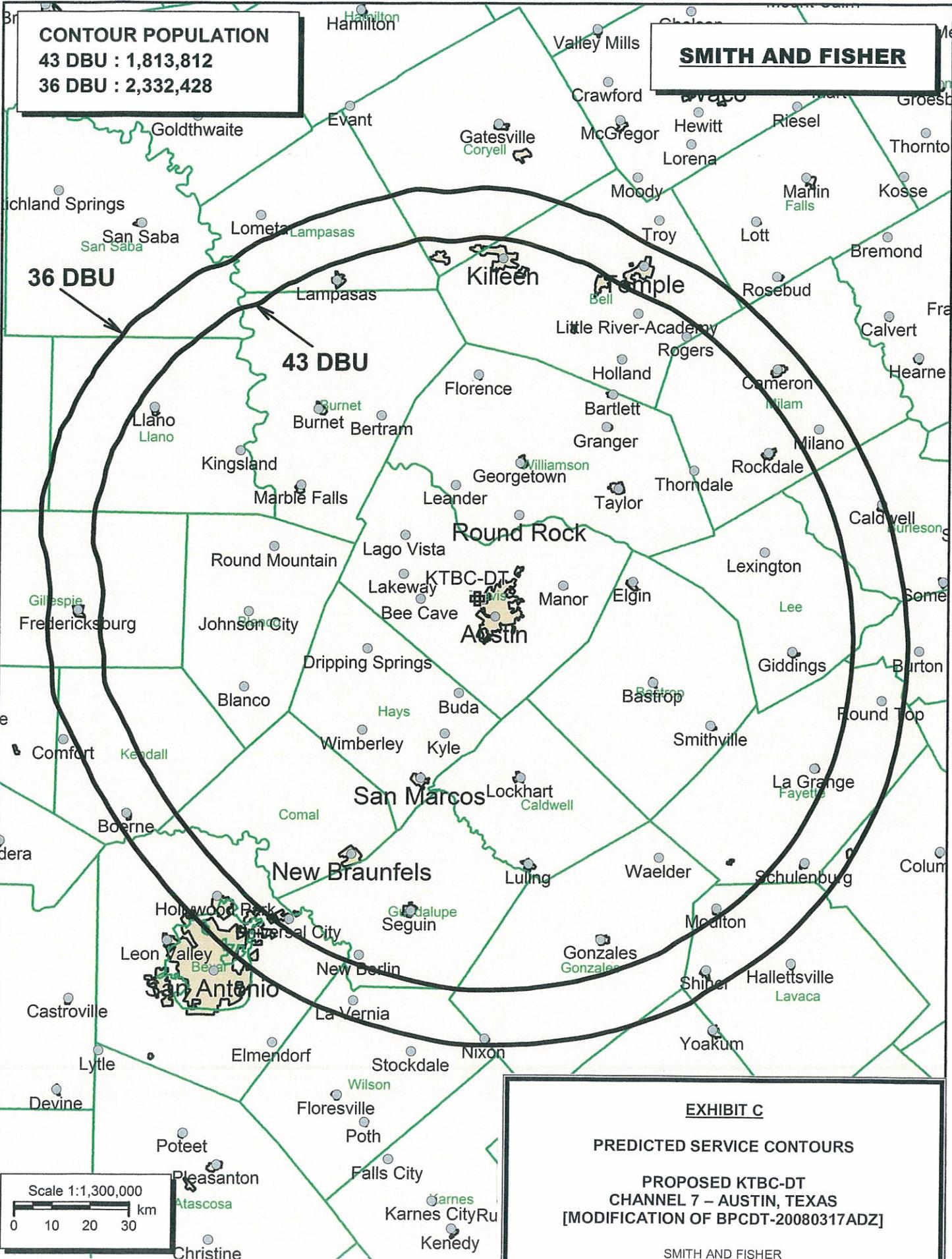
**43 DBU : 1,813,812**

**36 DBU : 2,332,428**

**SMITH AND FISHER**

**36 DBU**

**43 DBU**



**EXHIBIT C**

**PREDICTED SERVICE CONTOURS**

**PROPOSED KTBC-DT  
CHANNEL 7 – AUSTIN, TEXAS  
[MODIFICATION OF BPCDT-20080317ADZ]**

SMITH AND FISHER

INTERFERENCE STUDY

PROPOSED KTBC-DT  
CHANNEL 7 - AUSTIN, TEXAS

[MODIFICATION OF BPCDT-20080317ADZ]

The instant application specifies an ERP of 71.2 kw (directional) at 383 meters above average terrain, which has been 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, the applicant has relied upon the same Longley-Rice interference software used by the Commission in its studies. Based on the results of this analysis, the proposed KTBC-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted KTBC-DT facility) to the service population of any potentially affected post-transition DTV station or Class A LPTV station.

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

POWER DENSITY CALCULATION

PROPOSED KTBC-DT  
CHANNEL 7 - AUSTIN, TEXAS

[MODIFICATION OF BPCDT-20080317ADZ]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Austin facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 71.2 kw (H) and 35.6 kw (V), an antenna radiation center 319 meters above ground, and the elevation pattern of the ERI antenna, maximum power density two meters above ground of  $0.00022 \text{ mw/cm}^2$  is calculated to occur 118 meters southwest of the base of the tower. Since this is only 0.1 percent of the  $0.2 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 7 (174-180 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.