

ENGINEERING STATEMENT

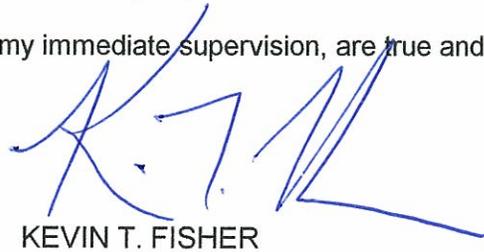
The engineering data contained herein have been prepared on behalf of FOX TELEVISION STATIONS, INC., licensee of WHBQ-DT, Channel 53 in Memphis, Tennessee, in support of its Application for Construction Permit to operate on Channel 13 with a maximized post-transition DTV facility.

It is proposed to mount a standard ERI directional antenna at the 318-meter level of the existing 329-meter tower on which the present WHBQ-DT antenna is mounted. Exhibit B provides elevation and azimuth 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 43 dBu service contour. An interference study is provided in Exhibit D and a power density calculation is included as 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 WHBQ-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 1039554 to this tower.

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 of Kevin T. Fisher in blue ink, consisting of stylized initials 'KF' followed by a surname.

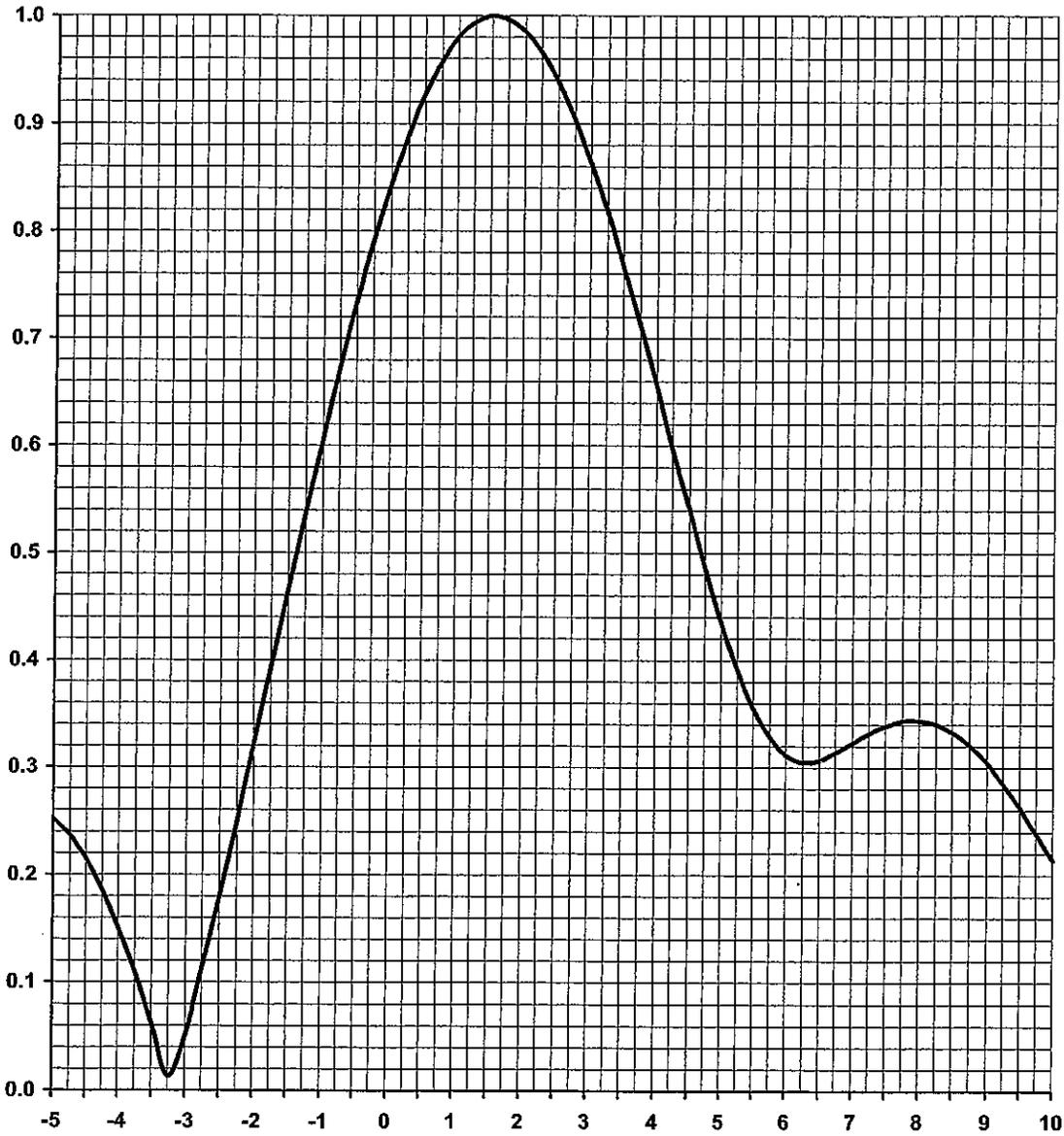
KEVIN T. FISHER

June 18, 2008

### ELEVATION PATTERN

<b>TYPE:</b>	<b>ATW12V6H</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>
<b>Main Lobe:</b>	<b>12.00</b>	<b>10.79</b>
<b>Horizontal:</b>	<b>8.57</b>	<b>9.33</b>

<b>Frequency:</b>	<b>13 (Digital)</b>
<b>Location:</b>	<b>Memphis, TN</b>
<b>Beam Tilt:</b>	<b>1.50</b>
<b>Polarization:</b>	<b>Horizontal</b>



**EXHIBIT B-1**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED WHBQ-DT**  
**CHANNEL 13 - MEMPHIS, TENNESSEE**  
**SMITH AND FISHER**

### AZIMUTH PATTERN

**TYPE:** ATW-VHF-P

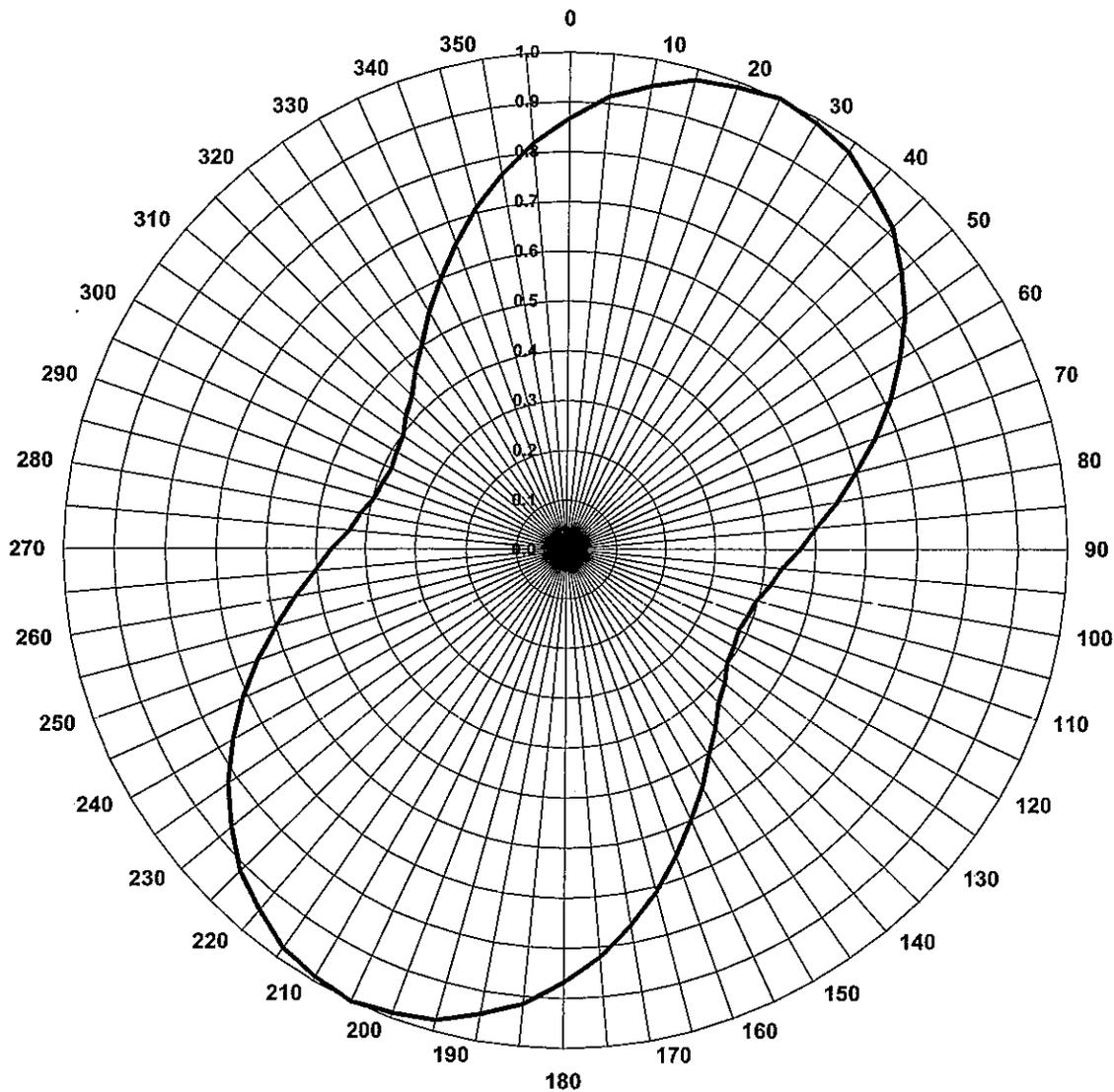
	<u>Numeric</u>	<u>dB</u>
<b>Directivity:</b>	<u>2.00</u>	<u>3.01</u>
<b>Peak(s) at:</b>		

**Polarization:** Horizontal

**Frequency:** 13 (Digital)

**Location:** Memphis, TN

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



ELECTRONICS RESEARCH, INC. **ERI**

**EXHIBIT B-2**

**ANTENNA AZIMUTH PATTERN**

**PROPOSED WHBQ-DT**

**CHANNEL 13 -- MEMPHIS, TENNESSEE**

SMITH AND FISHER

## ANTENNA AZIMUTH PATTERN DATA

PROPOSED WHBQ-DT  
CHANNEL 13 – MEMPHIS, TENNESSEE

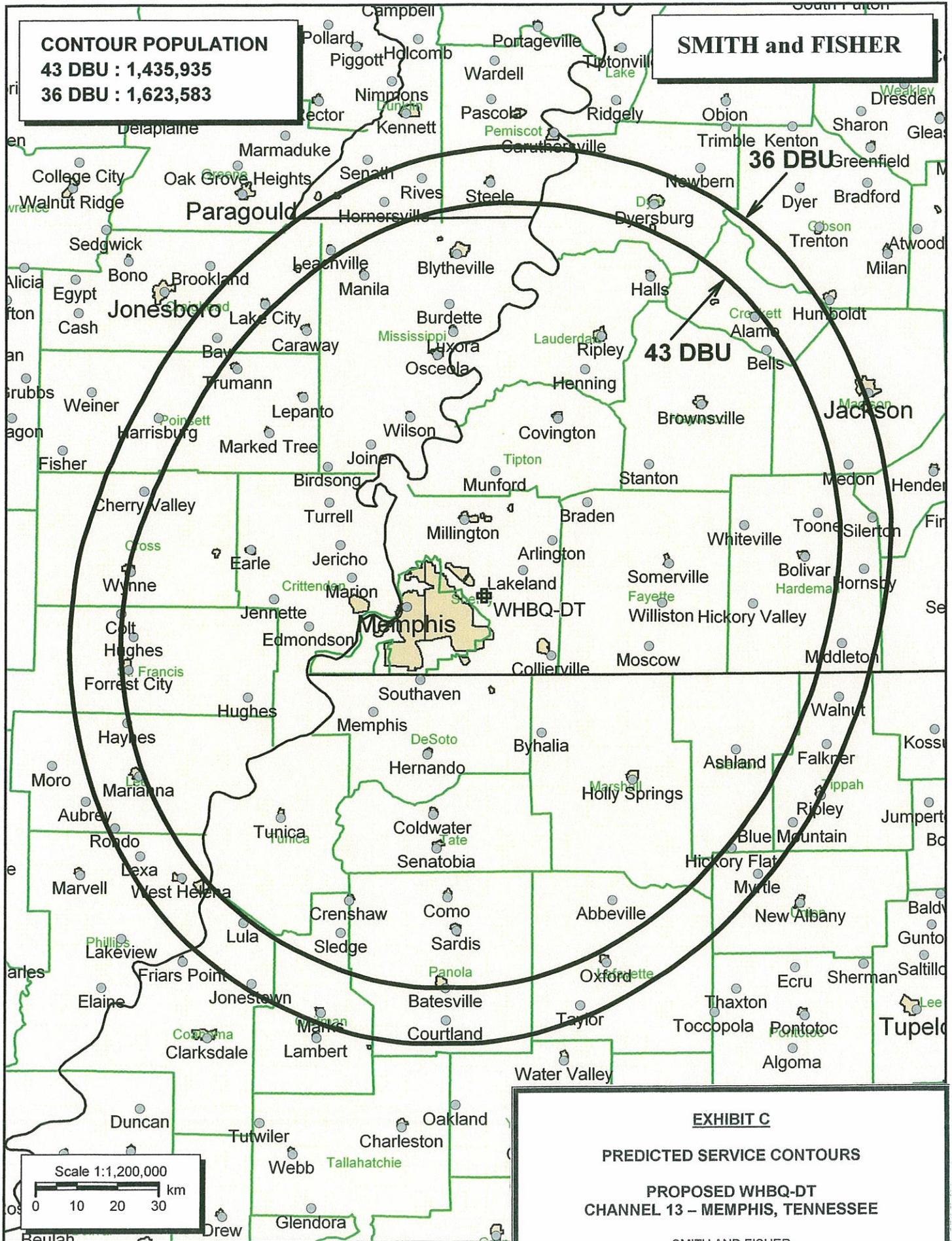
<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.867	18.5	180	0.867	18.5
10	0.945	19.3	190	0.945	19.3
20	0.988	19.7	200	0.988	19.7
30	0.989	19.7	210	0.989	19.7
40	0.945	19.3	220	0.946	19.3
50	0.867	18.5	230	0.867	18.5
60	0.765	17.5	240	0.765	17.5
70	0.655	16.1	250	0.655	16.1
80	0.551	14.6	260	0.551	14.6
90	0.469	13.2	270	0.469	13.2
100	0.415	14.0	280	0.415	14.0
110	0.389	11.6	290	0.389	11.6
120	0.390	11.6	300	0.390	11.6
130	0.416	12.2	310	0.416	12.2
140	0.469	13.2	320	0.469	13.2
150	0.551	14.6	330	0.551	14.6
160	0.654	16.1	340	0.654	16.1
170	0.765	17.5	350	0.765	17.5

**CONTOUR POPULATION**

**43 DBU : 1,435,935**

**36 DBU : 1,623,583**

**SMITH and FISHER**



INTERFERENCE STUDY  
PROPOSED WHBQ-DT  
CHANNEL 13 – MEMPHIS, TENNESSEE

The instant application specifies an ERP of 95 kw (directional) at 308 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 WHBQ-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted WHBQ-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 WHBQ-DT  
CHANNEL 13 – MEMPHIS, TENNESSEE

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Memphis facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 95.0 kw (H) and 47.5 kw (V), an antenna radiation center 318 meters above ground, and the elevation pattern of the proposed ERI antenna, maximum power density two meters above ground of 0.00030 mw/cm<sup>2</sup> is calculated to occur 118 meters north-northeast and south-southwest of the base of the tower. Since this is only 0.1 percent of the 0.2 mw/cm<sup>2</sup> reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 13 (210-216 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.