

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WBUY-DT, Channel 41, in Holly Springs, Mississippi, 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 143-meter level of the existing 152-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 it is important to note that it utilizes a cell size of 0.5 kilometer and an increment spacing of 0.1 kilometer. 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 WBUY-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 1038234 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.

A handwritten signature in blue ink, appearing to read 'K.T. Fisher', is written over the text of the declaration.

KEVIN T. FISHER

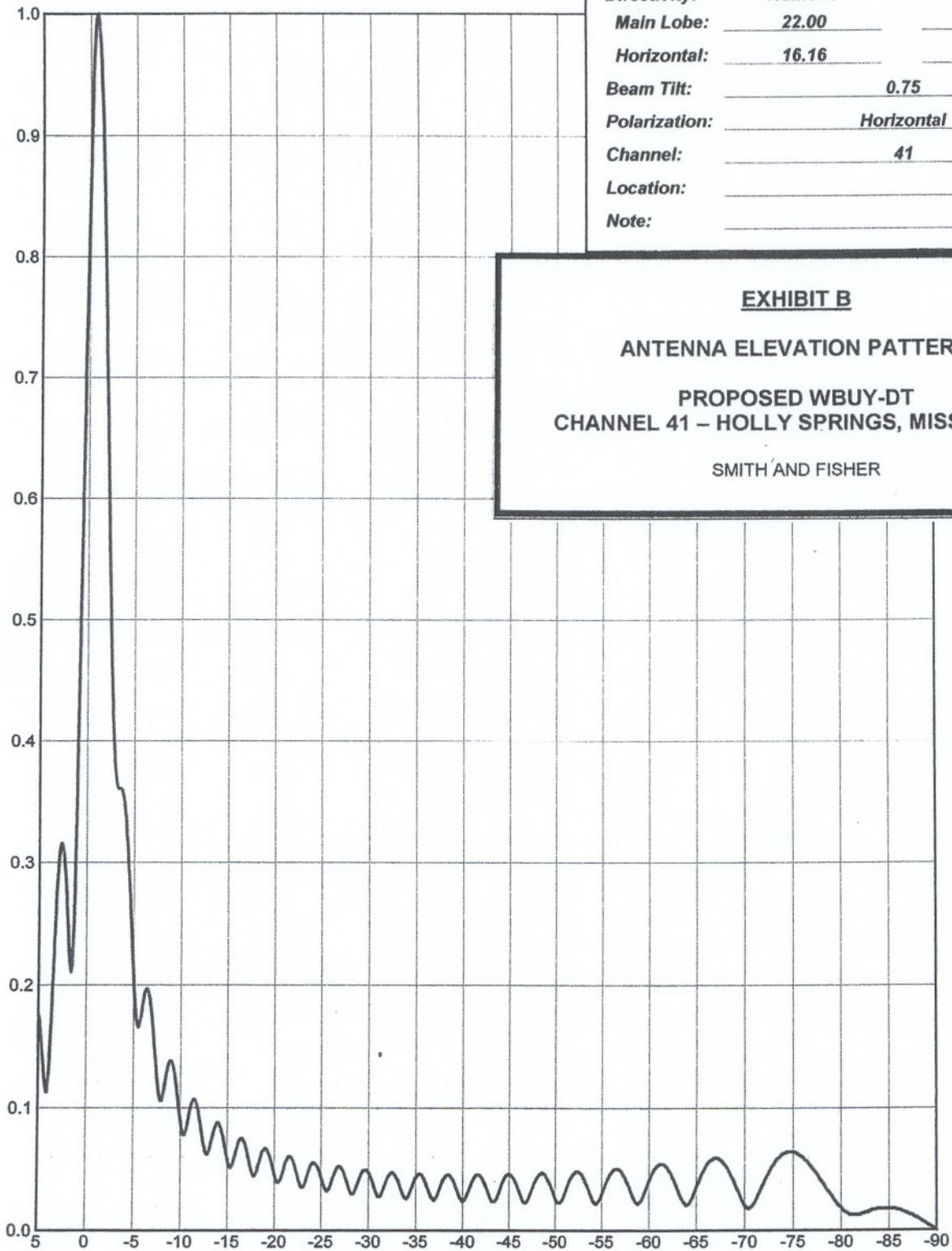
June 4, 2008



### ELEVATION PATTERN

Type:	ATW22H3H	
Directivity:	Numeric	dBd
Main Lobe:	22.00	13.42
Horizontal:	16.16	12.08
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	41	
Location:		
Note:		

Relative Field



**EXHIBIT B**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED WBUY-DT**  
**CHANNEL 41 – HOLLY SPRINGS, MISSISSIPPI**  
**SMITH AND FISHER**



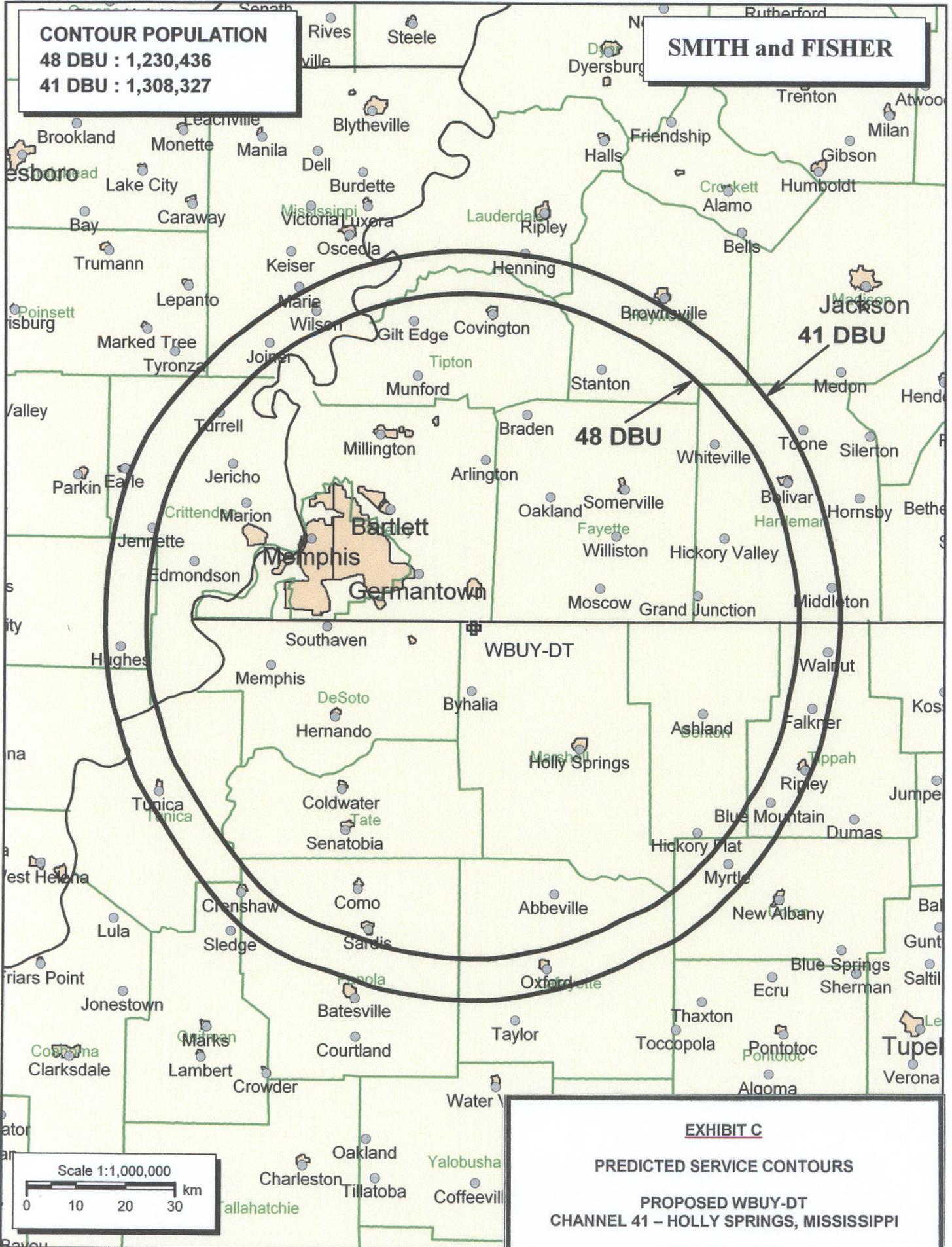
Electronics Research, Inc.  
7777 Gardner Road  
Chandler, Indiana U.S.A 47610

**CONTOUR POPULATION**

**48 DBU : 1,230,436**

**41 DBU : 1,308,327**

**SMITH and FISHER**



**41 DBU**

**48 DBU**

WBUY-DT

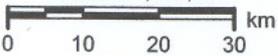
**EXHIBIT C**

**PREDICTED SERVICE CONTOURS**

**PROPOSED WBUY-DT  
CHANNEL 41 - HOLLY SPRINGS, MISSISSIPPI**

SMITH AND FISHER

Scale 1:1,000,000



INTERFERENCE STUDY  
PROPOSED WBUY-DT  
CHANNEL 41 – HOLLY SPRINGS, MISSISSIPPI

The instant application specifies an ERP of 750 kw (omnidirectional) at 317 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 0.5 kilometer and an increment spacing of 0.1 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed WBUY-DT to other pertinent stations are tabulated in Exhibit D-2.

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

A Longley-Rice interference study also reveals that the proposed WBUY-DT facility does not cause significant (0.5%) interference within the protected service contour of any potentially affected Class A low power television station, including W42BY in Memphis, Tennessee.

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

EXHIBIT D-2INTERFERENCE STUDY SUMMARY  
PROPOSED WBUY-DT  
CHANNEL 41 – HOLLY SPRINGS, MISSISSIPPI

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From WBUY-DT*</u>	<u>%</u>
WZDX-DT	Huntsville, AL	41	1,222,422	362	<0.1
WKPD-DT	Paducah, KY	41	243,754	251	0.1
W42BY	Memphis, TN	42	124,710	549	0.44

Note: This study utilized a cell size of 0.5 km and an increment spacing of 0.1 km.

\*Above that caused by the allotment facility.

EXHIBIT E

POWER DENSITY CALCULATION

PROPOSED WBUY-DT  
CHANNEL 41 – HOLLY SPRINGS, MISSISSIPPI

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Holly Springs facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 675 kw, an antenna radiation center 143 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of  $0.0043 \text{ mw/cm}^2$  is calculated to occur 38 meters from the base of the tower. Since this is only 1.0 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), 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.