

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WPGD-DT, Channel 51 in Hendersonville, Tennessee, in support of this Application for Construction Permit for a post-transition facility on Channel 33. The facility proposed herein is identical to that specified in the recently granted Petition for Rulemaking to substitute Channel 33 for Channel 51 (BPRM-20080620AIV).

It is proposed to mount a standard ERI omnidirectional antenna at the 364-meter level of the existing 393-meter tower on which the presently licensed WPGD-DT Channel 51 antenna is located. Exhibit B provides elevation pattern data for the proposed antenna, and operating parameters for the facility are tabulated in Exhibit C. Exhibit D 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 provided in Exhibit E and a power density calculation appears in Exhibit F.

It is important to note that, while the proposed effective radiated power of 1000 kw exceeds that allowable 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 (WSMV-DT, Channel 10 in Nashville, Tennessee), as allowed in Section 73.622(f)(5) of the Rules.

Since no change in the overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1233975 to this tower.

EXHIBIT A

I declare under penalty of perjury that the foregoing statements and the attached Engineering Report, which was prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



KEVIN T. FISHER

December 4, 2008

ELEVATION PATTERN

TYPE:

ATW22H3H

Frequency:

33 (DTV)

Directivity:

Numeric

dBd

Location:

Hendersonville, TN

Main Lobe:

22.00

13.42

Beam Tilt:

0.75

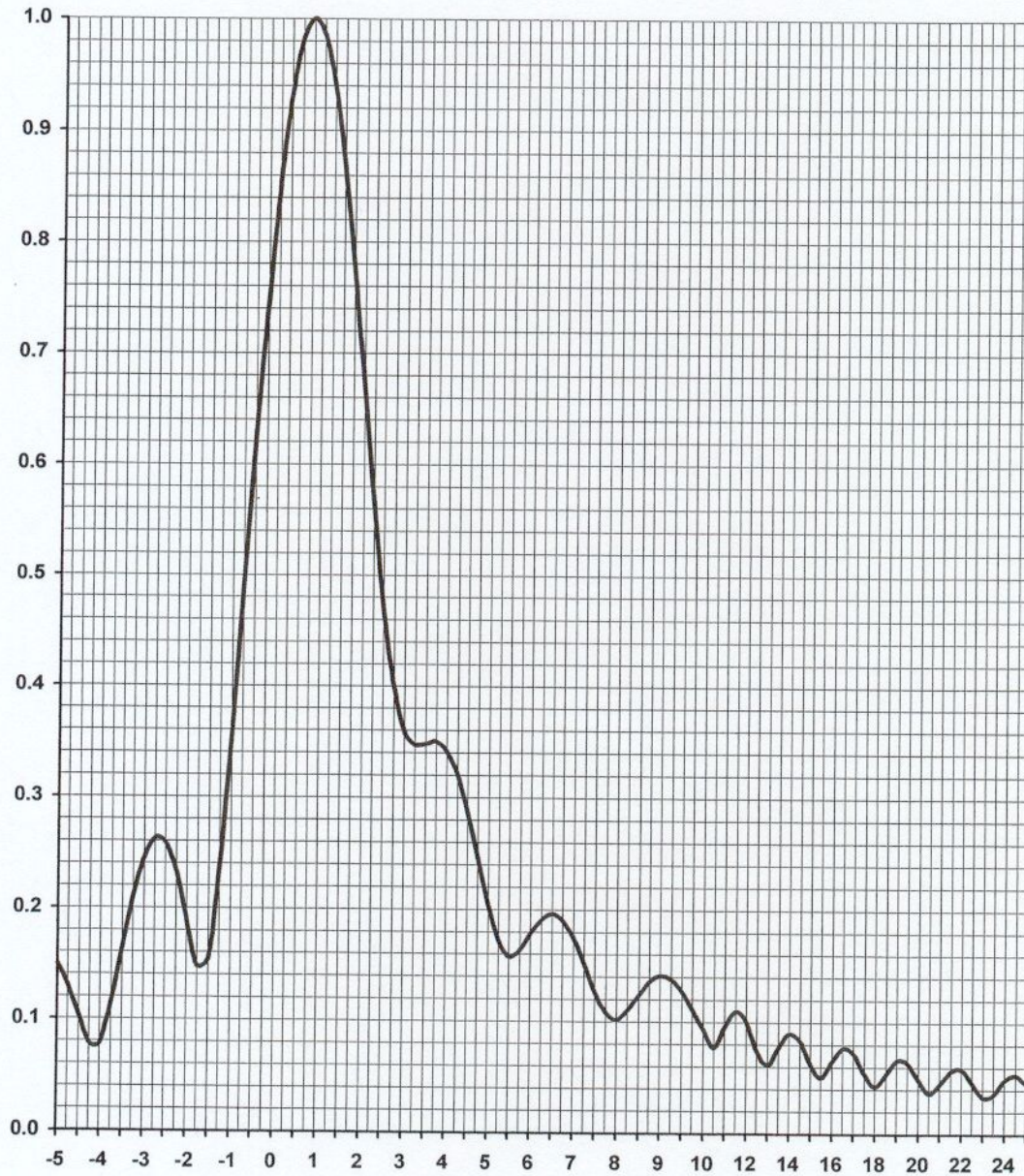
Horizontal:

16.04

12.05

Polarization:

Horizontal

ELECTRONICS RESEARCH, INC. **ERI****EXHIBIT B****ANTENNA ELEVATION PATTERN****PROPOSED WPGD-DT**
CHANNEL 33 – HENDERSONVILLE, TENNESSEE

SMITH AND FISHER

PROPOSED OPERATING PARAMETERS

PROPOSED WPGD-DT
CHANNEL 33 – HENDERSONVILLE, TENNESSEE

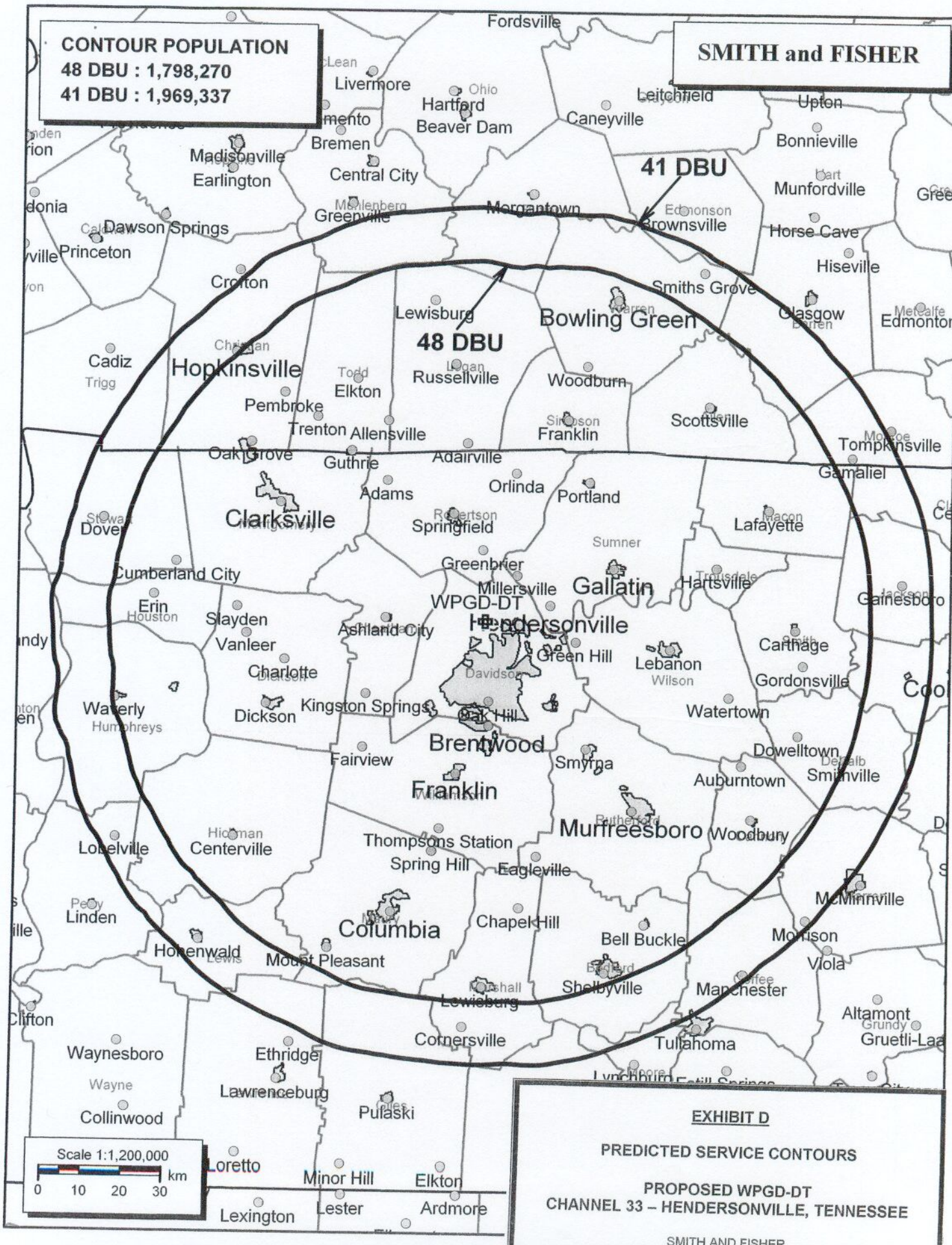
Transmitter Power Output:	33.7 kw
Transmission Line Efficiency:	70.7%
Antenna Power Gain – Main Lobe:	41.02
Effective Radiated Power – Main Lobe:	1000 kw
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Andrew MACX675B
Size and Type:	6-1/8" rigid
Length:	1,371 feet
Antenna Make and Model:	ERI ATW22H3-HSS-33S
Orientation	Omnidirectional
Beam Tilt	0.75 degrees
Radiation Center Above Ground:	364 meters
Radiation Center Above Mean Sea Level:	596 meters

CONTOUR POPULATION

48 DBU : 1,798,270

41 DBU : 1,969,337

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41 DBU

48 DBU

Bowling Green

Hopkinsville

Clarksville

WPGD-DT

Hendersonville

Gallatin

Brentwood

Franklin

Murfreesboro

Columbia

EXHIBIT D

PREDICTED SERVICE CONTOURS

**PROPOSED WPGD-DT
CHANNEL 33 - HENDERSONVILLE, TENNESSEE**

SMITH AND FISHER

INTERFERENCE STUDY
PROPOSED WPGD-DT
CHANNEL 33 – HENDERSONVILLE, TENNESSEE

The instant application specifies an ERP of 1000 kw (omnidirectional) at 412 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 2.0 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 WPGD-DT to other pertinent stations are tabulated in Exhibit E-2.

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

A Longley-Rice interference study also reveals that the proposed WPGD-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.

EXHIBIT E-2

INTERFERENCE STUDY SUMMARY

PROPOSED WPGD-DT
CHANNEL 33 – HENDERSONVILLE, TENNESSEE

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From WPGD-DT</u>	<u>%</u>
WAAY-DT	Huntsville, AL	32	1,311,245	982	<0.1
WCFT-DT (CP)	Tuscaloosa, AL	33	1,403,071	1,866	0.1
WNGH-DT (CP)	Chatsworth, GA	33	2,871,484	11,489	0.4