

EXHIBIT A

ENGINEERING STATEMENT


The engineering data contained herein have been prepared on behalf of COOPER FOWLER MEDIA COMPANY, auction winner for television Channel 22 in Topeka, Kansas, in support of its Application for Construction Permit to specify operating parameters for the new facility.

It is proposed to mount a standard ERI directional antenna at the 198-meter level of an existing 286-meter communications tower. Exhibit B provides directional antenna pattern data, and proposed operating parameters 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 80 dBu service contour. An interference study is included in Exhibit E and a power density calculation is provided in Exhibit F.

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 proposed site. However, if such should occur, the owner of this facility recognizes its obligation to take whatever corrective actions are necessary.

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. In addition, the FCC issued Antenna Structure Registration Number 1032651 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.

  
NEIL M. SMITH

April 24, 2006



## ELEVATION PATTERN

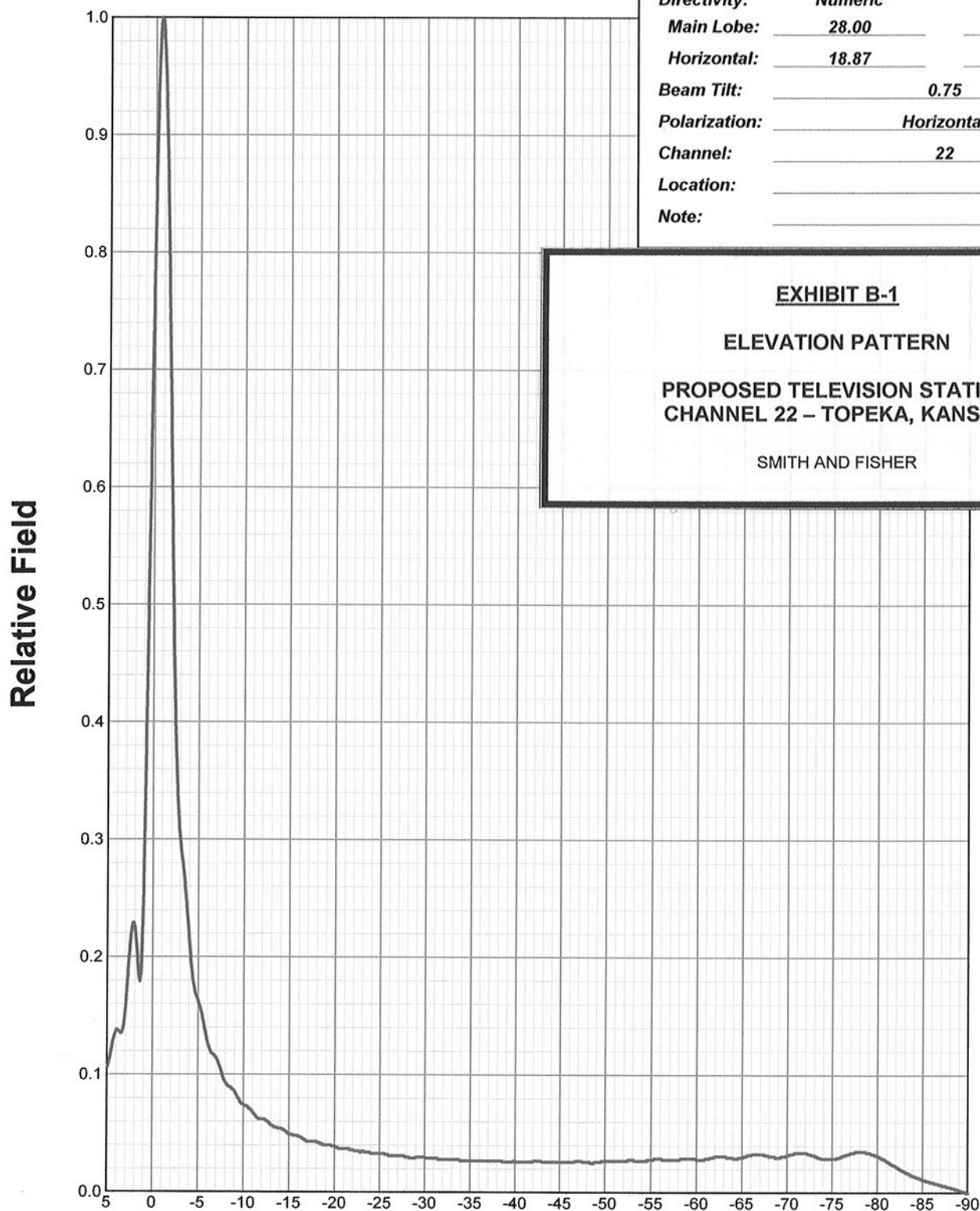
Type:	ATW28HS3H	
Directivity:	Numeric	dBd
Main Lobe:	28.00	14.47
Horizontal:	18.87	12.76
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	22	
Location:		
Note:		

### EXHIBIT B-1

#### ELEVATION PATTERN

PROPOSED TELEVISION STATION  
CHANNEL 22 – TOPEKA, KANSAS

SMITH AND FISHER



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

**EXHIBIT B-2****AZIMUTH PATTERN****PROPOSED TELEVISION STATION  
CHANNEL 22 – TOPEKA, KANSAS**

SMITH AND FISHER

**AZIMUTH PATTERN  
FCC FILING FORMAT**Type: ATW-SPolarization: Horizontal

<i>Angle</i>	<i>Field</i>	<i>ERP (kW)</i>	<i>ERP (dBk)</i>
0	0.632	1997.123	33.004
10	0.691	2387.409	33.779
20	0.753	2835.050	34.526
30	0.813	3304.851	35.192
40	0.868	3767.126	35.760
50	0.915	4186.132	36.218
60	0.952	4531.528	36.562
70	0.979	4792.213	36.805
80	0.995	4950.133	36.946
90	1.000	5000.009	36.990
100	0.995	4950.133	36.946
110	0.979	4792.213	36.805
120	0.952	4531.528	36.562
130	0.915	4186.132	36.218
140	0.868	3767.126	35.760
150	0.813	3304.851	35.192
160	0.753	2835.050	34.526
170	0.691	2387.409	33.779
180	0.632	1997.123	33.004
190	0.583	1699.448	32.303
200	0.550	1512.503	31.797
210	0.536	1436.482	31.573
220	0.539	1452.607	31.621
230	0.556	1545.683	31.891
240	0.578	1670.423	32.228
250	0.599	1794.008	32.538
260	0.614	1884.983	32.753
270	0.619	1915.808	32.824
280	0.614	1884.983	32.753
290	0.599	1794.008	32.538
300	0.578	1670.423	32.228
310	0.556	1545.683	31.891
320	0.539	1452.607	31.621
330	0.536	1436.482	31.573
340	0.550	1512.503	31.797
350	0.583	1699.448	32.303

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**EXHIBIT B-3**

**RELATIVE FIELD VALUES**

**PROPOSED TELEVISION STATION  
CHANNEL 22 - TOPEKA, KANSAS**

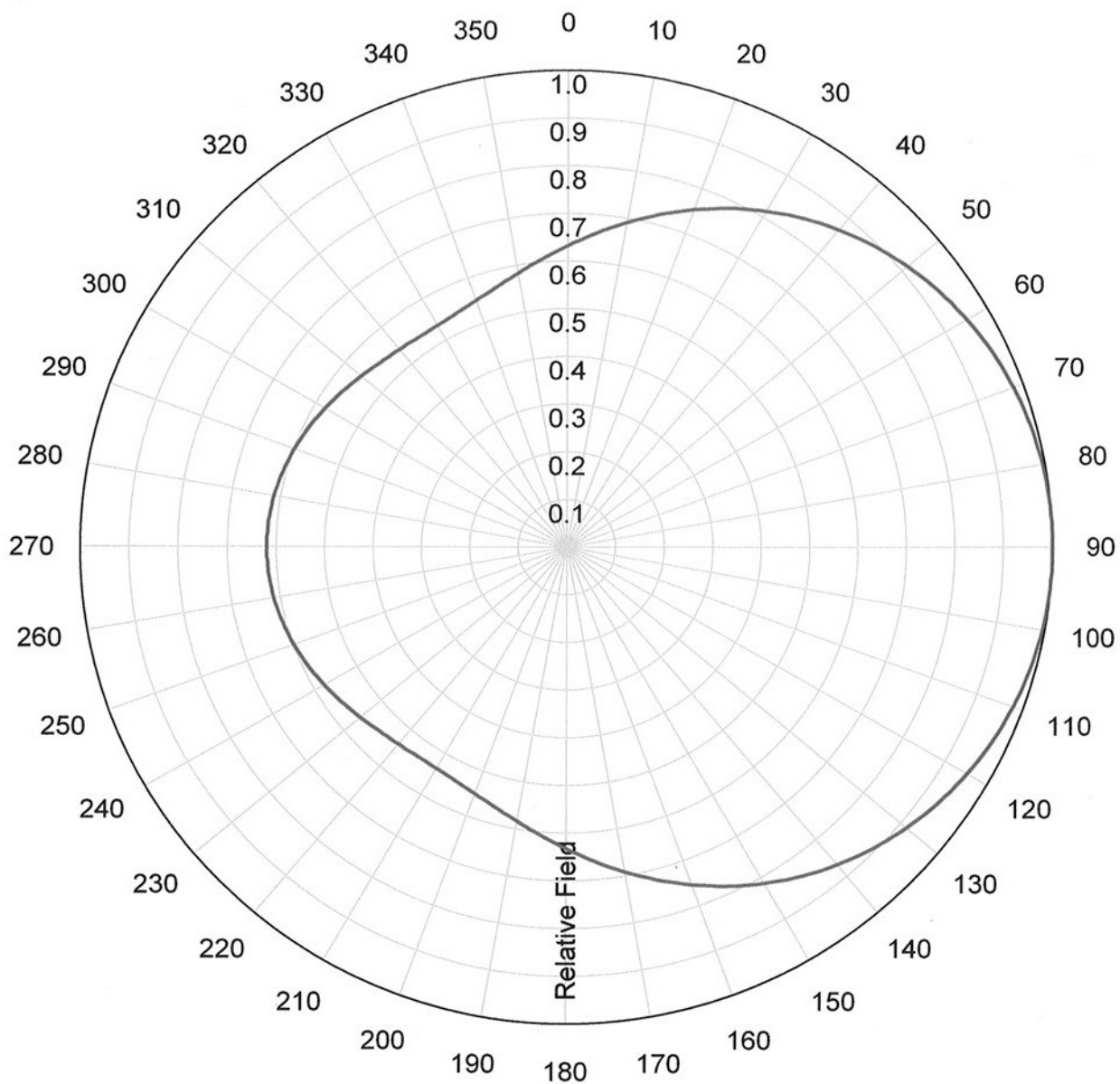
SMITH AND FISHER



**AZIMUTH PATTERN**

Type: ATW-S

	Numeric	dBd
Directivity:	<u>1.83</u>	<u>2.62</u>
Peak(s) at:	<u></u>	
Polarization:	<u>Horizontal</u>	
Channel:	<u>22</u>	
Location:	<u></u>	
Note:	<u></u>	



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EXHIBIT C

PROPOSED OPERATING PARAMETERS

PROPOSED TELEVISION STATION  
CHANNEL 22 – TOPEKA, KANSAS

Transmitter Power Output:	111 kw
Transmission Line Efficiency:	88.1%
Antenna Power Gain – Main Lobe:	51.24
Effective Radiated Power – Main Lobe:	5000 kw
Transmitter Make and Model:	Type-accepted
Rated Output	120 kw
Transmission Line Make and Model:	Andrew MACX875B
Size and Type:	8-3/16" rigid
Length:	700 feet
Antenna Make and Model:	ERI ATW28HSE-HSS-22H
Orientation	90 degrees true
Beam Tilt	0.75 degrees
Effective Height Above Ground:	198 meters
Effective Height Above Mean Sea Level:	527 meters

**CONTOUR POPULATION  
(2000 U.S. CENSUS)**  
**CITY-GRADE (80 DBU) : 302,335**  
**GRADE A (74 DBU) : 335,870**  
**GRADE B (64 DBU) : 426,491**

**SMITH and FISHER**

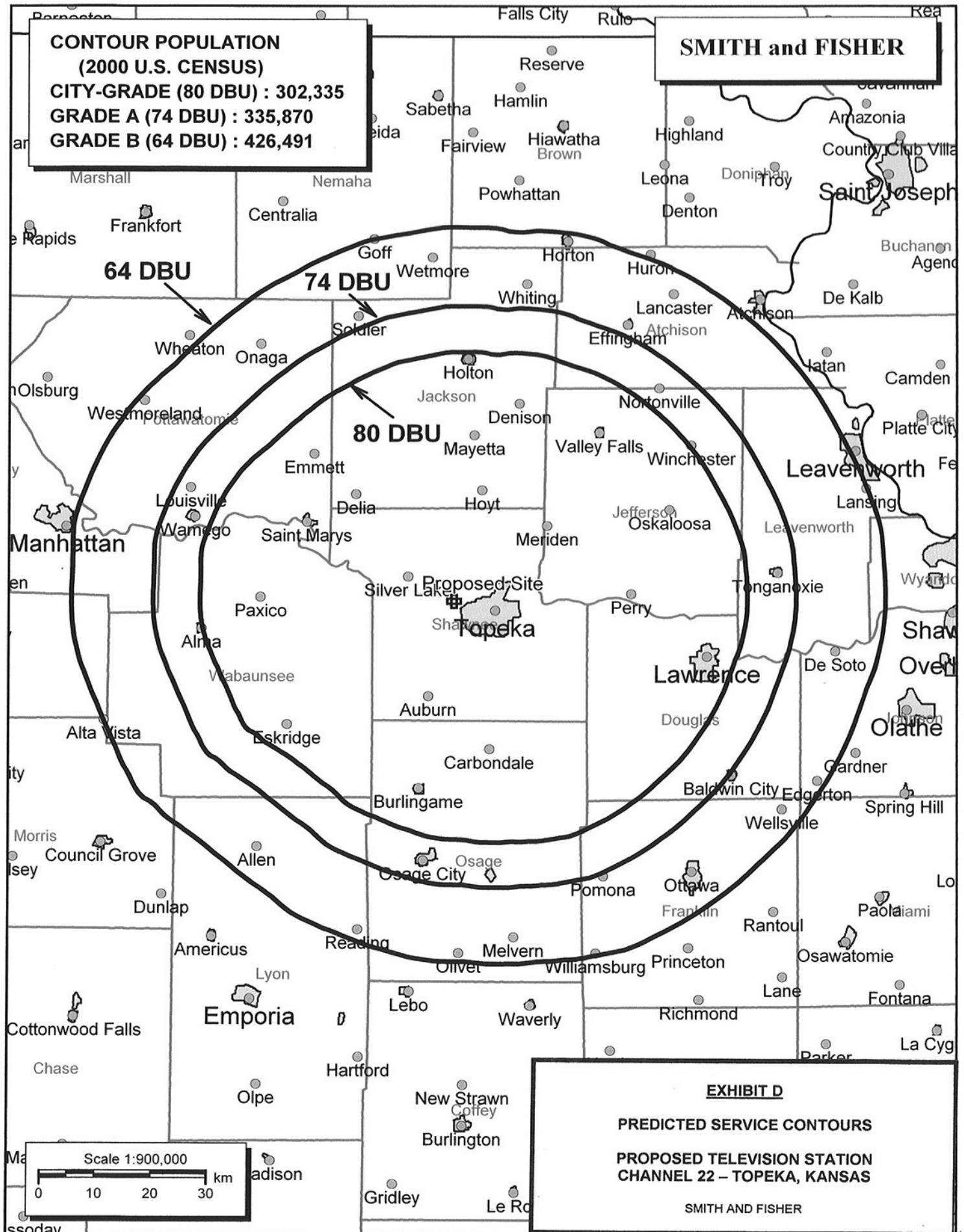


EXHIBIT E

INTERFERENCE STUDY  
PROPOSED TELEVISION STATION  
CHANNEL 22 – TOPEKA, KANSAS

In evaluating the interference effect of this proposal on digital television stations and their allotments, we have relied upon the V-Soft Communications "Probe III" computer program, which has been found generally to mimic the FCC's Longley-Rice program. In conducting our studies, we employed a signal resolution of 1.0 kilometers and an increment spacing of 0.1 kilometer along each radial. In addition, we utilized the 1990 U. S. Census. Changes in interference caused by the proposed facility to other pertinent digital stations were found to be less than 0.5 percent (which rounds to zero under the Commission's policy) in all cases.

Further, a Longley-Rice interference study reveals that the proposed facility does not cause interference within the protected 74 dBu contour of any potentially affected Class A low power television station.

Finally, a spacing study based upon the analog station separation requirements of Section 73.610 of the FCC's Rules was conducted for the proposed site. It concludes that the facility proposed herein meets the required spacings to all analog stations except to KSNT(TV), Channel 27 in Topeka, Kansas. Whereas the required spacing is 32 kilometers, the actual distance from the proposed site to that of KSNT is only 3.7 kilometers. However, it is believed that such a short-spacing is necessary in order to co-locate the proposed Channel 22 analog facility with first-adjacent-channel KTWU-DT (Channel 23 in Topeka). By doing so, we have eliminated all predicted interference to KTWU-DT. In addition, a Longley-Rice interference analysis similar to the one described above was conducted with respect to KSNT and revealed that the proposed facility will not cause any predicted interference to that fifth-adjacent facility. In

EXHIBIT E

addition, intermodulation products potentially generated by the Channel 22 and 27 facilities do not appear to fall within the television bands of any local full-power stations. Therefore, a waiver of Section 73.610 of the Commission's Rules with regard to the short-spacing between the instant proposal and KSNT is respectfully requested and believed to be justified.



EXHIBIT F

POWER DENSITY CALCULATION

PROPOSED TELEVISION STATION  
CHANNEL 22 – TOPEKA, KANSAS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Topeka facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 5,000 kw, an antenna radiation center 198 meters above ground, and the elevation pattern of the ERI antenna, maximum power density two meters above ground of  $0.0025 \text{ mw/cm}^2$  is calculated to occur 42 meters east of the base of the tower. Since this is only 0.7 percent of the  $0.35 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 22 (518-524 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.