

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of digital television station WRLM-DT, Channel 47 in Canton, Ohio, in support of its Application for Construction Permit to operate with the licensed facilities of WEAO-DT, Channel 50 in Akron, Ohio, under a channel-sharing arrangement. No change in site location, antenna make or model, effective radiated power or antenna height from that licensed to WEAO-DT under BLEDT-20091022AAS is proposed herein.

It is proposed to share the present Dielectric TFU-28GTH-R O4 DC omnidirectional antenna that is currently mounted at the 276-meter level of the existing 281.9-meter WEAO-DT tower. Exhibit B is a map upon which the predicted service contours of the shared WRLM-DT facility are plotted. As shown the predicted city-grade (48 dBu) contour completely encompasses Canton, Ohio, as required under FCC Rules. Since no change in the licensed WEAO-DT facility is proposed herein, no interference study is provided. An elevation pattern for the existing antenna, included as Exhibit C, was used to for the power density calculation that appears in Exhibit D.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station operating at or near the WEAO-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

EXHIBIT A

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 1018464 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". The signature is stylized and written in a cursive-like font.

KEVIN T. FISHER

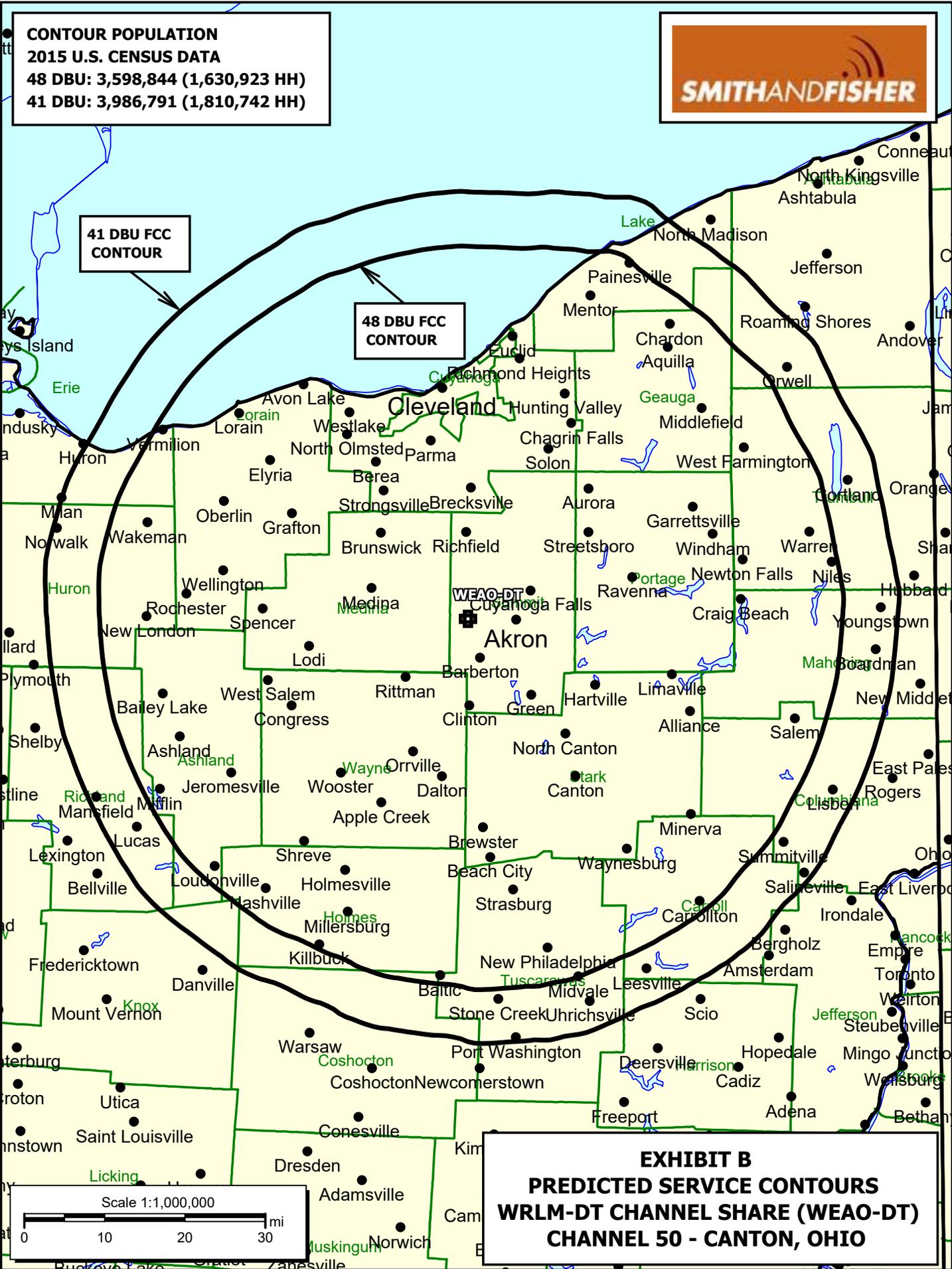
August 3, 2017

**CONTOUR POPULATION**  
**2015 U.S. CENSUS DATA**  
**48 DBU: 3,598,844 (1,630,923 HH)**  
**41 DBU: 3,986,791 (1,810,742 HH)**

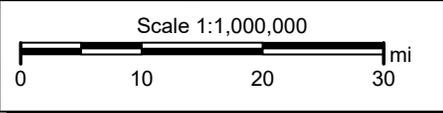


**41 DBU FCC CONTOUR**

**48 DBU FCC CONTOUR**



**EXHIBIT B**  
**PREDICTED SERVICE CONTOURS**  
**WRLM-DT CHANNEL SHARE (WEOA-DT)**  
**CHANNEL 50 - CANTON, OHIO**



## ELEVATION PATTERN

### EXHIBIT C

Exhibit No.  
 Date **1 Aug 2017**  
 Call Letters  
 Channel **25**  
 Antenna Type **TFU-28GTH TFU**  
 Location  
 Customer

**Future fill is available!**

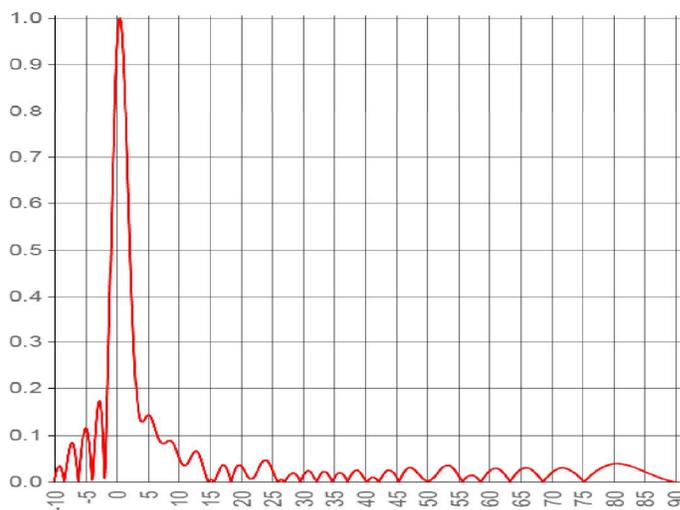
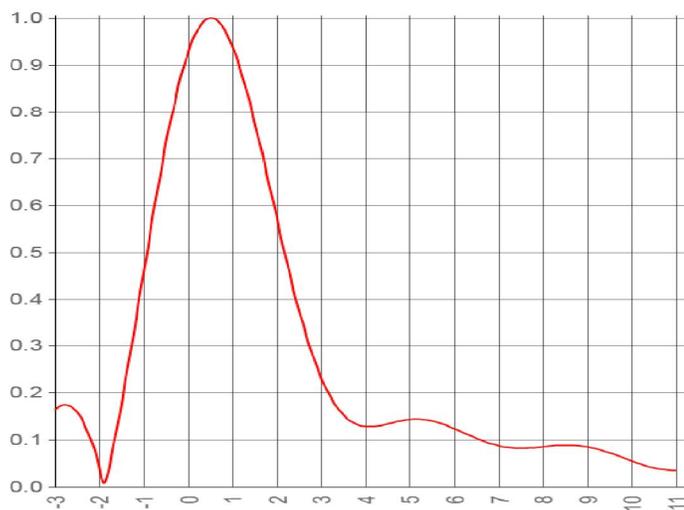
RMS Gain at Main Lobe **25.5 (14.07 dB)**

Beam Tilt **0.5 Degrees**

RMS Gain at Horizontal **21.9 (13.41 dB)**

Drawing # **28G255050**

**Calculated**



Degrees below horizontal

Degrees below horizontal

Angle	Field								
-10	0.000	10	0.055	30	0.011	50	0.002	70	0.019
-9	0.032	11	0.035	31	0.023	51	0.008	71	0.028
-8	0.037	12	0.054	32	0.005	52	0.024	72	0.030
-7	0.083	13	0.065	33	0.019	53	0.035	73	0.025
-6	0.013	14	0.031	34	0.017	54	0.031	74	0.016
-5	0.115	15	0.003	35	0.006	55	0.014	75	0.004
-4	0.016	16	0.008	36	0.019	56	0.005	76	0.009
-3	0.162	17	0.035	37	0.004	57	0.014	77	0.020
-2	0.045	18	0.021	38	0.019	58	0.008	78	0.029
-1	0.456	19	0.021	39	0.023	59	0.007	79	0.035
0	0.927	20	0.035	40	0.006	60	0.022	80	0.038
1	0.941	21	0.014	41	0.009	61	0.029	81	0.039
2	0.573	22	0.007	42	0.003	62	0.023	82	0.036
3	0.231	23	0.031	43	0.016	63	0.007	83	0.033
4	0.128	24	0.046	44	0.025	64	0.012	84	0.028
5	0.142	25	0.027	45	0.011	65	0.026	85	0.022
6	0.123	26	0.001	46	0.014	66	0.030	86	0.016
7	0.087	27	0.000	47	0.030	67	0.024	87	0.011
8	0.085	28	0.016	48	0.026	68	0.011	88	0.006
9	0.085	29	0.013	49	0.011	69	0.005	89	0.002

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

POWER DENSITY CALCULATION  
WRLM-DT CHANNEL SHARING WITH WEOA-DT  
CHANNEL 50 – CANTON, OHIO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Canton facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 250 kW, an antenna radiation center 276 meters above ground, and the specific elevation pattern for the Dielectric TFU-30DSC-R O4 DC antenna, maximum power density two meters above ground of  $0.00017 \text{ mW/cm}^2$  is calculated to occur 43 meters from the base of the tower. Since this is significantly less than 0.1 percent of the  $0.46 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 50 (686-692 MHz), this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing 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 non-ionizing radiation.