

**ENGINEERING STATEMENT**

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING OF INDIANA, INC., licensee of digital television station WKOI-DT, Channel 39 in Richmond, Indiana, in support of its Application for Construction Permit to operate with the licensed facilities of WDTN-DT, Channel 50 in Dayton, 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 WDTN-DT under BLC DT-20050629AAL is proposed herein.

It is proposed to share the present Dielectric TFU-30GTH-R 04 omnidirectional, horizontally-polarized antenna that is currently mounted at the 298-meter level of the existing 308-meter WDTN-DT tower. Exhibit B is a map upon which the predicted service contours of the shared WKOI-DT facility are plotted. As shown the predicted city-grade (48 dBu) contour completely encompasses Richmond, Indiana, as required under FCC Rules. Since no change in the licensed WDTN-DT facility is proposed herein, no interference study is provided. A power density calculation appears in Exhibit C.

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 WDTN-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 1016116 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 centered on the page.

KEVIN T. FISHER

April 26, 2018

**CONTOUR POPULATION**  
**2015 U.S. CENSUS DATA**  
**CITY-GRADE : 3,330,536 (1,458,803 HH)**  
**NOISE-LIMITED : 3,676,526 (1,600,791 HH)**



**FCC NOISE-LIMITED  
SERVICE CONTOUR**

**FCC CITY-GRADE  
CONTOUR**

**Richmond, Indiana  
WKOI-DT City of License**

**EXHIBIT B**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED WKOI-DT**  
**CHANNEL 50 - RICHMOND, INDIANA**

Scale 1:1,100,000

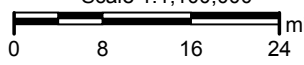


EXHIBIT C

POWER DENSITY CALCULATION

WKOI-DT CHANNEL SHARING WITH WDTN-DT  
CHANNEL 50 – RICHMOND, INDIANA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Richmond facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1000 kW, an antenna radiation center 298 meters above ground, and the specific elevation pattern for the Dielectric TFU-30GTH-R 04 omnidirectional antenna, a maximum power density value two meters above ground of  $0.000036 \text{ mW/cm}^2$  is calculated to exist 53 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.