

ENGINEERING REPORT

MINOR CONSTRUCTION PERMIT APPLICATION

For the FM Facilities of

**WWFW(FM) – Fort Wayne, IN
CH280A – 103.9 MHz
Facility ID No. 56765**

License No.

BLH-19890821KC

June, 2014

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Exhibit 35.1 - RF Radiation Study

(Exhibit Numbering is in response to FCC Online Form 301, Section III-B)

DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of this Minor Change Construction Permit Application for WWFW(FM) – Fort Wayne, IN (Facility ID No. 56765). Presently WWFW(FM) operates under License BLH-19890821KC with 3 kW ERP (H&V) at 347 meters AMSL. It is proposed to move to another structure (ASR #1028212) with an ERP of 1.6 kW (H&V) at 387 meters AMSL using a directional antenna. A multiple bay antenna will be used at the new location. The facility will continue to serve the currently authorized community of Fort Wayne, IN.

The WWFW(FM) facility is presently and will remain a 3 kW at 100 meter HAAT equivalent operation. The proposed site for the Class A operation meets all domestic and international spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation with the exception of WLBC-FM – Muncie, IN and WRBR-FM – South Bend, IN as shown in **Exhibit 30.1**. WLBC-FM will be protected under the provisions of §73.213(c) (former Class A spacing tables) which is shown in **Exhibit 33.1**. WRBR-FM will be protected under §73.215 of the FCC rules. WRBR-FM has been assumed to be a full Class A facility (6 kW at 100 meters HAAT) for protection purposes. A map and tabulation of protection of WRBR-FM from the proposed operation of WWFW(FM) is found in **Exhibit 34.1**.

The proposed service contours have been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The plotted contours are found as **Exhibit 27.4** of this report. This exhibit shows the 3.16 mV/m contour which serves at least 80% of the population and area of the community of license, and the overall service provided by the 1.0 mV/m contour of the facility. The plotted contours shown in **Exhibit 27.4**, are based on the use of a full 360 terrain radials. The applicant would like to note the use of the USGS 03 SEC terrain database for all allocation, contour and HAAT calculations contained here-in.

As stated before, the antenna will be mounted on an existing tower presently bearing Antenna Structure Registration number 1028212. A copy of the existing ASR has been included in **Exhibit 27.1**. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 27.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified

The remainder of the information in this report and exhibit numbering is responsive to the Rules of the Commission, and provides the data for FCC Online Form 301, Section III-B.

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules. The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

DISCUSSION OF REPORT (continued)

The FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b)(3) of the Commission's rules concerning RF contributors of less than 5%. **Exhibit 35.1** provides the details of the study that was made to demonstrate compliance. The facility is properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed.

In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.

DISTANCES TO CONTOURS: The table below shows the distances to the 3.16 mV/m and 1.0 mV/m contours from the proposed facility using an ERP of 1.6 kW at an HAAT of 140 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 410624.0 W. Lng. = 851146.0							
HAAT and Distance to Contour,							
FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC							
WWFW(FM) - Fort Wayne, IN (Site Change Application)							
Azi.	AV EL	HAAT	ERP kW	dBk	Field	70-F5	60-F5
000	258.0	129.0	1.2617	1.01	0.888	12.29	22.26
045	243.2	143.8	1.6000	2.04	1.000	13.79	24.65
090	236.3	150.7	1.6000	2.04	1.000	14.15	25.16
135	238.7	148.3	1.6000	2.04	1.000	14.03	24.99
180	234.4	152.6	1.6000	2.04	1.000	14.26	25.31
225	247.6	139.4	1.6000	2.04	1.000	13.55	24.31
270	257.9	129.1	0.8714	-0.60	0.738	11.25	20.40
315	258.6	128.4	0.3168	-4.99	0.445	8.76	15.50
Ave El= 246.84 M HAAT= 140.16 M AMSL= 387							