

ENGINEERING REPORT

MINOR CONSTRUCTION PERMIT APPLICATION

FOR

**WYFJ(FM) – CH261 - Ashland, VA
BLED-19940404KB**

**Change in Site Locations and
Minor Frequency Change to
CH260A (99.9 MHz)**

March, 2009

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

MUNN-REESE, INC.

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DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of a minor construction permit application for WYFJ(FM), Ashland, VA, License No. BLED-19940404KB. WYFJ(FM) is currently authorized to operate with 6.0 kW ERP (H)&(V) at 154 meters AMSL on CH261A. This minor construction permit modification requests operation from a new site location with 6.0 kW ERP (H)&(V) at 148 meters AMSL (100 meters HAAT). The facility will operate on new minor change frequency CH260A (99.9 MHz) and continue to serve Ashland, VA.

The proposed site for the Class A operation meets all domestic spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation. A tabulation of the existing and required spacing toward each of the other relevant stations is found in **Exhibit 26.1**.

The WYFJ(FM) 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 23.4** of this report. The tabulation of the distances to the respective contours shown in this discussion is based on the use of the standard eight cardinal bearings, which were also used for the computation of the HAAT. However, the plotted contours shown in **Exhibit 23.4**, are based on the use of a full 360 terrain radials. The USGS 03 second terrain database has been used in calculation of both HAAT and contour distance computations. This exhibit shows the overall service provided by the 1.0 mV/m and the 3.16 mV/m contour which serves less than 100.0% of the community of license of Ashland, VA. Therefore, an alternate propagation methodology (Longley/Rice) has been employed pursuant to §73.313(e) regarding community coverage requirements. Community coverage showings have been included in **Exhibit(s) 24**.

The proposed two bay, ERI, LPX-2E-HW, 0.5λ (wavelength) antenna will be mounted on existing Antenna Structure Registration 1015404. A copy of the existing ASR has been included in **Exhibit 23.1**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified. A copy of the vertical antenna plan has been included as **Exhibit 23.2**.

The applicant, Bible Broadcasting Network, Inc., is presently in possession of a 47 C.F.R. § 73.1125 waiver to operate the proposed facility as a "satellite" of co-owned noncommercial educational AM Station WYFQ(AM), Charlotte, North Carolina, (Facility ID No.: 5152). A continuation of this waiver request is requested. The applicant will continue to abide by each representation proffered in the original waiver request.

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.

DISCUSSION OF REPORT (continued)

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).

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 31.1*** 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.

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 6.0 kW at an HAAT of 100 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 373350.0 W. Lng. = 772729.0							
HAAT and Distance to Contour							
V-Soft 3-16 km, 131 pts Method - USGS 03 SEC							
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	70-F5
000	57.0	91.0	6.0000	7.78	1.000	27.07	15.30
045	37.4	110.6	6.0000	7.78	1.000	29.65	17.15
090	31.2	116.8	6.0000	7.78	1.000	30.37	17.66
135	29.9	118.1	6.0000	7.78	1.000	30.52	17.76
180	34.6	113.4	6.0000	7.78	1.000	29.98	17.38
225	62.1	85.9	6.0000	7.78	1.000	26.34	14.82
270	59.4	88.6	6.0000	7.78	1.000	26.72	15.06
315	71.2	76.8	6.0000	7.78	1.000	25.00	13.99
Ave El= 47.84 M HAAT= 100.16 M AMSL= 148							