

**ENGINEERING REPORT**  
**FM Translator Minor Change**  
**Modification Application**

for

**W215CA (formerly W218AX)**  
**Hazleton, PA**  
**Frequency Change Application**

Pending Lic No.  
BLFT-20080911ACE

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(Exhibit numbering is in response to FCC Online Form 349, Section III-A)

## **Discussion**

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This firm has been retained to prepare the required engineering report in support of a minor construction permit application for FM translator W215CA (formerly W218AX), Hazleton, PA, pending license application BLFT-20080911ACE. This pending license application covers granted Construction Permit BMPFT-20071130ACW. FM Translator W215CA is presently authorized to operate on 90.9 MHz with 2 watts of vertical only directional power with an antenna COR of 607 meters AMSL. A change in frequency to CH213D from the present site and tower location is requested. Operating parameters will remain 2 watts ERP at the present COR of 607 meters AMSL utilizing the same vertical only directional antenna. The translator will continue to rebroadcast parent station WRGN(FM), Sweet Valley, PA.

The proposed site will remain the site identified by existing ASR tower number 1026748. A copy of the existing Antenna Structure Registration has been supplied in **Exhibit 12.1**. This proposal will not increase the overall tower height, therefore the FAA need not be notified. A copy of the vertical antenna system has been included in **Exhibit 12.2**.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator with the exception of WVIA-FM, CH210B, Scranton, PA. Allocation details are found in **Exhibit 12.5**. A §74.1204(d) waiver request for second adjacent channel given interference towards WVIA-FM showing a lack of population or housing within the interference area has been included in **Exhibit 12.6**. Full protection will be afforded WVIA-FM as shown in the exhibit. There are three facilities close enough to merit contour protection showings. FM Commander maps and tabulations of protections toward WXLV(FM), Schnecksville, PA and the WCLH(FM) Wilkes-Barre, PA License and Construction Permit have been included in **Exhibit 12.7**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The translator site lies outside of the primary contour of WRGN(FM), and the 1 mV/m (60 dBu) contour extends beyond the WRGN(FM) station 1 mV/m contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 12.4**. The applicant would like to note the use of the NGDC 30 second terrain database for all HAAT, allocation and contour showings.

Regarding protection of international concerns, the proposed facility will remain within 320 km of the common border of the United States and Canada. Full protection will be afforded all Canadian concerns as noted in the **Exhibit 12.5** allocation study. In addition, the proposed 34 dBu f(50:10) interference contour does not reach the Canadian border. Documentation of the 34 dBu f(50:10) contour will be supplied upon request.

The proposed CH213D operation is within the affected radius of four TV6 facilities, WMYH-LP(TV), Elmira, NY; WPVI-TV, Philadelphia, PA, License and Construction Permit; and WXXW-LP, Binghamton, NY. Full Protection will be afforded all TV-6 facilities as noted in **Exhibit 12.5**.

The proposed operating parameters have been changed from the licensed values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 12.3**. The translator will employ a one bay vertically polarized Scala FMV antenna. As stated before, the antenna will be mounted on an existing tower, therefore the FAA need not be notified.

## Discussion (continued)

The proposed facility meets the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site may be reached promptly at all hours and in all seasons. The transmitter will be equipped with proper control and interface circuits which will place the translator in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls will be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons will be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for operation is listed in the type-approved list of the Commission.

**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 16.1*** 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 following tabulation of the distances to the proposed service contours results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1.

N. Lat. = 405810.0    W. Lng. = 755710.0						
HAAT and Distance to Contour						
FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	415.1	191.9	0.0007	-31.54	0.592	3.78
030	502.4	104.6	0.0006	-32.34	0.540	2.78
060	462.8	144.2	0.0006	-32.42	0.535	3.13
090	432.6	174.4	0.0006	-31.93	0.566	3.54
120	448.4	158.6	0.0009	-30.35	0.679	3.80
150	424.5	182.5	0.0014	-28.45	0.845	4.61
180	448.7	158.3	0.0018	-27.38	0.956	4.65
210	509.6	97.4	0.0020	-27.03	0.995	3.77
240	521.1	85.9	0.0020	-27.00	0.999	3.54
270	445.3	161.7	0.0019	-27.21	0.975	4.75
300	367.4	239.6	0.0016	-27.98	0.892	5.34
330	364.2	242.8	0.0011	-29.66	0.735	4.73
Ave El= 445.18 M    HAAT= 161.82 M    AMSL= 607.0						