

ENGINEERING REPORT

FM Translator Construction Permit Modification Application

W296CS.C – Lakeland, FL
File No. BNPFT-20130821ABY
Facility ID No. 139198

Site Change and Change in
Directional Antenna Pattern

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

Discussion

This firm has been retained to prepare the required engineering report in support of a Construction Permit Modification Application for FM Translator Permit BNPFT-20130821ABY (Facility ID No. 139198). The authorized Construction Permit specifies operation on CH296D (107.1 MHz) – Lakeland, FL with 0.032 kW of directional power at an antenna COR of 116 meters AMSL. A new site location and directional pattern are requested here-in. Continued operation on Channel CH296D (107.1 MHz) with a power of 0.250 kW ERP is requested from a new site location. A new circularly polarized antenna with a new directional antenna pattern will be utilized at the antenna COR height of 171 meters AMSL. The translator will rebroadcast new primary station WWRZ(FM) – Fort Meade, FL, CH252C2 (Facility ID No. 72687) as an HD2 FM Fill-In Translator.

The facility will be located on an existing tower which bears Antenna Structure Registration Number 1040895. A copy of ASR #1040895 has been included in **Exhibit 13.1**. The vertical antenna system has been plotted in **Exhibit 13.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or facility. General allocation details are found in **Exhibit 13.5**. There is one (1) facility, existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward WXGL(FM) – St. Petersburg, FL (CH297C1) as included in **Exhibit 13.6**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the use of the NED 03 second terrain database for all allocation, contour and HAAT calculations contained here-in.

The Translator will rebroadcast WWRZ(FM) as an HD2 FM Fill-In Translator. The proposed 60 dB μ contour of the Translator lies wholly inside of the WWRZ(FM)-HD2 Class C1 primary 60 dB μ contour. A map of the proposed service contour in relation to the primary station service contour has been included in **Exhibit 13.4**.

The proposed operating parameters have been changed from the authorized Construction Permit values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.3**.

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 (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 17.1** 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 utilizing the NED 03 second terrain database.

N. Lat. = 275636.0 W. Lng. = 815444.0 HAAT and Distance to Contour, FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	40.6	130.4	0.2500	-6.02	1.000	14.67
030	34.4	136.6	0.2500	-6.02	1.000	15.04
060	35.3	135.7	0.2500	-6.02	1.000	14.98
090	33.8	137.2	0.2500	-6.02	1.000	15.08
120	36.9	134.1	0.2500	-6.02	1.000	14.89
150	40.0	131.0	0.2500	-6.02	1.000	14.70
180	56.4	114.6	0.2500	-6.02	1.000	13.76
210	44.1	126.9	0.2500	-6.02	1.000	14.46
240	38.4	132.6	0.0625	-12.04	0.500	10.52
270	37.0	134.0	0.0225	-16.48	0.300	8.20
300	46.0	125.0	0.0342	-14.66	0.370	8.81
330	51.9	119.1	0.2500	-6.02	1.000	14.02
Ave El= 41.23 M HAAT= 129.77 M AMSL= 171						