

W288DV MINOR MODIFICATION TO FM TRANSLATOR CP BNPFT-20180321AAD
0.125 kW ND FACILITY ID 201538 NEW HAVEN, CONNECTICUT
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
JUNE 2020

W288DV is authorized to Yale Broadcasting Company, Inc. licensee of AM Broadcast station WYBC(AM), 1340 kHz, New Haven, Connecticut. The W288DV CP was granted as an AM fill-in translator for WYBC(AM). The modifications proposed herein reduce the RC AMSL from 202 meters to 166.7 meters and increase the ERP from 90 watts to 125 watts. No change in channel or omnidirectional radiation pattern are proposed. A move to a 29.9 meter tall, existing, unregistered, tower adjacent to the authorized structure is proposed. FCC TOWAIR was used to analyze the structure and the Determination states that the structure does not require registration as there are no airports within 8 kilometers.

The applicant proposes herein to locate its Bext TFC2K, circularly polarized, 3 bay, 0.56 wave spaced antenna near the top of the tower with its radiation center 27.4 meters AGL. Utilizing the FCC FM Model online calculator for an EPA type 2 antenna with 125 watts ERP H & V with 0.56 wave spacing on CH 288 gives a maximum calculated power density of 0.326 microwatts per centimeter squared which is 0.163 percent of the 200 microwatts public exposure guideline. Based on this analysis, it is believed that the proposed facility follows OET-65 Public Exposure Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 worker Guidelines.

The tower, building and all supporting infrastructure are existing.

Figure 1 attached is an AM on FM mapping demonstrating that:

There is almost complete duplication of the authorized and proposed 60 dBu contours demonstrating that the proposed modification is a minor change.

The Proposed 60 dBu coverage contour is located entirely within a 25 mile radius of the WYBC(AM) transmitter site.

Figure 2 attached shows the following:

There is no prohibited contour overlap to any co-channel or 1st adjacent channel FM station requiring protection.

The proposed site lies outside the 54 dBu protected contour of 3rd adjacent channel station WBLI.

The proposed site lies inside the 54 dBu protected contour of 2nd adjacent channel station WHCN and the WHCN contour value at the W288DV proposed transmitter is 69 dBu.

Figure 3 attached relies on a calculation of HAAT for 12 evenly spaced radials using the NAD 83 coordinates of the proposed site and a radiation center 166.7 meters AMSL. The calculation was undertaken using the FCC antenna height above average terrain calculator and the calculated HAAT is 96 meters. With the HAAT of 96 meters known, the ERP of 0.125 kW and the 109 dBu interfering contour value for WHCN the FCC FM Propagation curves routine was used to calculate distance to the 109 dBu contour. This distance is 0.278 kilometers or 912'.

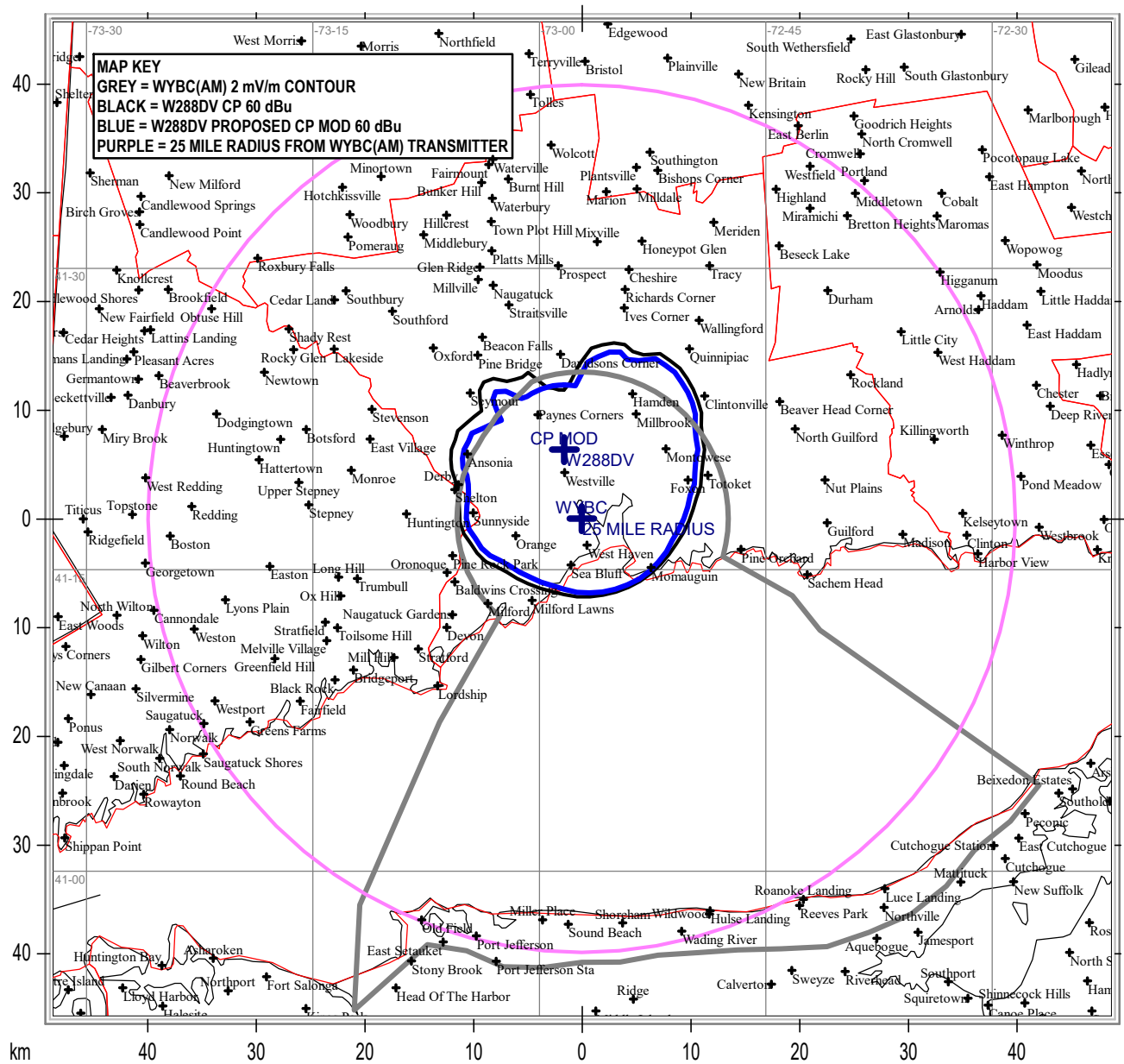
The red circle plotted on Figure 3 is the 0.278 km radius of the 109 dBu interfering contour to WHCN. In excess of 99.5% of the area of the contour lies inside unpopulated area designated as the West Rock Ridge State Park. The sliver lying outside of the park boundary is unpopulated gravel pit. A waiver of 74.1204 to show contour protection to WHCN in this manner is believed unnecessary but in the event that a waiver is deemed necessary it is respectfully requested.

The foregoing was prepared on behalf of Yale Broadcasting Company, Inc. by Clarence M. Beverage of Communications Technologies, Inc., Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



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June 17, 2020

W288DV CP MOD 0.125 kW OMNI RC 166.7 M AMSL NEW HAVEN, CONNECTICUT



Communications Technologies, Inc. Marlton, New Jersey

National Borders
 County Borders
 Lat/Lon Grid

Figure 2

FIGURE 3 0.278 km 109 dBu FREE SPACE CONTOUR

W288DV PROPOSED MINOR MOD INTERFERING CONTOUR OVER WEST ROCK RIDGE STATE PARK AND UNPOPULATED AREA

