

TECHNICAL SUMMARY  
REQUEST FOR SPECIAL TEMPORARY AUTHORITY (STA)  
DTV STATION WFUT-DT  
NEWARK, NEW JERSEY  
CHANNEL 26 195 KW (ND) 397 m

1. The instant request is for Special Temporary Authority (STA) for WFUT-DT, Newark, New Jersey, which is authorized (CP, LMS File No. 0000034667) for post-transition DTV operation on channel 26. The purpose of the WFUT-DT STA is to permit compliance with the Phase 4 construction deadline. Specifically, the WFUT-DT STA facility will operate on post-transition channel 26 using the existing Dielectric model TUF-C3-8/24U-2-S master nondirectional antenna located atop the Empire State Building with a maximum ERP of 195 kW and RCAMSL of 410.5 meters.<sup>1</sup> There will be no change in the overall structure height of the existing supporting structure (ASRN 1007048).

2. The proposed STA facility has been designed such that there will be no extension of the predicted noise-limited service contour of the STA facility beyond that of the authorized main facility (see Figure 1 attached).

3. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure to workers and the general public at the 86<sup>th</sup> floor Observation Deck of the Empire State Building, which is the closest “open air” point of public access. The radiation center for the proposed DTV antenna will be located 80 meters from the 86<sup>th</sup> floor Observation Deck. The total DTV ERP is 195 kW (horizontal polarization). A conservative vertical plane relative field value of 0.12 is presumed for the antenna’s downward radiation in both the horizontal and vertical planes of polarization (for angles below 11 degrees downward, see attached antenna data). The calculated power density at a point 2 meters above the Observation Deck is 15.4 uW/cm<sup>2</sup> which is 4.2% of the FCC’s recommended limit of 363.3 uW/cm<sup>2</sup> for channel 26 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

The Empire State Building is an established FM and TV transmitter site, shared by many broadcast users. Access to the antenna mast is restricted by locked doorways

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<sup>1</sup> The Dielectric master antenna is currently used by WCBS-TV (BLCDT-20090612AFN) and WNBC (BLCDT-20080409AAM).

and access hatches. Appropriate RFR signs are posted and there exists a formal RFR management protocol governing access to the mast and all outdoor areas above the 86<sup>th</sup> floor public observation deck. Furthermore, RFR levels on the 86<sup>th</sup> floor Observation Deck and 102<sup>nd</sup> floor observatory are periodically surveyed by the building's RF exposure consultant.