

TECHNICAL EXHIBIT  
IN SUPPORT OF  
SPECIAL TEMPORARY AUTHORITY (STA)  
FOR STATION WJHL-DT (FACILITY ID 57826)  
JOHNSON CITY, TENNESSEE  
CH 11 15.5 KW 707 M

Technical Narrative

This Technical Exhibit supports a Special Temporary Authority (STA) for digital television station WJHL-DT on channel 11 at Johnson City, Tennessee. Station WJHL-DT is authorized to operate on digital channel 11 (post-transition) with a directional antenna maximum effective radiated power (ERP) of 25.5 kilowatts (kW) and an antenna height above average terrain (HAAT) of 708 meters (BMPCDT-20080619ACA).

This application requests a “phase-in” special temporary authority (STA) to permit WJHL-DT to temporarily use its licensed analog antenna at a reduce ERP of 15.5 kW for initial post-transition use. This is needed until better weather is present to permit installation of WJHL’s final (directional) DTV antenna.

Proposed STA Facilities

The proposed STA operation is for use of the currently licensed, analog facility. The NAD27 coordinates are: 36-25-55 N, 82-08-15 W. The WJHL-DT STA operation proposes use of the analog, General Electric (GE) TY-95B, non-directional antenna, with an ERP of 15.5 kW at an antenna HAAT of 707 meters. The proposed antenna radiation center above mean sea level is 1332 meters.

Figure 1 is a map depicting the coverage contours for the requested STA facility, as well as the licensed analog and authorized (post-transition) digital facilities. The predicted STA 43 dBu F(50,90) contour will encompass all of Johnson City. The proposed 36 dBu contour will not extend coverage beyond the Appendix B 36 dBu (noise-limited) contour. The Johnson City limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

#### Allocation Considerations

The proposed WJHL-DT STA operation meets the FCC's 0.5% post-transition interference standards to pertinent Class A and DTV facilities using the procedures outlined in the FCC's OET-69 Bulletin and a with a standard 2 kilometer cell size and 1 kilometer terrain distance increment.

#### Population Served

The herein proposed WJHL-DT STA facility is predicted to serve 1,244,407 persons, post-transition, based upon the 2000 Census. WJHL-DT's associated Appendix B facility is predicted to serve 1,273,000 persons while the analog WJHL-TV facility is predicted to serve 1,103,947 persons. Thus, the temporary (STA) proposal will serve more than 100% of WJHL's analog service population and 98% of the Appendix B population.

#### Radiofrequency Electromagnetic Field Exposure

The proposed WJHL-DT STA facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the licensed antenna is located 61 meters above ground level with an ERP of 15.5 kW. A conservative relative field value of 0.25 was assumed for the calculation. The calculated power density at a point 2 meters above ground level will not exceed 0.0093 mW/cm<sup>2</sup>. This is less than 5% of the FCC's recommended limit of 0.2 mW/cm<sup>2</sup> for channel 11 for an "uncontrolled" environment.

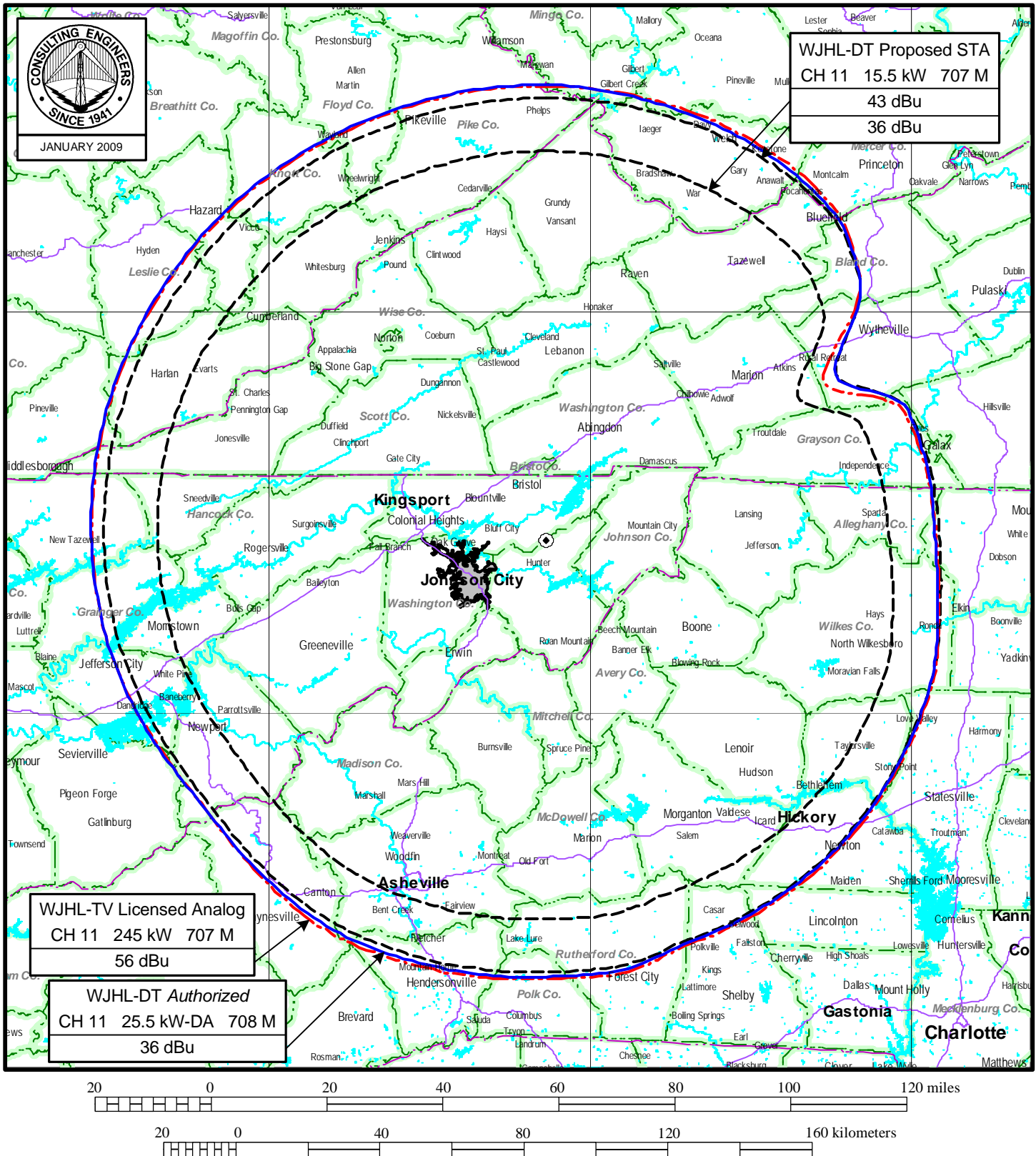
Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site and agreement between the stations will control site access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WJHL-DT STA operation appears to be otherwise categorically excluded from environmental processing.

A handwritten signature in blue ink, appearing to read 'J.N. Edwards', with a stylized flourish at the end.

Jonathan N. Edwards  
du Treil, Lundin & Rackley, Inc.  
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Figure 1



## PREDICTED COVERAGE CONTOURS

STATION WJHL-DT  
JOHNSON CITY, TENNESSEE  
CH 11 15.5 KW 707 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida