

TECHNICAL EXHIBIT  
APPLICATION FOR DTV MAXIMIZATION  
STATION KYOU-DT (FACILITY ID 53820)  
OTTUMWA, IOWA  
CH 15 360 KW 360 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KYOU-DT to maximize its post-transition facility. This application requests a construction permit (CP) for a digital television operation on Channel 15, using non-directional antenna.

Proposed Facilities

Station KYOU-DT proposes to operate DTV Channel 15 with a non-directional effective radiated power (ERP) of 360 kilowatts and antenna height above average terrain (HAAT) of 360 meters. The transmitter site coordinates are:

41° 11' 42" North Latitude  
91° 57' 15" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1. Figure 2 is a map showing the DTV predicted coverage contours. The predicted 48 dBu contour will encompass all of Ottumwa. The Ottumwa city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

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Population Served

The herein proposed KYOU-DT “maximized” facility is predicted to serve 661,443 persons, post-transition, based upon the 2000 Census. KYOU-DT’s associated Appendix B facility is predicted to serve 305,000 persons. Therefore, the herein proposed KYOU-DT facility would serve more than 100% of KYOU-DT’s Appendix B population.

Allocation Considerations

The proposed KYOU-DT 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 standard 2 kilometer cell size and 1 kilometer terrain distance increment.

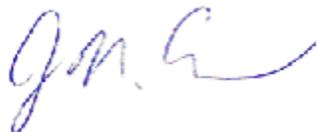
Radiofrequency Electromagnetic Field Exposure

The proposed KYOU-DT 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 proposed DTV antenna is located 354.4 meters above ground level with an ERP of 360 kW. A conservative relative field value of 0.3 was assumed for the calculation (see Figure 3). The calculated power density at a point 2 meters above ground level will not exceed 0.009 mW/cm<sup>2</sup>. This is less than 5% of the FCC’s recommended limit of 0.32 mW/cm<sup>2</sup> for Channel 15 for an “uncontrolled” environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. 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 station is at reduced power or shut down. The proposed KYOU-DT operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.



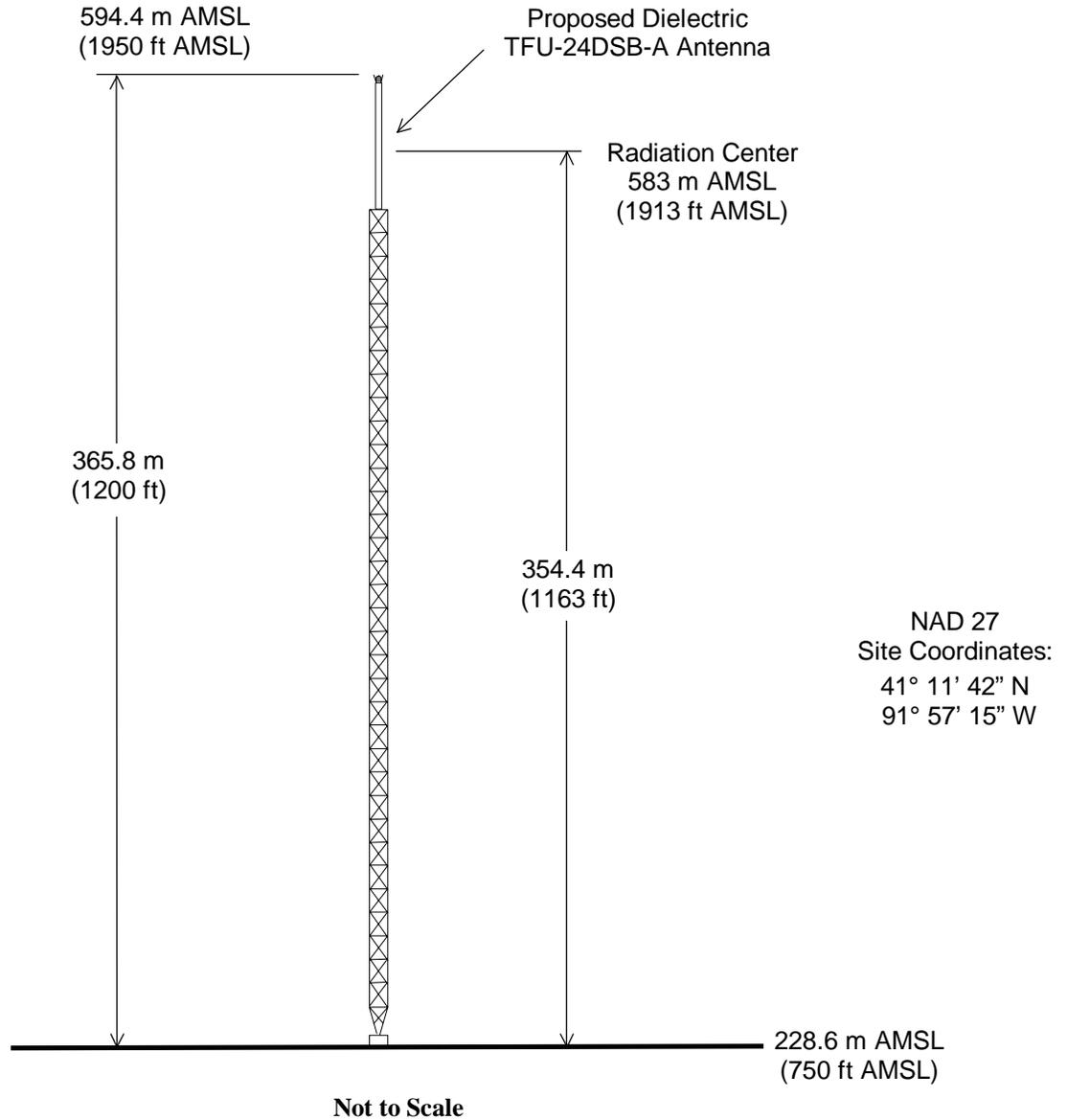
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June 18, 2008



Registration No. 1008480



**ANTENNA AND SUPPORTING STRUCTURE**

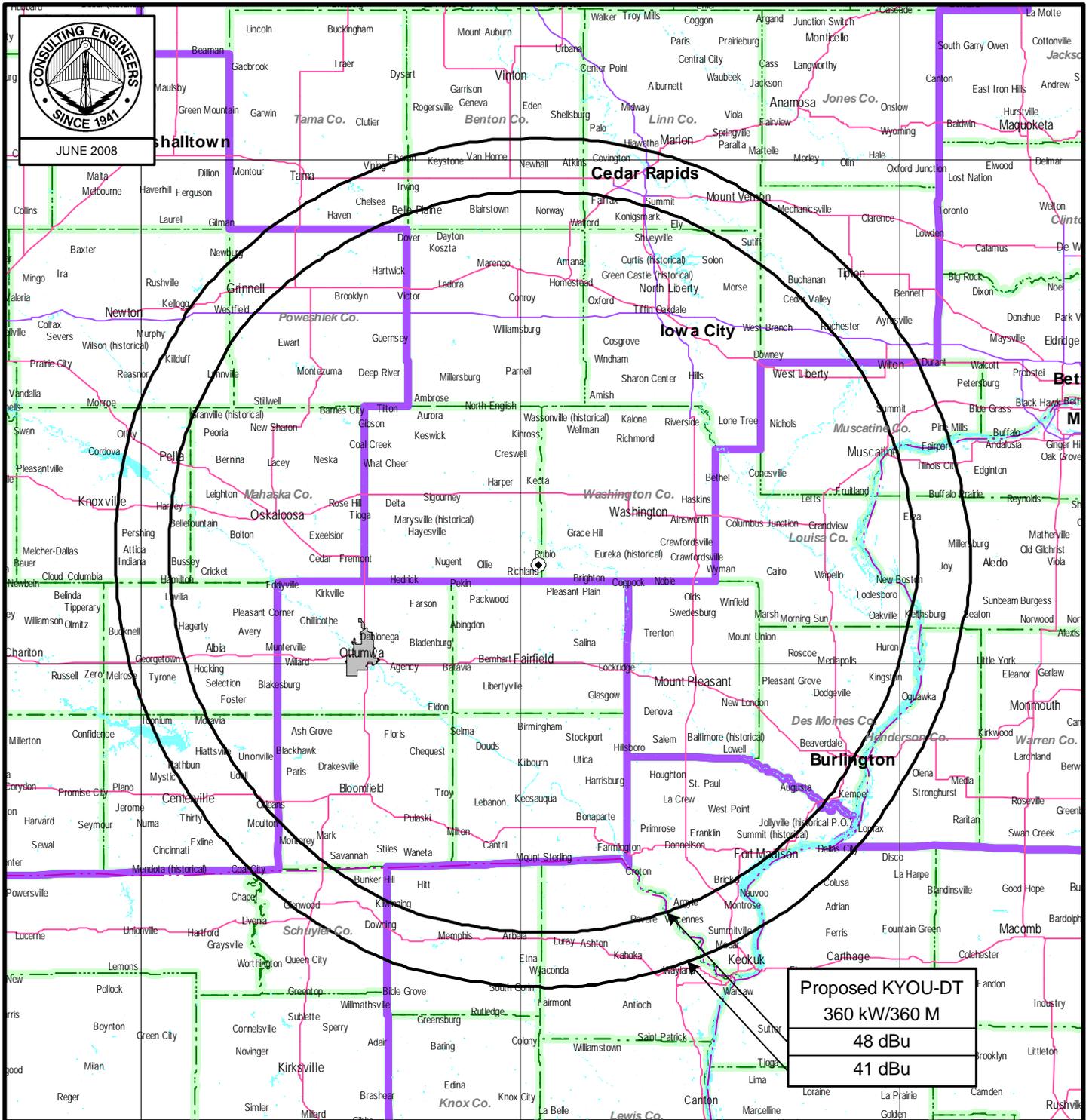
STATION KYOU-DT

OTTUMWA, IOWA

CH 15 360 KW 360 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



## PREDICTED COVERAGE CONTOURS

STATION KYOU-DT

OTTUMWA, IOWA

CH 15 360 kW 360 M

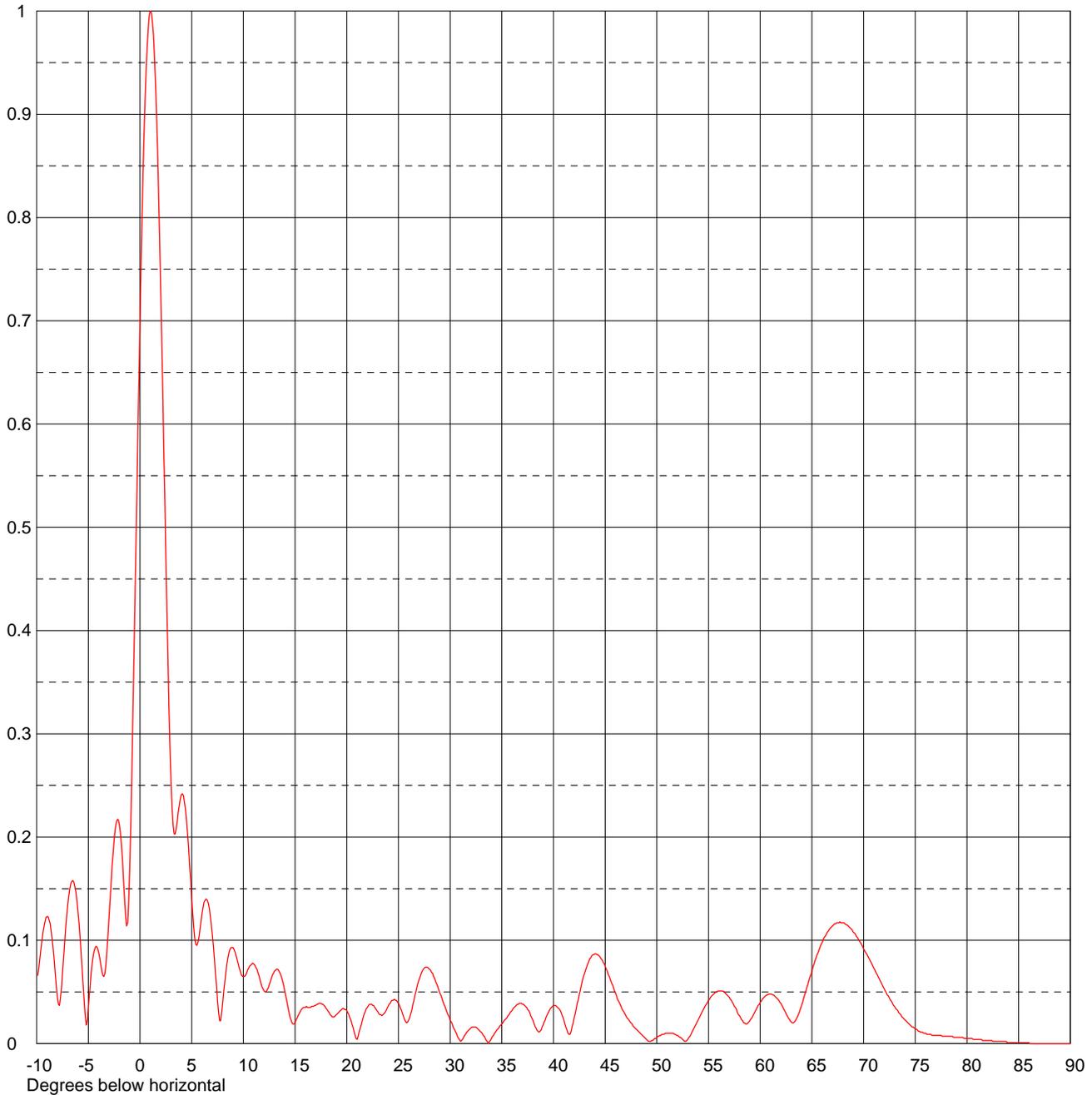
du Treil, Lundin & Rackley, Inc Sarasota, Florida



Date **18 Jun 2008**  
Call Letters **KYOU-DT** Channel **15**  
Location **Ottumwa, IA**  
Customer  
Antenna Type **TFU-24DSB-A**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>24.0 (13.80 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>11.9 (10.76 dB)</b>	Frequency	<b>479.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>24B240100-90</b>



Remarks: