

TECHNICAL EXHIBIT
MINOR AMENDMENT TO PENDING APPLICATION
STATION WTNZ-DT (FACILITY ID 19200)
KNOXVILLE, TENNESSEE

DECEMBER 5, 2001

CH 34 460 KW 531 M

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FOR CONSTRUCTION PERMIT
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Technical Narrative

This Technical Exhibit supports a minor amendment to the pending application for construction permit for digital television (DTV) station WTNZ-DT on channel 34 at Knoxville, Tennessee. Station WTNZ-DT has an application pending to operate with a directional antenna maximum effective radiated power (ERP) of 460 kW and an antenna height above average terrain (HAAT) of 529 meters (BPCDT-19991029AFI).

Proposed Facilities

This minor amendment updates the WTNZ-DT proposal to reflect the latest tower registration information. As a result of the adjusted heights, the proposed antenna HAAT will increase by 2 meters. The proposed transmitter site remains (NAD27): 36-00-13 N, 83-56-35 W. A non-directional antenna ERP of 460 kW and antenna HAAT of 531 meters is hereby proposed (*FCC tower registration no. 1052156*).

The proposed WTNZ-DT operating facilities (460 kW, 531 meters HAAT) are less than the facilities allotted to another station in the market. Station WBIR-DT on channel 31 at Knoxville was allotted an ERP of 767.9 kW and an HAAT of 546 meters. The predicted service area associated with this allotment is 41,330 square kilometers. The proposed WTNZ-DT predicted service area is 37,520 square kilometers, or less than that of station WBIR-DT. Therefore, the proposed WTNZ-DT facilities (ERP & HAAT) comply with Section 73.622(f)(5) of the FCC's rules concerning maximum ERP and HAAT.

The proposed transmitter site is more than 600 kilometers from the closest point of the Canadian border. The site is more than 1,600 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Powder Springs, Georgia, approximately 249 kilometers to the west. The closest point of the National Radio Quiet Zone (VA/WV) is more than 349 kilometers to the east-northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1,900 kilometers to the west-northwest. The closest radio astronomy site operating on TV channel 37 is at Green Bank, West Virginia, more than 453 kilometers to the northeast. These separations are sufficient to not be a concern for coordination purposes.

Allocation Study

Interference calculations have been made using the procedures outlined in the FCC's OET-69 bulletin, using a 2 kilometer grid spacing. The proposed WTNZ-DT operation does not cause excessive calculated interference to any analog or DTV assignment. Below is the list of stations considered in the OET-69 analysis.

Stations Potentially Affected by WTNZ-DT						
Chan	Call	City/State	Bear (°T)	Dist (km)	Status	App. Ref. No.
20	WBXX-TV	CROSSVILLE TN	288	37.4	LIC	BLCT-19971028KE
26	960920LJ	KNOXVILLE TN	54	1.2	APP	BPCT-19960920LJ
27	960919KW	CANTON NC	117	105.2	APP	BPET-19960919KW
33	WCLP-DT	CHATSWORTH GA	207	155.7	CP	BPEDT-20000425AAP
33	WCLP-DT	CHATSWORTH GA	207	155.7	PLN	DTVPLN-DTVP0847
33	WUNF-TV	ASHEVILLE NC	121	124.8	LIC	BLET-19980316KE
34	WCFT-DT	TUSCALOOSA AL	230	424.4	CP	BPCDT-19991026ACL
34	WCFT-DT	TUSCALOOSA AL	230	424.4	PLN	DTVPLN-DTVP0871
34	WNGM-TV	ATHENS GA	178	208.9	LIC	BLCT-19960614KH
34	WBKI-TV	CAMPBELLSVILLE KY	322	216.1	LIC	BLCT-20001109ABF
34	WBKI-TV	CAMPBELLSVILLE KY	322	216.1	CP MOD	BMPCT-20000308AAV
34	WSOC-DT	CHARLOTTE NC	105	302.0	PLN	DTVPLN-DTVP0890
34	WSOC-DT	CHARLOTTE NC	105	302.0	CP	BPCDT-20000427ABI
34	WCET-DT	CINCINNATI OH	352	350.6	CP	BPEDT-20000420ABE
34	WCET-DT	CINCINNATI OH	352	350.7	PLN	DTVPLN-DTVP0897
34	WSET-TV	LYNCHBURG VA	68	410.8	APP	BPRM-20010525ADB
34	WPBY-DT	HUNTINGTON WV	29	316.9	PLN	DTVPLN-DTVP0907
35	WKHA	HAZARD KY	27	148.4	LIC	BLET-19810303KE
35	WGGS-DT	GREENVILLE SC	130	182.2	CP	BPCDT-19991027ABK
35	WGGS-DT	GREENVILLE SC	130	182.2	PLN	DTVPLN-DTVP0936
35	WTVC-DT	CHATTANOOGA TN	233	155.6	PLN	DTVPLN-DTVP0937

From the above list of stations considered, the table below shows the calculated interference caused to each station. Only stations that are predicted to receive interference from the proposed WTNZ-DT operation are shown in the interference table.

Study Station	Baseline	Net Population Change/Interference
20 WBXX-TV CROSSVILLE TN (LIC)	1,390,888	22 (0.00%)
33 WCLP-DT CHATSWORTH GA (CP)	1,510,013	612 (0.04%)
33 WUNF-TV ASHEVILLE NC (LIC)	1,811,044	1,954 (0.11%)
32 WETK-DT BURLINGTON VT (PLN)	447,428	43 (0.0%)
34 WNGM-TV ATHENS GA (LIC)	3,089,759	964 (0.03%)
34 WBKI-TV CAMPBELLSVILLE KY (LIC)	1,434,547	12,028 (0.84%)
34 WBKI-TV CAMPBELLSVILLE KY (CPM)	1,437,576	11,185 (0.78%)
35 WTVC-DT CHATTANOOGA TN (PLN)	991,940	5,981 (0.60%)

The proposed WTNZ-DT operation does not cause prohibitive interference to any other analog or DTV assignments and therefore complies with the FCC's 2%/10% interference standard. If necessary, waiver of the FCC rules is requested with respect to the DTV allotments and assignments based on the OET-69 interference calculations.

Class A Consideration

The FCC's CDBS and its list of low power television (LPTV) assignments eligible for Class A status has been reviewed for potential impact. Two stations that receive prohibited overlap from the proposed WTNZ-DT operation are WEEE-LP on channel 32 (BLTT-19980717JA) and WFNA-LP on channel 34 (BLTTL-19890512IE).

Station WEEE is licensed as a Class A on channel 18 (BLTTA-20010710AAH) and, therefore, its channel 32 operation has been superceded and no longer requires protection. Therefore, the WEEE-LP channel 32 operation has been ignored.

Station WFNA has a Class A license application pending for operation on channel 32 (BLTTA-20010705AAS). WFNA does not have a Class A application for channel 34. Therefore, it is believed that the channel 34 operation does not require protection (only the channel 32 operation). Furthermore, even though neither require protection on their mentioned channel, OET-69 interference calculations indicate that the proposed WTNZ-DT operation does not cause any new calculated interference to either station mentioned above. If necessary, a waiver of the FCC rules is requested based on use of the FCC's OET-69 procedures to demonstrate no interference to LPTV assignments requesting Class A status.

Radiofrequency Electromagnetic Field Exposure

The proposed WTNZ-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 413.3 meters above ground level. The DTV ERP is 460 kW. A conservative relative field of 0.2 was used for the calculation (see Figure 2). Therefore, the "worst-case" calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0036 mW/cm². This is less than 1 % of the FCC's recommended limit of 0.40 mW/cm² for channel 34 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 an agreement will control 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 WTNZ-DT operation appears to be otherwise categorically excluded from environmental processing.

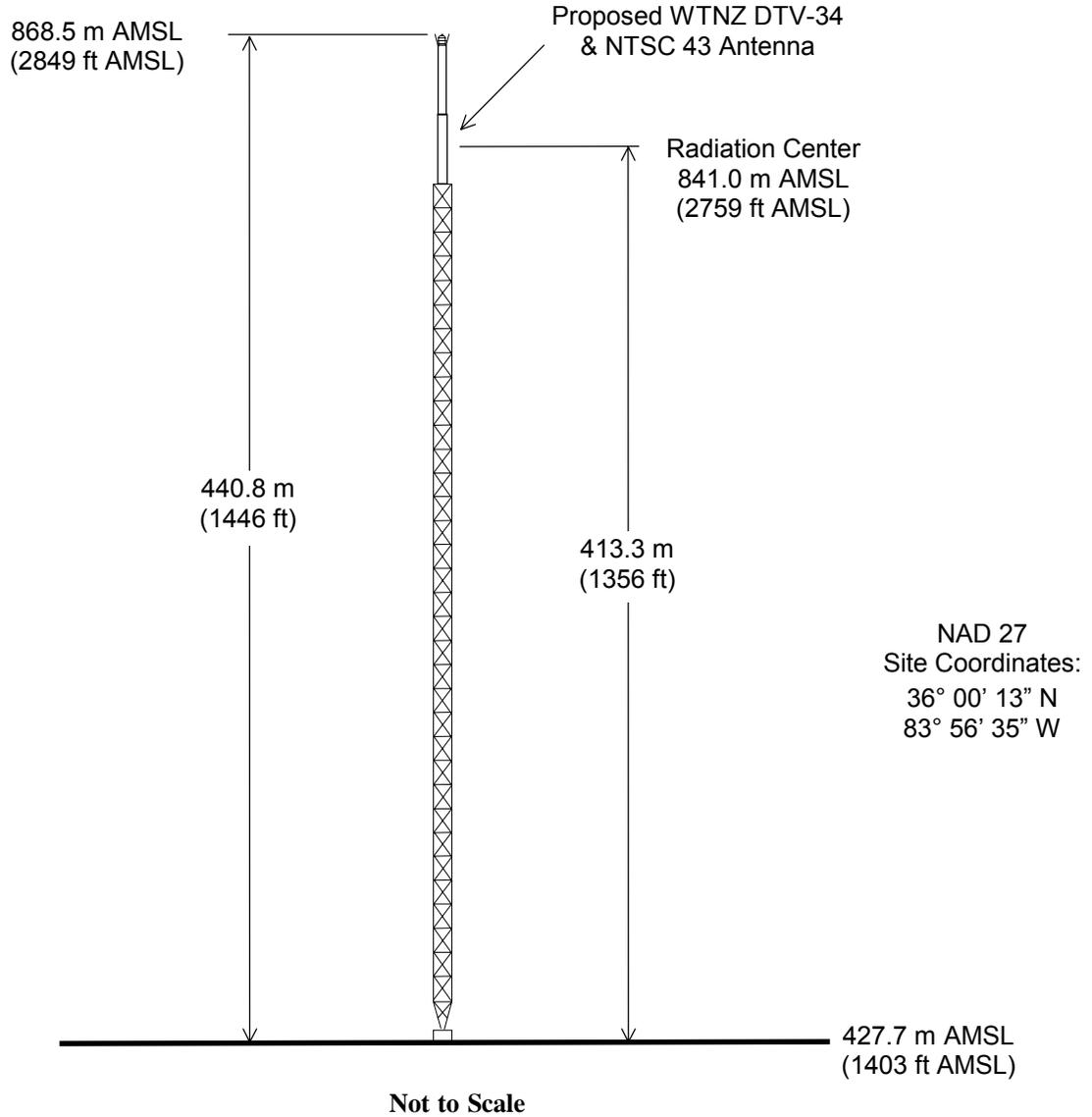
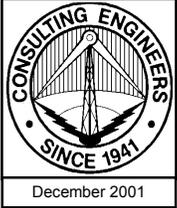
If there are questions concerning the technical portion of this application,
please contact the office of the undersigned.

Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

December 5, 2001

Tower Reg. No. 1052156



PROPOSED ANTENNA AND SUPPORTING STRUCTURE

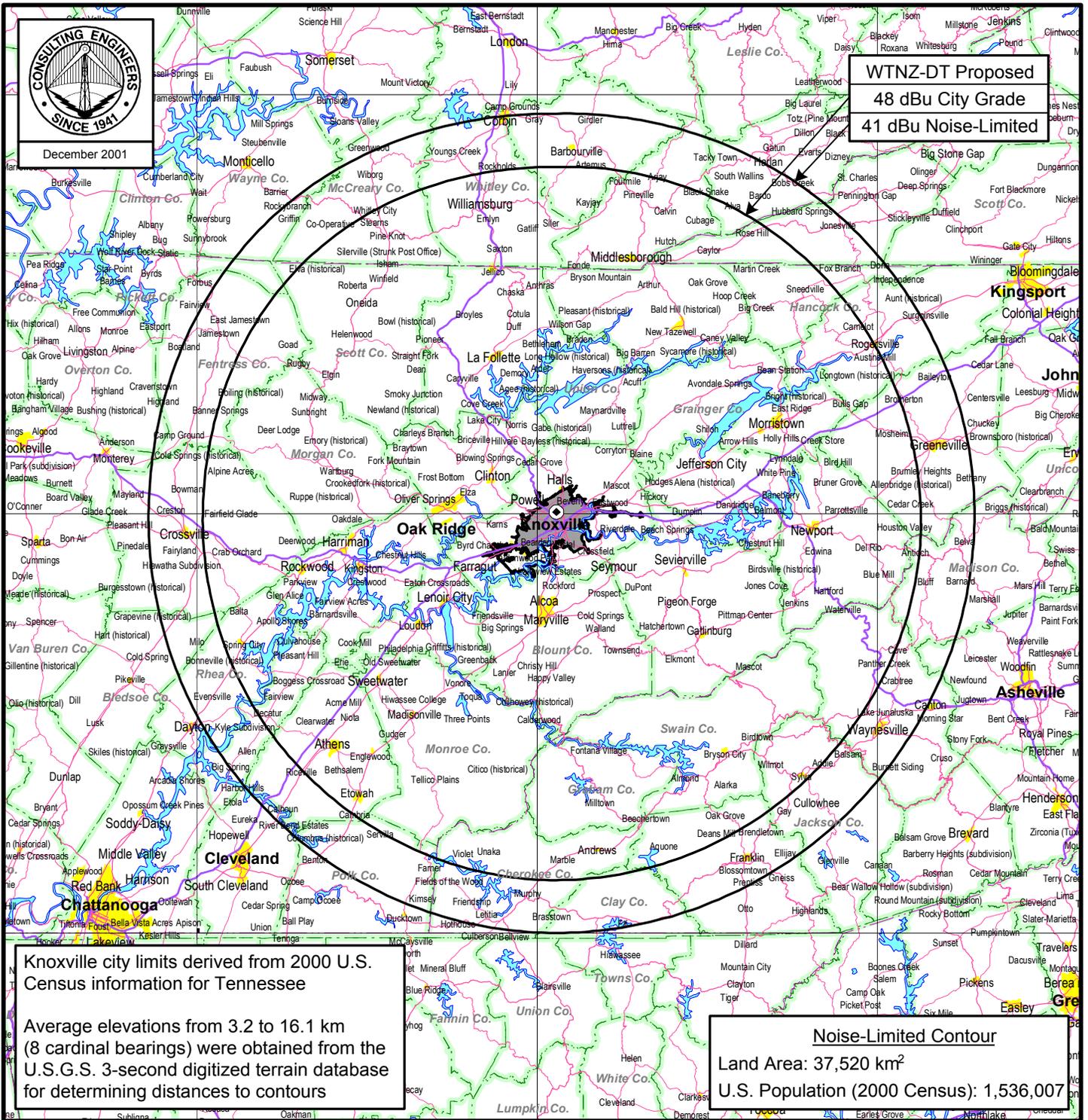
STATION WTNZ-DT

KNOXVILLE, TENNESSEE

CH 34 460 KW 531 M

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

Figure 3



PREDICTED F(50,90) COVERAGE CONTOURS

STATION WTNZ-DT

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du Treil, Lundin & Rackley, Inc Sarasota, Florida