

TECHNICAL EXHIBIT
APPLICATION FOR DTV CONSTRUCTION PERMIT
STATION WLBT-DT
JACKSON, MISSISSIPPI
CH 9 15 KW 535 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station WLBT-DT which is paired with NTSC (analog) channel 3 at Jackson, Mississippi. This application requests a construction permit (CP) for a digital television operation on channel 9 at Jackson. WLBT(TV) has filed a *Petition for Rule Making* to substitute its DTV Channel 51 allotment assigned in the Memorandum, Opinion and Order (MO&O) concerning reconsideration of the 6th Report and Order in MM Docket No. 87-268 to Channel 9. A proposed effective radiated power of 15 kilowatts is proposed.¹

Proposed Facilities

Station WLBT-DT proposes to operate DTV channel 9 from its NTSC transmitter site. It is proposed to operate with a panel type of antenna with an average effective radiated power of 15 kilowatts.

¹ WLBT-DT has obtained an interference agreement with WTVA(TV) at Tupelo, Mississippi to permit the proposed 15 kilowatt effective radiated power.

The proposed DTV transmitter site will be located at its NTSC transmitter site. Therefore, the proposed site location is:

32° 12' 49" North Latitude
90° 22' 56" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1.

Figure 2 is a map showing the DTV predicted coverage contour. The map provides the predicted F(50,90) noise limited contour. The extent of the contour has been calculated using the normal FCC prediction method. The Jackson limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Allocation Considerations

The proposed WLBT-DT Channel 9 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other existing NTSC facilities and DTV allotments and assignments except to WTVA(TV) at Tupelo, Mississippi as discussed below. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.² Stations selected for

² The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth

analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference analyses for the proposed WLBT-DT facility are summarized herein at Figure 3. As indicated therein, the proposed facility will meet the 2%/10% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations except to WTVA(TV).³

It is noted that the predicted interference to WTVA(TV) at Tupelo, Mississippi exceeds the Commission's *de minimis* interference standards. However, an interference agreement between WTVA(TV) and the licensee of WLBT-TV is has been obtained to permit the proposed effective radiated power.

Class A Allocation Considerations

The proposed WLBT-DT facility causes prohibited contour overlap, defined pursuant to Section 73.613 of the Commission's Rules, to Class A low powered television stations WBXK-CA on Channel 8 and WBMS-CA on Channel 10, both assumed to the city of Jackson. However, using the OET-69 methodology as suggested in Section 73.613(j), the proposed WLBT-DT facility is not predicted to cause prohibited interference either of these stations. Therefore, based upon this OET-69 analysis, a waiver of the contour overlap

Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed.
3 Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking"). This properly reflects the net interference change for determining compliance with the FCC DTV2%/10% *de minimis* standard.

requirements of Section 73.613 is hereby requested with respect to WBXK-CA and WBMS-CA.

Radiofrequency Electromagnetic Field Exposure

The proposed WLBT-DT facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed WLBT-DT antenna is located 500 meters above ground level. The maximum effective radiated power is 16 kilowatts. A "worst-case" relative field value of 1.0 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.003 mW/cm². This is less than 5 percent of the Commission's recommended limit of 0.2 mW/cm² for channel 9 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 to the site. 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 or scheduling work when the stations are at reduced power or shut down.

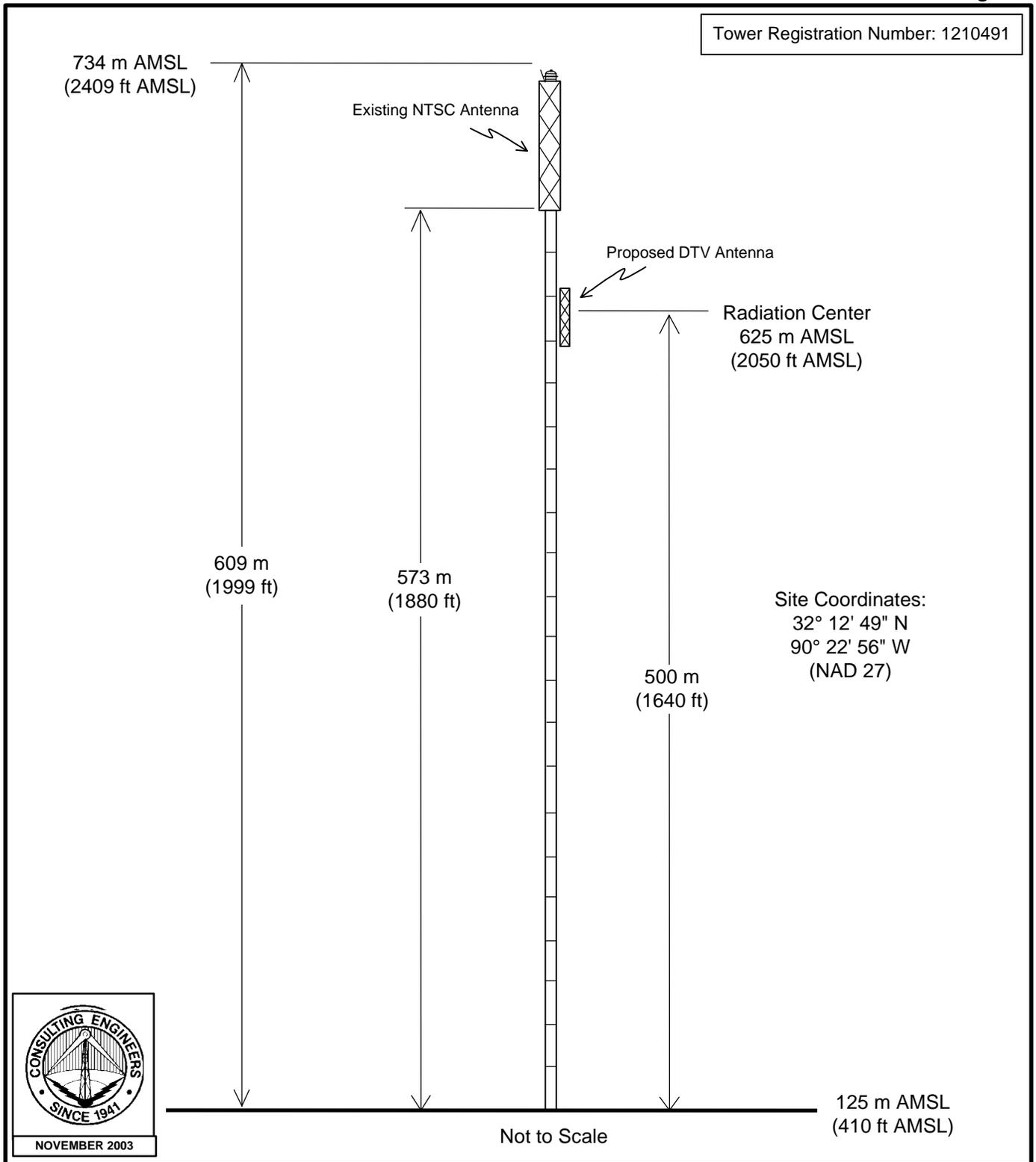
The proposed WLBT-DT operation appears to be otherwise categorically excluded from environmental processing.

Charles Cooper

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November 5, 2003

Figure 1

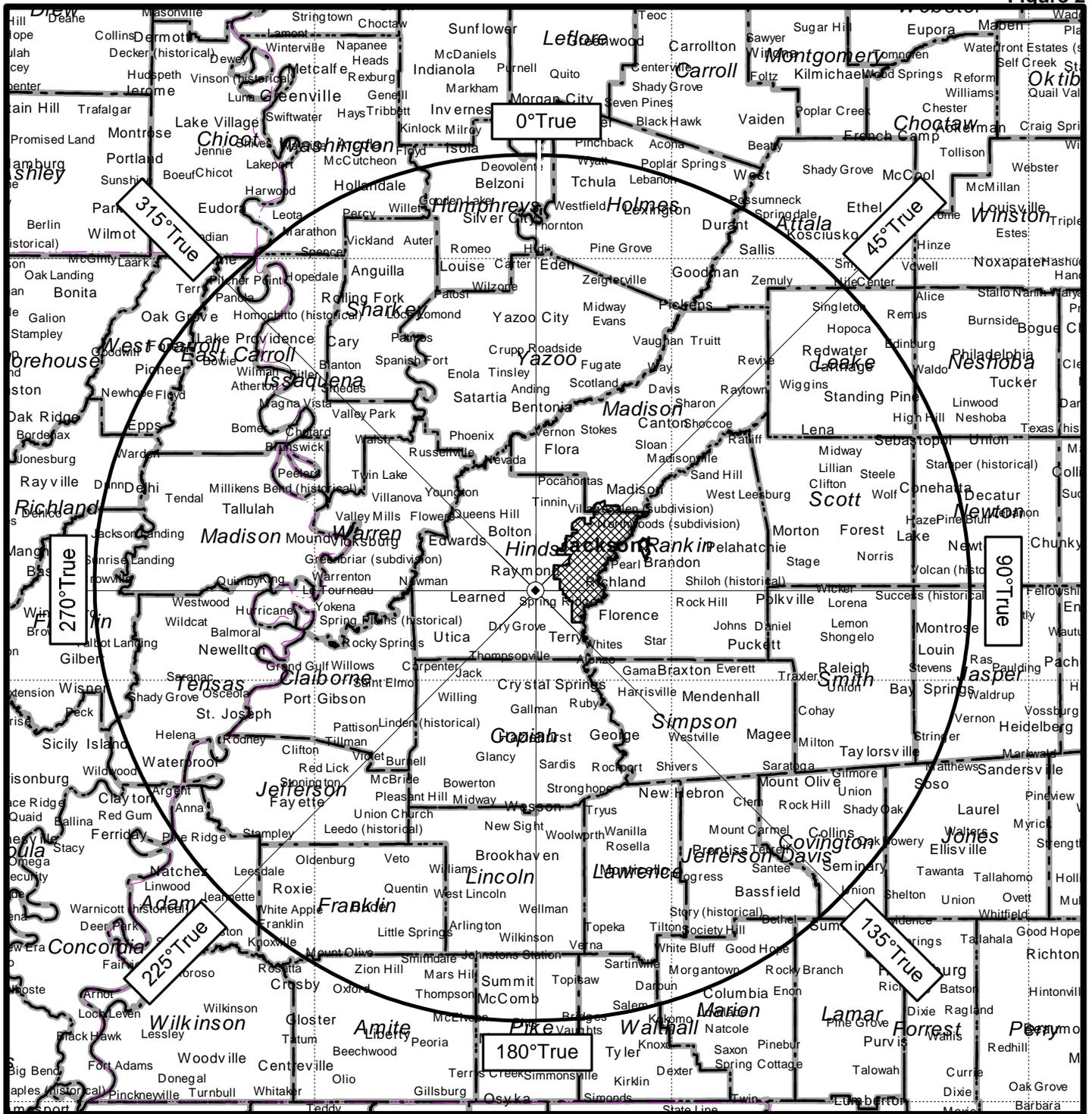


PROPOSED ANTENNA AND SUPPORTING STRUCTURE

TELEVISION STATION WLBT-DT
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



DTV NOISE-LIMITED COVERAGE CONTOUR

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

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Summary of Allocation Analysis

Facility	Channel	NTSC or DTV?	Baseline Service Population (1990)	Permissible IX(%)	Net New IX Caused by Proposed (1990)	Percent of Baseline (%)
KNOE (TV) Monroe, LA <i>BLCT-19990111KG</i>	8	NTSC	728,802	0.0	284	<0.05
WTVA (TV) Tupelo, MS <i>BLTVL-19900316JF</i>	8	DTV	645,000	No Interference Predicted		
WTVA (TV) Tupelo, MS <i>BLCT-1234</i>	9	NTSC	683,128	Interference Agreement		
WAFB (TV) Baton Rouge, LA <i>BLCT-1498</i>	9	NTSC	1,877,779	2.0	11,650	0.6
WALA-DT Mobile, AL <i>BPCDT-19991028AEO</i>	9	DTV	1,008,000	2.0	87	<0.01
WALA-DT Mobile, AL <i>DTV Allotment</i>	9	DTV	988,000	2.0	81	<0.01
KETG (TV) Arkadelphia, AR <i>BLET-413</i>	9	NTSC	382,884	2.0	0	0
KAIT-DT Jonesboro, AR <i>Allotment</i>	9	DTV	630,000	0.0	0	0
KAIT-DT Jonesboro, AR <i>BPCDT-19991101ABU</i>	9	DTV	644,000	2.0	0	0

Figure 3
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Facility	Channel	NTSC or DTV?	Baseline Service Population (1990)	Permissible IX(%)	Net New IX Caused by Proposed (1990)	Percent of Baseline (%)
KTVE (TV) El Dorado, AR <i>BLCT-19870817KF</i>	10	NTSC	668,136	No Interference Predicted		
WMAB-DT Mississippi State <i>BPRM-20010629ACP</i>	10	DTV		No Interference Predicted		
WMAB-DT Mississippi State <i>BMPEDT-20020313AAK</i>	10	DTV		No Interference Predicted		
WBXK-CA Jackson, MS <i>BLTVL-19900316JF</i>	8	NTSC	266,268	2.0	432	0.16
WBMS-CA Jackson, MS <i>BLTVL-19950922IE</i>	10	NTSC	98,603	No Interference Predicted		