

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KLKN-DT (FACILITY ID 11264)  
LINCOLN, NEBRASKA

MAY 18, 2006

CH 31 500 KW 376 M

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KLKN-DT (FACILITY ID 11264)  
LINCOLN, NEBRASKA  
CH 31 500 KW 376 M

Table of Contents

Technical Narrative

Figure 1 Predicted FCC Coverage Contours

Figure 2 Vertical Antenna Patterns

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KLKN-DT (FACILITY ID 11264)  
LINCOLN, NEBRASKA  
CH 31 500 KW 376 M

Technical Narrative

This Technical Exhibit supports a minor modification application for digital television station KLKN-DT on channel 31 at Lincoln, Nebraska. Station KLKN-DT is authorized to operate with a non-directional antenna visual effective radiated power (ERP) of 1000 kW and an antenna height above average terrain (HAAT) of 376 meters (BMPCDT-20000428ABB).

This application proposes to specify a different non-directional antenna and reduce ERP. There is no proposed change in channel (31), antenna height, transmitter site or city of license (Lincoln). The site coordinates remain (NAD27): 40-52-59 N, 97-18-19 W. A non-directional antenna ERP of 500 kW and antenna HAAT of 376 meters is proposed. The antenna structure registration number (ASRN) is 1043251 (see Figure 1).

The proposed facility will not result in any extension of the composite authorized/allotted noise-limited contour as shown in Figure 1. Therefore, the proposal meets the terms of the FCC Filing Freeze for digital television stations.<sup>1</sup> The proposal complies with Section 73.622(f)(8) concerning maximum power and antenna heights.

Allocation Considerations

An interference analysis using the provisions of the FCC's OET-69 program was conducted. The OET-69 results indicate that only "de minimis" interference will be caused to any station. The results are shown below:

<u>Ch</u>	<u>Call</u>	<u>City</u>	<u>St</u>	<u>Status</u>	<u>Application Ref. No.</u>	<u>Before</u>	<u>After</u>	<u>Baseline</u>	<u>Change</u>	<u>%</u>
17	KTVG	GRAND ISLAND	NE	LIC	BLCT -19990126KG	There is no interference to station				1
17	KTVG	GRAND ISLAND	NE	APP	BMPCT -19960724KF	15518	15518	250047	0	<b>0.00</b>
24	KKAZ-CA	OMAHA	NE	LIC	BLTTA -20030402AFC	There is no interference to station				3
29	KHNE-TV	HASTINGS	NE	LIC	BMLET -20020206ABQ	2114	2098	150643	-16	<b>-0.01</b>
30	KCAU-DT	SIOUX CITY	IA	PLN	DTVPLN -DTVP0784	There is no interference to station				5
30	KCAU-TV	SIOUX CITY	IA	CP MOD	BMPCDT -20000428ABE	There is no interference to station				6
31	KCCI-DT	DES MOINES	IA	PLN	DTVPLN -DTVP0821	4113	4019	914622	-94	<b>-0.01</b>
31	KCCI	DES MOINES	IA	LIC	BLCDDT -20050628ABX	4209	4065	914622	-144	<b>-0.02</b>
31	KSCW	WICHITA	KS	LIC	BLCDDT -20020501AAQ	938	740	612604	-198	<b>-0.03</b>
31	KWCV-DT	WICHITA	KS	PLN	DTVPLN -DTVP0823	There is no interference to station				10
31	KCWB-DT	KANSAS CITY	MO	PLN	DTVPLN -DTVP0828	418	418	1763362	0	<b>0.00</b>
31	KCWE	KANSAS CITY	MO	LIC	BLCDDT -20051014ABT	5408	5267	1763362	-141	<b>-0.01</b>
32	KBIN-TV	COUNCIL BLUFFS	IA	LIC	BLET -19860923KL	There is no interference to station				13
32	KGIN-DT	GRAND ISLAND	NE	PLN	DTVPLN -DTVP0871	1263	802	206499	-461	<b>-0.22</b>

Calculations have been made concerning interference that the proposed KLKN-DT operation would receive. The calculations are based on the OET-69 procedures using a 2 kilometer grid and the 2000 Census. After consideration of terrain and interference, the proposed KLKN-DT operation would serve 569,667 people. This complies with the KLKN-DT certification and FCC's "use-it-or-lose-it" requirement.

#### Radiofrequency Electromagnetic Field Exposure

The proposed KLKN-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 antenna is located 366 meters above ground level with an ERP of 500 kW. A conservative relative field value of 0.2 was assumed for the calculation (see Figure 2). The calculated power density at a point 2 meters above ground level will be 0.005 mW/cm<sup>2</sup>. This is less than 5% of the FCC's recommended limit of 0.38 mW/cm<sup>2</sup> for channel 31 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

---

<sup>1</sup> See August 2004 Filing Freeze PN, DA 04-2446 (MB released Aug. 3, 2004).

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. 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 as part of the tower registration process.

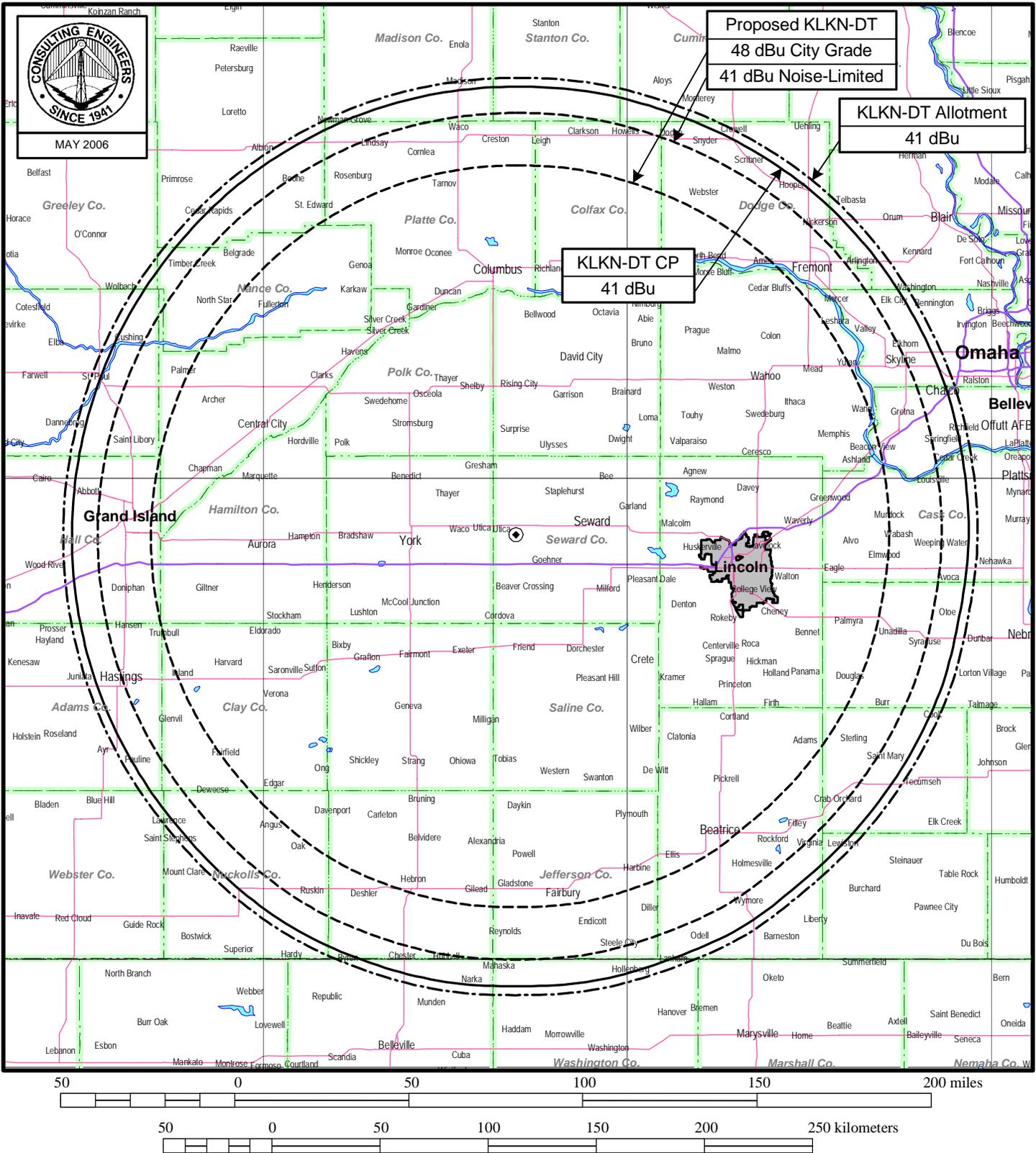


Jonathan N. Edwards

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

May 18, 2006

Figure 1



**PREDICTED COVERAGE CONTOURS**

STATION KLKN-DT

LINCOLN, NEBRASKA

CH 31 500 KW 376 M

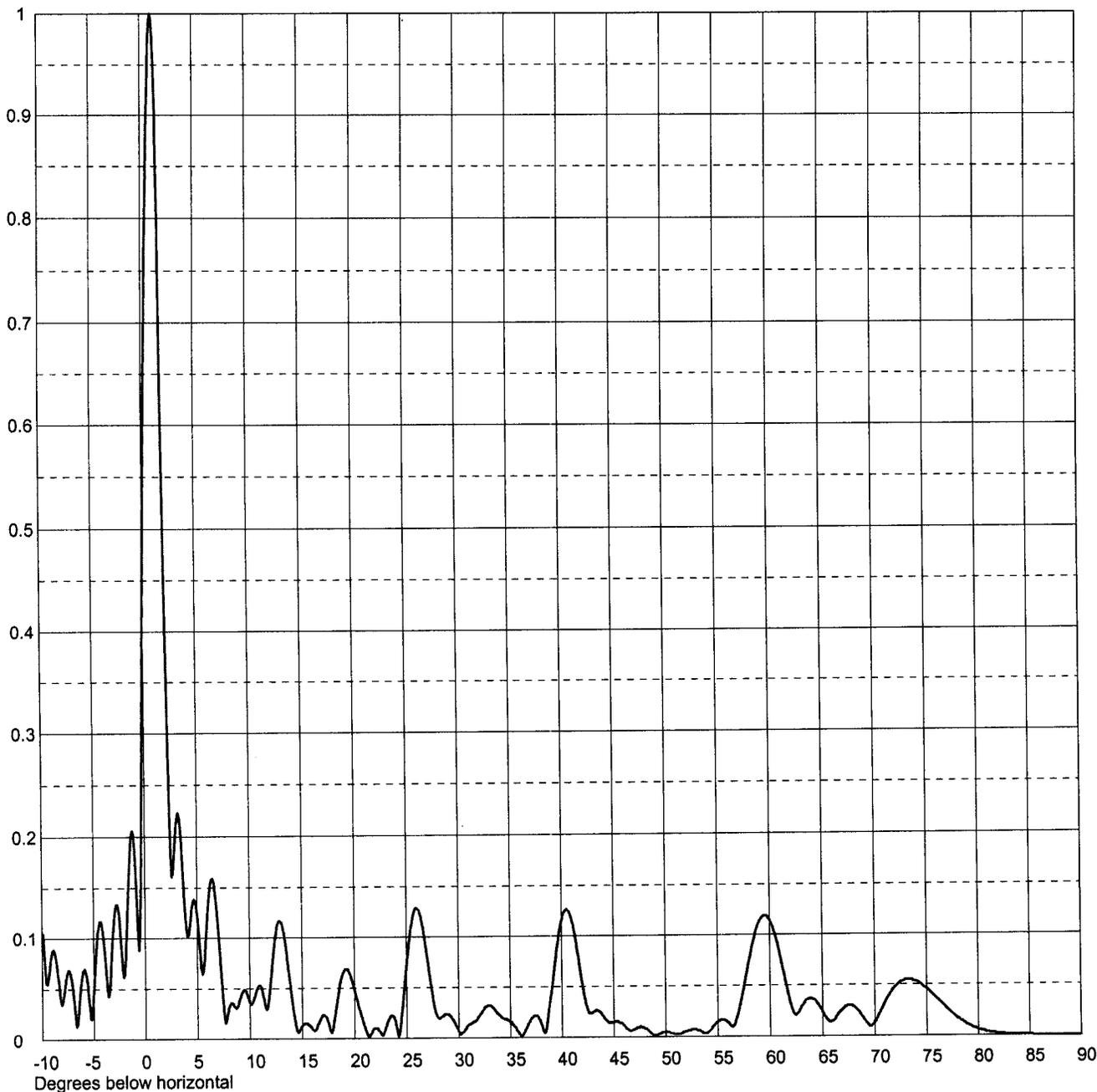
du Treil, Lundin & Rackley, Inc Sarasota, Florida



Date **15 May 2006**  
Call Letters **KLKN-DT** Channel **31**  
Location **Lincoln, NE**  
Customer **Citadel Communications**  
Antenna Type **TFU-32DSB-A (C)**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>32.0 (15.05 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>6.7 (8.26 dB)</b>	Frequency	<b>575.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>32B320100-90</b>

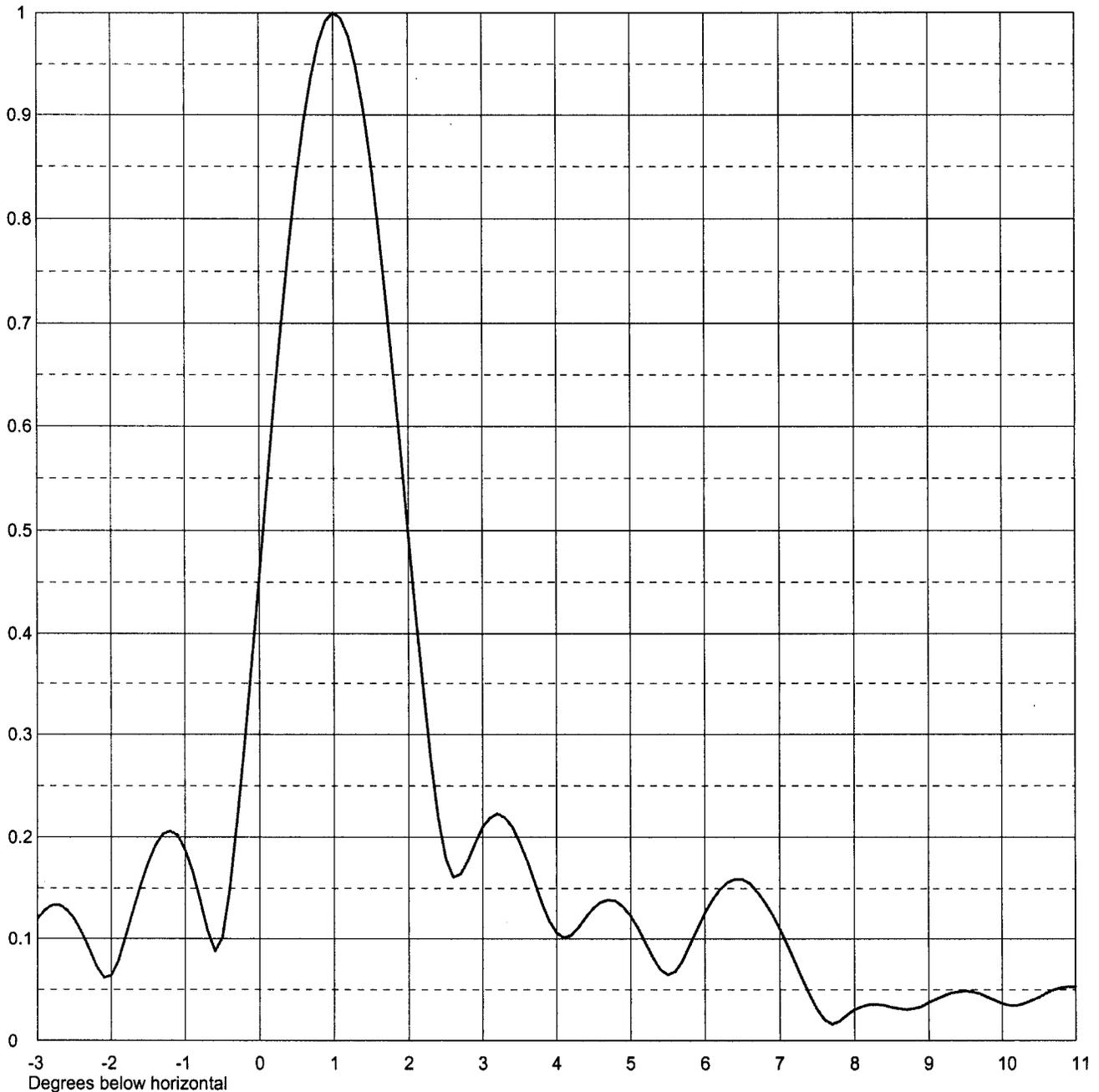


Remarks:

Date	15 May 2006	Channel	31
Call Letters	KLKN-DT	Customer	Citadel Communications
Location	Lincoln, NE	Antenna Type	TFU-32DSB-A (C)

### ELEVATION PATTERN

RMS Gain at Main Lobe	32.0 (15.05 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	6.7 (8.26 dB)	Frequency	575.00 MHz
Calculated / Measured	Calculated	Drawing #	32B320100



Remarks: