

TECHNICAL EXHIBIT  
MINOR MODIFICATION APPLICATION  
STATION KPXC-DT (FACILITY ID 68695)  
DENVER, COLORADO

DECEMBER 26, 2006

CH 43 1000 KW (MAX-DA) 368 M

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Technical Narrative

This Technical Exhibit supports a minor modification application for digital television station KPXC-DT on channel 43 at Denver, Colorado. Station KPXC-DT is authorized (CP) to operate on digital channel 43 with a directional antenna maximum effective radiated power (ERP) of 1000 kilowatts (kW) and an antenna height above average terrain (HAAT) of 356 meters (BPCDT-19990923AAM).

Proposed Facilities

Station KPXC proposes to operate from a new transmitter site, located 52 kilometers northeast of the authorized site. The proposed site coordinates are (NAD27): 40-03-43 N, 104-52-21 W. It is proposed to operate with a directional antenna maximum ERP of 1000 kW at an antenna HAAT of 368 meters. A Dielectric TFU-26DSC-R C190 antenna is proposed. The proposed structure has been assigned FAA study number 2006-ANM-1124-OE.

As KPXC-DT is unable to construct at its authorized transmitter site, a new site has been found. However, the maximum ERP from this new site, as limited by the FCC's current Freeze on contour extension, will not allow KPXC-DT to achieve adequate city coverage of Denver. Thus, the applicant is requesting waiver of the FCC's Freeze. Figure 2

is a map indicating that the proposed City-Grade contour will encompass all of the city limits of Denver (derived from 2000 U.S. Census information for Colorado).

### Allocation Considerations

The proposed KPXC-DT operation meets the FCC's interference standards to pertinent analog (NTSC) and DTV assignments using the procedures outlined in the FCC's OET-69 Bulletin and a 2 kilometer grid cell size. The proposed KPXC-DT operation complies with the FCC's "de minimis" interference policy with respect to pertinent Class A TV assignments. If necessary, a waiver of the FCC rules is requested with respect to use of the OET-69 interference procedures.

Table Mountain Radio Quiet Zone (CO) is located 32.6 kilometers at a bearing of 284 degrees True. The proposal will not adversely impact the Table Mountain Radio Quiet Zone.

### Radiofrequency Electromagnetic Field Exposure

The proposed KPXC-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 359 meters above ground level with a maximum ERP of 1000 kW. A conservative relative field value of 0.2 was assumed for the antenna calculation (see Figure 3). The calculated power density at a point 2 meters above ground level will be  $0.011 \text{ mW/cm}^2$ . This is less than 5% of the FCC's recommended limit of  $0.43 \text{ mW/cm}^2$  for channel 43 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 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.



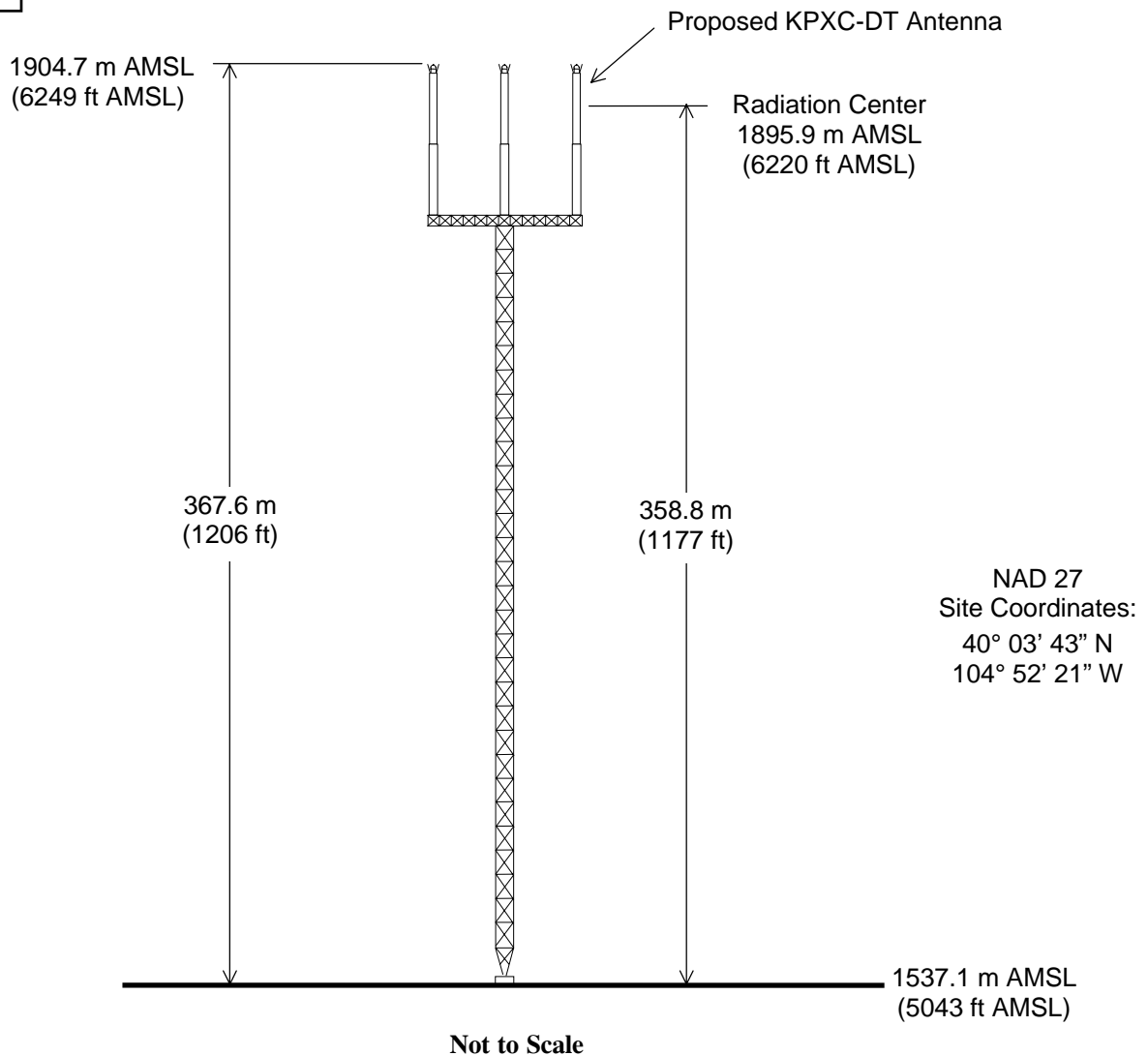
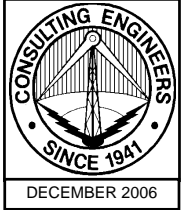
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December 26, 2006

FAA Study no. 2006-ANM-1124-OE

## Proposed Richland Tower

**PROPOSED ANTENNA AND SUPPORTING STRUCTURE**

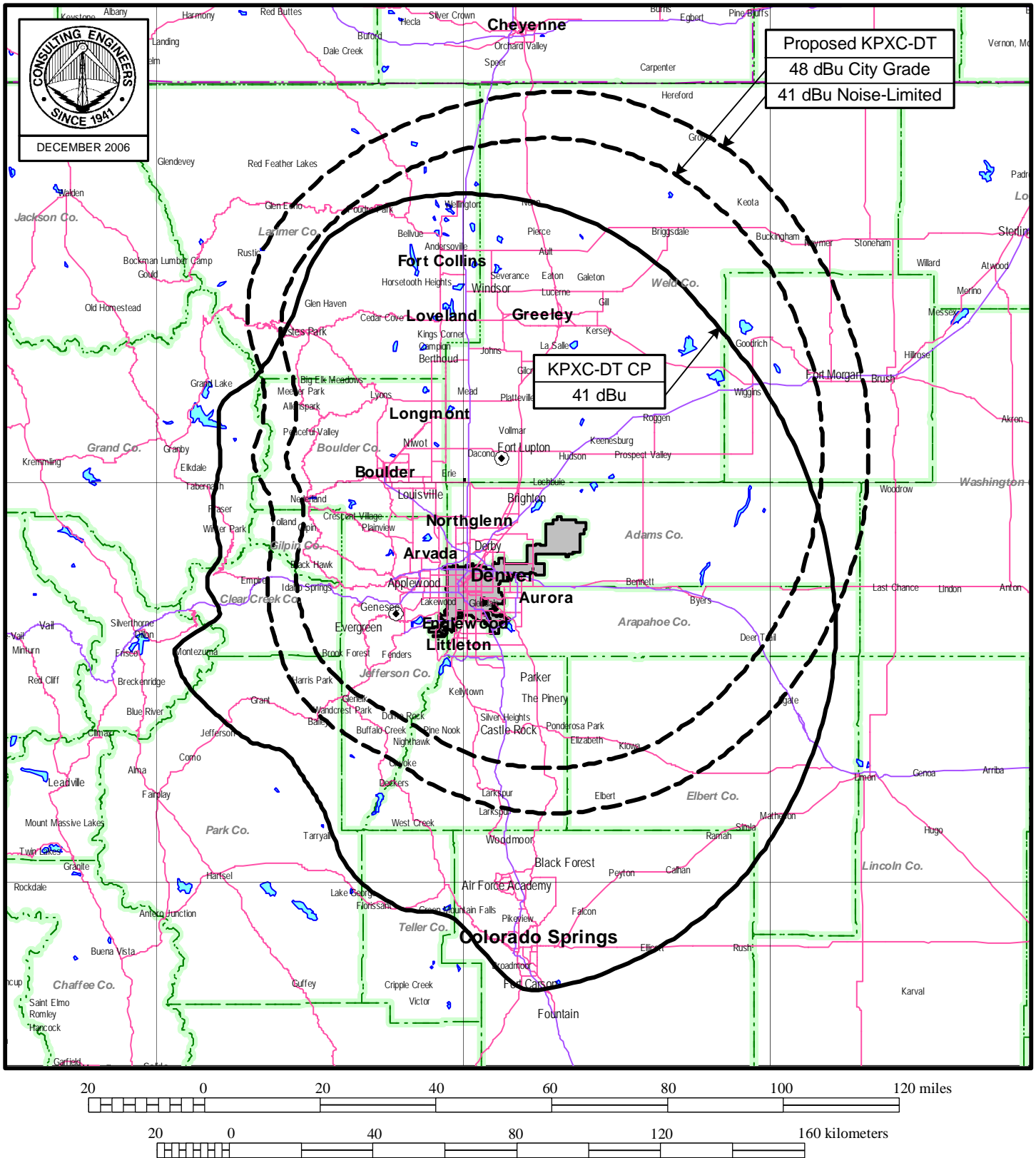
STATION KPXC-DT

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

Figure 2



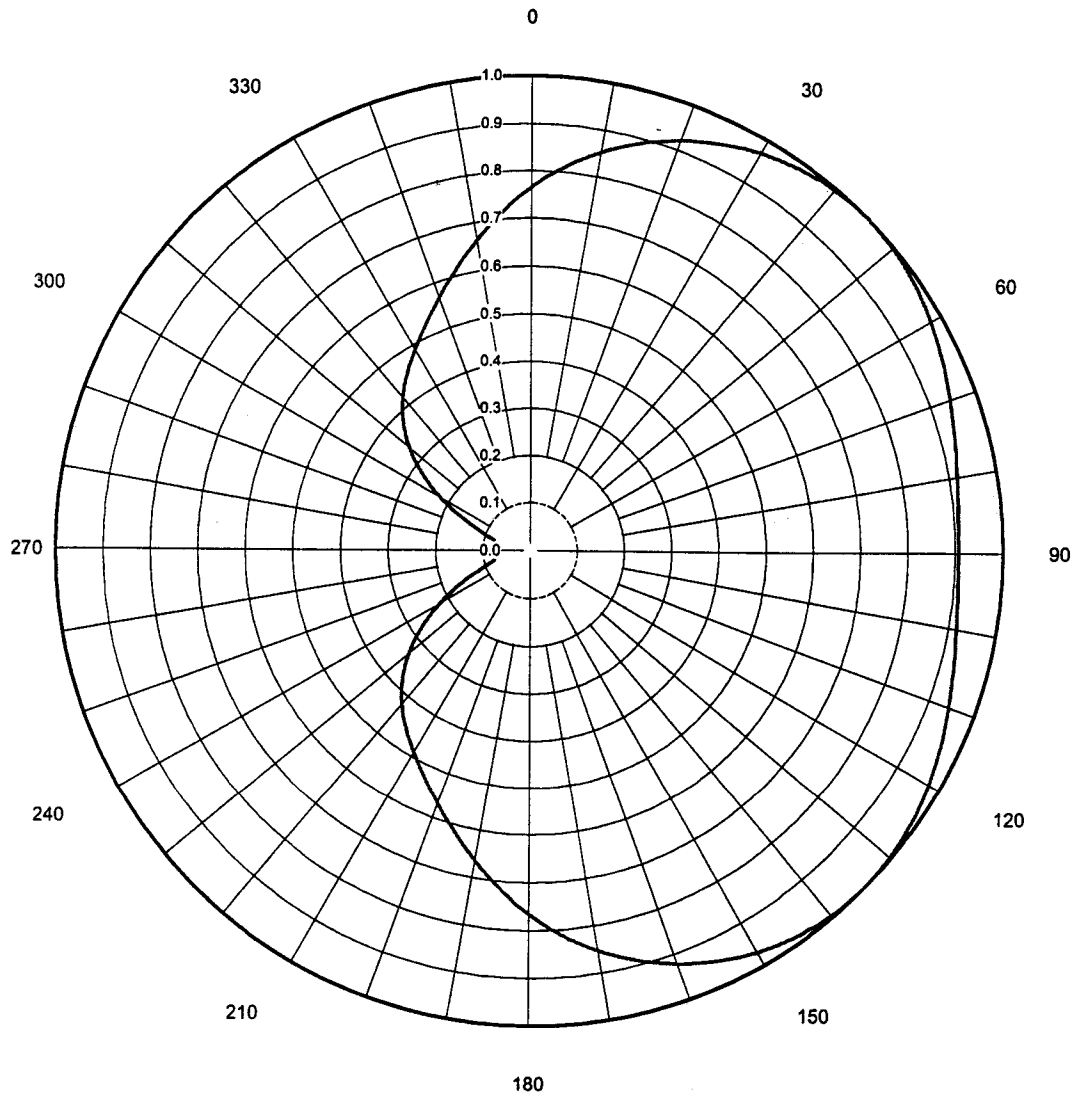
Dielectric

Proposal Number	C-00648	
Date	14-Sep-06	
Call Letters		Channel 43
Location	Denver, Co	
Customer	Ionmedia	
Antenna Type	TFU-26DSC-R C190	

**AZIMUTH PATTERN**

Gain 1.90 (2.79 dB)  
Calculated / Measured Calculated

Frequency 647.00 MHz  
Drawing # TFU-C190-6470







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Date	14-Sep-06	
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Customer	Ionmedia	
Antenna Type	TFU-26DSC-R C190	

### ELEVATION PATTERN

RMS Gain at Main Lobe	22.00 ( 13.42 dB )	Beam Tilt	1.00 deg
RMS Gain at Horizontal	11.60 ( 10.64 dB )	Frequency	647.00 MHz
Calculated / Measured	Calculated	Drawing #	26Q220100-90

