

TECHNICAL EXHIBIT  
MINOR AMENDMENT TO PENDING APPLICATION  
STATION WPXE-DT (FACILITY ID 37104)  
KENOSHA, WISCONSIN

MARCH 21, 2002

CH 40    880 KW (MAX-DA)    342 M

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Technical Narrative

This Technical Exhibit supports a minor amendment to the pending application for digital television (DTV) station WPXE-DT on channel 40 at Kenosha, Wisconsin. The *pending* WPXE-DT application proposes to operate with a directional antenna maximum effective radiated power (ERP) of 910 kW and an antenna height above average terrain (HAAT) of 342 meters (BPCDT-19991012ABL). The proposed WPXE-DT facility will operate with a directional antenna maximum ERP of 880 kW and an antenna HAAT of 342 meters.

Proposed Facilities

This application proposes only to reduce the directional ERP. No other changes to the currently pending application are hereby proposed. The transmitter site coordinates remain: 43-05-44 N, 87-54-17 W. The FCC antenna structure registration number is 1057482. The proposed facilities (880 kW, 342 m) comply with Section 73.622(f)(8)(i) of the FCC rules concerning maximum allowable ERP and antenna height for DTV stations.

There are no AM broadcast stations located within 3.2 kilometers of the proposed transmitter site. The proposed site is located within an antenna farm where various other broadcasting operations exist. No adverse impact is expected to any other surrounding

station. However, the applicant recognizes its responsibility to correct problems that may result from its proposed operation.

The transmitter site is beyond the coordination zones with Canada (400 km) and Mexico (275 km). The closest FCC monitoring station is at Allegan, Michigan, approximately 168 kilometers to the east-southeast. The closest point of the National Radio Quiet Zone (VA/WV) is more than 700 kilometers to the southeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1,400 kilometers to the west. The closest radio astronomy site operating on TV channel 37 is at North Liberty Iowa, approximately 335 kilometers to the west-southwest. These separations are sufficient to not be a concern for coordination purposes.

#### Allocation Considerations

Interference calculations have been made using the procedures outlined in the FCC's OET-69 bulletin, using the FCC's default 2 kilometer grid spacing. The pending application appears to cause excessive interference to station KFXB-DT (see FCC "30-day" letter, dated February 20, 2002). As shown in the table below, this proposal will reduce the interference caused to KFXB-DT to *de minimis* levels.

NTSC/DTV Station	Baseline	Proposed UNIQUE Interference
40 KFXB DUBUQUE IA (CP)	310,783	3,504 (1.1%)
40 KFXB DUBUQUE IA (LIC)	221,581	3,777 (1.7%)

The proposed WPXE-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.

### 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. Interference calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin. The proposed WPXE-DT operation does not cause any new calculated interference to any current or potential Class A station over that already predicted to be caused by the current WPXE-DT application (filed prior to the FCC's May 1, 2001 DTV maximization deadline). 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.

### Environmental Considerations

The proposed WPXE-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 347.5 meters above ground level. The maximum DTV ERP is 880 kW. A conservative relative field value of 0.15 was used for the calculation (see Figure 2C). Therefore, the "worst-case" calculated power density at a point 2 meters above ground level is  $0.005 \text{ mW/cm}^2$ . This is 1.3% of the FCC's recommended limit of  $0.42 \text{ mW/cm}^2$  for channel 40 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 WPXE-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.



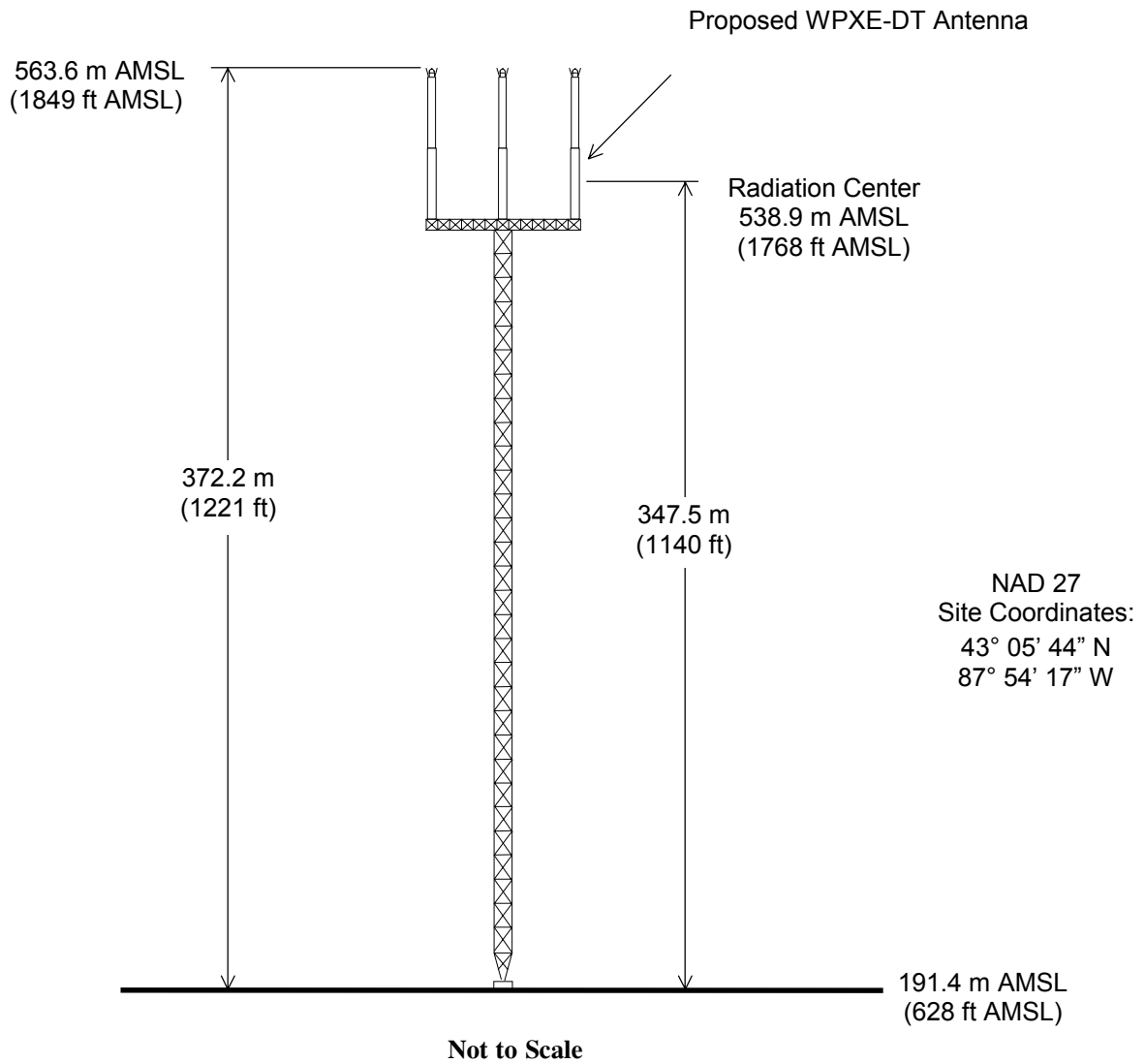
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du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000

March 21, 2002



Tower Reg. No. 1057482



## ANTENNA AND SUPPORTING STRUCTURE

STATION WPXE-DT

KENSOHA, WISCONSIN

CH 40 880 KW (MAX-DA) 342 M

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



Date	07 Sep 1999		
Call Letters	WPXE-DT	Channel	40
Location	Kenosha, WI		
Customer			
Antenna Type	TFU-18DSC C170		

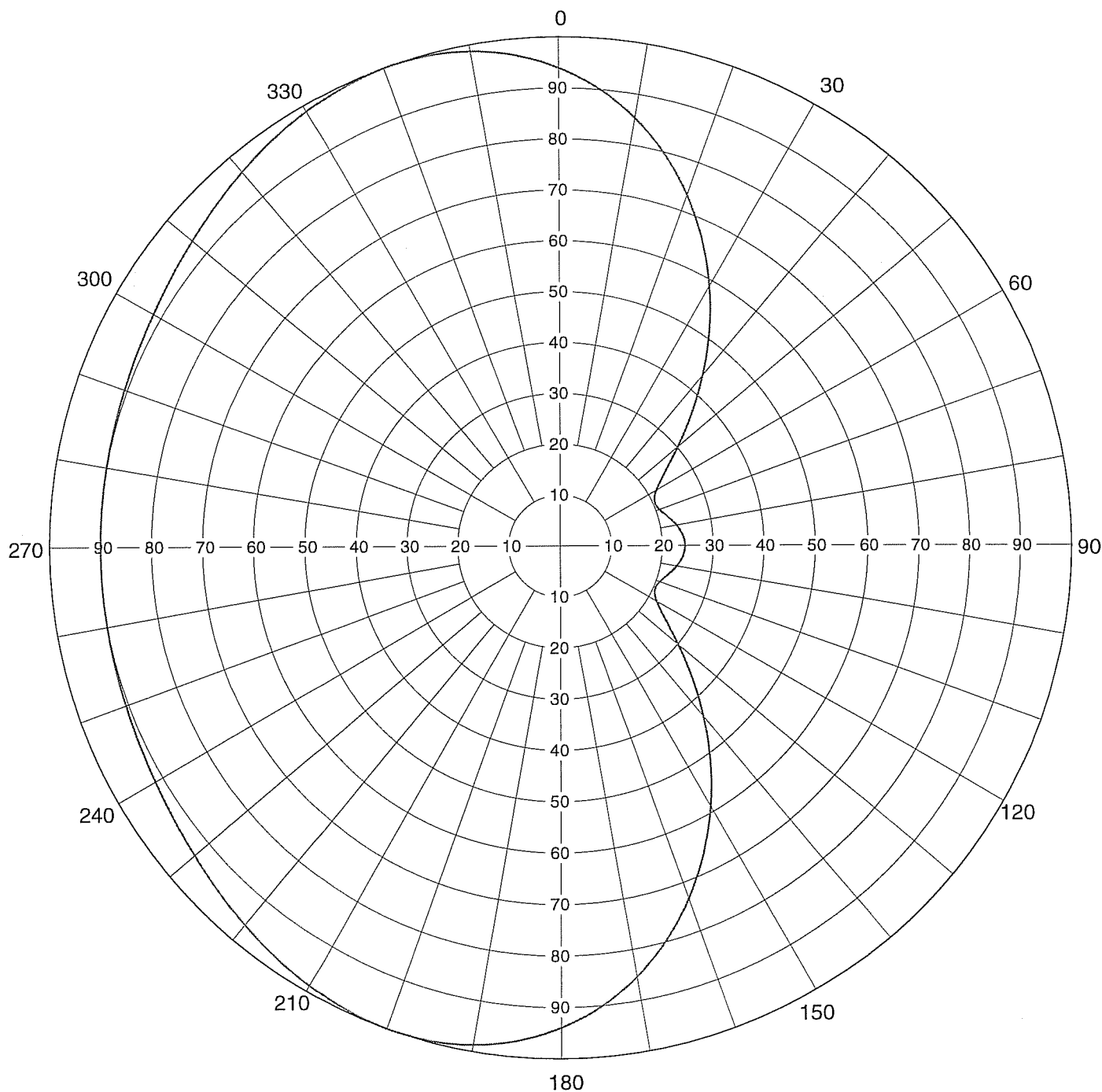
### AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**

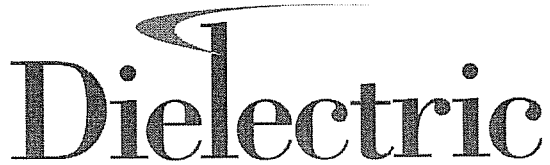
Frequency  
Drawing #

**629 MHz**  
**C170**



Remarks:

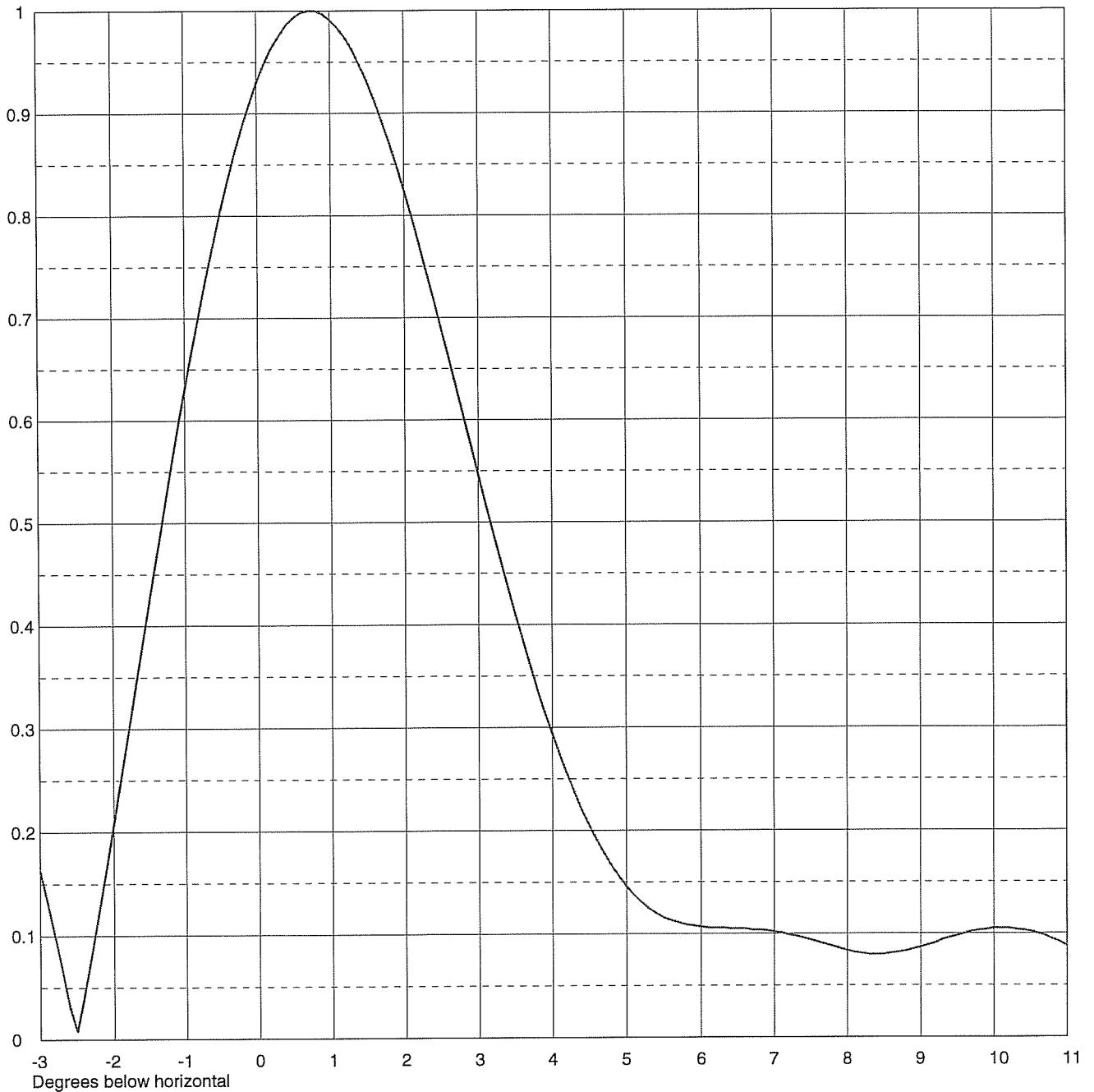




Date	07 Sep 1999	
Call Letters	WPXE-DT	Channel 40
Location	Kenosha, WI	
Customer		
Antenna Type	TFU-18DSC C170	

### ELEVATION PATTERN

RMS Gain at Main Lobe	15.0 (11.76 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	13.0 (11.14 dB)	Frequency	629.00 MHz
Calculated / Measured	Calculated	Drawing #	18Q15007



Remarks:

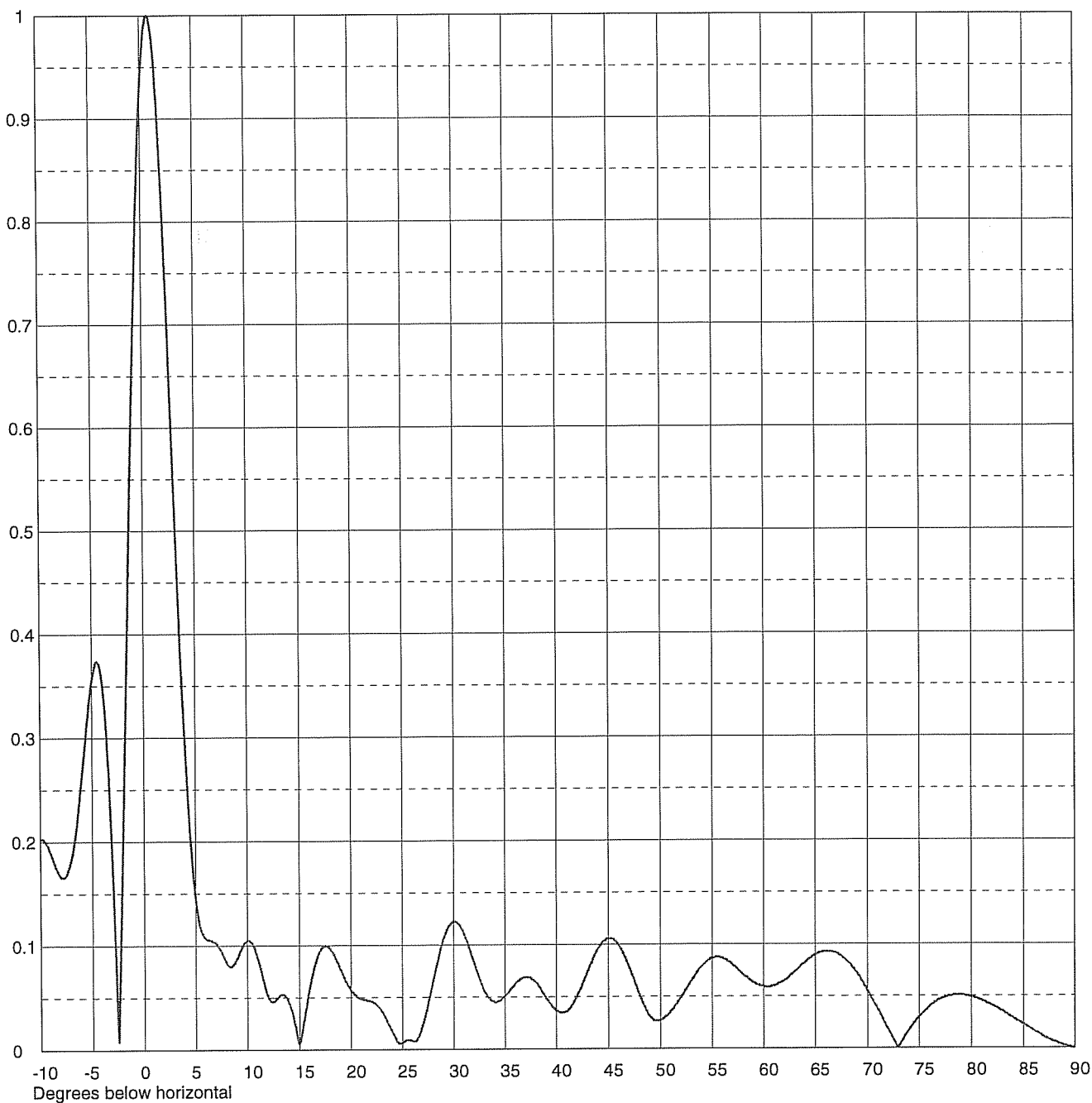


Date  
Call Letters  
Location  
Customer  
Antenna Type

07 Sep 1999  
WPXE-DT Channel 40  
Kenosha, WI  
TFU-18DSC C170

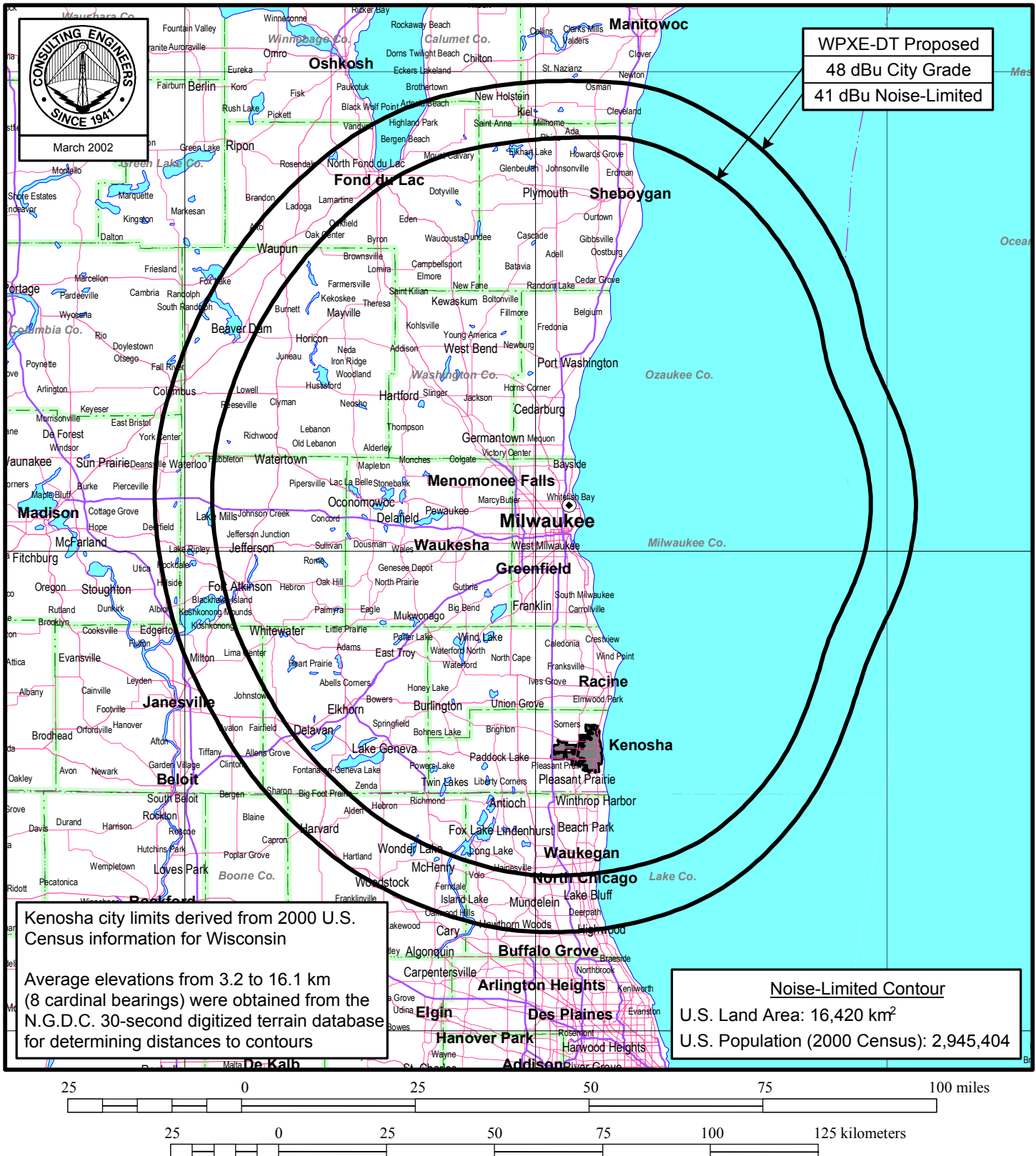
### ELEVATION PATTERN

RMS Gain at Main Lobe	15.0 (11.76 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	13.0 (11.14 dB)	Frequency	629.00 MHz
Calculated / Measured	Calculated	Drawing #	18Q15007-90



Remarks:

Figure 3



## PREDICTED F(50,90) COVERAGE CONTOURS

STATION WPXE-DT

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Technical Specifications

Channel	40
Frequency	626-632 MHz
Proposed Site Coordinates (NAD 27)	43° 05' 44" North Latitude 87° 54' 17" West Longitude
Site Elevation above mean sea level	191.4 m
Average elevation above mean sea level of 8 equally spaced radials, 3-16 kilometers	197 m
Overall height of antenna structure	
Above ground	372.2 m
Above mean sea level	563.6 m
Height of antenna radiation center	
Above ground	347.5 m
Above mean sea level	538.9 m
Above average terrain	342 m
Transmitter rated power output (average)	50 kW
Transmission line	Dielectric 562176 (6")
Length	(1,250 ft) 381 m
Efficiency (1.538 dB loss)	70.2%
Antenna	Dielectric TFU-18DSC C170
Polarization	Horizontal
Peak Power Gain	25.5
Beam Tilt (electrical)	0.75°
Orientation	270° T

Proposed Operation

Transmitter output power (average)	49.2 kW
Transmission line loss	14.7 kW
Antenna input power	34.5 kW
Maximum Effective Radiated Power (MAX-DA)	880 kW