

TECHNICAL EXHIBIT
APPLICATION FOR DTV CONSTRUCTION PERMIT
STATION KTVF-DT
FAIRBANKS, ALASKA
CH 26 27 KW (MAX-DA) 471 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KTVF-DT for its final DTV facility at Fairbanks, Alaska. This application requests a construction permit (CP) for a digital television operation on channel 26 at Fairbanks with a directional effective radiated power of 27 kilowatts. KTVF-DT intends to use an ERI AL12M-26-PM transmitting antenna for digital operation.

Proposed Facilities

Station KTVF-DT proposes to operate DTV channel 26 from the *Ester Dome* transmitter site. The antenna height above average terrain for the channel 26 DTV operation will be 471 meters. The proposed KTVF-DT effective radiated power exceeds the Commission's *Appendix B* allocated maximum effective radiated power in some azimuthal directions.¹ Therefore, an allocation study was completed to ensure no prohibited interference would occur.

¹ See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

The proposed site location is:

64° 52' 45" North Latitude
148° 03' 14" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 2.

Figure 3 is a map showing the DTV predicted coverage contour and the associated analog Grade B coverage contour. The extent of the contour has been calculated using the normal FCC prediction method. The Fairbanks city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Allocation Considerations

The proposed KTVF-DT Channel 26 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments.

Radiofrequency Electromagnetic Field Exposure

The proposed KTVF-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 KTVF-DT antenna is located 20 meters above ground level. The maximum effective radiated power is 27 kilowatts. A downward relative field value of 0.2 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.09 mW/cm². This is 5

percent of the Commission's recommended limit of 1.8 mW/cm^2 for channel 26 for a "controlled" environment.

Access to the transmitting site is restricted and appropriately marked with warning signs. As this will be a multi-user site an agreement between the stations 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 KTVF-DT operation appears to be otherwise categorically excluded from environmental processing.

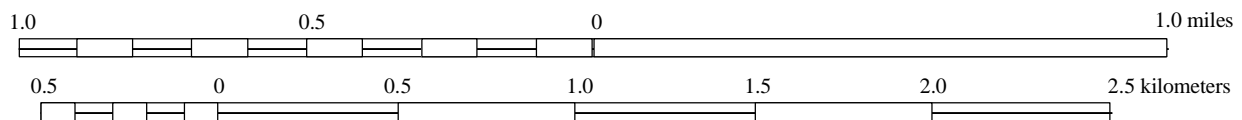
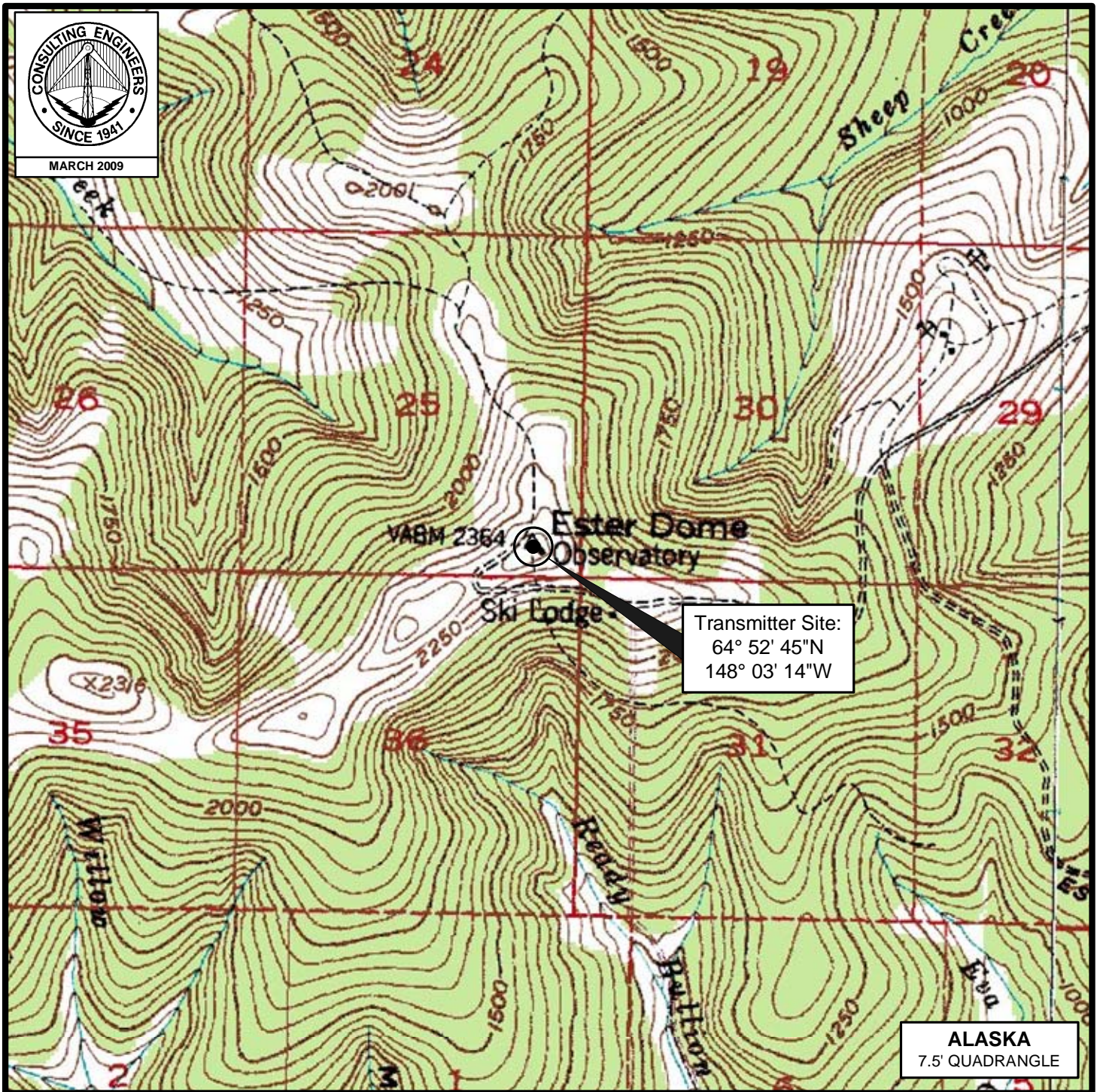
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

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March 6, 2009

Figure 1



PROPOSED TRANSMITTER SITE

DTV STATION KTVF-DT

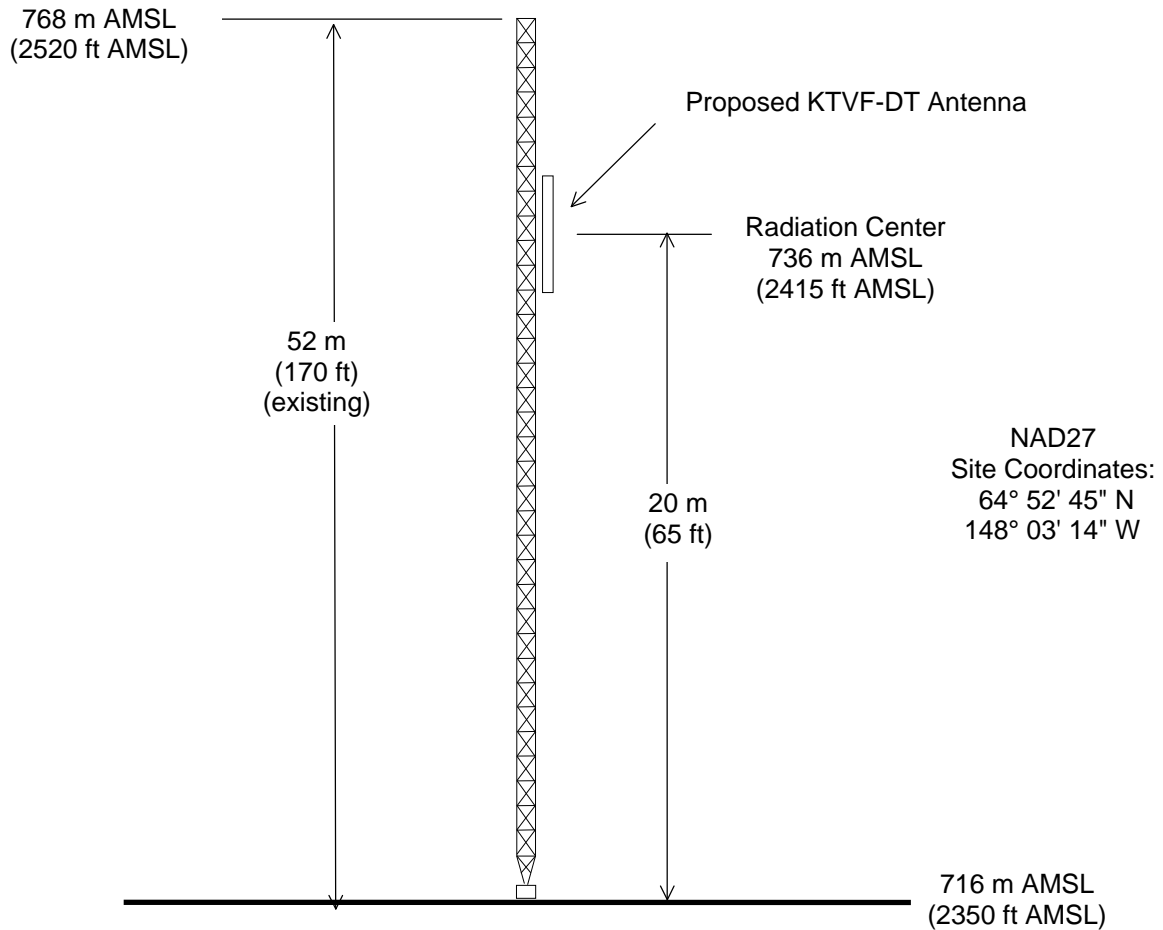
FAIRBANKS, ALASKA

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ASRN: N/A

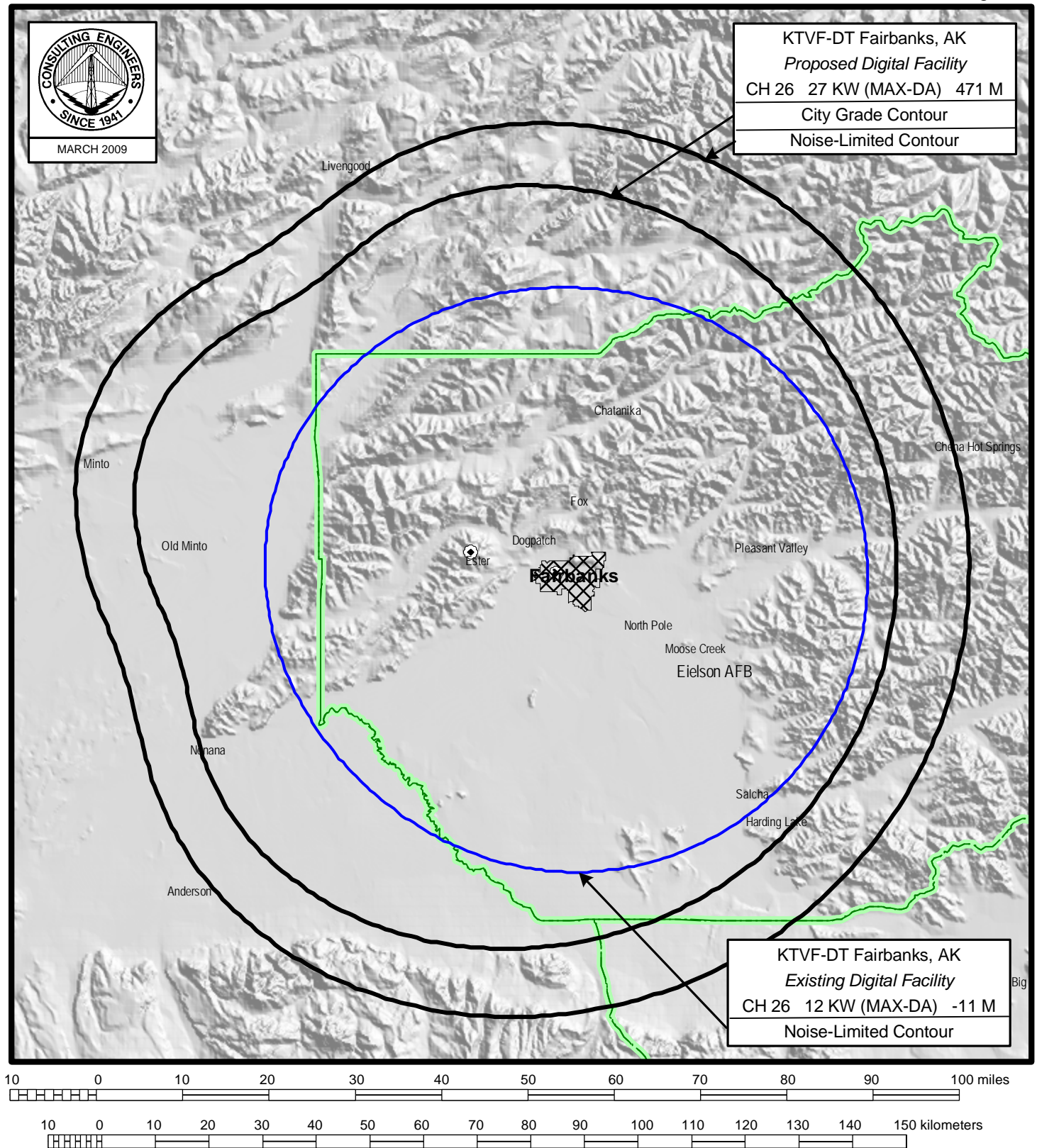


Not to Scale

ANTENNA AND SUPPORTING STRUCTURE

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FCC PREDICTED COVERAGE CONTOURS

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