

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of CHRISTIAN BROADCASTING, INC., licensee of noncommercial radio station KATB(FM), Channel 207C3 in Anchorage, Alaska, in support of its Application for Construction Permit to increase the effective radiated power of the station to 14.4 kW and thereby increase the class to a Class C2 facility. No change in the transmitter site location or antenna height is proposed herein.

It is proposed to utilize the existing KATB Jampro 3-bay FM antenna, which is mounted at the 19-meter level of an existing 28-meter communications tower. In Exhibit B, we show the predicted service contours for the proposed facility.

An interference study is provided in Exhibit C. As shown, the protected service contours and interference contours of the proposed KATB facility and those of pertinent co-channel and adjacent-channel FM stations do not overlap. Proposed operating parameters for the instant facility are provided in Exhibit D and a power density calculation follows as Exhibit E.

Since no change in the overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. In addition, the FCC has assigned Antenna Structure Registration number 1062073 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits are true and correct to the best of my knowledge and belief.



October 20, 2015

KEVIN T. FISHER



CONTOUR POPULATION
2010 U.S. CENSUS DATA
70 DBU : 254,924 (99,015 HH)
60 DBU : 279,088 (110,100 HH)



EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED KATB(FM)
CH. 207C3 - ANCHORAGE, AK

Exhibit C-1

PROPOSED KATB(FM)

CHANNEL 207C2 - ANCHORAGE, ALASKA

REFERENCE CH# 207C2 - 89.3 MHz, Pwr= 14.5 kW, HAAT= 202.0 M, COR= 529 M
 61 04 02.0 N.
 149 44 36.0 W.

DISPLAY DATES
 DATA 10-20-15
 SEARCH 10-20-15

Average Protected F(50-50)= 46.39 km
 Omni-directional

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
208A Sutton	KVRF	LIC_CX AK		30.4 211.2	87.11 BLED20110907AAJ	61 44 18.2 148 54 26.6	0.360 -435	36.8 297	24.5 Radio Free Palmer, Inc.	-17.8	-37.6*
205A Girdwood	KEUL	LIC_HX AK		107.7 288.3	37.87 BLED20020314AAO	60 57 44.0 149 04 38.0	1.400 194	2.5 727	52.3 Girdwood Community Club In	-32.7*	-21.1*
204A Houston	KJHA	LIC_CX AK		354.3 174.2	64.79 BLED20121025AAM	61 38 44.6 149 51 51.6	0.430 17	1.5 139	17.7 Evangelistic Alaska Missio	-4.7*	40.4
205A Palmer	KJLP	LIC_CX AK		31.7 212.3	72.88 BLED20050822ANL	61 37 18.0 149 01 16.0	0.250 -64	1.1 276	21.7 Christian Broadcasting Inc	3.7	44.5
205A Kasilof	KABN-FM	LIC_V_ AK		231.3 50.1	94.08 BLED20110428AAK	60 31 58.0 151 04 52.0	3.200 102	2.6 147	29.0 Alaska Educational Radi o S	23.4	58.3

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone= , Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beam tilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.



KATB(FM)
54 DBU

KVRF(FM)
60 DBU

KVRF(FM)
54 DBU

KATB(FM)
60 DBU

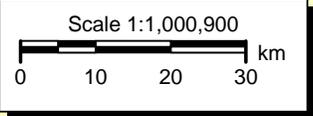
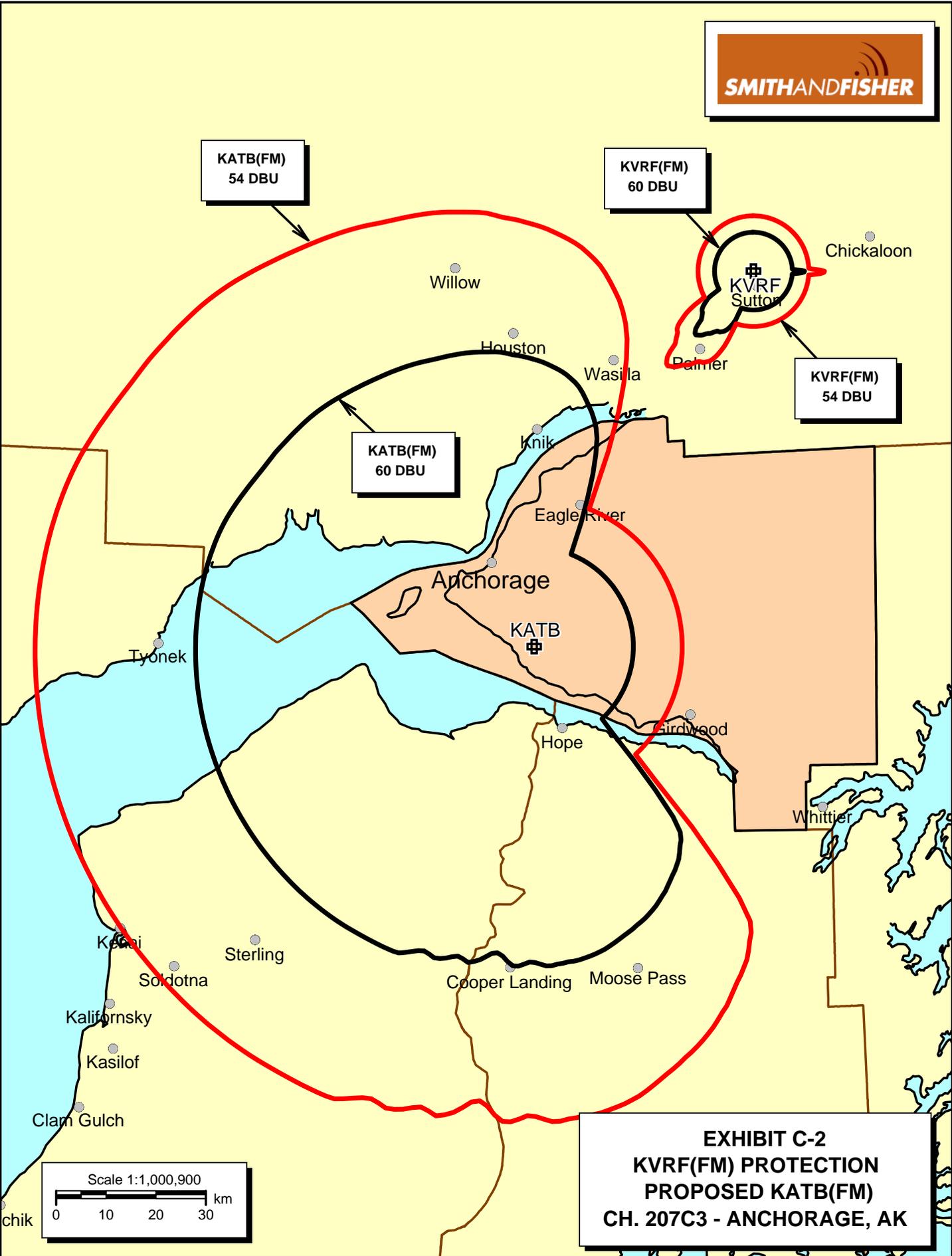


EXHIBIT C-2
KVRF(FM) PROTECTION
PROPOSED KATB(FM)
CH. 207C3 - ANCHORAGE, AK

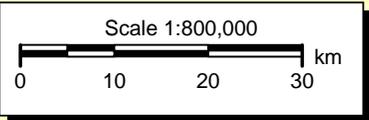
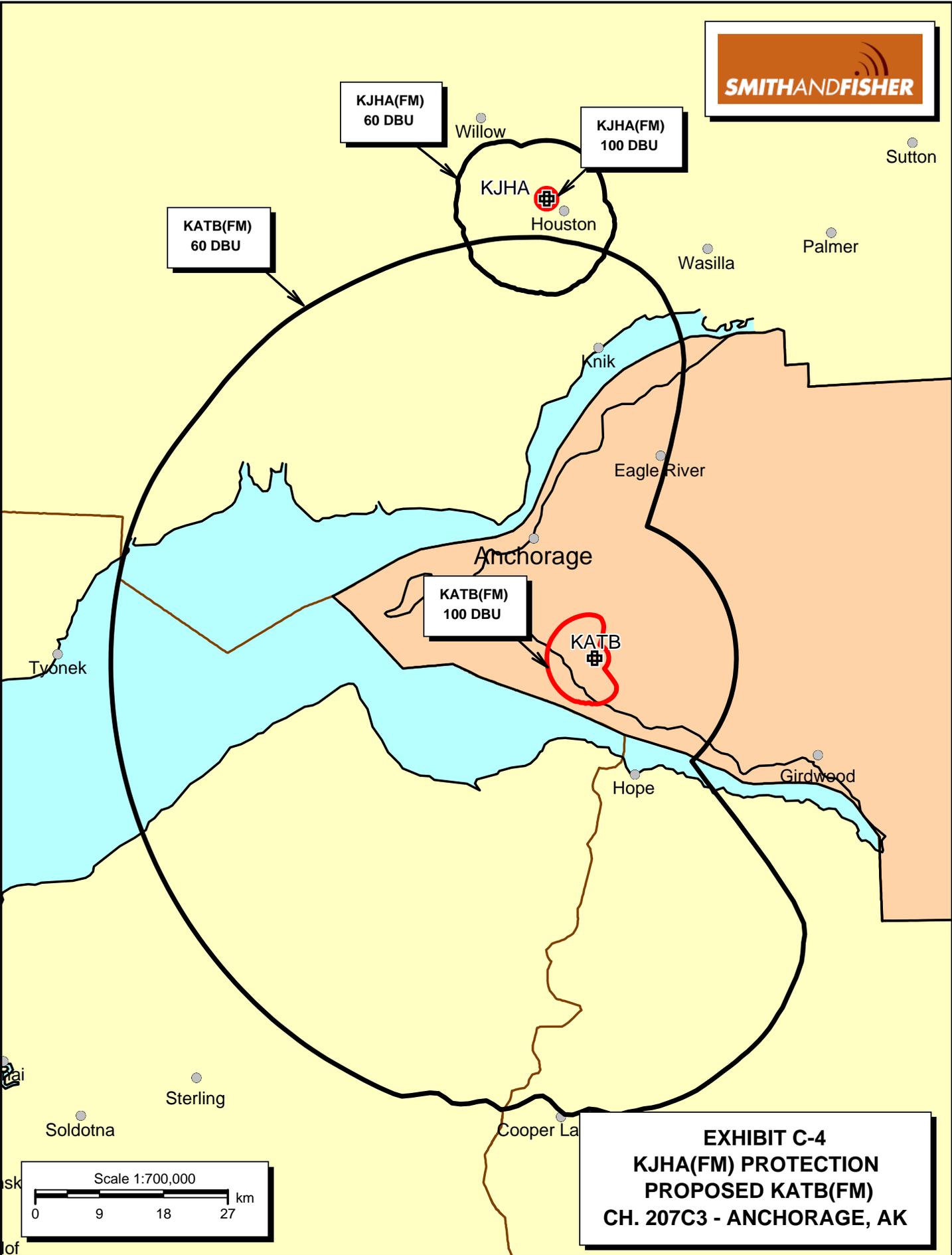
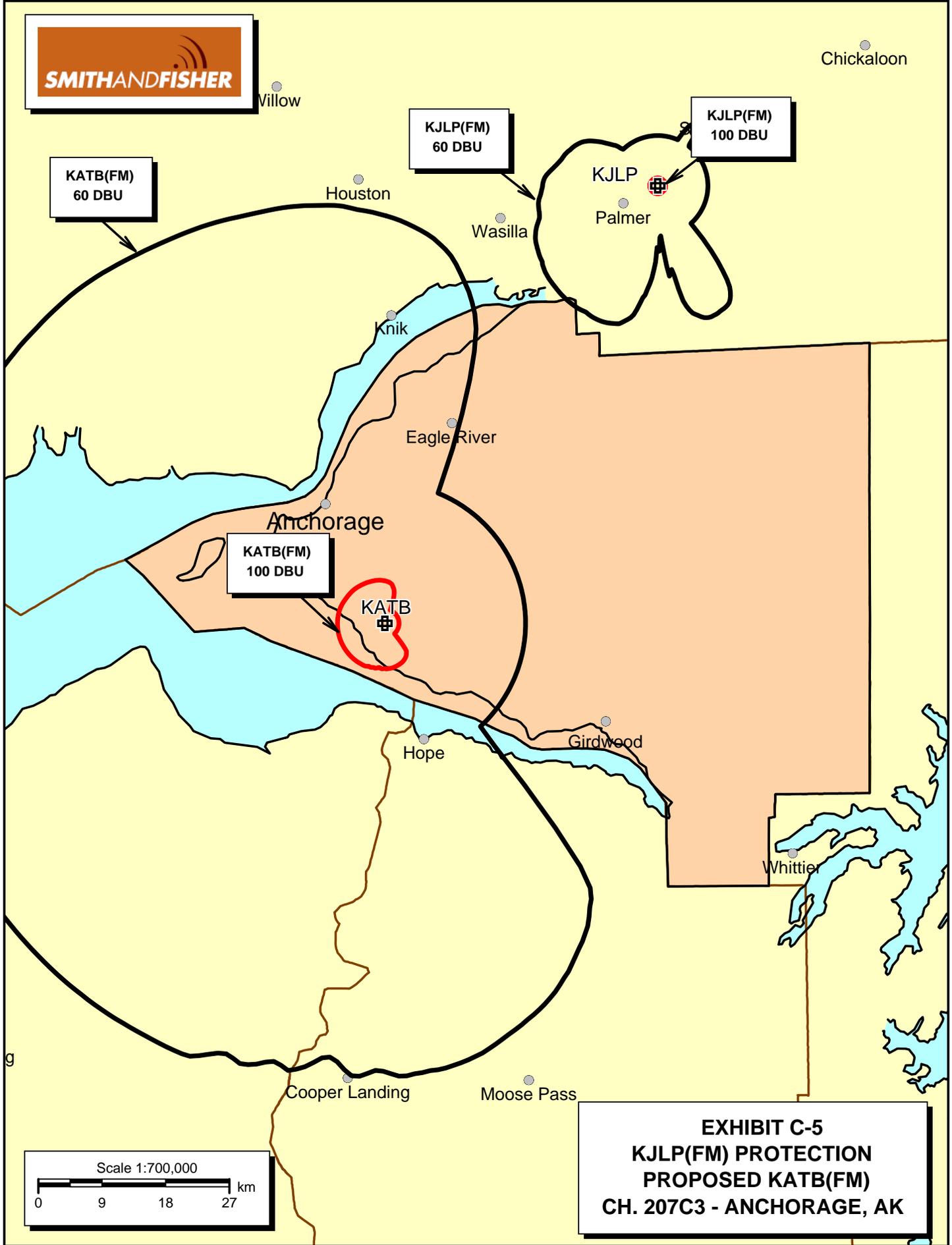


EXHIBIT C-3
KEUL(FM) PROTECTION
PROPOSED KATB(FM)
CH. 207C3 - ANCHORAGE, AK





KATB(FM)
60 DBU

KJLP(FM)
60 DBU

KJLP(FM)
100 DBU

KATB(FM)
100 DBU

KATB

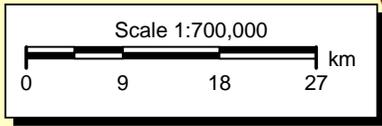


EXHIBIT C-5
KJLP(FM) PROTECTION
PROPOSED KATB(FM)
CH. 207C3 - ANCHORAGE, AK

PROPOSED OPERATING PARAMETERS

PROPOSED KATB(FM)
CHANNEL 207C3 – ANCHORAGE, ALASKA

Transmitter Power Output:	10.0 kW
Transmission Line Efficiency:	96.1%
Antenna Power Gain – Main Lobe:	1.5 (H,V)
Effective Radiated Power – Main Lobe:	14.4 kW (H,V)
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Andrew LDF12-50
Size and Type:	2-1/4" foam heliax
Length:	100 feet
Antenna Make and Model:	Jampro JMPC-3
Orientation	Omnidirectional
Beam Tilt	none
Radiation Center Above Ground:	19.0 meters
Radiation Center Above Mean Sea Level:	533.7 meters

POWER DENSITY CALCULATION

PROPOSED KATB(FM)
CHANNEL 207C3 – ANCHORAGE, ALASKA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Anchorage facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 14.4 kW (H,V), an antenna radiation center 19 meters above ground, and assuming a vertical relative field value of 20 percent at the steeper elevation angles for the KATB Jampro antenna, maximum power density two meters above ground of 0.13 mW/cm² is calculated to occur near the base of the tower. This value is only 13 percent of the 1.0 mW/cm² reference for controlled environments (areas without public access) surrounding a facility operating in the FM Band. Because there are other broadcast facilities that operate from this location, the calculated power density values do not properly reflect the RF environment at this multi-user site. It is important to note that the broadcast towers at this site are enclosed by a fence with a locked gate.

Recently, this office conducted a power density measurement survey of the site and concluded that the site complies with the Commission's human exposure requirements with respect to non-ionizing electromagnetic radiation. Following completion of the power increase proposed herein, another such study will be conducted in order to determine that the site continues to meet the FCC's exposure guideline values.

EXHIBIT E

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.