ENGINEERING STUDY

KUSF (FM)

Requesting a Minor Change to
License BLED1755

Channel 212 (90.3mHz)

San Francisco, CA.

Facility ID 69143

March, 2011

EXPEDITED PROCESSING REQUESTED

independence
BROADCAST SERVICES
Dallas, TX 75225

KUSF (FM)

Requesting a Minor Change to

License BLED1755

Facility ID 69143

March, 2011

TECHNICAL STATEMENT

This technical statement and attached exhibits were prepared on behalf of the Classical Public Radio Network, proposed assignee of radio station KUSF (FM), Channel 212A, 90.3mHz, San Francisco, CA (See File No. BALED-20110125ACE). This proposal is to relocate KUSF's broadcast transmitter site from the existing location on the University of San Francisco campus to a common transmitter site on a hill above Sausalito, CA. The relocation will substantially increase the HAAT of the antenna and reduce the ERP. The modification will technically increase the station class from A to B1. The application is filed by, the Licensee, the University of San Francisco, as an accommodation to Classical Public Radio Network (CPRN), to be constructed by CPRN upon grant and consummation of the KUSF assignment.

REQUEST FOR EXPEDITED PROCESSING

KUSF's antenna currently resides on a building within the University of San Francisco (USF) campus. Because, upon approval by the FCC, the license will be assigned to a party not affiliated with USF, it is necessary to relocate the station's transmitter site. Additionally, due to the controversial nature of the license assignment, USF and CPRN wish to maintain better security at the transmitter site by relocating it to an off-campus location.

ALLOCATION

The proposed operation will utilize a directional antenna and will meet all contour protection requirements toward other stations. The allocation study attached as Exhibit 18.1 indicates that eight facilities are close enough to warrant close examination, KWMR, KALX, KDVS (CP and LIC), KZSU, K265DI, KVHS, KAZU,and KSJS. Those maps are attached as Exhibits 18.2 through 18.8. Each is discussed in detail below:

KWMR- As shown in exhibit 18.2, the only overlap between the protected and interfering contours of KUSF and KWMR is over the Pacific Ocean.

KALX – The proposed antenna pattern fully complies with overlap requirements both incoming and outgoing to both KUSF and KALX.

KDVS – As shown in exhibit 18.4, the only overlap between the protected and interfering contours of KUSF and KDVS is over the San Francisco Bay. The KUSF proposed antenna contours are compliant with both the construction permit facility and the existing licensed KDVS facility.

KZSU – As shown in exhibit 16.8, any overlap between the protected and interfering contours of KUSF and KZSU is over the San Francisco Bay.

K265DI – K265DI is on an IF frequency, 10.6mHz (53 channels) from KUSF. K265DI is a secondary, class D station operating with 80 watts ERP. Although technically short-spaced, the commission typically allows this type of short spacing as long as the interfering station is under 100 watts as is the case here. The proposed assignee does not wish to displace K265DI and requests that the commission allow the two facilities to coexist unless actual interference is demonstrated.

KVHS, KAZU, and KSJS As demonstrated in exhibits 18.6 to 18.8, there is no prohibited overlap to any of these stations from the proposed KUSF facility.

The proposed facility is not within 320kM of any common border between the US and Mexico or Canada. There is no impact to any full power TV Channel 6 operation.

Exhibit 14.1 indicates that the proposed 60dBu noncommercial station’s contour will completely encompass the San Francisco, CA. Community of License.

The main studio location for the proposed assignee will be located at 201 3rd St. San Francisco, CA. following the license assignment and is within the Community of License. Until such time as the license is transferred, the main studio location for KUSF remains at the University of San Francisco campus, 2130 Fulton St. in San Francisco.

ENVIRONMENTAL CONSIDERATIONS

The proposed antenna will be attached to an existing tower at the common tower site called "Wolfback Ridge". A number of other stations transmit from towers within 100ft. of the proposed tower. None of the towers have ASR numbers assigned and they are all under 200ft.AGL.

In particular the other non-excluded stations are:

KDFC-FM (33kW, 46m AGL)

KFRC-FM (80kW, 31m AGL),

KISQ (75kW, 31m AGL),

KLLC (82kW, 28m)

The proposed antenna for KUSF will not extend or significantly alter the existing proposed tower structure for purposes of the Nationwide Programmatic Agreement and the NHPA Section 106.

With the exception of the four stations noted above, there are no other non-excluded RF sources located on or near the tower supporting the proposed KUSF antenna. The proposed KUSF antenna will operate at a maximum power level of 1kW and will operate at 27m AGL. Because the other antennas at the site are so close in proximity to the proposed antenna, it can be considered for all intents and purposes that the KUSF antenna will be co-located on the same tower and at similar heights as the other non-excluded facilities.

The proposal is to operate with a two-bay, 0.75 wavelength spaced antenna centered at 27m AGL. Based upon the FCC "FM Model for Windows" Power Density vs. Distance calculator using a "ERI or Jampro rototiller (EPA)" type antenna setting, the maximum power density at 2m AGL is expected to be 5.16 μW/cm² or 2.58% of the permitted 200 μW/cm² limit for uncontrolled exposure. The output of the FCC program "FM Model for Windows" is shown as figure 19

Because the expected emission from the KUSF antenna is under 5% of the permitted 200 µW/cm² limit for uncontrolled exposure, and because the existing tower planned for use is on an established "antenna farm" the proposed KUSF antenna and mounting structure are categorically excluded from further Environmental Assessment under 47CFR 1.1306 and 1.1307.

Radio station KUSF along with other users at the site will maintain an occupational safety policy and agrees to reduce power or cease operation during periods of maintenance to avoid potentially harmful exposure of personnel to non-ionizing RF radiation.

.

Respectfully Submitted

Bert Goldman
Technical Consultant

EXHIBIT 17 – Proposed KUSF Antenna Pattern

KUSF PROPOSED PATTERN

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.512
10.0	0.408
20.0	0.35
30.0	0.3
40.0	0.27
50.0	0.279
60.0	0.292
70.0	0.33
80.0	0.37
90.0	0.465
100.0	0.585
110.0	0.736
120.0	0.9
130.0	0.785
140.0	0.624
150.0	0.61
160.0	0.767
170.0	0.966
180.0	1.0
190.0	1.0
200.0	1.0
210.0	1.0
220.0	1.0
230.0	1.0
240.0	1.0
250.0	1.0
260.0	1.0
270.0	1.0
280.0	1.0
290.0	1.0
300.0	1.0
310.0	0.98
320.0	0.8
330.0	0.75
340.0	0.7
350.0	0.645

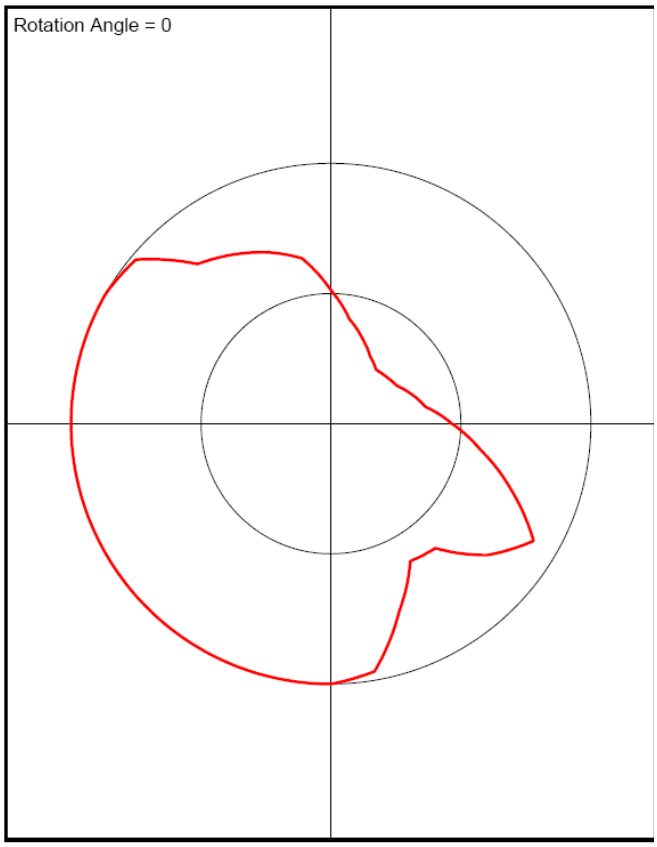


EXHIBIT 14.1

KUSF 212B1 ProposedCommunity of License Coverage

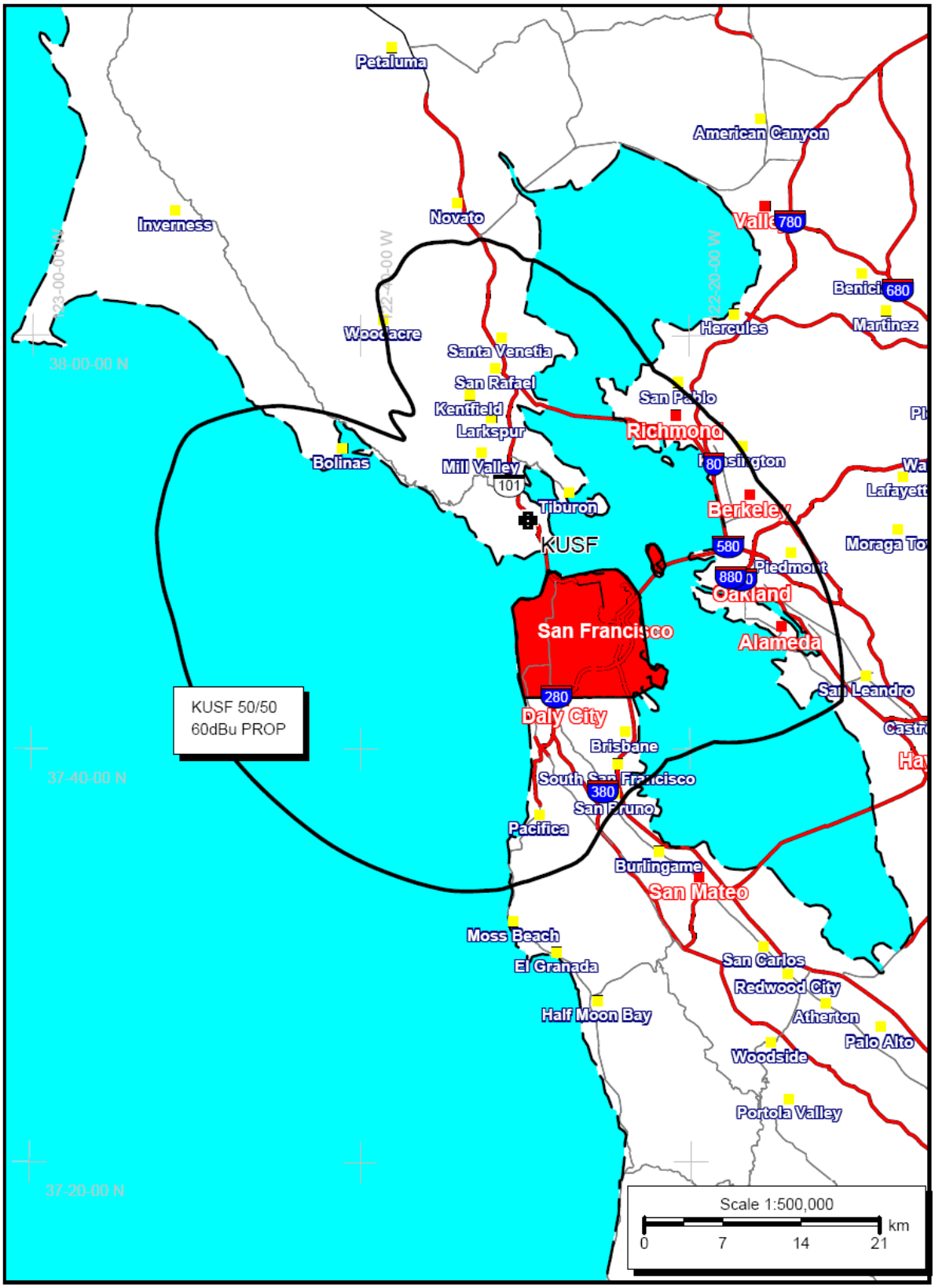


EXHIBIT 18.1 – Allocation Study

ComStudy 2.2 search of channel 212B1 (90.3 MHz Class A) at 37-51-04.0 N, 122-29-50.0 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE	
KWMR	POINT REYES STATION	CA	213	A	41.17	72.00	308.3	-11.47 dB	Water ovlp see 16.2
KALX	BERKELEY	CA	214	A	22.34	31.00	82.3	-4.69 dB	No overlap, see 16.3
K265DI	SAUSALITO	CA	265	D	0.02	0.00	90.0	0.0	IF under 100 watts
KVHS	CONCORD	CA	213	A	47.95	72.00	65.3	0.22 dB	close see 16.6
KDVS	DAVIS	CA	212	B1	100.73	143.00	40.1	0.30 dB	water ovlp see 16.4
KDVS	DAVIS	CA	212	B1	108.27	143.00	40.3	-0.72 dB	water ovlp see 16.4
KZSU	STANFORD	CA	211	A	56.33	72.00	150.0	-0.65 dB	water ovlp see 16.5
KAZU	PACIFIC GROVE	CA	212	B1	157.27	143.00	156.3	4.29 dB	close see 16.6
KSJS	SAN JOSE	CA	213	A	95.66	72.00	138.0	6.27 dB	close see 16.7
KYCC	STOCKTON	CA	211	B	107.54	113.00	83.2	9.66 dB	close see 16.8
NEW	NEWMAN	CA	212	A	136.01	115.00	115.7	11.85 dB	
KNDL	ANGWIN	CA	210	B	91.56	69.00	352.7	15.12 dB	
NEW	BOULDER CREEK	CA	211	A	87.01	72.00	156.6	16.05 dB	
KFJC	LOS ALTOS	CA	209	B1	66.75	48.00	151.9	17.28 dB	
NEW	LIVERMORE	CA	210	A	70.87	31.00	105.5	19.87 dB	
KFNO	FRESNO	CA	212	B	284.66	178.00	106.8	22.99 dB	
KLAI	LAYTONVILLE	CA	212	B	225.12	178.00	335.8	23.57 dB	
KAIS	TRACY	CA	214	B1	85.02	48.00	112.1	24.90 dB	
KKTO	TAHOE CITY	CA	213	C	279.49	165.00	53.7	25.74 dB	
KADV	MODESTO	CA	213	A	138.43	72.00	100.9	26.51 dB	
NEW	SAN LUCAS	CA	212	A	231.02	115.00	145.2	27.50 dB	
KXJZ	SACRAMENTO	CA	215	B	130.37	69.00	42.5	28.94 dB	
KZFR	CHICO	CA	211	B1	229.91	96.00	18.9	29.11 dB	
KLRS	LODI	CA	209	B	98.80	69.00	61.4	29.47 dB	
KYCI	FIREBAUGH	CA	213	A	198.08	72.00	128.7	33.16 dB	
KXJZ	SACRAMENTO	CA	215	B	122.41	69.00	50.0	34.01 dB	
KSRI	SANTA CRUZ	CA	214	A	102.09	31.00	157.2	34.69 dB	
NEW	WILLOWS	CA	213	B	177.81	113.00	0.8	35.34 dB	
KFER	SANTA CRUZ	CA	210	A	103.97	31.00	153.5	36.83 dB	
NEW	MORGAN HILL	CA	210	A	114.43	31.00	140.3	39.48 dB	

* FCC CDBS Database as of 3/17/11

EXHIBIT 18.2 – Contour protection to KWMR 1st Adjacent

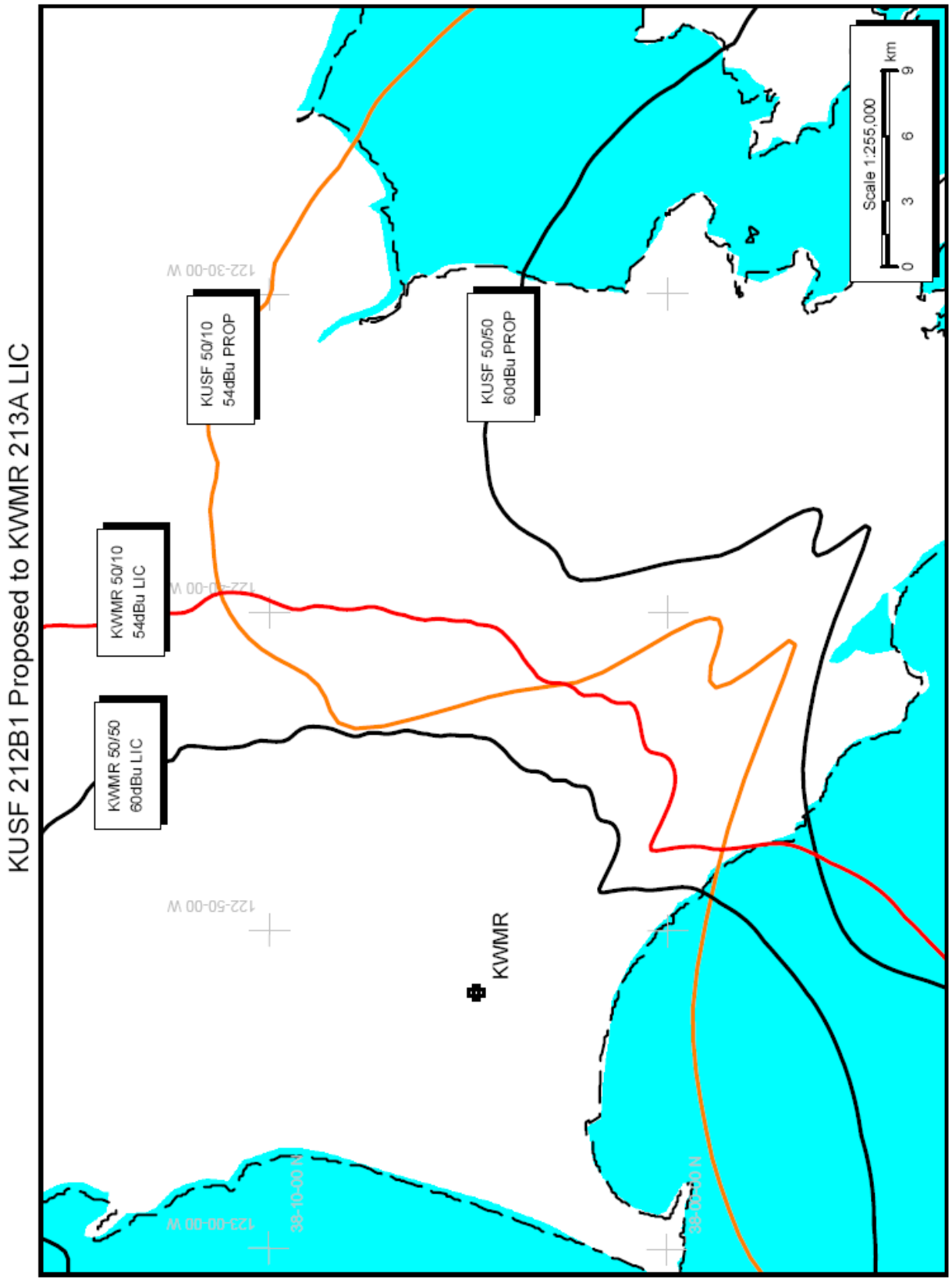


EXHIBIT 18.3 – Contour protection to KALX (2nd Adjacent)

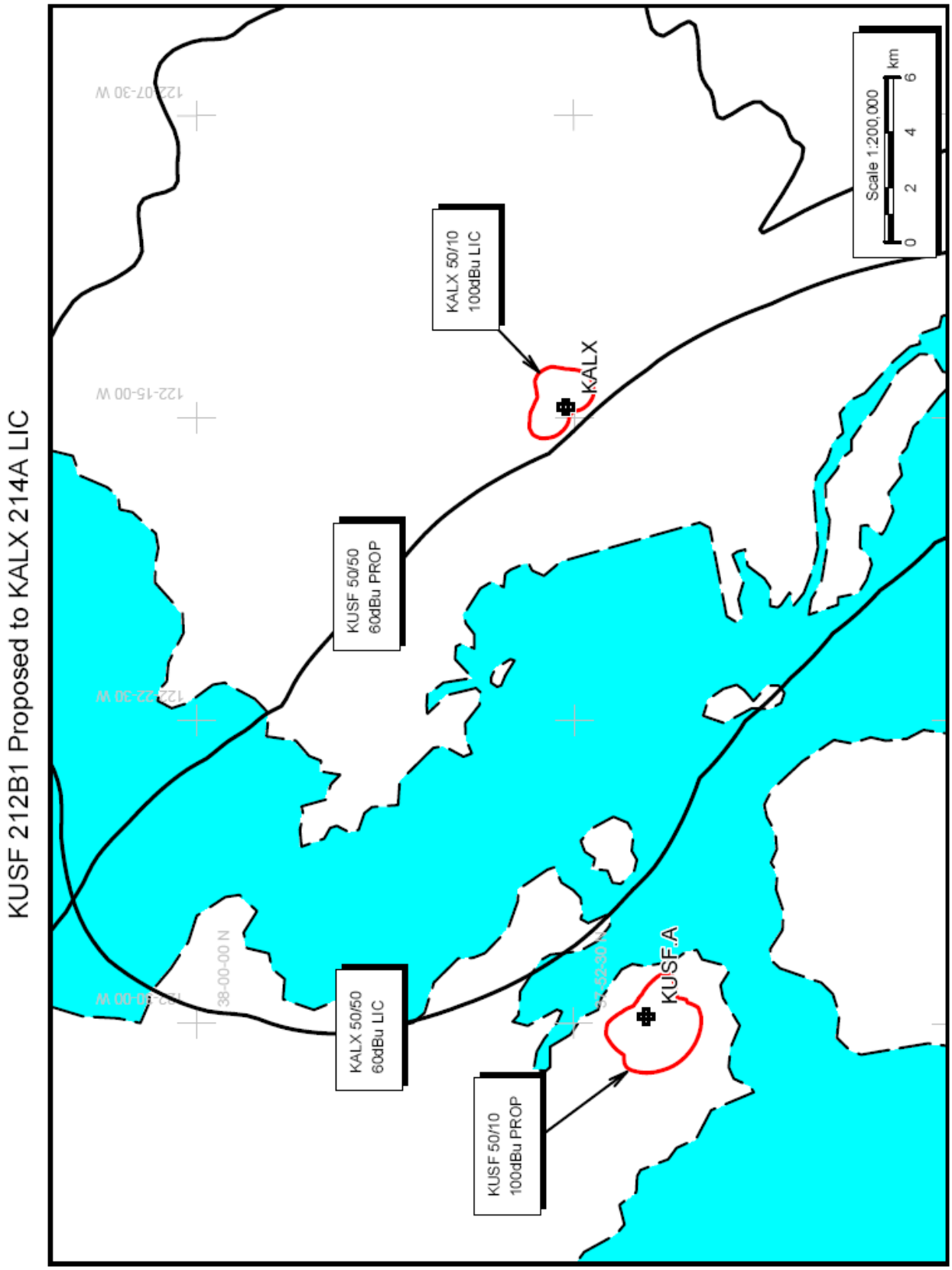


EXHIBIT 18.4a – Contour protection to KDVS (Incoming Co-channel)

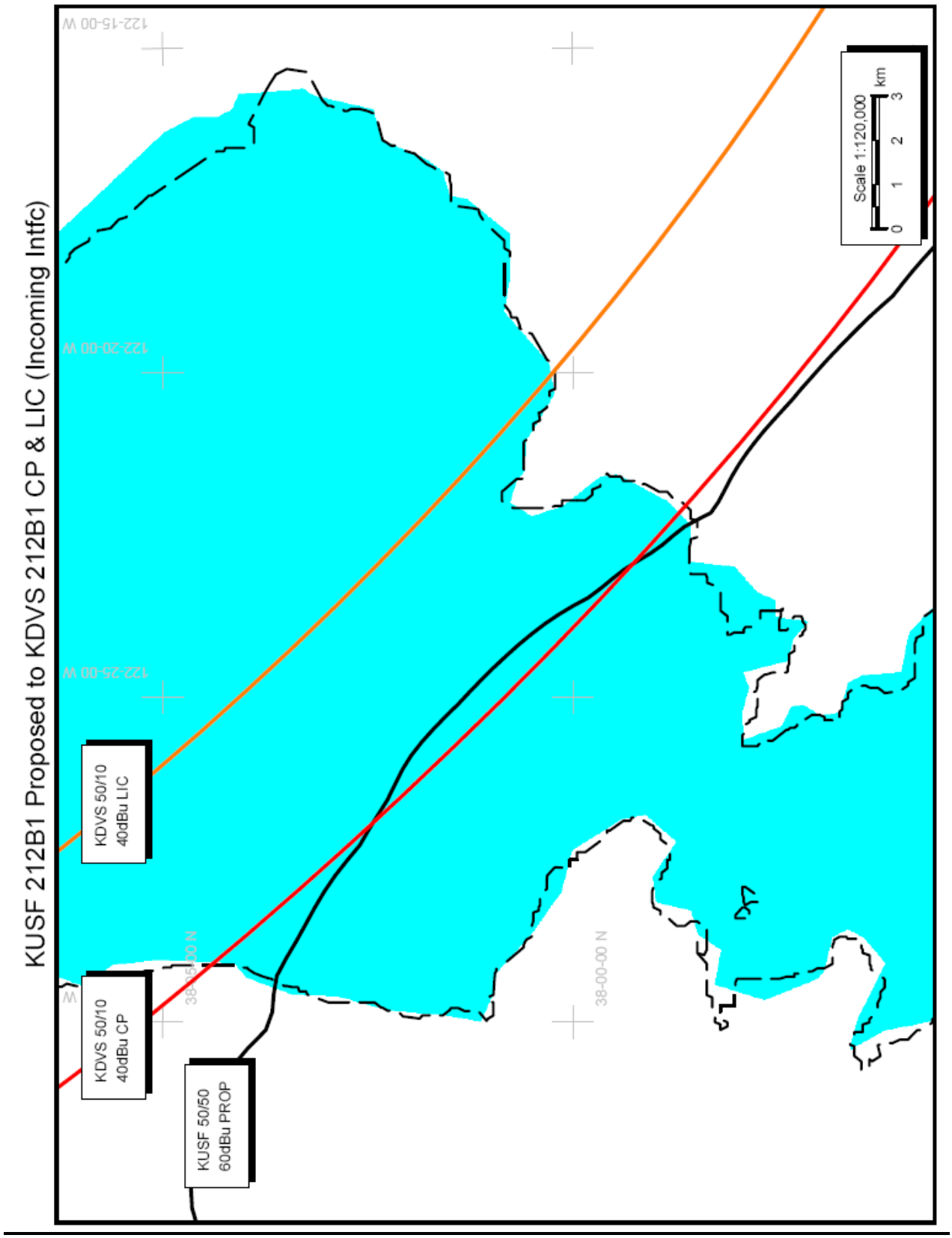


EXHIBIT 18.4b – Contour protection to KDVS (Outgoing Co-channel)

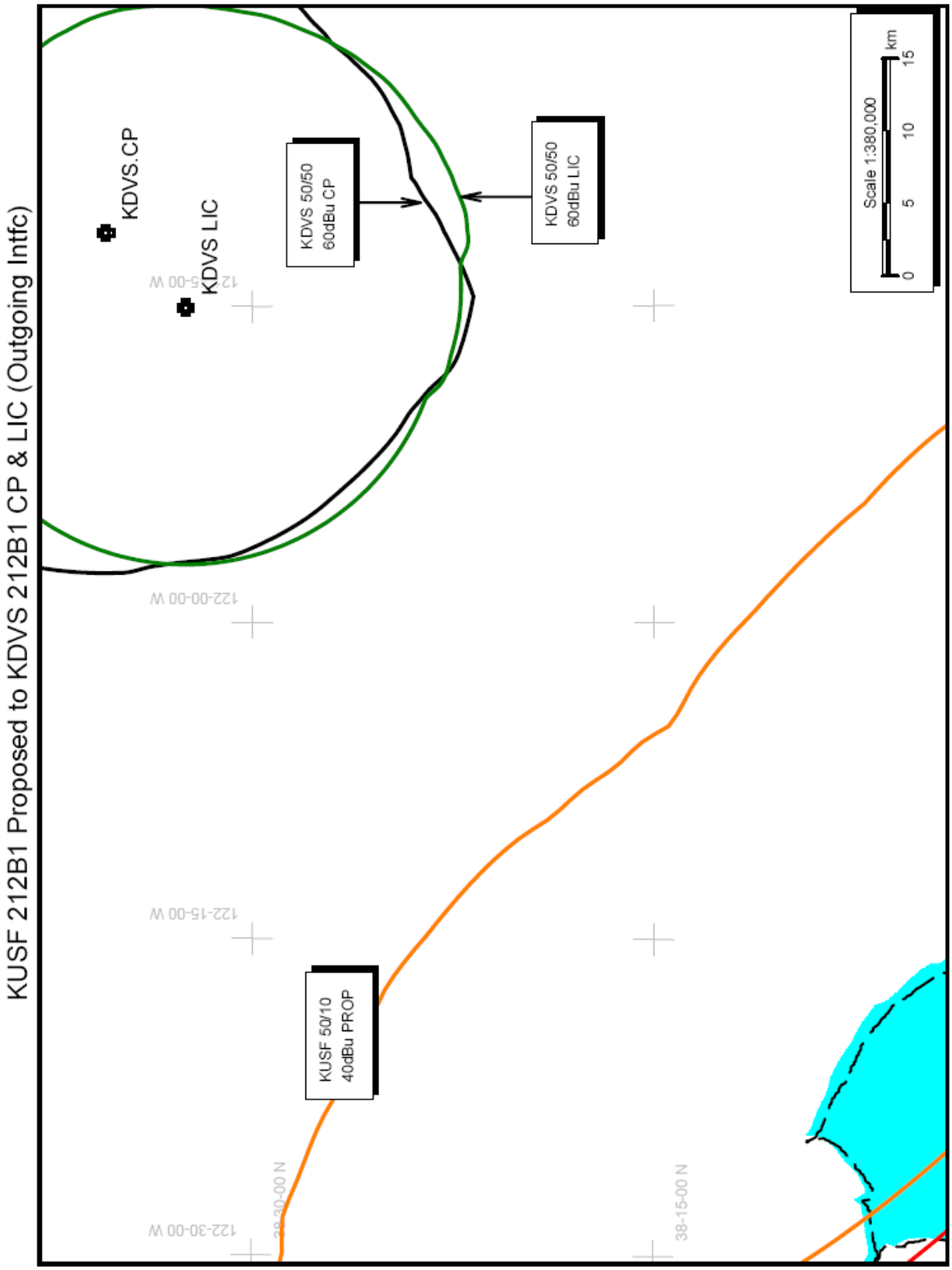


EXHIBIT 18.5 – Contour protection to KZSU (1st Adjacent)

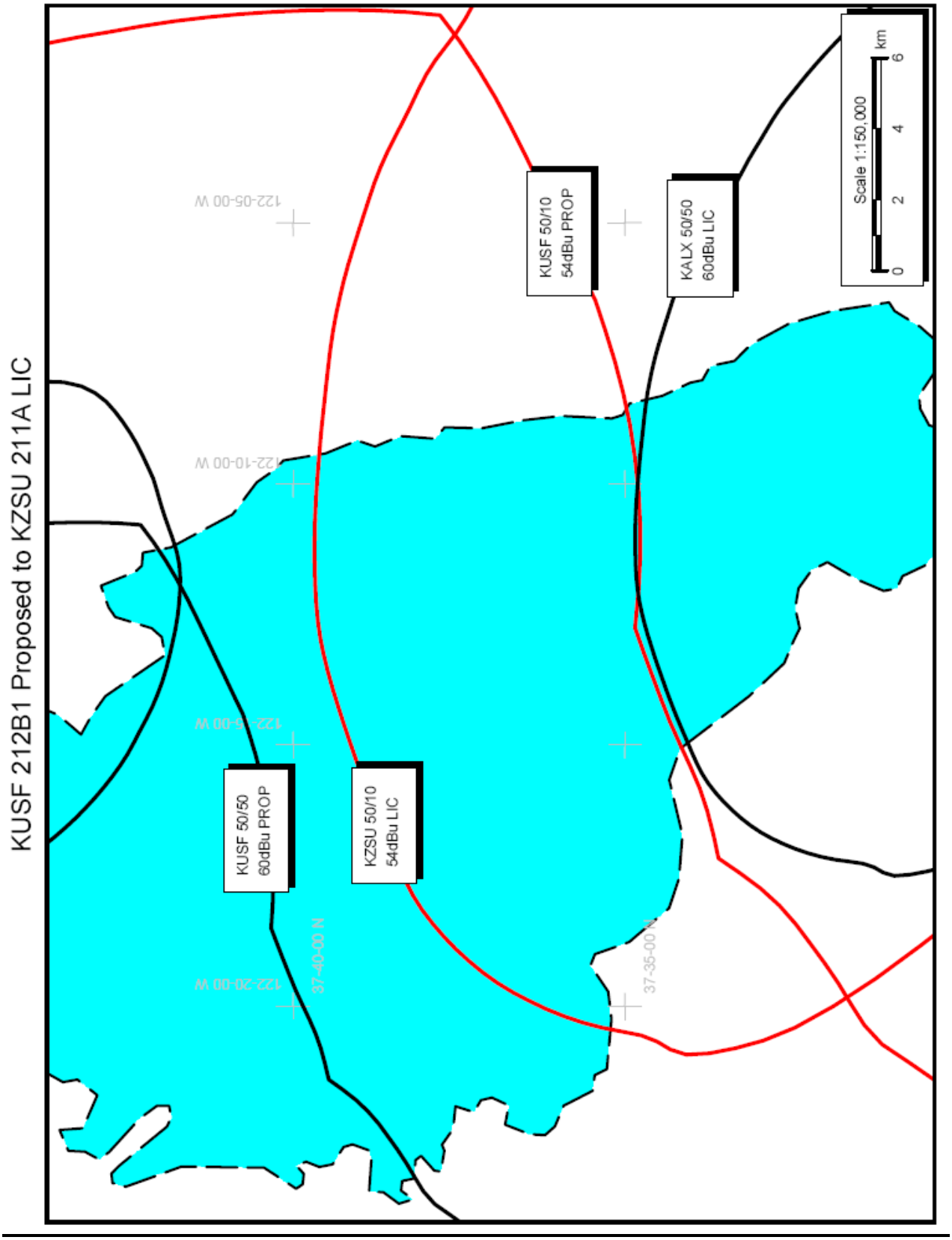


EXHIBIT 18.6 – Contour protection to KVHS (1st Adjacent)

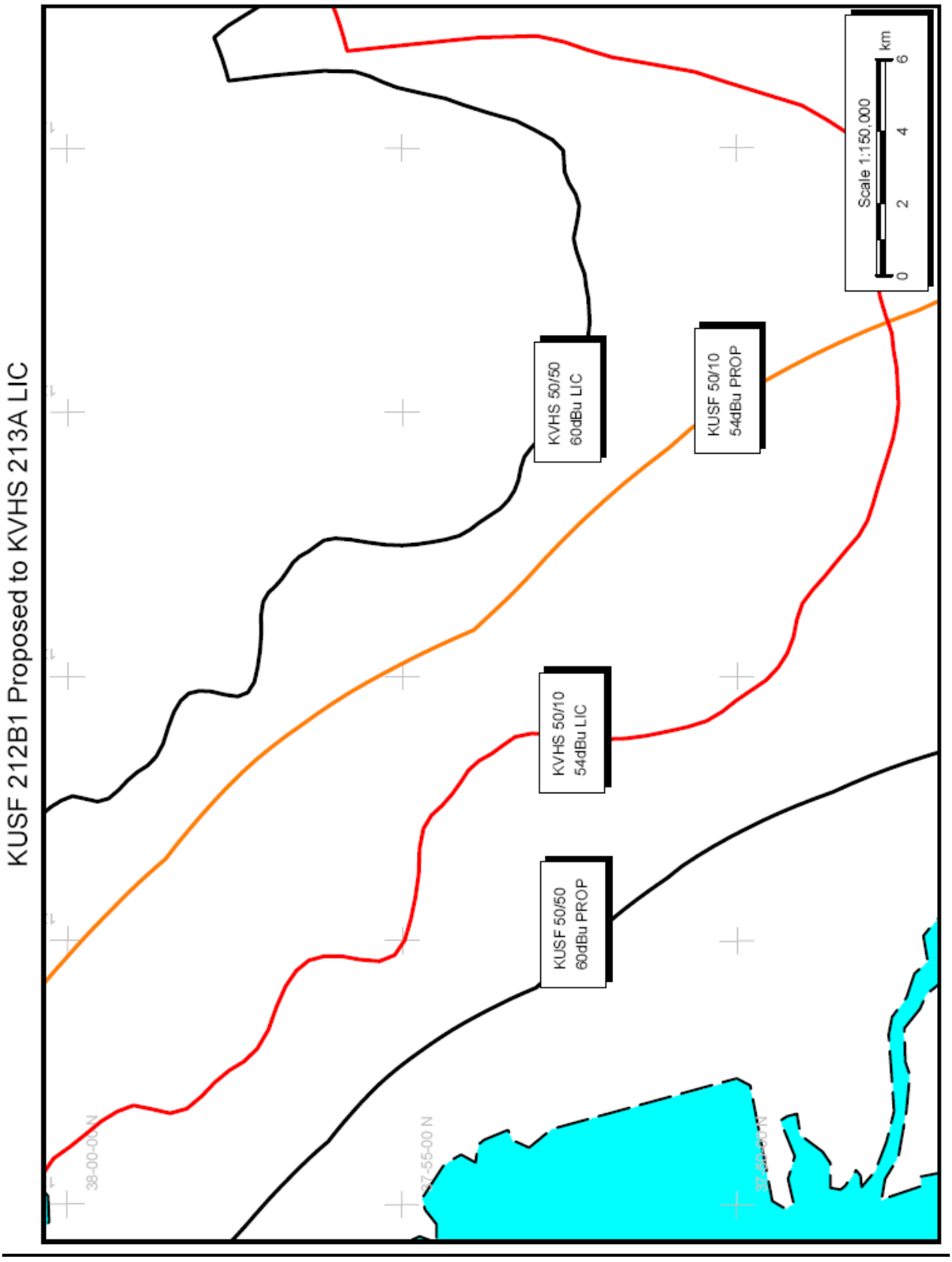


EXHIBIT 18.7 – Contour protection to KAZU (co-channel)

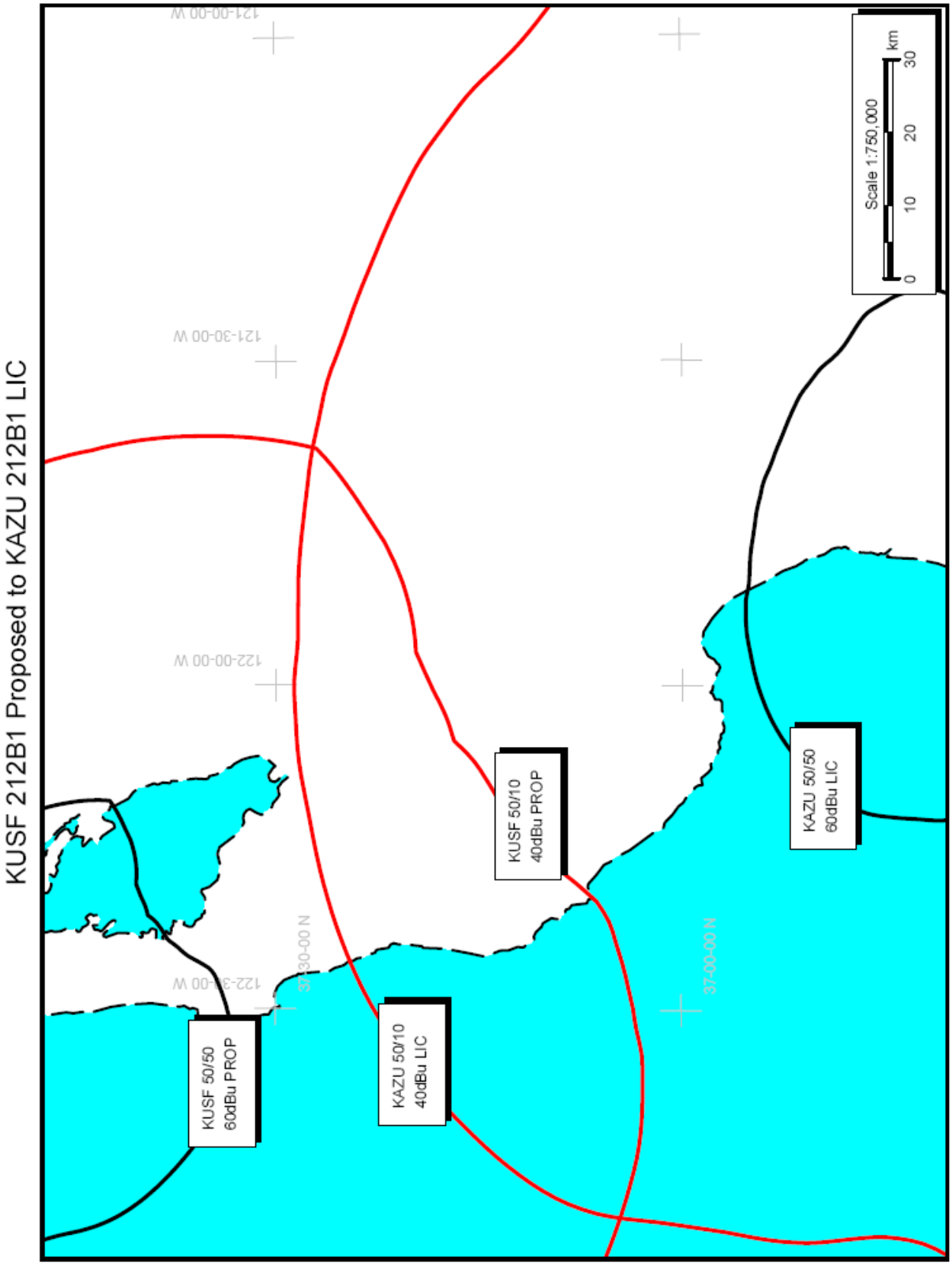


EXHIBIT 18.8 – Contour protection to KSJS (1st Adjacent)

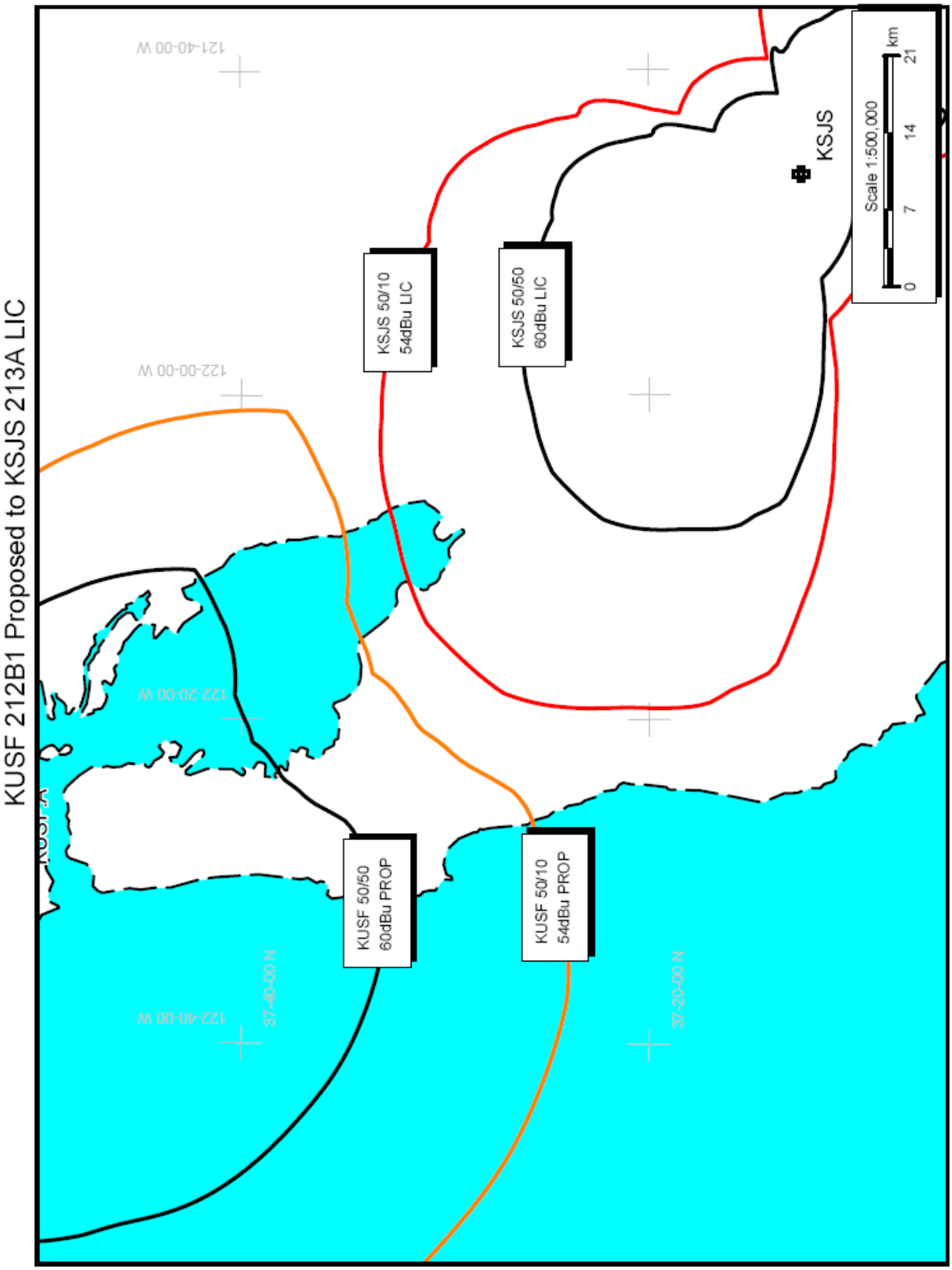
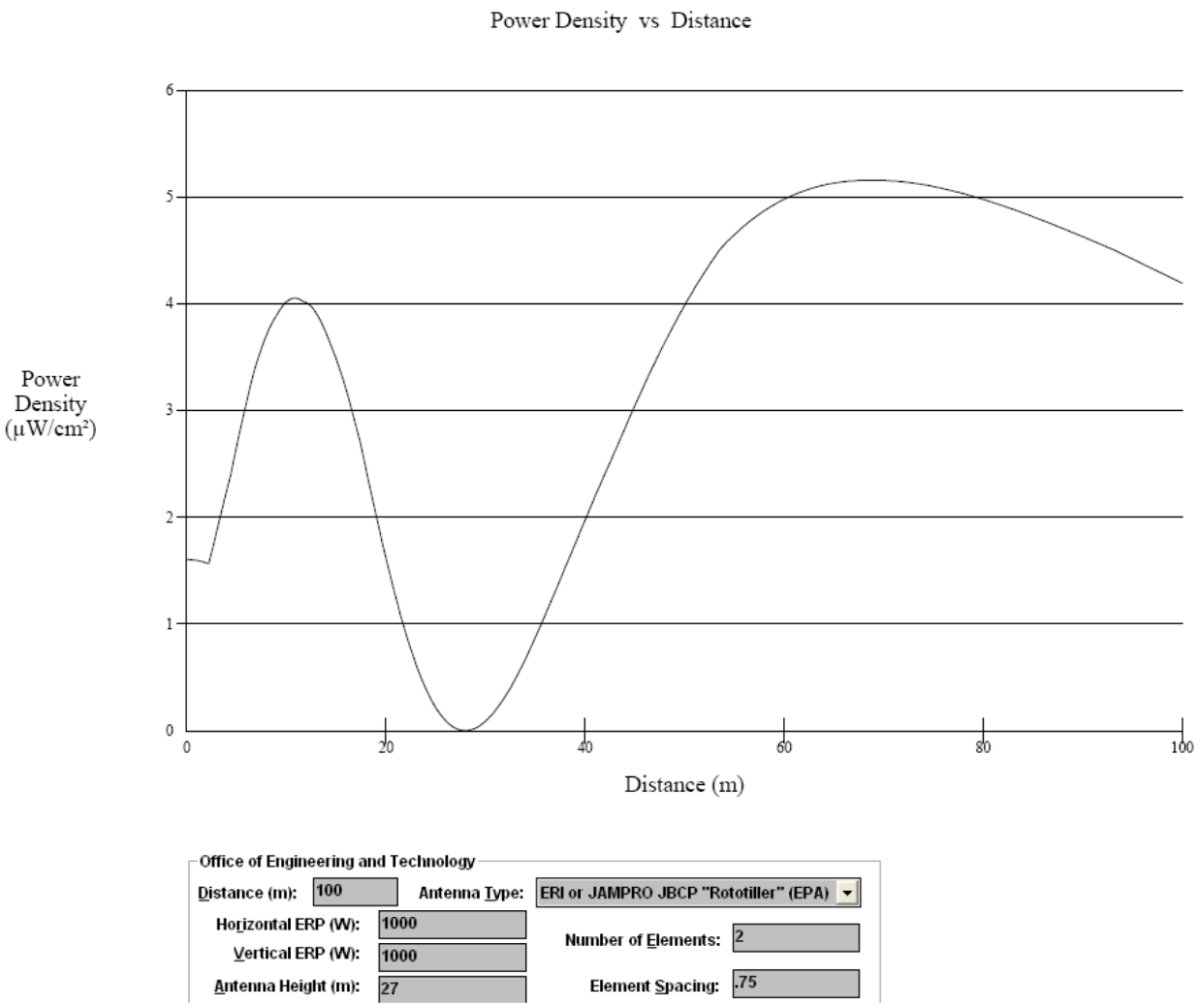


Figure 19, Power Density, KUSF PROPOSED



Maximum RFR @ 2m AGL, 69.2m from tower base = 5.16 µW/cm², or 2.58% 200 µW/cm² limit