

CITY OF LICENSE  
CALL LETTERS  
PREPARED FOR  
VERSION  
JOB

Palmer, AK  
K208BC  
Radio Free Palmer, Inc.  
1.1  
116028

# **CONSOLIDATED**

# **ENGINEERING EXHIBIT**

FCC Form 349 - Section II-a - Engineering

**ENGINEERING STATEMENT**  
**MINOR CHANGE OF LICENSED FM TRANSLATOR**  
**K208BC, PALMER, AK**

**SUMMARY**

Radio Free Palmer (RFP) hereby submits this proposal for a minor-change to K208BC. RFP proposes to move to a site 510 meters NE from the current site, using the same antenna. The frequency would change to Ch209. The ERP and antenna azimuth would also change.

**ANTENNA INFORMATION**

A Kathrein/Scala HDCA-10/HRM antenna is proposed, aimed at 260 degrees true.

# EXHIBIT 13

## FM OVERLAP REQUIREMENTS

### INTERFERENCE PROTECTION

This application meets all requirements of 47 CFR §74.1204 regarding interference protection to other stations and authorizations.

Stations considered:

ID	City	St	Chan	CL	Stat	Prefix	ARN	FID	Dist	Notes
<b>1st-Adjacent Channel</b>										
KVRF	SUTTON	AK	208	A	LIC	BLED	20110907AAJ	177165	14.48	no overlap in community of license dismissed
K208BC	PALMER	AK	208	DX	APP	BPFT	20160201AFH	807	0.07	
K208BC	PALMER	AK	208	DX	LIC	BLFT	19860122TA	807	0.51	
KAUG	ANCHORAGE	AK	210	DM	LIC	BLED	20070827ABI	165582	31.92	
<b>2nd &amp; 3rd-Adjacent Channel</b>										
KNBA	ANCHORAGE	AK	212	C1	LIC	BLED	19961025KF	35289	50.76	protection shown by ratio method
KATB	ANCHORAGE	AK	207	C2	CP	BPED	20151022AAN	10933	72.85	
KATB	ANCHORAGE	AK	207	C3	LIC	BLED	19930817KB	10933	72.85	
K206AO	EAGLE RIVER	AK	206	DX	LIC	BLFT	20011003AAD	10938	41.23	

As shown by **Exhibit 13a**, most of the licensed coverage contour (in gray) is duplicated by the proposed contour (in red), qualifying this as a minor-change.

There are no co-channel stations within range. **Exhibit 13b** shows the first-adjacent contour protections. While overlapping with the 60dBu contour of KVRF, the co-owned primary station, the overlap is outside the Community of License, Sutton, AK (now known as Sutton-Alpine CDP). The overlap is therefore allowable under §74.1204(e).

### CONTOUR PROTECTION TO 2<sup>nd</sup> AND 3<sup>rd</sup>- ADJACENT STATIONS

**Exhibit 13c** shows contour protection to all 2<sup>nd</sup> and 3<sup>rd</sup>-Adjacent stations, except for KNBA, Anchorage. Protection to KNBA is shown using the ratio method. The F(50/50) contour of KNBA is 67.29dBu at the proposed translator site. Using the appropriate U/D ratio of

40dB, the corresponding interfering contour of the proposed translator is therefore 107.29dBu.

**Exhibit 13d** shows that there are no populated areas within the 107.29dBu contour.

This proposal is exempt from I.F. spacing requirements in that the proposed ERP is less than 100 watts.

### **MAXIMUM ERP COMPLIANCE**

This is not a fill-in translator proposal. The site is west of the Mississippi River and not in Zone 1-A. Compliance with 74.1235(b)(2), regarding the Maximum Allowable ERP (MAERP) for each of the cardinal radials, is demonstrated below.

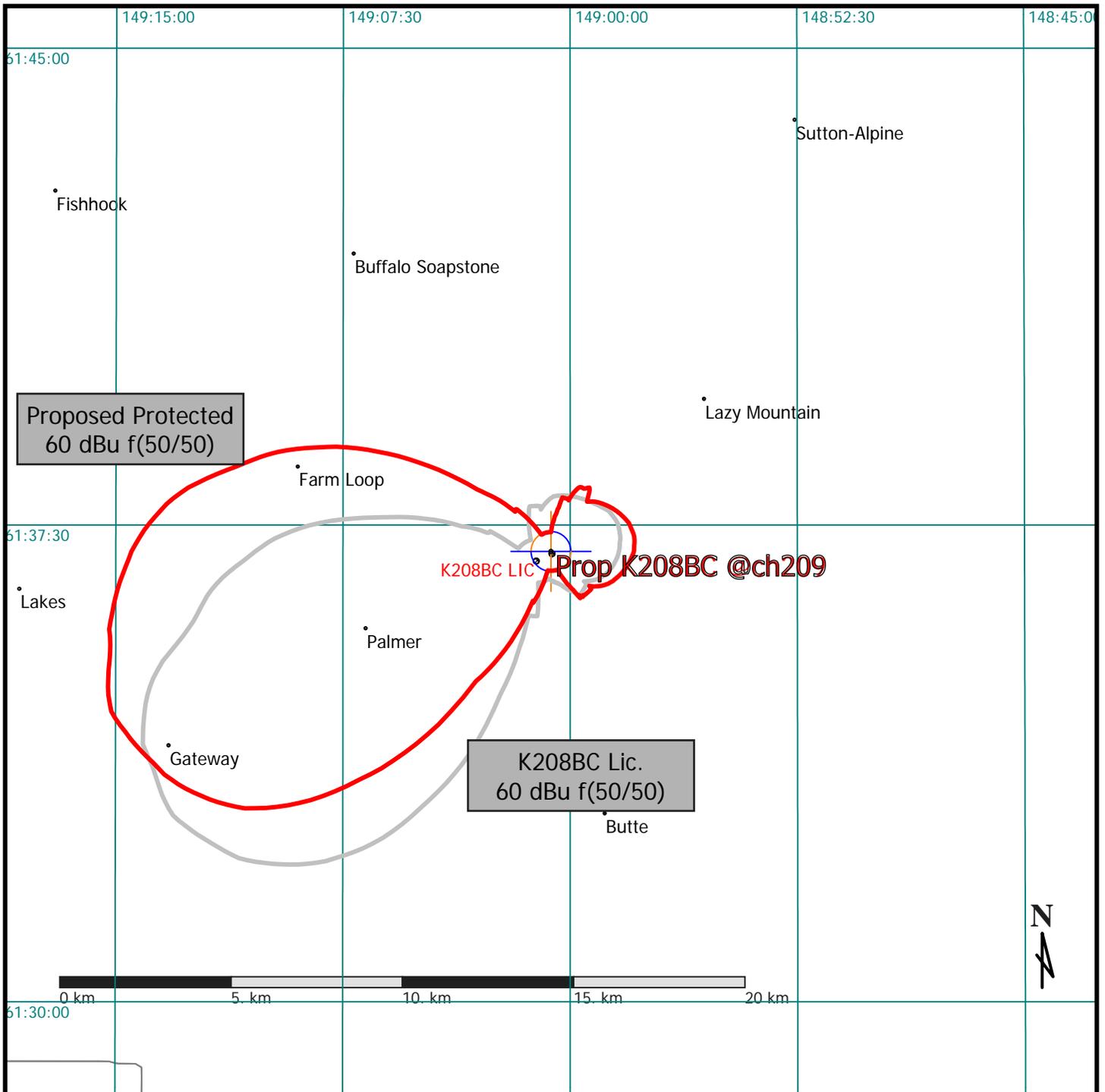
<b>Radial (Degrees)</b>	<b>Radial HAAT (m)</b>	<b>ERP (Watts)</b>	<b>MAERP at HAAT (W)</b>
0	-22.7	0.0	250
30	50.9	1.0	250
60	-499.1	2.3	250
90	-823.1	3.1	250
120	-966.0	0.9	250
150	190.3	0.0	62
180	42.9	0.0	250
210	276.7	0.9	34
240	250.2	40.8	41
260		65.0	75
270	185.2	57.2	75
300	121.5	6.2	170
330	-0.3	0.0	250

# Exhibit 13a

## Proposed vs. Licensed K208BC

Brown Broadcast Services, Inc.  
Job: K208BC rotate antenna ch209.fmj  
Master Database: 2016\_Apr\_30.fmd  
Lat: N61:37:05 Lon: W149:00:38 NAD-27  
Scale: 1:166667  
Channel: 209 Class: DX

rfInvestigator Version 3.8.16  
by rfSoftware, Inc.  
Date: 5/8/2016 8:34:55 PM



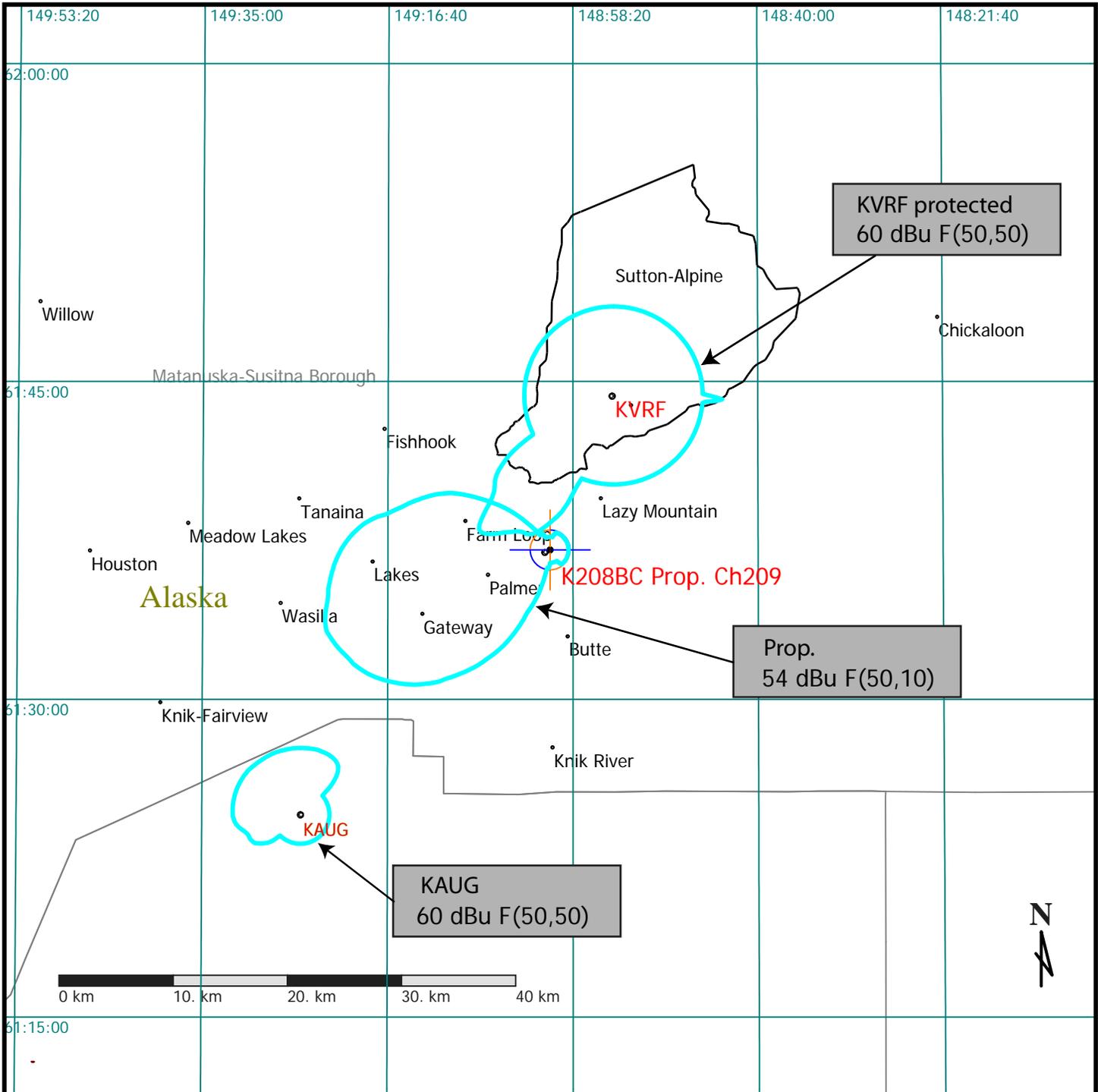
# Exhibit 13b - First-Adjacent-Channel Contour Protection

Brown Broadcast Services, Inc.  
 Job: K208BC rotate antenna.fmj  
 Master Database: 2016\_Apr\_15.fmd  
 Lat: N61:37:03 Lon: W149:00:36 NAD-27  
 Scale: 1:500000  
 Channel: 209 Class: DX

rfInvestigator Version 3.8.16  
 by rfSoftware, Inc.  
 Date: 5/6/2016 6:03:04 PM  
 Key:

- City Grade
- Protected
- Co-Channel
- 1st Adj
- 2nd/3rd Adj

Overlap with co-owned primary station KVRF does not occur within the Community of License, in compliance with 74.1204(e).



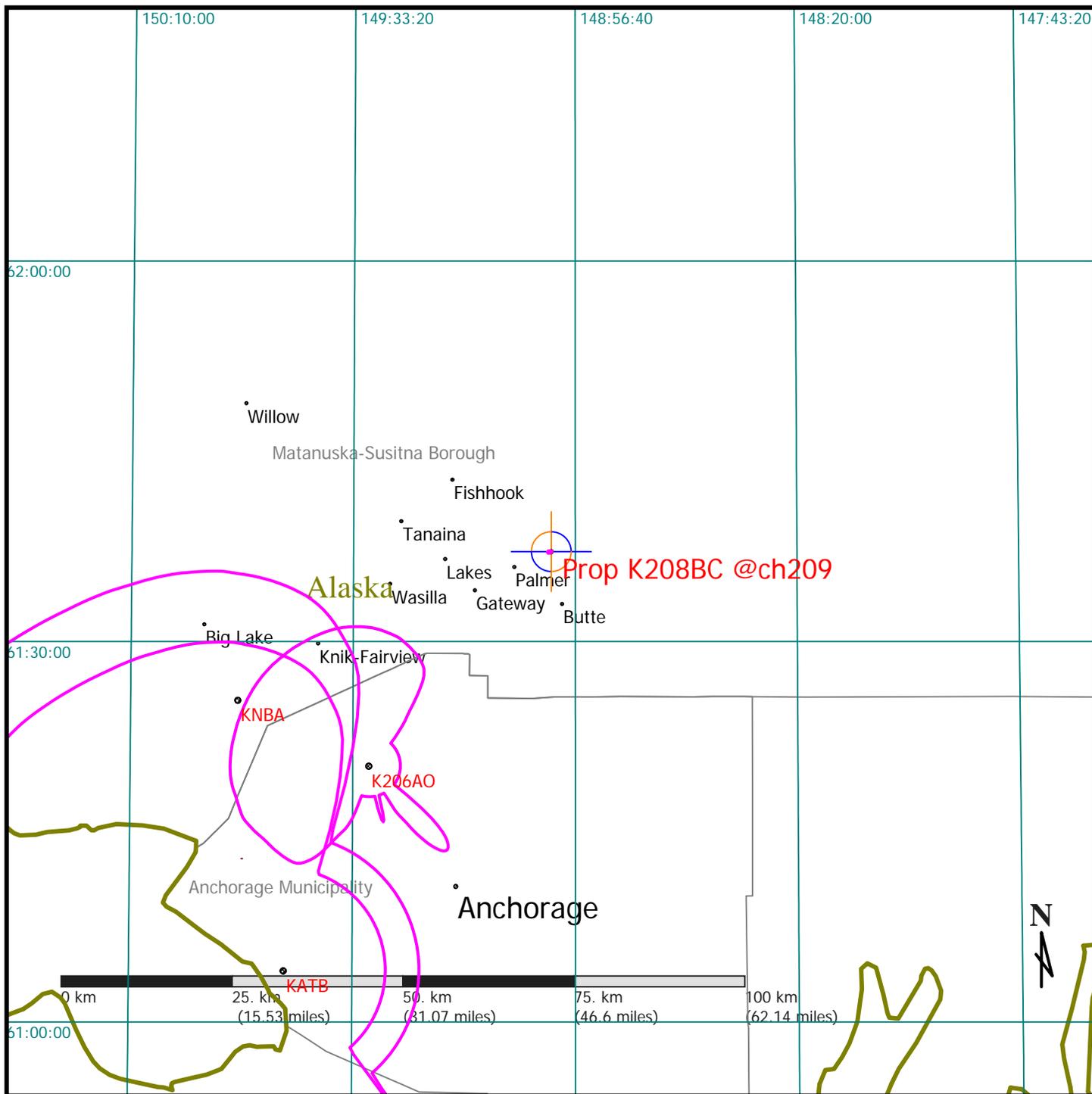
# Exhibit 13c

## 2nd & 3rd-Adjacent Contour Protection

Brown Broadcast Services, Inc.  
Job: K208BC rotate antenna ch209.fmj  
Master Database: 2016\_Apr\_30.fmd  
Lat: N61:37:05 Lon: W149:00:38 NAD-27  
Scale: 1:833333  
Channel: 209 Class: DX

rfInvestigator Version 3.8.16  
by rfSoftware, Inc.  
Date: 5/10/2016 2:31:11 PM  
Key:

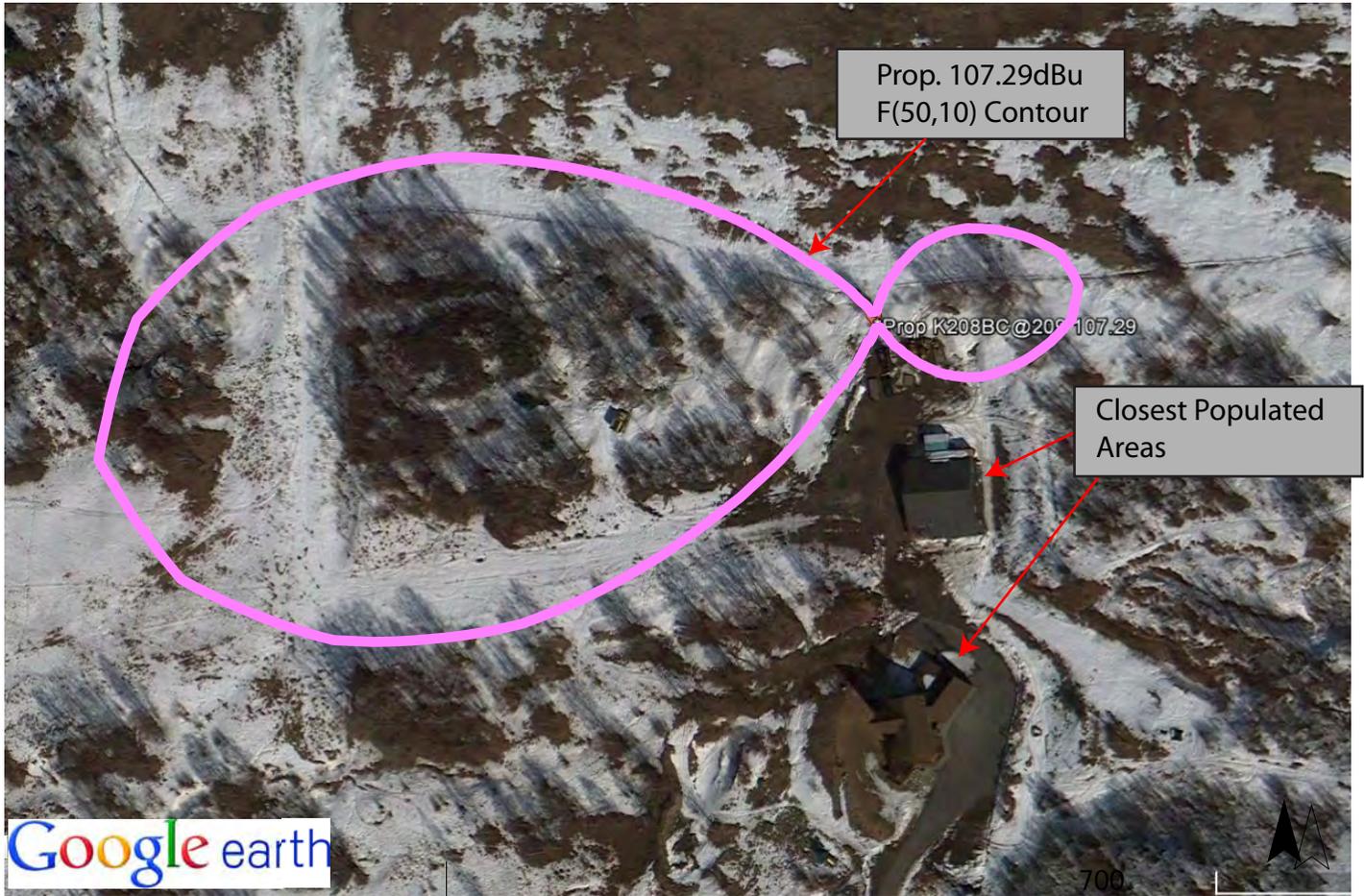
- City Grade
- Protected
- Co-Channel
- 1st Adj
- 2nd/3rd Adj



# Exhibit 13d

## 3rd-Adjacent Protection to KNBA

KNBA protection is provided by ratio method.  
There are no populated areas within the  
proposed translator interfering contour.



# EXHIBIT 14

## TV CHANNEL 6 PROTECTION

TV Channel 6 stations within range:

ID	City	St	Chan	CL	Stat	FID	Dist	Min 1205	Clear 1205
KNIK-LP	ANCHORAGE	AK	6		LIC	0	66.49	135	-68.51
K06MF	KENAI	AK	6		LIC	0	164.8	135	29.81
K06MF	KENAI	AK	6		CP	0	181.8	135	46.78

A written agreement between the applicant and Fireweed Communications LLC, the owner of KNIK-LP is included in Exhibit 14a. It gives their consent to this proposal.

### BROWN BROADCAST SERVICES

Michael D. Brown      3740 S.W. Comus St.      INCORPORATED      Portland, Oregon 97219-7418      503-245-6065

**Exhibit 14a**



May 10, 2016

Mike Chmielewski – COO  
Radio Free Palmer  
550 S. Alaska Street  
Suite 201  
Palmer, AK 99645

Dear Mr. Chmielewski:

We understand that you are applying to modify FM translator K208BC, Palmer, AK, by moving it 510m to the northeast from its current licensed location, and changing to Channel 209 (89.7MHz). This proposal is within the critical distance to KNIK-LP, our Channel 6 LPTV station in Anchorage. Based on the specifications presented to me today by your consultant, Michael Brown, we hereby give our consent to the grant of your application, subject to the following conditions:

1. Radio Free Palmer (RFP) will notify Fireweed Communications, LLC, at least 7 days prior to commencing operation at the new location.
2. RFP will furnish Fireweed copies of any reception complaints, and any corrective action.
3. RFP agrees to furnish suitable notch filters to Channel 6 users, as needed, to remove any interference.
4. RFP will provide the email and phone number(s) for the person(s) to contact, should any complaints to Channel 6 reception arise.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeremy Lansman", is written over a light blue rectangular background.

Jeremy Lansman

Member

Fireweed Communications LLC.

## **EXHIBIT 17**

### **ENVIRONMENTAL PROTECTION ACT / NEIR ANALYSIS**

§1.1307(b)(1) Table 1, states that any “Part 74 – Subpart L” facility with an ERP greater than 100 watts, is subject to routine environmental evaluation. This facility will operate with less than 100 watts ERP, and qualifies under this Subpart. It is therefore “categorically excluded from making such studies or preparing an EA” .

The applicant will ensure that public access is restricted by fencing, anti-climb devices, or other appropriate measures. The site will be posted with appropriate RF exposure warning signs. If climbing by authorized personnel becomes necessary, transmitter power will be reduced operation will cease, as necessary, so as to not exceed the RF exposure limits.