

CITY OF LICENSE
CALL LETTERS
FACILITY ID
PREPARED FOR
VERSION
JOB

Corvallis, Salem, OR
K264AA
65756
The KBOO Foundation
1.1
112031-AMD

CONSOLIDATED ENGINEERING EXHIBIT

FCC Form 349 - Section III-A - Engineering

BROWN BROADCAST SERVICES

Michael D. Brown

INCORPORATED
3740 S.W. Comus St. Portland, Oregon 97219-7418

503-245-6065

ENGINEERING STATEMENT
MINOR AMENDMENT TO APPLICATION FOR A MINOR-CHANGE
OF FM TRANSLATOR K264AA
The KBOO Foundation

SUMMARY

The KBOO Foundation (“KBOO”) hereby seeks a minor amendment of BPFT-20131021ACE, which is an application for a minor-change of licensed translator K264AA. This amendment retains the current licensed site, but proposes a modification of the antenna pattern and ERP.

STATION IS SILENT - APPLICANT PREFERS TO RETURN TO AIR USING THESE PROPOSED FACILITIES

K264AA went silent on June 7, 2013, due to equipment failure. A Request for Silent STA was filed and granted (BLSTA20130709ABP), and a Request to Extend STA has also been filed and Accepted for Filing (BLESTA-20140314ADM). After a long delay caused by an outside repair shop, equipment repairs are now complete. The applicant will return to the air prior to the one-year anniversary of its initial silence, and strongly prefers to return using the facilities proposed herein. This proposal removes any contour overlap with co-channel station KPPT-FM, Depoe Bay, OR, which exists with the current licensed station. **As such, the applicant respectfully requests processing of this amended application not later than May 1, 2014, to allow adequate time for this modified facility to be built and tested by June 7.**

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EXHIBIT 13

OVERLAP REQUIREMENTS

INTERFERENCE PROTECTION

This proposal amends the pending minor-modification, to return the translator to its existing licensed site at Vineyard Mountain, near Corvallis, Oregon. The antenna height, ERP, and antenna pattern are changed. As shown by **Exhibit 13a**, nearly all of the 60dBu coverage of this proposal overlaps the existing licensed facility, qualifying it as a minor-change. **Exhibits 13a to 13c** show that this proposal meets all contour protection requirements of §74.1204(a).

Brown Broadcast Services, Inc. 3740 SW Comus St. Portland, OR 97219-7418										
K224AA Move Back to Vineyard MT The Kboo Foundation										
CH# 264D - 100.7 MHz, Pwr= 0.023 kW DA, HAAT= 304.2 M, COR= 454 M										
Average Protected F(50-50)= 12.53 km										
Standard Directional										
REFERENCE 44 38 25.0 N. 123 16 25.0 W.	DISPLAY DATES DATA 03-23-14 SEARCH 03-23-14									
CH CITY	CALL	TYPE STATE	ANT AZI	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)	
264D K264AA Corvallis, Etc.	LIC _C_	OR	0.0 0.0	0.00 BLFT20090918ACY	44 38 25.0 123 16 25.0	0.016 300	39.4 450	11.8 The Kboo Foundation	-42.6*	
264D K264AA Salem	APP DC_	OR	13.4 193.5	40.80 BPFT20131021ACE	44 59 50.0 123 09 11.0	0.047 240	45.5 324	13.7 The Kboo Foundation	-14.4	
264C2 KFFT-FM Depoe Bay	LIC _CX	OR	282.2 101.6	62.72 BLH20030926AQJ	44 45 23.0 124 03 01.0	17.500 255	123.8 328	49.0 Appal Broadcasting Inc.	9.7	
266C ALLO Portland Coordinates updated from LIC record	USE _	OR	23.4 203.7	106.22 BLH821018AR	45 30 58.0 122 43 59.0	100.000 600	13.9 691	92.5	13.4	
262C ALLO Portland Coordinates updated from LIC record	USE _	OR	22.5 202.8	106.31 BLH870206KB	45 31 22.0 122 45 07.0	100.000 600	13.8 685	91.9	14.1	
264C2 ALLO Depoe Bay	USE _	OR	282.2 101.6	62.72	44 45 23.0 124 03 01.0	50.000 150	130.3 198	41.7	16.0	
264C2 K1130.5 Depoe Bay change of community	USE _	OR	282.2 101.6	62.72 RM10524	44 45 23.0 124 03 01.0	50.000 150	130.3 198	41.7	16.0	
266C KXL-FM Portland	LIC _C_	OR	23.4 203.7	106.22 BLH20100503ACD	45 30 58.0 122 43 59.0	100.000 502	12.8 594	88.0 Alpha Licensee, Llc	17.9	
262C KKRZ Portland	LIC _C_	OR	22.7 203.1	106.47 BLH20011214AAE	45 31 21.0 122 44 45.0	100.000 470	12.4 561	85.5 Citicasters Licenses, Inc.	20.6	
263D K263AF Sweet Home	LIC DH_	OR	129.3 309.6	42.16 BLFT20080602AJQ	44 23 57.0 122 51 47.0	0.250 428	5.4 678	3.0 Bicoastal Media Licenses V	38.5	
265D K265DF Eugene	LIC DC_	OR	169.7 349.8	72.20 BLFT20131025AGV	44 00 04.0 123 06 45.0	0.250 505	37.5 505	24.6 Educational Media Foundati	45.9	
263C3 KMME Cottage Grove	LIC NCX	OR	168.9 349.1	99.57 BMLED20110520ABF	43 45 40.0 123 02 07.0	10.500 154	75.3 531	48.7 Catholic Broadcasting Nort	46.9	
264L1 KQRZ-LP Hillsboro	LIC _	OR	19.2 199.5	96.33 BLL20130711ACH	45 27 29.0 122 52 05.0	0.005 131	227	Oregon Amateur Radio Club	48.6	
264L1 1593802 Portland	APP _	OR	30.4 210.9	111.09 BNPL20131114BHV	45 30 00.6 122 33 10.7	0.080 34	133	slavic Community Center Of	58.8	

Terrain database is FCC NGDC 30 Sec. R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
Ant Column: (D= DA standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(V,N,X)
Incoming contour overlap is ignored.
**"affixed to 'IN' or 'OUT' values = site inside protected contour.

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MAXIMUM ERP COMPLIANCE

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.

Radial (Degrees)	Radial HAAT (m)	Relative Field	ERP (Watts)	MAERP at HAAT (W)
0	329.2	0.505	0.6	15.5
30	344.4	0.960	21.2	23
38		1.000	23	23*
60	368.7	0.785	14.2	19
90	382.1	0.217	1.1	15.5
120	388.2	0.010	0.002	15.5
150	384.7	0.011	0.003	15.5
180	372.5	0.035	0.028	19
210	327.5	0.040	0.037	23
240	191.7	0.040	0.037	75
270	132.5	0.023	0.012	140
300	185.3	0.010	0.002	75
330	227.8	0.033	0.025	50

*from nearest

cardinal radial

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Exhibit 13a Proposed vs. Lic

Brown Broadcast Services, Inc.
Job: K264AA Vineyard DA_Mar14.fmj
Master Database: 2014_Mar_12.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:150000
Channel: 264 Class: DX

rfInvestigator Version 3.7.4
by rfSoftware, Inc.
Date: 4/3/2014 12:26:31 PM

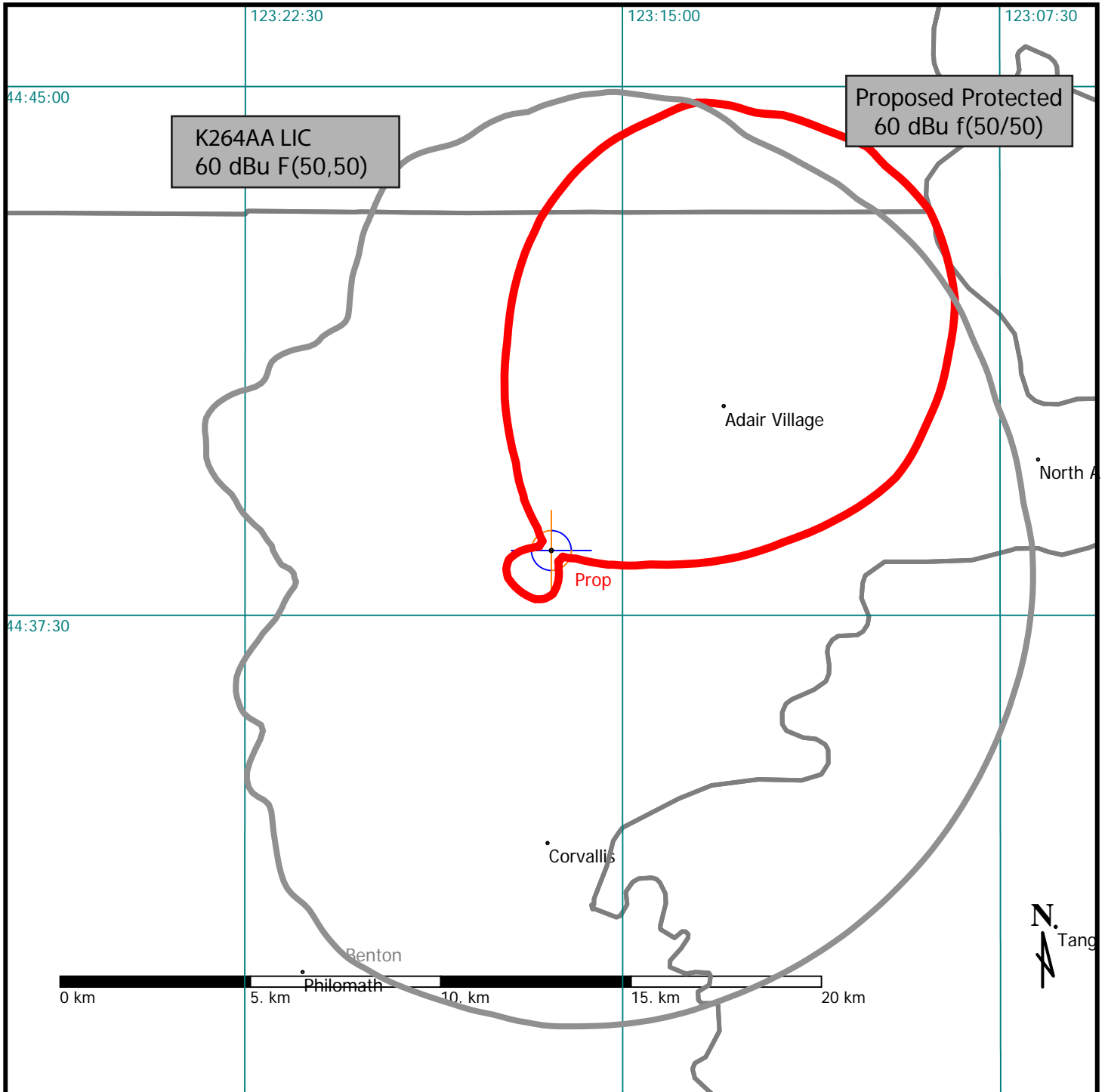


Exhibit 13b

Co-channel Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Vineyard DA_Mar14.fmj
Master Database: 2014_Mar_12.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:750000
Channel: 264 Class: DX

rfInvestigator Version 3.7.4
by rfSoftware, Inc.
Date: 4/3/2014 12:24:38 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

PROPOSED
Interfering: 40dBu F(50,10)
AFFECTED
Protected: 60dBu F(50,50)

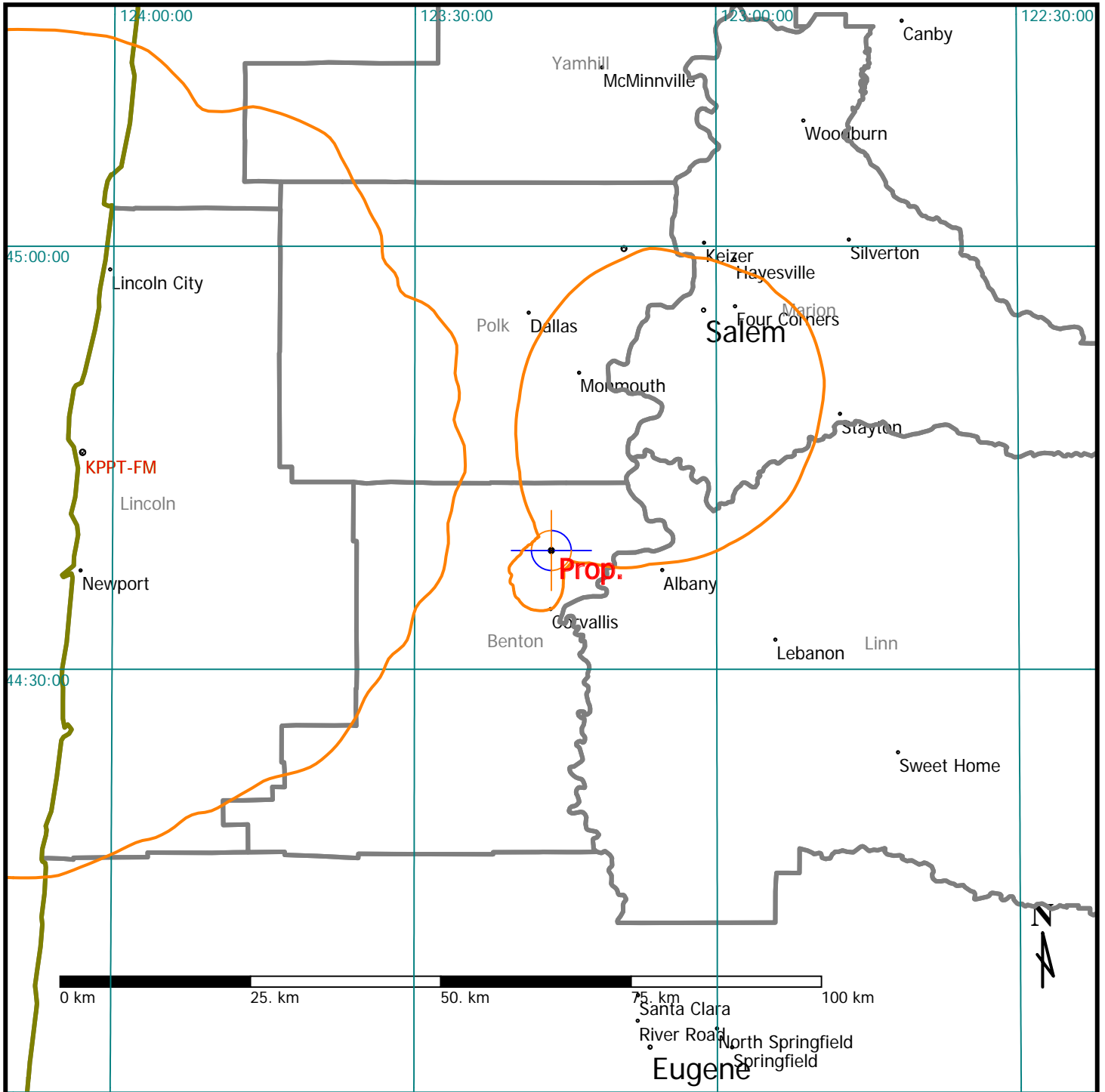


Exhibit 13c

First-Adjacent Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Vineyard DA_Mar14.fmj
Master Database: 2014_Mar_12.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:1250000
Channel: 264 Class: DX

rfInvestigator Version 3.7.4
by rfSoftware, Inc.
Date: 4/3/2014 10:16:01 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

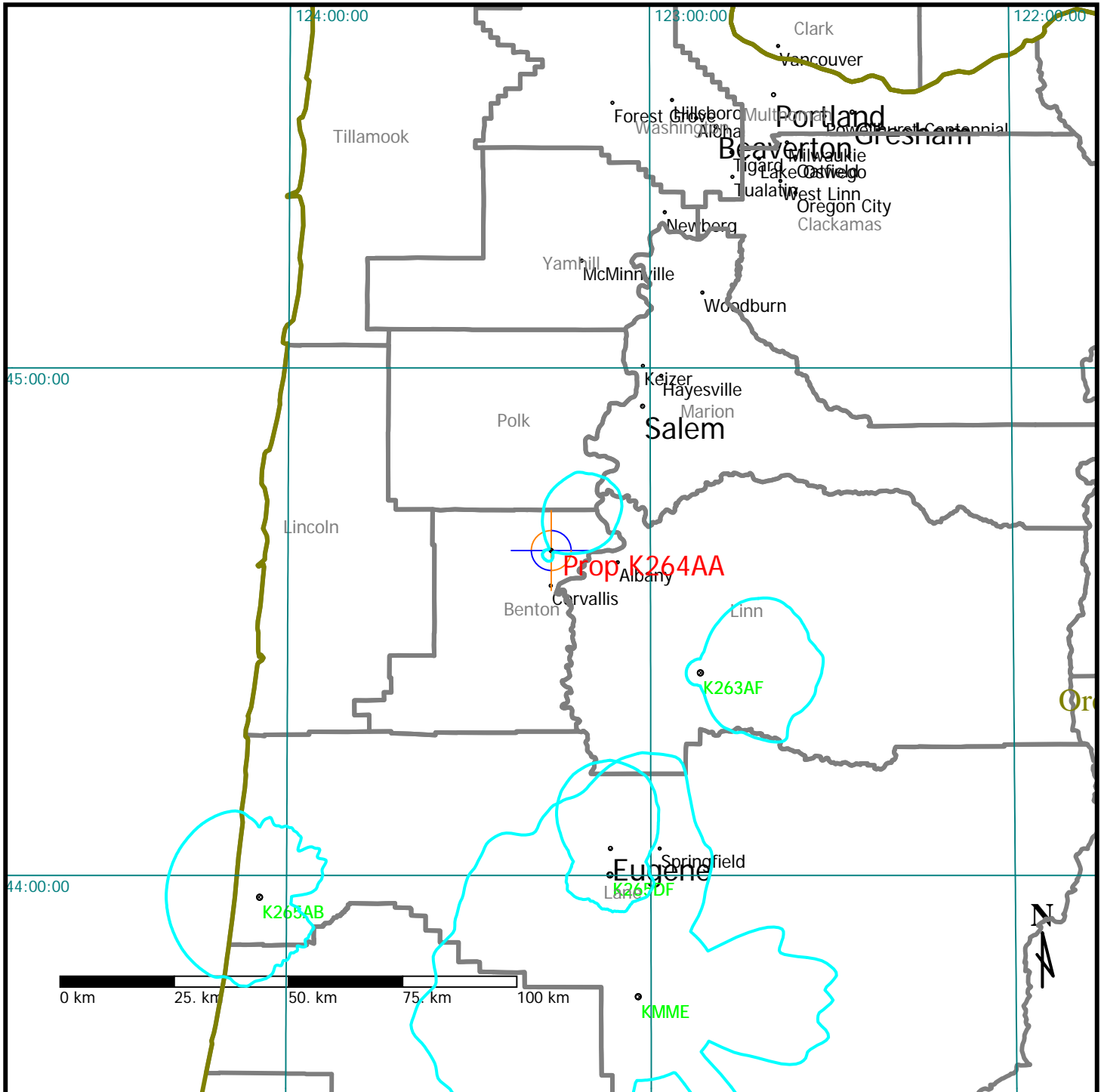


Exhibit 13d

Second-Adjacent Contour Protection

Brown Broadcast Services, Inc.
Job: K264AA Vineyard DA_Mar14.fmj
Master Database: 2014_Mar_12.fmd
Lat: N44:38:25 Lon: W123:16:25 NAD-27
Scale: 1:250000
Channel: 264 Class: DX

rfInvestigator Version 3.7.4
by rfSoftware, Inc.
Date: 4/3/2014 10:17:18 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

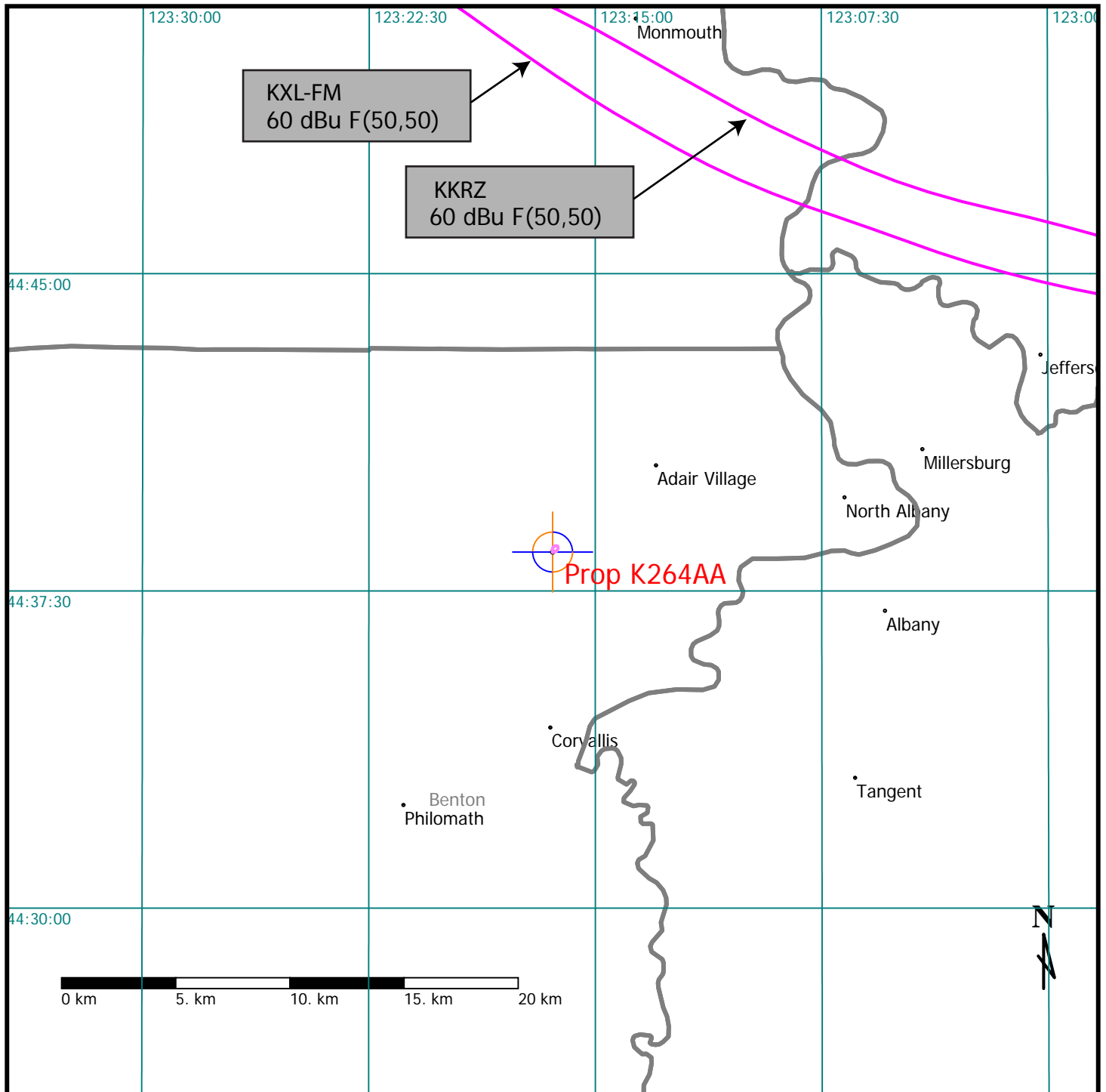


EXHIBIT 17

ENVIRONMENTAL PROTECTION ACT / NIER ANALYSIS

The applicant proposes mounting a Scala CL-FMRX/HCM horizontally-polarized antenna on an existing 19 meter pole. The proposed center of radiation is 17m AGL. Calculations were made using FM Model for Windows, version 2.10c, with the Phelps-Dodge Ring Stub or Dipole “worst-case” setting employed. This resulted in a predicted peak exposure of $0.95\mu\text{W}/\text{cm}^2$, at 8.6 meters from the tower. This represents 0.5% of the Maximum Permissible Exposure (MPE) of $200\mu\text{W}/\text{cm}^2$ for uncontrolled environments. 47 CFR §1.1307(b)(3) exempts applicants from preparing an Environmental Assessment when the predicted exposure levels would be less than 5% of the FCC limits.

Vehicle access to the site is limited by a locked gate. The pole is inherently unclimbable without specialized equipment, since the lower section is devoid of climbing pegs. The site will be posted with appropriate RF exposure warning signs. If pole climbing by authorized personnel becomes necessary, transmitter power will be reduced or operation will cease, as necessary, so as to not exceed the RF exposure limits.