Technical Report Supporting a Form 349 Minor Change in Licensed Facility Construction Permit Application

Pursuant to 47 C.F.R. Section 74:

for

K269DO.L - Scottsbluff, NE
(Facility ID: 25878)

"New Site & New Primary Station"

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as a

Commercial, Fill-In Translator for
KNEB-FM - Scottsbluff, NE

April, 2018

Asher Broadcast Consulting, LLC
justinasher@consultant.com
1(202)875-2986

Table of Contents

Supplemental Appendix(s):

EXPLANATION OF PROPOSAL: This Form 349 Filing and accompanying technical report supports a Minor Change Construction Permit Application for FM Fill-In Translator K269DO.L - Scottsbluff, NE (Facility ID: 25878). This FCC Form 349 Filing requests a new site location and new primary station. Continued operation on CH269D (101.7 MHz) with 0.250 kW ERP (Circular Polarization) at 1478 meters AMSL is requested. At this time, diplexing into the existing K262CU Nicom (NIC) Model BKG77 (one bay) non-directional antenna is requested. This Form 349 Filing will specify rebroadcast of new Class C1, commercial Primary Station KNEB-FM - Scottsbluff, NE (CH231C1, 94.1 MHz); Facility ID No. 51462. The Translator will continue to provide service to the community of Scottsbluff, NE.

FACILITY COMPLIANCE SHOWINGS: A map of the proposed 60 dBµ service contour in relation to the present 60 dBµ service contour has been included in ***Exhibit 1***. The minor change proposed service area will overlap a portion of the presently licensed service area as noted in the exhibit. The proposed 60 dBµ contour of the Translator lies wholly inside the larger FM primary daytime 60 dBµ contour. The primary station service contour relationship has been plotted in ***Exhibit 2***.

The proposed facility will be located on the tower bearing Antenna Structure Registration Number 1026737. In support of the requested site location, a copy of the existing ASRN has been included in ***Exhibit 3***. A depiction of the tower and antenna configuration has been included in ***Exhibit 4***. Further notification to the FAA or ASR governing authorities is not required as this proposal will not increase the overall tower height.

The applicant would like to note use of the NED 03 second terrain database for all allocation, contour and HAAT showings contained herein. A copy of the proposed HAAT calculation has been included in ***Exhibit 5***.

ALLOCATION COMPLIANCE SHOWINGS: The proposed Translator remains in compliance with 47 C.F.R. Section 74.1204 toward all allocation protection concerns with the exception of KOZY-FM - Bridgeport, NE (CH267C0) and KPNY(FM) - Alliance, NE (CH272C0). A general allocation study for this proposal is found in ***Exhibit 6***.

The applicant would like to note the existence of a 47 C.F.R. Section 74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward KOZY-FM - Bridgeport, NE (CH267C0) and KPNY(FM) - Alliance, NE (CH272C0). The Interference Contour at the proposed Translator site has been calculated to be no less than the 112.7 dBµ F(50:10) interference contour corresponding to the worst case protected contour at the Translator site. This represents the proposed interference contour which falls wholly within the 40:1 dB ratio. As seen in the ***Exhibit 8*** Aerial Photograph, there is a lack of population, housing, buildings or major roads within this interference contour. The applicant would like to note the existence of the dedicated transmitter building located at the base of the tower. However, structures of this nature have been exempt as a matter of FCC Policy.

There are two facilities, existing or proposed, close enough to merit further study. Therefore, a supplemental contour protection study has been provided toward each facility as included in ***Exhibit(s) 7(a-b)***. It is believed sufficient clearance exists precluding the need for additional contour protection showings. A copy of the manufacturer's antenna specifications has been included in ***Exhibit 9***.

Regarding protection of international concerns, the facility is, and will remain, more than 320 km from the common border between the United States and Canada or Mexico. As a result, no further international protection showings are believed required.

ENVIRONMENTAL COMPLIANCE SHOWINGS: The proposed facility complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments as set forth under §1.1310 and/or §1.1307(b)(3) of the Commission's rules and the guidelines for RF radiation protection guidelines as set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01). Compliance has been demonstrated in the attached ***RF Appendix 1*** of this filing. The facility is, or will be, properly marked with signs. Entry is, or will be, restricted by means of fencing with locked doors or gates. In addition, coordination with other users of the site will be secured to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Regarding compliance with the NEPA, Nationwide Programmatic Agreement and NHPA Section 106 for tower co-location, compliance with the Agreement is not required where no new tower construction is being proposed and the tower is not being substantially altered. Specifically, compliance is not necessary where only an existing antenna is being diplexed into on the existing structure, as here. However, should the Commission determine compliance is necessary, upon notification to the applicant, the applicant will file FCC Form 621.

CERTIFICATION OF TECHNICAL CONSULTANT: *I declare, under penalty of perjury, that the contents of this report are true and accurate to the best of my knowledge and belief. I further certify I have over nineteen years of experience as a broadcast technical consultant before the Federal Communications Commission ("the FCC"); and am familiar with the Code of Federal Regulations Title 47 ("the Rules") as pertaining to this report and its contents herein. The underlying data utilized in this report was taken directly from FCC databases or indirectly through third party software vendors securing data directly from FCC databases. This firm cannot be held liable for errors or omissions resulting from the underlying data. The information contained herein is believed accurate to the date reported below.*

Justin W. Asher, Technical Consultant
April 19, 2018

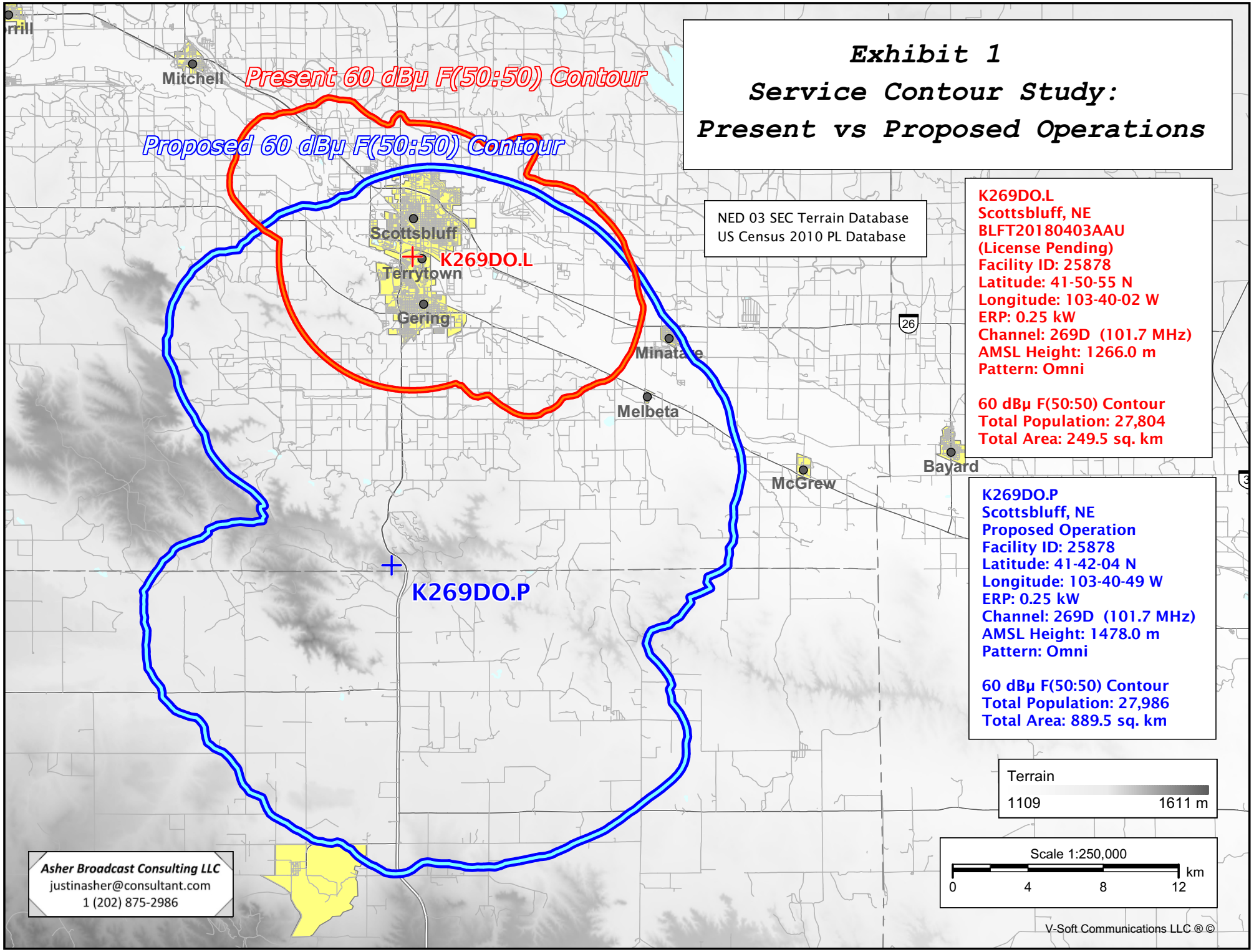
Exhibit 1
Service Contour Study:
Present vs Proposed Operations
Present 60 dBμ F(50:50) Contour
Proposed 60 dBμ F(50:50) Contour
NED 03 SEC Terrain Database
US Census 2010 PL Database
K269DO.L
Scottsbluff, NE
BLFT20180403AAU
(License Pending)
Facility ID: 25878
Latitude: 41-50-55 N
Longitude: 103-40-02 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1266.0 m
Pattern: Omni
60 dBμ F(50:50) Contour
Total Population: 27,804
Total Area: 249.5 sq. km
K269DO.P
Scottsbluff, NE
Proposed Operation
Facility ID: 25878
Latitude: 41-42-04 N
Longitude: 103-40-49 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1478.0 m
Pattern: Omni
60 dBμ F(50:50) Contour
Total Population: 27,986
Total Area: 889.5 sq. km
Mitchell
Scottsbluff
Terrytown
Gering
K269DO.L
K269DO.P
Minatare
Melbeta
McGrew
Bayard
26
Terrain
1109
1611 m
Scale 1:250,000
0
4
8
12
km
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V-Soft Communications LLC ® ©

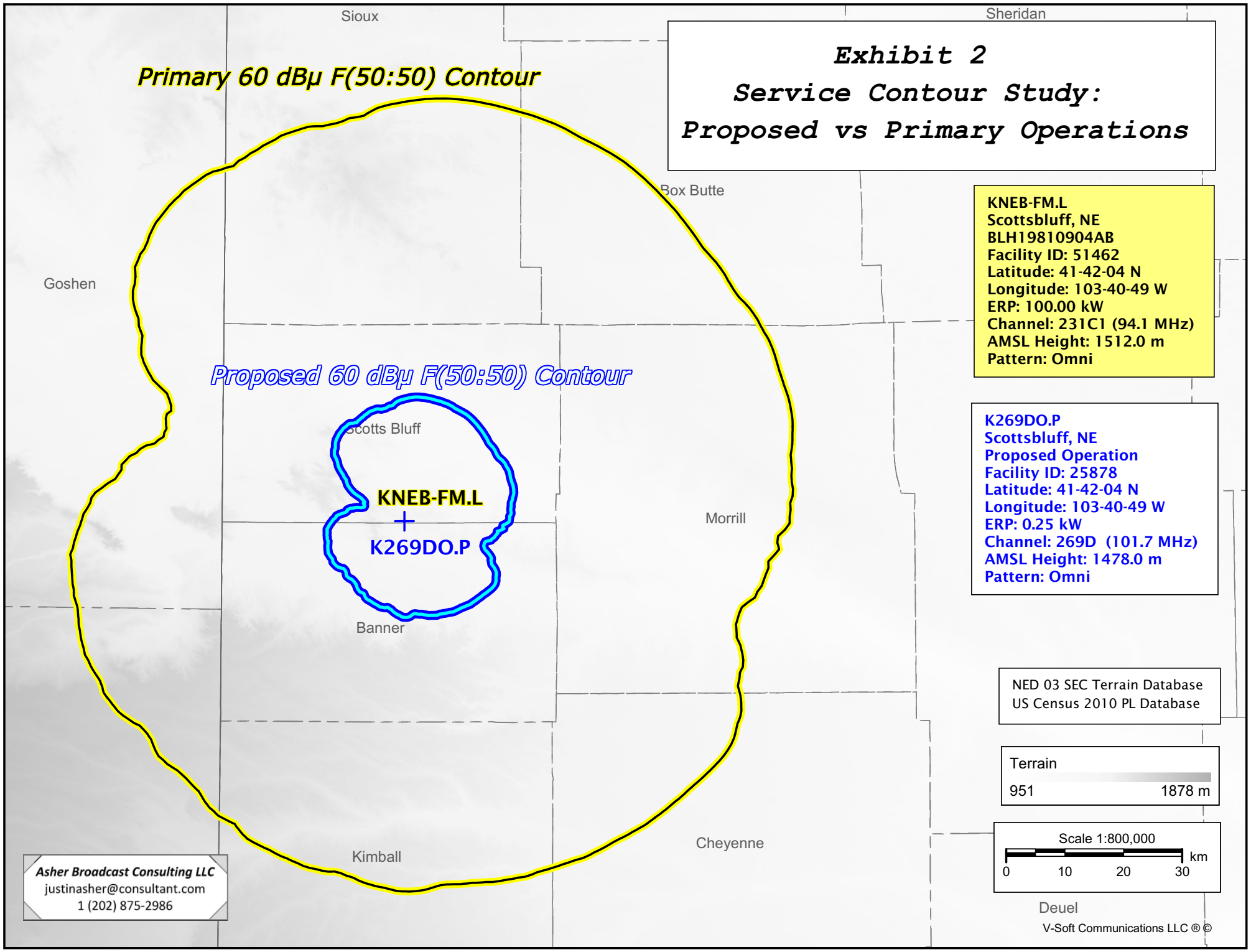
Exhibit 2
Service Contour Study:
Proposed vs Primary Operations
Primary 60 dBµ F(50:50) Contour
Proposed 60 dBµ F(50:50) Contour
KNEB-FM.L
Scottsbluff, NE
BLH19810904AB
Facility ID: 51462
Latitude: 41-42-04 N
Longitude: 103-40-49 W
ERP: 100.00 kW
Channel: 231C1 (94.1 MHz)
AMSL Height: 1512.0 m
Pattern: Omni
K269DO.P
Scottsbluff, NE
Proposed Operation
Facility ID: 25878
Latitude: 41-42-04 N
Longitude: 103-40-49 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1478.0 m
Pattern: Omni
KNEB-FM.L
K269DO.P
Sioux
Sheridan
Box Butte
Goshen
Scotts Bluff
Morrill
Banner
Kimball
Cheyenne
Deuel
NED 03 SEC Terrain Database
US Census 2010 PL Database
Terrain
951
1878 m
Scale 1:800,000
km
0
10
20
30
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V-Soft Communications LLC ® ©

ASR Registration Search

Registration 1026737

Map Registration

Exhibit 3
Copy of Existing Antenna Structure Registration
(public record copy)

Registration Detail

Reg Number	1026737	Status	Constructed
File Number	A0976417	Constructed	01/02/1960
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type: TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	41-42-04.0 N 103-40-51.0 W	Address	1800' (N 214^ E) OF INTERSECTION OF HWY 71 AND STAGE HILL ROAD, "WILDCAT HILLS."
City, State	SCOTTSBLUFF , NE		
Zip	69341	County	SCOTTS BLUFF
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
1439.6	91.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
1531.0	90.5

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

FAA Notification

FAA Study	FAA Issue Date

Owner & Contact Information

FRN	0002390557	Owner Entity Type	Corporation
Assignor FRN	0002380798	Assignor ID	L00025332

Owner

Nebraska Rural Radio Association
P.O. Box 880
Lexington , NE 68850-0880

P: (380)324-2371
F:
E: rzeigler@krvn.com

Contact

P:
F:
E:

Last Action Status

Status	Constructed	Received	07/29/2015
Purpose	Change Owner	Entered	07/29/2015
Mode	Interactive		

Related Applications

07/29/2015	A0976417 - Change Owner (OC)
07/31/1997	A0031727 - New (NE)

Comments

Comments

None

History

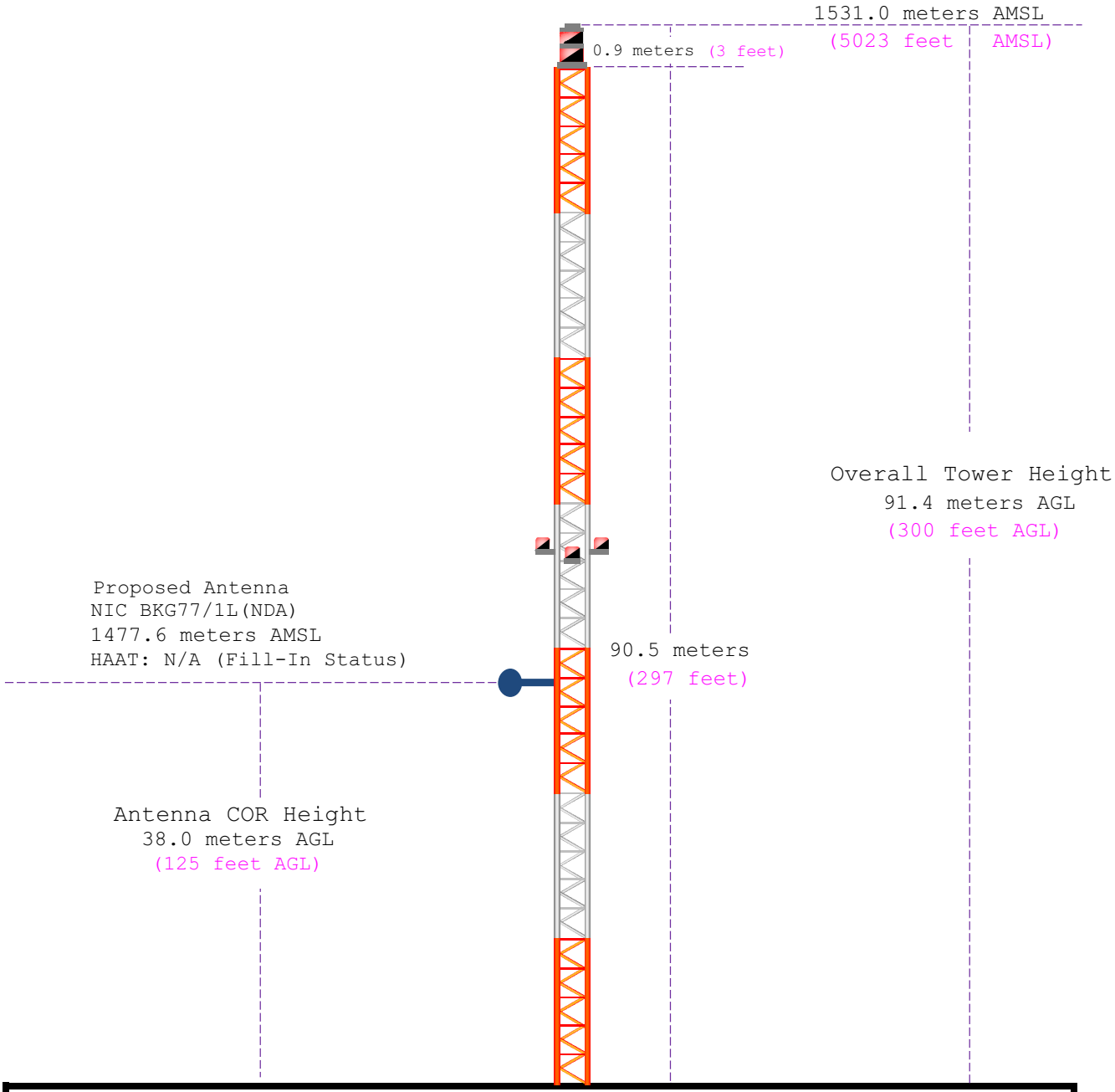
Date	Event
07/30/2015	Registration Printed
07/30/2015	Change of Ownership Letter Sent
07/29/2015	Change of Ownership Received

All History (4)

Automated Letters

07/30/2015	Authorization, Reference
07/30/2015	Ownership Change, Reference 873344

Exhibit 4
Vertical Plan of Antenna System



Ground Elevation:	1439.6 meters AMSL (4723 feet AMSL)
Address:	1800' (N 214^ E) of the Intersecton of HWY 71 and Stage Hill Road, "WILDCAT HILLS".
City: Scottsbluff	**Latitude (D M S)** **Longitude (D M S)**
County: Scottsbluff	NAD 27 datum values: 41 42 4.10384 103 40 49.19983
State: Nebraska	NAD 83 datum values: 41 42 4.00000 103 40 51.00000

Antenna Structure Registration 1026737	Drawing Is Not To Scale	***Asher Broadcast Consulting, LLC*** justinasher@consultant.com 1(202)875-2986

Exhibit 5
HAAT and Miscellaneous Coordinate Information

HAAT Calculation (1927):

N. Lat. = 414204.0 W. Lng. = 1034049.0
HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	1224.4	253.6	0.2500	-6.02	1.000	20.82
030	1220.6	257.4	0.2500	-6.02	1.000	20.96
060	1250.9	227.1	0.2500	-6.02	1.000	19.73
090	1293.4	184.6	0.2500	-6.02	1.000	17.84
120	1286.6	191.4	0.2500	-6.02	1.000	18.15
150	1299.8	178.2	0.2500	-6.02	1.000	17.54
180	1320.8	157.2	0.2500	-6.02	1.000	16.36
210	1357.0	121.0	0.2500	-6.02	1.000	14.13
240	1358.6	119.4	0.2500	-6.02	1.000	14.03
270	1387.9	90.1	0.2500	-6.02	1.000	12.24
300	1413.9	64.1	0.2500	-6.02	1.000	10.47
330	1266.5	211.5	0.2500	-6.02	1.000	19.04

Ave El= 1306.71 M HAAT= 171.29 M AMSL= 1478.0

NAD 1983 to NAD 1927 Conversion:

	Latitude	Longitude
NAD 27 datum values:	41 42 4.10384	103 40 49.19983
NAD 83 datum values:	41 42 4.00000	103 40 51.00000

Various Coordinate Conversion Calculations (NAD 1983):

Position Type	Lat Lon
Degrees Lat Long	41.7011111°, -103.6808333°
Degrees Minutes	41°42.06667', -103°40.85000'
Degrees Minutes Seconds	41°42'04.0000", -103°40'51.0000"
UTM	13T 609761mE 4617432mN
UTM centimeter	13T 609761.13mE 4617432.45mN
MGRS	13TFG0976117432
Grid North	0.9°
GARS	153LZ41
Maidenhead	DN81DQ88HG24
GEOREF	FJBM19154206

Exhibit 6
Tabulation of Proposed Allocation

Blue Text indicates contour protection studies toward select stations as included in ***Exhibit(s) 7(a-b).***

Yellow Highlighted Text denotes the existence of multiple 47 C.F.R. Section 74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Requests as included in ***Exhibit 8.***

Nebraska Rural Radio Association

REFERENCE CH# 269D - 101.7 MHz, Pwr= 0.25 kW, HAAT= 0.0 M, COR= 1478 M — DISPLAY DATES
41 42 04.0 N. Average Protected F(50-50)= 7.09 km — DATA 04-18-18
103 40 49.0 W. Omni-directional — SEARCH 04-18-18

CH CALL / CITY	TYPE ANT / STATE	AZI <--	DIST / FILE #	LAT / LNG	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
267C0 KOZY-FM	LIC _C_	321.8	19.61	41 50 23.0	100.000	10.9	75.8	-9.6*<	-57.3*<
Bridgeport	NE	141.7	BLH20010827AAD	103 49 36.0	339	1630	Legacy Communications, Llc		
Downgraded pursuant to reclassification letter 8/29/2003.									
269D K269DO	CP _C_	3.8	16.43	41 50 55.0	0.250	16.43	16.43	64.5R	-48.1M
Scottsbluff	NE	183.8	BPFT20150831AAT	103 40 02.0		1266	Armada Media - Mccook, Inc		
269D K269DO	LIC _HN	1.5	15.87	41 50 38.0	0.008	15.87	15.87	64.5R	-48.6M
Scottsbluff	NE	181.5	BLFT19890213TN	103 40 31.0	12	1249	Armada Media - Mccook, Inc		
TRANSLATOR FOR KPNY, ALLIANCE, NE									
272C0 KPNY	LIC _C_	72.6	52.61	41 50 28.0	100.000	12.1	82.9	21.1*	-31.4*<
Alliance	NE	253.0	BLH20131205ACP	103 04 27.0	412	1677	My Bridge Radio		
270C2 KIGN	LIC _CN	232.1	104.92	41 07 01.0	50.000	82.9	56.0	8.9	29.2
Burns	WY	51.4	BMLH19950920KD	104 40 07.0	150	1963	Townsquare Media Cheyenne		
269C1 R12441	ADD ___	109.2	207.84	41 03 50.0	100.000	173.5	73.4	19.8	85.6
Ogallala	NE	290.7		101 20 16.0	299	1270	Jer Licenses, Llc		
involuntary channel substitution per BNPH-20070502AEZ-from Channel 259C1									
216C KTNE-FM	LIC _CY	73.2	54.23	41 50 24.0	100.000	0.0	0.0	28.5R	25.7M
Alliance	NE	253.6	BLED19900515KB	103 03 18.0	404	1669	Nebraska Educational Telec		
268C KJHM	LIC NHX	187.2	199.22	39 55 22.0	97.000	137.8	92.9	46.0	83.2
Watkins	CO	7.0	BLH20170103ABQ	103 58 18.0	625	2109	Max Radio Of Denver Llc		
269A KZEW	LIC _CN	290.5	111.59	42 02 44.0	3.000	53.3	13.2	51.1	74.3
Wheatland	WY	109.6	BLH19850723KC	104 56 47.0	38	1503	Smith Broadcasting, Incorp		
266D K266CC	LIC _C_	236.5	112.67	41 08 09.0	0.250	1.1	8.0	97.7	103.6
Cheyenne	WY	55.7	BLFT20170411ACC	104 48 07.0		1874	Mountain Community Transla		
215C0 KLWV	LIC _CX	254.2	154.24	41 18 39.0	100.000	0.0	0.0	24.5R	129.7M
Chugwater	WY	73.0	BLED20040621ABR	105 27 12.0	361	2765	Educational Media Foundati		
268C0 KDDV-FM	LIC _CX	333.9	285.88	43 59 57.0	100.000	102.4	70.1	164.9	188.1
Wright	WY	152.8	BLH20081002AEA	105 15 15.0	335	1761	Legend Communications Of W		
271D KGRE-FM2	LIC DC_	223.6	183.95	40 29 37.0	0.065	0.3	16.7	170.1	166.2
Fort Collins	CO	42.6	BLFTB20070404AAP	105 10 53.0		2090	United States Cp, Llc		
271A KGRE-FM	LIC _HX	226.6	214.51	40 21 38.0	6.000	4.2	46.4	196.9	167.0
Estes Park	CO	45.4	BLH20070117AAE	105 31 12.0	25	2739	United States Cp, Llc		
266C0 KOSI	CP DCY	210.4	260.01	39 40 24.4	100.000	12.6	89.3	233.3	169.6
Denver	CO	29.4	BPH20171017AAH	105 13 02.5	341	2364	Bonneville International C		

Terrain database is NED 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= West 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), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
< = Contour Overlap

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Exhibit 7a
Contour Protection Studies Toward Select Allocation Concern(s)

Nebraska Rural Radio Association

FMCommander Single Allocation Study - 04-18-2018 - NED 03 SEC
K269DO.P's Overlaps (In= 8.9 km, Out= 29.2 km)

K269DO.P CH 269 D
Lat= 41 42 04.0, Lng= 103 40 49.0
0.25 kW 0 m HAAT, 1478 m COR
Prot.= 60 dBu, Intef.= 54 dBu

KIGN CH 270 C2 BMLH19950920KD
Lat= 41 07 01.0, Lng= 104 40 07.0
50.0 kW 150 m HAAT, 1963 m COR
Prot.= 60 dBu, Intef.= 54 dBu

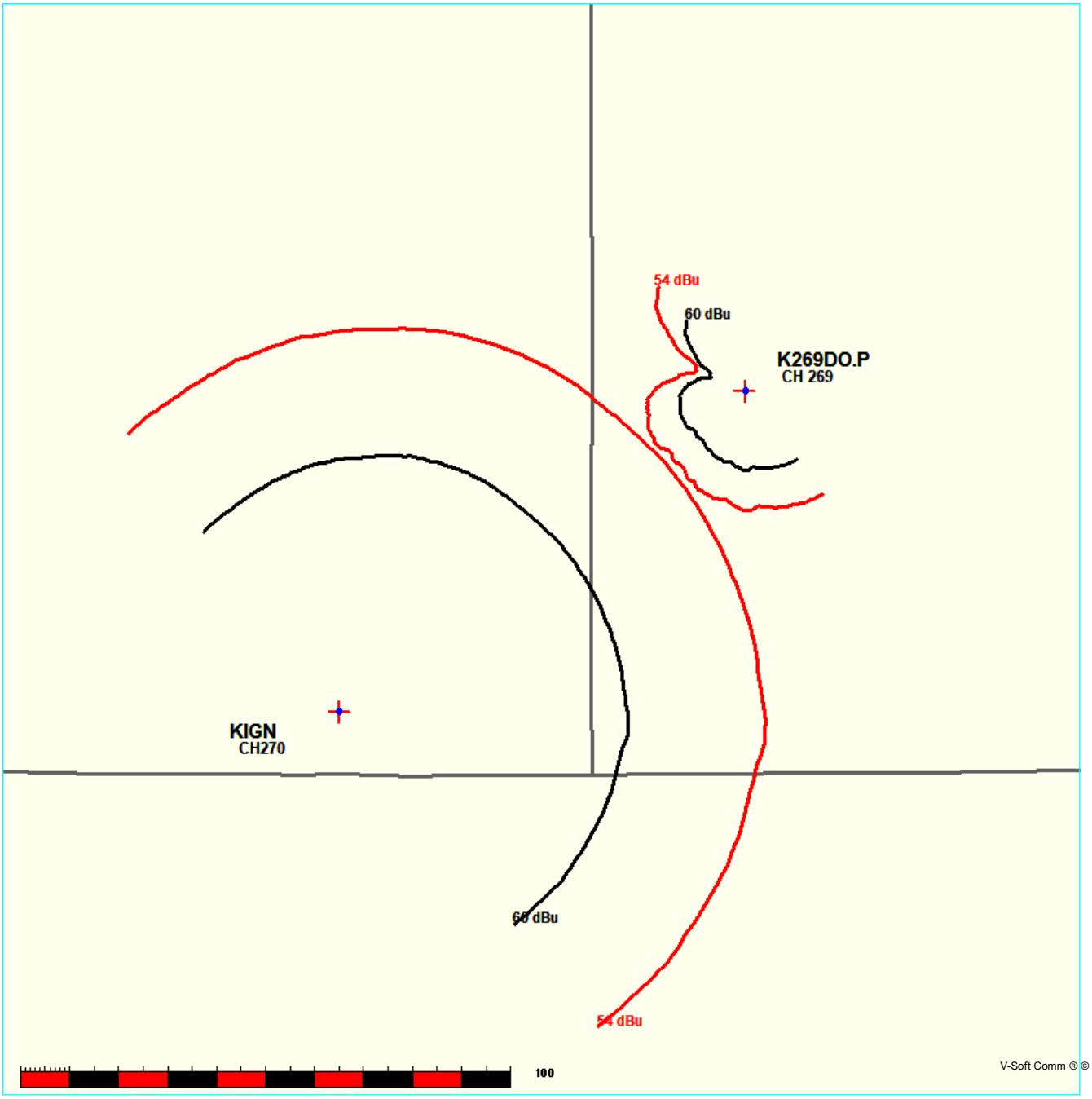

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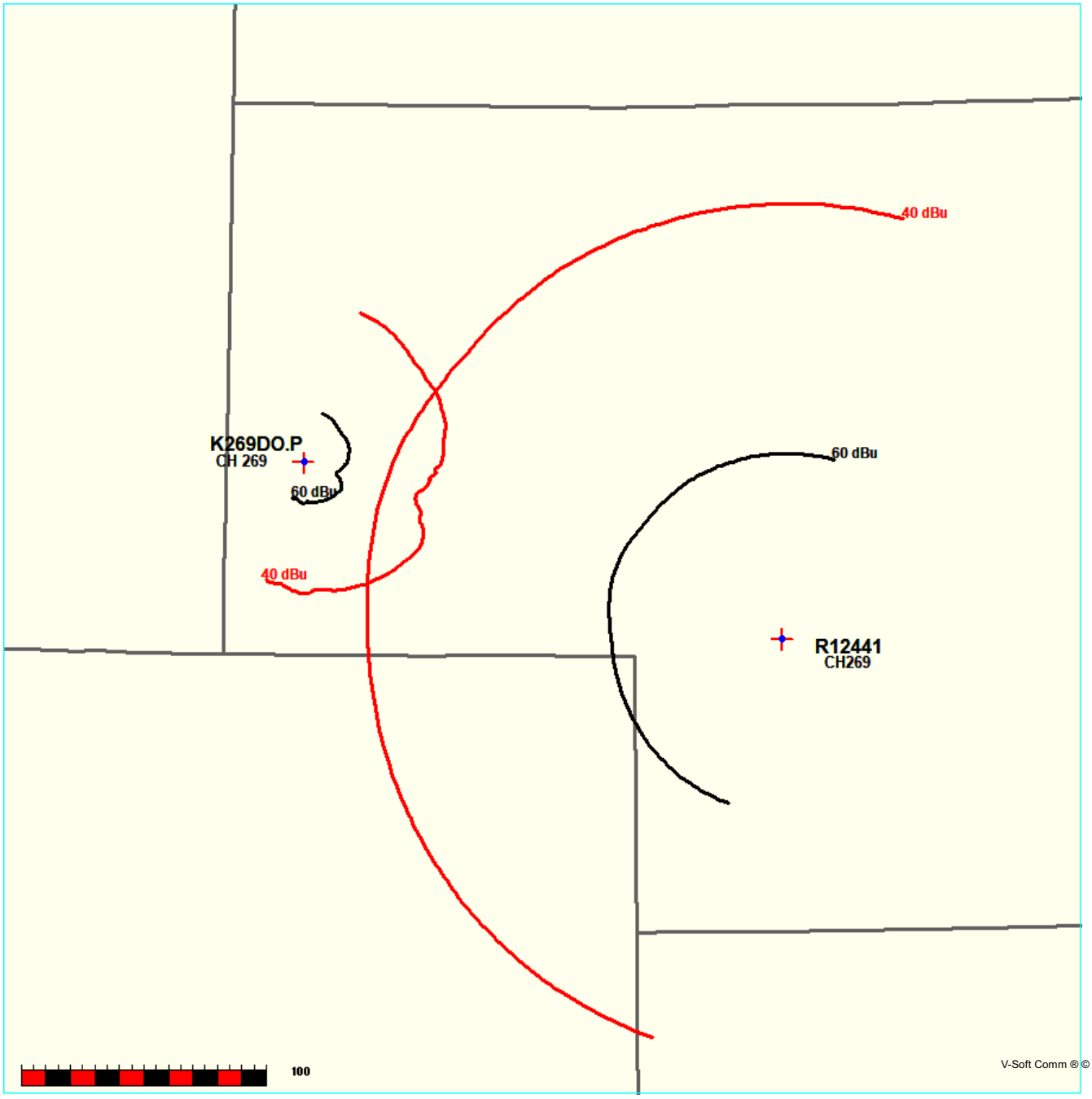
Exhibit 7b
Contour Protection Studies Toward Select Allocation Concern(s)

Nebraska Rural Radio Association

FMCommander Single Allocation Study - 04-18-2018 - NED 03 SEC
K269DO.P's Overlaps (In= 19.79 km, Out= 85.57 km)

K269DO.P CH 269 D
Lat= 41 42 04.0, Lng= 103 40 49.0
0.25 kW 0 m HAAT, 1478 m COR
Prot.= 60 dBu, Intef.= 40 dBu

R12441 CH 269 C1
Lat= 41 03 50.0, Lng= 101 20 16.0
100.0 kW 299 m HAAT, 1270.1 m COR
Prot.= 60 dBu, Intef.= 40 dBu



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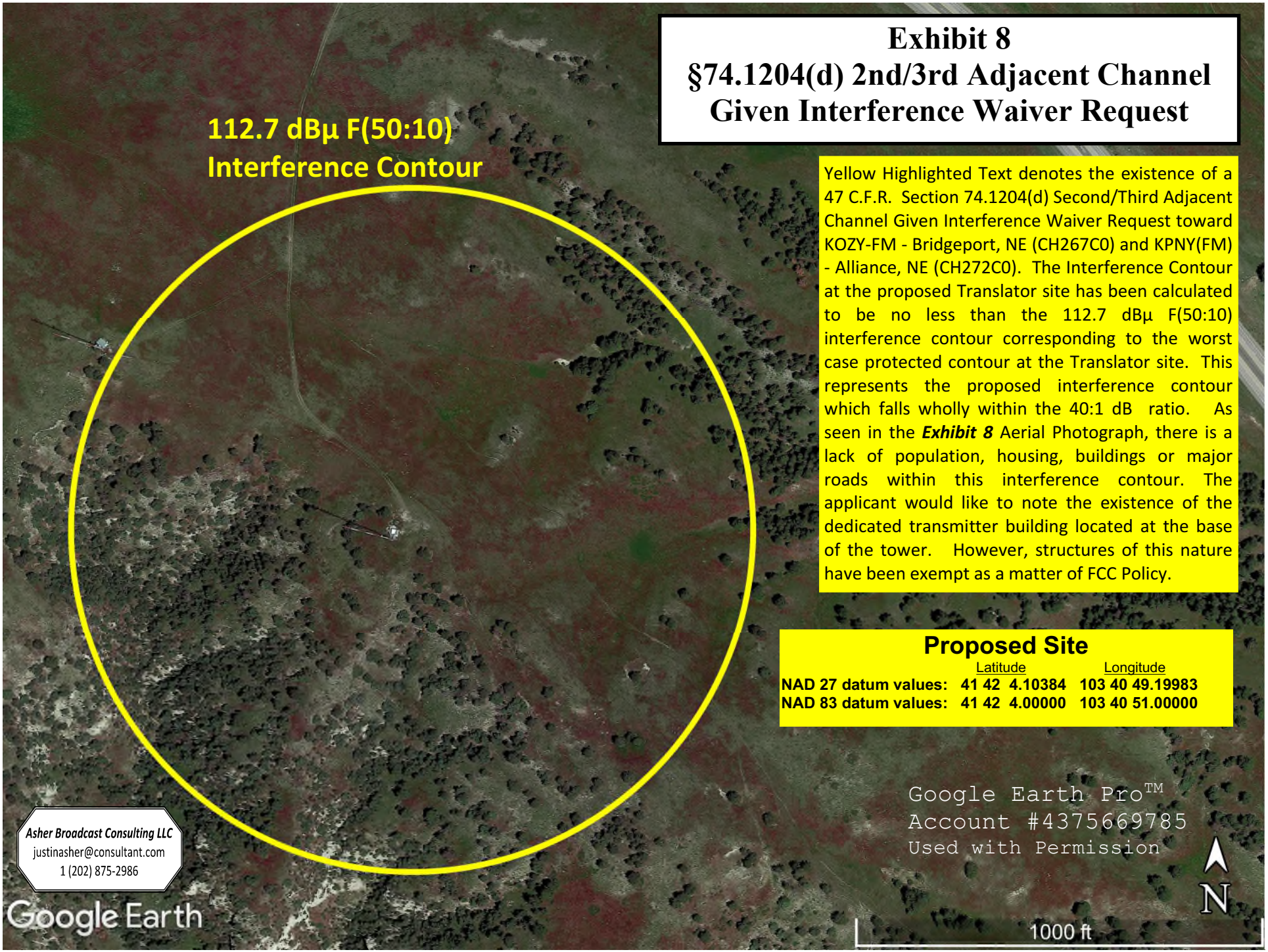


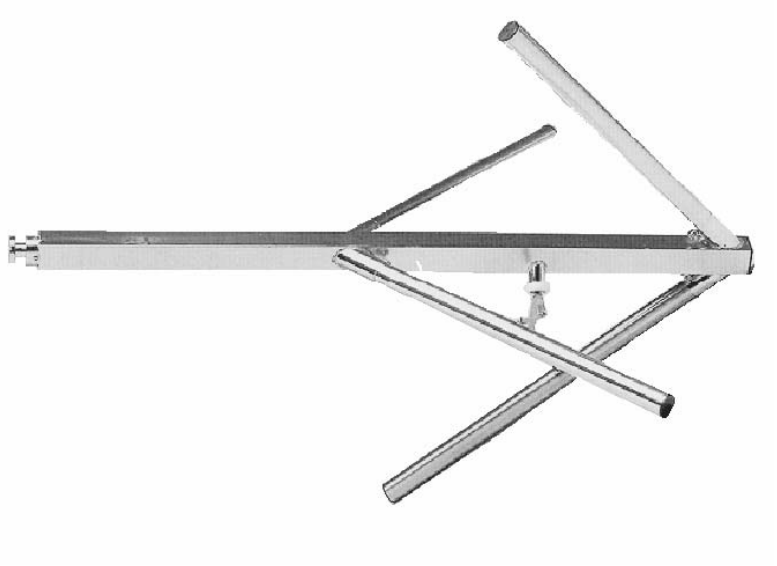
Exhibit 8
§74.1204(d) 2nd/3rd Adjacent Channel Given Interference Waiver Request

Yellow Highlighted Text denotes the existence of a 47 C.F.R. Section 74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward KOZY-FM - Bridgeport, NE (CH267C0) and KPNY(FM) - Alliance, NE (CH272C0). The Interference Contour at the proposed Translator site has been calculated to be no less than the 112.7 dBµ F(50:10) interference contour corresponding to the worst case protected contour at the Translator site. This represents the proposed interference contour which falls wholly within the 40:1 dB ratio. As seen in the ***Exhibit 8*** Aerial Photograph, there is a lack of population, housing, buildings or major roads within this interference contour. The applicant would like to note the existence of the dedicated transmitter building located at the base of the tower. However, structures of this nature have been exempt as a matter of FCC Policy.

Proposed Site

	Latitude	Longitude
NAD 27 datum values:	**41 42 4.10384**	**103 40 49.19983**
NAD 83 datum values:	**41 42 4.00000**	**103 40 51.00000**

Exhibit 9 - Copy of Manufacturer's Antenna Documentation
(public record copy)



NICOM

BKG77

Low Power

Broadband FM Circular Polarization Antenna

Antena de FM Banda Ancha Polarizacion Circular

This antenna, constructed completely of stainless steel, offers circular polarization for better coverage especially in urban areas. In order to facilitate and decrease shipping costs, this model is simple to break down and reassemble when ready to be installed. It is insulated with Teflon, and with the appropriate connector has a maximum input of 0.5 kw.
Esta antena, fabricada completamente de acero inoxidable, le ofrece polarización circular para mejor alcance, especialmente en zonas urbanas. Para facilitar y desminuir los costos de transportación, este modelo es fácil de desarmar y volver a montar tan pronto que la quiera instalar. Está aislada con Teflon, y con el conector apropiado tiene una entrada máxima de 0.5 kw.

TECHNICAL SPECIFICATIONS (per bay)

Antenna type	circular polarization dipole
Frequency range	87.5 - 108 MHz
Bandwidth	500 kHz max
Impedance	50 ohms
Connectors	N type (0.5 kw)
Power rating	500 Watts max
VSWR	< 1.1:1
Polarization	vertical and horizontal
Gain	- 3 dBd (referred to half-wave dipole)
H plane	omnidirectional ±1.5 dB (with a 4" mast)
V plane	omnidirectional ±3 dB (with a 4" mast)

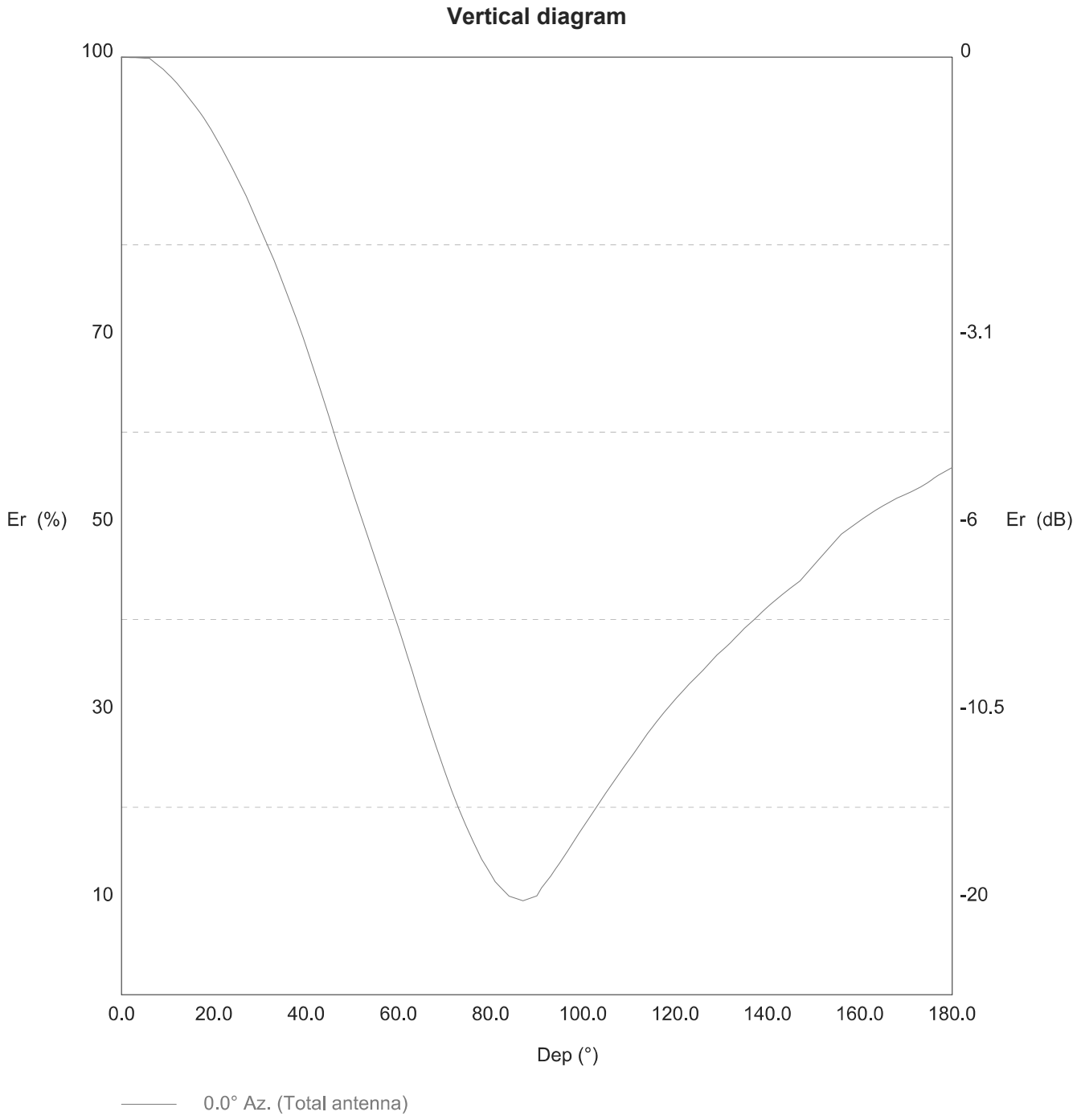
Front-to-back ratio	3 dB
Lightening protection	all parts grounded
Max wind velocity	119 mph (190 km/h)
Wind load	8 Lbs (3.6 kg)
Wind surface	0.3 ft^2 (0.04 m^2)
Materials (external)	stainless steel
Mounting	from 2" to 4"
Weight	7.7 Lbs (3.5 kg)
Dimensions	58"×32"×32" (1450×800×800mm)
Packing	72"×6"×6" (1500×152×152mm)

Exhibit 9 - Copy of Manufacturer's Antenna Documentation
(public record copy)

Date: 29/04/2013 BKG77SINGLE.PRJ

TX station: BKG77-1 Site name:

Frequency: 100.00 MHz



NicomUsa, Inc

Exhibit 9 - Copy of Manufacturer's Antenna Documentation

(public record copy)

BKG77SINGLE.PRJ

TX station: BKG77-1

Site name:

Frequency: 100.00 MHz

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	373.6	60.0	39.1	57.2	120.0	31.5	37.0
1.0	100.0	373.5	61.0	37.6	52.8	121.0	32.0	38.3
2.0	100.0	373.4	62.0	36.1	48.6	122.0	32.6	39.6
3.0	99.9	373.3	63.0	34.5	44.6	123.0	33.1	41.0
4.0	99.9	373.1	64.0	32.9	40.5	124.0	33.6	42.2
5.0	99.9	372.9	65.0	31.3	36.6	125.0	34.1	43.5
6.0	99.9	372.8	66.0	29.7	33.0	126.0	34.6	44.7
7.0	99.5	369.9	67.0	28.2	29.8	127.0	35.2	46.2
8.0	99.1	367.0	68.0	26.8	26.8	128.0	35.7	47.6
9.0	98.7	364.1	69.0	25.3	23.9	129.0	36.2	49.1
10.0	98.2	360.5	70.0	23.9	21.3	130.0	36.7	50.3
11.0	97.7	356.9	71.0	22.5	18.9	131.0	37.1	51.5
12.0	97.2	353.3	72.0	21.1	16.6	132.0	37.6	52.7
13.0	96.6	348.9	73.0	19.9	14.8	133.0	38.1	54.1
14.0	96.0	344.5	74.0	18.8	13.2	134.0	38.6	55.6
15.0	95.4	340.1	75.0	17.6	11.6	135.0	39.1	57.0
16.0	94.7	335.4	76.0	16.6	10.2	136.0	39.5	58.4
17.0	94.1	330.8	77.0	15.5	9.0	137.0	40.0	59.7
18.0	93.4	326.1	78.0	14.5	7.8	138.0	40.4	61.1
19.0	92.6	320.4	79.0	13.7	7.0	139.0	40.9	62.5
20.0	91.8	314.7	80.0	12.9	6.2	140.0	41.4	63.9
21.0	91.0	309.1	81.0	12.0	5.4	141.0	41.8	65.3
22.0	90.0	302.7	82.0	11.5	5.0	142.0	42.2	66.5
23.0	89.1	296.5	83.0	11.0	4.5	143.0	42.6	67.8
24.0	88.1	290.3	84.0	10.5	4.1	144.0	43.0	69.0
25.0	87.2	283.8	85.0	10.3	4.0	145.0	43.4	70.3
26.0	86.2	277.4	86.0	10.2	3.9	146.0	43.8	71.6
27.0	85.2	271.1	87.0	10.0	3.7	147.0	44.1	72.8
28.0	84.0	263.9	88.0	10.2	3.9	148.0	44.7	74.7
29.0	82.9	256.8	89.0	10.4	4.0	149.0	45.3	76.5
30.0	81.8	249.8	90.0	10.5	4.1	150.0	45.8	78.4
31.0	80.6	242.9	91.0	11.4	4.8	151.0	46.4	80.3
32.0	79.5	236.1	92.0	12.0	5.4	152.0	46.9	82.3
33.0	78.3	229.3	93.0	12.7	6.0	153.0	47.5	84.3
34.0	77.1	222.0	94.0	13.4	6.7	154.0	48.0	86.2
35.0	75.8	214.7	95.0	14.1	7.4	155.0	48.6	88.2
36.0	74.5	207.6	96.0	14.8	8.2	156.0	49.1	90.2
37.0	73.2	200.4	97.0	15.6	9.1	157.0	49.5	91.5
38.0	71.9	193.3	98.0	16.4	10.0	158.0	49.8	92.8
39.0	70.6	186.3	99.0	17.1	11.0	159.0	50.2	94.1
40.0	69.1	178.6	100.0	17.9	11.9	160.0	50.5	95.4
41.0	67.6	170.9	101.0	18.6	12.9	161.0	50.9	96.8
42.0	66.1	163.5	102.0	19.3	13.9	162.0	51.2	98.1
43.0	64.6	156.0	103.0	20.1	15.0	163.0	51.5	99.2
44.0	63.1	148.7	104.0	20.8	16.2	164.0	51.8	100.4
45.0	61.6	141.6	105.0	21.5	17.3	165.0	52.1	101.6
46.0	60.0	134.4	106.0	22.3	18.5	166.0	52.4	102.7
47.0	58.4	127.5	107.0	23.0	19.7	167.0	52.7	103.7
48.0	56.8	120.7	108.0	23.7	21.0	168.0	53.0	104.8
49.0	55.3	114.4	109.0	24.4	22.2	169.0	53.2	105.7
50.0	53.8	108.2	110.0	25.1	23.5	170.0	53.4	106.5
51.0	52.3	102.2	111.0	25.7	24.8	171.0	53.6	107.4
52.0	50.8	96.6	112.0	26.5	26.2	172.0	53.9	108.4
53.0	49.4	91.1	113.0	27.2	27.6	173.0	54.1	109.4
54.0	47.9	85.8	114.0	27.9	29.0	174.0	54.4	110.5
55.0	46.5	80.7	115.0	28.5	30.4	175.0	54.7	111.9
56.0	45.0	75.7	116.0	29.2	31.8	176.0	55.1	113.3
57.0	43.6	71.0	117.0	29.8	33.1	177.0	55.4	114.7
58.0	42.1	66.2	118.0	30.4	34.4	178.0	55.7	115.9
59.0	40.6	61.6	119.0	30.9	35.7	179.0	56.0	117.0