

Technical Report Supporting a Minor Modification of a Licensed Facility Construction Permit Application

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

for

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

*“Site Relocation,
Increase in Antenna COR
& New Non-Directional Antenna”*

*as a
Commercial, Fill-In
AM Translator for
KOLT(AM) - Terrytown, NE*

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EXPLANATION OF PROPOSAL: This LMS Schedule 349 Filing and accompanying technical report supports a Minor Modification of a Licensed Facility Construction Permit Application for FM Translator K269DO.L - Scottsbluff, NE (Facility ID: 25878). This filing requests a change in site location, increase in antenna COR and new non-directional antenna. Continued operation on CH269D (101.7 MHz) with a power of 0.250 kW ERP circular polarization (H&V) is requested. The FM Translator will operate from a COR of 1605.4 meters AMSL at the new site location. This filing will specify continued rebroadcast of Class D, AM Primary Station KOLT(AM) - Terrytown, NE (690 kHz); Facility ID No. 67472. The Translator will remain licensed to the current 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 present service area as noted in the exhibit. The proposed 60 dBμ contour of the Translator lies wholly inside the larger of the AM primary daytime 2.0 mV/m contour or a 25 mile radius around the AM site. 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 1218350. In support of this filing, a copy of the 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 FCC 30 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 Requests toward KOZY-FM - Bridgeport, NE (CH267C0) and KPNY(FM) - Alliance, NE (CH272C0) as noted in *Exhibit 8*. The interference contour at the site has been calculated to be no less than the 108.0 dBμ F(50:10) contour corresponding to the 68.0 dBμ F(50:50) protected contour at the Translator site. This represents the proposed interference contour which falls wholly within the 40:1 dBu 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 multiple dedicated transmitter buildings located at the remote site. However, structures of this nature have been exempt as a matter of FCC Policy (*see similar grant under BPFT-20160725ABE*).

There are two additional 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)**.

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 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, 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 antenna and feed-line are being added to an 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 twenty-two 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
June 11, 2021

Exhibit 1

Service Contour Study: Present vs Proposed Operations

FCC 30 SEC Terrain Database
US Census 2010 PL Database
NED 1983 Coordinate Datum

K269DO.L
Scottsbluff, NE
BLFT20180629ABI
Facility ID: 25878
Latitude: 41-42-03.90 N
Longitude: 103-40-50.80 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1478.0 m
Horiz. Pattern: Omni

60 dBμ F(50:50) Contour
Total Population: 28,049
Total Area: 890.7 sq. km

K269DO.P
Scottsbluff, NE
Proposed Operation
Facility ID: 25878
Latitude: 41-50-22.80 N
Longitude: 103-49-37 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1605.4 m
Horiz. Pattern: Omni

60 dBμ F(50:50) Contour
Total Population: 34,871
Total Area: 1,669.0 sq. km

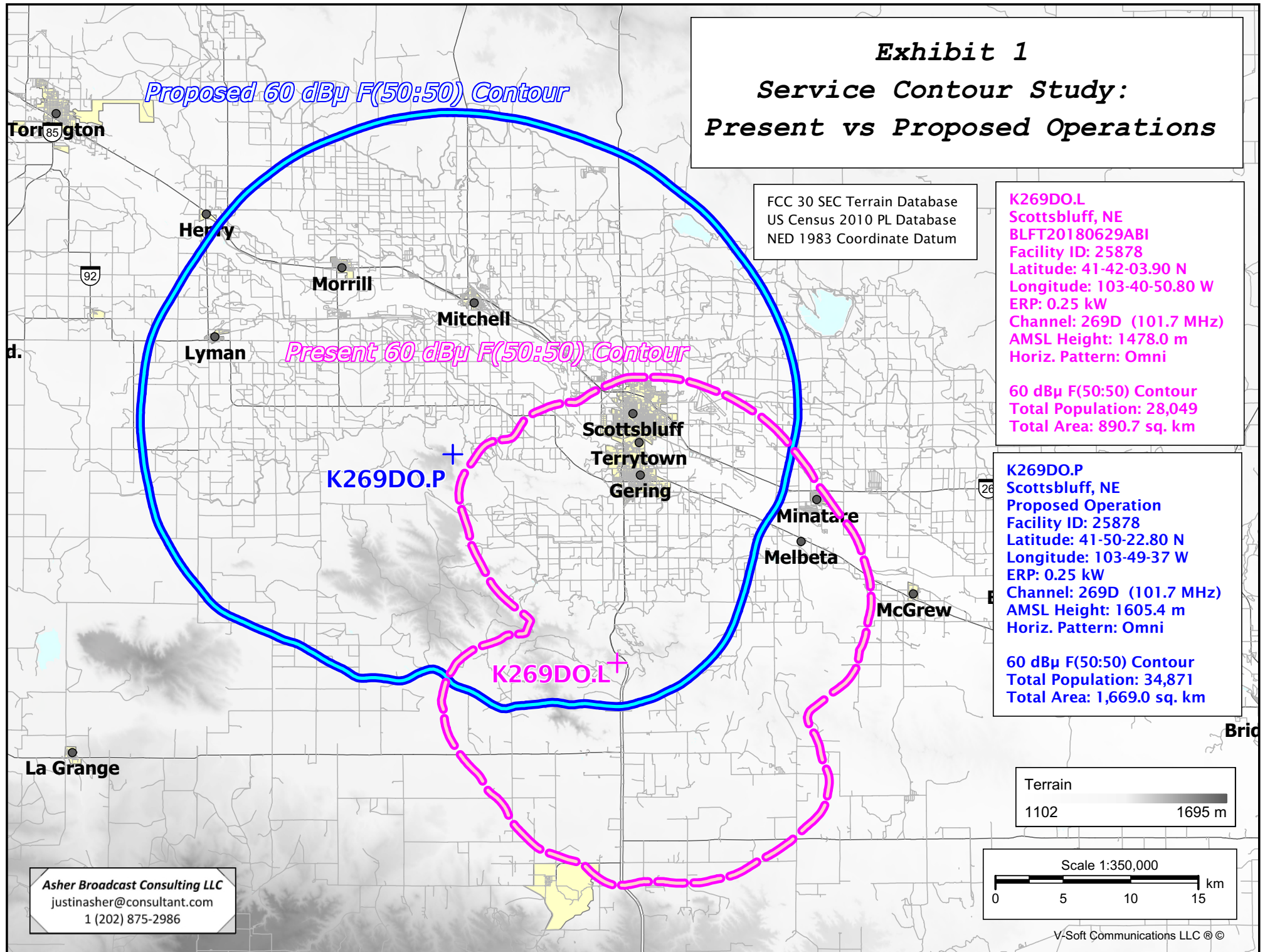


Exhibit 2
Service Contour Study:
Proposed vs Primary Operations

Sioux
Primary 2 mV/m Daytime Contour

25 mile Radius from AM Site

Proposed 60 dBµ F(50:50) Contour

KOLT(AM)

+ Scotts Bluff

K269DO.P

KOLT 690 kHz
Terrytown, Nebraska
Station Class: D
Region 2 Class: B
Facility ID: 67472
File Number: BL-19950809AD
41-50-55.0 N 103-40-02.0 W (NAD 27)
41-50-54.9 N 103-40-03.8 W (NAD 83)
Power: 1 kW, Directional
Hours: Daytime
Pattern Type: Augmented
Towers: 2 Augmentations: 13
RMS Theoretical: 289.68 mV/meter

K269DO.P
Scottsbluff, NE
Proposed Operation
Facility ID: 25878
Latitude: 41-50-22.80 N
Longitude: 103-49-37 W
ERP: 0.25 kW
Channel: 269D (101.7 MHz)
AMSL Height: 1605.4 m
Horiz. Pattern: Omni

Garden

Terrain

894

1885 m

FCC 30 SEC Terrain Database
US Census 2010 PL Database
NAD 1983 Coordinate Datum

Scale 1:825,000

0 15 30 45 km

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

Kimball

Cheyenne

V-Soft Communications LLC ©

Exhibit 3

Copy of Existing Antenna Structure Registration

(public record copy)

Registration Detail

Reg Number	1218350	Status	Constructed
File Number	A1152470	Constructed	11/01/2001
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

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

Location (in NAD83 Coordinates)

Lat/Long	41-50-22.8 N 103-49-37.0 W	Address	3.8 km SSW of NE 29 and 92
City, State	Scottsbluff , NE		
Zip	69357	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)
1492.6	152.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
1644.7	152.1

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	00-ACE-1398-OE	FAA Issue Date	08/24/2000
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Owner & Contact Information

FRN	0002390557	Owner Entity Type	Other - Non-Profit Corporation
Assignor FRN	0022014799	Assignor ID	L01731660

Owner

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

P: (308)324-2371
F:
E: John@JWKingLaw.com

Contact

King , John W
4051 Shoal Creek Ln E
Jacksonville , FL 32225-4792

P: (904)647-9610
F:
E: John@JWKINGLAW.com

Last Action Status

Status	Constructed	Received	01/23/2020
Purpose	Change Owner	Entered	01/23/2020
Mode	Interactive		

Related Applications

01/23/2020	A1152470 - Change Owner (OC)
08/30/2012	A0784590 - Change Owner (OC)
01/23/2008	A0581735 - Change Owner (OC)

Related applications (6)

Comments

Comments

None

History

Date

01/24/2020
01/24/2020
01/23/2020
All History (15)

Event

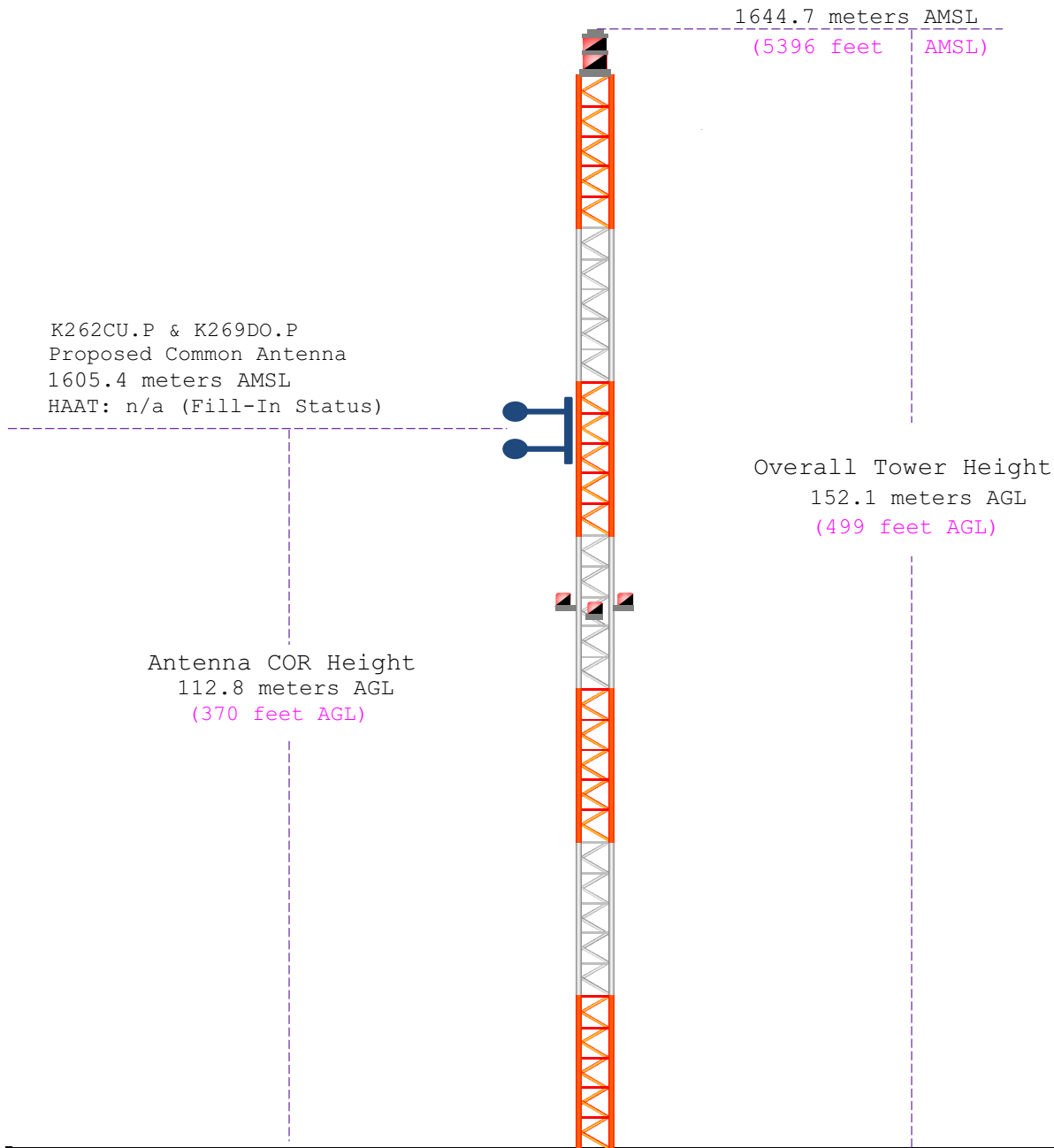
Registration Printed
Change of Ownership Letter Sent
Change of Ownership Received

Automated Letters

01/24/2020	Authorization, Reference
01/24/2020	Ownership Change, Reference 1076717
08/31/2012	Authorization, Reference
All letters (9)	

Exhibit 4

Vertical Plan of Antenna System



Ground Elevation: 1492.6 meters AMSL (4897 feet AMSL)		
Address: 3.8 km SSW of NE 29 and 92		
City: Scottsbluff	Latitude (D M S) Longitude (D M S)	
County: Scotts Bluff	---- (NAD 1927)	
State: Nebraska	Lat/Long 41-50-22.8 N 103-49-37.0 W (NAD 1983)	
Antenna Structure Registration	Drawing	Asher Broadcast Consulting, LLC
1218350	Is Not	justinasher@consultant.com
	To Scale	1(202)875-2986

Exhibit 5

HAAT and Miscellaneous Coordinate Information

HAAT Calculation (1983):

N. Lat. = 415022.8 W. Lng. = 1034937.0
 HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	1225.9	379.5	0.2500	-6.02	1.000	25.23
030	1218.5	386.9	0.2500	-6.02	1.000	25.45
060	1203.0	402.4	0.2500	-6.02	1.000	25.91
090	1234.0	371.4	0.2500	-6.02	1.000	24.98
120	1259.6	345.8	0.2500	-6.02	1.000	24.15
150	1338.1	267.3	0.2500	-6.02	1.000	21.34
180	1438.6	166.8	0.2500	-6.02	1.000	16.93
210	1420.4	185.0	0.2500	-6.02	1.000	17.86
240	1346.1	259.3	0.2500	-6.02	1.000	21.04
270	1296.8	308.6	0.2500	-6.02	1.000	22.87
300	1271.6	333.8	0.2500	-6.02	1.000	23.75
330	1238.7	366.7	0.2500	-6.02	1.000	24.83

Ave El= 1290.95 M HAAT= 314.45 M AMSL= 1605.4

NAD 1983 to NAD 1927 Conversion:

Various Coordinate Conversion Calculations (NAD 1983):

Position Type	Lat Lon
Degrees Lat Long	41.8396667°, -103.8269444°
Degrees Minutes	41°50.38000', -103°49.61667'
Degrees Minutes Seconds	41°50'22.8000", -103°49'37.0000"
UTM	13T 597393mE 4632639mN
UTM centimeter	13T 597393.92mE 4632639.94mN
MGRS	13TEG9739332639
Grid North	0.8°
GARS	153LZ16
Maidenhead	DN81CU01SM44
GEOREF	FJBM10385038

Exhibit 6

Tabulation of Proposed Allocation

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

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

Nebraska Rural Radio Association REFERENCE CH# 269D - 101.7 MHz, Pwr= 0.25 kW, HAAT= 314.4 M, COR= 1605.4 M DISPLAY DATES 41 50 22.80 N. Average Protected F(50-50)= 23.08 km DATA 06-08-21 103 49 37.00 W. Omni-directional SEARCH 06-08-21											
CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*	
267C0 Bridgeport	KOZY-FM	LIC_CN NE	0.0 99.5	0.00 BLH20010827AAD	41 50 22.90 103 49 37.80	100.000 339	11.2 1630	77.6 Nebraska Rural Radio Assoc	-36.4*	-78.7*	
269D Scottsbluff	K269DO	LIC_CN NE	141.8 321.9	19.60 BLFT20180629ABI	41 42 03.90 103 40 50.80	0.250	1478	---Reference---			Nebraska Rural Radio Assoc
272C0 Alliance	KPNY	LIC_CN NE	89.6 270.1	62.31 BLED20131205ACP	41 50 27.90 103 04 28.70	100.000 412	11.9 1677	81.7 Mybridge	25.4	-20.5*	
270C2 Burns	KIGN	LIC_CN WY	221.4 40.8	106.66 BMLH19950920KD	41 07 00.90 104 40 08.80	50.000 150	82.4 1963	55.7 Townsquare License, LLC	5.8	23.6	
269A Wheatland	KZEW	LIC_CN WY	284.3 103.5	95.40 BLH19850723KC	42 02 43.80 104 56 48.80	3.000 38	53.3 1503	13.2 Smith Broadcasting, Incorp	18.6	11.5	
269C1 Ogallala	R12441	ADD NE	111.8 293.4	224.59	41 03 49.98 101 20 17.58	100.000 299	173.2 1267	73.2 Jer Licenses, Llc	27.8	80.5	
216C Alliance	KTNE-FM	LIC_CN NE	89.7 270.2	64.07 BLED19900515KB	41 50 23.80 103 03 19.70	100.000 404	54.3 1669	14.7 Nebraska Educational Telec	28.5R	35.6M	
268C Watkins	KJHM	LIC_NHN CO	183.3 3.2	213.47 BLH20170103ABQ	39 55 21.90 103 58 19.80	97.000 625	138.2 2109	93.1 Max Radio Of Denver LLC	59.3	96.3	
266D Cheyenne	K266CC	LIC_CN WY	226.4 45.8	112.80 BLFT20170411ACC	41 08 08.90 104 48 08.90	0.250	1.1 1874	8.6 Mountain Community Transla	92.7	103.1	
215C0 Chugwater	KLWV	CP_CN WY	247.1 66.0	147.85 0000086811	41 18 39.00 105 27 14.00	100.000 345	54.3 2749	14.7 Educational Media Foundati	24.5R	123.4M	
215C0 Chugwater	KLWV	LIC_CN WY	247.1 66.0	147.85 BLED20040621ABR	41 18 38.90 105 27 13.90	100.000 361	54.3 2765	14.7 Educational Media Foundati	24.5R	123.4M	
268C0 Wright	KDDV-FM	LIC_CN WY	334.6 153.7	266.73 BLH20081002AEA	43 59 56.90 105 15 16.90	100.000 335	105.4 1761	72.6 Legend Communications Of W	136.4	156.2	
270C Belle Fourche	KFMH	LIC_HN SD	359.9 179.9	276.62 BLH20060822AIM	44 19 39.90 103 50 07.70	100.000 454	102.3 2165	70.1 Bad Lands Broadcasting Com	149.1	168.1	
271A Estes Park	KGRE-FM	LIC_HN CO	221.3 40.2	217.19 BLH20070117AAE	40 21 37.90 105 31 13.90	6.000 25	4.2 2739	47.2 Greeley Broadcasting Corpo	194.6	168.9	
271D Fort Collins	KGRE-FM2	LIC_DCN CO	217.6 36.7	187.76 BLFTB20070404AAP	40 29 36.90 105 10 54.90	0.065	0.4 2090	16.9 Greeley Broadcasting Corpo	169.4	169.7	

Terrain database is FCC NGDC 30 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.
 << = Station meets FCC minimum distance spacing for its class.

Exhibit 7a

Contour Protection Studies Toward Select Allocation Concern(s)

Nebraska Rural Radio Association

FMCommander Single Allocation Study - 06-08-2021 - FCC NGDC 30 Sec
K269DO.P's Overlaps (In= 5.83 km, Out= 23.6 km)

K269DO.P CH 269 D
Lat= 41 50 22.80, Lng= 103 49 37.00
0.25 kW 314.4 m HAAT, 1605.4 m COR
Prot.= 60 dBu, Intef.= 54 dBu

KIGN CH 270 C2 BMLH19950920KD
Lat= 41 07 00.90, Lng= 104 40 08.80
50.0 kW 150 m HAAT, 1963 m COR
Prot.= 60 dBu, Intef.= 54 dBu

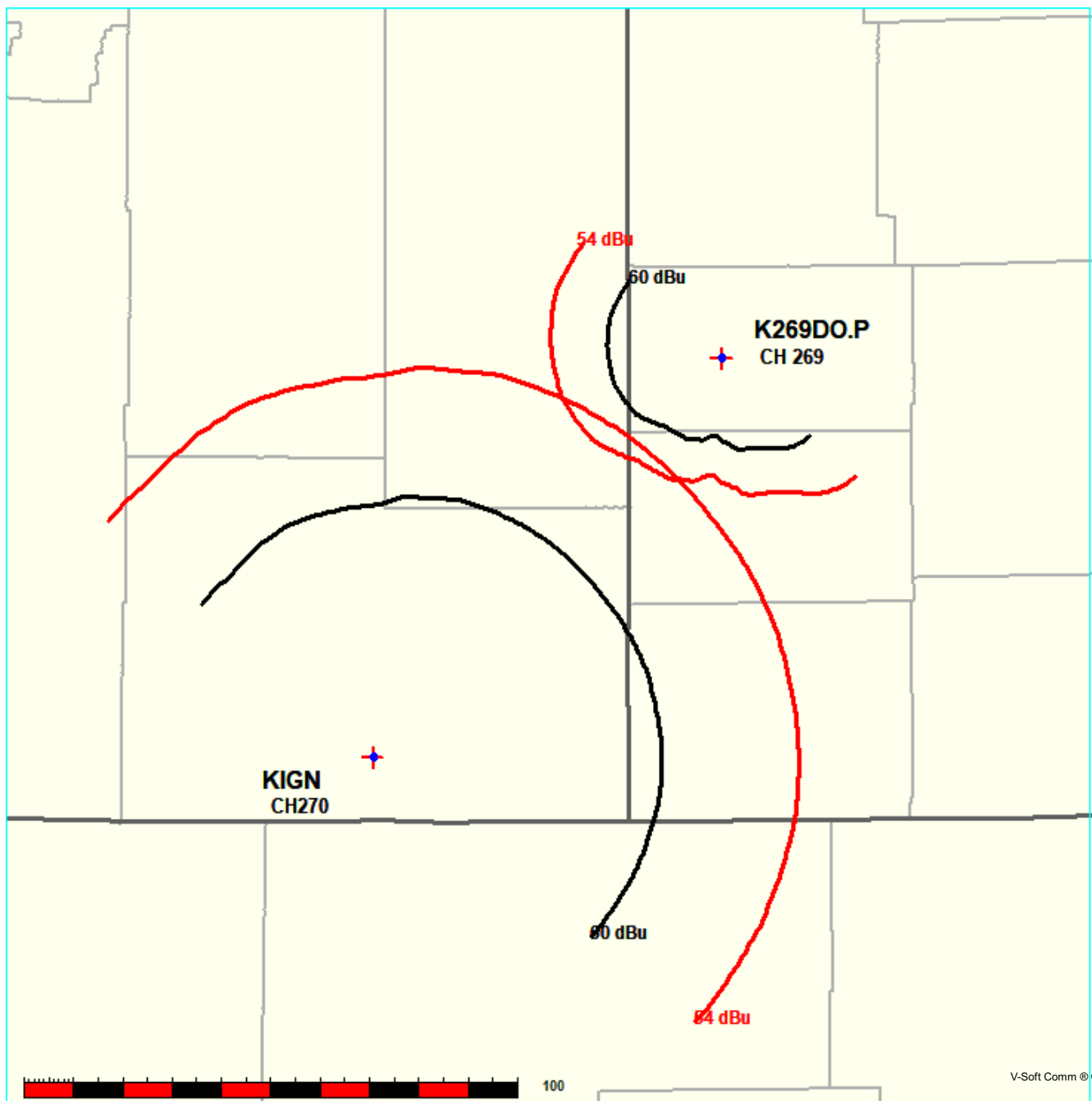


Exhibit 7b

Contour Protection Studies Toward Select Allocation Concern(s)

Nebraska Rural Radio Association

FMCommander Single Allocation Study - 06-08-2021 - FCC NGDC 30 Sec

K269DO.P's Overlaps (In= 18.59 km, Out= 11.5 km)

K269DO.P CH 269 D

Lat= 41 50 22.80, Lng= 103 49 37.00

0.25 kW 314.4 m HAAT, 1605.4 m COR

Prot.= 60 dBu, Intef.= 40 dBu

KZEW CH 269 A BLH19850723KC

Lat= 42 02 43.80, Lng= 104 56 48.80

3.0 kW 38 m HAAT, 1503 m COR

Prot.= 60 dBu, Intef.= 40 dBu

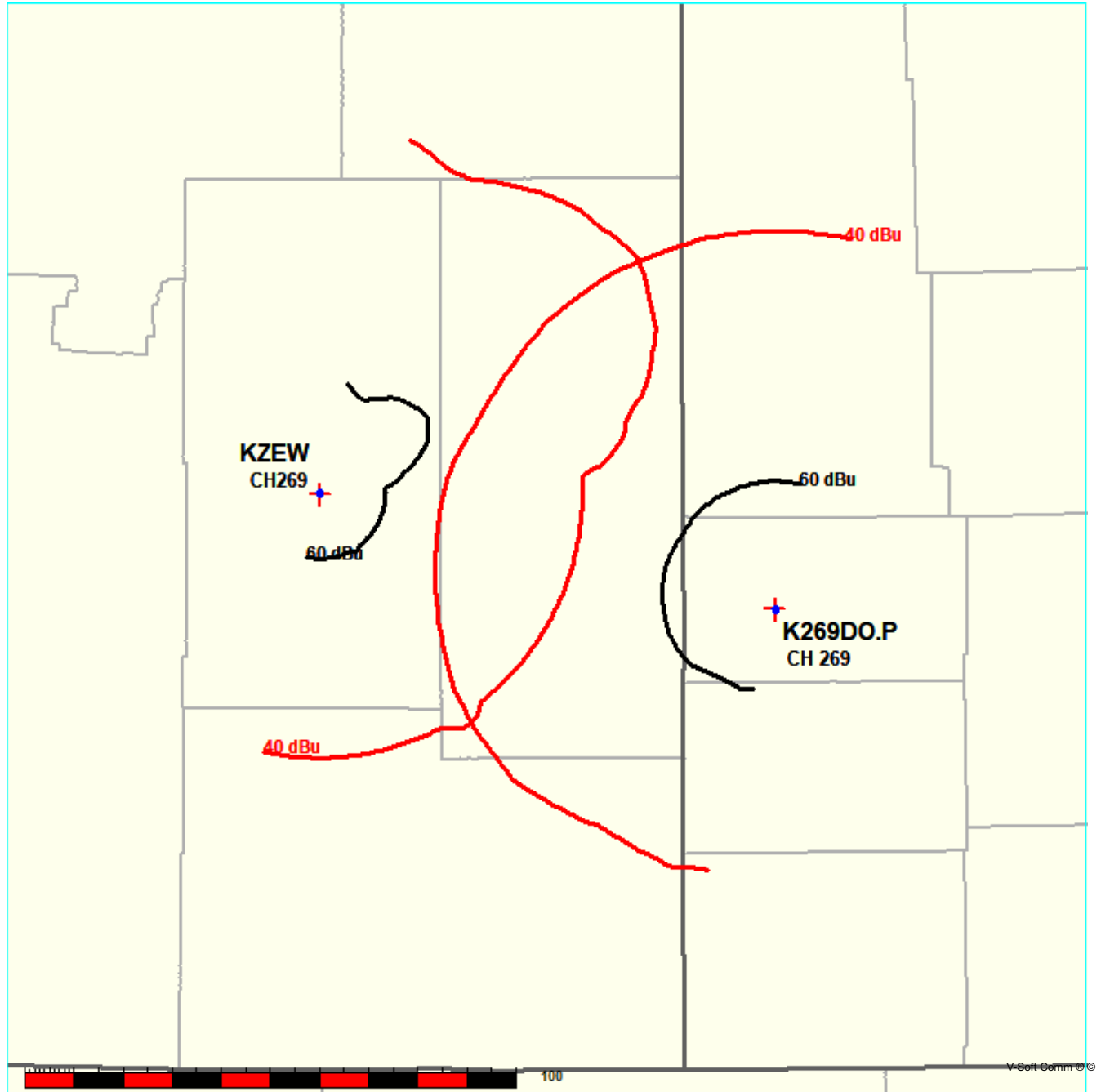


Exhibit 8
§74.1204(d) 2nd/3rd Adjacent Channel
Given Interference Waiver Request

Multiple dedicated transmitter buildings. Structures of this nature have been exempt as a matter of FCC Policy (see similar grant under BPFT-20160725ABE).

108.0 dBμ F(50:10)
Interference Contour

Yellow Highlighted Text denotes a 47 C.F.R. Section 74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Requests toward KOZY-FM - Bridgeport, NE (CH267C0) and KPNY(FM) - Alliance, NE (CH272C0) as noted in *Exhibit 8*. The interference contour at the site has been calculated to be no less than the 108.0 dBμ F(50:10) contour corresponding to the 68.0 dBμ F(50:50) protected contour at the Translator site. This represents the proposed interference contour which falls wholly within the 40:1 dBu 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 multiple dedicated transmitter buildings located at the remote site. However, structures of this nature have been exempt as a matter of FCC Policy (see similar grant under BPFT-20160725ABE).

Site Coordinates		(NGS NADCON)	
	Latitude	Longitude	
(NAD 1927)	----	----	
(NAD 1983)	41-50-22.8 N	103-49-37.0 W	

Signal Report

KPNY Signal value at Reference site = 68.0 dBu. Distance to K269DO.P interference signal contour = 442.7 m

OK

Signal Report

KOZY-FM Signal value at Reference site = 0.0 dBu. Distance to K269DO.P interference signal contour = 59599.0 m

OK

Google Earth Pro™
Account #4375669785
Used with Permission

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

Google Earth

1000 ft



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



JCPB

JCPB-M / JCPB-H
FM BROADBAND
BROADCAST ANTENNA

The JAMPRO JCPB side mount antenna is a broadband version of the PENETRATOR antenna, which has become an industry standard for quality and performance. The directionality in the horizontal radiation pattern is improved by the horizontal reflecting element mounted on the antenna. Each bay consists of a PENETRATOR style radiating element supported by a galvanized steel mounting bracket; standard round leg mounting brackets for a uniform face tower are included with each antenna. Dipoles are stainless steel. Silver plated inner conductor connectors are used throughout for maximum contact life and minimum power loss.



Dipole Power rating 2.0kW (JCPB-M) | 5kW (JCPB-H)

Ideal for broadband & multi frequency applications

Excellent VSWR & bandwidth without field tuning

Circular polarization

DC ground at each bay & balun radomes available

Electrical Specifications	
Frequency	Band II 87.5-108 MHz
Circularity	2.0 dB (Free Space)
Polarization	Circular
Impedance	50 ohm
VSWR	1.25:1

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



JCPB

# of Bays	Power Gain (HPOL) (times)	Gain (HPOL) (dB)	Max Power Rating	
			JCPB-M	JCPB-H*
1	.45	-3.4	2 kW	5 kW
2	.90	-0.4	4 kW	10 kW
3	1.38	1.4	6 kW	15 kW
4	1.95	2.9	8 kW	20 kW
6	3.0	4.8	10 kW	30 kW
8	4.3	6.4	10 kW	40 kW

NOTES:

1. All inputs EIA flange, female.
2. Power derating occurs above 2,000 ft. elevation.
3. Power and dB gains are typical RMS gains for horizontal and vertical components.
4. Special mounting brackets available.
5. Other combinations of EIA inputs and Higher power ratings available.
6. Free space azimuth circularity is 2.0 dB.
7. Polarization is right hand, clockwise, circular.
8. Power gain is based on half wave dipole in free space.

Since many factors contribute to a station's compliance with the FCC exposure guidelines for radio frequency radiation (RFR), JAMPRO ANTENNAS, INC. cannot accept any responsibility in this matter. The station must examine and determine its status based on each individual situation. For reduced low angle radiation near the tower, a low RFR model of this antenna is available. Contact the factory for pricing data and further details.

*All specifications subject to change without notice. Higher power ratings available