

KZUS(FM)
Helena Valley Northeast, MT
Proposed Minor Modification
Of Licensed Facility

The instant application is being contemporaneously and contingently filed with 301 Applications submitted by the following parties:

- The Montana Radio Company, LLC (“TMRC”), licensee of KUUS(FM) Vaughn, MT and KZUS(FM) Highwood, MT
- Fisher Radio Regional Group, Inc. (“Fisher”), licensee of KQDI-FM Great Falls, MT

TMRC and Fisher contingently and contemporaneously propose the following: (a) TMRC proposes to substitute KUUS(FM)’s channel of 280C3 with 269C3 at its current site; (b) in order for the KUUS(FM) channel substitution to comply with Section 73.207 channel spacings requirements, TMRC contingently proposes that channel 269C1 at Highwood be deleted and mutually exclusive Channel 270A be added at Helena Valley Northeast, MT, for use by KZUS(FM) at a modified allotment reference site and antenna site; and (c) in order to not deprive Highwood, MT, of its sole local transmission service, Fisher contingently proposes to delete Channel 291C1 at Great Falls, MT, and add mutually exclusive Channel 291C1 at Highwood, MT, for use by KQDI-FM at its current allotment and antenna site.

Application Overview:

KZUS(FM) (FCC Facility ID# 164132) proposes to modify its currently Licensed Facilities using the following parameters:

Tech Box:

Channel:	270
Class:	A
Antenna Coordinates:	N46-46-07, 112-01-21 (NAD 27)
Allotment Ref. Coordinates:	N46-45-23, W112-00-02 (NAD 27)
ASRN:	N/A
Tower Height AGL:	58 m
COR AMSL:	1515 m
COR AGL:	27 m
COR HAAT:	207 m
ERP:	0.55 kW
Directional Antenna:	No

Allotment Modifications:

KZUS(FM) proposes to delete channel 269C1 at Highwood, MT, and add mutually exclusive Channel 270A at Helena Valley Northeast via a mutually exclusive community change. As such, exhibit 1 is an allotment reference site channel spacings study for KZUS(FM) on Channel 270A at Helena Valley Northeast, MT, demonstrating that the proposed facility is fully spaced pursuant to Section 73.207 towards all other authorizations, allotments, and proposals with the exception of LPFM station KHFG-LP Helena, MT, from the following location:

Allotment Reference Coordinates: N46-45-23, W112-00-02 (NAD 27)

The Applicant has conducted a displacement channel study and has determined that, among other second adjacent channels, KHFG-LP could be displaced to Channels 235, 261, 263, or 273 as well as several second adjacent channels. See displacement Channel studies in Exhibit 1A.

Allotment Site City-Grade Coverage:

In accordance with the city grade coverage requirements of Section 73.315, Exhibit 2 demonstrates that the proposed allotment site provides requisite coverage of KZUS(FM)'s community of license – Helena Valley Northeast, MT. As can be seen in the Exhibit, 100% of Helena Valley Northeast's community boundaries are encompassed by the theoretical 70 dBu, circle contour. Also, no terrain obstructions are located between the antenna site and the community.

Suitable Allotment Reference Site:

In accordance with Note 1 to Section 73.3573, Exhibit 3 is a site map showing that the allotment reference site is located at a suitable location and is not offshore, in a national or state park, on an airport or otherwise in an area which would necessarily present a hazard to air navigation. The allotment site is located within the community boundaries of Helena Valley Northeast.

Antenna Site City-Grade Coverage:

Exhibit 4 demonstrates that the proposed facility's antenna site provides city grade coverage of KZUS(FM)'s community of license – Helena Valley Northeast, MT. As can be seen in the Exhibit, 100% of Helena Valley Northeast's community boundaries are encompassed by

the F(50,50) 70 dBu contour of the proposed facility. Also, no major terrain obstructions are located between the antenna site and the community.

Interference Study (Fully Spaced):

Exhibit 5 is a channel spacings study demonstrating that the proposed antenna site is fully spaced towards all applications, authorizations, and permits pursuant to Section 73.207.

Downward Radiation Study (FM Model):

The proposed FM Facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (OET Bulletin 65, Second Edition 97-01, August, 1997). KZUS will be located on a hilltop approximately 12 miles north of Helena, Montana. Access to the site is by unimproved private road with a gates and “No Trespassing” signs restricting access to the transmitter site. Further, a chain gate and RF Hazard signs are located on the road entering the site near where the RF field strength exceeds the the MPE limit for uncontrolled/general population access. The Commission’s FM Model Power Density Prediction program was employed to determine the Field. Using the Jampro "Double V" antenna with 1 sections and 1 wavelength spacing, and the AGL height and ERP proposed in this application, the highest predicted power density 2 meters above ground is less than 1.7% of the Controlled Standard with a Power Density of 16.2 microwatts per square centimeter 25.6 meters from the base of the tower.

Even though the site will fully comply with the Controlled Site Standards, access to the transmitting site will continue to be restricted and appropriately marked with warning signs.

When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency radiation will not exceed the FCC guidelines.

Existing Tower:

The proposed facility is exempt from environmental processing because the facility is not located at a location specified in Section 1.1307(a)(1)-(8) of the Commission's Rules and since the tower in question already exists.

Exhibit 1

Allotment Reference Site Channel Spacings Study

ADD 270A Helena Valley Northeast, MT
Section 73.207 Allotment Site Spacings Study

REFERENCE 46 45 23.0 N. CLASS = A Int = A DISPLAY DATES
112 00 02.0 W. Current Spacings DATA 10-21-10
SEARCH 10-29-10
----- Channel 270 - 101.9 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin
KHFG-LP LIC	270L1	Helena	MT	186.8	16.9	66.5	-49.60
Of Note: The LPFM can be displaced to Channel 235L1, 261L1, 263L1, or 273L1 at the Licensed KHFG-LP site. See Channel Studies in Exhibit 1A for KHFG-LP displacement channels.							
KZUS LIC	269C1	Highwood	MT	26.9	106.31	132.5	-26.19
Of Note: Mutually Exclusive current KZUS authorization.							
ADD 269C3PRO	269C3	Vaughn	MT	26.9	106.31	88.5	17.81
Of Note: Contingently proposed channel substitution for KUUS to 269C3 at Vaughn.							
KBMC LIC	271C2	Bozeman	MT	155.3	136.53	105.5	31.03
AL1023 AL	270B	Cardston	AB	340.9	288.44	236.5	51.94

Exhibit 1A

KHFG-LP

Available Displacement Channels

KHFG-LP Displacement Channel Study

REFERENCE		DISPLAY DATES
46 37 02.0 N.	CLASS = L1 Int = A	DATA 12-02-10
112 02 56.0 W.	Current Spacings to 2nd Adj.	SEARCH 12-21-10
----- Channel 273 - 102.5 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KUHM	LIC 219A	Helena	MT 6.7	17.1	5.5	11.6
KEAU	LIC 274C1	Fairfield	MT 25.1	121.8	99.5	22.3
AU9129276	VAC 274A	Whitehall	MT 192.8	78.9	55.5	23.4
KMSO	LIC 273C0	Missoula	MT 278.9	149.0	121.5	27.5

KHFG-LP Displacement Channel Study

REFERENCE		DISPLAY DATES
46 37 02.0 N.	CLASS = L1 Int = A	DATA 12-02-10
112 02 56.0 W.	Current Spacings to 2nd Adj.	SEARCH 12-21-10
----- Channel 263 - 100.5 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KLSK	LIC 262C1	Great Falls	MT 43.3	99.7	99.5	0.22
KEAJ-LP	LIC 262L1	Cell Site	MT 171.6	24.1	13.5	10.6
KXLB	LIC 264C1	Livingston	MT 138.6	139.1	99.5	39.6

KHFG-LP Displacement Channel Study

REFERENCE		DISPLAY DATES
46 37 02.0 N.	CLASS = L1 Int = A	DATA 12-02-10
112 02 56.0 W.	Current Spacings to 2nd Adj.	SEARCH 12-21-10
----- Channel 261 - 100.1 MHz -----		

Call	Channel	Location		Azi	Dist	FCC	Margin
KLSK	LIC 262C1	Great Falls	MT	43.3	99.7	99.5	0.22
KEAJ-LP	LIC 262L1	Cell Site	MT	171.6	24.1	13.5	10.6
KZOQ-FM	LIC 261C1	Missoula	MT	278.7	148.5	110.5	38.0

KHFG-LP Displacement Channel Study

REFERENCE

46 37 02.0 N.

112 02 56.0 W.

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CLASS = L1 Int = A
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Current Spacings to 2nd Adj.

Channel 235 - 94.9 MHz -----

DISPLAY DATES

DATA 12-02-10

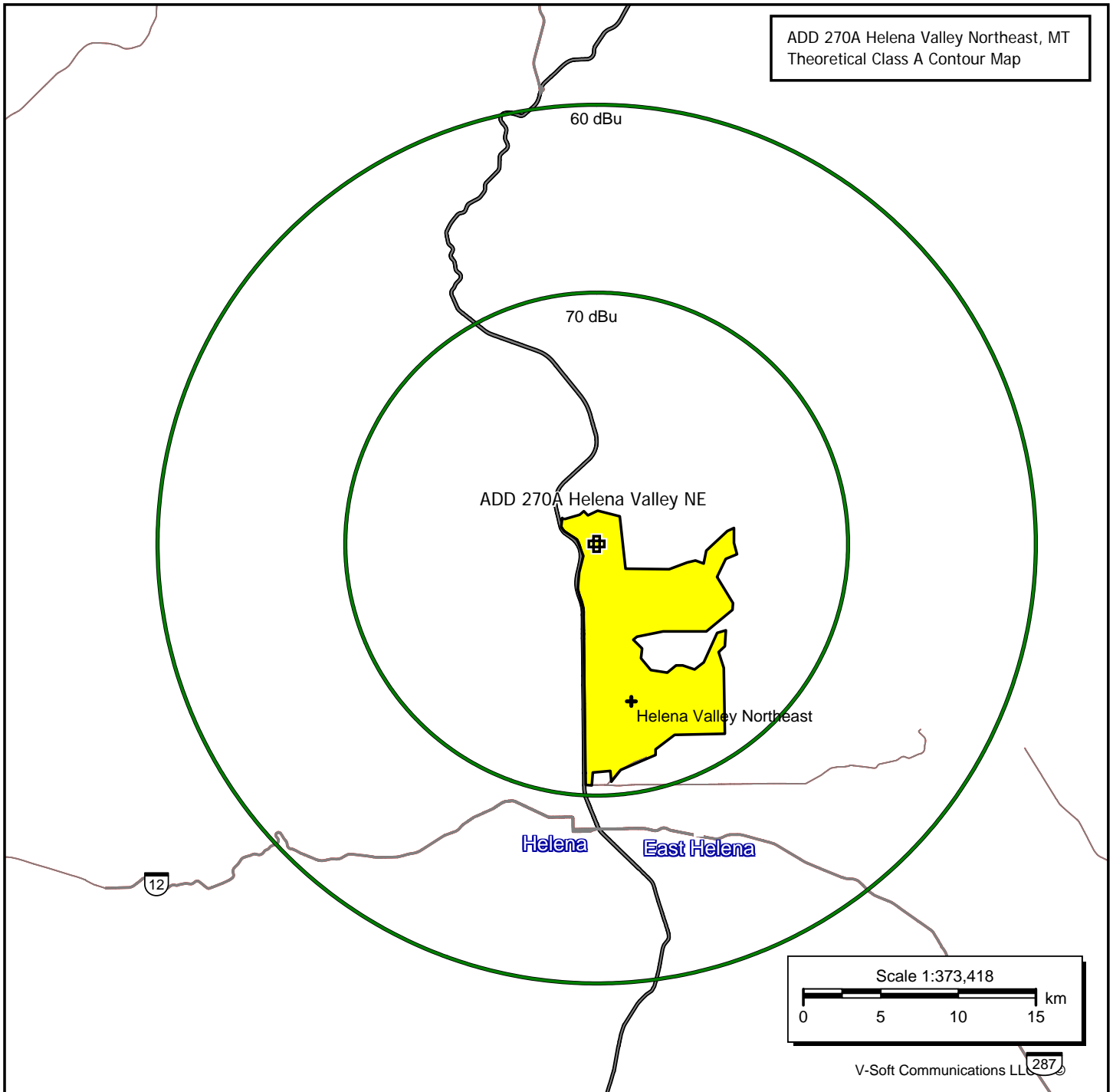
SEARCH 12-21-10

Call	Channel		Location		Azi	Dist	FCC	Margin
KYSS-FM	LIC	235C	Missoula	MT	288.1	155.3	129.5	25.8
KMMS-FM	LIC	236C1	Bozeman	MT	138.6	139.1	99.5	39.6
KMON-FM	LIC	233C1	Great Falls	MT	29.9	118.6	72.5	46.1
K234AT	LIC	234D	Mcqueen	MT	204.1	74.2	27.5	46.7

Exhibit 2

Allotment Reference Site City-Grade Coverage Map

ADD 270A Helena Valley Northeast, MT
Theoretical Class A Contour Map

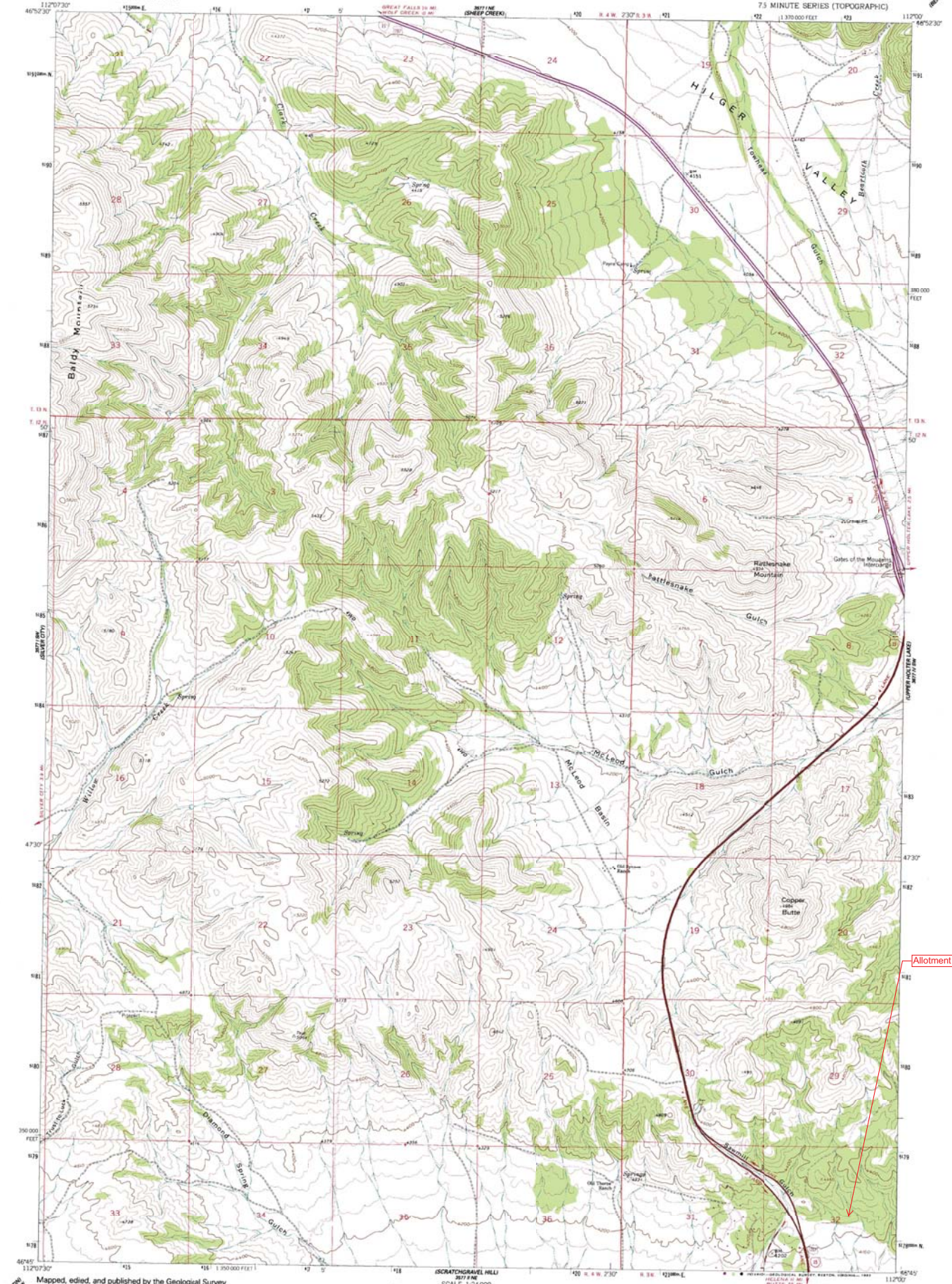


ADD 270A Helena Valley NE

Channel: 270A
Frequency: 101.9 MHz
Latitude: 46-45-22.70 N
Longitude: 112-00-01.62 W
COR AGL Height: 106.74 m
COR AMSL Height: 1405.57 m
Base Elevation: 1298.83 m
COR HAAT: 100.0 m
ERP: 6.00 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 3

Allotment Reference Site Topographic Map



Mapped, edited, and published by the Geological Survey

Control by USGS and NGS/NOAA

Topography by photogrammetric methods from aerial

photographs taken 1956. Field checked 1962.

Polyconic projection. 1927 North American Datum

10,000-foot orthocentric on Montana coordinate system,

central zone. 100-meter Universal Transverse

Mercator grid used, zone 12, shown in blue.

The difference between 1927 North American Datum and

North American Datum of 1983 (NAD 83) for 7.5 minute

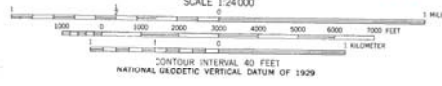
intersections is given in USGS Bulletin 1875. The NAD 83

is shown by dashed corner ticks.

Revisions shown in purple and woodland compiled from aerial

photographs taken 1976 and other source data.

This information not field checked. Map edited 1979.



ISORATCH GRAVEL HILL
SCALE 1:24,000

CONTOUR INTERVAL 40 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1983 MAGNETIC NORTH

DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OF RESTON, VIRGINIA 22092

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Primary highway, all weather, hard surface
Secondary highway all weather, hard surface
Light-duty road, all weather, improved surface
Unimproved road, fair or dry weather
Interstate Route
U.S. Route
State Route

DIAPHRAGM LOCATION

RATTLESNAKE MOUNTAIN, MONT.

46112-G1-1F-G24

1982

PHOTOREVISED 1979

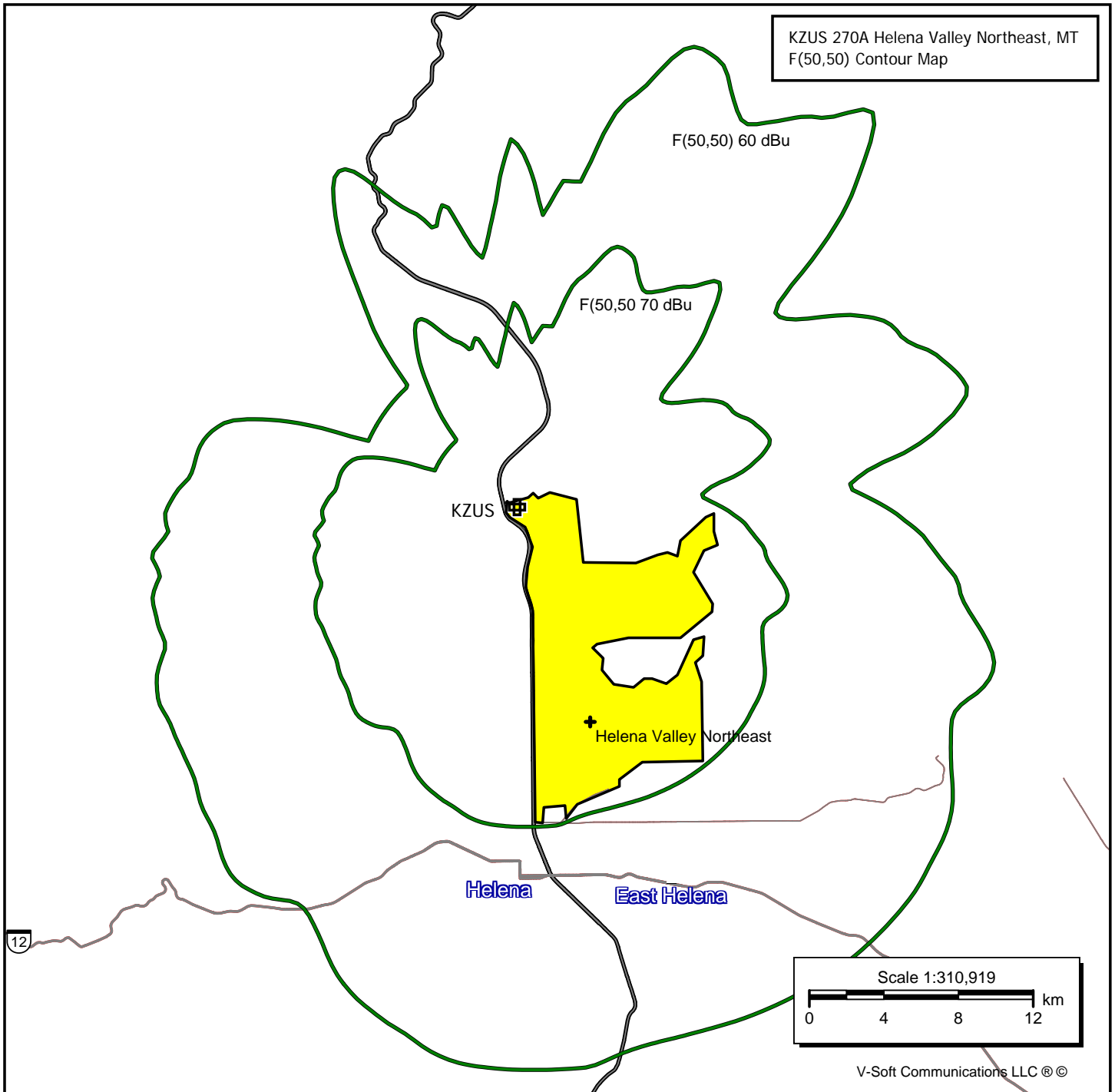
DMA 3577 1 SE-SERIES V894

Exhibit 4

Proposed Antenna Site Contour Map:

**F(50,50) Protected Contour
F(50,50) City-Grade Contour**

KZUS 270A Helena Valley Northeast, MT
F(50,50) Contour Map



V-Soft Communications LLC ©

KZUS

Channel: 270A
Frequency: 101.9 MHz
Latitude: 46-46-07 N
Longitude: 112-01-21 W
COR AGL Height: 27.0 m
COR AMSL Height: 1515.0 m
Base Elevation: 1488.0 m
COR HAAT: 206.74 m
ERP: 0.55 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 5

Proposed Antenna Site Channel Spacings Study

KZUS 270A Helena Valley Northeast
Section 73.207 Antenna Site Spacings Study

REFERENCE									
46 46 07.0 N.		CLASS = A	Int = B					DISPLAY DATES	
112 01 21.0 W.		Current	Spacings					DATA 10-21-10	
		Channel 270	- 101.9 MHz					SEARCH 10-29-10	

Call	Channel	Location		Azi	Dist	FCC	Margin
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KZUS	PRO	270A	Helena Valley NE	MT	0.0	0.00	114.5	-114.50
Of Note: Instantly proposed allotment site for KZUS.								

KHFG-LP	LIC	270L1	Helena	MT	186.8	16.9	66.5	-49.60
Of Note: The LPFM can be displaced to Channel 235L1, 261L1, 263L1, or 273L1 at the Licensed KHFG-LP site. See Channel Studies in Exhibit 1A for KHFG-LP displacement channels.								

KZUS	LIC	269C1	Highwood	MT	28.1	105.88	132.5	-26.62
Of Note: Mutually Exclusive current authorization for KZUS.								

ADD 269C3PRO	269C3	Vaughn		MT	28.1	105.88	88.5	17.38
Of Note: Contingently proposed Allotment site for KUUS on 269C3 at Vaughn.								

KUUS	PRO	269C3	Vaughn	MT	28.1	105.88	88.5	17.38
Of Note: Contingently proposed Antenna site for KUUS on 269C3 at Vaughn.								

KBMC	LIC	271C2	Bozeman	MT	154.9	138.47	105.5	32.97
AL1023	AL	270B	Cardston	AB	341.1	286.61	236.5	50.11
