

KJLF(FM)
Butte, MT
Proposed Minor Modification
Of Licensed Facility

Application Overview:

While conducting an audit of licensed parameters for KJLF(FM) (FCC Facility ID# 93010), the licensee discovered that the site elevation was inadvertently substituted for the CORAMSL value in application BMPED-20070907AFI and, consequently, licensed in BLED-20080211ADA.

The purpose of the instant application is to correct this error and modify the station license using the following parameters:

Tech Box:

Channel:	213
Class:	C2
Antenna Coordinates:	N46-00-22, W112-26-33 (NAD 27)
ASRN:	N/A
Tower Height AGL:	31 m
COR AMSL:	2505 m
COR AGL:	12 m
COR HAAT:	530 m
ERP:	1 kW
Directional Antenna:	No

Antenna Site City-Grade Coverage:

Exhibit 1 demonstrates that the proposed facility's antenna site provides city grade coverage of KJLF(FM)'s proposed community of license – Butte, MT. As can be seen in the Exhibit, 100% of Butte's community boundaries are encompassed by the F(50,50) 60 dBu contour of the proposed facility. Also, no major terrain obstructions are located between the antenna site and the community.

Section 73.509 Interference Study:

Exhibit 2 is a contour overlap study from the proposed KJLF(FM) antenna site. It notes that the proposed KJLF(FM) facility's contours do not overlap any other application or authorization.

Section 73.525 Compliance:

There are several considerations outlined in 47 C.F.R. 73.525 for TV channel 6 protection. Outlined below are the various factors as they apply to the proposed operation and KTVM-TV6 Butte, MT.

The proposed NCE facility on Channel 213C2 is located 0.16 km from the transmission facilities of KTVM. Section 73.525(a)(1) requires the minimum distance between a TV-6 and an NCE FM on Channel 213 to be 193 km. Therefore, the proposed NCE FM is shortspaced by 192.84 km. KJLF is essentially co-located under Section 73.525(d) and the Proposed ERP of 1.0 kW (vertical) complies with Section 73.525(d)(1) for Channel 213 since it is less than 38 kW. Also, as will be demonstrated below, the interference area (as predicted by the procedures outlined in 47 C.F.R. 73.525(e)(1)) contains no more than 3,000 persons.

When an applicant wishes to use vertically polarized transmissions only, C.F.R. 74.525(e)(4) limits the vertical ERP to the maximum permissible horizontally polarized ERP multiplied by 40 (if the predicted interference area lies entirely outside the limits of a city of 50,000 persons) or 10 (if not). The proposed horizontally polarized ERP for the proposed facility is 1 kW. Since the predicted interference area lies entirely outside the limits of a city of 50,000 persons, that is multiplied by 40 to obtain the vertical-only ERP of 1 kW specified in this application.

Population in the predicted interference area was determined using the centroid method and the 2014 Census Estimates. The predicted interference contour (of the theoretical horizontal component of 1 kW) is contained within the KTVM-TV6 F(50,50) 90 dBu contour.

The predicted interference contour is determined from 47 C.F.R. 73.599 for channel 213 to be F(50,10) 90.5 dBu. (See Exhibit 4 for a tabulation of the KTVM protected contour values and the corresponding channel 213 interfering contours) Exhibit 4 shows the F(50,50) 90 dBu protected contour for KTVM and the corresponding F(50,10) interfering contour for the proposed channel 213 facility. Additionally shown is a population scattergraph of the area of proposed operation. The total population contained within the interfering contour is zero persons. Therefore, the proposed operation is within the limitations of 47 CFR 73.525(c).

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). The Commission's FM Model Power Density Prediction program was employed to determine the Field. Using the Phelps-Dodge "Ring Stub" Worst Case antenna with 1 sections and Full wavelength spacing, and the AGL height and ERP proposed in this application, the highest predicted power density 2 meters above ground is less than 32.0% of the Controlled Standard with a Power Density of 320 microwatts per square centimeter 2.2 meters from the base of the tower.

Even though the site will comply with the Controlled Site Standards by being on a remote mountain top beyond a locked gate, access to the transmitting site will 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.

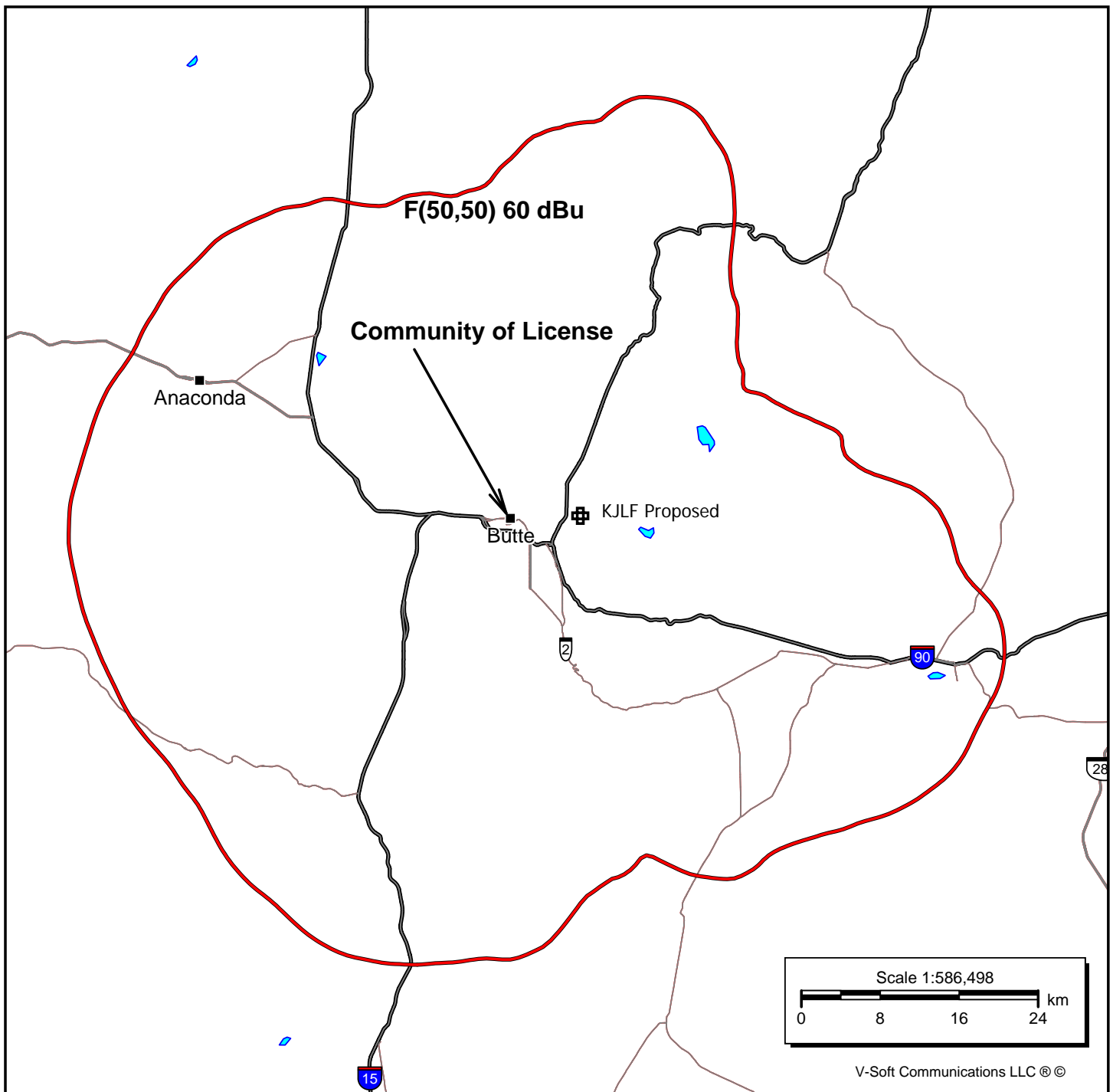
Existing Tower:

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

Proposed Antenna Site Contour Map:

F(50,50) City-Grade Contour



KJLF Proposed

Correction

Channel: 213C2

Frequency: 90.5 MHz

Latitude: 46-00-22 N

Longitude: 112-26-33 W

COR AGL Height: 12.0 m

COR AMSL Height: 2505.0 m

Base Elevation: 2493.0 m

COR HAAT: 530.38 m

ERP: 1.00 kW

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model: None

Exhibit 2

Section 73.509 Contour Overlap Tabulations

REFERENCE
46 00 22.0 N.
112 26 33.0 W.

CH# 213C2 - 90.5 MHz, Pwr= 1 kW, HAAT= 530.4 M, COR= 2505 M
Average Protected F(50-50)= 41.71 km
Omni-directional

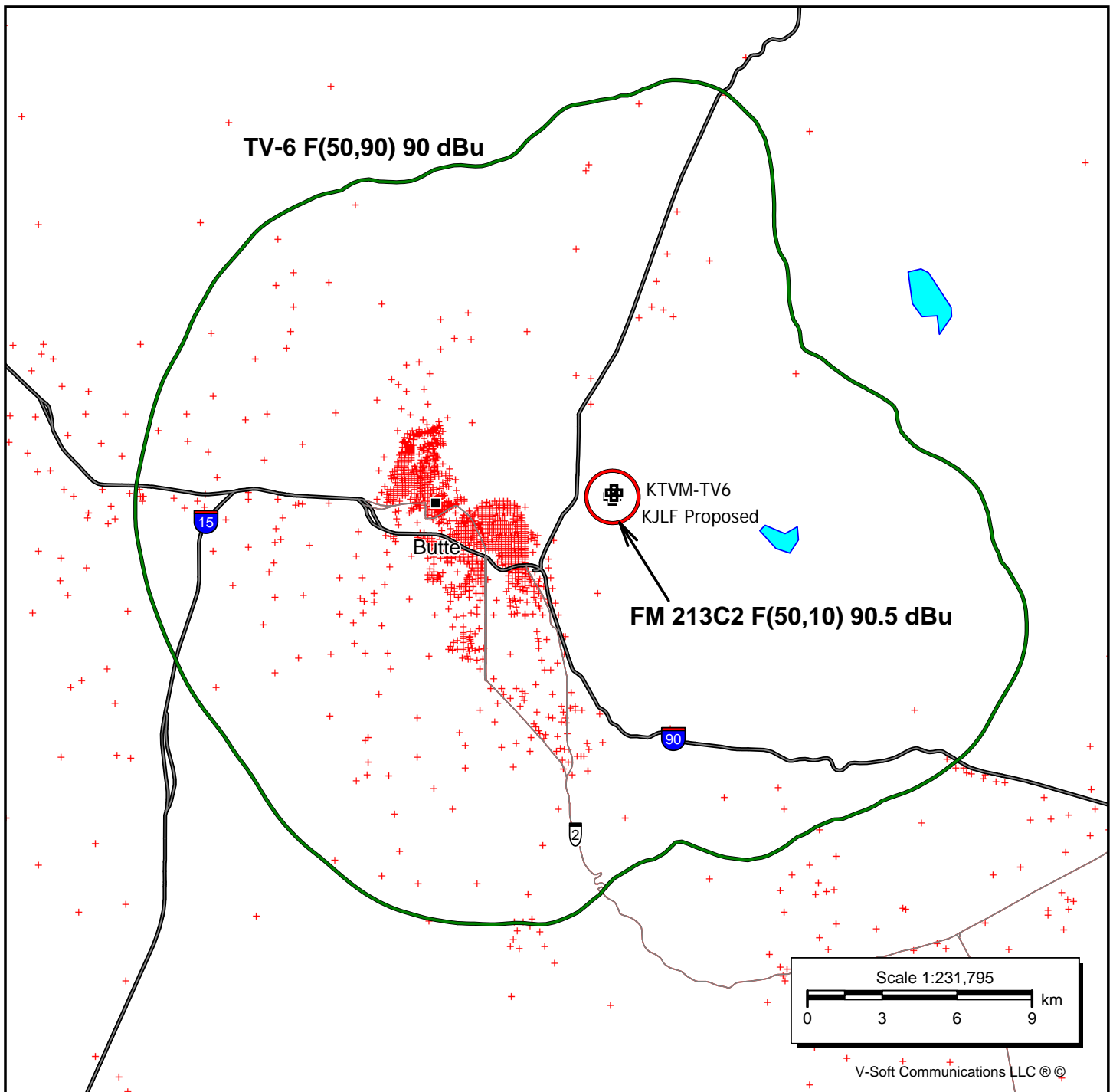
DISPLAY DATES
DATA 05-31-16
SEARCH 06-09-16

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
213C2 Butte	KJLF	LIC _VX MT	0.0 0.0	0.00 BLED20080211ADA	46 00 22.0 112 26 33.0	1.000 530	104.0 2493	39.3 Hi-line Radio	-143.8*	-144.4*
06 2C Butte	KTVM-TV	LI _HN MT	22.6 202.6	0.16 BLCDT20100629AVB	46 00 27.0 112 26 30.0	19.200 591	24.6 2566	116.2	140.9R	-140.7M
214A Hamilton	KMZO	LIC _CX MT	280.8 99.6	140.66 BLED20090831ACW	46 13 46.0 114 14 01.0	5.000 101	81.5 1674	54.3 Faith Communications Corp.	9.0	11.5
212C3 Bozeman	KZBN	LIC _VX MT	109.6 290.7	122.43 BLED20130510ADK	45 37 40.0 110 57 47.0	12.500 -168	55.8 1627	36.8 Bozeman Christian Educatio	21.3	17.2
215C3 Three Forks	KGCM	APP _EN MT	93.4 274.2	83.31 BPED20151208ADK	45 57 25.0 111 22 11.0	5.500 190	3.8 1626	41.5 Hi-line Radio Fellowship	42.1	39.7
215C3 Belgrade	KGCM	LIC _VX MT	93.4 274.2	83.31 BLED20060504ACK	45 57 25.0 111 22 11.0	5.500 190	3.8 1626	41.5 Hi-line Radio Fellowship	42.1	39.7
215A Dillon	KDWG	LIC _C_ MT	189.8 9.6	89.86 BLED20010124AAN	45 12 33.0 112 38 14.0	0.850 -72	1.6 1593	13.3 The University of Montana	42.7	74.4
211C3 Helena	KHLV	LIC _EX MT	20.7 201.0	90.70 BLED20051116AAJ	46 46 07.0 112 01 21.0	3.500 202	3.3 1509	40.3 Educational Media Foundati	47.4	48.3
266C Helena	KZMT«	LIC _CY MT	5.9 186.0	82.89 BLH20041122ACA	46 44 51.8 112 19 47.6	95.000 607	2.1 2278	36.9 Ccr-helena Iv, LLC	34.5R	48.4M

Terrain database is 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= , 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 4

TV Channel 6 Compliance

**KJLF Proposed**

Correction
Channel: 213C2
Frequency: 90.5 MHz
Latitude: 46-00-22 N
Longitude: 112-26-33 W
COR AGL Height: 12.0 m
COR AMSL Height: 2505.0 m
Base Elevation: 2493.0 m
COR HAAT: 530.38 m
ERP: 0.025 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KTVM-TV6

Channel: 6 2C
Frequency: 85.0 MHz
Latitude: 46-00-27 N
Longitude: 112-26-30 W
COR AGL Height: 53.3 m
COR AMSL Height: 2566.3 m
Base Elevation: 2513.0 m
COR HAAT: 591.3 m
ERP: 19.20 kW
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.0
Prop Model: None

Population Report

Station: KJLF Proposed (213)
Contour: FCC F(50-10) 90.50 dBu (FCC HAAT)

Population Database: 2014 US Census Estimate

Total Population: 0
Housing Units: 0
Coverage Area: 3 sq. km

Channel-Six TV Protection Study

KTVM-TV LI 06 2C Dom 19.200 kW 591 m HAAT THN Non-DA
Butte MT 2566.0 m COR AMSL -
Lat= 46 00 27.0, Lng= 112 26 30.0

Fac ID# 18066 BLCDT20100629AVB
Direct line HAAT Grade B, 47 dBu= 116.25 km & Grade A= 61.74 km

Distance from reference to Grade B = -116.08 km
Cutoff Dist from Full Service or Class CA= 193
Maximum Co-located power= 38 kW
KTVM-TV Signal Contour at Reference location = 135.3 dBu
Add 6 dB to TV Contour if within angle.

TV/FM D to U values.

47.0	69.5	55.0	68.7	63.0	70.2	71.0	74.9	79.0	81.2	87.0	87.9
48.0	69.3	56.0	68.8	64.0	70.7	72.0	75.6	80.0	82.0	88.0	88.7
49.0	69.0	57.0	68.8	65.0	71.1	73.0	76.4	81.0	82.8	89.0	89.6
50.0	68.8	58.0	68.9	66.0	71.7	74.0	77.2	82.0	83.7	90.0	90.5
51.0	68.8	59.0	69.0	67.0	72.2	75.0	78.0	83.0	84.5	91.0	90.5
52.0	68.7	60.0	69.3	68.0	72.8	76.0	78.8	84.0	85.3	92.0	90.5
53.0	68.7	61.0	69.5	69.0	73.5	77.0	79.6	85.0	86.2	93.0	90.5
54.0	68.7	62.0	69.8	70.0	74.2	78.0	80.4	86.0	87.0	94.0	90.5