

[Exhibit 13]

## **Non-Interference Compliance**

Regarding Facility id 201662

Channel 281

### **Description of Exhibit 13 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dB $\mu$  F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 4 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 5 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

**Note: The only structures within the zone of predicted interference are unoccupied communications buildings, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

## Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dB $\mu$  for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

<b>Application_id</b>	<b>File Number</b>	<b>Callsign</b>	<b>Contour at Tower</b>	<b>Min. Contour</b>
1005072	BLH20040728AMQ	KBZM	71.8	71.8
1686018	BMLH20150825AAF	KZMY	79.8	79.2
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>71.8</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **71.8 dB $\mu$** , this makes the proposed translator's worst-case interfering contour **111.8 dB $\mu$** . By the free-space equation, this contour is calculated to extend a maximum of **285.1 m** from the transmit antenna.

The interfering contour of the proposed translator was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 4 of this exhibit). As demonstrated on the quadrangle, there are no populated structures or highways within the area of interference (Note: FCC 02-244 at Section II.A.6 states that USGS quadrangles "have been recognized as acceptable to demonstrate lack of population").

**Note: The only structures within the zone of predicted interference are unoccupied communications buildings, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

**Antenna Manufacturer:** SWR  
**Antenna Model:** FM1  
**CORAGL:** 53 m  
**Maximum ERP:** 0.25 kW  
**Interfering Contour:** 111.8 dB $\mu$   
**Max Int. Contour Distance:** 285.1 m

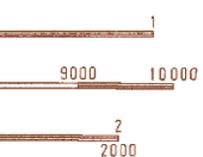
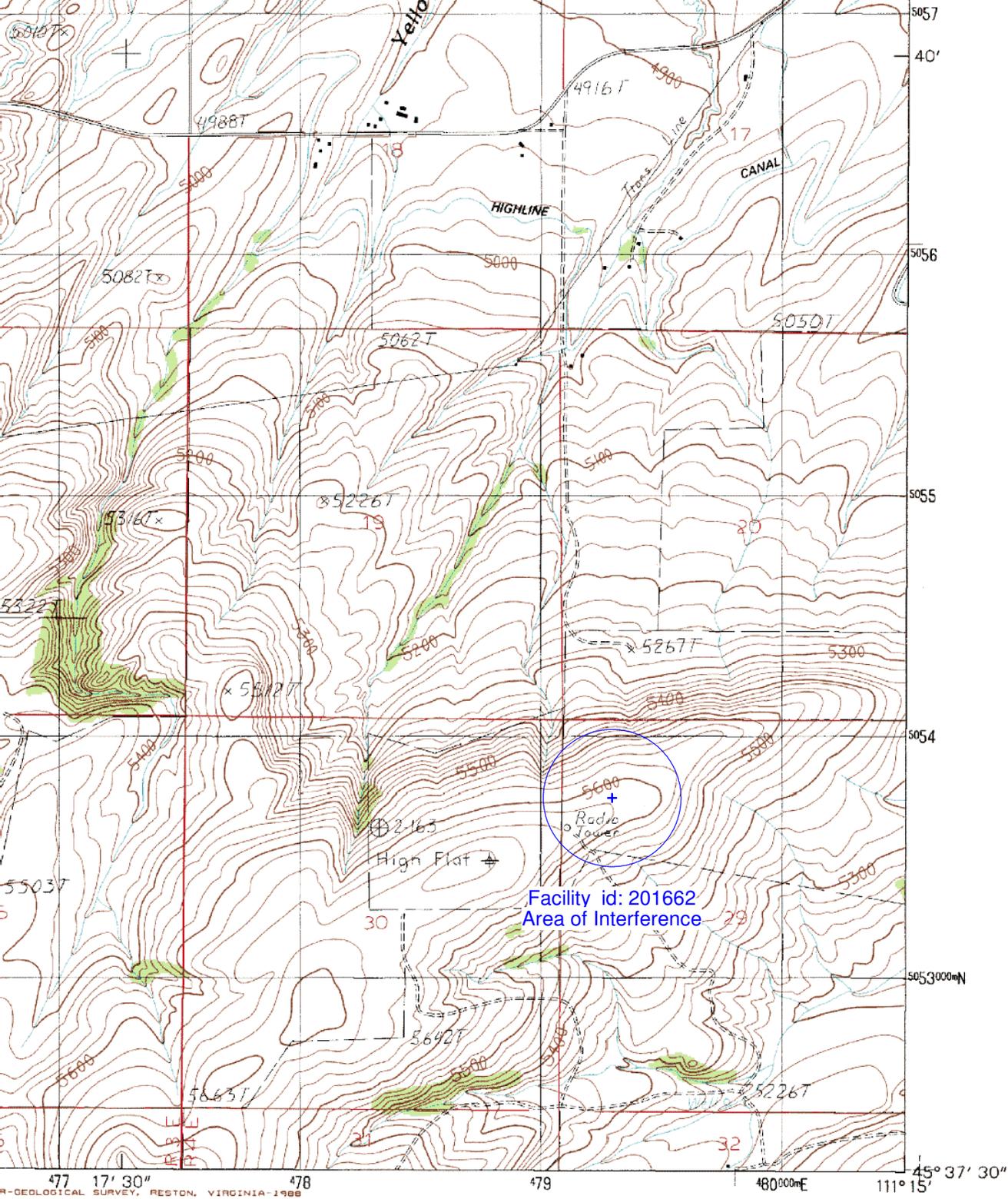
**Adjacent Channel Study  
For Station NEW, Facility\_id: 201662**

**Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1686018	72722	BMLH-20150825AAF	KZMY	TOWNSQUARE MEDIA BOZEMAN	C1	BOZEMAN	MT	LIC	100	1724	278	3	36.3	1.4918
1005072	81679	BLH-20040728AMQ	KBZM	ORION MEDIA LLC	C1	BIG SKY	MT	LIC	5	3406	284	3	42.6	1.4918
94534	39763	BLFT-19861110TJ	K280CS	MAMMOTH COMMUNITY TV & FM	D	MAMMOTH HOT S	WY	LIC	0.044	2610	280	1	90	0
1440330	3042	BLED-20110816ABB	KMSM-FM	THE ASSOCIATED STUDENTS OF	A	BUTTE	MT	LIC	0.74	1785	280	1	108.4	0
1635879	145555	BLFT-20140505AAM	K283BP	THE MONTANA RADIO COMPANY	D	HELENA	MT	LIC	0.25	2369	283	2	136.1	0
1757475	49724	BMLEL-20170522AB	KBMI-FM	HI-LINE RADIO FELLOWSHIP, INC	C3	EAST HELENA	MT	LIC	5	1515	281	0	138.4	0

**Intermediate Frequencies (53 and 54 channels difference):**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
1311038	142893	BLFT-20090504AAA	K227BM	DEAD-AIR BROADCASTING COM	D	SHERIDAN	MT	LIC	0.25	1526	227	54	78.6	68.6



**ROAD LEGEND**

- Improved Road . . . . .
- Unimproved Road . . . . .
- Trail . . . . .
- Ⓜ Interstate Route   Ⓜ U.S. Route   Ⓜ State Route

1	2	3	1 Manhattan SW
			2 Manhattan
			3 Belgrade
4		5	4 Madison Plateau
			5 Bozeman Hot Springs
			6 Cherry Creek Canyon
			7 Ruby Mountain
6	7	8	8 Gallatin Gateway

ADJOINING 7.5' QUADRANGLE NAMES

**ANCENEY, MONTANA**  
**PROVISIONAL EDITION 1988**

45111-F3-TF-024

