

[Exhibit 12]

## **Non-Interference Compliance**

Regarding Facility id 148558

Channel 217

### **Description of Exhibit 12 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 a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

## 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 dBμ 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>
73868	BMLED19841106LW	KUNI	62.3	62.3
	Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour			<b>62.3</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 **62.3 dBμ**, this makes the proposed translator's worst-case interfering contour **102.3 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **589.6 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"). Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), 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:** FMEV  
**CORAGL:** 16 m  
**Maximum ERP:** 0.12 kW  
**Interfering Contour:** 102.3 dBμ  
**Max Int. Contour Distance:** 589.6 m

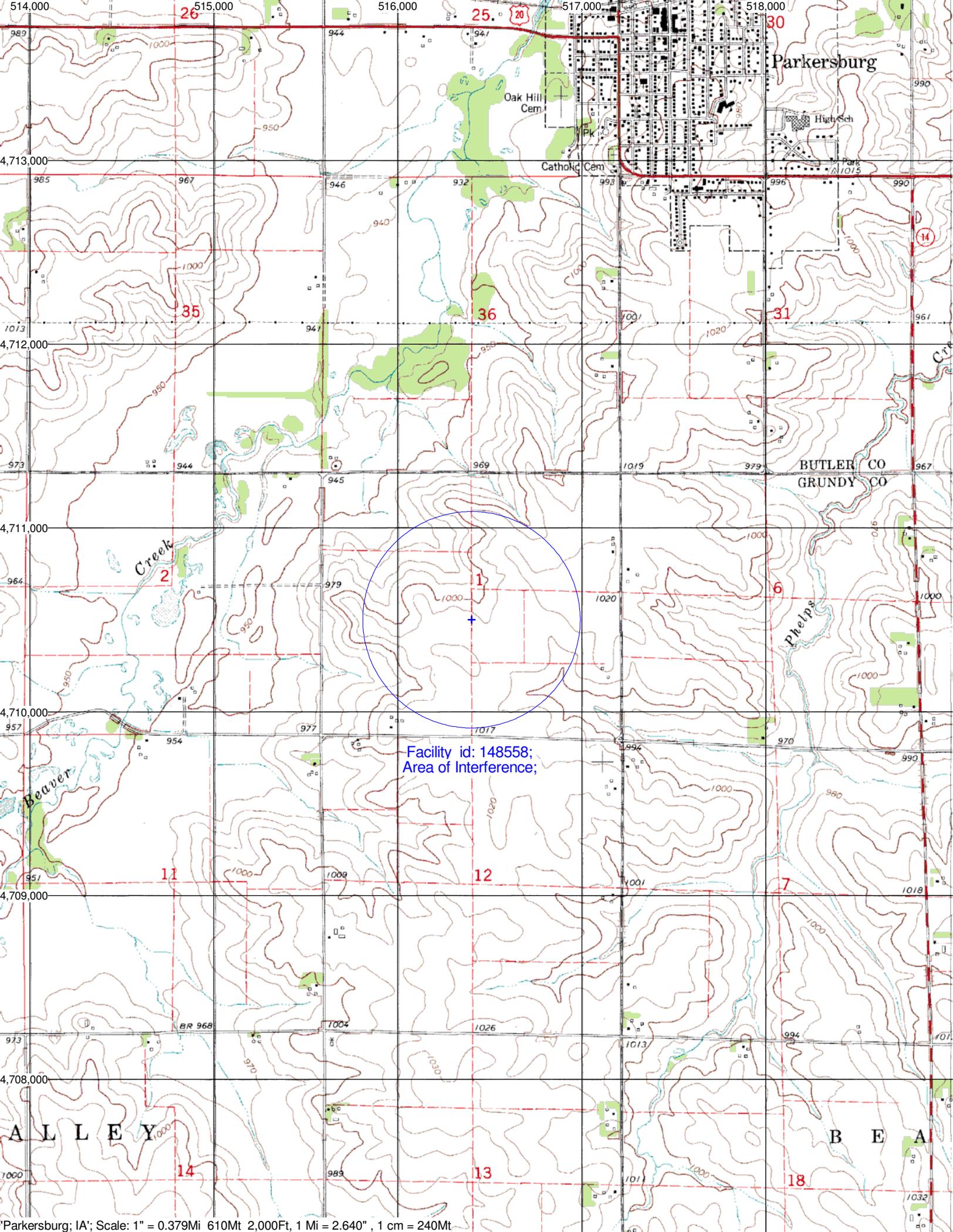
## Adjacent Channel Study For Station K214EJ, Facility\_id: 148558

### Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
73868	69158	BMLD	19841106LW	KUNI	UNIVERSITY OF NORTHERN IOWA	C	CEDAR FALLS	IA	LIC	94	799	215	2	81.5	1.1935
1259541	92457	BLED	20080728AAD	KTDV	MARSHALLTOWN EDUCATION PLUS, INC.	C3	STATE CENTER	IA	LIC	22	402.1	220	3	38.5	0
1154213	76660	BMLFT	20060920AEE	K218CE	CALVARY CHAPEL OF TWIN FALLS, INC.	D	MARSHALLTOWN	IA	LIC	0.08	335	218	1	60.8	0
108659	69284	BLED	19880125KA	KUNY	UNIVERSITY OF NORTHERN IOWA	C3	MASON CITY	IA	LIC	8	460	218	1	73.1	0
174694	69129	BLFT	19920619TB	K214BA	UNIVERSITY OF NORTHERN IOWA	D	MASON CITY, ETC.	IA	LIC	0.273	426	214	3	77.5	0
1226826	171642	BNPED	20071018AKJ	KDVO	UNIVERSITY OF NORTHERN IOWA	C3	MASON CITY	IA	CP	14	467	214	3	88.6	0
1201157	29066	BLED	20070911ABL	KTPR	IOWA STATE UNIVERSITY OF SCIENCE AND TE	C	FORT DODGE	IA	LIC	100	676	216	1	135	0
228779	66626	BLED	19960708KC	KSUI	THE UNIVERSITY OF IOWA	C	IOWA CITY	IA	LIC	95	626	219	2	151.4	0

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

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
1190887	49786	BMLD	20070614AAO	KNWS-FM	NORTHWESTERN COLLEGE	C	WATERLOO	IA	LIC	80	585	270	53	66.6	37.6
1134026	49786	BXMLD	20060616ABF	KNWS-FM	NORTHWESTERN COLLEGE	C	WATERLOO	IA	LIC	80	585	270	53	66.6	37.6
1095140	49786	BLED	20051102ABH	KNWS-FM	NORTHWESTERN COLLEGE	C	WATERLOO	IA	LIC	100	762	270	53	80.2	51.2



Facility id: 148558;  
Area of Interference;

