

***COMPREHENSIVE TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT***

**FM TRANSLATOR STATION K269EC
MANKATO, MINNESOTA
101.7 MHz / 0.250 kW DA**

THREE EAGLES OF LUVERNE, INC.

FEBRUARY, 2014

APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **Three Eagles of Luverne, Inc.** ("Three Eagles"), licensee of FM translator station K269EC at Mankato, Minnesota, and are in support of their application for construction permit to modify that facility.¹

Under this application it is proposed that K269EC change its primary station from KEEZ-FM at Mankato, Minnesota to KMKO-FM at Lake Crystal, Minnesota.² Due to the location of the 60 dBu service contour associated with KMKO-FM, a change from a non-directional antenna to a directional antenna is also proposed. There is no change proposed to the channel of operation, nor are there any changes proposed to the location, channel of operation, or elevation data associated with the facility.

At present, K269EC operates with an effective radiated power of 250 Watts utilizing a non-directional antenna with a center of radiation at 25 meters AGL.³ This application proposes a change to a composite directional antenna. The composite antenna would consist of three horizontally polarized Kathrein-Scala CL-FM log-periodic antennas. These antennas would be oriented at 165, 242, and 320 degrees true. Equal power division between the three antennas would be utilized to achieve the tabulated horizontal plane pattern.

The proposed changes to the translator would keep it as a fill-in translator, although the primary facility would change to KMKO-FM. Exhibits E-1A and E-1B illustrate the predicted 60 dBu

¹ The Facility ID for K269EC at Mankato, Minnesota is 23467.

² The Facility ID for KEEZ-FM at Mankato, Minnesota is 21193. The Facility ID for KMKO-FM at Lake Crystal, Minnesota is 164294.

³ Site elevation is 237 meters AMSL, thus the center of radiation is 262 meters AMSL.

JEREMY RUCK & ASSOCIATES, INC.

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Canton, IL 61520

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service contour of the proposed facility along with the 60 dBu service contour of KMKO-FM. As is demonstrated by these two maps, the predicted 60 dBu service contour of K269EC would be wholly contained within the 60 dBu service contour of KMKO-FM.

The proposed facility would comply with the contour overlap requirements of Section 74.1204 of the Commission's Rules. The television channel six provisions under Section 74.1205 are not applicable due to the channel of operation. Exhibit E-2 illustrates a tabular based allocation study for the proposed facility. As this study demonstrates, there would be no prohibited contour overlap between the proposed facility, and any other relevant proposed or authorized facility. This study is graphically illustrated in the map that is Exhibit E-3.

The facility is excluded from environmental processing as it would not have a significant environmental impact. The antenna for the facility is to be mounted to the elevator equipment shelter on top of a high-rise lodging establishment. This lodging establishment is an existing structure, and no excavation is required to change the antenna utilized.

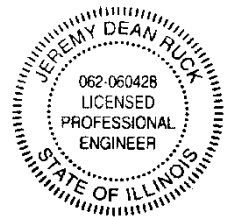
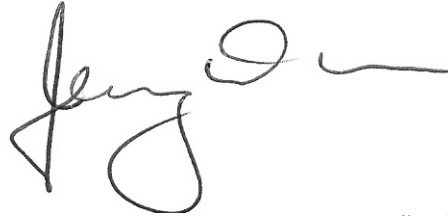
A small portion of the rooftop of the hotel is predicted to potentially experience power density levels in excess of the controlled environment condition of the safety standard. The rooftop of this building is a restricted area with controlled access. In order to protect persons having access to this restricted area, Three Eagles will coordinate with hotel management to cease operation of the translator whenever access to the rooftop is required. Operation of the translator will not resume until such time as maintenance personnel are confirmed to have left the rooftop, and access to the rooftop is secured. Appropriate warning signs with contact information will be posted around the tower, and at all access points to the rooftop.

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The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2015

Jeremy D. Ruck, PE
February 3, 2014

JEREMY RUCK & ASSOCIATES, INC.

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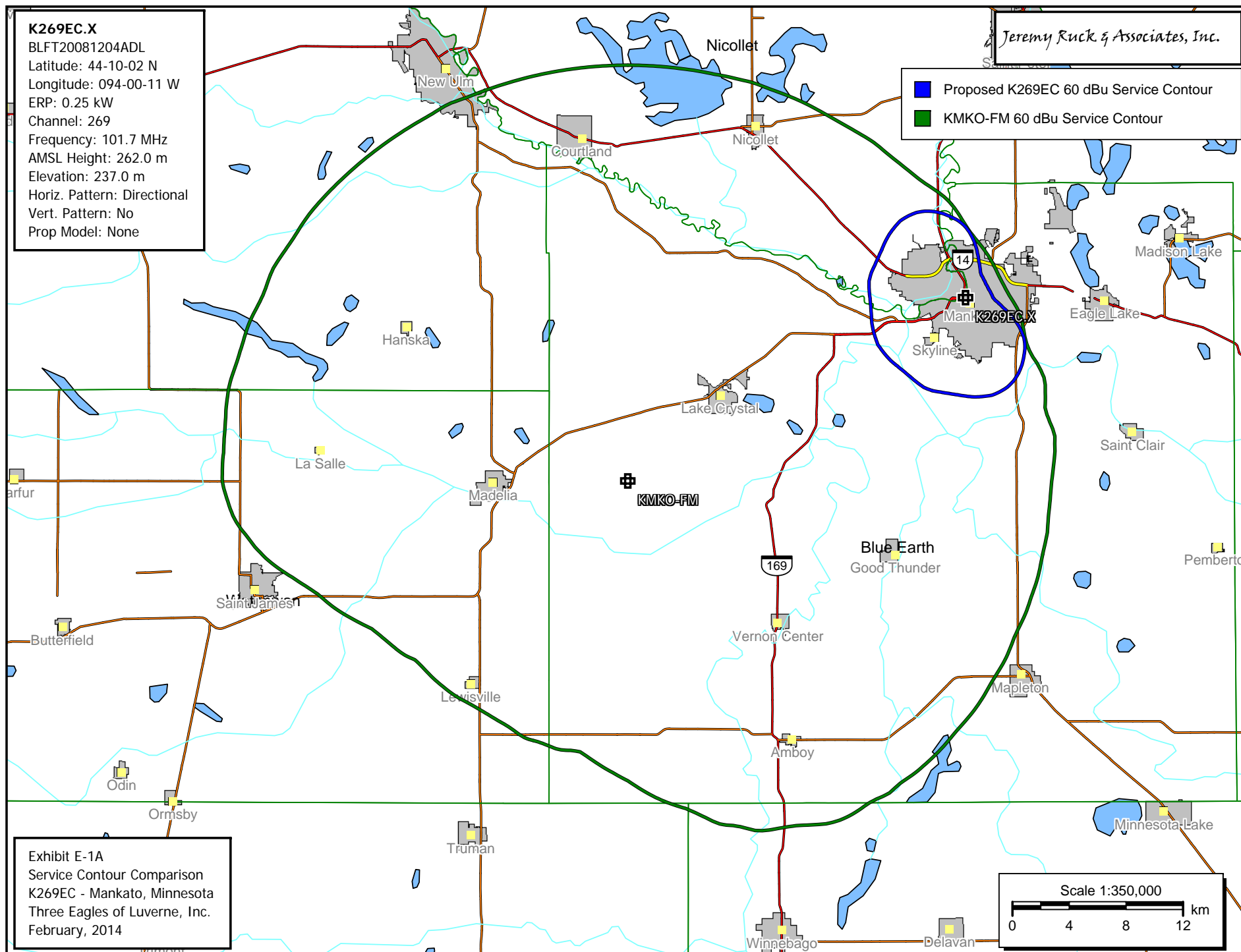
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K269EC.X

BLFT20081204ADL
Latitude: 44-10-02 N
Longitude: 094-00-11 W
ERP: 0.25 kW
Channel: 269
Frequency: 101.7 MHz
AMSL Height: 262.0 m
Elevation: 237.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

Jeremy Ruck & Associates, Inc.

- Proposed K269EC 60 dBu Service Contour
- KMCO-FM 60 dBu Service Contour



K269EC.X

BLFT20081204ADL

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ERP: 0.25 kW

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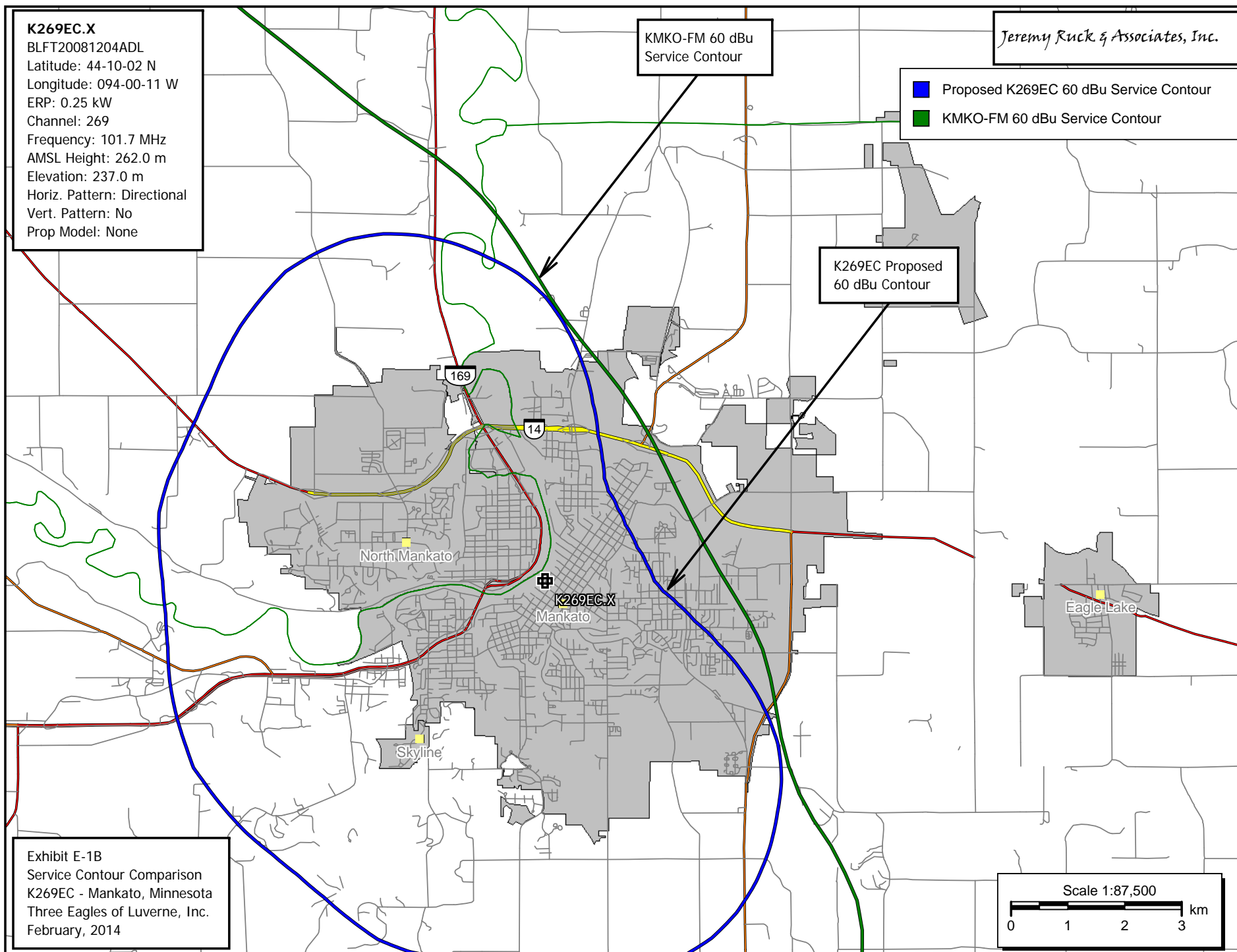
Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

KMKO-FM 60 dBu
Service Contour*Jeremy Ruck & Associates, Inc.*

- Proposed K269EC 60 dBu Service Contour
- KMKO-FM 60 dBu Service Contour

K269EC Proposed
60 dBu Contour**Exhibit E-1B**

Service Contour Comparison

K269EC - Mankato, Minnesota

Three Eagles of Luverne, Inc.

February, 2014

Scale 1:87,500

0 1 2 3 km

Jeremy Ruck & Associates, Inc.
Consulting Engineers - Canton, Illinois

Exhibit E-2 - Tabular Interference Study
K269EC - Mankato, Minnesota
CH# 269D - 101.7 MHz, Pwr= 0.25 kW DA, HAAT= -26.6 M, COR= 262 M
Average Protected F(50-50)= 7.09 km
Standard Directional

REFERENCE
44 10 02.0 N.
94 00 11.0 W.

DISPLAY DATES
DATA 01-31-14
SEARCH 02-03-14

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
269C2 Rochester	KRCH	LIC_CN MN	92.6 273.5	104.95 BLH19911202KB	44 06 59.0 92 41 22.0	39.000 169	132.5 524	50.2 Cc Li censes, LI c	-31.8*	48.2
269D Mankato	K269EC	LIC_CN MN	0.0 0.0	0.00 BLFT20081204ADL	44 10 02.0 94 00 11.0	0.250 -27	23.8 262	7.1 Three Eagles Of Luverne, I	-28.7*	-23.2*
268C3 St. James	KRRW	LIC_CN MN	235.9 55.5	57.78 BLH20050531AUW	43 52 27.0 94 36 00.0	14.000 136	62.0 484	41.7 Minnesota Valley Broadcast	-11.1*	6.1
269C2 Sauk Rapids	WHMH-FM	LIC_CN MN	352.8 172.7	149.43 BLH20001016ABN	45 30 02.0 94 14 31.0	50.000 145	135.8 474	50.3 Tri-county Broadcasting In	7.3	80.8
270D New Ulm	K270DZ	LIC_CN MN	303.6 123.4	40.23 BLFT20120910ABW	44 22 01.0 94 25 28.0	0.250 58	13.6 355	9.8 Refuge Media Group (new Bo	19.7	20.6
270D Blue Earth	K270AQ	LIC_CN MN	189.8 9.7	56.43 BLFT20050606AHC	43 40 01.0 94 07 19.0	0.250 75	16.5 404	11.4 Minnesota Public Radi o	33.1	35.2
267C Richfield	KDWB-FM	LIC_CN MN	34.8 215.4	121.05 BLH19910814KA	45 03 30.0 93 07 27.0	100.000 315	10.4 593	73.6 Amfm Broadcasting Li censes	106.5	47.2
271C St. Paul	KEEY-FM	LIC_CN MN	34.8 215.4	121.05 BLH19910814KJ	45 03 30.0 93 07 27.0	100.000 315	10.4 593	73.6 Amfm Broadcasting Li censes	106.5	47.2

Terrain database is NED 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
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 protected contour.

BLFT20081204ADL
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Vert. Pattern: No
Prop Model: None

- 60 dBu F(50,50) Service Contour
- 40 dBu F(50,10) Interference Contour
- 54 dBu F(50,10) Interference Contour
- 100 dBu F(50,10) Interference Contour

Exhibit E-3
Contour Allocation Study
K269EC - Mankato, Minnesota
Three Eagles of Luverne, Inc.
February, 2014

Scale 1:1,000,000