

***AMENDMENT TO APPLICATION
FOR CONSTRUCTION PERMIT***

**PROPOSED NEW FM TRANSLATOR STATION
WATERLOO, IOWA
FACILITY ID: 156471
106.9 MHz / 0.250 kW ERP / ND**

E-STRING WIRELESS, LTD.

JULY, 2013

AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **E-String Wireless, Ltd.** ("E-String"), applicant for a new FM translator station to serve Waterloo, Iowa, and are in support of their amendment to application for construction permit.¹

This amendment is being submitted as part of the Commission's Translator Auction 83 settlement process. The original application submitted by E-String was assigned FCC File No. BNPFT-20030317HOM. The staff determined upon initial review, that the application was mutually exclusive with other applications in the region. The end result is that the E-String application plus three other applications combined to form MX Group 174.

The technical parameters proposed under this amendment will eliminate the mutual exclusivity between the proposed facility and all other members of the group. In order to eliminate this mutual exclusivity, E-String proposes a site change as well as a channel change.

The proposed facility would operate on channel 295 with an effective radiated power of 250 Watts at a center of radiation of 354 meters AMSL.² The change in the channel of operation is from the originally specified channel 293 to channel 295, or a change of two channels. Exhibit E-1 illustrates the original 60 dBu service contour along with the contour proposed under this amendment. As Exhibit E-1 demonstrates, there would be overlap between these two contours. The changes in total therefore represent a minor change to the facility.

¹ The Facility ID for the proposed translator facility is 156471.

² The average terrain for the proposed facility is determined by the 180 degree true radial on which the average elevation is 257.0 meters AMSL. Terrain was sampled from the FCC 30-second terrain database.

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The original application specified KCCK-FM at Cedar Rapids, Iowa as the primary station for the proposed translator. Under this amendment, the primary station would be changed to KZIA(FM) at Cedar Rapids, Iowa.³ E-String has received written permission from KZIA, Inc., the licensee of KZIA(FM) to retransmit their signal. Exhibit E-2 illustrates the predicted 60 dBu service contour of the proposed translator along with the 60 dBu service contour of KZIA(FM).

The proposed facility would not preclude LPFM licensing opportunities within any of the Appendix A markets. The closest two Appendix A markets to the proposed facility are the Des Moines market and the Quad Cities market. The proposed facility lies at a distance greater than 39 kilometers from the grid of both markets.

The proposed facility would comply with the provisions of Section 74.1204 of the Commission's Rules. Exhibit E-4 is a tabular allocation study for the proposed facility. This study demonstrates that the proposed facility would meet all of the contour overlap requirements to all facilities of relevance with the exception of BNPFT-20030311AMV at Waterloo, Iowa. This tabular study is graphically depicted in the contour map in Exhibit E-5.

Although normally prohibited contour overlap between the proposed facility and the Starboard Media Foundation application under BNPFT-20030311AMV would exist, no interference would occur between that facility and the proposed facility. These two translators would be co-located on the same registered tower. Both applications specify identical values for the effective radiated power, and differ only slightly in vertical elevation. Since there is a 1:1 ratio between the

³ The Facility ID for KZIA(FM) at Cedar Rapids, Iowa is 35556.

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effective radiated power of the two facilities, no condition exists in any region where the ratio of the field strength between the two facilities would approach, let alone exceed, 40 dB. As a result, no interference is predicted to occur to the Starboard facility from the proposed facility. Similarly the proposed facility would not receive interference from the Starboard facility.

The proposed facility would not create a significant environmental impact, and is exempt from environmental processing. The facility would utilize an existing tower that is registered with the Commission. In addition, the facility would not constitute an RF exposure hazard to the general public.

The Commission's *FM Model* software package predicts a maximum power density at ground level of $0.724 \mu\text{W}/\text{cm}^2$ at a distance of 72 meters from the base of the tower. This value is sufficiently low to categorically exclude the proposed facility. E-String certifies that it will coordinate with all other users of the site to ensure that workers and other personnel having access to the site are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.

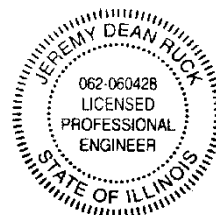
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7.15.2013

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, 2013

Jeremy D. Ruck, PE
July 15, 2013

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7.15.2013

649760.X

BNPFT20030317HOM
Latitude: 42-29-56 N
Longitude: 092-15-51.30 W
ERP: 0.25 kW
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 354.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

649760.A

BNPFT20030317HOM
Latitude: 42-29-59 N
Longitude: 092-20-14 W
ERP: 0.25 kW
Channel: 293
Frequency: 106.5 MHz
AMSL Height: 323.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Jeremy Ruck & Associates, Inc.

Original 60 dBu
Service Contour

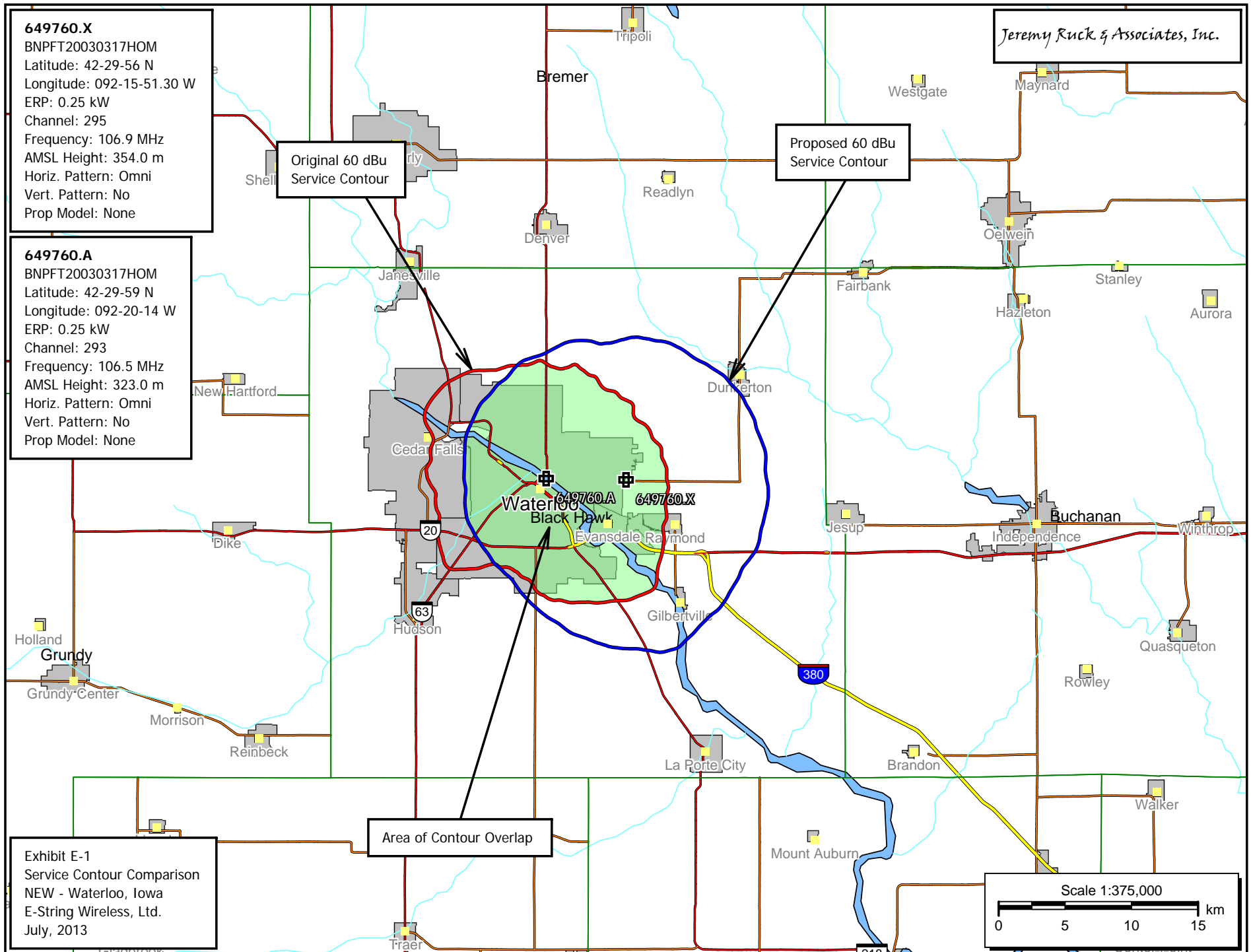
Proposed 60 dBu
Service Contour

Area of Contour Overlap

Exhibit E-1
Service Contour Comparison
NEW - Waterloo, Iowa
E-String Wireless, Ltd.
July, 2013

Scale 1:375,000

0 5 10 15 km



BNPFT20030317HOM
Latitude: 42-29-56 N
Longitude: 092-15-51.30 W
ERP: 0.25 kW
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 354.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None


KZIA
BLH20010521ABM
Latitude: 42-03-25 N
Longitude: 091-41-42 W
ERP: 100.00 kW
Channel: 275
Frequency: 102.9 MHz
AMSL Height: 531.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

KZIA 60 dBu
Service Contour

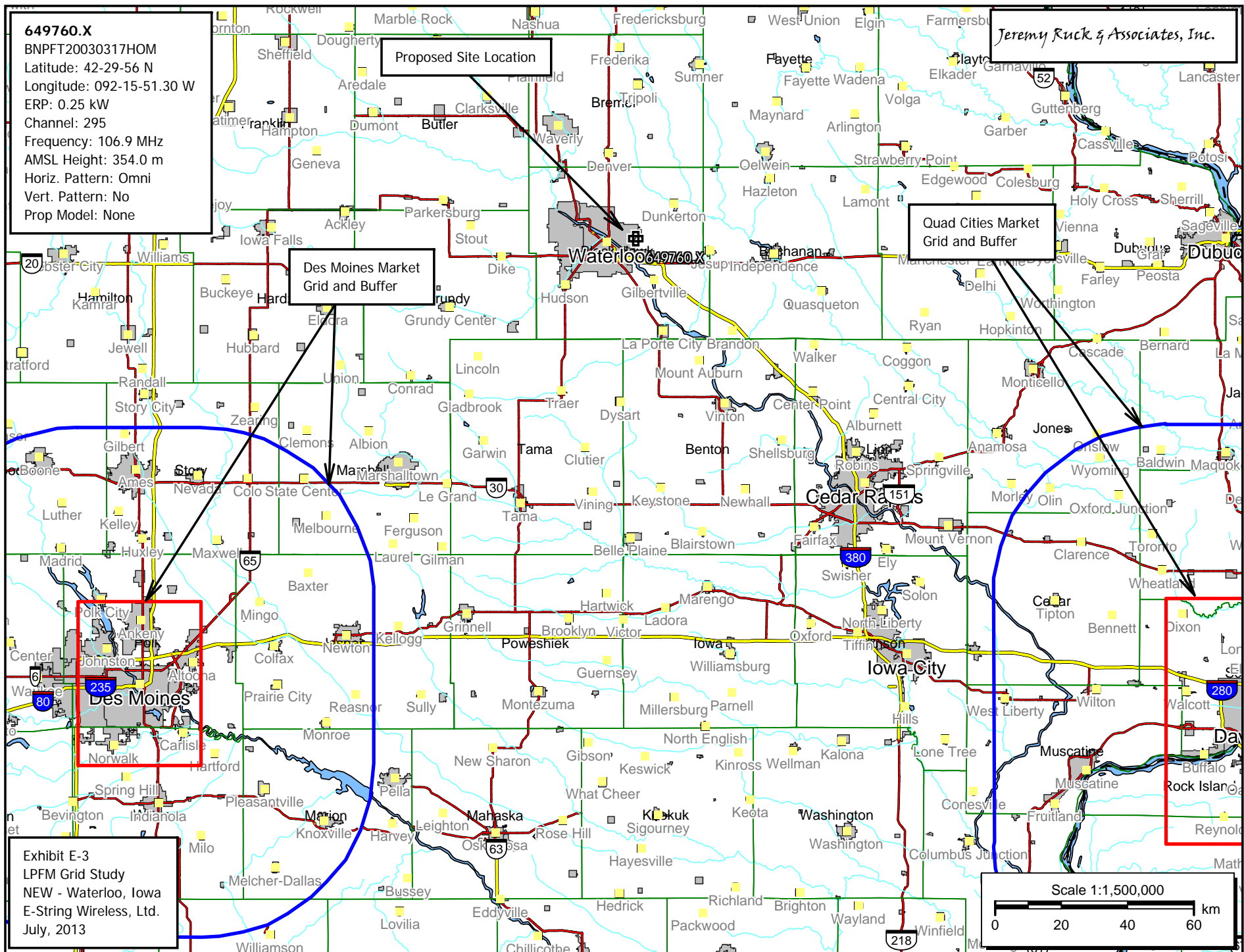
Proposed 60 dBu
Service Contour

Exhibit E-2
Service Contour Comparison
NEW - Waterloo, Iowa
E-String Wireless, Ltd.
July, 2013

Scale 1:1,250,000



A horizontal scale bar with a black background and white markings. It is divided into three equal segments, each labeled '10' below the bar. The total length is labeled '30' at the right end, followed by 'km'.



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

Exhibit E-4 - Tabular Allocation Study

REFERENCE CH# 295D - 106.9 MHz, Pwr= 0.25 kW, HAAT= 78.4 M, COR= 354 M
42 29 56.0 N. NEW - Waterloo, Iowa
92 15 51.3 W. Average Protected F(50-50)= 11.46 km
Omni-directional

DISPLAY DATES
DATA 07-15-13
SEARCH 07-15-13

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*
295CO Rochester	KROC-FM	LIC_CN MN	353.7 173.6	119.90 BLH7076	43 34 15.0 92 25 37.0	100.000 338	178.9 755	76.7 Cumulus	-69.8*	7.3 Li censi ng LI c
293D Waterloo	634414	APP_C_ IA	0.0 90.0	0.00 BNPFT20030311AMV	42 29 56.0 92 15 52.0	0.250 86	1.1 362	11.1 Starboard	-11.7*	-12.2* Media Foundation
294C2 Grinnell	KRTI	LIC_CN IA	203.5 23.2	84.11 BLH19930601KB	41 48 16.0 92 40 09.0	50.000 150	79.3 443	53.4 Newton	-7.4	13.0 License Co, LI c
293D Waterloo	649760	APP_C_ IA	270.9 90.9	5.98 BNPFT20030317HOM	42 29 59.0 92 20 14.0	0.250 49	1.1 323	9.1 E-string	-7.3*	-4.2* Wireless, Ltd
296A Vinton	KRON	LIC_CX IA	140.8 321.1	50.09 BMLH20051025ABI	42 08 56.0 91 52 50.0	4.700 113	42.9 366	27.8 George S.	-4.7	4.9 Flinn, Jr.
293D Waterloo	636316	APP_C_ IA	257.4 77.3	13.50 BNPFT20030313AJP	42 28 20.0 92 25 30.0	0.250 69	1.1 347	11.9 Friendship	0.1	0.5 Communications,
293D Parkersburg	650089	APP_C_ IA	297.3 116.9	47.66 BNPFT20030317LKR	42 41 39.0 92 46 58.0	0.250 78	1.1 376	12.6 Family	34.2	33.6 Stations, Inc.

Terrain database is FCC NGDC 30 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.
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 protected contour.
Reference station has protected zone issue:

649760.X
BNPFT20030317HOM
Latitude: 42-29-56 N
Longitude: 092-15-51.30 W
ERP: 0.25 kW
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 354.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Jeremy Ruck & Associates, Inc.

- 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

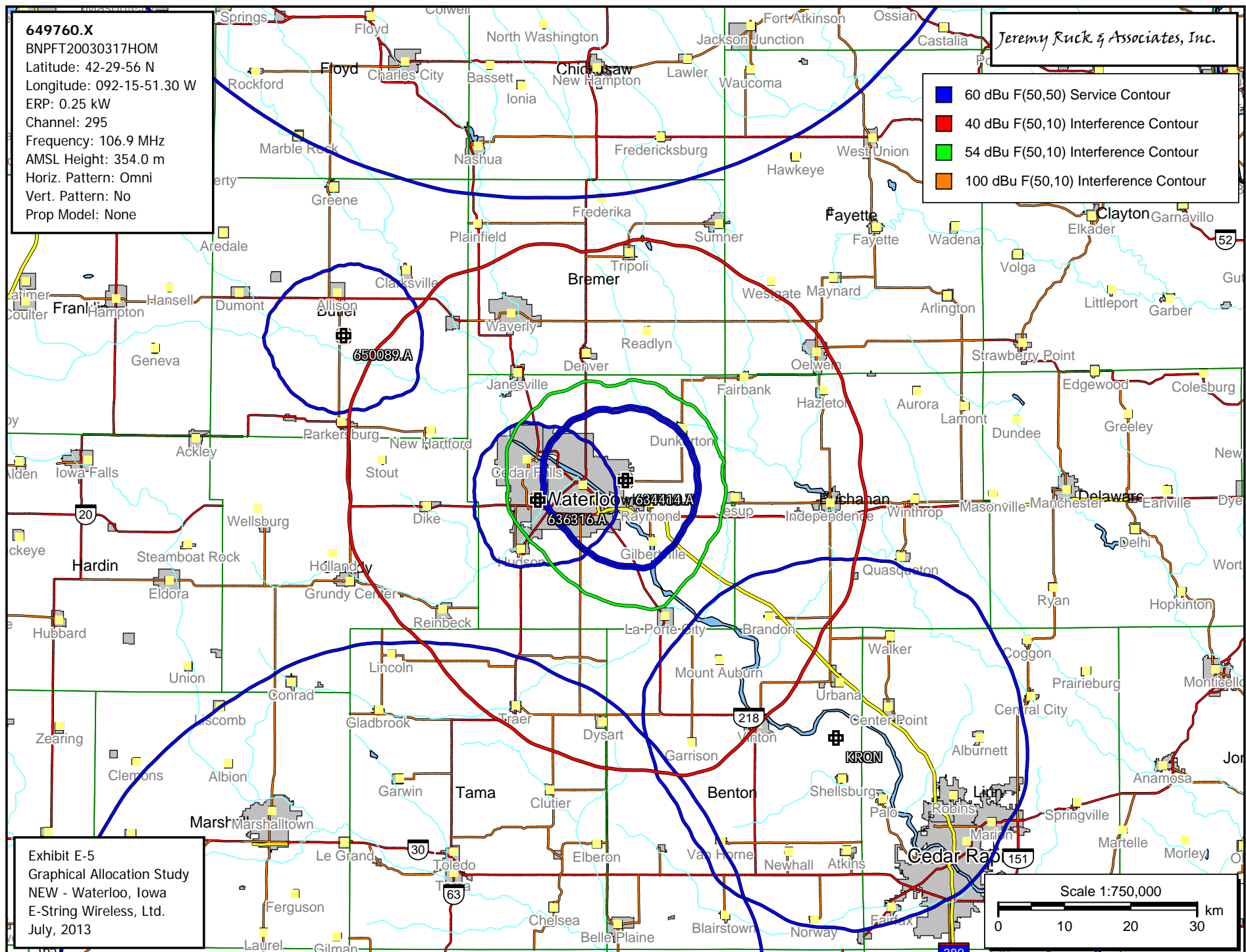


Exhibit E-5
Graphical Allocation Study
NEW - Waterloo, Iowa
E-String Wireless, Ltd.
July, 2013

Scale 1:750,000

0 10 20 30 km