

Comprehensive Technical Exhibit
Amendment to Application for
Modification of Construction Permit
KRKR(FM) – Waverly, Nebraska
FM Channel 236C2 – 95.1 MHz
Chapin Enterprises, LLC
June, 2009

Amendment to Application for Modification of Construction Permit

The following engineering statement and attached exhibits have been prepared for **Chapin Enterprises, LLC** ("Chapin"), licensee of FM broadcast station KRKR(FM) at Lincoln, Nebraska, and are in support of their amendment to application for modification of construction permit.¹

KRKR(FM) is currently licensed to Lincoln, Nebraska on channel 236C2.² In addition, Chapin holds an outstanding construction permit, BPH-20070419ADV as modified by BMPH-20080617ACC, for which an additional modification under BMPH-20081120AFT is sought. Under the original construction permit, the community of license was changed from Lincoln, Nebraska to Valley, Nebraska. This original construction permit also resulted in a change in the channel of operation from 236C2 to 235A at a transmitter site near Valley, Nebraska.

This original construction permit was part of an upgrade and relocation scenario involving KCSI(FM) at Red Oak, Iowa, that had been proposed by another entity.³ One portion of the scenario was the above discussed relocation of KRKR(FM) from Lincoln to Valley, Nebraska. The other half of the scenario was a change in community of license of KCSI(FM) from Red Oak, Iowa to Treynor, Iowa. Under that construction permit, no change in the channel or class of operation was proposed.⁴

Subsequently the licensee of KCSI(FM) submitted an application to modify that construction permit. That application, which is still pending before the Commission, requested a change in the

¹ The Facility ID for KRKR(FM) is 54707.

² See FCC File No. BLH-19880609KA.

³ The Facility ID for KCSI(FM) at Red Oak, Iowa is 26456.

⁴ See FCC File No. BPH-20070419ADT.

authorized transmitter site location.⁵ In addition, the applicant also sought a change in the class of operation from C3 to C2 and a return to Red Oak, Iowa as the community of license. These changes to KCSI(FM) rendered KRKR(FM) unable to comply with the provisions of the Commission's Rules from the current site from which it operates.

Discussions were held with Hawkeye Communications, Inc. ("Hawkeye"), the licensee of KCSI(FM) to resolve the issues facing both facilities. An agreement was reached between the two parties whereby both facilities would return to their respective licensed sites as class C2 facilities. This agreement is the subject of this amendment to the application for modification of construction permit. In addition, an amendment to the pending KCSI(FM) application will be filed concurrently to address the necessary changes to that facility, which propose the use of the current licensed site as a C2 facility serving Villisca, Iowa as the community of license. The text and exhibits in both applications will reference the other, and take into account the proposed parameters of the other facility when demonstrating compliance with the Commission's Rules.

Chapin proposes that KRKR(FM) be licensed to Waverly, Nebraska as a class C2 facility operating on channel 236.⁶ This change in the allocation would be consistent with the provisions of Section 73.203 of the Commission's Rules. The allocation of channel 236C2 to Waverly would be defined as a minor change under the Commission's Rules.

As will be subsequently discussed in this engineering statement authorization for KRKR(FM) is being sought pursuant to Section 73.215 with regard to the proposed KCSI(FM) facilities.

⁵ See FCC File No. BMPH-20081020AGI.

⁶ This channel and class of operation are equivalent to the current licensed facility.

Therefore, the transmitter site for KRKR(FM) is at a different location than the allocation reference coordinates specified in this application.

For purposes of the allocation, coordinates of 40-48-00 North Latitude and 96-47-38 West will be utilized. Exhibit E-1 is a single channel spacing study, which demonstrates that this location would comply with the spacing requirements of Section 73.207 to all facilities. The study lists eight short spacings. Five of these are to various iterations of KRKR while the remaining three pertain to the KCSI construction permit and pending application and allocation change. All of these short spacings will become moot through the submission of this amendment and the concurrently submitted amendment for KCSI.

The two entries in this study where the Section 73.207 distances would be met require additional discussion. The fourth entry for KCSI, or the first which would meet Section 73.207 spacings, is the geographic spacing from the proposed KRKR(FM) Waverly, Nebraska allocation to the reference coordinates for the proposed 237C2 allocation at Villisca, Iowa.⁷ The final KCSI entry in this study is the spacing between the coordinates of the KRKR Waverly, Nebraska proposed allocation and the current KCSI transmitter site, which is the site that will be utilized for that facility following the above discussed upgrade to class C2 operation.⁸

The reference coordinates for the proposed change to the KRKR(FM) allocation would further comply with Section 73.203 of the Commission's Rules as they describe a suitable site for construction. These coordinates are located in a rural agricultural area, and based on satellite

⁷ The geographic coordinates for the proposed revision to the proposed 237C2 Villisca, Iowa allocation are 41-03-34 North latitude and 95-16-48 West longitude.

⁸ Both KRKR and KCSI will be authorized pursuant to Section 73.215 with respect to each other. Compliance with the Section 73.207 spacing will become moot.

imagery is an unimproved tract of cultivated land. Exhibit E-2 illustrates both the predicted 70 dBu service contour from this site based on reference parameters and real terrain as well as a circle of radius equivalent to the 70 dBu contour distance based on reference parameters. Both contours would totally encompass the entire city of license.

The proposed facility would comply with the provisions of Section 73.315 of the Commission's Rules. Exhibit E-3 illustrates the predicted FCC service contours for the proposed facility. As this map demonstrates, the predicted 70 dBu service contour for the proposed facility would totally encompass Waverly, Nebraska, the community of license.

The main studio for KRKR(FM) complies with the provisions of Section 73.1125 of the Commission's Rules. The main studio is located within the corporate boundaries of Lincoln, Nebraska, and within the predicted 70 dBu service contour of the proposed facility. The main studio is also located at a distance less than twenty-five miles from the reference coordinates of Waverly, Nebraska.

The proposed facility would be authorized pursuant to Section 73.215 with regard to a concurrently filed application to modify the construction permit for KCSI(FM), but would meet Section 73.207 to all other proposed or authorized facilities. Exhibit E-4 is a single channel spacing study for the proposed facility. As this study demonstrates, the only short spacings listed are those to either KRKR or KCSI.

The short spacings to the various KRKR facilities are clearly moot. In the case of the KCSI short spacings, all are irrelevant except the next to last one in the listing. This spacing to KCSI.PRO represents the geographical separation between the proposed KRKR facilities and the

KCSI facilities that will be described in the previously discussed application that will be filed concurrently by that licensee. As indicated in the table, the spacing to this KCSI facility is 125.9 kilometers, which is short under Section 73.207. Under Section 73.215, however, the spacing exceeds the absolute minimum of 117 kilometers as described in that section of the rules.

Although the proposed facility would be short spaced to the proposed KCSI facilities, adequate contour protection would be met according to Section 73.215.⁹ Exhibit E-5 depicts the contour based allocation study for KRKR relative to the proposed KCSI facility. The contours for KRKR are based on the proposed parameters for that facility. In the case of KCSI, that facility would also be authorized pursuant to Section 73.215 with regard to KRKR. As a result, the relevant contours have been based on actual parameters. The licensed and existing facilities for KCSI were not considered as they are moot.

The proposed facility would not constitute a significant environmental impact. In the first place there are no actual physical changes being proposed to the existing plant. As a result, the facilities described in this application will not increase the already existing environmental impact caused by the facility. In addition, the facility would not constitute an RF radiation exposure hazard to persons at ground level.

The facility will continue to utilize the existing 6 bay full wavelength spaced ERI antenna. The Commission's FM Model software package predicts a maximum power density of 70.2 mW/cm² at a distance of 18 meters from the base of the tower. This value complies with the uncontrolled environment condition of the applicable safety standard. In addition, the applicant

⁹ The concurrent KCSI(FM) application will also request authorization pursuant to Section 73.215 with regard to KRKR(FM).

certifies that it will coordinate with all other users of the site to ensure workers having access to the site are not exposed to levels of radiofrequency radiation in excess of applicable safety standards. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power, or cessation of operation.

As discussed, the proposed facility would change its community of license from the authorized city of Valley, Nebraska to Waverly, Nebraska. The remainder of this comprehensive exhibit contains the 307(b) analysis for the proposed facility. This 307(b) analysis was prepared by attorneys at Fletcher, Heald & Hildreth, PLC. The text of that analysis has been included in this exhibit unchanged.

KRKR (FM) Application for Minor Modification of License
Community of License Change to Waverly, Nebraska
Section 307(b) Showing

Through this Application, Chapin Enterprises, LLC ("Chapin"), licensee of FM Station KRKR, Facility Id. 54707 (the "Station"), seeks the modification of the Station's license to provide first local aural transmission service to Waverly, Nebraska, by changing and upgrading channels from Channel 235A to Channel 236C2 and specifying Waverly as the Station's community of license. Adoption of this proposal is in the public interest as it will result in a preferential arrangement of allotments under Section 307(b) by providing Waverly with its first local aural transmission service and by serving a greater population.

Public Interest Analysis

Chapin currently holds a construction permit for KRKR(FM) under FCC File Number BMPH-20080617ACC. This permit modified the previous permit, FCC File number BPH-20070419ADV, by which the city of license for KRKR(FM) was changed from Lincoln, Nebraska to Valley, Nebraska. However, the facilities specified at Valley have never been built. Thus, while the proposal to change the Station's community of license to Waverly will leave the community of Valley without a first local transmission service, the citizens of Valley will not be deprived of sole local existing service because the Station's facilities at Valley are unbuilt. *See Pelham and Meigs, Georgia*, 18 FCC Rcd 12187 (2003) (removal of unconstructed station does not present loss of service concerns because it does not constitute service the public has become reliant upon); *Linden, Texas*, 16 FCC Rcd 10853 (2001) (removal of unbuilt facilities does not present the same loss of service concerns as removal of a licensed station).

The Application presents a preferential arrangement of station assignments under FM allotment priorities (3) and (4). First, the proposal should be awarded a Priority (3) preference because grant of the Application would result in the provision of first local transmission service to the community of Waverly. Second, grant of the Application is preferential to the current permit because it proposes to serve larger population. *See, e.g., Greenup, Kentucky and Athens, Ohio*, 6 FCC Rcd 1493 (1991) (population advantage presumptively best serves public interest).

The Application proposes to move the Station from the smaller city of Valley, population 1,788, to Waverly, population 2,448 (2000 U.S. Census), a net gain of 660 people served just in the community of license. In addition, the predicted 70 dBu service contour for the proposed facility would provide service to 244,027 persons, and the 60 dBu contour would provide service to 291,592. By contrast, the 70 dBu contour for the facilities specified in the Valley permit would provide service to 78,248 persons; the 60 dBu contour would bring service to 399,151 persons. Thus, because the proposed facilities would triple the population served by the Station's city-grade contour and increase the total population served by both contours by more than 50,000 persons, the Application is clearly preferential under priority (4). Finally, the *Technical Exhibit* submitted herewith provides further support, in its gain-loss analysis and identification of available protected aural services, for the conclusion that the proposed change of the Station's community of license to Waverly will result in a superior distribution of allotments under 307(b).

The City of Waverly is a community for allotment purposes under Section 307(b) because it is a city incorporated by the State of Nebraska and it is listed as a city in the U.S. Census. The Commission has determined that "for [purposes of Section 307(b)] it is sufficient that the community is incorporated or is listed in the census." *Revision of FM Assignment Policies and Procedure*, 90 FCC 2d 88, 101 (1982). Although Waverly is *not* situated within an Urbanized Area, the proposed facilities to serve Waverly will also provide service to the majority of the Lincoln, Nebraska, Urbanized Area. Thus, an analysis is provided herein to demonstrate, using the familiar *Tuck* criteria, that Waverly is an independent community. *Faye and Richard Tuck*, 3 FCC Rcd 5374 (1988).

Tuck Analysis

Under *Tuck*, the Commission considers: (a) the degree to which the station would provide coverage not only to the designated community of license but to the nearby metropolis; (b) the size and proximity of the designated community vis-à-vis the central city; and (c) the degree to which the proposed community is independent from the central city of the Urbanized Area.

With respect to the first criterion, the proposed 70 dBu city-grade contour would encompass 98.7% of the Lincoln, Nebraska, Urbanized Area. That the proposed Station will provide city-grade coverage over such a large percentage of the Urbanized Area does not preclude a favorable finding under this criterion. See *St. Augustine and Neptune Beach, Florida*, 16 FCC Rcd 18,903 (Allocations Branch, 2001) (city-grade coverage of more than 95% of UA); see also *Clovis and Madera, California*, 11 FCC Rcd 5219 (Allocations Branch, 1996) (city-grade coverage over 100% of UA). This is due to the principle that "the first two Tuck factors (signal population coverage and size and proximity of the specified community to the central city) . . . , although pertinent, have less significance than evidence of interdependence [under criteria three]." *Clovis*, at ¶ 20.

With respect to the second factor, Waverly's population (2,448) is 1% of the population of the central city, Lincoln (225,581; U.S. Census 2000). But this figure does not preclude favorable consideration of the proposed move; there have been other cases in which a community with less than one percent of the larger city's population was nonetheless granted a first local preference. See, e.g., *Lincoln and Sherman, Illinois*, 19 FCC Rcd 23,581 (MB 2004), citing *Ada, Newcastle and Watonga, Oklahoma*, 11 FCC Rcd 16,896 (MMB 1996). Moreover, this factor is of lesser import than *Tuck* factor three, independence from the central city of the Urbanized Area.

With respect to the third criterion, the information presented herein clearly demonstrates Waverly's status as an independent community. With respect to the eight factors that reflect on Waverly's independence from the Lincoln Urbanized Area, the following is provided:

(1) the extent to which the community residents work in the larger metropolitan area rather than the specified community;

The Commission has noted that "the purpose of this factor is to assure that the residents of the suburban community are not reliant upon the Urbanized Area for employment." *Evergreen, Alabama, and Shalimar, Florida*, 21 FCC Rcd 1636, 1638 (2006). The Commission has also held that a community in which employment opportunities were available for a majority of its residents was sufficiently independent under this factor. See *St. Augustine and Neptune Beach, Florida*, at 18904-05 (2001). According to the *2002 City of Waverly Comprehensive Development Plan* (available at

<http://www.nogoodnames.com/waverly/waverly%20doc.pdf>), more than 1,300 industrial and manufacturing jobs are located in Waverly. In addition, the local school district, which is based in Waverly, employs nearly 300 more individuals, most full-time (see Nebraska School District 145, 2008 Annual Report, *available at* <http://www.dist145.esu6.org/>). These figures are in addition to the numerous small businesses that call Waverly home. In light of the Census Bureau's determination that only 1,291 of Waverly's 2,448 residents are part of the labor force, Waverly is a "net importer" of workers and clearly not reliant on Lincoln for employment opportunities for its residents.

(2) whether the smaller community has its own newspaper or other media that covers the community's needs and interests;

Waverly has its own newspaper. *The News* is published once per week, on Thursdays, and has a web site that updated throughout the week: http://omahanewsstand.com/waverly_news/front/.

(3) whether community leaders and residents perceive the specified community as being an integral part of, or separate from, the larger metropolitan area;

Waverly has been an active, independent community since it was first incorporated as a village in 1885. The City enjoys the best of both worlds – as noted in the 2002 *City of Waverly Comprehensive Development Plan*, "Waverly's location on the edge of the Lincoln metropolitan region is a significant asset. The city enjoys the quality of life advantages of a small, intimate town while also enjoying access to the resources and opportunities of a large city." Yet, the *Plan* — which was produced as a joint effort of consultants and the citizens of the City of Waverly— is focused on ways in which Waverly, faced with its own recent growth and the growth of nearby Lincoln, may maintain its small-town livability while increasing the resources needed to support its growing population. Community-focused planning toward the development of retail businesses, the creation of a downtown development plan, the development of public facilities and infrastructure, and neighborhood planning districts, demonstrate a community commitment toward achieving the overarching goal to "maintain Waverly as a functionally unified city".

In addition, there are several active community groups in Waverly. The Waverly Jaycees sponsor the annual WaverlyFest, a two-day July 4th celebration of parades, street dances and fireworks, as well as FrightFest each October. The Waverly Community Foundation operates a community center and park in Waverly with a social hall for events and gatherings. Waverly also hosts a Veterans of Foreign Wars (VFW) Post. Clearly Waverly's leaders and residents view their community as distinctly separate from and independent of the larger metropolitan area.

(4) whether the specified community has its own local government and elected officials;

The City of Waverly has its own government, headed by an elected mayor and a city council comprised of four elected Councilors. In addition to elected officials, Waverly is managed by a city administrator/clerk, a city attorney, a deputy city clerk/treasurer, a zoning administrator & buildings inspector, a public works director, and a parks and recreation director.

(5) whether the smaller community has its own telephone book provided by the local telephone company or zip code;

The United States Postal Service has assigned the Zip Code 68462 to Waverly. In addition, there is a U.S. Post Office located at 10850 North 142nd Street in downtown Waverly.

(6) whether the community has its own commercial establishments, health facilities, and transportation systems;

According to the Waverly Chamber of Commerce, the City of Waverly is home to nearly 100 commercial establishments providing a wide-range of services, including two retail banking branches, a florist, a funeral home, gas stations, restaurants (both local and national chain), hair and nail salons, auto repair shops, insurance agents, a drug store, a fitness center, a veterinary clinic, and a hardware store. Several of these establishments include the city's name in their business name: Waverly Care Center; Waverly Crane & Consulting Services; Waverly Dental; Waverly Keno; Waverly Nail Spa; Waverly Plumbing & Well Co.; Waverly

Self-Storage; Waverly Snap Fitness; and Waverly TrueValue Hardware. Waverly is also the location of several churches, including the First United Methodist Church of Waverly and Peace Lutheran Church Waverly. Waverly has health facilities in the form of a nursing and rehabilitation center, physician and physical therapist offices, and two dental offices.

(7) the extent to which the community and central city are part of the same advertising market;

Advertisers looking to advertise directly to the residents of Waverly may use *The News*, both in print and online. The media outlets serving the urbanized area and the city of Lincoln would certainly be less effective (and more expensive) for targeting Waverly's citizens than advertising in the hometown paper. Thus, it is reasonable to conclude that the advertising markets are distinct. The licensing of a radio station to Waverly will only enhance the distinction by providing a broadcast outlet for advertisers in Waverly.

(8) the extent to which the specified community relies on the larger metropolitan area for various municipal services, such as police, fire protection, schools, and libraries.

As noted above, Waverly has its own city government. It provides its citizens with water and sewer service (other basic utilities, such as electric and gas, are provided by private companies or, in the case of electric, provided by a non-profit, customer-owned company). Waverly also has its own volunteer fire & rescue squad. Policing is provided by the Lancaster County Sheriff's Office.

Finally, Waverly is home to its own school district, Nebraska School District 145, comprised of five schools (two elementary, one intermediate, one middle, and one high school), all but one of which is located within the City of Waverly.

The Commission considers a community independent when a majority of these factors demonstrate that the community is distinct from the urbanized area. *Parker and St. Joe, Florida*, 11 FCC Rcd 1095 (1996); *Jupiter and Hobe Sound, Florida*, 12 FCC Rcd 3570 (1997). Here, *all* of these factors demonstrate Waverly's independence from Lincoln.

Conclusion

The material presented herein demonstrates that Waverly is a vibrant, independent community meeting the *Tuck* criteria for preferential treatment under 307(b). Adoption of the proposed modification to is in the public interest as it will provide first local service to Waverly in addition to serving a much greater population.

Affidavit

The preceding statement and attached exhibits, except for the 307(b) analysis, 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, 2009

Jeremy D. Ruck, PE
June 15, 2009

D.L. Markley & Associates, Inc.
Consulting Engineers
Exhibit E-1
Spacing Study for KRKR(FM) Allocation

REFERENCE		DISPLAY DATES
40 48 00.0 N.	CLASS = C2	DATA 06-11-09
96 47 44.0 W.	Current Spacings	SEARCH 06-11-09
----- Channel 236 - 95.1 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KRKR.PRO	PRO 236C2	Waverly	NE 22.6	21.67	189.5	-167.83
KRKR	LIC 236C2	Lincoln	NE 22.7	21.71	189.5	-167.79
KRKR	RSV 236A	Lincoln	NE 121.9	6.61	165.5	-158.89
KRKR.A	APP-N 236A	Lincoln	NE 106.4	7.99	165.5	-157.51
KRKR.C	CP -Z 235A	Valley	NE 35.8	68.98	105.5	-36.52
KCSI.A	APP 237C2	Red Oak	IA 71.9	109.75	129.5	-19.75
KCSI	RSV 237C2	Red Oak	IA 71.9	109.75	129.5	-19.75
KCSI.C	CP 237C3	Treynor	IA 61.5	105.14	116.5	-11.36
KCSI.ALL	PA 237C2	Villisca	IA 76.7	130.86	129.5	1.36
KCSI.PRO	PRO 237C2	Villisca	IA 78.8	136.63	129.5	7.13
KCKS.C	CP -N 235C1	Concordia	KS 207.4	169.51	157.5	12.01
KCKS	LIC-N 235C1	Concordia	KS 207.3	169.86	157.5	12.36
KCSI	LIC 237C3	Red Oak	IA 78.8	136.63	116.5	20.13
KNDY-FM	LIC 238C3	Marysville	KS 176.8	93.41	55.5	37.91
KROA	LIC 239C1	Grand Island	NE 269.9	132.61	78.5	54.11
KNEN	LIC 234C1	Norfolk	NE 331.9	142.10	78.5	63.60
KKCD	LIC-N 290C2	Omaha	NE 57.5	83.69	19.5	64.19
KHCA	LIC 237A	Wamego	KS 167.8	180.60	105.5	75.10
KLIQ	LIC-N 233C1	Hastings	NE 263.4	174.10	78.5	95.60
KCMO-FM	LIC 235C0	Kansas City	MO 133.1	274.71	175.5	99.21
KCMO-FM.C	CP 235C0	Shawnee	KS 133.1	274.71	175.5	99.21
KWOA-FM	LIC 236C1	Worthington	MN 16.0	327.66	223.5	104.16
KICT-FM	LIC 236C1	Wichita	KS 191.0	339.13	223.5	115.63
KGLI	LIC 238C1	Sioux City	IA 11.9	194.80	78.5	116.30
KGGO	LIC 235C0	Des Moines	IA 70.6	294.84	175.5	119.34
WIBW-FM	LIC 233C0	Topeka	KS 162.1	209.15	88.5	120.65
WIBW-FM.C	CP 233C0	Topeka	KS 158.9	210.79	88.5	122.29
KSWI	LIC-Z 239C3	Atlantic	IA 66.1	179.26	55.5	123.76
KBBN-FM	LIC 237C2	Broken Bow	NE 285.4	262.41	129.5	132.91
KKAN-FM	LIC 237A	Phillipsburg	KS 243.3	242.96	105.5	137.46
KQKY	LIC 290C	Kearney	NE 263.4	174.10	34.5	139.60
KSUX	LIC-N 289C2	Winnebago	NE 7.5	172.84	19.5	153.34
KCHZ	LIC-N 239C1	Ottawa	KS 142.3	249.39	78.5	170.89
KAAN-FM	LIC 238C2	Bethany	MO 104.3	231.63	57.5	174.13
KJLT-FM	LIC 235C1	North Platte	NE 275.0	344.85	157.5	187.35
KVOB	LIC 238C3	Lindsborg	KS 198.2	249.00	55.5	193.50
KLZR	LIC 290C1	Lawrence	KS 149.2	226.85	26.5	200.35

KRKR.ALLOC
PROPOSED ALLOC.
Latitude: 40-48-00 N
Longitude: 096-47-44 W
ERP: 50.00 kW
Channel: 236
Frequency: 95.1 MHz
AMSL Height: 536.99 m
Elevation: 368.4 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Method

32.8 km Radius Centered
on Allocation Coordinates

D.L. Markley & Associates, Inc.

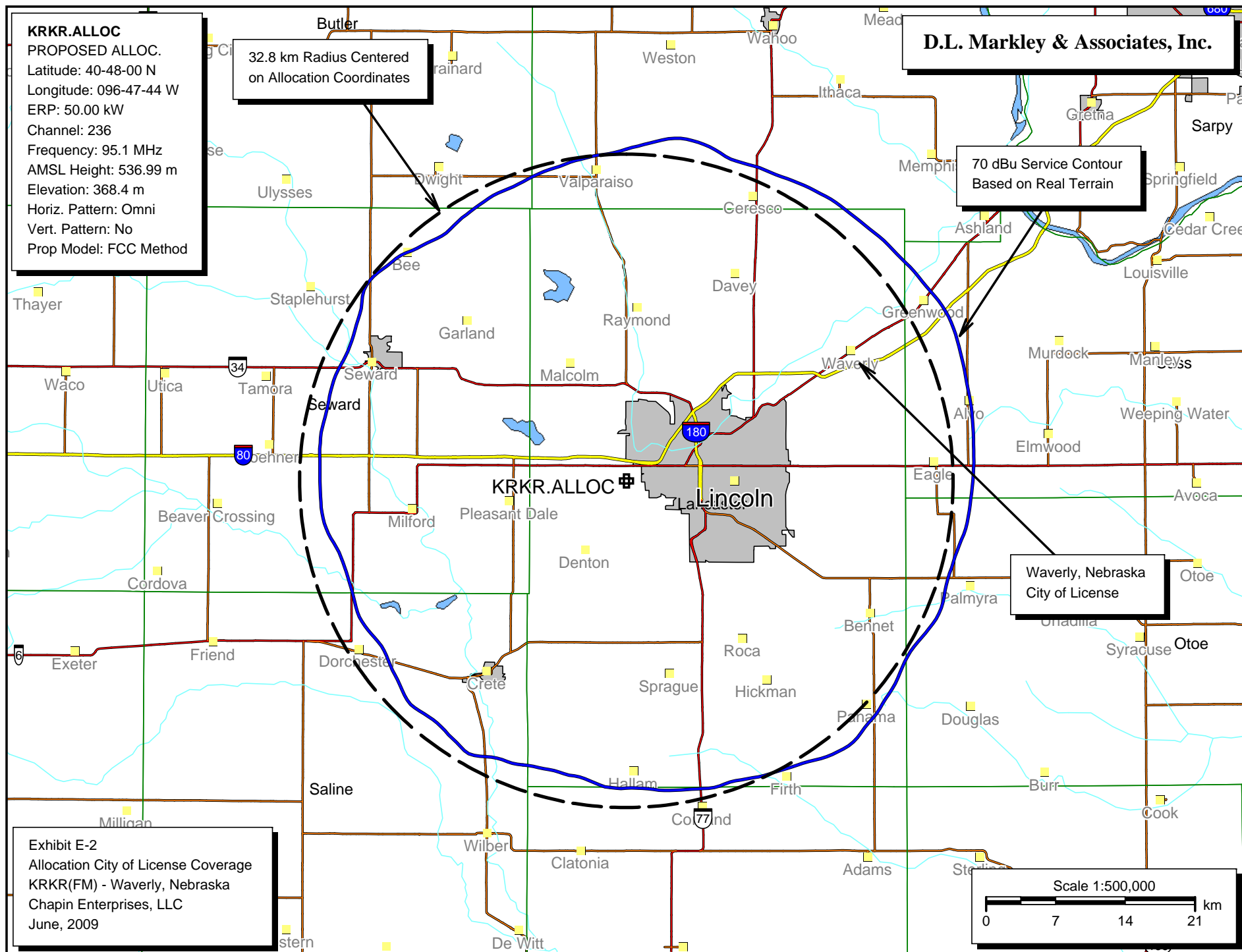
70 dBu Service Contour
Based on Real Terrain

Waverly, Nebraska
City of License

Exhibit E-2
Allocation City of License Coverage
KRKR(FM) - Waverly, Nebraska
Chapin Enterprises, LLC
June, 2009

Scale 1:500,000



0 7 14 21 km

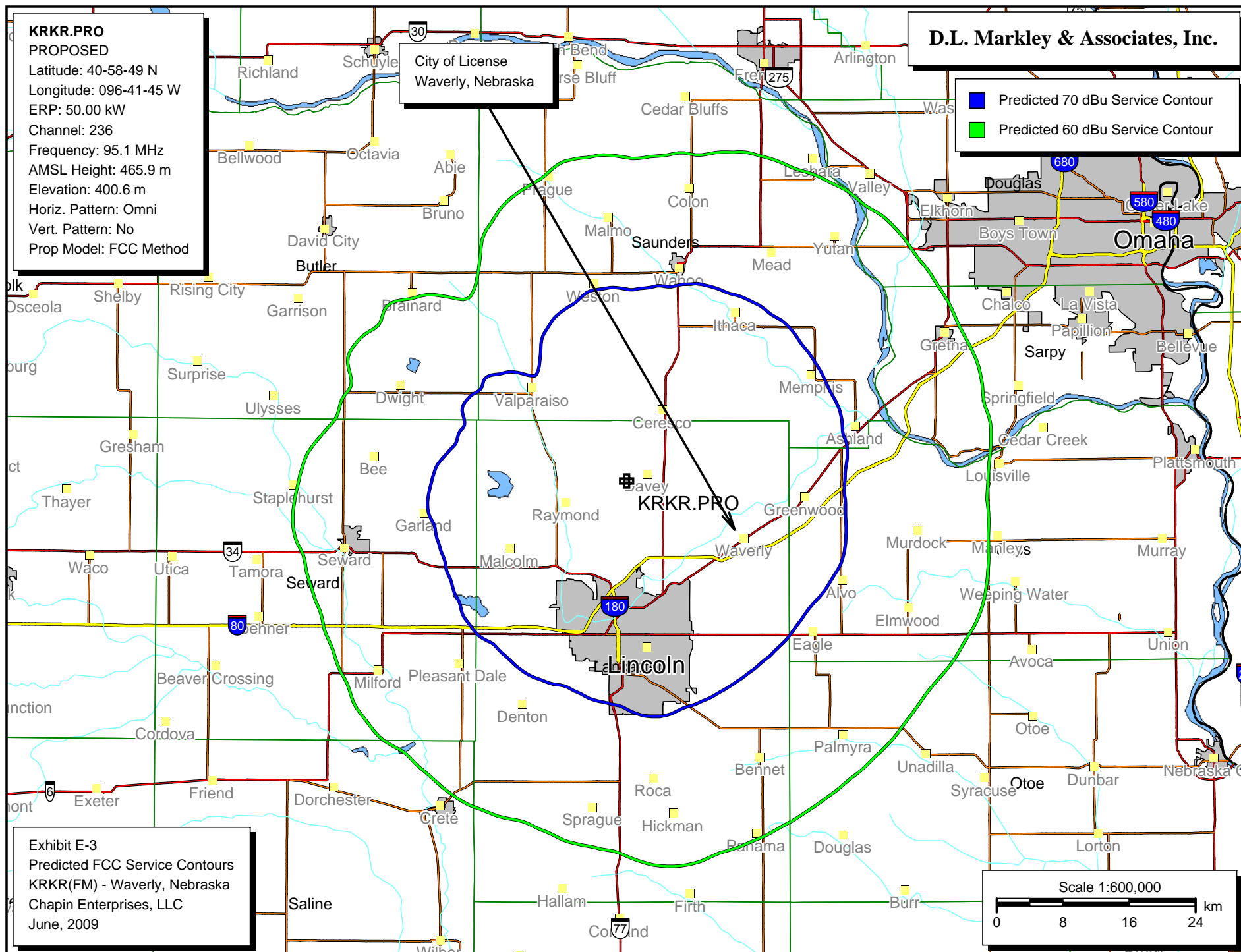


KRKR.PRO
PROPOSED
Latitude: 40-58-49 N
Longitude: 096-41-45 W
ERP: 50.00 kW
Channel: 236
Frequency: 95.1 MHz
AMSL Height: 465.9 m
Elevation: 400.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Method

City of License
Waverly, Nebraska

D.L. Markley & Associates, Inc.

 Predicted 70 dBu Service Contour
 Predicted 60 dBu Service Contour



D.L. Markley & Associates, Inc.
Consulting Engineers
Exhibit E-4
Spacing Study for Proposed KRKR(FM) Facilities

REFERENCE	CLASS = C2	DISPLAY DATES
40 58 48.0 N.	Current Spacings	DATA 06-11-09
96 41 46.0 W.		SEARCH 06-11-09
----- Channel 236 - 95.1 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KRKR.PRO	PRO 236C2	Waverly	NE 0.0	0.00	189.5	-189.50
KRKR	LIC 236C2	Lincoln	NE 37.4	0.03	189.5	-189.47
KRKR.A	APP-N 236A	Lincoln	NE 181.9	22.25	165.5	-143.25
KRKR	RSV 236A	Lincoln	NE 186.7	23.63	165.5	-141.87
KRKR.C	CP -Z 235A	Valley	NE 41.8	48.13	105.5	-57.37
KCSI.A	APP 237C2	Red Oak	IA 81.7	97.00	129.5	-32.50
KCSI	RSV 237C2	Red Oak	IA 81.7	97.00	129.5	-32.50
KCSI.C	CP 237C3	Treynor	IA 70.3	89.31	116.5	-27.19
KCSI.ALL	PA 237C2	Villisca	IA 85.3	119.43	129.5	-10.07
KCSI.PRO	PRO 237C2	Villisca	IA 87.2	125.86	129.5	-3.64
KCSI	LIC 237C3	Red Oak	IA 87.2	125.86	116.5	9.36
KCKS.C	CP -N 235C1	Concordia	KS 206.9	191.12	157.5	33.62
KCKS	LIC-N 235C1	Concordia	KS 206.9	191.47	157.5	33.97
KKCD	LIC-N 290C2	Omaha	NE 68.2	67.06	19.5	47.56
KNEN	LIC 234C1	Norfolk	NE 324.5	129.55	78.5	51.05
KNDY-FM	LIC 238C3	Marysville	KS 181.7	113.31	55.5	57.81
KROA	LIC 239C1	Grand Island	NE 261.8	142.43	78.5	63.93
KWOA-FM	LIC 236C1	Worthington	MN 15.6	306.14	223.5	82.64
KHCA	LIC 237A	Wamego	KS 171.4	198.74	105.5	93.24
KGLI	LIC 238C1	Sioux City	IA 10.7	173.55	78.5	95.05
KGGO	LIC 235C0	Des Moines	IA 73.9	280.78	175.5	105.28
KLIQ	LIC-N 233C1	Hastings	NE 257.6	185.68	78.5	107.18
KCMO-FM	LIC 235C0	Kansas City	MO 137.2	282.94	175.5	107.44
KCMO-FM.C	CP 235C0	Shawnee	KS 137.2	282.94	175.5	107.44
KSWI	LIC-Z 239C3	Atlantic	IA 71.4	164.21	55.5	108.71
KSUX	LIC-N 289C2	Winnebago	NE 5.4	152.03	19.5	132.53
KBBN-FM	LIC 237C2	Broken Bow	NE 280.9	266.04	129.5	136.54
KICT-FM	LIC 236C1	Wichita	KS 191.8	360.38	223.5	136.88
WIBW-FM	LIC 233C0	Topeka	KS 165.7	226.02	88.5	137.52
WIBW-FM.C	CP 233C0	Topeka	KS 162.8	226.91	88.5	138.41
KQKY	LIC 290C	Kearney	NE 257.6	185.68	34.5	151.18
KKAN-FM	LIC 237A	Phillipsburg	KS 240.2	259.78	105.5	154.28
KAAN-FM	LIC 238C2	Bethany	MO 109.7	229.44	57.5	171.94
KCHZ	LIC-N 239C1	Ottawa	KS 146.5	260.73	78.5	182.23
KJLT-FM	LIC 235C1	North Platte	NE 271.7	352.06	157.5	194.56
KLZR	LIC 290C1	Lawrence	KS 153.4	240.34	26.5	213.84
KVOB	LIC 238C3	Lindsborg	KS 198.6	270.62	55.5	215.12

KRKR.PRO
PROPOSED
Latitude: 40-58-49 N
Longitude: 096-41-45 W
ERP: 50.00 kW
Channel: 236
Frequency: 95.1 MHz
AMSL Height: 465.9 m
Elevation: 400.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Method

KCSI.PRO
BLH19970625KB
Latitude: 41-01-35 N
Longitude: 095-12-05 W
ERP: 50.00 kW
Channel: 237
Frequency: 95.3 MHz
AMSL Height: 463.0 m
Elevation: 352.639 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Method

Exhibit E-5
Contour Allocation Study
KRKR(FM) - Waverly, Nebraska
Chapin Enterprises, LLC
June, 2009

D.L. Markley & Associates, Inc.

60 dBu F(50,50) Contour
54 dBu F(50,10) Contour

