

Technical Certifications Exhibit

This minor modification of licensed facility complies with all engineering standards and assignment requirements specified in the applicable FCC rules and regulations. This application is being filed concurrently with an application for co-owned K215DM to move to channel 220, specifying a reduction in the ERP in order to eliminate any prohibited overlap with K215DM operating on channel 220 (reference page 5 of this exhibit).

In addition to the change in the ERP, this application proposes a minor correction of the site elevation, antenna COR AMSL height and HAAT as is indicated below:

	Licensed	Minor Mod of Licensed Facility
Channel / Class	221D	221D
ASRN	1037725	1037725
Geographical coordinates	39 11 25.7 95 39 37.7	39 11 25.7 95 39 37.7
Site elevation	345.0 m	344.7 m
Tower AGL	125.0 m	125.0 m
Antenna COR AGL	113.0 m	113.0 m
Antenna COR AMSL	458.0 m	457.7 m
HAAT	136.1 m	147.3 m
ERP	0.075 kW (H&V, non-DA)	0.003 kW (H&V, non-DA)

GLOBE terrain data

Tabulation of HAAT / ERP / distance to 60 dBu contour

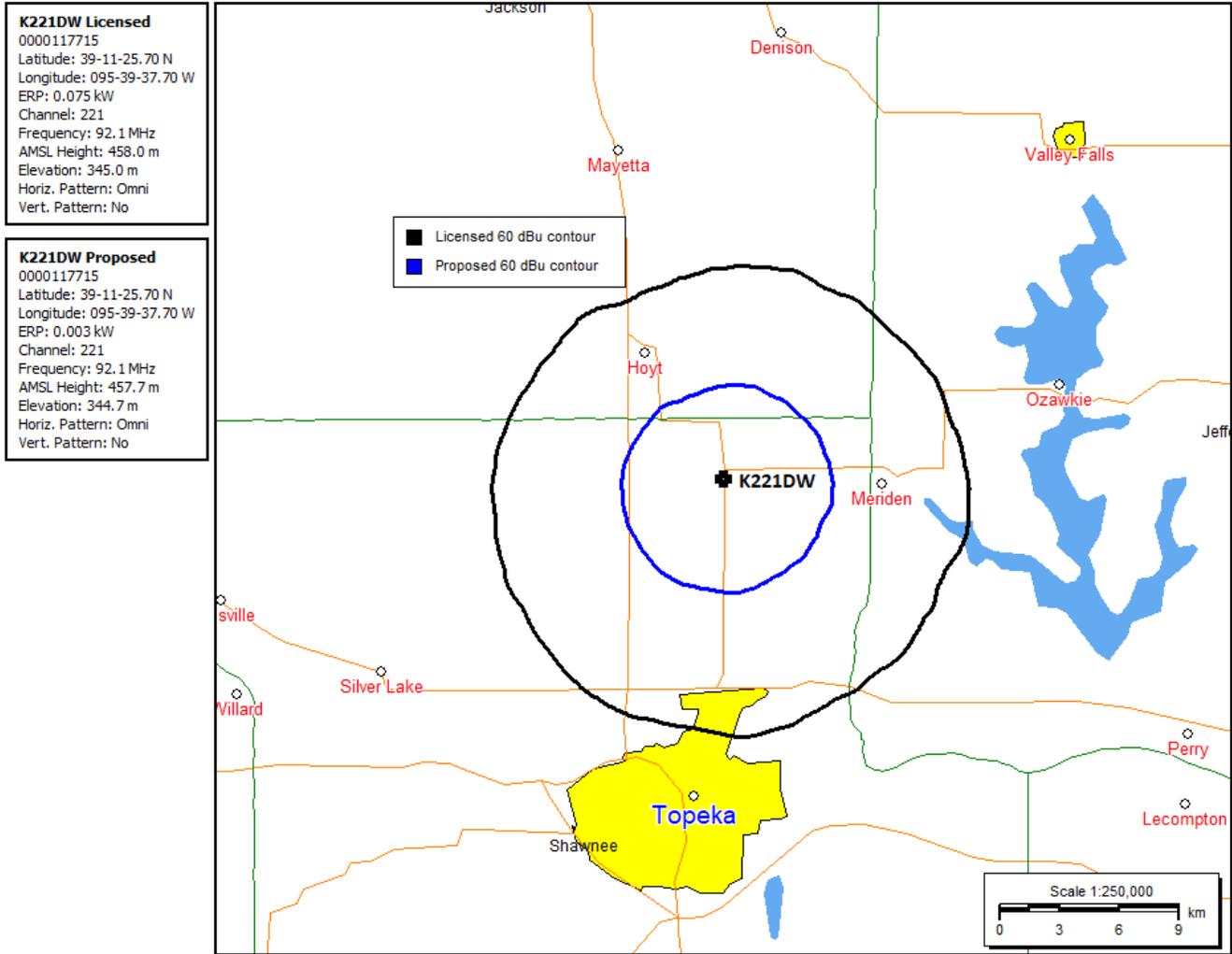
CH 221D 39 11 25.7 / 95 39 37.7 0.003 kW ERP (H&V, non-DA) 457.7 m COR AMSL 147.3 m HAAT

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	335.7	122.0	0.0030	-25.23	1.000	4.70
010	329.5	128.2	0.0030	-25.23	1.000	4.81
020	325.1	132.6	0.0030	-25.23	1.000	4.89
030	327.8	129.9	0.0030	-25.23	1.000	4.84
040	321.6	136.1	0.0030	-25.23	1.000	4.95
050	321.3	136.4	0.0030	-25.23	1.000	4.96
060	313.8	143.9	0.0030	-25.23	1.000	5.10
070	310.0	147.7	0.0030	-25.23	1.000	5.17
080	304.2	153.5	0.0030	-25.23	1.000	5.27
090	298.2	159.5	0.0030	-25.23	1.000	5.37
100	293.2	164.5	0.0030	-25.23	1.000	5.45
110	300.7	157.0	0.0030	-25.23	1.000	5.33
120	298.9	158.8	0.0030	-25.23	1.000	5.36
130	294.5	163.2	0.0030	-25.23	1.000	5.43
140	295.1	162.6	0.0030	-25.23	1.000	5.42
150	293.9	163.8	0.0030	-25.23	1.000	5.44
160	291.2	166.5	0.0030	-25.23	1.000	5.48
170	282.8	174.9	0.0030	-25.23	1.000	5.61
180	283.8	173.9	0.0030	-25.23	1.000	5.60
190	289.9	167.8	0.0030	-25.23	1.000	5.51
200	285.8	171.9	0.0030	-25.23	1.000	5.57
210	286.1	171.6	0.0030	-25.23	1.000	5.56
220	291.4	166.3	0.0030	-25.23	1.000	5.48
230	297.3	160.4	0.0030	-25.23	1.000	5.39
240	301.6	156.1	0.0030	-25.23	1.000	5.31
250	305.6	152.1	0.0030	-25.23	1.000	5.24
260	310.9	146.8	0.0030	-25.23	1.000	5.15
270	311.5	146.2	0.0030	-25.23	1.000	5.14
280	316.6	141.1	0.0030	-25.23	1.000	5.04
290	323.6	134.1	0.0030	-25.23	1.000	4.92
300	328.9	128.8	0.0030	-25.23	1.000	4.82
310	331.2	126.5	0.0030	-25.23	1.000	4.78
320	330.6	127.1	0.0030	-25.23	1.000	4.79
330	344.3	113.4	0.0030	-25.23	1.000	4.54
340	344.7	113.0	0.0030	-25.23	1.000	4.53
350	341.2	116.5	0.0030	-25.23	1.000	4.60

GLOBE Terrain Data
 (yellow highlighted values establish average HAAT)

60 dBu contour coverage map

The proposed 60 dBu contour will have overlap with the licensed 60 dBu contour.



GLOBE terrain data

Interference Study

CH 221DW 39 11 25.7 / 95 39 37.7 0.003 kW ERP (H&V, non-DA) 457.7 m COR AMSL 147.3 m HAAT

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
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Reference station:

221D	K221DW	LIC	0.0	0.00	39 11 25.70	0.075				
Tecumseh		KS	0.0	0000117715	95 39 37.70	136	458	Educational Media Foundation		

Co-channel, 1st, 2nd, & 3rd adjacent channel relationships:

218C1	KANU	LIC	127.8	42.80	38 57 14.00	100.000	8.2	63.8	29.1	-21.1
Lawrence		KS	308.1	BLED19920721KA	95 16 11.90	213	491	University Of Kansas		
220C3	KWJC	LIC	93.5	110.05	39 07 23.00	7.000	36.3	24.1	68.3	76.5
Liberty		MO	274.3	BMLED20160114ABU	94 23 24.80	190	440	The Curators Of The Univ		
220C3	KSRD	LIC	42.4	78.42	39 42 35.00	10.000	57.5	38.6	16.0	32.7
St. Joseph		MO	222.8	BLED20040928AHD	95 02 33.90	150	435	Educational Media Foundation		
220A	KJLG	LIC	209.6	99.59	38 24 35.00	3.000	33.6	22.4	60.5	68.9
Emporia		KS	29.2	BLED19870127KA	96 13 31.00	81	437	Great Plains Christian Rad		
220A	KSDB-FM	LIC	268.0	75.36	39 09 48.90	1.400	36.2	24.1	34.0	43.8
Manhattan		KS	87.4	BLED19870504KA	96 31 55.00	88	447	Kansas State University		
220D	K215DM	APP	204.3	19.52	39 01 49.00	0.093	13.8	9.9	0.1	1.6
Topeka		KS	24.2	BLFT20180607AAU	95 45 12.90	75	378.9	Educational Media Foundation		

As is noted on page 1 of this exhibit, the application for K221DW is being filed concurrently with the application for K215DM to move to channel 220. K221DW's application specifying a reduction in ERP will eliminate any prohibited overlap with K215DM operating on channel 220 (see page 5 of this exhibit).

221A	KMZA	LIC	336.0	77.37	39 49 34.00	4.000	83.2	27.7	-10.4	35.2
Seneca		KS	155.8	BLH19990405KA	96 01 46.00	123	500	Knza, Inc.		
221C3	KREP	LIC	291.0	179.18	39 45 00.00	14.500	101.3	34.3	72.9	128.6
Belleville		KS	109.7	BLH19970716KA	97 36 49.10	84	541	First Republic Broadcasting		
222C3	KCCV-FM	LIC	111.6	76.02	38 56 10.00	8.300	62.4	42.2	8.2	26.1
Olathe		KS	292.1	BLH19951113KA	94 50 41.90	172	465	Bott Broadcasting Company		
223C3	KCVT	LIC	257.7	23.59	39 08 42.00	6.700	3.0	30.9	15.4	-7.5
Silver Lake		KS	77.5	BLH19960722KF	95 55 38.00	118	417	Richard P. Bott, II		
224D	K224FF	LIC	102.7	86.15	39 00 58.00	0.099	0.7	11.8	80.0	74.1
Lenexa		KS	283.3	BLFT20170724ABE	94 41 23.90		392	Radio Vida Kansas, Inc.		
224D	K224EX	LIC	267.6	82.36	39 09 21.00	0.099	0.7	11.3	76.5	70.5
Manhattan		KS	87.0	BLFT20160315ABQ	96 36 45.00		440	Eagle Communications, Inc.		
224C2	KSJQ	LIC	33.6	105.13	39 58 33.90	50.000	6.3	54.5	93.9	50.5
Savannah		MO	214.1	BLH19911003KA	94 58 37.90	150	445	Eagle Communications, Inc.		

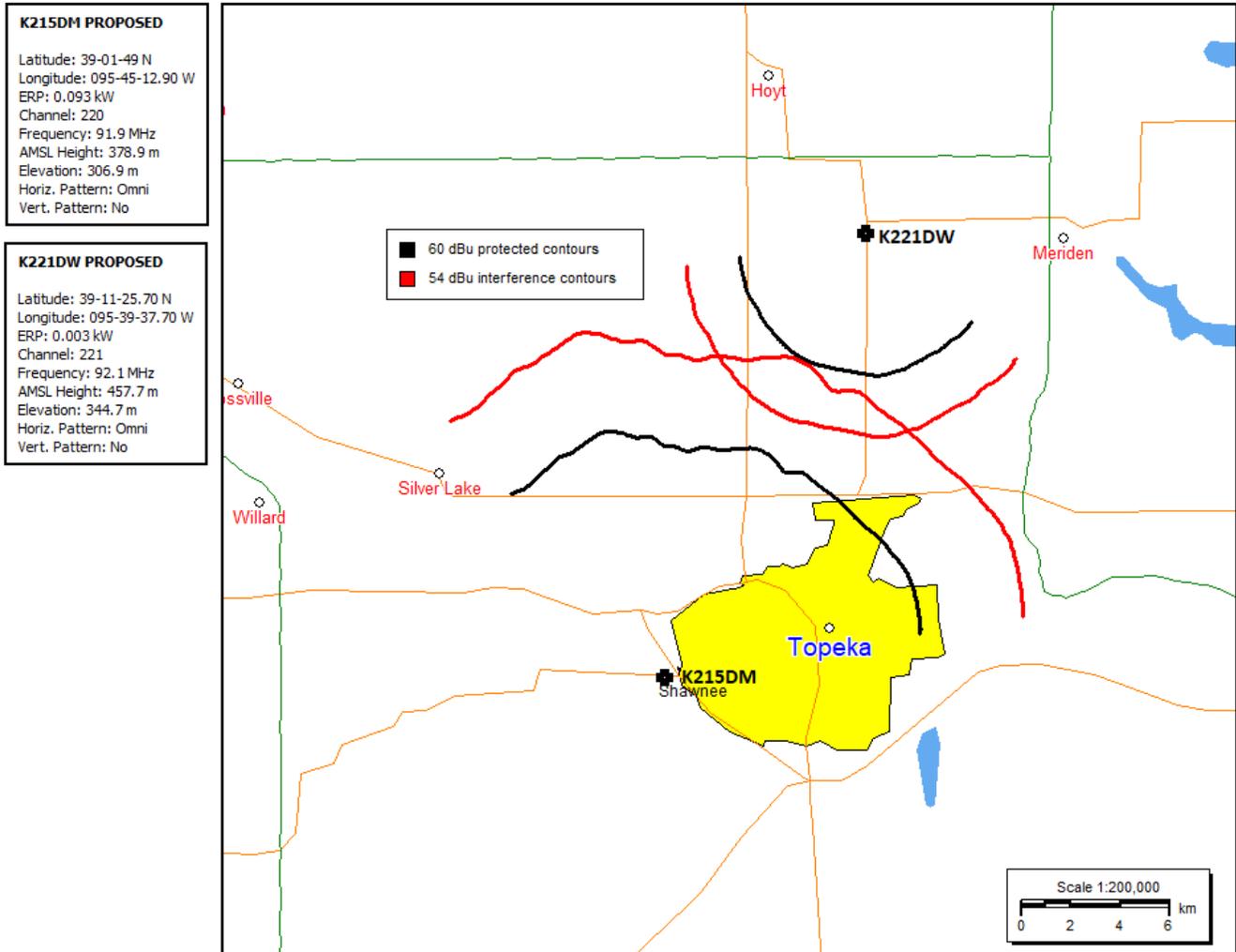
I.F. relationships:

N/A

 GLOBE terrain data

Interference Study

The below map demonstrates that the reduction of K221DW's ERP as specified in this application will not have any prohibited overlap with the concurrently filed application of co-owned K215DM specifying a move to channel 220.



GLOBE terrain data

Interference Study

K221DW is located within the protected contour of the following facilities:

KANU(LIC), Lawrence, KS, CH 218C1

KANU signal strength at the K221DW site	70.1 dBu
K221DW interference contour	110.1 dBu
Distance to K221DW interference contour	37.9 meters

KCVT(LIC), Silver Lake, KS, CH 223C3

KCVT signal strength at the K221DW site	65.2 dBu
K221DW interference contour	105.2 dBu
Distance to K221DW interference contour	66.6 meters

K221DW’s antenna COR AGL height is 113.0 meters. The 110.1 dBu interference contour distance to KANU of 37.9 meters will not reach the ground with a clearance of 75.1 meters. The 105.2 dBu interference contour distance to KCVT of 66.6 meters will not reach the ground with a clearance of 46.4 meters. Furthermore, there are no occupied structures within the 110.1 dBu or 105.2 dBu interference contours as is demonstrated on the below map. Therefore, based on the showing of no population within the area of predicted interference a waiver of Section 74.1204(d) is respectfully requested.



Environmental Impact & RFR Compliance Statement

K221DW is located at an established communications site that is in compliance with all environmental impact requirements.

K221DW will operate with 0.003 kW ERP (H&V) at an antenna COR AGL height of 113.0 meters. For a worse case estimation at 2 meters above ground level the RFR is no more than .01% of the general population/uncontrolled MPE limit. There are no other broadcast facilities at the site.

Facilities that contribute no more than 5% of the general population/uncontrolled MPE limit at the site comply with the requirements of OET Bulletin No. 65 with no further study, therefore K221DW is in compliance with all environmental and RFR requirements.

The site has restricted access to only authorized personnel. The applicant certifies that in cooperation with other users of the site all authorized personnel will be protected from RFR exposure in excess of FCC guidelines while accessing any controlled exposure area, including the tower, by either reducing power or ceasing operations.