Engineering Statement
in Support of an
Application for a Construction Permit
KWOX, Channel 266C0, Woodward, Oklahoma

General

The instant application is being filed for KWOX as a result of the Report and Order in MB Docket 05-136. As a result of KWOX downgrading from a class C to a class C0 facility, KVRO will be able to remain at its current licensed site and merely change frequency from channel 251A to channel 266A. KWOX will voluntarily downgrade to a class C0 facility and reduce its ERP from 100 kW to 84 kW to as to avoid overlap with KVRO at its current site on channel 266A. KWOX proposes no new construction in the instant application; it merely proposes a downgrade and a power reduction.

Exhibits Explained

Exhibit E, Figure 1 is a channel spacing study demonstrating that the proposed class C0 (at its current licensed site) is short spaced only to the proposed KVRO on channel 266A. As a result, KWOX will be accepting section 73.215 spacing.

Exhibit E, Figures 2 and 3 show that the proposed facility will continue to cover the city of license (Woodward, OK) easily after the proposed downgrade. Exhibit E, Figure 4 is a vertical sketch showing all pertinent elevations on the tower.

Exhibit E, Figures 5 and 6 are maps that show that the proposed KWOX class C0 operating at 84 kW will not create any prohibitive contour overlap. Exhibit E, Figure 6 is a zoomed view of the two contours (the KWOX interfering and the KVRO protected) that are closest to overlapping. This map clearly shows that no overlap will exist.

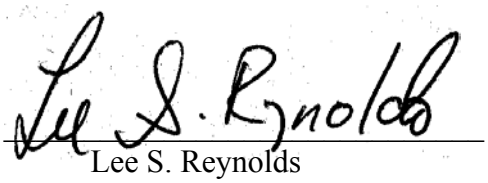
Human Exposure to Radiofrequency Radiation (No Exhibits)

Using the FCC Worksheet #1A, the proposed facility will produce approximately a power density of 45.8 $\mu W/cm^2$ at a point 2 meters above ground directly under the tower (worst case scenario). This is well below the FCC's uncontrolled 200 $\mu W/cm^2$ for uncontrolled areas and easily below the controlled limit as well (1000 $\mu W/cm^2$).

Conclusion

The proposed KWOX facility (84 kW ERP at 366 meters HAAT) at its current antenna location as a class C0 will be fully compliant with FCC rules and regulations.

For the applicant:



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Channel Spacing Study

REFERENCE — DISPLAY DATES
36 16 06 N — CLASS = C0 — DATA 05-23-07
99 26 56 W — Current Spacings — SEARCH 06-07-07
Channel 266 - 101.1 MHz

Call	Channel		Location		Dist	Azi	FCC	Margin
KWOX	**LIC**	**266C**	**Woodward**	**OK**	**0.00**	**0.0**	**281.0**	**-281.00**
RDEL	**DEL**	**266C**	**Woodward**	**OK**	**0.00**	**0.0**	**281.0**	**-281.00**
RADD	**ADD**	**266C**	**Woodward**	**OK**	**24.51**	**308.2**	**281.0**	**-256.49**
	Of no concern:							
	Coordinates used by KWOX.							
RADD	**ADD**	**266A**	**Stillwater**	**OK**	**205.54**	**90.8**	**215.0**	**-9.46**
	Of note:							
	Allocation (and proposed application site) for KVRO, Stillwater, OK on channel 266A. KVRO, although it is to be a section 215 station as a result of the application filed contingently with the instant application, is protected as a maximum class A facility (6 kW at 100 meters HAAT). See Exhibit E, Figures 5 and 6.							
KLAW	LIC-N	267C1	Lawton	OK	207.81	156.4	196.0	11.81
AL9245	VAC	267C3	Mclean	TX	176.47	222.1	163.0	13.47
AL8438	VAC	264C2	Reydon	OK	105.23	201.6	89.0	16.23
KFDI-F	LIC	267C	Wichita	KS	240.45	44.5	220.0	20.45
AU7057	VAC	269C2	Sayre	OK	109.79	189.1	89.0	20.79
AP9959	APP	269C2	Sayre	OK	109.79	189.1	89.0	20.79
AP3286	APP	269C2	Sayre	OK	115.73	182.6	89.0	26.73
AL8610	VAC	268C3	Okeene	OK	113.75	90.7	87.0	26.75
KXGL	LIC-N	265C0	Amarillo	TX	241.19	244.6	207.0	34.19
KREJ	LIC	269C2	Medicine Lodge	KS	128.07	32.9	89.0	39.07
RDEL	DEL	265C2	Quanah	TX	223.32	181.2	176.0	47.32
KWFB	LIC	265C2	Quanah	TX	223.32	181.2	176.0	47.32

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Terrain/Contour Study

Reference Coordinates: **ERP: 84 kW**

North Latitude: 36-16-6

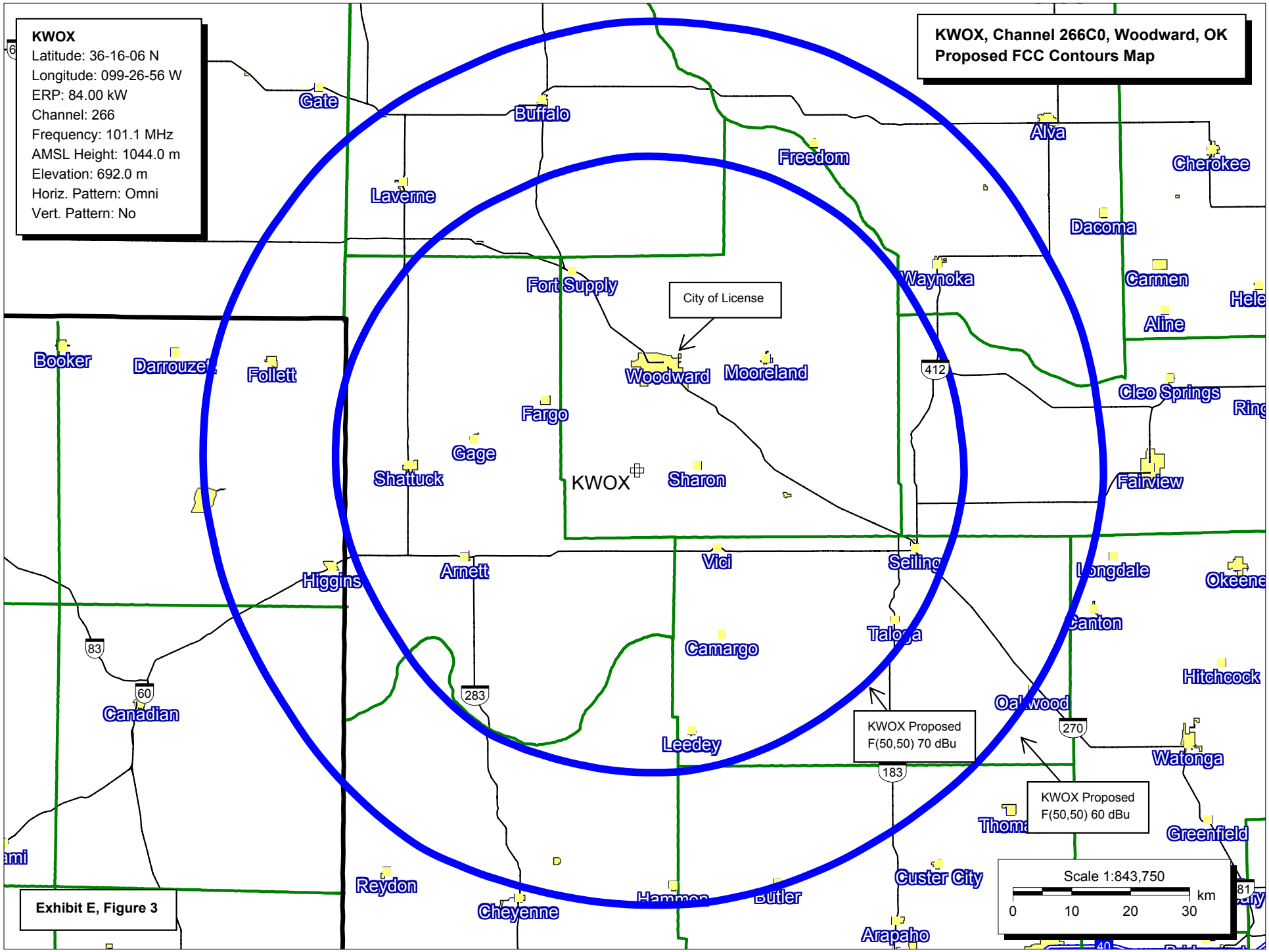
West Longitude: 99-26-56

Azimuth °T.	Ave. Elev. 3 to 16 km (Meters AMSL)	FM - 2-6 Tables Effective Antenna Height (Meters AAT)	ERP (dBk)	F(50-50) Distance to 70 dBu Contour (km)	F(50-50) Distance to 60 dBu Contour (km)
0	667.2	376.8	19.243	53.3	76.3
5	664.3	379.7	19.243	53.5	76.5
10	661.0	383.0	19.243	53.7	76.7
15	654.0	390.0	19.243	54.0	77.2
20	648.7	395.3	19.243	54.3	77.6
25	642.5	401.5	19.243	54.7	78.1
30	639.7	404.3	19.243	54.8	78.3
35	635.2	408.8	19.243	55.1	78.6
40	631.3	412.7	19.243	55.3	78.9
45	631.2	412.8	19.243	55.3	78.9
50	631.6	412.4	19.243	55.3	78.9
55	633.2	410.8	19.243	55.2	78.8
60	635.1	408.9	19.243	55.1	78.6
65	633.4	410.6	19.243	55.2	78.7
70	629.3	414.7	19.243	55.4	79.1
75	628.7	415.3	19.243	55.4	79.1
80	629.7	414.3	19.243	55.4	79.0
85	629.1	414.9	19.243	55.4	79.1
90	627.1	416.9	19.243	55.5	79.2
95	630.5	413.5	19.243	55.3	79.0
100	636.6	407.4	19.243	55.0	78.5
105	644.5	399.5	19.243	54.6	77.9
110	649.9	394.1	19.243	54.3	77.5
115	653.1	390.9	19.243	54.1	77.3
120	658.1	385.9	19.243	53.8	76.9
125	662.9	381.1	19.243	53.6	76.6
130	667.8	376.2	19.243	53.3	76.2
135	673.5	370.5	19.243	53.0	75.8
140	679.7	364.3	19.243	52.6	75.3
145	683.8	360.2	19.243	52.3	75.0
150	686.8	357.2	19.243	52.2	74.8
155	688.8	355.2	19.243	52.0	74.7

Continued on next page

ERP: 84 kW

Azimuth °T.	Ave. Elev. 3 to 16 km (Meters AMSL)	FM - 2-6 Tables Effective Antenna Height (Meters AAT)	ERP (dBk)	F(50-50) Distance to 70 dBu Contour (km)	F(50-50) Distance to 60 dBu Contour (km)
160	690.3	353.7	19.243	52.0	74.6
165	691.5	352.5	19.243	51.9	74.5
170	693.3	350.7	19.243	51.8	74.4
175	697.1	346.9	19.243	51.5	74.1
180	700.8	343.2	19.243	51.3	73.8
185	703.5	340.5	19.243	51.1	73.6
190	706.1	337.9	19.243	51.0	73.4
195	706.6	337.4	19.243	50.9	73.4
200	705.4	338.6	19.243	51.0	73.5
205	703.3	340.7	19.243	51.1	73.6
210	700.5	343.5	19.243	51.3	73.8
215	705.5	338.5	19.243	51.0	73.5
220	710.9	333.1	19.243	50.6	73.1
225	715.7	328.3	19.243	50.3	72.7
230	720.4	323.6	19.243	50.0	72.4
235	725.5	318.5	19.243	49.7	72.0
240	726.1	317.9	19.243	49.7	72.0
245	724.6	319.4	19.243	49.8	72.1
250	720.0	324.0	19.243	50.1	72.4
255	716.1	327.9	19.243	50.3	72.7
260	713.1	330.9	19.243	50.5	72.9
265	707.1	336.9	19.243	50.9	73.3
270	702.9	341.1	19.243	51.2	73.7
275	699.5	344.5	19.243	51.4	73.9
280	695.4	348.6	19.243	51.6	74.2
285	693.5	350.5	19.243	51.8	74.3
290	691.5	352.5	19.243	51.9	74.5
295	691.6	352.4	19.243	51.9	74.5
300	691.4	352.6	19.243	51.9	74.5
305	692.1	351.9	19.243	51.8	74.4
310	690.5	353.5	19.243	51.9	74.6
315	688.2	355.8	19.243	52.1	74.7
320	688.5	355.5	19.243	52.1	74.7
325	689.8	354.2	19.243	52.0	74.6
330	690.8	353.2	19.243	51.9	74.5
335	692.6	351.4	19.243	51.8	74.4
340	689.4	354.6	19.243	52.0	74.6
345	684.3	359.7	19.243	52.3	75.0
350	679.6	364.4	19.243	52.6	75.4
355	672.5	371.5	19.243	53.0	75.9


KWOX
Latitude: 36-16-06 N
Longitude: 099-26-56 W
ERP: 84.00 kW
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 1044.0 m
Elevation: 692.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
KWOX, Channel 266C0, Woodward, OK
Proposed FCC Contours Map
City of License
KWOX
KWOX Proposed
F(50,50) 70 dBu
KWOX Proposed
F(50,50) 60 dBu
Scale 1:843,750
km
0
10
20
30
Exhibit E, Figure 3
Gate
Buffalo
Freedom
Alva
Cherokee
Laverne
Dacoma
Fort Supply
Waynoka
Carmen
Aline
Booker
Follett
Woodward
Mooreland
Cleo Springs
Fargo
Gage
Shattuck
Sharon
Fairview
Vici
Seiling
Arnett
Higgins
Longdale
Okeene
Canton
Camargo
Hitchcock
Canadian
Leedey
Watonga
Greenfield
Reydon
Cheyenne
Custer City
Arapaho
Butler
412
83
60
283
183
270
81

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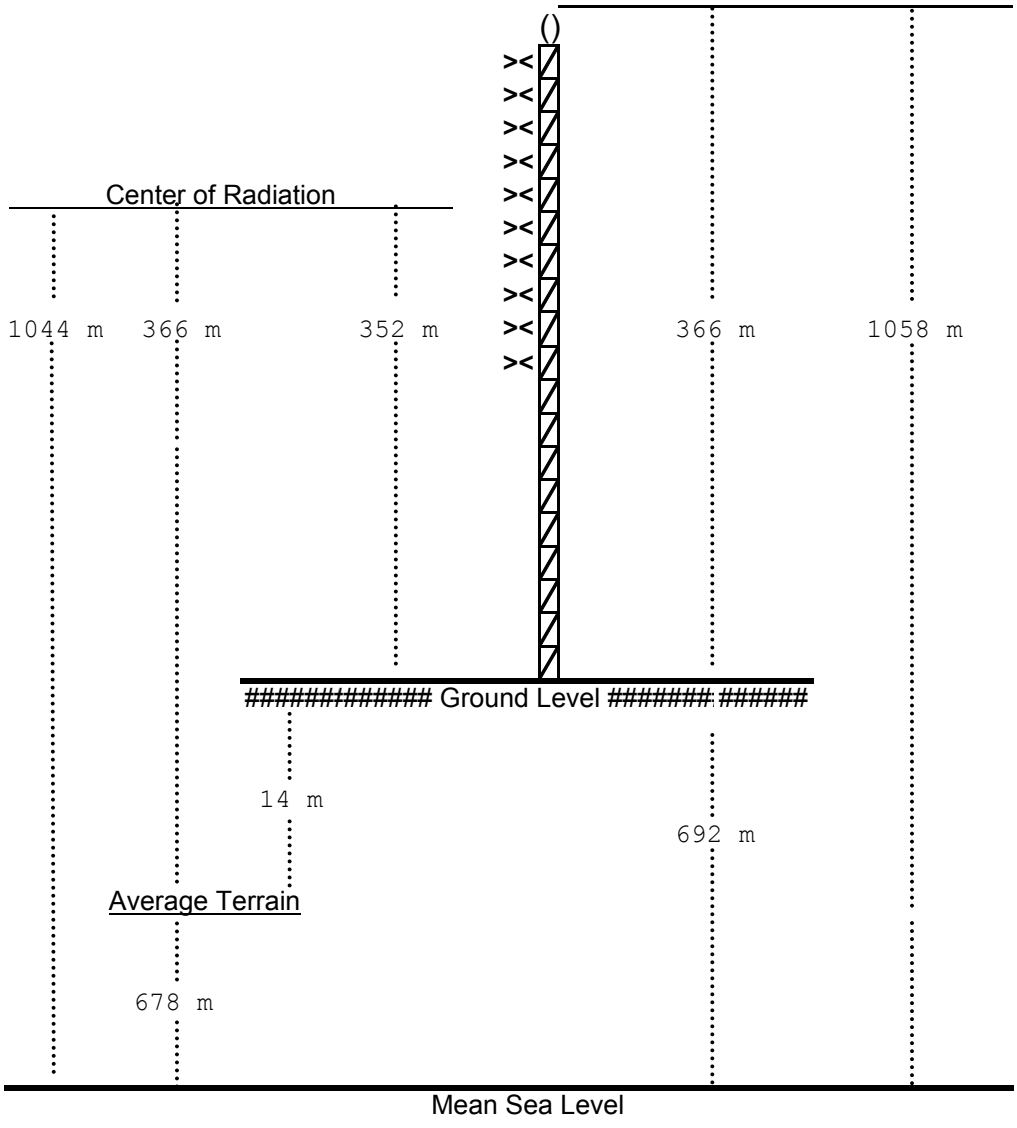
Vertical Sketch

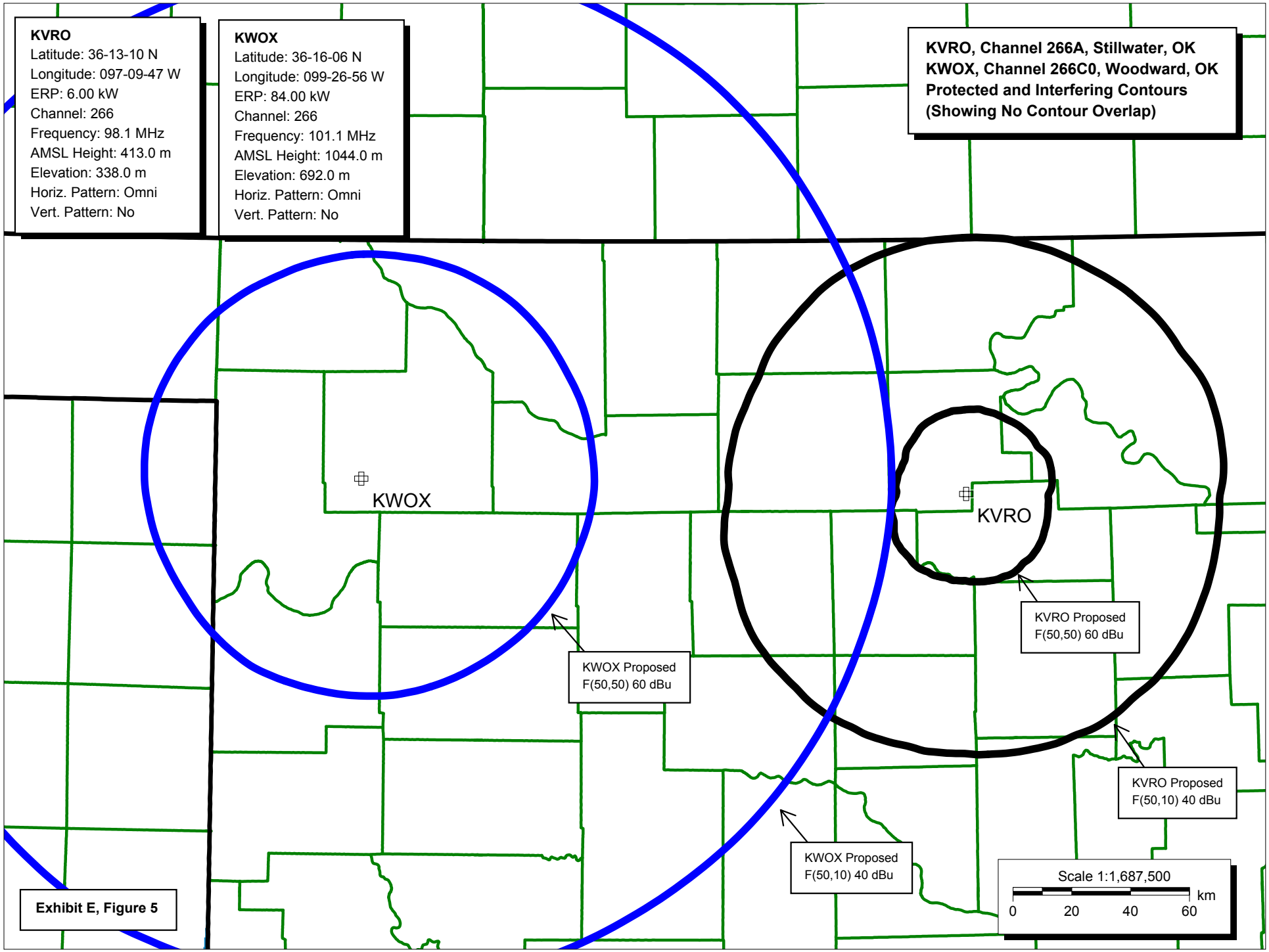


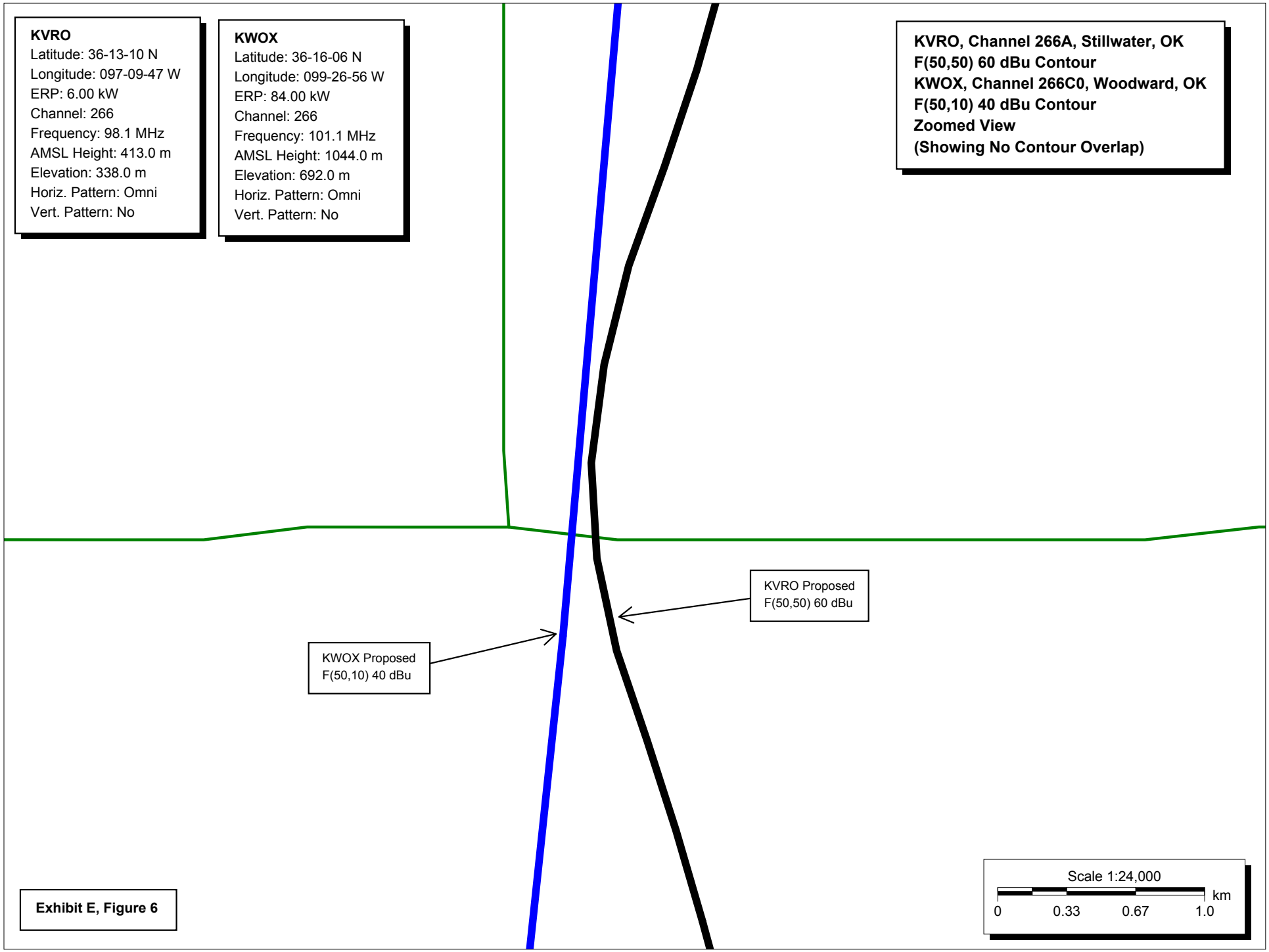
Proposed Location: 36° 16' 6" N. Lat. 99° 26' 56" W. Long. [NAD27]

NOT DRAWN TO SCALE

Proposed Antenna: 10 elements

Exhibit E, Figure 4


KVRO
Latitude: 36-13-10 N
Longitude: 097-09-47 W
ERP: 6.00 kW
Channel: 266
Frequency: 98.1 MHz
AMSL Height: 413.0 m
Elevation: 338.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
KWOX
Latitude: 36-16-06 N
Longitude: 099-26-56 W
ERP: 84.00 kW
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 1044.0 m
Elevation: 692.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
KVRO, Channel 266A, Stillwater, OK
KWOX, Channel 266C0, Woodward, OK
Protected and Interfering Contours
(Showing No Contour Overlap)
KWOX
KVRO
KVRO Proposed
F(50,50) 60 dBu
KWOX Proposed
F(50,50) 60 dBu
KVRO Proposed
F(50,10) 40 dBu
KWOX Proposed
F(50,10) 40 dBu
Scale 1:1,687,500
km
0
20
40
60
Exhibit E, Figure 5


KVRO
Latitude: 36-13-10 N
Longitude: 097-09-47 W
ERP: 6.00 kW
Channel: 266
Frequency: 98.1 MHz
AMSL Height: 413.0 m
Elevation: 338.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
KWOX
Latitude: 36-16-06 N
Longitude: 099-26-56 W
ERP: 84.00 kW
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 1044.0 m
Elevation: 692.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
KVRO, Channel 266A, Stillwater, OK
F(50,50) 60 dBu Contour
KWOX, Channel 266C0, Woodward, OK
F(50,10) 40 dBu Contour
Zoomed View
(Showing No Contour Overlap)
KVRO Proposed
F(50,50) 60 dBu
KWOX Proposed
F(50,10) 40 dBu
Scale 1:24,000
km
0
0.33
0.67
1.0
Exhibit E, Figure 6