

TECHNICAL NARRATIVE

**K268CT FM Translator Station
Amendment
Modify Construction Permit LMS No. 0000107535
BLFT-20160302AAF
CH268D - 101.5 MHz - 0.099 kW
St. Louis, MO
to
K268CT Proposed CH268D – 101.5 MHz – 0.099 kW
St. Louis, MO**

July 11, 2022

This Technical Narrative and attached exhibits were prepared on behalf of Kaspar Broadcasting of Missouri (“Kaspar”), licensee of FM translator K268CT, Facility ID No. 155886, Channel 268D, St. Peters, MO. Kaspar herein amends K268CT construction permit modification application No. 0000107535 to which species operation from a different transmit location. The proposed site is an existing pole on a building rooftop which is 111.6 meters (366.1 ft.) in overall height, is located at 38° 38' 10.9" North Latitude, 90° 20' 37.7 West Longitude (NAD 83) and is registered with an Antenna Registration Structure system “ASR” number 1293670.

The proposed K268CT facility will be used as a fill-in translator for WXOS-HD3, Channel 266C1, Facility No. 56512, licensed to East St. Louis, IL. Kaspar has received written consent to retransmit WXOS from St. Louis FCC License Sub, LLC, licensee of WXOS. An exhibit demonstrates compliance with FCC Section 74.1201(g) Fill-In Translator. The proposed K268CT FCC F(50,50) 60 dBu contours is contained within the WXOS FCC F(50,50) 60 dBu contour. Therefore, it is believed that this application is in compliance with Section 74.1201(g) of the Commission’s rules.

An exhibit demonstrates compliance with Section 74.1233(a) "Common Overlap". There is an area of common overlap between the current K268CT licensed facility and the proposed K268CT facility.

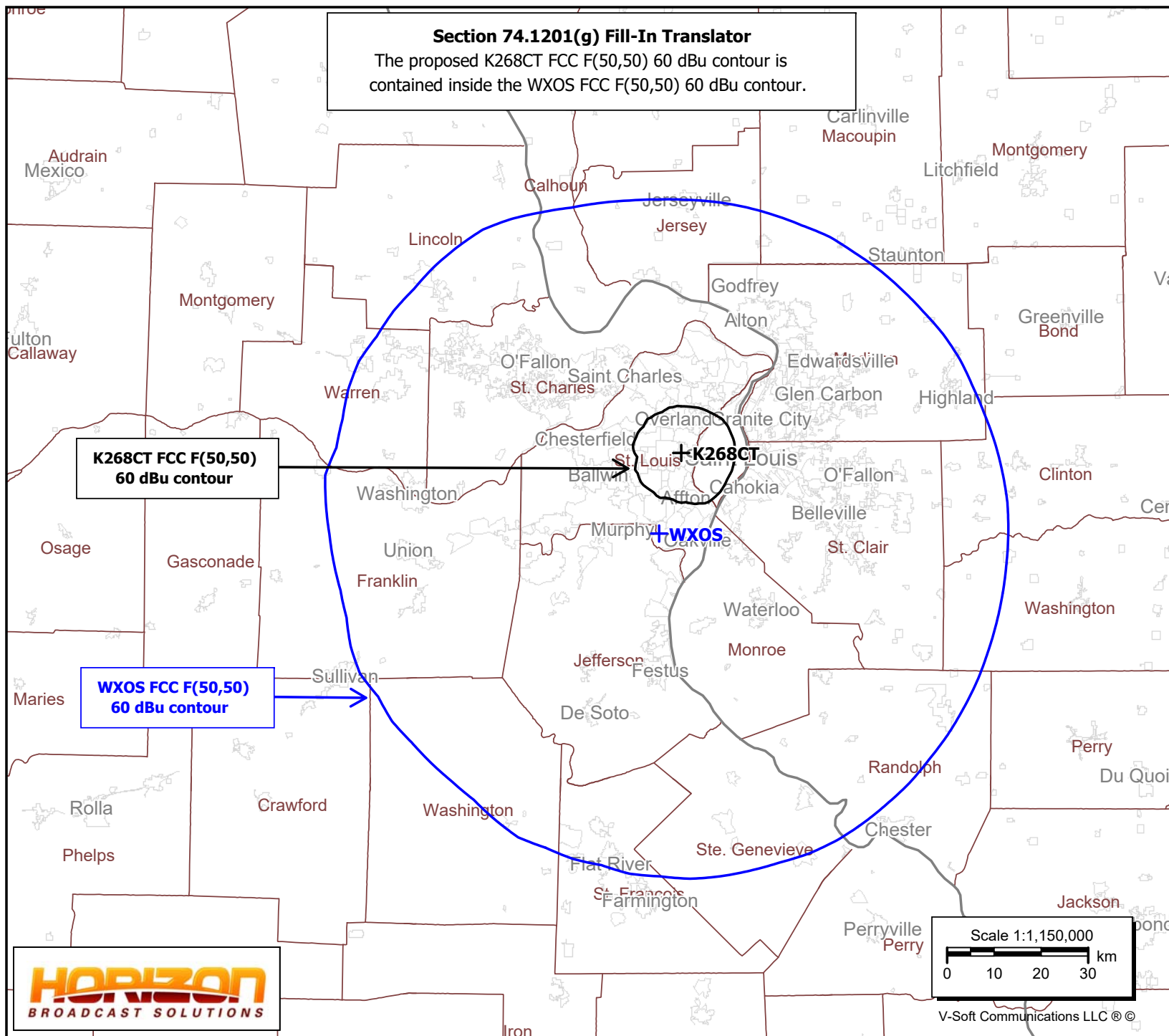
A channel study was included as an exhibit. It assumes a Class A 6 kW facility operating on channel 268 and is provided as a courtesy to help identify potential contour overlap issues. Section 74.1204 contour protection exhibits have been included for second adjacent full power FM station WXOS, Channel 266C1, East St. Louis, IL, second adjacent FM translator K270BW, Bellefontaine, MO and co-channel full power FM station WCIL-FM, Channel 268B, Carbondale, IL.

Studies have been undertaken to show the proposed K268CT facility is in compliance with the Commission's radio frequency emission limits and have been included as exhibits.

St. Louis, MO
Latitude: 38-38-10.90 N
Longitude: 090-20-37.70 W
ERP: 0.099 kW
HAAT: 107.16
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 269.9 m
Elevation: 160.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

East St. Louis, IL
BLH20080630ACL
Latitude: 38-28-56.20 N
Longitude: 090-23-53.40 W
ERP: 100.00 kW
HAAT: 300.4
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 466.0 m
Elevation: 175.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

The proposed K268CT FCC F(50,50) 60 dBu contour is contained inside the WXOS FCC F(50,50) 60 dBu contour.



K268CT at University Club Tower

REFERENCE		CLASS = A Int = A		DISPLAY DATES		
38 38 10.9 N.		Current Spacings to 3rd Adj.		DATA 07-11-22		
90 20 37.7 W.		Channel 268 - 101.5 MHz		SEARCH 07-11-22		
Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		
K268CT	LIC 268D	Saint Peters	MO 312.9	6.6	84.5	-77.9
38 40 37.2	90 23 59.4	VN	0.008 kW 0 M			
	Kaspar Broadcasting Co. Of		BLFT20160302AAF			
K268CT	CP -D 268D	St. Louis	MO 192.8	11.5	84.5	-73.0
38 32 07.0	90 22 23.0	DCN	0.099 kW 0 M			
	Kaspar Broadcasting Co. Of		0000107535			
K268CT	APP 268D	St. Louis	MO 304.2	0.0	84.5	-84.5
38 38 11.6	90 20 39.0	CN	0.099 kW 0 M			
	Kaspar Broadcasting Co. Of		0000194060			
WXOS	LIC 266C1	East St. Louis	IL 195.4	17.7	74.5	-56.8
38 28 56.2	90 23 53.4	CN	100.000 kW 300 M			
	St. Louis FCC License Sub,		BLH20080630ACL			
Note: See Section -74.1204 Contour Protection - WXOS & K270BW						
WCIL-FM	LIC-N 268B	Carbondale	IL 140.4	134.3	177.5	-43.2
37 42 04.2	89 22 18.3	NCN	28.500 kW 199 M			
	Mrr License LLC		BLH20031010ABX			
Note: See Section -74.1204 Contour Protection - WCIL-FM						
KPLA	LIC-N 268C1	Columbia	MO 284.7	172.9	199.5	-26.6
39 00 52.1	92 16 32.7	NCN	42.000 kW 324 M			
	Cumulus Licensing LLC		BLH19980306KB			
K270BW	LIC 270D	Bellefontaine	MO 167.0	7.1	25.5	-18.4
38 34 27.9	90 19 31.9	CN	0.250 kW 197 M			
	Educational Media Foundati		0000113305			
Note: See Section -74.1204 Contour Protection - WXOS & K270BW						
KWMU	LIC 214C1	St. Louis	MO 168.5	6.3	21.5	-15.2
38 34 50.2	90 19 45.4	CN	100.000 kW 289 M			
	The Curators Of The Univer		BLED20010706AAR			
KWUL	LIC-N 269A	Elsberry	MO 321.5	66.4	71.5	-5.1
39 06 09.1	90 49 23.4	NCN	3.100 kW 142 M			
	East Central Broadcasting,		BLH20080318ACV			
WGEL	ALO 269A	Greenville	IL 77.6	88.5	71.5	17.0
38 48 11.2	89 20 56.3		0.000 kW 100 M			
	Bond Broadcasting Inc.					
WGEL	LIC-D 269A	Greenville	IL 77.6	88.5	71.5	17.0
38 48 11.2	89 20 56.3	DCN	6.000 kW 90 M			
	Bond Broadcasting Inc.		BLH20090717ADL			
DKQXQ	VAC 269A	Cuba	MO 233.3	119.0	71.5	47.5
37 59 31.1	91 25 54.5		0.000 kW 100 M			
	From CDBS					
WBNQ	LIC-N 268B	Bloomington	IL 29.1	231.7	177.5	54.2
40 27 01.1	89 00 42.3	NCN	50.000 kW 142 M			
	Cumulus Licensing LLC		BLH19971103KB			
WBNQ	ALO 268B	Bloomington	IL 29.0	232.5	177.5	55.0
40 27 32.1	89 00 38.3		0.000 kW 150 M			

Cumulus Licensing LLC

Page # 2

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KTUI-FM	LIC 271A	Sullivan	MO	236.5	88.4	30.5	57.9
38 11 42.2	91 11 12.5	CN	6.000 kW		84 M		
Meramec Area Broadcasting			BLH20080321ABQ				
WTGT-LP	CP 265L1	Donnellson	IL	59.6	87.2	28.5	58.8
39 01 46.4	89 28 25.8	HN	0.100 kW		26 M		
Rose Of Sharon Broadcastin			BPL20190805AAF				
WTGT-LP	LIC 265L1	Donnellson	IL	59.5	87.5	28.5	59.0
39 01 54.9	89 28 20.0	CN	0.074 kW		35 M		
Rose Of Sharon Broadcastin			BLL20170127AAD				

Section 74.1204 Contour Protection
WXOS Channel 266C1 East St. Louis, IL
K270BW Channel 270D Bellefontaine, MO

This comprehensive exhibit has been prepared to demonstrate that the proposed modification to FM translator K268CT will not cause prohibited interference to second adjacent full power FM station WXOS, Channel 268C1, East St. Louis, IL and second adjacent FM translator K270BW, Channel 270D, Bellefontaine, MO. This statement demonstrates that a lack of population and/or other factors allow this proposal to be compliant with Section 74.1204. The process commonly called "Living Way," allows for the use of U/D Analysis, also known as "signal strength ratio methodology." In this instant case the facilities to be protected are second adjacent and are to be afforded protection from signals 40 dB stronger than they present in the location of the proposed antenna location.

The proposed K268CT transmit antenna would be mounted on a pole on the rooftop of the SBTV.Network building located at 1034 S. Brentwood Blvd. in Richmond Heights, MO. The pole is registered with FCC Antenna Structure Registration No. 1293670. The top of the pole is 111.6 meters AGL. The K268CT antenna center of radiation is mounted at 109.3 meters AGL. The highest occupied floor is the 23rd floor which is 87.3 meters AGL. The K268CT antenna when installed would be 22.0 meters (72.2 ft.) above the floor level of the highest occupied floor. Sketches of the building are included with this exhibit that depict the location of the antenna as well as the highest occupied floor.

The WXOS F(50,50) protected contour at the proposed K268CT application site is 90.0 dBu. Therefore, the proposed K268CT F(50,10) interfering contour with respect to WXOS is the 130.0 dBu contour. The K270BW F(50,50) protected contour at the proposed K268CT application site is 75.7 dBu. Therefore, the proposed K268CT FCC F(50,10) interfering contour with respect to K270BW is the 115.7 dBu contour. Therefore, the proposed K268CT facility will cause greater interference to K270BW. Using the FCC's FM propagation curves program (see attached), the 115.7 dBu contour was calculated to extend 114 meters from the antenna. As shown on the accompanying spreadsheet and chart, using the vertical elevation pattern data for the Nicom BKG77 three bay antenna 5/8 (0.625) wave spaced directional antenna (see attached), the ERP and contour distances have been calculated every 10 degrees from 0 degrees to 90 degrees. The contour distance decreases from a maximum distance of 114 meters at 0 degrees to 0 meters at 90 degrees. That data was calculated in the attached chart to plot the distance the interfering contour extends into free space. The contour does not reach the highest occupied floor of the building. The contour comes to within approximately 2.8 meters (9.2 feet) of the floor of the highest occupied floor (23rd floor) of the building. However, this occurs at a point approximately 70 meters (229.7 ft.) horizontally from the antenna. The most distant point of the building is approximately 30 meters (98.4 ft.) horizontally from the antenna. The closest the interfering contour comes to the occupied floor is approximately 5.4 meters (17.7 feet) from the antenna. Therefore, the FCC F(50,10) 115.7 dBu interfering contour will not reach the ground or any population in any occupied buildings. Therefore, it is believed that the proposed modification to K268CT is in compliance with Section 74.1204 contour protection with respect to K270BW.

K268CT will not cause prohibited interference to K270BW because the interfering contour does not reach any populated areas. Therefore, this application is in compliance with 47 C.F.R. § 74.1204 with respect to K270BW.

K268CT Mod

St. Louis, MO
Latitude: 38-38-10.90 N
Longitude: 090-20-37.70 W
ERP: 0.099 kW
HAAT: 107.17 m
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 269.9 m
Elevation: 160.6 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

K270BW

Bellefontaine, MO
BLFT20130923ADC
Latitude: 38-34-28.01 N
Longitude: 090-19-30.98 W
ERP: 0.25 kW
HAAT: 196.9 m
Channel: 270
Frequency: 101.9 MHz
AMSL Height: 351.0 m
Elevation: 137.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 74.1204 Contour Protection
K270BW Channel 270D Bellefontaine, MO

FCC F(50,50) 75.7 dBu contour

+ K268CT Mod

+ K270BW

St. Louis

St. Louis city

HORIZON
BROADCAST SOLUTIONSScale 1:100,000
0 1 2 3 km

V-Soft Communications LLC ©

FM and TV Propagation Curves

Databases & Searches

AM Query

Antenna Height Above Average
Terrain (HAAT) Calculator

Antenna Structure Registration
(ASRN) Records Within A Radius

Broadcast Station Mailing
Address Search

CDBS Database Public Files

Children's Educational
Television Reporting - Form
2100, Schedule H

Children's Programming Query

COLORIT HTML Color Generator

Degrees Minutes Seconds
to/from Decimal Degrees

Distance and Azimuths
Between Two Sets of
Coordinates

Electioneering Communications
Database

EEO Filing Search

Filing Systems and Databases

Find Community Coordinates

This Javascript calculator uses the FM or TV propagation curves to find the distance to a service or interfering c or the corresponding field strength at a given contour distance. [More after the form.](#)

Select Contour Type:

F(50,50) Service Contour -- FM and NTSC (analog) TV
F(50,10) Interfering Contour
F(50,90) Digital TV Service Contour

Select Channel Range:
(not TV Virtual Channel)

FM Radio or TV Transmit Channels 2-6
TV Transmit Channels 7-13
TV Transmit Channels 14-69

Find This:

Field Strength, given a Distance (in km)
Distance, Given a Field Strength (in dBu)
FM ERP, given Distance and Field Strength [F(50,50) Service Contour]

0.099

ERP (kW)

Distance (km)

104.3

HAAT (meters)

115.7

Field (dBu)

Find Result

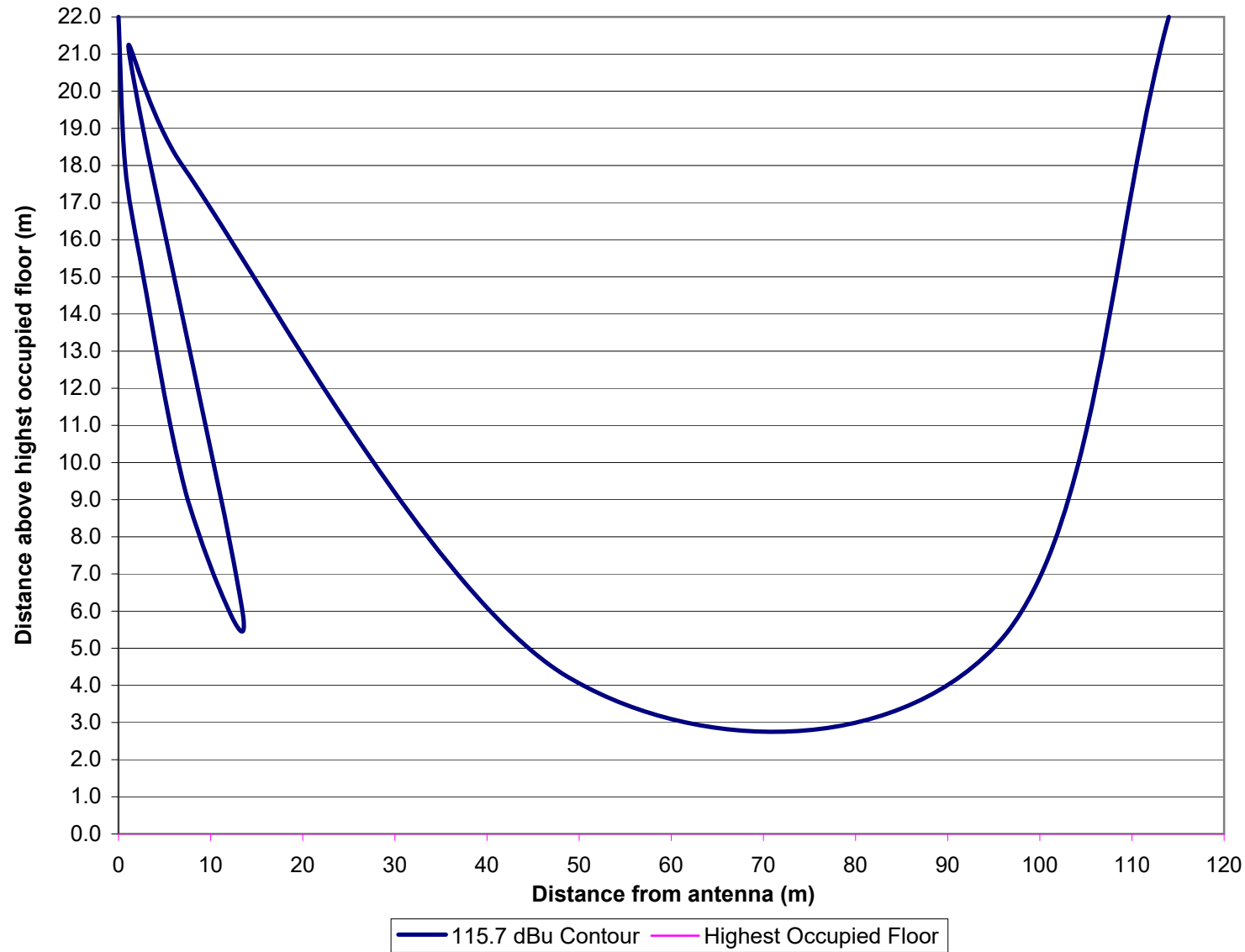
Clear Form

Results:

Calculated Distance = 0.114 km

Free Space equation used to compute distance.

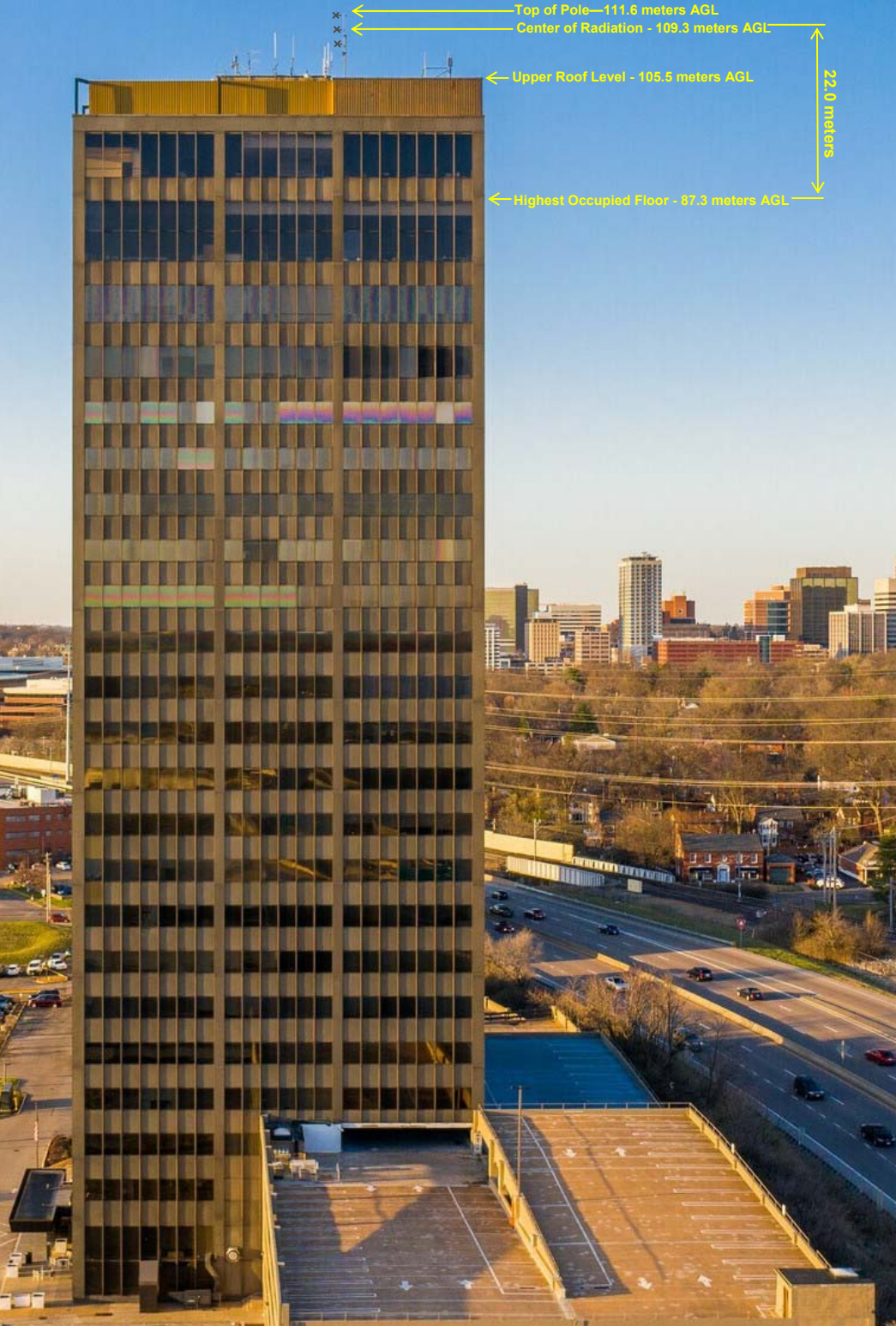
K268CT - St. Louis, Missouri
Section 74.1204 Contour Protection:
K270BW CH270D, Bellefontaine, Missouri
(115.7 dBu F(50,10) interfering contour shown)



The K268CT interfering contour with respect to K270BW does not reach the highest occupied floor of the building.

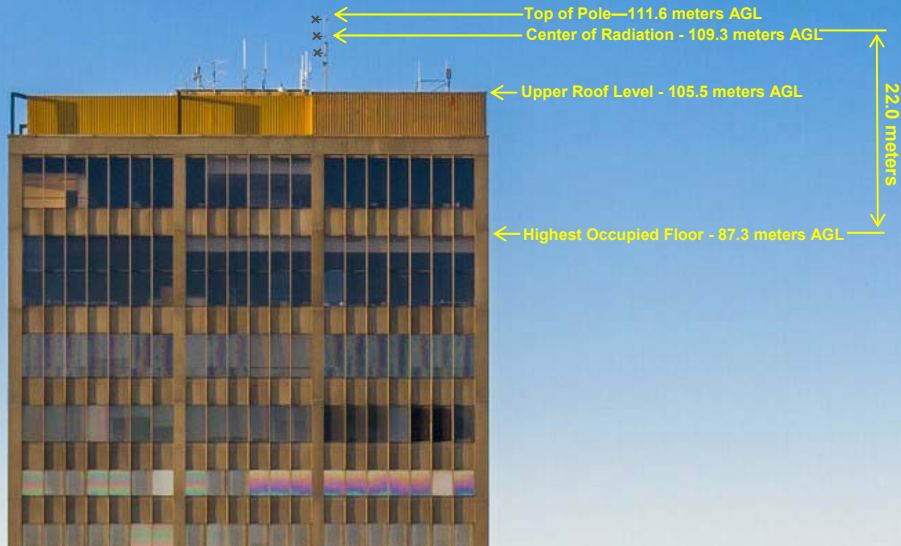
SBTV.Network Building

The distance from the antenna center of radiation
to the highest occupied floor is 22.0 meters



SBTV.Network Building

The distance from the antenna center of radiation
to the highest occupied floor is 22.0 meters



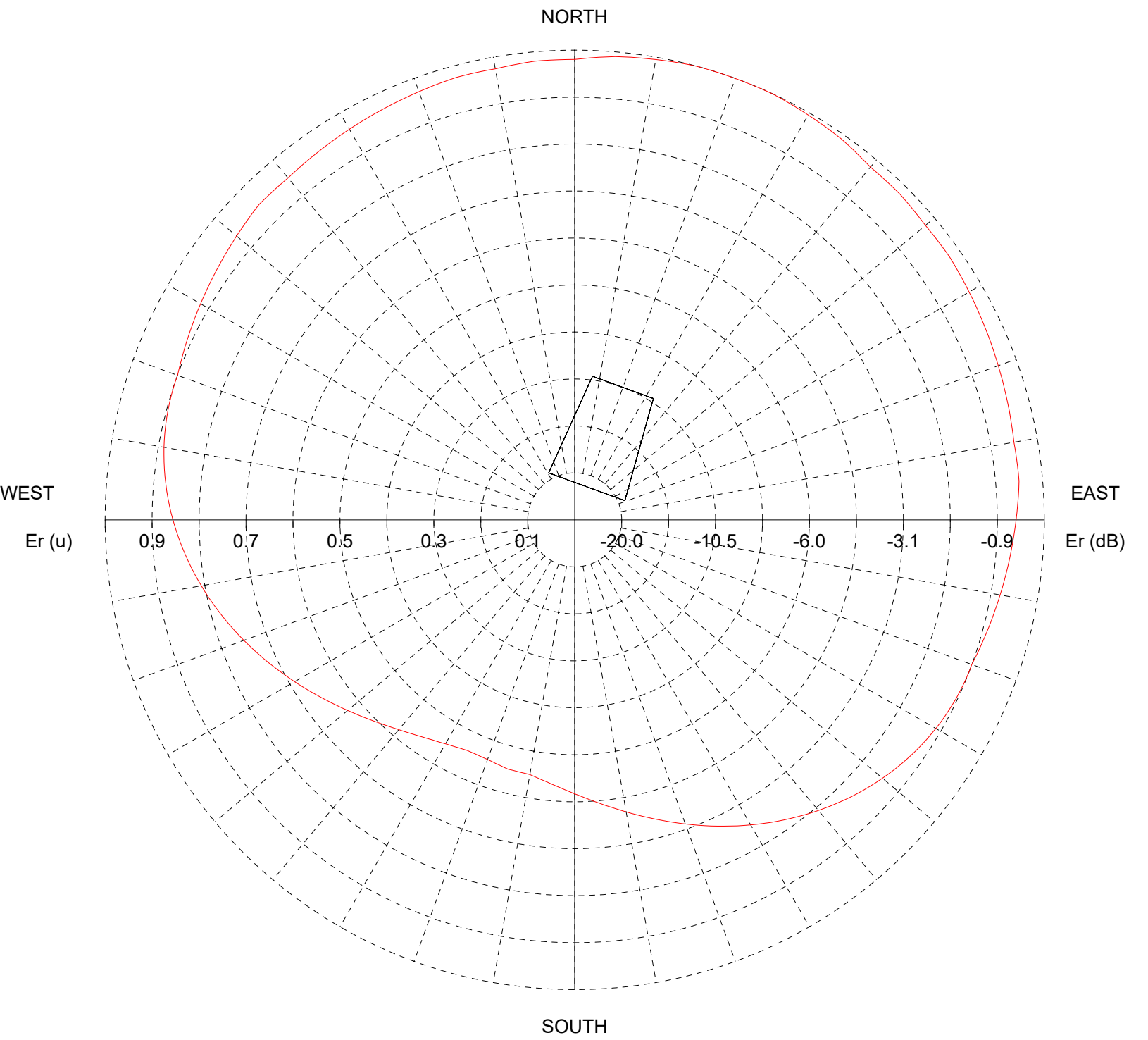
Angle of Elevation (Degrees)	Relative Field	ERP (watts)	ERP (dBk)	115.7 dBu Contour (Meters)
0	1.000	99.0	-10.044	114
10	0.845	70.7	-11.507	97
20	0.454	20.4	-16.903	52
30	0.069	0.5	-32.267	8
40	0.128	1.6	-27.899	1.5
50	0.186	3.4	-24.653	21
60	0.130	1.7	-27.765	15
70	0.065	0.4	-33.337	7
80	0.027	0.1	-41.744	4
90	0.017	0.0	-45.435	0

Θ (°)	Θ (radians)	R (m)	x'	y'	y = 22 - y'	Gnd
0	0	114	114	0	22.0	0
10	0.175	97	95.5	16.8	5.2	0
20	0.349	52	48.9	17.8	4.2	0
30	0.524	8	6.9	4	18	0
40	0.698	1.5	1.1	1.0	21.0	0
50	0.873	21	13.5	16.1	5.9	0
60	1.047	15	7.5	13.0	9.0	0
70	1.222	7	2.4	6.6	15.4	0
80	1.396	4	0.7	3.9	18.1	0
90	1.571	0	0.0	0	22	0

TX station: BKG77 3BAY 5/8 WAVE
Frequency: 104.50 MHz

Site name:

Horizontal diagram



0.0° depres. (Total antenna), Gain (dBd): 3.25 ERP T.max (KW): 0.698 ERP E

TX station: BKG77 3BAY 5/8 WAVE

Site name:

Frequency: 104.50 MHz

Horizontal diagram at 0.0° depres. (Total antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
0.0	98.0	570.3	60.0	97.0	558.7	120.0	88.8	468.4
1.0	98.2	572.6	61.0	96.9	557.5	121.0	88.6	465.9
2.0	98.4	574.9	62.0	96.8	556.4	122.0	88.3	463.1
3.0	98.6	577.3	63.0	96.7	555.2	123.0	88.0	460.2
4.0	98.8	579.6	64.0	96.6	554.1	124.0	87.7	457.1
5.0	99.0	582.0	65.0	96.5	552.9	125.0	87.4	453.7
6.0	99.1	583.1	66.0	96.4	551.8	126.0	87.1	450.3
7.0	99.2	584.3	67.0	96.3	550.7	127.0	86.7	446.6
8.0	99.3	585.5	68.0	96.2	549.5	128.0	86.4	442.8
9.0	99.4	586.7	69.0	96.1	548.4	129.0	86.0	438.8
10.0	99.5	587.9	70.0	96.0	547.2	130.0	85.6	434.7
11.0	99.6	589.0	71.0	95.9	546.1	131.0	85.1	430.4
12.0	99.7	590.2	72.0	95.8	545.0	132.0	84.7	426.0
13.0	99.8	591.4	73.0	95.7	543.8	133.0	84.3	421.5
14.0	99.9	592.6	74.0	95.6	542.7	134.0	83.8	416.9
15.0	100.0	593.8	75.0	95.5	541.5	135.0	83.3	412.2
16.0	100.0	593.8	76.0	95.4	540.4	136.0	82.8	407.3
17.0	100.0	593.8	77.0	95.3	539.3	137.0	82.3	402.4
18.0	100.0	593.8	78.0	95.2	538.2	138.0	81.8	397.4
19.0	100.0	593.8	79.0	95.1	537.0	139.0	81.3	392.3
20.0	100.0	593.8	80.0	95.0	535.9	140.0	80.8	387.2
21.0	100.0	593.8	81.0	95.0	535.9	141.0	80.2	382.0
22.0	100.0	593.8	82.0	95.0	535.9	142.0	79.7	376.7
23.0	100.0	593.8	83.0	95.0	535.9	143.0	79.1	371.5
24.0	100.0	593.8	84.0	95.0	535.9	144.0	78.5	366.1
25.0	100.0	593.8	85.0	95.0	535.9	145.0	77.9	360.8
26.0	99.9	592.6	86.0	94.8	533.6	146.0	77.4	355.4
27.0	99.8	591.4	87.0	94.6	531.4	147.0	76.8	350.0
28.0	99.7	590.2	88.0	94.4	529.1	148.0	76.2	344.6
29.0	99.6	589.0	89.0	94.2	526.9	149.0	75.6	339.2
30.0	99.5	587.9	90.0	94.0	524.7	150.0	75.0	333.8
31.0	99.4	586.7	91.0	93.8	522.4	151.0	74.4	328.5
32.0	99.3	585.5	92.0	93.6	520.2	152.0	73.8	323.1
33.0	99.2	584.3	93.0	93.4	518.0	153.0	73.2	317.8
34.0	99.1	583.1	94.0	93.2	515.8	154.0	72.5	312.5
35.0	99.0	582.0	95.0	93.0	513.6	155.0	71.9	307.3
36.0	98.8	579.6	96.0	92.8	511.4	156.0	71.3	302.1
37.0	98.6	577.3	97.0	92.6	509.2	157.0	70.7	296.9
38.0	98.4	574.9	98.0	92.4	507.0	158.0	70.1	291.8
39.0	98.2	572.6	99.0	92.2	504.8	159.0	69.5	286.8
40.0	98.0	570.3	100.0	92.0	502.6	160.0	68.9	281.8
41.0	98.0	570.3	101.0	91.8	500.4	161.0	68.3	276.9
42.0	98.0	570.3	102.0	91.6	498.2	162.0	67.7	272.0
43.0	98.0	570.3	103.0	91.4	496.0	163.0	67.1	267.3
44.0	98.0	570.3	104.0	91.2	493.9	164.0	66.5	262.6
45.0	98.0	570.3	105.0	91.0	491.7	165.0	65.9	258.0
46.0	97.9	569.1	106.0	90.8	489.6	166.0	65.3	253.6
47.0	97.8	567.9	107.0	90.6	487.4	167.0	64.8	249.2
48.0	97.7	566.8	108.0	90.4	485.3	168.0	64.2	244.9
49.0	97.6	565.6	109.0	90.2	483.1	169.0	63.7	240.7
50.0	97.5	564.5	110.0	90.0	481.0	170.0	63.1	236.6
51.0	97.5	564.5	111.0	90.0	480.8	171.0	62.6	232.6
52.0	97.5	564.5	112.0	90.0	480.4	172.0	62.1	228.7
53.0	97.5	564.5	113.0	89.9	479.8	173.0	61.5	224.9
54.0	97.5	564.5	114.0	89.8	478.9	174.0	61.0	221.3
55.0	97.5	564.5	115.0	89.7	477.7	175.0	60.6	217.7
56.0	97.4	563.3	116.0	89.6	476.3	176.0	60.1	214.3
57.0	97.3	562.2	117.0	89.4	474.7	177.0	59.6	211.0
58.0	97.2	561.0	118.0	89.2	472.8	178.0	59.2	207.9
59.0	97.1	559.8	119.0	89.0	470.7	179.0	58.7	204.8

TX station: BKG77 3BAY 5/8 WAVE

Site name:

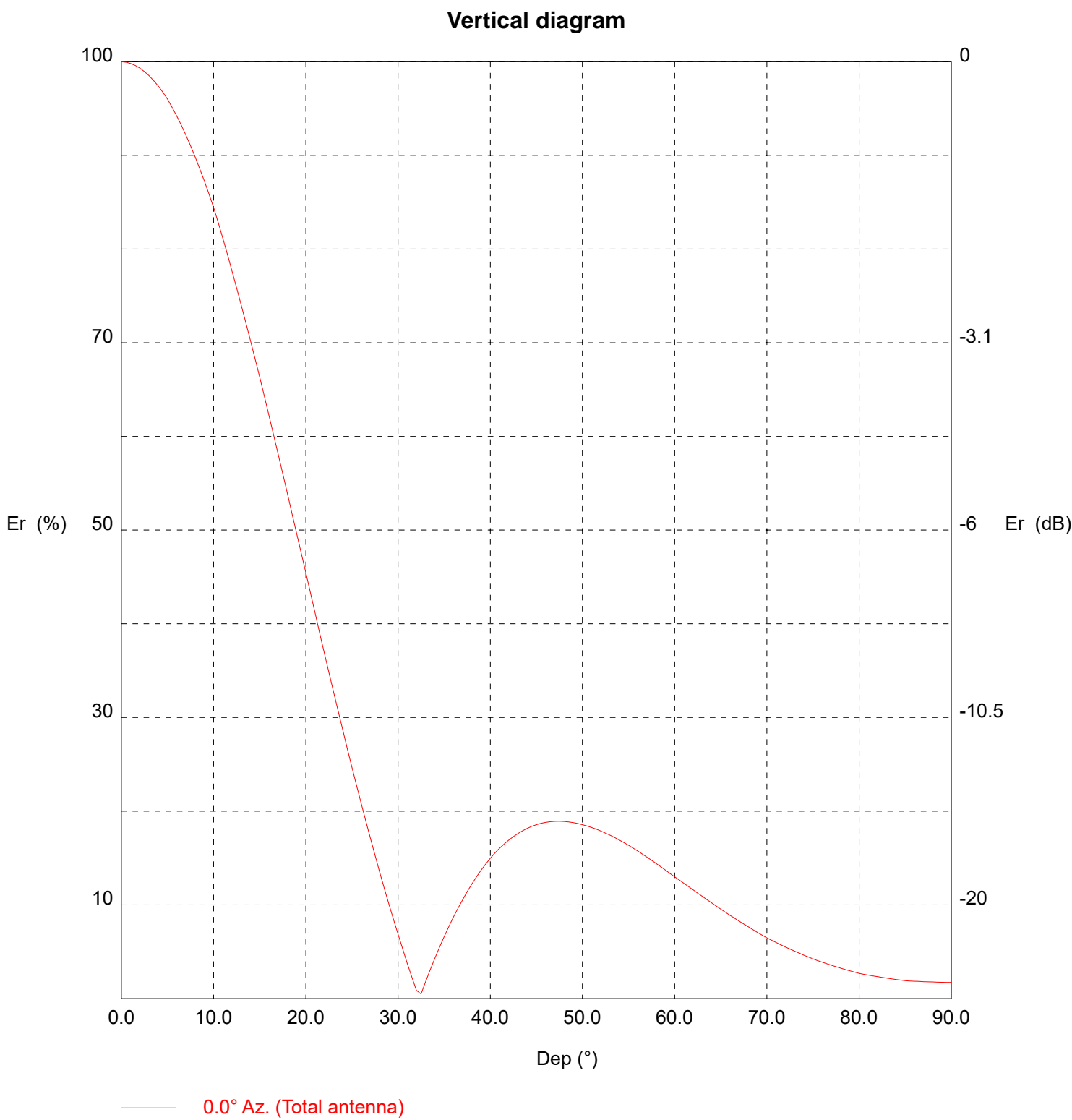
Frequency: 104.50 MHz

Horizontal diagram at 0.0° depres. (Total antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
180.0	58.3	201.9	240.0	68.9	281.8	300.0	92.0	502.6
181.0	57.9	199.1	241.0	69.5	286.8	301.0	92.2	504.8
182.0	57.5	196.4	242.0	70.1	291.8	302.0	92.4	507.0
183.0	57.1	193.9	243.0	70.7	296.9	303.0	92.6	509.2
184.0	56.8	191.5	244.0	71.3	302.1	304.0	92.8	511.4
185.0	56.5	189.2	245.0	71.9	307.3	305.0	93.0	513.6
186.0	56.1	187.1	246.0	72.5	312.5	306.0	93.2	515.8
187.0	55.8	185.1	247.0	73.2	317.8	307.0	93.4	518.0
188.0	55.6	183.3	248.0	73.8	323.1	308.0	93.6	520.2
189.0	55.3	181.6	249.0	74.4	328.5	309.0	93.8	522.4
190.0	55.1	180.0	250.0	75.0	333.8	310.0	94.0	524.7
191.0	55.0	179.6	251.0	75.6	339.2	311.0	94.2	526.9
192.0	55.0	179.3	252.0	76.2	344.6	312.0	94.4	529.1
193.0	54.9	179.2	253.0	76.8	350.0	313.0	94.6	531.4
194.0	54.9	179.2	254.0	77.4	355.4	314.0	94.8	533.6
195.0	55.0	179.3	255.0	77.9	360.8	315.0	95.0	535.9
196.0	54.8	178.2	256.0	78.5	366.1	316.0	95.0	535.9
197.0	54.6	177.3	257.0	79.1	371.5	317.0	95.0	535.9
198.0	54.5	176.4	258.0	79.7	376.7	318.0	95.0	535.9
199.0	54.4	175.7	259.0	80.2	382.0	319.0	95.0	535.9
200.0	54.3	175.1	260.0	80.8	387.2	320.0	95.0	535.9
201.0	54.2	174.6	261.0	81.3	392.3	321.0	95.1	537.0
202.0	54.2	174.3	262.0	81.8	397.4	322.0	95.2	538.2
203.0	54.2	174.1	263.0	82.3	402.4	323.0	95.3	539.3
204.0	54.2	174.1	264.0	82.8	407.3	324.0	95.4	540.4
205.0	54.2	174.3	265.0	83.3	412.2	325.0	95.5	541.5
206.0	54.3	175.1	266.0	83.8	416.9	326.0	95.6	542.7
207.0	54.5	176.1	267.0	84.3	421.5	327.0	95.7	543.8
208.0	54.6	177.3	268.0	84.7	426.0	328.0	95.8	545.0
209.0	54.8	178.5	269.0	85.1	430.4	329.0	95.9	546.1
210.0	55.1	180.0	270.0	85.6	434.7	330.0	96.0	547.2
211.0	55.3	181.6	271.0	86.0	438.8	331.0	96.1	548.4
212.0	55.6	183.3	272.0	86.4	442.8	332.0	96.2	549.5
213.0	55.8	185.1	273.0	86.7	446.6	333.0	96.3	550.7
214.0	56.1	187.1	274.0	87.1	450.3	334.0	96.4	551.8
215.0	56.5	189.2	275.0	87.4	453.7	335.0	96.5	552.9
216.0	56.8	191.5	276.0	87.7	457.1	336.0	96.6	554.1
217.0	57.1	193.9	277.0	88.0	460.2	337.0	96.7	555.2
218.0	57.5	196.4	278.0	88.3	463.1	338.0	96.8	556.4
219.0	57.9	199.1	279.0	88.6	465.9	339.0	96.9	557.5
220.0	58.3	201.9	280.0	88.8	468.4	340.0	97.0	558.7
221.0	58.7	204.8	281.0	89.0	470.7	341.0	97.1	559.8
222.0	59.2	207.9	282.0	89.2	472.8	342.0	97.2	561.0
223.0	59.6	211.0	283.0	89.4	474.7	343.0	97.3	562.2
224.0	60.1	214.3	284.0	89.6	476.3	344.0	97.4	563.3
225.0	60.6	217.7	285.0	89.7	477.7	345.0	97.5	564.5
226.0	61.0	221.3	286.0	89.8	478.9	346.0	97.5	564.5
227.0	61.5	224.9	287.0	89.9	479.8	347.0	97.5	564.5
228.0	62.1	228.7	288.0	90.0	480.4	348.0	97.5	564.5
229.0	62.6	232.6	289.0	90.0	480.8	349.0	97.5	564.5
230.0	63.1	236.6	290.0	90.0	481.0	350.0	97.5	564.5
231.0	63.7	240.7	291.0	90.2	483.1	351.0	97.6	565.6
232.0	64.2	244.9	292.0	90.4	485.3	352.0	97.7	566.8
233.0	64.8	249.2	293.0	90.6	487.4	353.0	97.8	567.9
234.0	65.3	253.6	294.0	90.8	489.6	354.0	97.9	569.1
235.0	65.9	258.0	295.0	91.0	491.7	355.0	98.0	570.3
236.0	66.5	262.6	296.0	91.2	493.9	356.0	98.0	570.3
237.0	67.1	267.3	297.0	91.4	496.0	357.0	98.0	570.3
238.0	67.7	272.0	298.0	91.6	498.2	358.0	98.0	570.3
239.0	68.3	276.9	299.0	91.8	500.4	359.0	98.0	570.3

TX station: BKG77 3BAY 5/8 WAVE
Frequency: 104.50 MHz

Site name:



TX station: BKG77 3BAY 5/8 WAVE

Site name:

Frequency: 104.50 MHz

Vertical diagram at an azimuth of 0° degrees

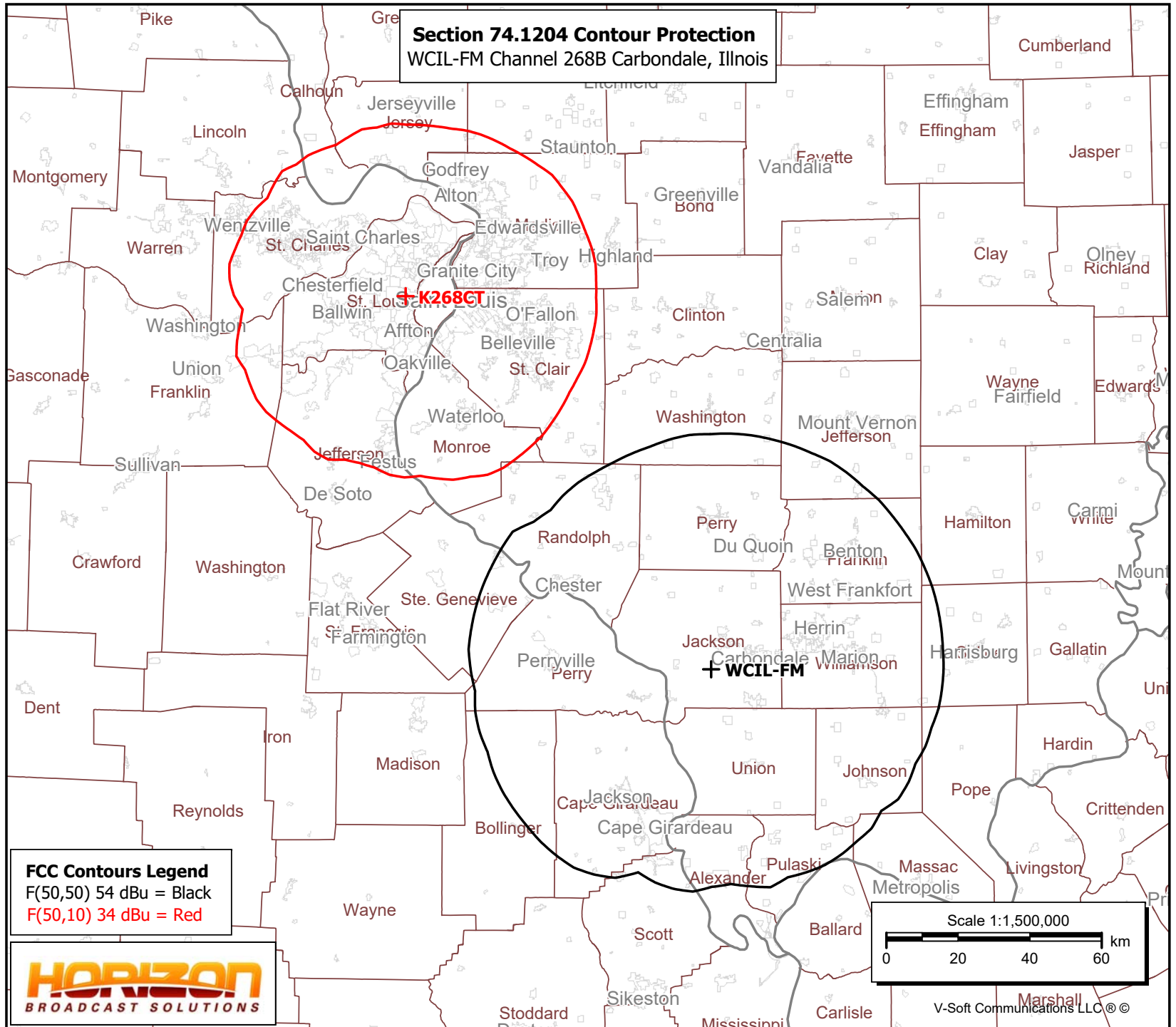
Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	570.3	30.0	6.9	2.7	60.0	13.0	9.6
0.5	99.9	569.7	30.5	5.3	1.6	60.5	12.6	9.1
1.0	99.8	568.1	31.0	3.8	0.8	61.0	12.3	8.6
1.5	99.6	565.8	31.5	2.3	0.3	61.5	11.9	8.1
2.0	99.3	562.5	32.0	0.9	0.0	62.0	11.6	7.7
2.5	99.0	558.4	32.5	0.5	0.0	62.5	11.3	7.2
3.0	98.5	553.4	33.0	1.8	0.2	63.0	10.9	6.8
3.5	98.0	547.6	33.5	3.1	0.5	63.5	10.6	6.4
4.0	97.4	541.0	34.0	4.3	1.1	64.0	10.2	6.0
4.5	96.7	533.7	34.5	5.5	1.7	64.5	9.9	5.6
5.0	96.0	525.6	35.0	6.6	2.5	65.0	9.5	5.2
5.5	95.1	516.2	35.5	7.7	3.4	65.5	9.2	4.8
6.0	94.2	506.2	36.0	8.7	4.3	66.0	8.9	4.5
6.5	93.2	495.6	36.5	9.7	5.3	66.5	8.6	4.2
7.0	92.2	484.3	37.0	10.6	6.4	67.0	8.3	3.9
7.5	91.0	472.6	37.5	11.4	7.4	67.5	7.9	3.6
8.0	89.8	460.3	38.0	12.2	8.5	68.0	7.6	3.3
8.5	88.6	447.5	38.5	13.0	9.6	68.5	7.3	3.1
9.0	87.3	434.3	39.0	13.7	10.7	69.0	7.0	2.8
9.5	85.9	420.8	39.5	14.4	11.8	69.5	6.8	2.6
10.0	84.5	406.9	40.0	15.0	12.8	70.0	6.5	2.4
10.5	82.8	391.3	40.5	15.5	13.7	70.5	6.2	2.2
11.0	81.2	375.6	41.0	16.0	14.7	71.0	6.0	2.0
11.5	79.4	359.8	41.5	16.5	15.5	71.5	5.7	1.9
12.0	77.7	344.0	42.0	16.9	16.3	72.0	5.5	1.7
12.5	75.9	328.2	42.5	17.3	17.0	72.5	5.3	1.6
13.0	74.0	312.4	43.0	17.6	17.7	73.0	5.1	1.5
13.5	72.1	296.8	43.5	17.9	18.3	73.5	4.8	1.3
14.0	70.2	281.3	44.0	18.2	18.8	74.0	4.6	1.2
14.5	68.3	266.0	44.5	18.4	19.3	74.5	4.4	1.1
15.0	66.3	250.9	45.0	18.6	19.6	75.0	4.2	1.0
15.5	64.3	235.7	45.5	18.7	19.9	75.5	4.0	0.9
16.0	62.2	220.9	46.0	18.8	20.2	76.0	3.9	0.9
16.5	60.2	206.4	46.5	18.9	20.3	76.5	3.7	0.8
17.0	58.1	192.4	47.0	18.9	20.4	77.0	3.5	0.7
17.5	56.0	178.7	47.5	18.9	20.4	77.5	3.4	0.7
18.0	53.9	165.6	48.0	18.9	20.4	78.0	3.2	0.6
18.5	51.8	152.9	48.5	18.9	20.3	78.5	3.1	0.5
19.0	49.7	140.7	49.0	18.8	20.1	79.0	3.0	0.5
19.5	47.6	129.0	49.5	18.7	19.9	79.5	2.8	0.5
20.0	45.4	117.8	50.0	18.6	19.6	80.0	2.7	0.4
20.5	43.3	106.9	50.5	18.4	19.3	80.5	2.6	0.4
21.0	41.2	96.6	51.0	18.3	19.0	81.0	2.5	0.4
21.5	39.0	86.9	51.5	18.1	18.6	81.5	2.4	0.3
22.0	36.9	77.7	52.0	17.9	18.2	82.0	2.3	0.3
22.5	34.8	69.2	52.5	17.7	17.8	82.5	2.3	0.3
23.0	32.8	61.2	53.0	17.4	17.3	83.0	2.2	0.3
23.5	30.7	53.8	53.5	17.2	16.8	83.5	2.1	0.3
24.0	28.7	46.9	54.0	16.9	16.3	84.0	2.0	0.2
24.5	26.7	40.6	54.5	16.6	15.8	84.5	2.0	0.2
25.0	24.7	34.8	55.0	16.4	15.3	85.0	1.9	0.2
25.5	22.8	29.5	55.5	16.1	14.7	85.5	1.9	0.2
26.0	20.8	24.8	56.0	15.7	14.1	86.0	1.8	0.2
26.5	19.0	20.5	56.5	15.4	13.6	86.5	1.8	0.2
27.0	17.1	16.7	57.0	15.1	13.0	87.0	1.8	0.2
27.5	15.3	13.4	57.5	14.7	12.4	87.5	1.8	0.2
28.0	13.5	10.5	58.0	14.4	11.8	88.0	1.8	0.2
28.5	11.8	8.0	58.5	14.1	11.3	88.5	1.8	0.2
29.0	10.1	5.8	59.0	13.7	10.7	89.0	1.7	0.2
29.5	8.5	4.1	59.5	13.3	10.2	89.5	1.7	0.2

K268CT

St. Louis, MO
Latitude: 38-38-10.90 N
Longitude: 090-20-37.70 W
ERP: 0.099 kW
HAAT: 107.2
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 269.9 m
Elevation: 160.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

WCIL-FM

Carbondale, IL
BLH20031010ABX
Latitude: 37-42-04.20 N
Longitude: 089-22-18.30 W
ERP: 28.50 kW
HAAT: 199.0
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 338.0 m
Elevation: 192.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 74.1204 Contour Protection
WCIL-FM Channel 268B Carbondale, Illinois

K268CT

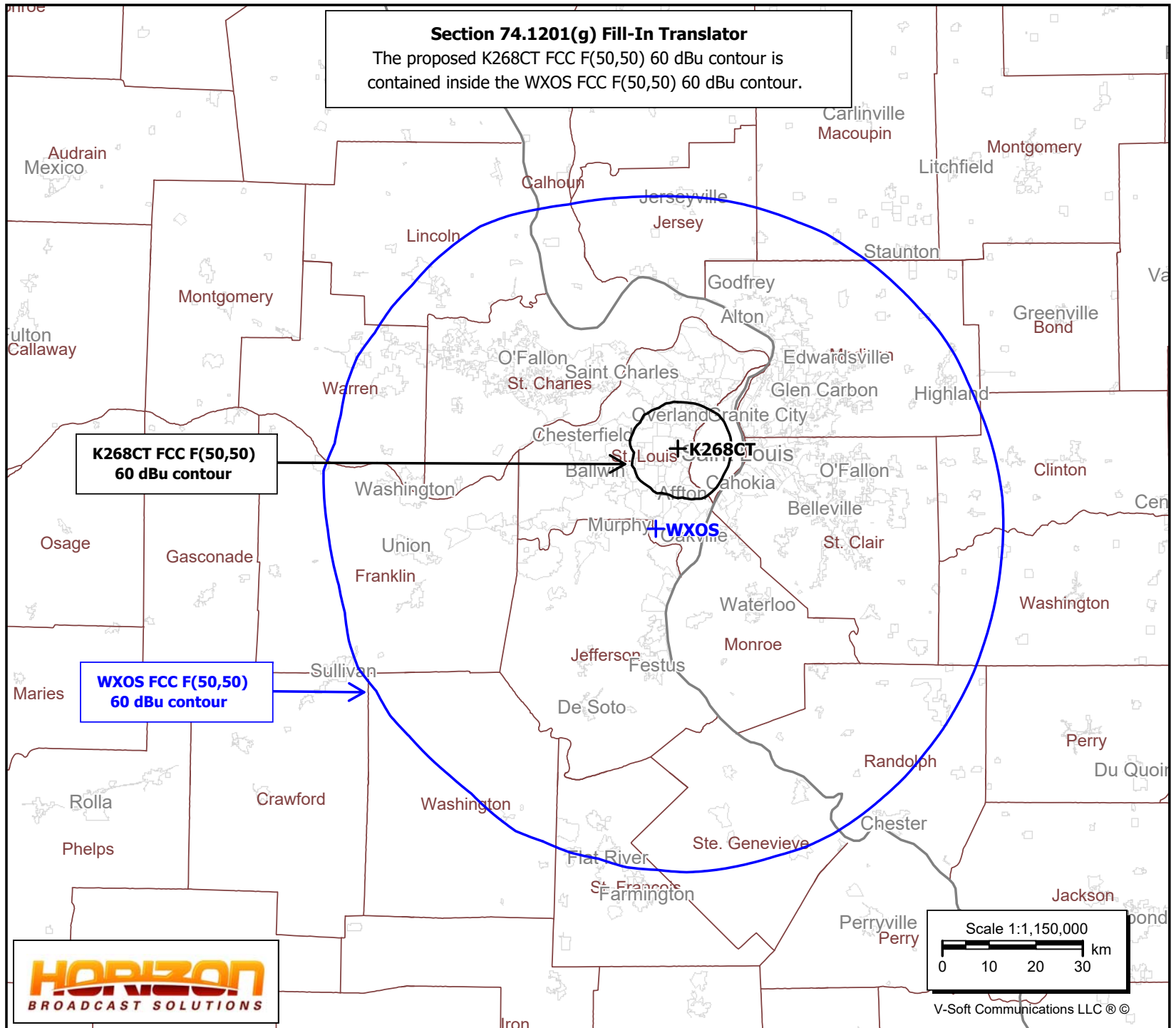
St. Louis, MO
Latitude: 38-38-10.90 N
Longitude: 090-20-37.70 W
ERP: 0.099 kW
HAAT: 107.16
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 269.9 m
Elevation: 160.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

WXOS

East St. Louis, IL
BLH20080630ACL
Latitude: 38-28-56.20 N
Longitude: 090-23-53.40 W
ERP: 100.00 kW
HAAT: 300.4
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 466.0 m
Elevation: 175.6 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 74.1201(g) Fill-In Translator

The proposed K268CT FCC F(50,50) 60 dBu contour is contained inside the WXOS FCC F(50,50) 60 dBu contour.



**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Kaspar Broadcasting of Missouri, seeks to change the transmit location of FM translator station K268CT, Channel 268D (101.5 MHz) Facility ID No. 155886, St. Peters, MO. Kaspar here proposes to modify K268CT to operate from a different transmitter location in Richmond Height, MO. The site is an a pole mounted on a building 111.6 meters (366.1 ft.) in overall height and is registered with FCC Antenna Registration Structure "ASR" number 1293670. The coordinates are 38° 38' 10.9" North Latitude, 90° 20' 37.7" West Longitude (NAD 83). The proposed transmit antenna is a side mounted Nicom BKG77 three bay broadband 0.625 wave spaced circularly polarized non-directional antenna with a center of radiation of 109.3 meters AGL. K268CT will operate with 99 watts ERP at 107.2 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. Because K268CT proposes to operate from an existing tower and no modifications are being made to the tower, is believed to be exempt from a Section 106 review by the SHPO/THPO.

The antenna center of radiation is 22.0 meters above the floor of the highest occupied floor on the building. Therefore, the antenna height is set at 22.0 meters. The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The Nicom antenna is included in the revised OET FM Model Program under Type 2, Opposed "V" dipole. Using this antenna, the maximum calculated signal density near the tower at two meters above the highest occupied floor of the building level attributable to the proposed K268CT facility is 0.350 $\mu\text{W}/\text{cm}$ at 86.4 meters, which is 0.175 percent of the general population/uncontrolled maximum permitted exposure limit.

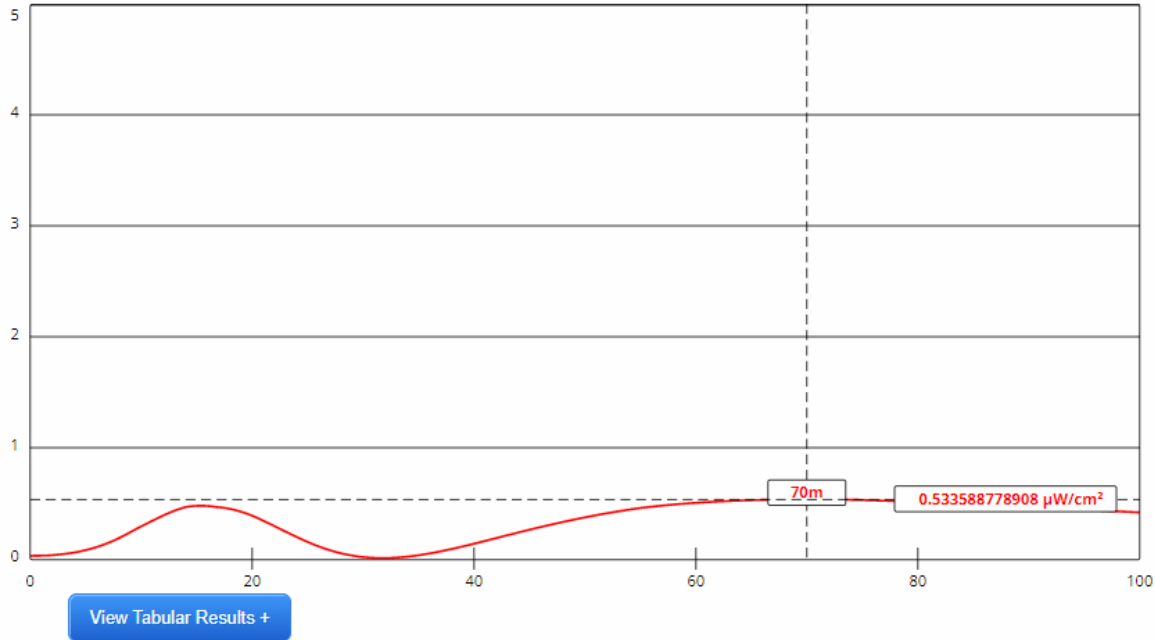
This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

FM Model

- Radio Frequency Safety
- FCC Policy on Human Exposure
- RF Safety FAQ
- Body Tissue Dielectric Parameters
- RF Safety Highlighted Releases
- FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA. [Show More....](#)



Channel Selection	Channel 268 (101.5 MHz) ▼		
Antenna Type +	EPA Type 2: Opposed V Dipole ▼		
Height (m)	<input type="text" value="22"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="99"/>	ERP-V (W)	<input type="text" value="99"/>
Num of Elements	<input type="text" value="3"/>	λ	<input type="text" value="0.625"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	