

Channel Study

REFERENCE		CH# 202D - 88.3 MHz, Pwr= 0.06 kW DA, HAAT= 43.0 M, COR= 261 M								DISPLAY DATES	
40 06 40.0 N.		Average Protected F(50-50)= 5.9 km								DATA 03-12-12	
88 14 35.0 W.		Standard Directional								SEARCH 03-13-12	
CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
204B1 WPCD Champaign		LIC C IL		339.3 159.3	13.4 BLED19990916AAE	40 13 27.0 88 17 56.0	10.500 103	3.2 326	31.9 Parkland College	6.1	-18.8*<
202B1 WPJC Pontiac		CP DCX IL		341.9 161.7	73.2 BPED20101220AAH	40 44 13.0 88 30 47.0	3.500 172	87.5 385	30.8 Calvary Radio Network, Inc	-18.5*<	29.0
201D W201CK Champaign		LIC DV IL		0.0 0.0	0.0 BLFT20010213AAK	40 06 40.0 88 14 35.0	0.050 42	6.5 260	4.6 Educational Media Foundati	-11.4*	-11.5*
201B1 NONE Ludlow		CP DCX IL		42.2 222.4	54.5 BNPED20071022AYA	40 28 25.0 87 48 38.0	14.000 80	44.4 293	28.2 Grace Community Church Of	4.3	18.2
202B WJLY Ramsey		LIC DCN IL		214.4 33.8	131.0 BLED19990303KA	39 08 06.0 89 06 02.0	25.000 153	106.1 330	39.9 Countryside Broadcasting	20.0	75.6
201A WZGL Charleston		LIC CX IL		172.9 352.9	70.9 BLED20080320ABX	39 28 38.0 88 08 25.0	2.100 70	27.1 272	18.5 Illinois Bible Institute,	38.1	44.3
201A WNLD Decatur		LIC DCN IL		242.5 62.1	72.2 BLED19941202KA	39 48 35.0 88 59 31.0	1.000 93	26.4 291	17.9 Illinois Bible Institute	41.2	47.8
202A WAWF Kankakee		LIC C IL		20.8 201.1	115.0 BLED20000512AAE	41 04 39.0 87 45 22.0	1.250 87	61.1 279	18.6 Family Worship Center Chur	48.3	78.1
202A WPJC Pontiac		LIC CX IL		340.0 159.7	98.7 BLED20021219AAY	40 56 42.0 88 38 46.0	0.500 63	45.1 265	12.9 Calvary Radio Network, Inc	49.5	72.6
205A WDCR Oreana		LIC DCX IL		249.3 68.9	56.5 BLED20110316ACJ	39 55 49.9 88 51 41.0	1.100 50	0.4 257	6.1 St. Mary's Hospital, Decat	51.5	50.1
205B1 WEIU Charleston		LIC CN IL		175.1 355.1	70.5 BLED19850617KH	39 28 43.0 88 10 21.0	4.000 51	1.9 256	19.1 Eastern Illinois Universit	62.9	51.0
201D W201AD Mattoon		LIC CN IL		189.7 9.6	71.1 BLFT19980618TE	39 28 47.0 88 22 57.0	0.038 65	9.7 272	6.8 Illinois Bible Institute,	56.5	57.4
203B WBNH Pekin		LIC DCX IL		298.6 117.8	126.5 BLED20060906AAM	40 38 53.0 89 33 26.0	48.000 154	63.9 339	42.3 Central Illinois Radio Fel	58.5	78.4
203D W203BD Decatur		LIC C IL		242.5 62.1	72.2 BLFT20001115ABF	39 48 35.0 88 59 31.0	0.013 116	8.9 300	6.3 Educational Media Foundati	58.7	59.4
201A WESN Bloomington		LIC CN IL		303.8 123.3	76.5 BLED19820111AU	40 29 28.0 88 59 37.0	0.120 30	8.4 271	5.9 Illinois Wesleyan Universi	64.2	65.0

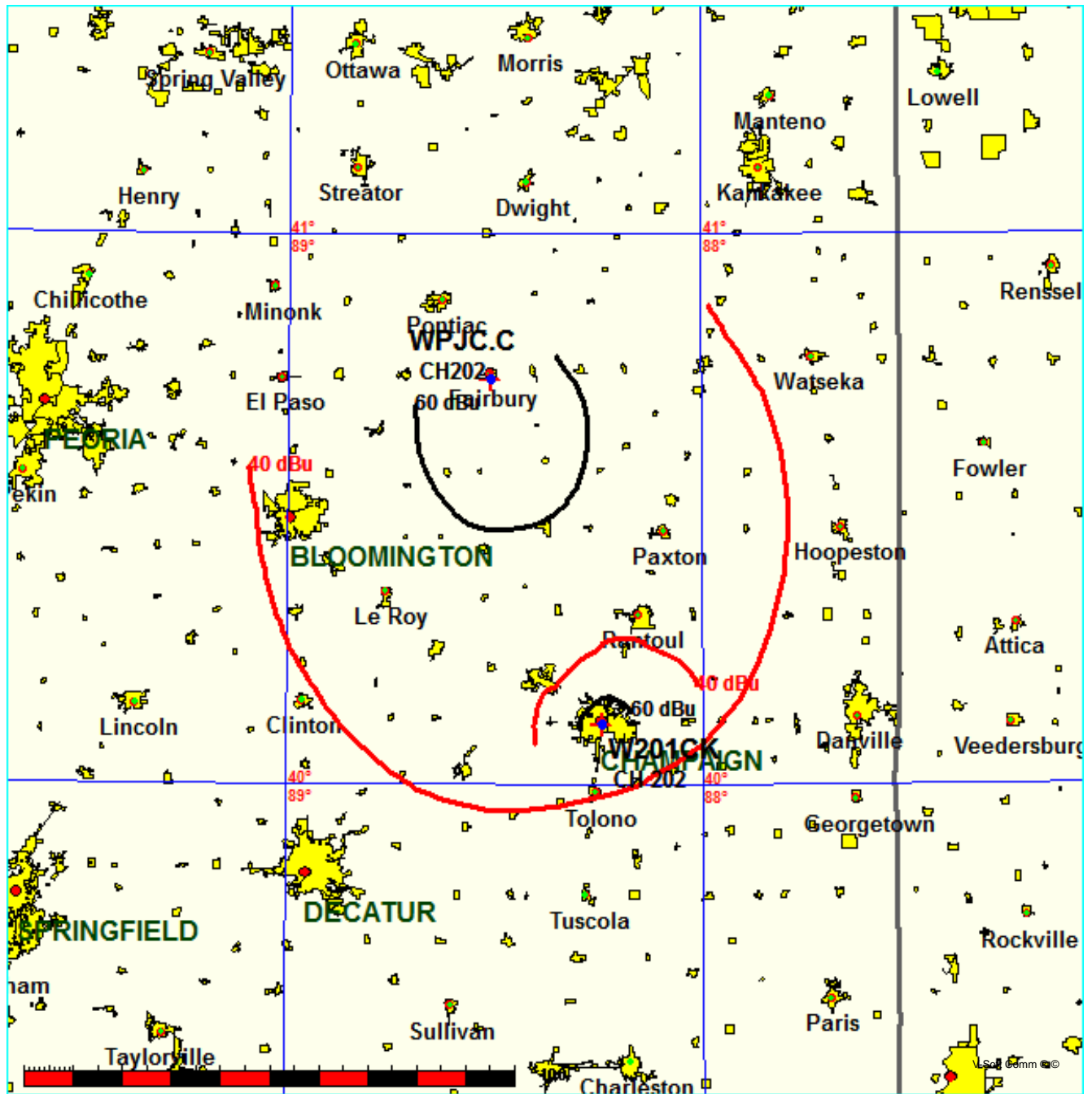
 Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in
 KM
 Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd
 adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E),
 Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.
 < = Contour Overlap

Educational Media Foundation

FMCommander Single Allocation Study - 03-13-2012 - NGDC 30 SEC
W201CK's Overlaps (In= -18.5 km, Out= 28.98 km)

W201CK CH 202 D DA
Lat= 40 06 40.0, Lng= 88 14 35.0
0.06 kW 43 M HAAT, 261 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WPJC-C CH 202 B1 DA BPED20101220AAH
Lat= 40 44 13.0, Lng= 88 30 47.0
3.5 kW 172 M HAAT, 385 M COR
Prot.= 60 dBu, Intef.= 40 dBu

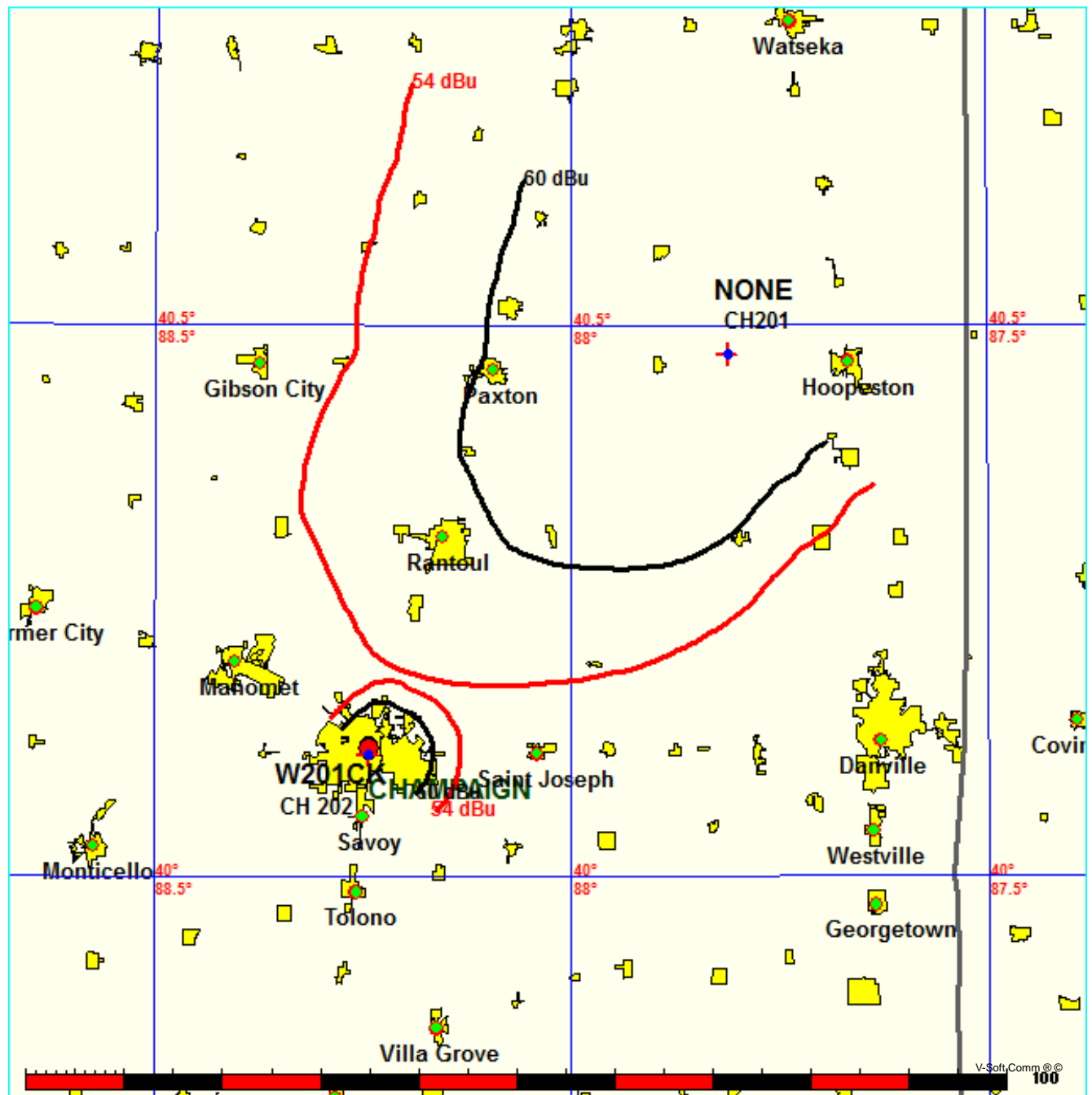


Educational Media Foundation

FMCommander Single Allocation Study - 03-13-2012 - NGDC 30 SEC
W201CK's Overlaps (In= 4.32 km, Out= 18.19 km)

W201CK CH 202 D DA
Lat= 40 06 40.0, Lng= 88 14 35.0
0.06 kW 43 M HAAT, 261 M COR
Prot.= 60 dBu, Intef.= 54 dBu

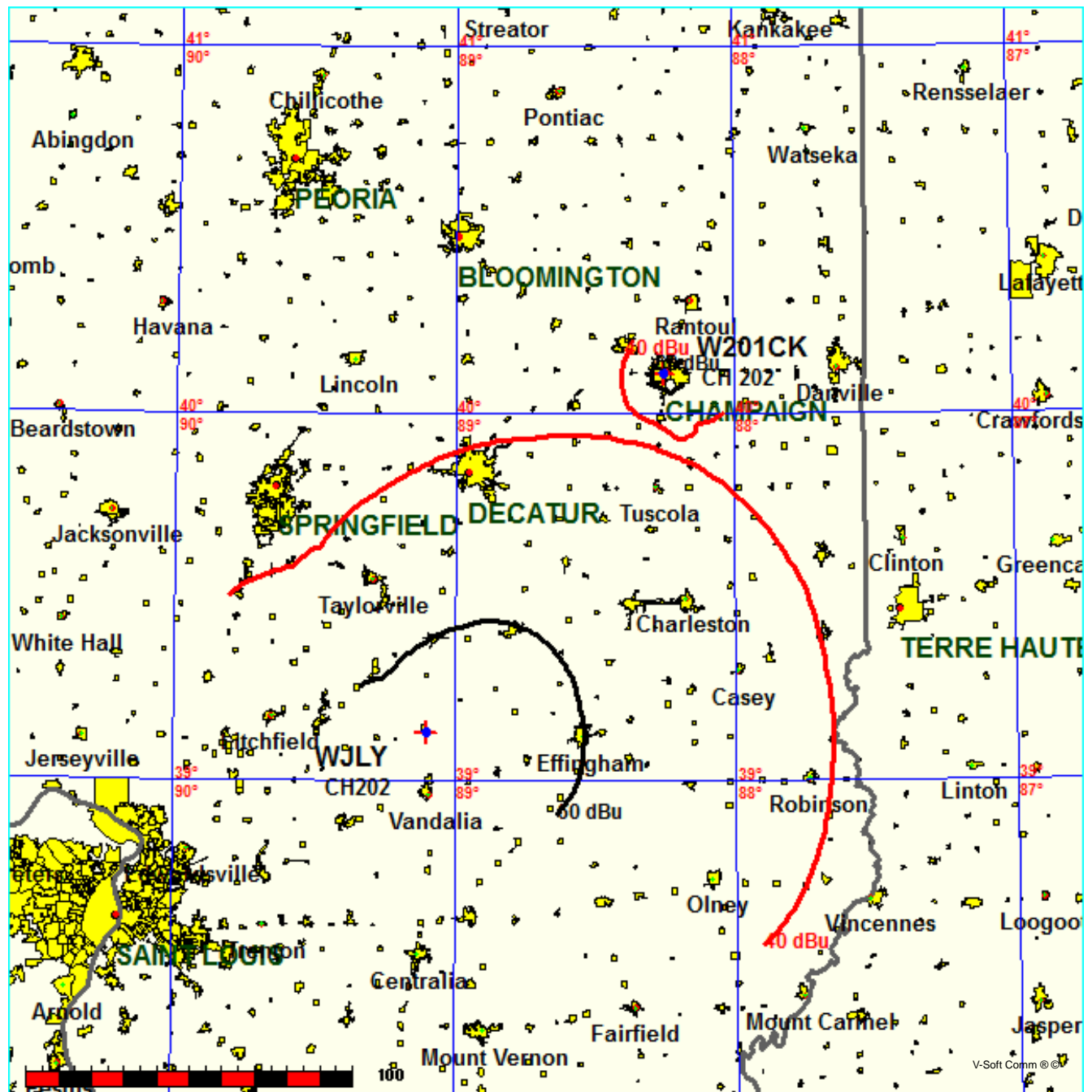
NONE CH 201 B1 DA BNPED20071022AYA
Lat= 40 28 25.0, Lng= 87 48 38.0
14.0 kW 80 M HAAT, 293 M COR
Prot.= 60 dBu, Intef.= 54 dBu



FMCommander Single Allocation Study - 03-13-2012 - NGDC 30 SEC
W201CK's Overlaps (In= 20.05 km, Out= 75.62 km)

W201CK CH 202 D DA
Lat= 40 06 40.0, Lng= 88 14 35.0
0.06 kW 43 M HAAT, 261 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WJLY CH 202 B DA BLED19990303KA
Lat= 39 08 06.0, Lng= 89 06 02.0
25.0 kW 153 M HAAT, 330 M COR
Prot.= 60 dBu, Intef.= 40 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 57dBu contour of second adjacent channel station WPCD, channel 204B1, Champaign, IL. According to 74.1204(a)(3), in order to protect second adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W201CK:	60 watts
The proposed COR AG for W201CK:	37 meters
WPCD F(50/50) contour at proposed site:	75.3 dBu
The F(50/10) contour of proposed W201CK	115.3 dBu
The predicted distance to W201CK interference contour:	93.6 meters

By taking into account the antenna vertical elevation pattern for the Jampro JLCP two bay half wave spaced antenna, and the height of the antenna above ground (37m), that the interfering contour does not touch the ground at any point. At worst case, according to the chart in Exhibit 13-A1, the relative field at the angle of suppression of 30 degrees is .594. The distance to the interfering contour at 30 degrees is 55.445 meters. The distance from the antenna to the ground at 30 degrees is 64.723 meters. The result is the height of the interfering contour above ground is predicted to be 9.278 meters and will not actually reach the ground or the rooftops of the nearby buildings. Please see Exhibit 13-A2 for an aerial photo of the area. There are no buildings or homes that extend into this interfering contour.

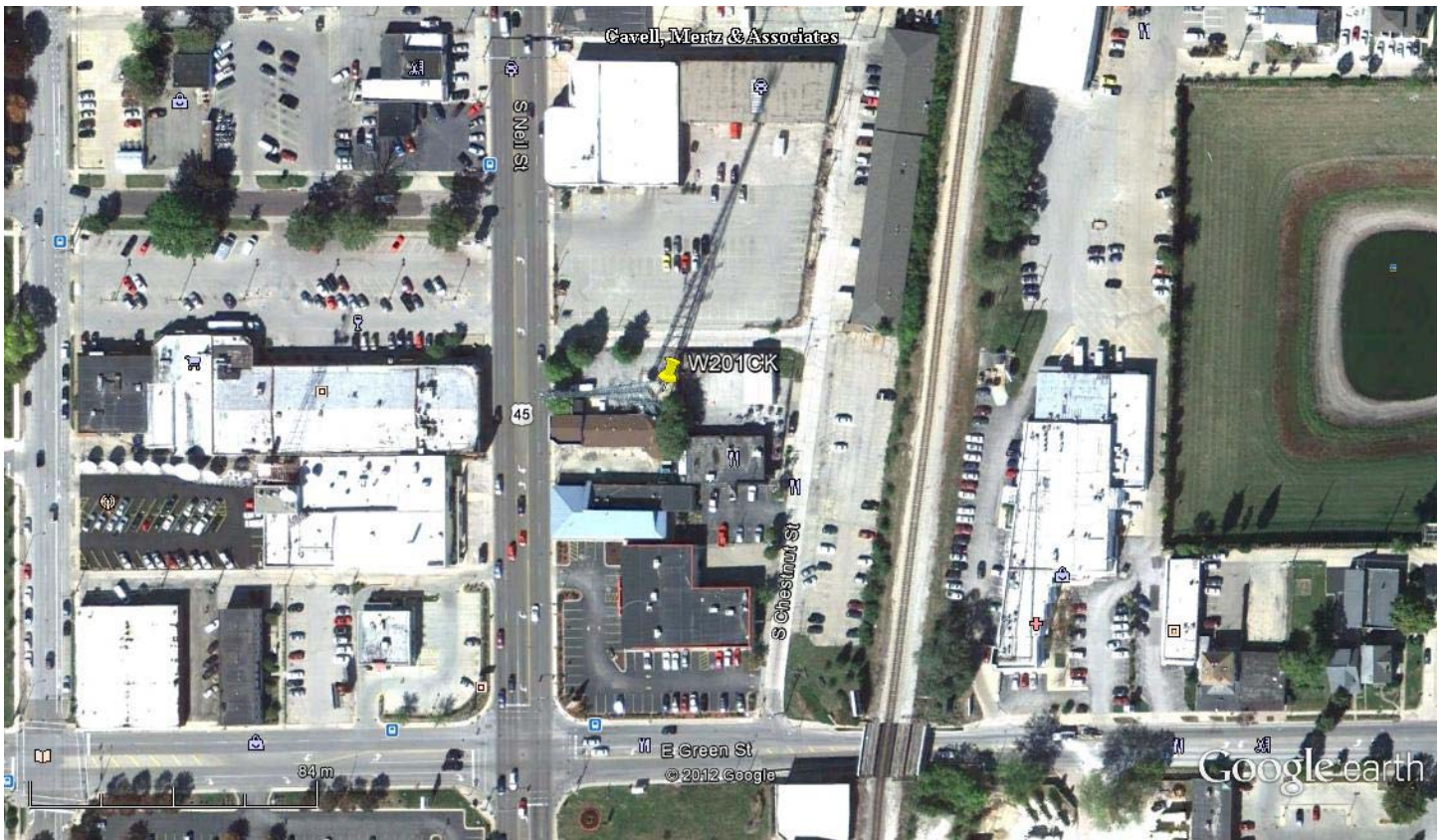
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W201CK
Champaign, IL

ERP (kw): 0.06
Height of Antenna above Ground (m): 37
Translator's IX Contour: 115.3
Antenna Type: Jampro JLCP-2H

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0600	93.3417	37.000
5	0.984	0.0581	91.8482	28.995
10	0.939	0.0529	87.6478	21.780
15	0.863	0.0447	80.5539	16.151
20	0.782	0.0367	72.9932	12.035
25	0.693	0.0288	64.6858	9.663
30	0.594	0.0212	55.4450	9.278
35	0.478	0.0137	44.6173	11.409
40	0.378	0.0086	35.2832	14.320
45	0.289	0.0050	26.9757	17.925
50	0.216	0.0028	20.1618	21.555
55	0.146	0.0013	13.6279	25.837
60	0.094	0.0005	8.7741	29.401
65	0.056	0.0002	5.2271	32.263
70	0.030	0.0001	2.8003	34.369
75	0.013	0.0000	1.2134	35.828
80	0.004	0.0000	0.3734	36.632
85	0.001	0.0000	0.0933	36.907
90	0.001	0.0000	0.0933	36.907

Note: Input the ERP, Height of the antenna above Ground, the Calculated Translator IX contour, and the specified Antenna Relative Field Pattern.



Google earth

feet
meters



NAD 27

40 06 40

88 14 35