

**Channel Study**

REFERENCE CH# 256D - 99.1 MHz, Pwr= 0.01 kW DA, HAAT= 130.9 M, COR= 328 M DISPLAY DATES  
 41 32 26.0 N. Average Protected F(50-50)= 6.6 km DATA 02-11-13  
 88 02 08.0 W. Standard Directional SEARCH 02-11-13

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
254B Chicago	WFMT	LIC	NC IL	41.3	50.20	41 52 44.0	6.000	4.7	69.5	40.5	-19.6*<
				221.6	BMLH20090415AAX	87 38 08.0	470	651	Window To The World Commun		
258B Chicago	WUSN	LIC	CX IL	40.5	52.55	41 53 56.0	5.700	4.5	66.0	43.0	-13.8*<
				220.8	BLH20030611AAT	87 37 23.0	425	606	Cbs Radio Inc. Of Chicago		
256D Park Forest	646021	APP	C IL	110.1	27.82	41 27 14.9	0.010	24.2	7.2	2.8	16.9
				290.3	BNPFT20030317EUD	87 43 21.8	163	382	Edgewater Broadcasting, In		
256B Milwaukee	WMYX-FM	LIC	CN WI	359.2	156.07	42 56 44.0	50.000	135.2	62.5	14.2	62.1
				179.2	BMLH19860225KC	88 03 39.0	137	377	Entercom Milwaukee License		
256B Savoy	WYXY	LIC	CX IL	171.8	156.21	40 08 53.0	50.000	137.5	64.9	15.6	76.7
				352.0	BLH20090317AAM	87 46 21.0	152	354	Saga Communications Of Ill		
255A Dwight	WJEZ	LIC	CN IL	210.9	65.40	41 02 06.0	1.300	37.5	25.0	25.1	36.2
				30.6	BLH19980901KE	88 26 10.0	149	352	Cumulus Licensing Llc		
257B1 La Salle	WAJK	LIC	CN IL	262.6	104.58	41 24 47.0	11.000	58.3	45.0	45.6	58.0
				81.8	BLH19891026KC	89 16 34.0	149	352	La Salle County Broadcasti		
255D Dekalb	W255BN	LIC	C IL	306.9	74.11	41 56 18.0	0.250	13.6	9.8	55.6	57.3
				126.5	BLFT20120604ABM	88 45 03.0		316	American Education Foundat		

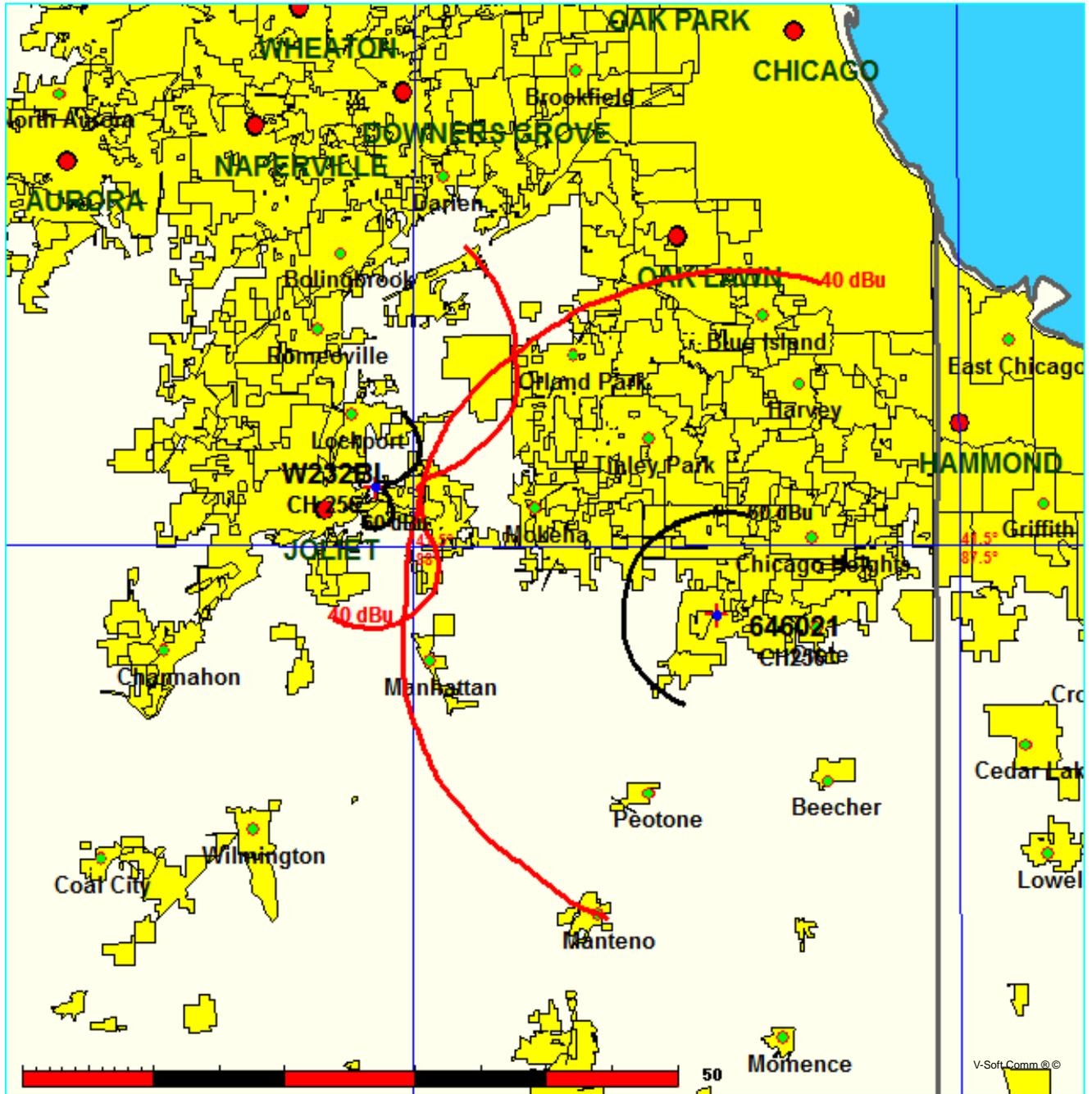
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
 Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding  
 Ant Column: (D= 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  
 Reference station has protected zone issue:

Educational Media Foundation

FMCommander Single Allocation Study - 02-11-2013 - NGDC 30 SEC  
W232BL's Overlaps (In= 2.78 km, Out= 16.92 km)

W232BL CH 256 D DA  
Lat= 41 32 26.0, Lng= 88 02 08.0  
0.01 kW 130.9 M HAAT, 328 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

646021 CH 256 D BNPFT20030317EUO  
Lat= 41 27 14.9, Lng= 87 43 21.8  
0.01 kW 162.5 M HAAT, 381.7 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WUSN, channel 258B, Chicago, IL. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W232BL.P:	10 watts
The proposed COR for W232BL.P:	130 meters
WUSN F(50/50) contour at proposed site:	60.0dBu
The F(50/10) contour of proposed W232BL:	100.0dBu

The predicted distance to the 100.0dbu interfering contour is 221.9 meters. Taking into account the vertical elevation pattern for the Scala CA2-CP single bay antenna and the height above ground of 130M, it has been determined that the interfering contour of 100.0dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 28.05M above ground.

As can be seen in Exhibit 13-A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 28.05 meter aperture.

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  
W232BL  
Joliet, IN

ERP (kw): 0.01  
Height of Antenna above Ground (m): 130  
Translator's IX Contour: 100  
Antenna Type: Scala CA2-CP

<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	0.0100	221.8196	130.000
5	0.990	0.0098	219.6014	110.860
10	0.979	0.0096	217.1614	92.290
15	0.952	0.0091	211.1723	75.345
20	0.920	0.0085	204.0741	60.203
25	0.877	0.0077	194.5358	47.786
30	0.829	0.0069	183.8885	38.056
35	0.772	0.0060	171.2448	31.778
40	0.715	0.0051	158.6010	28.053
45	0.647	0.0042	143.5173	28.518
50	0.570	0.0032	126.4372	33.143
55	0.487	0.0024	108.0262	41.510
60	0.388	0.0015	86.0660	55.465
65	0.292	0.0009	64.7713	71.297
70	0.187	0.0003	41.4803	91.021
75	0.095	0.0001	21.0729	109.645
80	0.045	0.0000	9.9819	120.170
85	0.032	0.0000	7.0982	122.929
90	0.030	0.0000	6.6546	123.345

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WFMT, channel 254B, Chicago, IL. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W232BL.P:	10 watts
The proposed COR for W232BL.P:	130 meters
WFMT F(50/50) contour at proposed site:	62.3dBu
The F(50/10) contour of proposed W232BL:	102.3dBu

The predicted distance to the 102.3dbu interfering contour is 170.2 meters. Taking into account the vertical elevation pattern for the Scala CA2-CP single bay antenna and the height above ground of 130M, it has been determined that the interfering contour of 102.3dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 51.77M above ground.

As can be seen in Exhibit 13-A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 51.77 meter aperture.

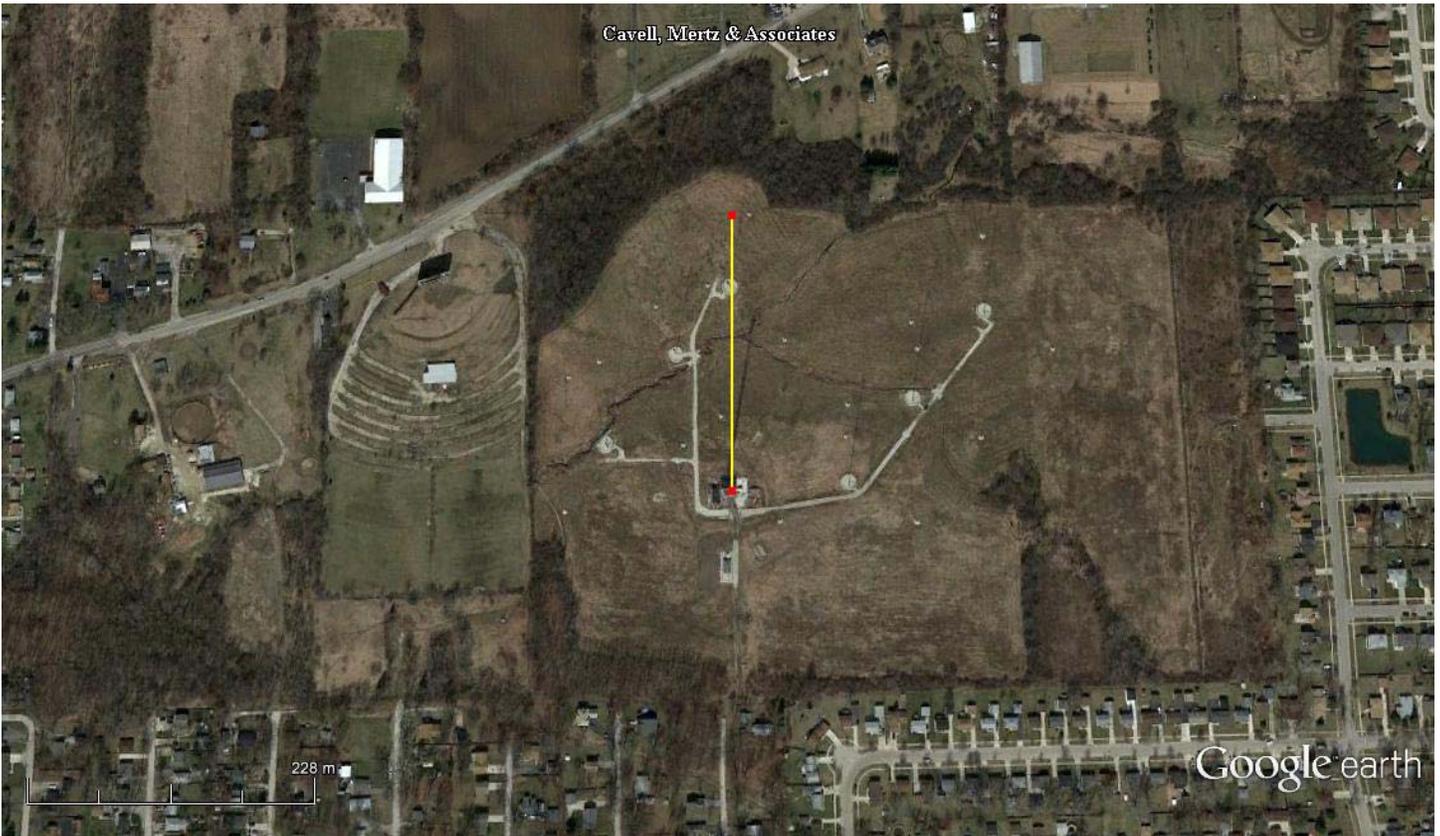
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1  
 74.1204(d) Showing  
 W232BL  
 Joliet, IN

ERP (kw): 0.01  
 Height of Antenna above Ground (m): 130  
 Translator's IX Contour: 102.3  
 Antenna Type: Scala CA2-CP

<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	0.0100	170.2159	130.000
5	0.990	0.0098	168.5137	115.313
10	0.979	0.0096	166.6413	101.063
15	0.952	0.0091	162.0455	88.060
20	0.920	0.0085	156.5986	76.440
25	0.877	0.0077	149.2793	66.912
30	0.829	0.0069	141.1089	59.446
35	0.772	0.0060	131.4066	54.628
40	0.715	0.0051	121.7043	51.770
45	0.647	0.0042	110.1297	52.127
50	0.570	0.0032	97.0230	55.676
55	0.487	0.0024	82.8951	62.096
60	0.388	0.0015	66.0438	72.804
65	0.292	0.0009	49.7030	84.954
70	0.187	0.0003	31.8304	100.089
75	0.095	0.0001	16.1705	114.380
80	0.045	0.0000	7.6597	122.457
85	0.032	0.0000	5.4469	124.574
90	0.030	0.0000	5.1065	124.894

Exhibit A-2



Google earth



NAD27

41 32' 26.0" N

88 02' 08.0" W

Marker: 221.9M at zero degree true north