

Channel Study

REFERENCE		CH# 268D - 101.5 MHz, Pwr= 0.25 kW DA, HAAT= 349.4 M, COR= 529 M DISPLAY DATES									
41 53 06.0 N.		Average Protected F(50-50)= 24.3 km DATA 08-24-16									
87 37 18.0 W.		Standard Directional SEARCH 08-26-16									
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
270B Skokie	WTMX	LIC	CX IL	239.4 59.4	1.33 BLH20020722ABF	41 52 44.0 87 38 08.0	4.200 476	4.0 657	66.3 Chicago Fcc License	-26.2*<	-66.9*<
266B Chicago	WKQX	LIC	CX IL	355.7 175.7	1.54 BMLH20110629BQS	41 53 56.0 87 37 23.0	5.700 425	4.5 606	66.0 Merlin Media License, Llc	-4.0*<	-64.4*<
268D Seward Township	W268AY!	CP	DC IL	317.8 137.8	0.61 BPFT20130215ABD	41 53 20.6 87 37 35.8	0.250	13.7 545	2.9 Educational Media Foundati	-16.0	-15.8
268B South Bend	WNSN	LIC	CN IN	103.9 284.8	120.57 BMLH19900206KG	41 37 00.0 86 13 01.0	13.000 296	127.1 536	66.4 Wsjm, Inc.	-9.9*<	32.3
268D Seward Township	W268AY!	LIC	C IL	232.7 52.2	71.00 BLFT20070803ADT	41 29 47.0 88 17 56.0	0.019 89	19.8 266	6.0 Educational Media Foundati	28.7	-4.0
268L1 Huntley	WHRU-LP	LIC		295.0 114.5	71.54 BLL20141007ABT	42 09 15.0 88 24 23.0	0.032 52			37.5	17.5
215A Glen Ellyn	WDCB	LIC	CN IL	263.2 82.9	38.61 BMLE19840113AF	41 50 36.0 88 05 00.0	5.000 91	78.0 314	65.0 College Of Du Page, Distri	10.0R	28.6M
268B Bloomington	WBNQ	LIC	NCN IL	216.6 35.6	197.47 BLH19971103KB	40 27 01.0 89 00 42.0	50.000 142	134.9 375	62.0 Cumulus Licensing Llc	44.0	58.9
268L1 Lake Villa	WLGS-LP	LIC		326.4 146.0	71.82 BLL20050525AJG	42 25 18.0 88 06 23.0	0.100 30			52.1	59.0
268L1 Kenosha	WIPZ-LP	LIC		347.3 167.1	86.80 BLL20150313ABJ	42 38 49.0 87 51 19.0	0.100 26			63.1	72.9
267D Kankakee	W267CI	CP	C IL	195.0 14.8	87.63 BMPFT20160729AIS	41 07 21.9 87 53 34.8	0.250	14.6 269	10.5 Covenant Network	63.6	63.6

Terrain database is USGS 03 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 restricted contour.
< = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

Exhibit 13-A
Seward Township, IL

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WTMX, channel 270B, Skokie, 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 W268AY.P:	250 watts
The proposed COR for W268AY.P:	349 meters
WTMX F(50/50) contour at proposed site:	110.6dBu
The F(50/10) contour of proposed W268AY.P:	150.6dBu

The predicted distance to the 150.6dbu interfering contour is 3.3 meters. Taking into account the vertical elevation pattern of the single bay antenna and the height above ground of 349M, it has been determined that the interfering contour of 150.6dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 347.5M above ground at a distance of 2.26m from the antenna. Note also this distance is not great enough to affect any of the nearby tall structures in the immediate vicinity.

As can be seen in Exhibit 13–A2 there are no surrounding structures which are tall enough to enter the interfering contour within the 3.3m distance from the antenna.

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
W268AY
Seward Township, IL

ERP (kw): 0.25
Height of Antenna above Ground (m): 349
Translator's IX Contour: 150.6
Antenna Type: Scala CLFM-H

<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	0.2500	3.2732	349.000
5	0.994	0.2468	3.2519	348.717
10	0.980	0.2401	3.2077	348.443
15	0.953	0.2268	3.1177	348.193
20	0.917	0.2100	2.9999	347.974
25	0.873	0.1903	2.8559	347.793
30	0.818	0.1671	2.6758	347.662
35	0.756	0.1427	2.4729	347.582
40	0.690	0.1190	2.2585	347.548
45	0.618	0.0953	2.0212	347.571
50	0.544	0.0738	1.7790	347.637
55	0.468	0.0546	1.5302	347.747
60	0.390	0.0380	1.2765	347.894
65	0.300	0.0225	0.9820	348.110
70	0.190	0.0090	0.6219	348.416
75	0.110	0.0030	0.3600	348.652
80	0.050	0.0006	0.1637	348.839
85	0.030	0.0002	0.0982	348.902
90	0.030	0.0002	0.0982	348.902

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5700 W Oaks Blvd
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Exhibit 13-A
Seward Township, IL

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WKQX, channel 266B, 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 W268AY.P:	250 watts
The proposed COR for W268AY.P:	349 meters
WQKX F(50/50) contour at proposed site:	110.0dBu
The F(50/10) contour of proposed W268AY.P:	150.0dBu

The predicted distance to the 150.0dbu interfering contour is 3.5 meters. Taking into account the vertical elevation pattern of the single bay antenna and the height above ground of 349M, it has been determined that the interfering contour of 150.0dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 347.4M above ground at a distance of 2.4m from the antenna. Note also this distance is not great enough to affect any of the nearby tall structures in the immediate vicinity.

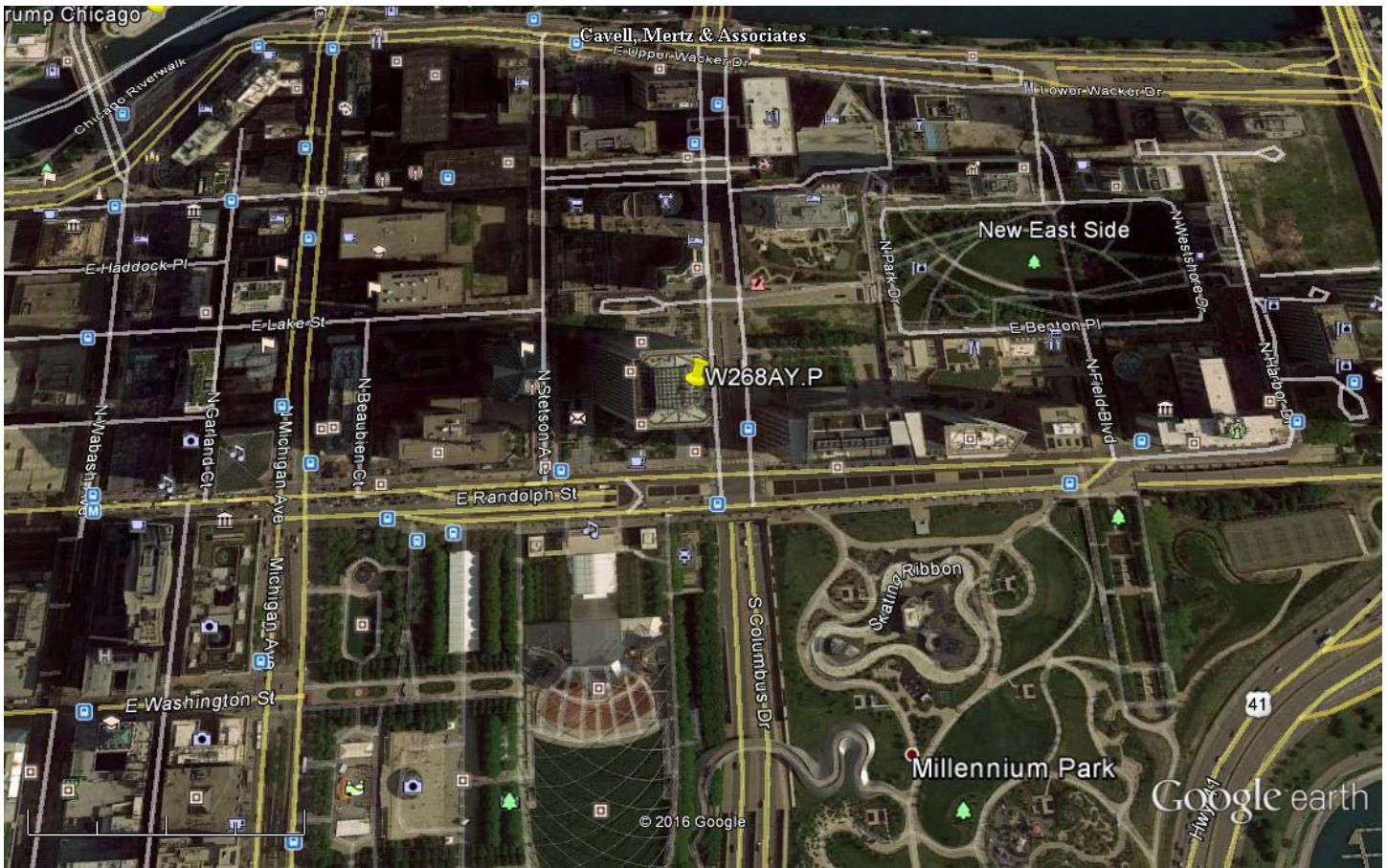
As can be seen in Exhibit 13–A2 there are no surrounding structures which are tall enough to enter the interfering contour within the 3.5m distance from the antenna.

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
W268AY
Seward Township, IL

ERP (kw): 0.25
Height of Antenna above Ground (m): 349
Translator's IX Contour: 150
Antenna Type: Scala CLFM-H

<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	0.2500	3.5073	349.000
5	0.994	0.2468	3.4845	348.696
10	0.980	0.2401	3.4371	348.403
15	0.953	0.2268	3.3407	348.135
20	0.917	0.2100	3.2144	347.901
25	0.873	0.1903	3.0601	347.707
30	0.818	0.1671	2.8672	347.566
35	0.756	0.1427	2.6497	347.480
40	0.690	0.1190	2.4200	347.444
45	0.618	0.0953	2.1657	347.469
50	0.544	0.0738	1.9062	347.540
55	0.468	0.0546	1.6397	347.657
60	0.390	0.0380	1.3678	347.815
65	0.300	0.0225	1.0522	348.046
70	0.190	0.0090	0.6664	348.374
75	0.110	0.0030	0.3858	348.627
80	0.050	0.0006	0.1754	348.827
85	0.030	0.0002	0.1052	348.895
90	0.030	0.0002	0.1052	348.895



Google earth

feet 1000
meters 400



Yellow Pin Marker

NAD 27

41 53' 06.0" N 87 37' 18.0" W