

Channel Study

REFERENCE CH# 252D - 98.3 MHz, Pwr= 0.25 kW DA, HAAT= 96.4 M, COR= 277.9 M DISPLAY DATES
 42 17 04.6 N. Average Protected F(50-50)= 12.6 km DATA 07-03-14
 83 08 25.0 W. Standard Directional SEARCH 07-07-14

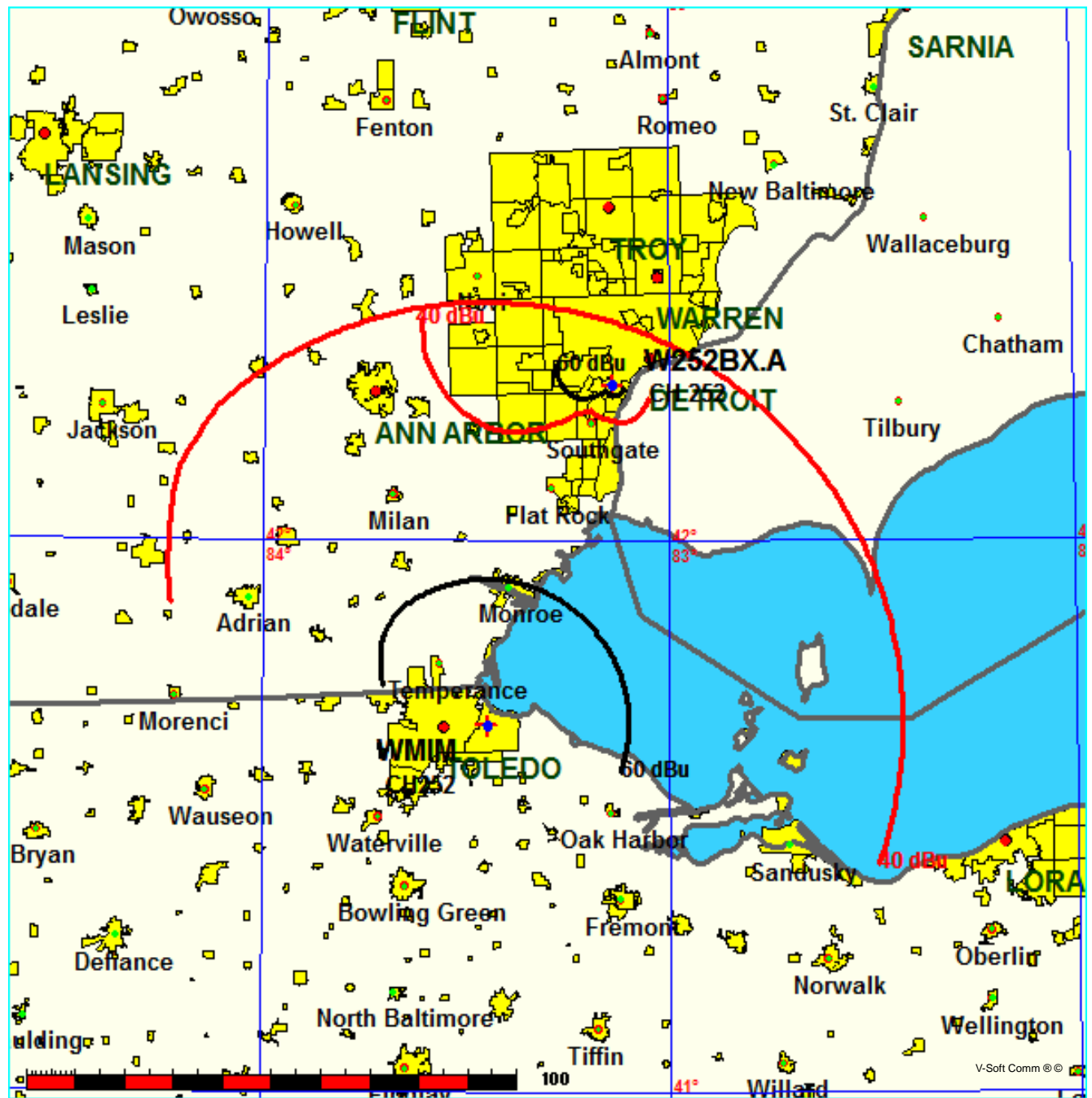
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
254B Detroit	WDZH	LIC	CN MI	356.5 176.5	12.28 BLH19890928KF	42 23 42.0 83 08 58.0	50.000 141	6.0 332	65.3 Cbs Radio East Inc.	-3.1<	-54.3*<
250B Detroit	WJLB	LIC	CN MI	9.7 189.7	13.69 BLH19810811AO	42 24 22.0 83 06 44.0	50.000 149	6.1 339	66.0 Amfm Radio Licenses, L.l.c	0.0<	-53.2*<
252D Detroit	W252BX	CP	DV MI	0.0 0.0	0.00 BPFT20130319ABD	42 17 04.6 83 08 25.0	0.250 98	41.3 278	12.0 Educational Media Foundati	-50.3*	-42.0*
252D Detroit	W252BX	APP	DV MI	0.0 0.0	0.00 BMPFT20140520AHM	42 17 04.6 83 08 25.0	0.250	8.6 278	2.6 Educational Media Foundati	-17.7*	-32.6*
252D Detroit	W252BX	LIC	DV MI	347.4 167.4	4.81 BLFT20090331ASS	42 19 37.0 83 09 11.0	0.170 25	4.2 209	1.6 Educational Media Foundati	-9.8*	-32.0
252A Luna Pier	WMIM	LIC	ZCX MI	200.8 20.6	73.22 BLH20070301ABH	41 40 05.0 83 27 11.0	3.400 135	85.0 316	29.3 Cumulus Licensing Llc	-13.9*<	36.8
252D Holly	W252CP	CP	C MI	322.8 142.5	55.77 BMPFT20131206AAR	42 40 59.0 83 33 11.0	0.013	24.3 426	7.2 Educational Media Foundati	19.2	6.6
252A Sarnia	AL2988	AL		38.3 218.8	97.73	42 58 20.0 82 23 48.0	6.000 100	86.8 286	38.0	8.8	49.5
252D Chelsea	W252BA	CP	C MI	274.1 93.6	68.15 BPFT20130924AGX	42 19 32.0 83 57 54.0	0.170 28	25.0 310	7.5 Spring Arbor University	32.3	23.8
252D Chelsea	W252BA	LIC	C MI	271.3 90.7	78.04 BLFT20070309ADV	42 17 48.0 84 05 11.0	0.250 17	24.2 309	7.2 Spring Arbor University	43.3	35.1
252D Walpole Island	CFRZ-FM	OPE	CN ON	57.8 238.2	64.26 20110106CA1	42 35 26.0 82 28 38.0	0.050 31	17.1 208	7.4	45.2	47.2
251B Saginaw	WKQC	LIC	CX MI	333.5 153.0	141.03 BMLH20100823ABD	43 25 04.0 83 55 06.0	50.000 150	77.7 332	64.7 The Macdonald Broadcasting	51.8	52.0
250D Bedford Township	1559838	APP	DC MI	208.2 27.9	66.47 BNPFT20030317LQM	41 45 24.5 83 31 07.2	0.055 58	0.1 238	3.0 Michigan Community Radio	64.3	63.4

KM
 Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in
 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

FMCommander Single Allocation Study - 07-07-2014 - NGDC 30 SEC
W252BX.A's Overlaps (In= -13.93 km, Out= 36.8 km)

W252BX.A CH 252 D DA
Lat= 42 17 04.6, Lng= 83 08 25.0
0.25 kW 96.4 M HAAT, 277.9 M COR
Prot.= 60 dBu, Intef.= 40 dBu

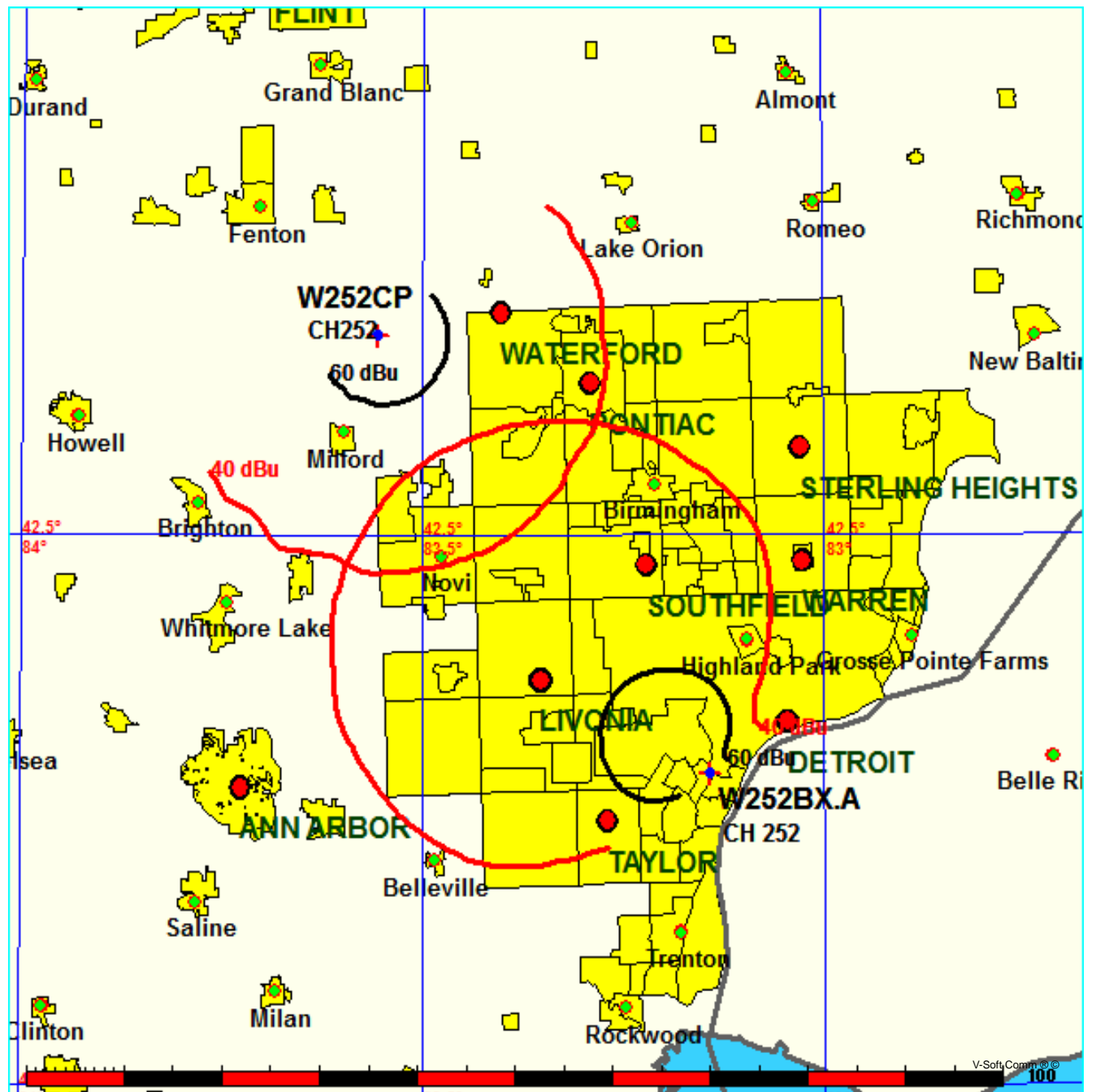
WMIM CH 252 A 73.215 Z BLH20070301ABH
Lat= 41 40 05.0, Lng= 83 27 11.0
3.4 kW 135.1 M HAAT, 316 M COR
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 07-07-2014 - NGDC 30 SEC
W252BX.A's Overlaps (In= 19.24 km, Out= 6.62 km)

W252BX.A CH 252 D DA
Lat= 42 17 04.6, Lng= 83 08 25.0
0.25 kW 96.4 M HAAT, 277.9 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W252CP CH 252 D BMPFT20131206AAR
Lat= 42 40 59.0, Lng= 83 33 11.0
0.013 kW 0 M HAAT, 426 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 WZDH, channel 254B, Detroit, MI. 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 W252BX.P:	250 watts
The proposed COR for W252BX.P:	100 meters
WZDH F(50/50) contour at proposed site:	87.5dBu
The F(50/10) contour of proposed W225AM.P:	127.5dBu

The predicted distance to the 127.5dbu interfering contour is 46.7 meters. Taking into account the vertical elevation pattern of the Scala CL-V single bay antenna and the height above ground of 100M, it has been determined that the interfering contour of 127.5dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 84.91M above ground at a distance of 26.3 meters from the antenna.

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 84.91 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
W252BX
Detroit, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 100
Translator's IX Contour: 127.5
Antenna Type: Scala CL-V

<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	46.7703	100.000
5	0.980	0.2401	45.8349	96.005
10	0.950	0.2256	44.4318	92.285
15	0.895	0.2003	41.8594	89.166
20	0.820	0.1681	38.3516	86.883
25	0.735	0.1351	34.3762	85.472
30	0.645	0.1040	30.1668	84.917
35	0.563	0.0791	26.3083	84.910
40	0.470	0.0552	21.9820	85.870
45	0.360	0.0324	16.8373	88.094
50	0.250	0.0156	11.6926	91.043
55	0.155	0.0060	7.2494	94.062
60	0.085	0.0018	3.9755	96.557
65	0.045	0.0005	2.1047	98.093
70	0.020	0.0001	0.9354	99.121
75	0.010	0.0000	0.4677	99.548
80	0.010	0.0000	0.4677	99.539
85	0.010	0.0000	0.4677	99.534
90	0.010	0.0000	0.4677	99.532

Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WJLB, channel 250B, Detroit, MI. 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 W252BX.P:	250 watts
The proposed COR for W252BX.P:	100 meters
WJLB F(50/50) contour at proposed site:	85.9dBu
The F(50/10) contour of proposed W225AM.P:	125.9dBu

The predicted distance to the 125.9dbu interfering contour is 56.1 meters. Taking into account the vertical elevation pattern of the Scala CL-V single bay antenna and the height above ground of 100M, it has been determined that the interfering contour of 125.9dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 81.858M above ground at a distance of 31.63 meters from the antenna.

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 81.858 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
W252BX
Detroit, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 100
Translator's IX Contour: 125.9
Antenna Type: Scala CL-V

<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	56.2302	100.000
5	0.980	0.2401	55.1056	95.197
10	0.950	0.2256	53.4187	90.724
15	0.895	0.2003	50.3261	86.975
20	0.820	0.1681	46.1088	84.230
25	0.735	0.1351	41.3292	82.534
30	0.645	0.1040	36.2685	81.866
35	0.563	0.0791	31.6295	81.858
40	0.470	0.0552	26.4282	83.012
45	0.360	0.0324	20.2429	85.686
50	0.250	0.0156	14.0576	89.231
55	0.155	0.0060	8.7157	92.861
60	0.085	0.0018	4.7796	95.861
65	0.045	0.0005	2.5304	97.707
70	0.020	0.0001	1.1246	98.943
75	0.010	0.0000	0.5623	99.457
80	0.010	0.0000	0.5623	99.446
85	0.010	0.0000	0.5623	99.440
90	0.010	0.0000	0.5623	99.438



Google earth

feet
meters

100 600



NAD 27

42 17' 04.6" N

83 08' 25.0" W

Marker: 56.1M at zero degrees true north