

Engineering Statement
In Support of an Application for
Authority to Construct a
New Fill-In FM Translator Station
For
WDCX(AM)
Rochester, NY

The Corporate Engineering Department of the Crawford Broadcasting Company, on behalf of its subsidiary, Kimtron, Inc. (“Kimtron”), has prepared this Engineering Statement and associated exhibits to accompany an Application for Authority to Construct a New FM Translator Station.

In a Public Notice, “Filing Instructions for a Second Cross-Service FM Translator Auction Filing Window for AM Broadcasters (Auction 100) to be Open January 25 – January 31, 2018,” DA-17-1168, Released December 4, 2017, the Commission outlined the eligibility for certain AM stations to file for new FM translator stations. Kimtron is licensee of Class B AM station WDCX, Rochester, NY (FID No. 1906). This station meets the eligibility requirements for the second filing window.

A short-form application was filed in the Auction 100 window on January 25, 2017. That application bears File No. BNPFT-20180125ABY and FID No. 202174.

Kimtron proposes to construct a new FM translator station, identified herein as “WDCXAM-FX,” on channel 296 with a maximum Effective Radiated Power of 99 watts H&V and employing a PSI FML-1A-DA directional antenna with a 6 dB null to the north. The antenna will be mounted on an existing 182.9-meter tower, ASRN 1000493, at an elevation of 214.5 meters above mean sea level (AMSL) and 50 meters above ground level (AGL), which corresponds to a height above average terrain (HAAT) of 73.5 meters.

Table 1 below shows a channel spacing study from the proposed site for the proposed WDCXAM-FX on channel 296D.

The spacing study shows that the proposed facility is short-spaced to co-channel Canadian station CILQ-FM (296C1) in Toronto. Figure 1 shows that there is no overlap of the proposed 34 dBu contour with the 86 km 54 dBu maximum contour distance arc from CILQ-FM in accordance with Paragraph 5.2.2.1 of the U.S.-Canadian FM Broadcasting Service Agreement and the Associated Working Arrangement (“Agreement”). The 34 dBu contour will not exceed 60 km in any direction in compliance with Paragraph 4.3 of the Agreement as amended.

The spacing study shows that the proposed facility is short-spaced to second-adjacent channel station WKGS (294A) in Irondequoit, NY. WKGS produces a field strength of 81.1 dBu at the proposed site. The +40 dB 121.1 dBu maximum contour distance from the antenna is 61

meters, which will not reach the ground and as such has zero population. 47 C.F.R. §74.1204(d) thus applies for WKGS.

This study shows a short-spacing to a Canadian 296B allocation at Trenton, Ontario. Figure 1 shows that there is no overlap of the proposed 34 dBu F(50,10) contour with the Trenton 65 km 54 dBu maximum contour distance arc from the Trenton reference coordinates in accordance with Paragraph 5.2.2.1 of the Agreement.

WCMF (243B) is a 10.6/10.8 MHz short-spacing to the proposed facility. Because the proposed facility will operate with less than 100 watts ERP, in accordance with 47 C.F.R. §74.1204(g), it will not be subject to intermediate frequency separation requirements.

W298CH (298D) is second-adjacent channel to the proposed facility. Figures 2 and 2A show that the proposed facility will not produce any prohibited overlap to the W298CH CP 60 dBu contour.

The study identifies WNBL (297A) as close-spaced to the proposed facility. Figures 1 and 2 show that the proposed facility will not produce any prohibited overlap to the WNBL protected 60 dBu contour.

The study also lists WLKK (299B) as close-spaced to the proposed facility. Figures 2 and 2A show that the proposed facility will not produce any prohibited overlap to the WLKK protected 54 dBu contour.

Finally, the study shows that the proposed facility is close-spaced to a proposed new translator in Brockport, NY (293D, BNPFT-20180129ABH). While not shown on Figure 2 because the contours are small in area, there is no overlap between the proposed 100 dBu and the Brockport 60 dBu contours.

Figure 3 and Table 2 show the proposed directional antenna pattern for use by WDCXAM-FX on channel 296D at the proposed site.

Figure 4 shows the proposed 60 dBu contour of WDCXAM-FX will be completely contained within the licensed 2 mV/m daytime contour of station WDCX(AM).

It was concluded that the new proposed operation of the proposed WDCXAM-FX on channel 296D at the proposed site will not cause any harmful interference to any existing stations and will be in full compliance with the Commission's rules.

Respectfully submitted,



W.C. Alexander, CPBE, AMD, DRB
Director of Engineering
Crawford Broadcasting Company

FM Study for: FCC Database Date: 9/28/2018 43-10-13

Location: ROCHESTER, NY Channel Class: 77-40-23

[*] by HAAT indicates calculated as missing in database.

Call City, State Chan Cl. Freq kW Latitude Dist. Required
Status Proponent File Number HAAT Longitude Azm. Clear (km) Site

>>>>>> Study For Channel 296 107.1 MHz <<<<<<<

CILQFM	TORONTO, ON	296	C1	107.1	40.0	43-38-33	148.4	182	
	Fac. No. 96076	-			421	79-23-15	291.3	-33.6	SHORT
	SPECIAL NEGOTIATED SHORT-SPACED ALLOCATION.								
WKGS	IRONDEQUOIT, NY	294	A	106.7	4.60+	43-08-05	8.2	29	
LIC	Fac. No. 3205	BLH-20120906AAY			114	77-35-07	119.1	-20.8	SHORT
ALLOCR	TRENTON, ON	296	B	107.1		44-07-42	106.4	125	
		-				77-39-42	0.5	-18.6	SHORT
WCMF-A	ROCHESTER, NY	243	B	96.5	4.20	43-08-05	8.2	15	
LIC	Fac. No. 1905	BXLH-20160811ADI			109	77-35-07	119.1	-6.8	SHORT
WCMFFM	ROCHESTER, NY	243	B	96.5	48.0	43-08-05	8.2	15	
LIC	Fac. No. 1905	BLH-20060901AAD			142	77-35-06	119.1	-6.8	SHORT
WCMF-A	ROCHESTER, NY	243	B	96.5	6.30	43-08-05	8.2	15	
LIC	Fac. No. 1905	BXLH-20060905ABI			142	77-35-06	119.1	-6.8	SHORT
WCMF-A	ROCHESTER, NY	243	B	96.5	9.20	43-08-07	8.2	15	
LIC	Fac. No. 1905	BLH-19911126KB			100	77-35-02	118.4	-6.8	SHORT
W298CH	ROCHESTER, NY	298	D	107.5	.250	43-13-09	12.9	14	
LIC	Fac. No. 138910	BLFT-20180316AAH			46	77-31-45	65.2	-1.1	SHORT
WNBL	SOUTH BRISTOL TO, NY	297	A	107.3	.650	42-44-47	51.2	47	
LIC	Fac. No. 27580	BLH-20020117AAL			303	77-25-35	156.8	4.2	CLOSE
	3/22/2013: Accepted on channel 297-A (42-44-47 N 77-25-35 W) by Industry Can								
NEW	BROCKPORT, NY	293	D	106.5	.075+	43-11-44	22.8	14	
APP	Fac. No. 202663	BNPFT-20180129ABH			73	77-57-04	277.1	8.8	CLOSE
WLKK	WETHERSFIELD TWN, NY	299	B	107.7	17.0+	42-37-25	78.9	67	
LIC	Fac. No. 9250	BLH-20150122ABI			258	78-17-21	219.8	11.9	CLOSE
W297BK	ATTICA, NY	297	D	107.3	.250+	42-50-16	62.2	32	
LIC	Fac. No. 151657	BLFT-20160805ABP			-79	78-17-14	233.8	30.2	CLEAR
W296DI	SENECA FALLS, NY	296	D	107.1	.200+	42-54-55	78.5	44	
LIC	Fac. No. 138690	BLFT-20161205AAQ			60	76-46-28	110.9	34.5	CLEAR
WYRK	BUFFALO, NY	293	B	106.5	50.0	42-53-10	102.8	67	
LIC	Fac. No. 1908	BLH-19950814KA			142	78-52-25	252.5	35.8	CLEAR
	Specially negotiated short-spaced allotment								

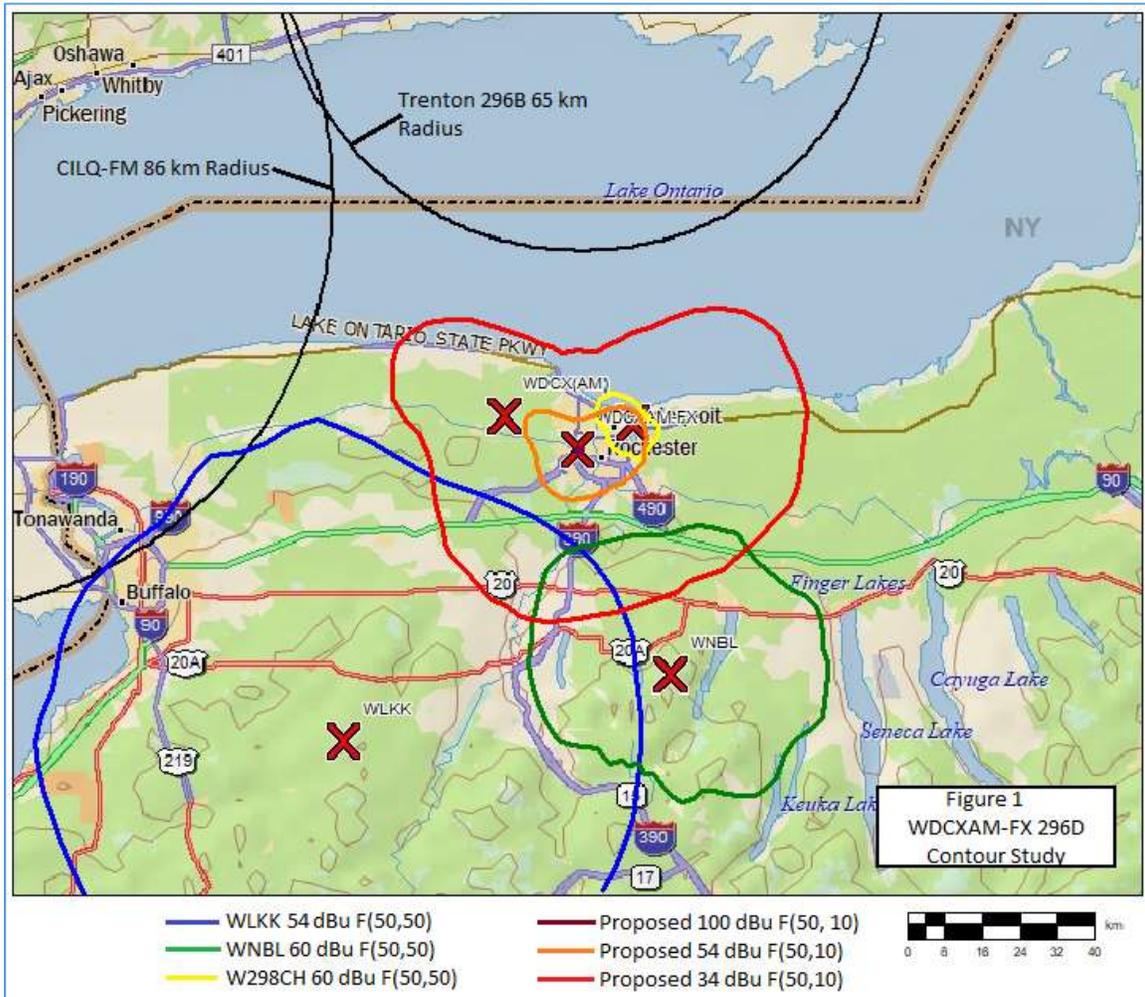


Figure 1 – WDCXAM-FX-P Contour Protection Study

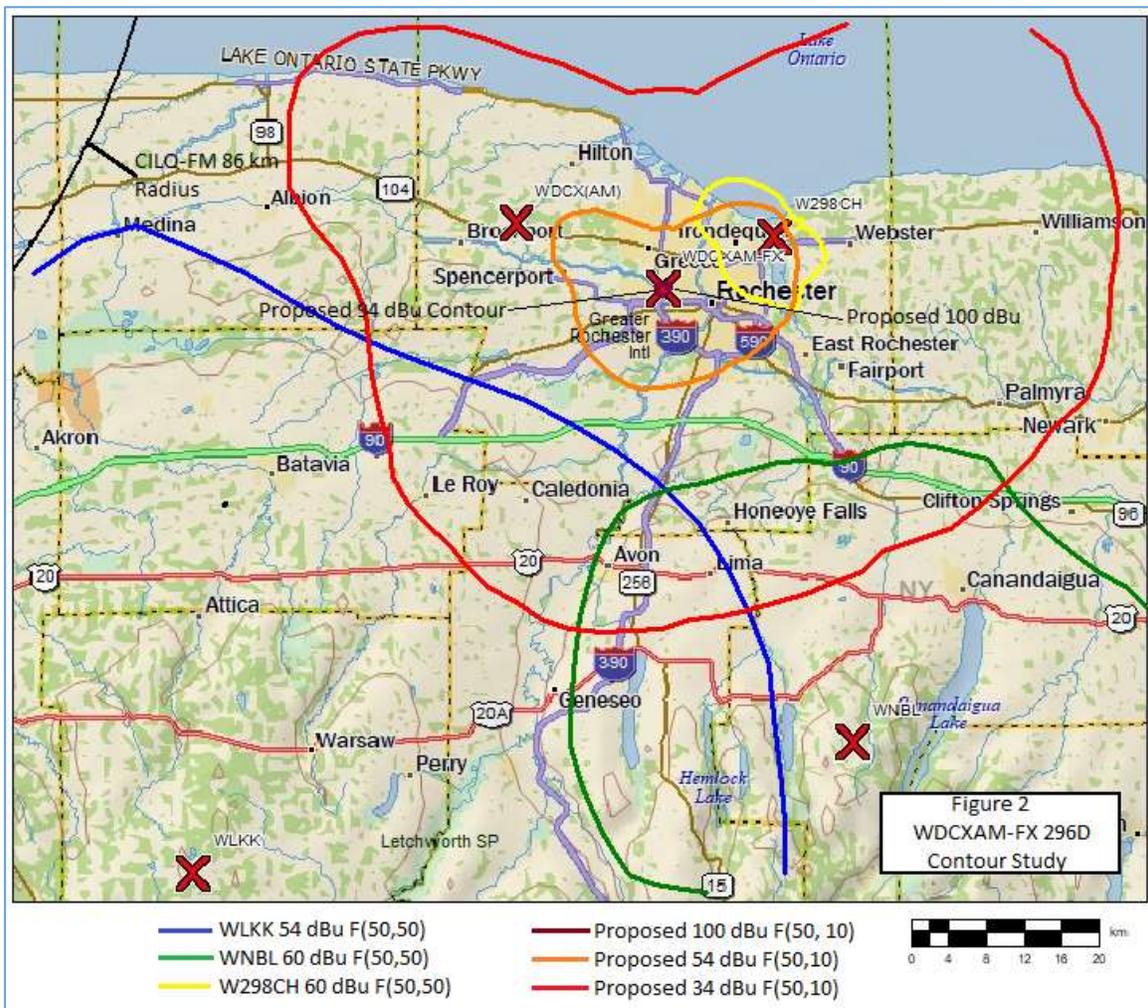


Figure 2 - WDCXAM-FX-P Contour Protection Study

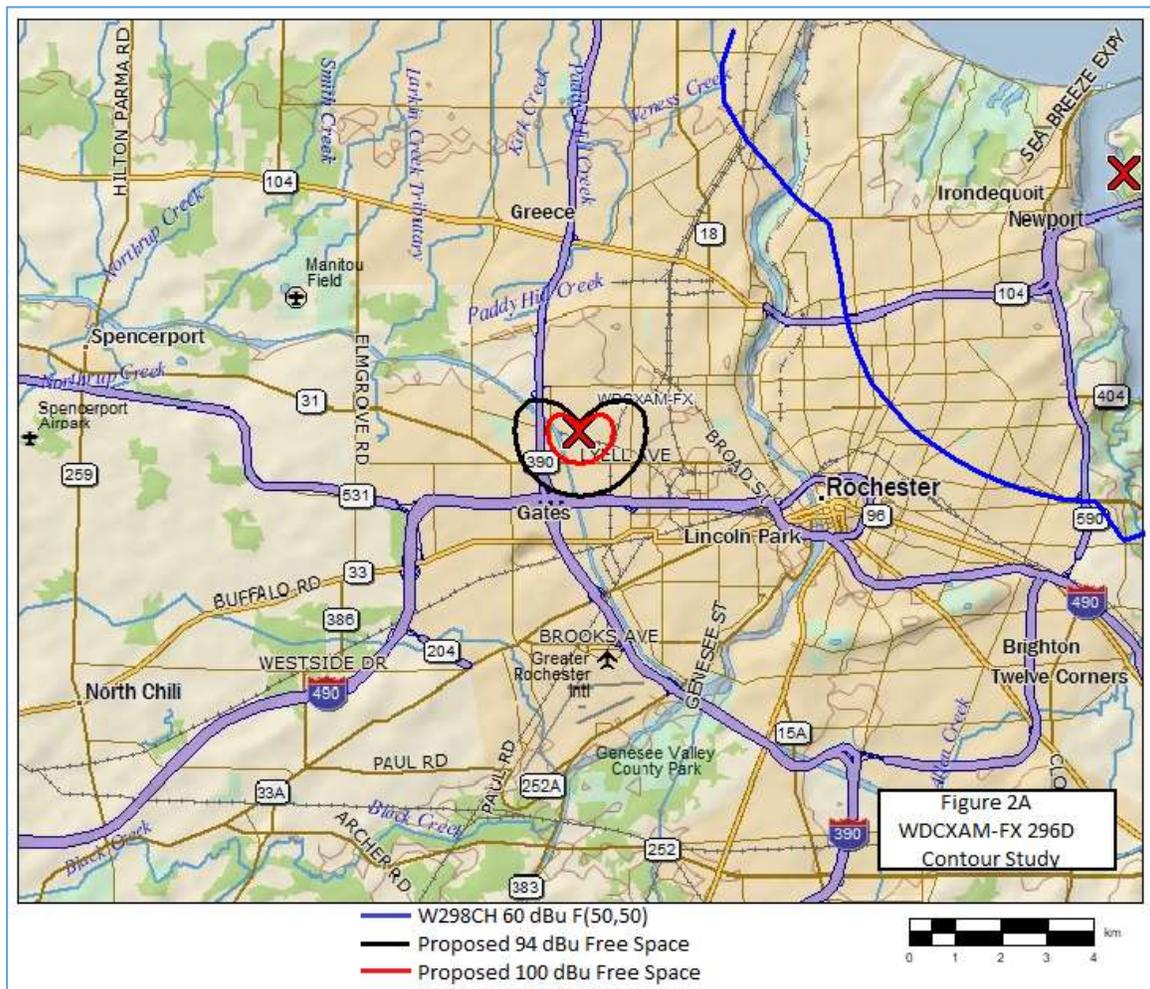


Figure 2A - WDCXAM-FX-P Contour Protection Study (Expanded)

WDCX-FX
Max ERP = 0.099 kW
Orientation = 0 Deg.
Max Scale = 1.000

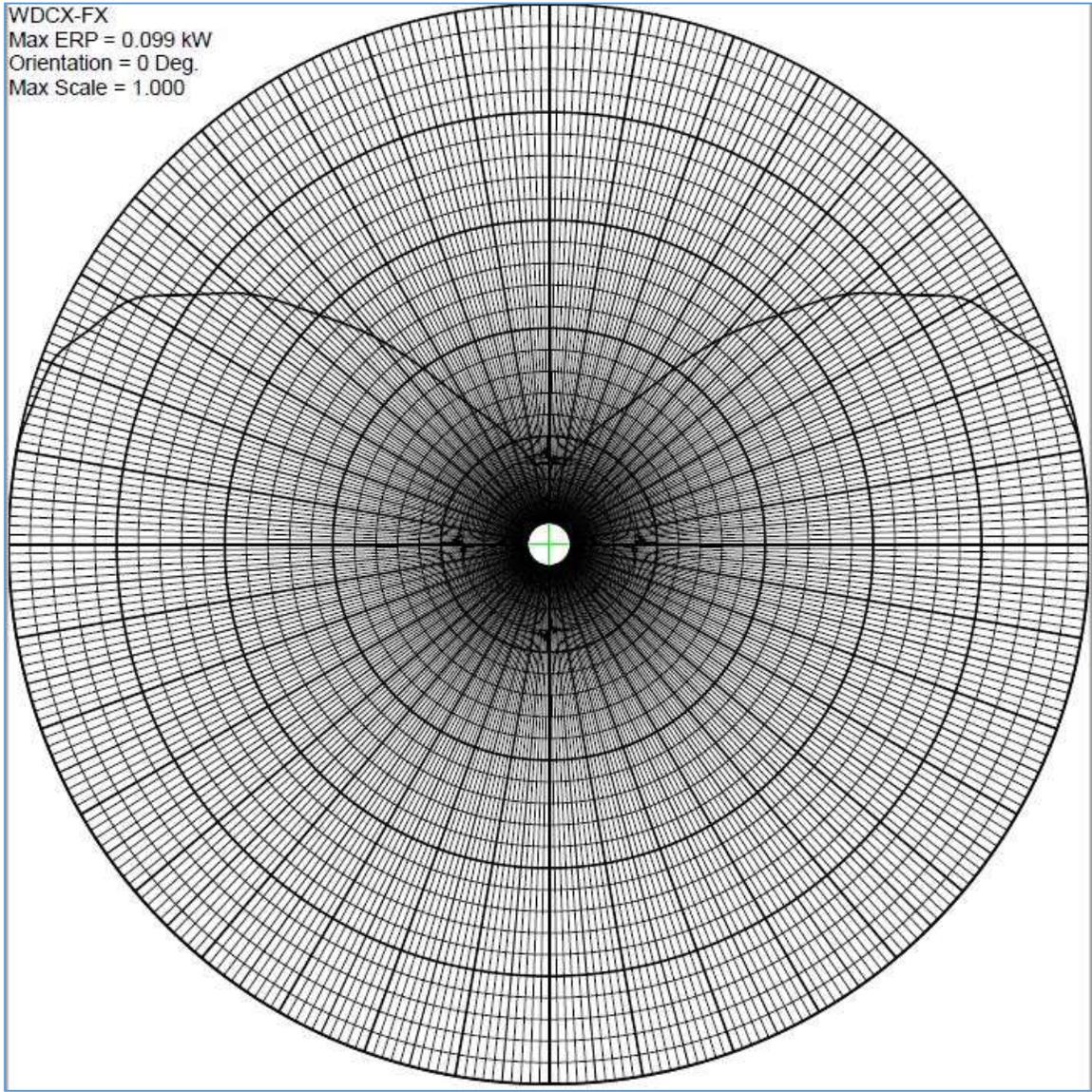


Figure 3 – Composite Directional Pattern

Table 2
WDCX-FX Pattern
Horizontal Plane Pattern
Pattern RMS: .8554 Field

Azimuth	Field	dBk	ERP(kW)	Azimuth	Field	dBk	ERP(kW)
0	0.150	-26.52	0.00	180	1.000	-10.04	0.10
5	0.150	-26.52	0.00	185	1.000	-10.04	0.10
10	0.150	-26.52	0.00	190	1.000	-10.04	0.10
15	0.177	-25.06	0.00	195	1.000	-10.04	0.10
20	0.210	-23.60	0.00	200	1.000	-10.04	0.10
25	0.251	-22.05	0.01	205	1.000	-10.04	0.10
30	0.300	-20.50	0.01	210	1.000	-10.04	0.10
35	0.387	-18.28	0.01	215	1.000	-10.04	0.10
40	0.500	-16.06	0.02	220	1.000	-10.04	0.10
45	0.600	-14.48	0.04	225	1.000	-10.04	0.10
50	0.720	-12.90	0.05	230	1.000	-10.04	0.10
55	0.805	-11.93	0.06	235	1.000	-10.04	0.10
60	0.900	-10.96	0.08	240	1.000	-10.04	0.10
65	0.939	-10.59	0.09	245	1.000	-10.04	0.10
70	0.980	-10.22	0.10	250	1.000	-10.04	0.10
75	0.990	-10.13	0.10	255	1.000	-10.04	0.10
80	1.000	-10.04	0.10	260	1.000	-10.04	0.10
85	1.000	-10.04	0.10	265	1.000	-10.04	0.10
90	1.000	-10.04	0.10	270	1.000	-10.04	0.10
95	1.000	-10.04	0.10	275	1.000	-10.04	0.10
100	1.000	-10.04	0.10	280	1.000	-10.04	0.10
105	1.000	-10.04	0.10	285	0.990	-10.13	0.10
110	1.000	-10.04	0.10	290	0.980	-10.22	0.10
115	1.000	-10.04	0.10	295	0.939	-10.59	0.09
120	1.000	-10.04	0.10	300	0.900	-10.96	0.08
125	1.000	-10.04	0.10	305	0.805	-11.93	0.06
130	1.000	-10.04	0.10	310	0.720	-12.90	0.05
135	1.000	-10.04	0.10	315	0.600	-14.48	0.04
140	1.000	-10.04	0.10	320	0.500	-16.06	0.02
145	1.000	-10.04	0.10	325	0.387	-18.28	0.01
150	1.000	-10.04	0.10	330	0.300	-20.50	0.01
155	1.000	-10.04	0.10	335	0.251	-22.05	0.01
160	1.000	-10.04	0.10	340	0.210	-23.60	0.00
165	1.000	-10.04	0.10	345	0.177	-25.06	0.00
170	1.000	-10.04	0.10	350	0.150	-26.52	0.00
175	1.000	-10.04	0.10	355	0.150	-26.52	0.00

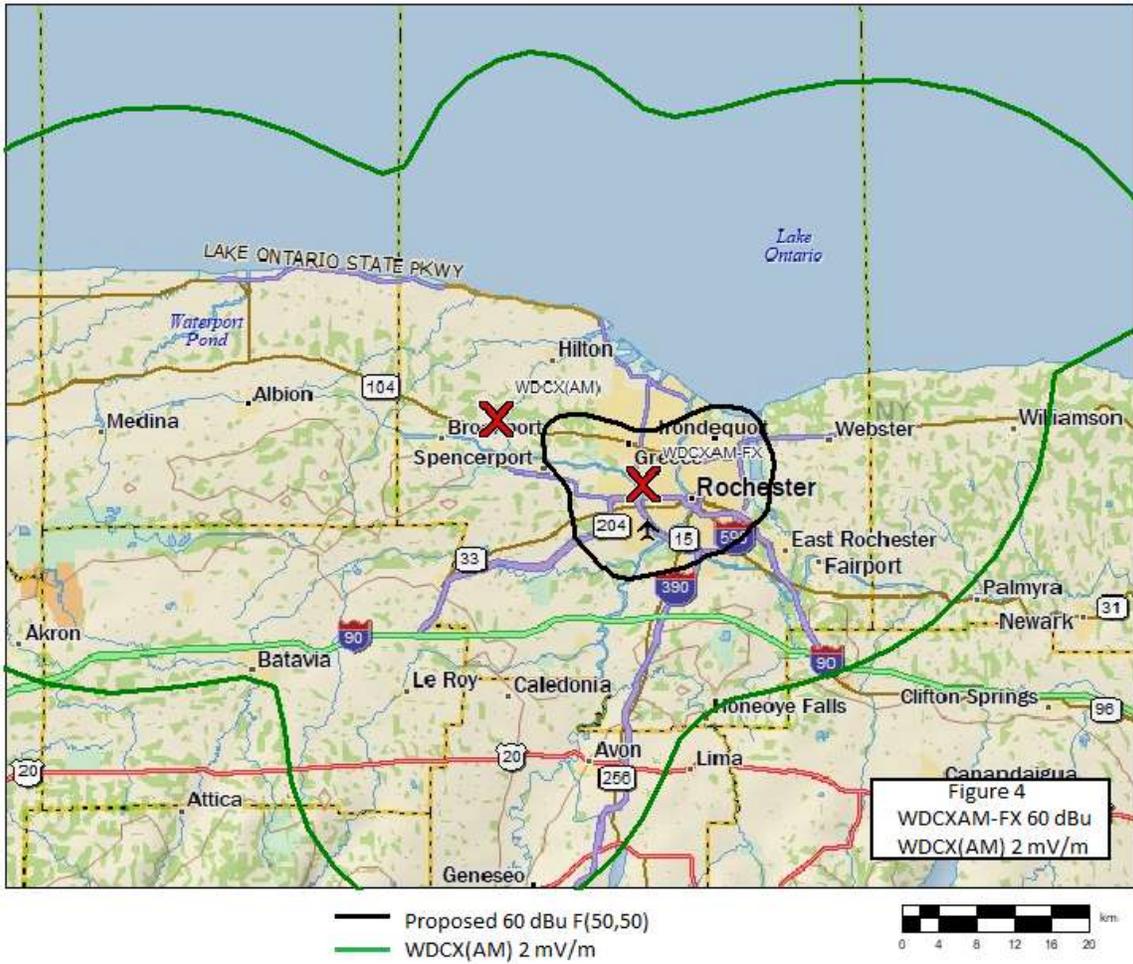


Figure 4 – WDCXAM-FX-P 60 dBu and WDCX(AM) 2 mV/m Daytime Contours