

Channel Study

REFERENCE		CH# 288D - 105.5 MHz, Pwr= 0.25 kW DA, HAAT= 93.8 M, COR= 313 M								DISPLAY DATES	
42 38 54.9 N.		Average Protected F(50-50)= 12.5 km								DATA 11-29-12	
83 04 31.3 W.		Standard Directional								SEARCH 11-29-12	
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	*OUT* in km)
286B Detroit	WMGC-FM	LIC	CX MI	198.5 18.5	22.8 BMLH20061004AIW	42 27 13.0 83 09 50.0	50.000 150	6.0 349	65.5 Greater Boston Radio, Inc.	6.0	-44.0*<
290B Detroit	WDMK	LIC	DCN MI	207.6 27.5	22.2 BLH19840619CK	42 28 16.0 83 12 03.0	20.000 221	5.6 429	63.8 Radio One Of Detroit, Llc	5.0	-43.2*<
288D Rochester Hills	W288BK	LIC	C MI	309.8 129.7	5.2 BLFT20110131AAB	42 40 43.0 83 07 28.0	0.038 52	26.7 294	8.0 Educational Media Foundati	-24.7*	-13.1*
288D Rochester Hills	W288BK	CP	C MI	309.8 129.7	5.2 BFPT20120716ADX	42 40 43.0 83 07 28.0	0.030	26.4 303	7.9 Educational Media Foundati	-24.4*	-13.0*
288B1 Flint	WWCK-FM	LIC	ZCN MI	310.8 130.4	61.9 BLH19970124KD	43 00 39.0 83 39 04.0	25.000 100	74.3 337	26.6 Cumulus Licensing Llc	-15.6*<	23.0
288A Chatham	CHATHAM	AL	HN ON	110.4 291.0	78.3 0	42 24 00.0 82 10 59.0	6.000 100	87.7 278	38.0 Chatham 41	-15.1*<	13.1
288A Chatham	LRRP-456	LR	HN ON	104.9 285.5	84.4	42 27 00.0 82 04 59.0	6.000 100	87.5 283	39.6 Lrrp-456	-8.6*<	19.1
288A Windsor	CBEF-2-FM	OP	DHN ON	176.7 356.7	37.0 8979	42 18 59.0 83 02 58.0	2.400 74	19.9 258	8.5 Cbef-2-fm	10.4	-2.6<
288D Detroit	643426	APP	C MI	174.9 354.9	34.1 BNPFT20030317HOP	42 20 33.9 83 02 18.3	0.170 24	21.5 206	6.4 Radio Assist Ministry, Inc	6.3	6.7
234B Birmingham	WCSX<	LIC	CN MI	198.5 18.5	22.8 BMLH19981008KA	42 27 13.0 83 09 50.0	13.500 290	60.0 488	65.5 Greater Boston Radio, Inc.	14.5R	8.3M
288A Sylvania	WWWM-FM	LIC	CX OH	201.6 21.2	119.6 BLH20091204AAR	41 38 49.0 83 36 18.0	4.300 119	84.8 303	28.5 Cumulus Licensing Llc	23.6	52.9
288D St. Clair	W288BT	LIC	V MI	70.2 250.6	49.2 BLFT20080304ACT	42 47 48.0 82 30 32.0	0.008 1	9.6 186	3.0 Radio Assist Ministry, Inc	33.6	26.5
288D St. Clair	W288BT	CP	DC MI	63.1 243.5	53.2 BPFT20120103ACW	42 51 47.0 82 29 42.0	0.021	13.9 229	4.4 Radio Assist Ministry, Inc	33.0	28.2
291B Charlotte	WJXQ	LIC	CX MI	257.8 76.8	130.3 BLH20060103ABP	42 23 31.0 84 37 22.0	49.000 151	6.1 442	65.8 Midwest Communications, In	115.1	62.9
291B Charlotte	AL4309	RSV-A	MI	257.8 76.8	130.3 RM11134	42 23 28.0 84 37 22.0	50.000 150	6.0 438	65.6	115.1	63.2

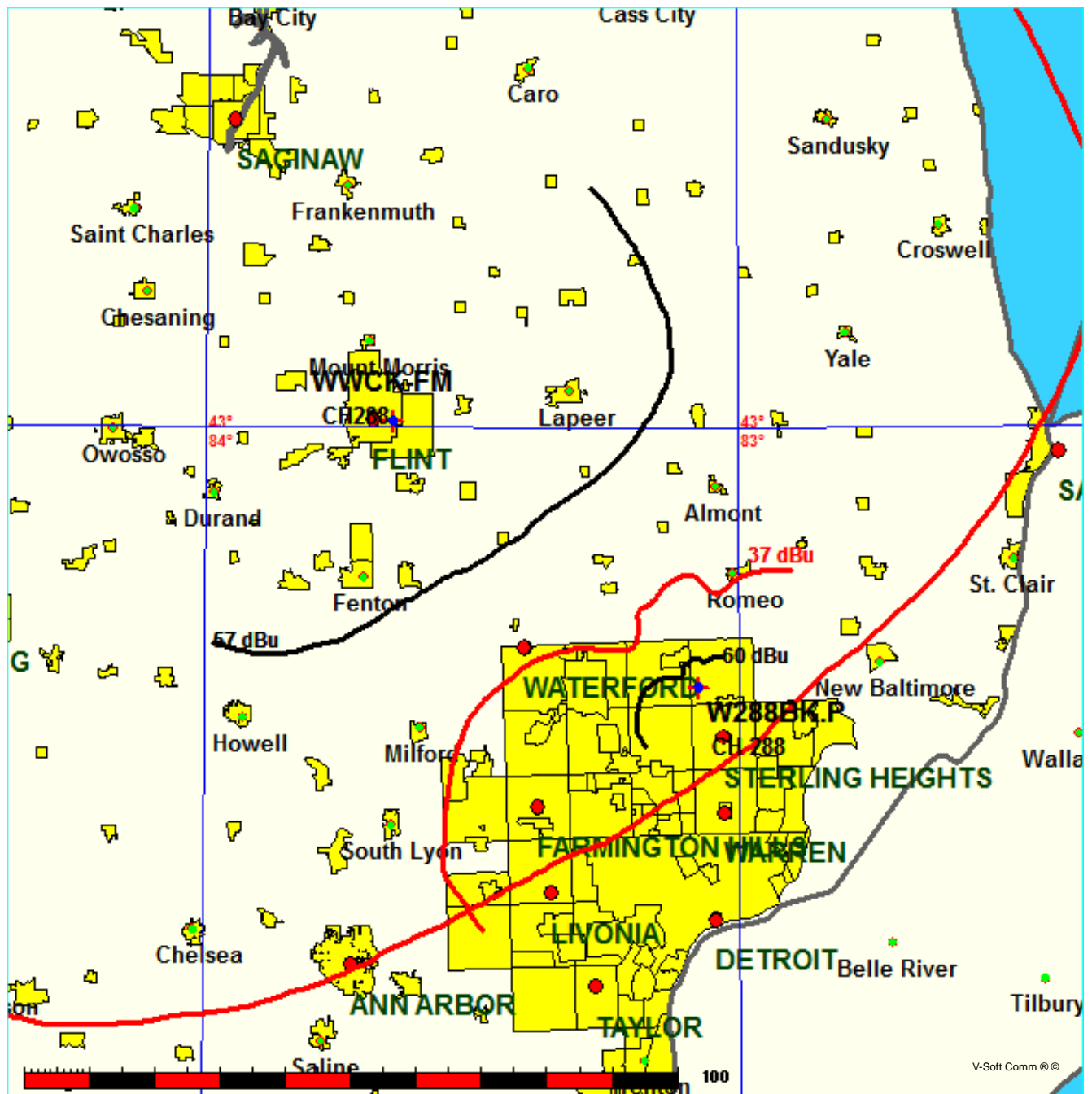
 Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in
 KM
 Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd
 adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization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

Educational Media Foundation

FMCommander Single Allocation Study - 11-29-2012 - NGDC 30 SEC
W288BK.P's Overlaps (In= -15.6 km, Out= 23.04 km)

W288BK.P CH 288 D DA
Lat= 42 38 54.9, Lng= 83 04 31.3
0.25 kW 93.8 M HAAT, 313 M COR
Prot.= 60 dBu, Intef.= 37 dBu

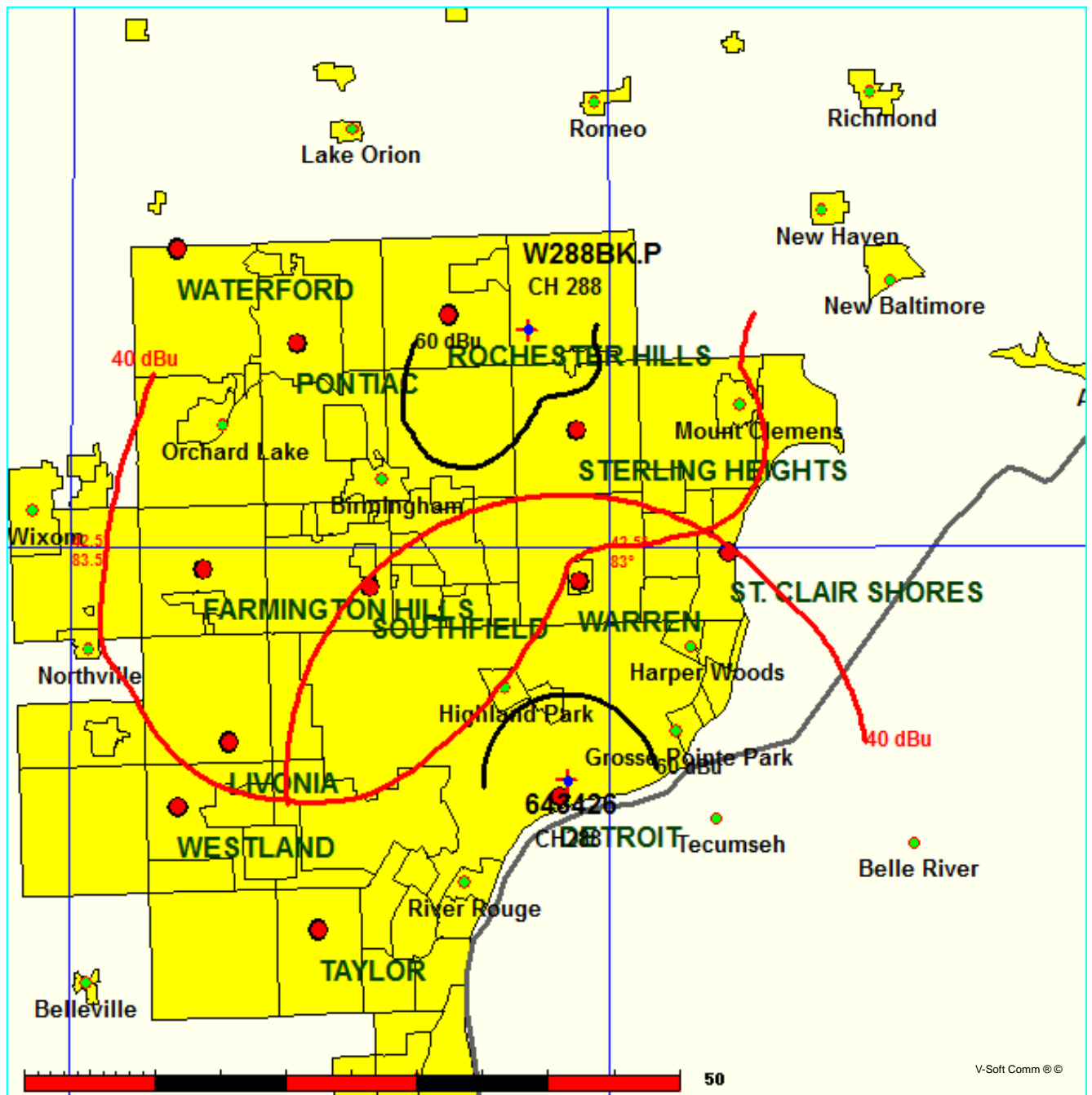
WWCK-FM CH 288 B1 73.215 Z BLH19970124KD
Lat= 43 00 39.0, Lng= 83 39 04.0
25.0 kW 100 M HAAT, 337 M COR
Prot.= 57 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 11-29-2012 - NGDC 30 SEC
W288BK.P's Overlaps (In= 6.33 km, Out= 6.74 km)

W288BK.P CH 288 D DA
Lat= 42 38 54.9, Lng= 83 04 31.3
0.25 kW 93.8 M HAAT, 313 M COR
Prot.= 60 dBu, Intef.= 40 dBu

643426 CH 288 D BNPFT20030317HOP
Lat= 42 20 33.9, Lng= 83 02 18.3
0.17 kW 23.6 M HAAT, 205.8 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 WMGC, channel 286B, 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 W288BK.P:	250 watts
The proposed COR for W288BK.P:	100 meters
WMGC F(50/50) contour at proposed site:	77.0dBu
The F(50/10) contour of proposed W288BK.P:	117.0dBu

The predicted distance to the 117.0dbu interfering contour is 157.4 meters. Taking into account the vertical elevation pattern for the Scala CA5-FM/CP/RM one bay full-waved spaced antenna and the height above ground of 100M, it has been determined that the interfering contour of 117.0dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 43.54 meters 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 43.54 meter aperture within the 157.4 meter predicted interference distance.

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
W288BK
Rochester Hills, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 100
Translator's IX Contour: 117
Antenna Type: Scala CA5-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	0.2500	156.6643	100.00
5	0.982	0.2412	153.8913	86.59
10	0.952	0.2267	149.1914	74.09
15	0.915	0.2092	143.3008	62.91
20	0.866	0.1875	135.6713	53.60
25	0.796	0.1584	124.7048	47.30
30	0.718	0.1290	112.5320	43.73
35	0.628	0.0987	98.4322	43.54
40	0.528	0.0698	82.7657	46.80
45	0.423	0.0448	66.3160	53.11
50	0.329	0.0271	51.5895	60.48
55	0.246	0.0152	38.5864	68.39
60	0.190	0.0090	29.7662	74.22
65	0.142	0.0050	22.1993	79.88
70	0.131	0.0043	20.5857	80.66
75	0.132	0.0043	20.6014	80.10
80	0.142	0.0050	22.1993	78.14
85	0.150	0.0056	23.4996	76.59
90	0.157	0.0062	24.6433	75.36

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

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WDMK, channel 290B, 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 W288BK.P:	250 watts
The proposed COR for W288BK.P:	100 meters
WMGC F(50/50) contour at proposed site:	76.7dBu
The F(50/10) contour of proposed W288BK.P:	116.7dBu

The predicted distance to the 116.7dbu interfering contour is 161.5 meters. Taking into account the vertical elevation pattern for the Scala CA5-FM/CP/RM one bay full-waved spaced antenna and the height above ground of 100M, it has been determined that the interfering contour of 116.7dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 41.56 meters 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 41.56 meter aperture within the 161.5 meter predicted interference distance.

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
W288BK
Rochester Hills, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 100
Translator's IX Contour: 116.7
Antenna Type: Scala CA5-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	0.2500	162.1698	100.00
5	0.982	0.2412	159.2994	86.12
10	0.952	0.2267	154.4343	73.18
15	0.915	0.2092	148.3367	61.61
20	0.866	0.1875	140.4391	51.97
25	0.796	0.1584	129.0872	45.45
30	0.718	0.1290	116.4866	41.76
35	0.628	0.0987	101.8913	41.56
40	0.528	0.0698	85.6743	44.93
45	0.423	0.0448	68.6465	51.46
50	0.329	0.0271	53.4025	59.09
55	0.246	0.0152	39.9424	67.28
60	0.190	0.0090	30.8123	73.32
65	0.142	0.0050	22.9795	79.17
70	0.131	0.0043	21.3091	79.98
75	0.132	0.0043	21.3253	79.40
80	0.142	0.0050	22.9795	77.37
85	0.150	0.0056	24.3255	75.77
90	0.157	0.0062	25.5093	74.49

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

US-Canadian Compliance

W288BK.P

BLFT20110131AAB

Latitude: 42-38-54.90 N

Longitude: 083-04-31.30 W

ERP: 0.25 kW

Channel: 288

Frequency: 105.5 MHz

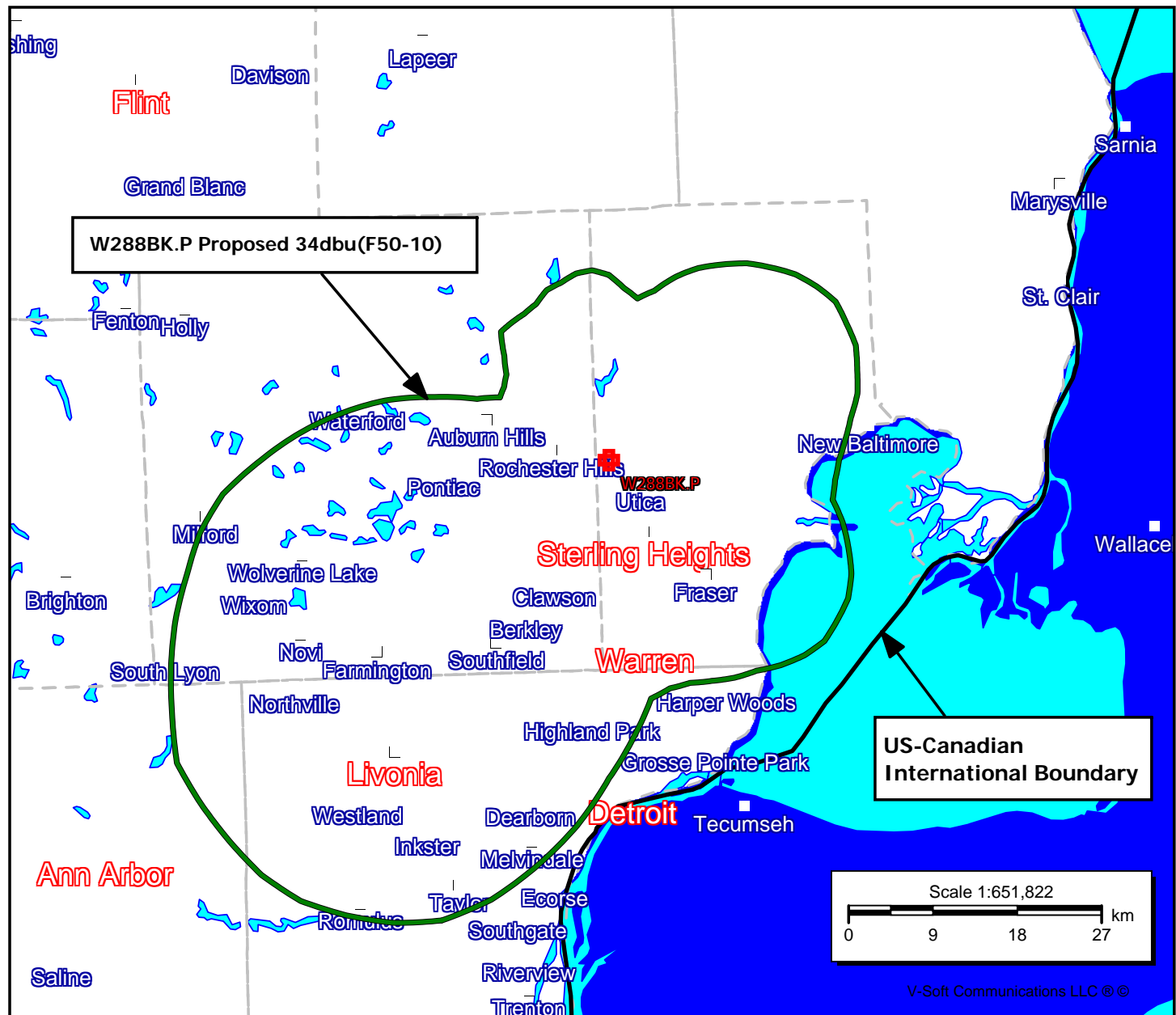
AMSL Height: 313.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

W288BK.P Proposed 34dbu(F50-10)



US-Canadian
International Boundary

Scale 1:651,822

0 9 18 27 km

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