

Channel Study

REFERENCE CH# 296D - 107.1 MHz, Pwr= 0.25 kW DA, HAAT= 72.2 M, COR= 254.4 M DISPLAY DATES
42 30 40.7 N. Average Protected F(50-50)= 11.0 km DATA 02-27-13
82 57 34.1 W. Standard Directional SEARCH 03-03-13

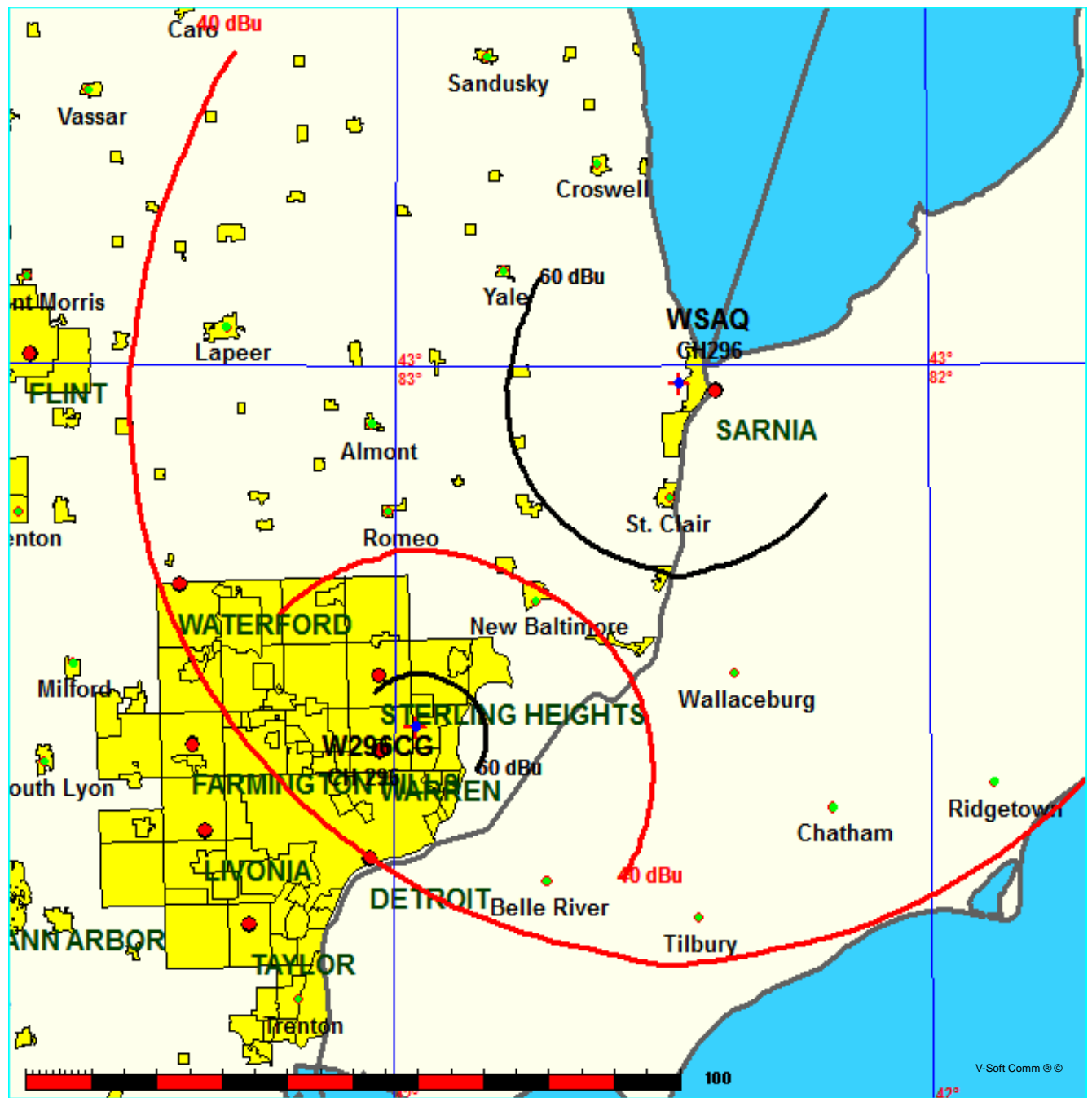
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
294B Detroit	WDTW-FM	LIC	CN MI	199.4 19.4	21.13 BMLH19890804KA	42 19 55.0 83 02 42.0	61.000 155	6.3 338	66.9 Amfm Radio Licenses, L.l.c	4.3	-47.4*<
298B Detroit	WGPR	LIC	CX MI	207.0 26.9	19.14 BLH20040422ABP	42 21 28.0 83 03 55.0	50.000 124	5.5 316	61.5 Wgpr, Inc.	3.2	-44.0*<
296A Port Huron	WSAQ	LIC	CN MI	37.8 218.1	65.71 BLH19910806KA	42 58 37.0 82 27 52.0	6.000 91	86.0 286	27.8 Liggett Communications, L.	-28.5*<	10.5
296D Detroit	W296CG	LIC	C MI	246.3 66.2	14.56 BLFT20120725ADM	42 27 31.0 83 07 18.0	0.038	23.5 264	7.0 Educational Media Foundati	-18.9*	-25.7
296A Ann Arbor	WQKL	LIC	CN MI	248.3 67.8	69.46 BLH19911119KA	42 16 41.0 83 44 32.0	3.000 88	75.0 350	23.7 Cumulus Licensing Llc	-15.5*<	12.7
242B Detroit	WDVD<	LIC	CN MI	249.1 69.0	17.98 BLH19861112KB	42 27 13.0 83 09 50.0	20.000 240	39.5 440	26.0 Radio License Holding I, L	14.5R	3.5M
296A Saginaw	WTLZ	LIC	CN MI	320.5 139.9	122.01 BMLH19900416KA	43 21 14.0 83 55 06.0	4.900 110	85.1 294	28.2 Nm Licensing Llc	29.0	67.5
299D Fort Gratiot Twp.	650354	APP	C MI	32.1 212.4	73.31 BNPFT20030317JUC	43 04 08.0 82 28 48.0	0.019 100	0.3 291	6.7 Michigan Community Radio	64.9	66.0
297B Elyria	WNWV	LIC	CX OH	149.9 330.5	159.08 BLH20041102AEC	41 16 10.0 82 00 16.0	20.000 238	79.9 493	67.6 Rubber City Radio Group, I	67.6	67.1

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.
< = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap
Reference station has protected zone issue:

FMCommander Single Allocation Study - 03-03-2013 - NGDC 30 SEC
W296CG's Overlaps (In= -28.54 km, Out= 10.52 km)

W296CG CH 296 D DA
Lat= 42 30 40.7, Lng= 82 57 34.1
0.25 kW 72.2 M HAAT, 254.4 M COR
Prot.= 60 dBu, Intef.= 40 dBu

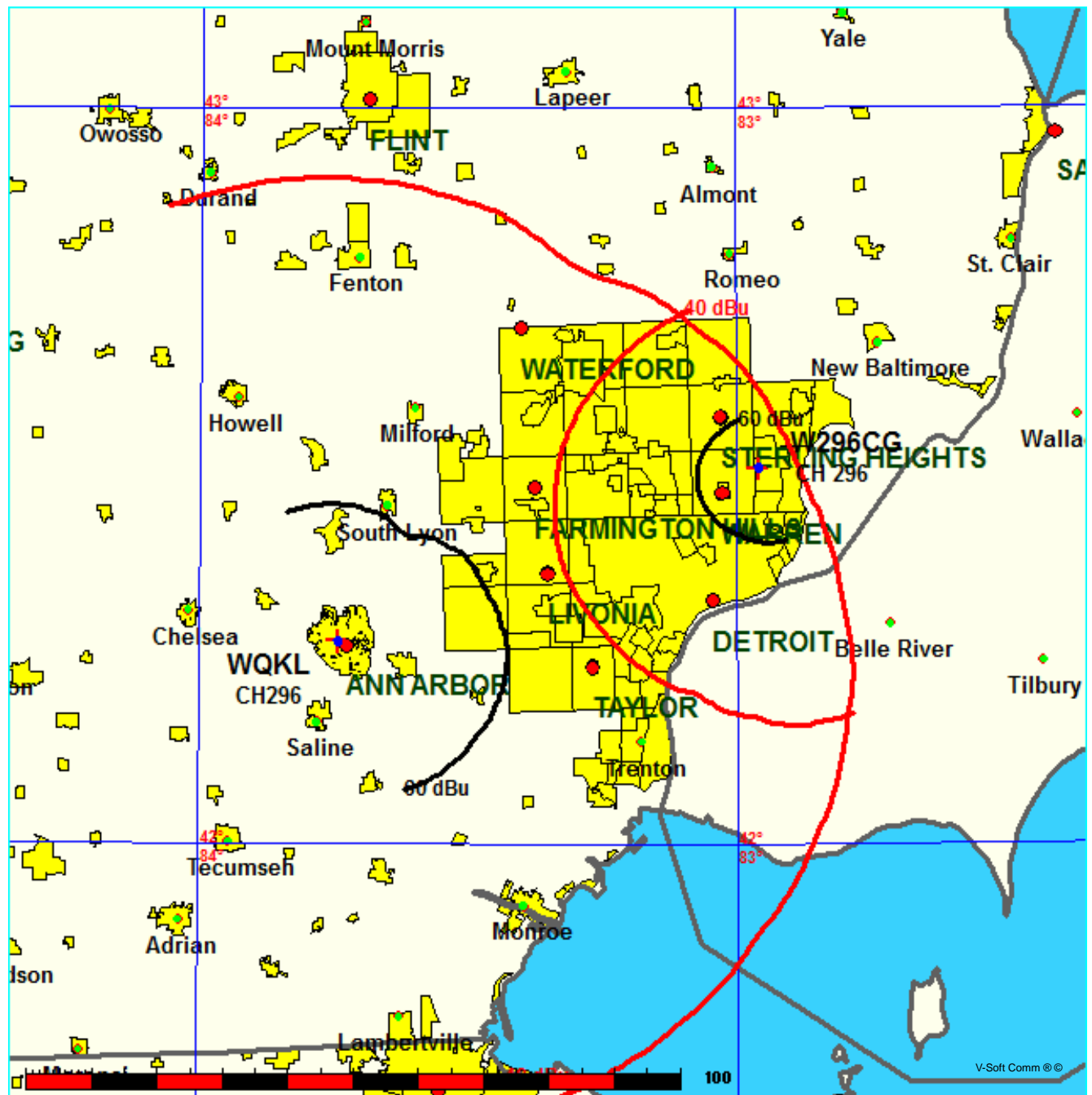
WSAQ CH 296 A BLH19910806KA
Lat= 42 58 37.0, Lng= 82 27 52.0
6.0 kW 91 M HAAT, 286 M COR
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 03-03-2013 - NGDC 30 SEC
W296CG's Overlaps (In= -15.47 km, Out= 12.73 km)

W296CG CH 296 D DA
Lat= 42 30 40.7, Lng= 82 57 34.1
0.25 kW 72.2 M HAAT, 254.4 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WQKL CH 296 A BLH19911119KA
Lat= 42 16 41.0, Lng= 83 44 32.0
3.0 kW 88 M HAAT, 350 M COR
Prot.= 60 dBu, Intef.= 40 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WGPR, channel 298B, 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 W296CG.P:	250 watts
The proposed COR for W96CG.P:	66 meters
WGPR F(50/50) contour at proposed site:	78.5dBu
The F(50/10) contour of proposed W296CG:	118.5dBu

The predicted distance to the 118.5dbu interfering contour is 132 meters. Taking into account the vertical elevation pattern for the Scala FMV single bay antenna and the height above ground of 66M, it has been determined that the interfering contour of 118.5dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 11.06M above ground at a distance of 95.84M from the antenna.

As can be seen in Exhibit 13–A1, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 11.06 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
W296CG.P
Detroit, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 66
Translator's IX Contour: 118.5
Antenna Type: Scala FMV-1

<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	131.8166	66.000
5	0.995	0.2474	131.1311	54.571
10	0.982	0.2409	129.4043	43.529
15	0.956	0.2283	125.9639	33.398
20	0.918	0.2108	121.0472	24.599
25	0.867	0.1877	114.2322	17.723
30	0.803	0.1610	105.7960	13.102
35	0.727	0.1322	95.8438	11.026
40	0.645	0.1040	85.0085	11.358
45	0.558	0.0779	73.5668	13.980
50	0.472	0.0556	62.1515	18.389
55	0.388	0.0376	51.1448	24.105
60	0.315	0.0248	41.5222	30.041
65	0.240	0.0144	31.6360	37.328
70	0.176	0.0078	23.2261	44.175
75	0.119	0.0035	15.6730	50.861
80	0.067	0.0011	8.8185	57.315
85	0.019	0.0001	2.5441	63.466
90	0.025	0.0002	3.3481	62.652

Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WDTW, channel 294B, 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 W296CG.P:	250 watts
The proposed COR for W96CG.P:	66 meters
WDTW F(50/50) contour at proposed site:	79.0dBu
The F(50/10) contour of proposed W296CG:	119.0dBu

The predicted distance to the 119.0dbu interfering contour is 124.4 meters. Taking into account the vertical elevation pattern for the Scala FMV single bay antenna and the height above ground of 66M, it has been determined that the interfering contour of 119.0dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 14.01M above ground at a distance of 90.48M from the antenna.

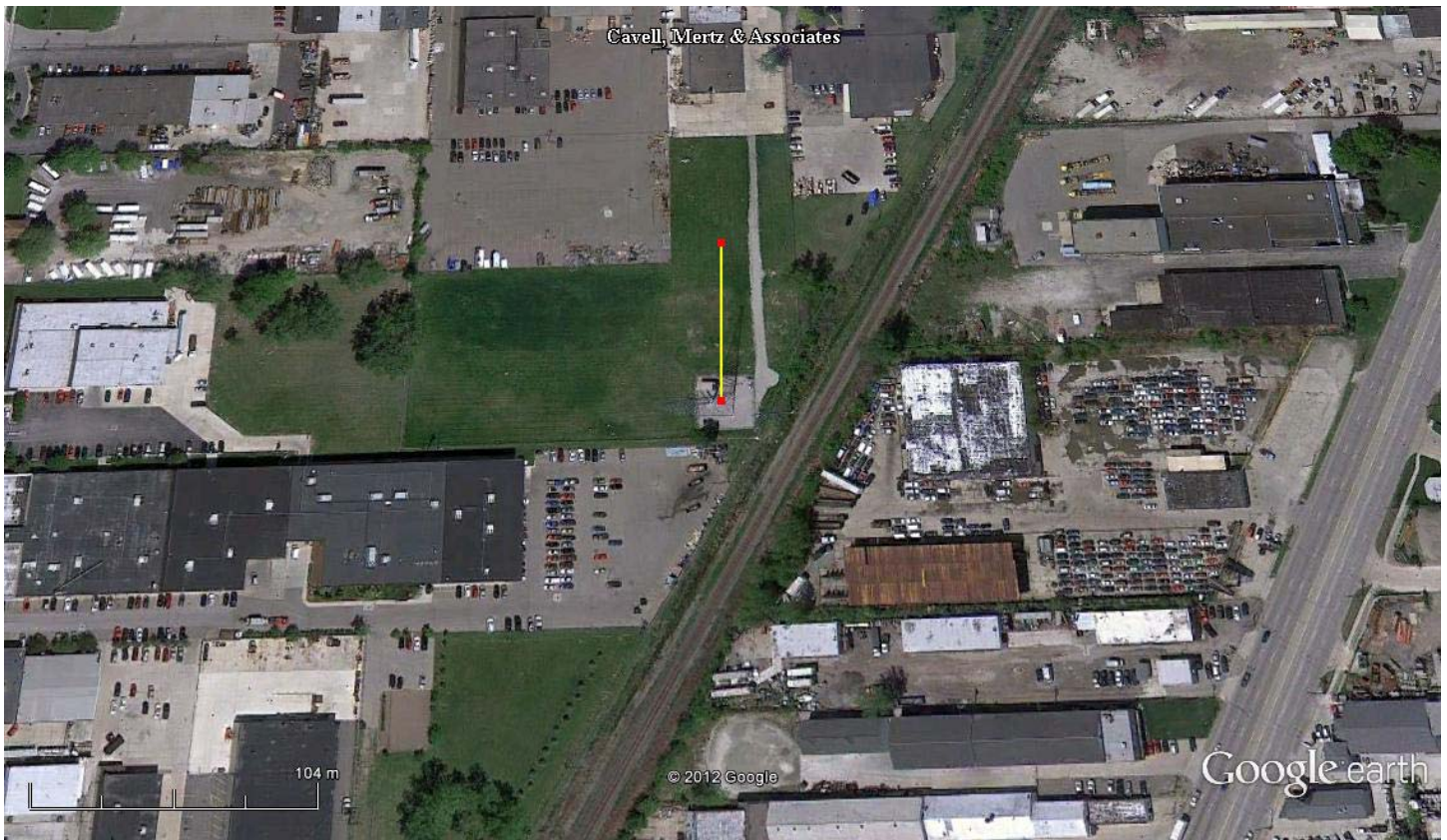
As can be seen in Exhibit 13–A1, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 14.01 meter aperture.

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
W296CG.P
Detroit, MI

ERP (kw): 0.25
Height of Antenna above Ground (m): 66
Translator's IX Contour: 119
Antenna Type: Scala FMV-1

<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	124.4429	66.000
5	0.995	0.2474	123.7958	55.210
10	0.982	0.2409	122.1656	44.786
15	0.956	0.2283	118.9176	35.222
20	0.918	0.2108	114.2759	26.915
25	0.867	0.1877	107.8422	20.424
30	0.803	0.1610	99.8778	16.061
35	0.727	0.1322	90.4824	14.101
40	0.645	0.1040	80.2532	14.414
45	0.558	0.0779	69.4516	16.890
50	0.472	0.0556	58.6748	21.052
55	0.388	0.0376	48.2838	26.448
60	0.315	0.0248	39.1995	32.052
65	0.240	0.0144	29.8663	38.932
70	0.176	0.0078	21.9268	45.396
75	0.119	0.0035	14.7963	51.708
80	0.067	0.0011	8.3252	57.801
85	0.019	0.0001	2.4017	63.607
90	0.025	0.0002	3.1608	62.839



Google earth

feet 800
meters 200



NAD 27

42 30' 40.7" N

82 57' 34.1" W

Marker: 66m at zero degrees true