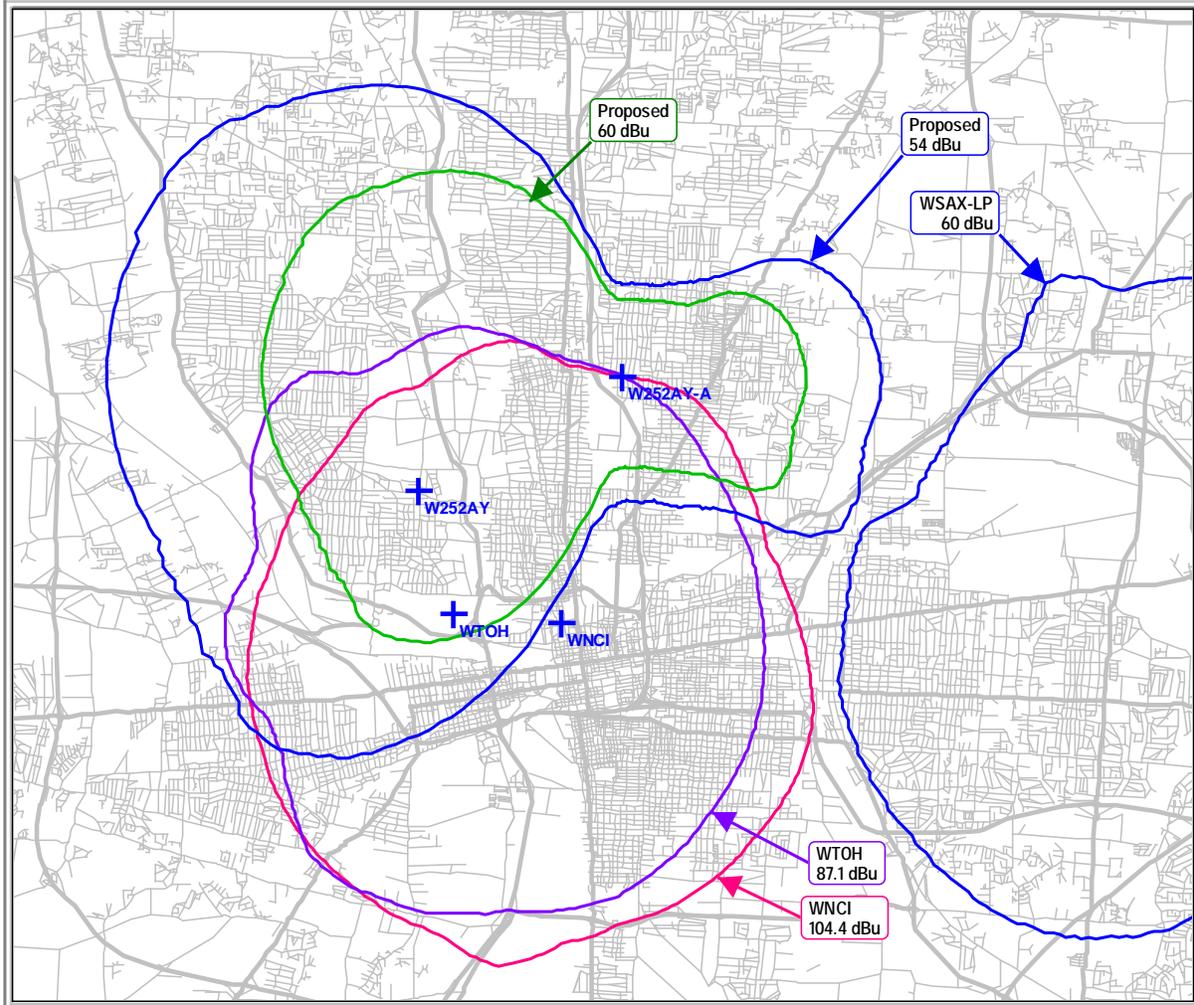


ComStudy 2.2 search of channel 252 (98.3 MHz Class D) at 40-00-51.4 N, 82-59-19.1 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
WNCI	COLUMBUS	OH	250	B	5.12	0.00	193.6	-53.83 dB
WTOH	UPPER ARLINGTON	OH	255	A	5.84	0.00	214.8	-29.68 dB
WSAX-LP	COLUMBUS	OH	253	LP100	12.12	13.00	107.4	1.16 dB
WPKO-FM	BELLEFONTAINE	OH	252	A	74.64	0.00	302.1	12.00 dB
WKET	KETTERING	OH	252	D	106.44	0.00	250.9	20.57 dB
WMAN-FM	FREDERICKTOWN	OH	252	A	76.83	0.00	34.5	21.62 dB
WKNA	LOGAN	OH	252	A	74.72	0.00	136.1	22.54 dB
WINF-LP	DELAWARE	OH	253	LP100	32.01	13.00	351.3	24.35 dB
W254CT	NEWARK	OH	254	D	50.11	0.00	87.3	26.33 dB
WZZY	WINCHESTER	IN	252	A	166.46	0.00	273.5	27.77 dB
W253CF	ZANESVILLE	OH	253	D	87.71	0.00	93.4	28.71 dB
WYKL	CRESTLINE	OH	254	A	84.24	0.00	11.5	29.78 dB
WRRM	CINCINNATI	OH	253	B	166.63	0.00	233.9	29.00 dB
WVOK	WHEELING	WV	254	B	189.34	0.00	87.0	31.64 dB
WKDD	MUNROE FALLS	OH	251	B	180.89	0.00	42.7	31.22 dB
WDFM	DEFIANCE	OH	251	B	193.07	0.00	317.9	32.04 dB
WYRO	MCARTHUR	OH	254	A	101.17	0.00	160.5	33.38 dB
W251BC	PIQUA	OH	251	D	110.07	0.00	277.7	33.85 dB
WUDR	DAYTON	OH	251	D	109.92	0.00	257.1	34.32 dB
WNCX	CLEVELAND	OH	253	B	181.25	0.00	35.1	34.21 dB
W253CM	LIMA	OH	253	D	124.48	0.00	310.8	36.02 dB
W251CP	PARKERSBURG	WV	251	D	148.22	0.00	120.1	38.86 dB
WCJO	JACKSON	OH	249	A	114.43	0.00	162.8	39.81 dB

Contour Protection & Second/Third Adjacent Arriving Contours



**§74.1235(b) COMPLIANCE FOR
NON-FILL IN FM TRANSLATORS**

W252AY
Marble Cliff, Ohio
Channel 252D (98.3 MHz)

Based on NED1 data derived directly from the FCC Contours API:

Azimuth	HAAT	§74.1235 maximum ERP allowed (watts)	Proposed facility ERP (watts)
0	6	250	<1
30	20	250	1
60	15	250	10
90	23	250	17
120	41	120	11
150	50	80	1
180	54	80	<1
210	53	80	34
240	33	170	167
270	24	250	249
300	27	250	176
330	28	250	42

Proposed transmitter site located east of the Mississippi River.

Prepared by,
/S/
Michelle Bradley, CBT
REC Networks

April 6, 2023

REQUEST FOR WAIVER OF §74.1204
SECOND AND THIRD ADJACENT CHANNELS

W252AY
Marble Cliff, Ohio
Channel 252D (98.3 MHz)

The instant application meets all §74.1204 contour protection requirements with the exception of WNCI, Columbus, Ohio and WTOH, Upper Arlington, Ohio.

WNCI is a grandparented super-power FM station operating on Channel 250B with a horizontal effective radiated power (ERP) of 175 kW at 171 meters height above average terrain (HAAT) into a directional antenna. WNCI places a 104.4 dBu service contour at the proposed site.

WTOH operates on Channel 255A with an ERP of 2.6 kW at 154 meters HAAT into a directional antenna. WTOH places an 87.1 dBu service contour at the proposed site.

When considering situations where there is second or third adjacent channel prohibited overlap with multiple facilities, we further consider the station with the weakest arriving field strength as the stronger facility's interfering contour will be entirely inside the weaker one. In this case, we will further evaluate WTOH.

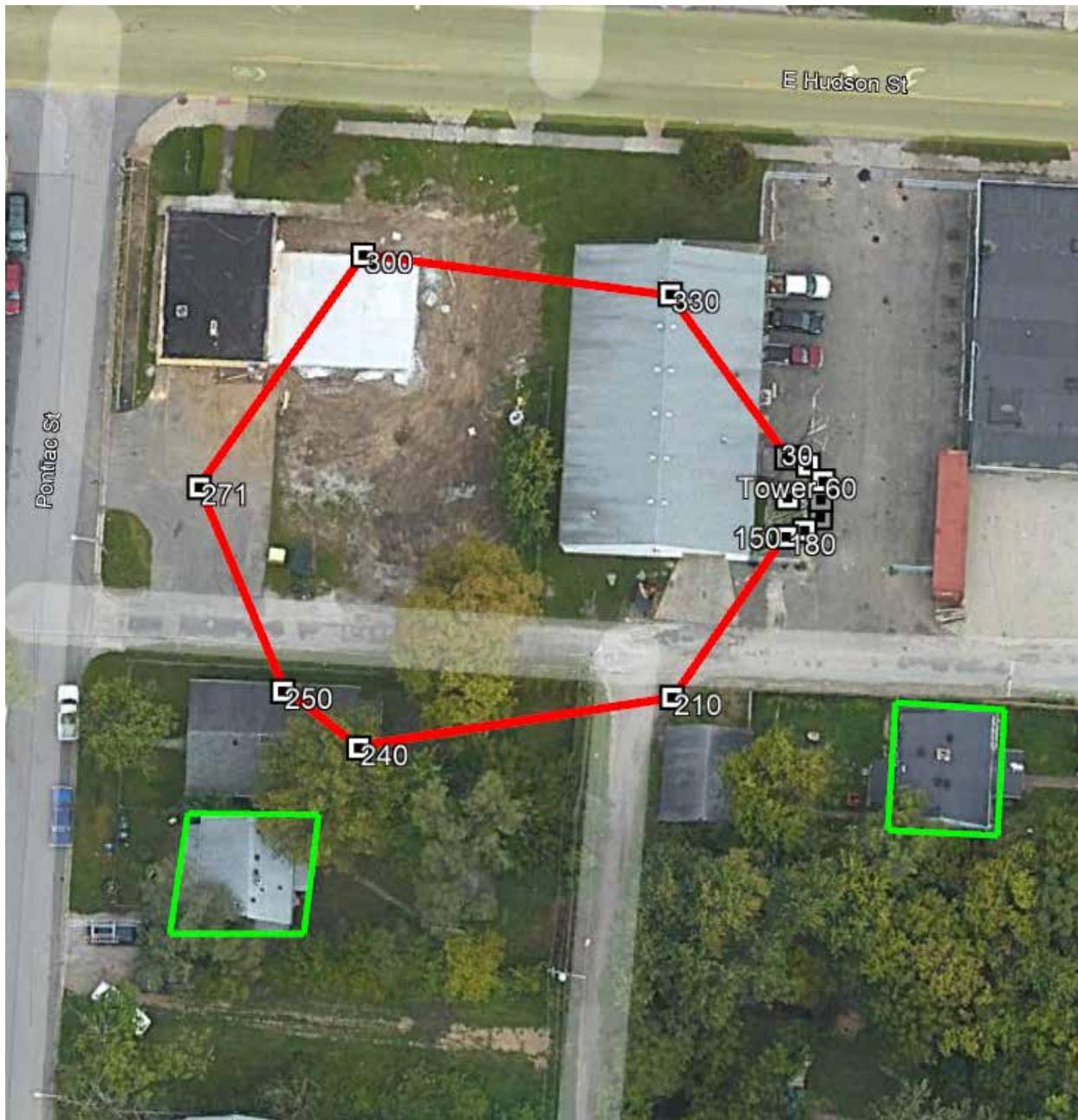
Using the U/D method, the proposed translator facility is predicted to produce an undesired interference overlap in respect to WTOH to the translator's directional 127.1 dBu interfering contour (overlap zone). At 250 watts ERP, the overlap zone extends to a peak distance of 49 meters. With a radiation center of 25 meters above ground level, the interference is theoretically predicted to reach the ground. Within 49 meters of the base of the tower, two 2-story structures have been identified, however, when antenna directionality is taken into consideration, the 127.1 dBu interfering contour from the proposed facility does not reach the 2-story structures. There are three single story structures within the directional 127.1 dBu interfering contour.

To address concerns regarding interference, the applicant is proposing to utilize a single bay Kathrein Scala CA2-FM-CP-RM circularly polarized antenna. Based on the manufacturer's specifications, along the -40 degree depression angle, the calculated field strength at two meters above ground level is 126.91 dBu. Therefore, in all directions, including along the peak lobe, the 127.1 dBu interfering contour will reach no point less than 2 meters (6 feet) above ground level. As a result, no interference will be caused to any listeners or potential listeners of the overlapped stations.

As such, the applicant requests a waiver of §74.1204(a) in respect to stations WNCI, Columbus, Ohio and WTOH, Upper Arlington, Ohio.

Prepared by,
/S/
Michelle Bradley, CBT
REC Networks

April 6, 2023

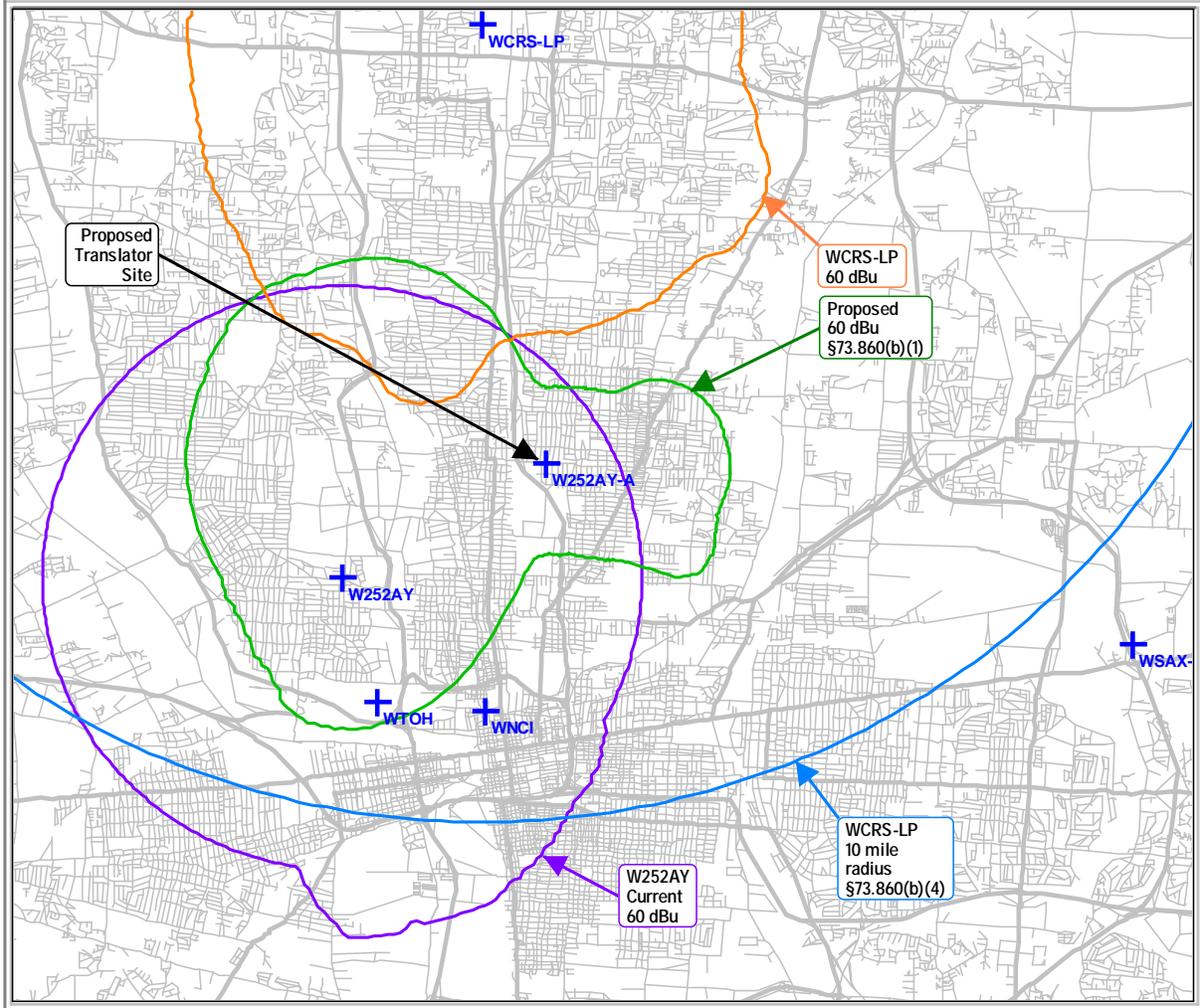


In the satellite photo above, the red polygon is the 127.1 dBu interfering contour of the proposed facility as sampled at radials 30 degrees apart. Due to the contour coming close to a two story structure, an additional radial was added at 250 degrees. The peak lobe 271 was used in lieu of the 270 degree radial. The green polygons are the identified two story structures located within close proximity of the proposed tower facility.

Proposed Power:	0.25 kW
Antenna Height AGL:	25 m
Interference Contour:	127.1 dBu
Artificial RX Antenna Height:	2 m
Antenna Type:	SCA CA2-FM/CP - 1 bay 0 wave spacing

Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant to Interference Contour	Distance from Ant to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant to Ground Level	Field Strength in dBu @ Ground Level
5	0.990	0.245	-6.11	48.48	263.90	112.38	286.84	111.66
10	0.979	0.240	-6.20	47.95	132.45	118.27	143.97	117.55
15	0.952	0.227	-6.45	46.62	88.87	121.50	96.59	120.77
20	0.920	0.212	-6.74	45.06	67.25	123.62	73.10	122.90
25	0.877	0.192	-7.16	42.95	54.42	125.04	59.16	124.32
30	0.829	0.172	-7.65	40.60	46.00	126.02	50.00	125.29
35	0.772	0.149	-8.27	37.81	40.10	126.59	43.59	125.86
40	0.715	0.128	-8.93	35.02	35.78	126.91	38.89	126.19
45	0.647	0.105	-9.80	31.69	32.53	126.87	35.36	126.15
50	0.570	0.081	-10.90	27.92	30.02	126.47	32.64	125.74
55	0.487	0.059	-12.27	23.85	28.08	125.68	30.52	124.96
60	0.388	0.038	-14.24	19.00	26.56	124.19	28.87	123.47
65	0.292	0.021	-16.71	14.30	25.38	122.12	27.58	121.39
70	0.187	0.009	-20.58	9.16	24.48	118.56	26.60	117.84
75	0.095	0.002	-26.47	4.65	23.81	112.92	25.88	112.19
80	0.045	0.001	-32.96	2.20	23.35	106.60	25.39	105.87
85	0.032	0.000	-35.92	1.57	23.09	103.73	25.10	103.01
90	0.003	0.000	-56.48	0.15	23.00	83.21	25.00	82.48

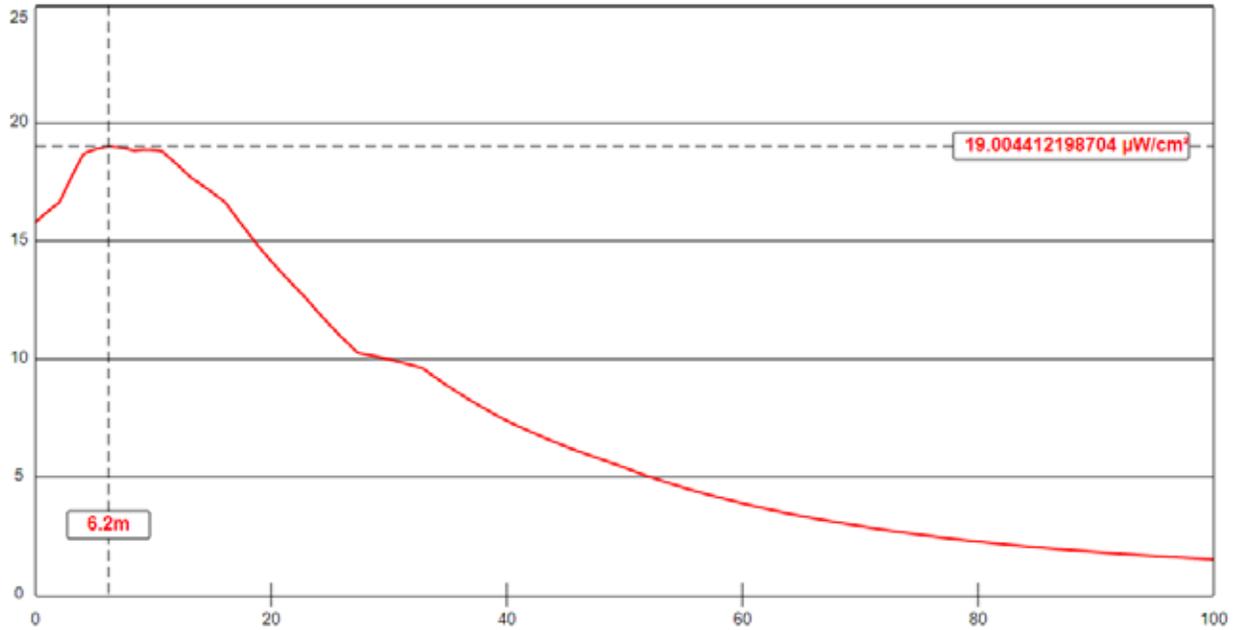
§74.1233 (minor change) & §73.860(b) (LPFM cross-ownership) showing



NEPA COMPLIANCE

W252AY
Marble Cliff, Ohio
Channel 252D (98.3 MHz)

Utilizing the Commission's FM MODEL software, it has been determined that at no point will the power density exceed 19.0 $\mu\text{W}/\text{cm}^2$ at any point. Therefore, the peak power density from this tower site does not exceed the general population/controlled exposure guideline of 200 $\mu\text{W}/\text{cm}^2$.



REC is not aware of any other non-exempt services using this tower.

Prepared by

/S/
Michelle Bradley, CBT
REC Networks

April 6, 2023

NEARBY AM BROADCAST STATION TOWERS

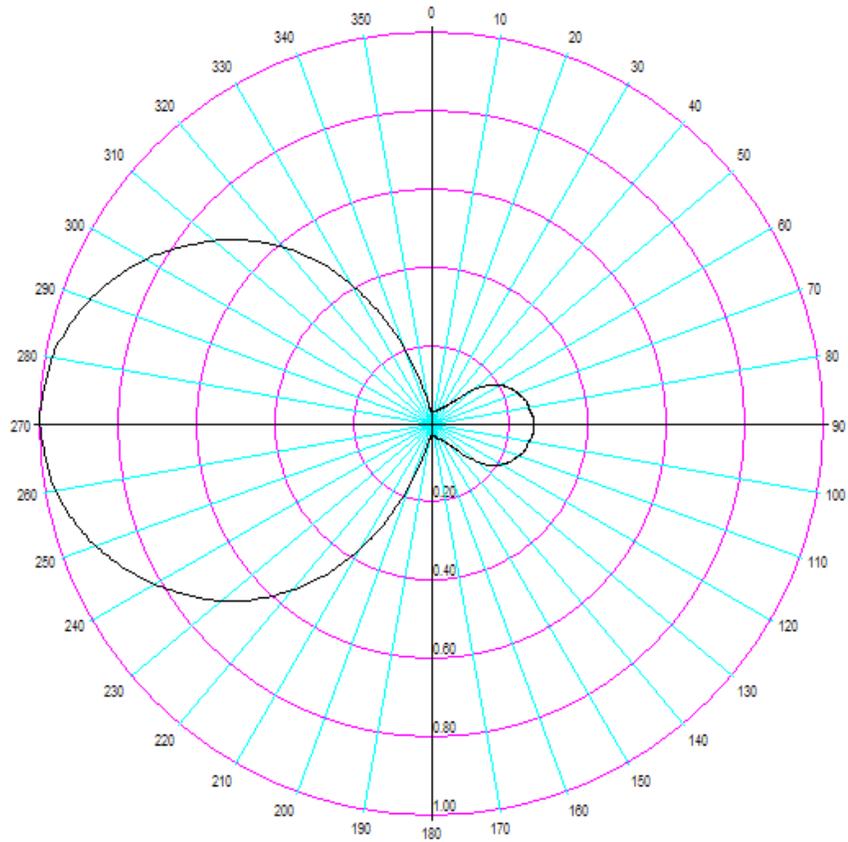
W252AY
Marble Cliff, Ohio
Channel 252D (98.3 MHz)

Tower structure details							
Antenna type		Free-standing tower					
Supporting Height		48.8 m					
In the calculation of electrical degrees, the entire tower structure height will be considered due to the antenna being ground mounted.							
AM Station Details							
Array Center		Distance		Elec. Degrees		Notify AM Station	
Latitude	Longitude	Required	Actual	Req'd	Actual		
WV KO 1580 kHz (190 m) BL-20070615ADX <i>Directional</i> (Daytime)							
40 3' 43.20"	82 56' 42.00"	1899 m	6486 m	36	92.52	NO	
40 3' 42.88"	82 56' 43.96"	1899 m	6451 m	36	92.52	NO	
WV KO 1580 kHz (190 m) BL-20070615ADX <i>Directional</i> (Nighttime)							
40 3' 43.20"	82 56' 42.00"	1899 m	6486 m	36	92.52	NO	
40 3' 40.96"	82 56' 41.27"	1899 m	6440 m	36	92.52	NO	
40 3' 38.75"	82 56' 40.44"	1899 m	6396 m	36	92.52	NO	

TOWAIR SEARCH

W252AY
Marble Cliff, Ohio
Channel 252D (98.3 MHz)

DETERMINATION Results							
PASS SLOPE(25:1): NO FAA REQ-HELIPORT 7680.65 MTRS (7.68069 KM) AWAY							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
HELI	B	39-57-35.00N	083-02-39.00W	DEPARTMENT OF TRANSPORTATION	FRANKLIN COLUMBUS, OH	217.9	12.199999999999999
PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7032.65 MTRS (7.03270 KM) AWAY							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	40-00-12.00N	082-54-27.00W	JOHN GLENN COLUMBUS INTL	FRANKLIN COLUMBUS, OH	245.3	3082.8000000000002
PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7162.80 MTRS (7.16279 KM) AWAY							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	39-59-37.00N	082-54-33.00W	JOHN GLENN COLUMBUS INTL	FRANKLIN COLUMBUS, OH	245.3	3082.8000000000002
Your Specifications							
NAD83 Coordinates							
Latitude						40-00-51.4 north	
Longitude						082-59-19.1 west	
Measurements (Meters)							
Overall Structure Height (AGL)						48.8	
Support Structure Height (AGL)						0	
Site Elevation (AMSL)						259	
Structure Type							
LTOWER - Lattice Tower							



Azim	Rel.FS	ERP [W]	dBk
0.0	0.030	0.225	-36.478
5.0	0.031	0.240	-36.193
10.0	0.032	0.256	-35.918
15.0	0.033	0.272	-35.650
20.0	0.036	0.324	-34.895
25.0	0.041	0.420	-33.765
30.0	0.045	0.506	-32.956
35.0	0.052	0.676	-31.701
40.0	0.063	0.992	-30.034
45.0	0.088	1.936	-27.131
50.0	0.132	4.356	-23.609
55.0	0.172	7.396	-21.310
60.0	0.198	9.801	-20.087
65.0	0.217	11.772	-19.291
70.0	0.231	13.340	-18.748
75.0	0.244	14.884	-18.273
80.0	0.249	15.500	-18.097
85.0	0.257	16.512	-17.822

Azim	Rel.FS	ERP [W]	dBk
90.0	0.260	16.900	-17.721
95.0	0.259	16.770	-17.755
100.0	0.252	15.876	-17.993
105.0	0.247	15.252	-18.167
110.0	0.237	14.042	-18.526
115.0	0.224	12.544	-19.016
120.0	0.206	10.609	-19.743
125.0	0.184	8.464	-20.724
130.0	0.149	5.550	-22.557
135.0	0.103	2.652	-25.764
140.0	0.071	1.260	-28.995
145.0	0.056	0.784	-31.057
150.0	0.047	0.552	-32.579
155.0	0.042	0.441	-33.556
160.0	0.038	0.361	-34.425
165.0	0.034	0.289	-35.391
170.0	0.032	0.256	-35.918
175.0	0.031	0.240	-36.193

Azim	Rel.FS	ERP [W]	dBk
180.0	0.030	0.225	-36.478
185.0	0.031	0.240	-36.193
190.0	0.042	0.441	-33.556
195.0	0.085	1.806	-27.432
200.0	0.168	7.056	-21.514
205.0	0.271	18.360	-17.361
210.0	0.369	34.040	-14.680
215.0	0.467	54.522	-12.634
220.0	0.553	76.452	-11.166
225.0	0.631	99.540	-10.020
230.0	0.701	122.850	-9.106
235.0	0.760	144.400	-8.404
240.0	0.818	167.281	-7.766
245.0	0.867	187.922	-7.260
250.0	0.911	207.480	-6.830
255.0	0.946	223.729	-6.503
260.0	0.974	237.169	-6.249
265.0	0.988	244.036	-6.125

Azim	Rel.FS	ERP [W]	dBk
270.0	0.998	249.001	-6.038
275.0	0.992	246.016	-6.090
280.0	0.981	240.590	-6.187
285.0	0.958	229.441	-6.393
290.0	0.926	214.369	-6.688
295.0	0.885	195.806	-7.082
300.0	0.839	175.980	-7.545
305.0	0.783	153.272	-8.145
310.0	0.726	131.769	-8.802
315.0	0.660	108.900	-9.630
320.0	0.585	85.556	-10.677
325.0	0.503	63.252	-11.989
330.0	0.408	41.616	-13.807
335.0	0.311	24.180	-16.165
340.0	0.208	10.816	-19.659
345.0	0.113	3.192	-24.959
350.0	0.055	0.756	-31.213
355.0	0.034	0.289	-35.391