

Technical Report W224DI.CP Minor Modification

A minor modification is requested for the CP (BPFT-20170707ABF) for licensed 250 mile waiver translator W224DI. The facility will remain at the original CP site and within the 250 mile limit from the original site from which it was moved. It will continue to serve as a fill-in facility WTLC(AM) 1310 kHz at Indianapolis, IN, FCC facility I.D. no. 51433.

W224DI.CP Modification Analysis:

An overlap study in exhibit E-1 shows the W224DI.CP modification is within the WIBC(FM) 226B and WTTS(FM) 222B second adjacent protected contours. A tabulation of the +40 dBu F(50-10) contour to those facilities (exhibits E-2, E-3) using the vertical elevation pattern of the ERI 100A single bay antenna (exhibit E-4) shows the interference contours are at least 22.1 meters above ground (exhibit E-5). Based on this showing, a waiver of Section 74.1204 is requested, in accordance with *Living Way Ministries, Inc.* (FCC 08-242).

The 60 dBuF(50-50) contour is contained within the primary WTLC(AM) 2.0 mV/m daytime contour and has a 28.1% overlap with W236CR, which also serves as a fill in facility for WTLC(AM) (exhibit E-6). The modification is located within 250 miles of the original facility (exhibit E-7).

Antenna System:

The W224DI.CP modification will be located at the existing tower, ASR 1031014, at coordinates:

39 45 36N 86 00 22W

NAD 27.

An ERI 100A single bay, directional antenna (exhibit E-8) will be mounted at a COR AGL of 183 meters, 442 meters AMSL and operate at 0.250 kW ERP.

RF Exposure Calculation:

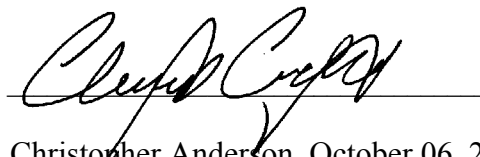
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

Using a worst case vertical (F) factor of 1.0, the RF is calculated to be 0.51 $\mu\text{W/cm}^2$ to the ground, which is well below 5% of the 200 $\mu\text{W/cm}^2$ maximum permissible for general public exposure allowing exclusion from consideration.

Conclusion:

It is concluded that the W224DI.CP modification complies with all Commission rules and policies.



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E-1 W224DI.CP Mod. Overlap Study

REFERENCE		CH# 224D - 92.7 MHz, Pwr= 0.25 kW DA, HAAT= 196.0 M, COR= 442 M					DISPLAY DATES				
39 45 36.0 N.		Average Protected F(50-50)= 18.35 km					DATA 10-03-17				
86 00 22.0 W.		Standard Directional					SEARCH 10-03-17				
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
224D	W224DI	CP	DV_	0.0	0.00	39 45 36.0	0.100	49.3	14.9	-67.3*	-71.4*
Indianapolis		IN		0.0	BPFT20170707ABF	86 00 22.0		502	Charles M. Anderson		
226B	WIBC	LIC	CX	15.9	0.86	39 46 03.0	13.500	5.5	65.4	-17.3*	-65.6*(1)
Indianapolis		IN		195.9	BLH20031121APA	86 00 12.0	302	551	Emmis Radio License, LIc		
224D	W224DI	LIC	DV_	0.0	0.00	39 45 36.0	0.140	30.1	9.1	-48.0*	-65.6*
Indianapolis		IN		0.0	BLFT20170707ABC	86 00 22.0		320	Charles M. Anderson		
222B	WTTS	LIC	CX	197.3	41.02	39 24 27.0	37.000	8.0	78.8	15.3	-39.6*(2)
Bloomington		IN		17.2	BMLH20160429ABG	86 08 52.0	332	574	Sarkes Tarzian, Inc.		
222B	WTTS	LIC	CN	197.3	41.02	39 24 27.0	37.000	8.0	78.8	15.3	-39.6*
Bloomington		IN		17.2	BMLH19880426KB	86 08 52.0	332	574	Sarkes Tarzian, Inc.		
224A	AL2138	RSV-A	___	254.5	100.81	39 30 43.0	6.000	85.1	27.1	-3.2	14.9
Brazil		IN		73.8	RM10763	87 08 19.0	100	290			
224A	WFNB	LIC	CX	254.5	100.77	39 30 44.0	6.000	82.9	25.3	-1.0	16.6
Brazil		IN		73.8	BLH20051109AAI	87 08 18.0	91	278	Dlc Media, Inc.		
224D	W224CL	LIC	C_	33.7	44.61	40 05 36.9	0.019	21.4	6.5	7.8	1.2
Anderson		IN		213.9	BLFT20160415ABA	85 42 54.7		357	Educational Media Foundati		
224A	WXKU-FM	LIC	CX	170.0	105.84	38 49 20.0	3.600	84.4	28.6	3.0	19.4
Austin		IN		350.1	BLH20061221ABR	85 47 38.0	129	308	Bk Media, LIc		
277B	WOLT	LIC	C_	312.2	22.45	39 53 43.0	18.000	23.8	7.1	14.5R	8.0M
Indianapolis		IN		132.0	BMLH20061208ACR	86 12 04.0	259	515	Capstar Tx, LIc		
223A	WZWZ	LIC	CN	350.4	80.26	40 28 18.0	6.000	40.2	26.0	22.2	27.6
Kokomo		IN		170.3	BLH19950120KB	86 09 52.0	99	348	Hoosier Am/fm, LIc		
223D	1763640	APP	C_	50.0	69.61	40 09 40.0	0.240	18.5	12.6	32.9	33.6
Muncie		IN		230.4	BNPFT20170801AIE	85 22 44.0		393	Woof Boom Radio Muncie Li c		
225B	WGTZ	LIC	CN	85.9	137.07	39 50 10.0	40.000	76.9	64.5	41.7	34.0
Eaton		OH		267.0	BLH19850204KW	84 24 16.0	168	463	Alpha Media Licensee LIc		
224D	W224AX	LIC	V_	314.1	101.22	40 23 26.0	0.038	17.7	5.4	65.3	38.3
Lafayette		IN		133.6	BLFT19991109ACH	86 51 52.0	60	259	Pensacola Christian Colleg		
221A	WBST	LIC	CN	42.5	68.58	40 12 48.0	3.000	2.3	24.6	48.9	43.5
Muncie		IN		222.9	BLED19781211AR	85 27 36.0	91	374	Ball State University		
224A	WZBD	LIC	CN	38.6	144.53	40 46 15.0	4.100	82.8	27.4	44.7	77.8
Berne		IN		219.3	BLH19950327KC	84 56 05.0	120	366	Adams County Radio, Inc		
223B	WOFX-FM	LIC	DCN	118.5	147.65	39 06 59.0	16.000	75.1	63.7	54.0	44.8
Cincinnati		OH		299.5	BLH19981209KB	84 30 07.0	264	483	Cumulus Li censi ng LIc		

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. 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 restricted contour.

- (1) A tabulation of the +40 dBu F(50-10) contour within the WIBC(FM) 226B second adjacent protected contour in exhibit E-2 shows no interfering signal will reach any population, buildings or roads.
- (2) A tabulation of the +40 dBu F(50-10) contour within the WTTS(FM) 222B second adjacent protected contour in exhibit E-3 shows no interfering signal will reach any population, buildings or roads.

E-2 W224DI.CP Mod. +40 dBu Tabulation Within WIBC(FM) 226B

W224DI.CP Indianapolis, IN
74.1204(d) Showing
Translator or LPFM Maximum Licensed ERP = 0.25
Translator or LPFM Antenna Height AG = 183 Meters
W224DI Antenna Model = ERI 100A-1

Protected Station's Contour = 119.4595 dBu
Translator's or LPFM's full Interference contour 159.4595

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 1.000
Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
Distance between stations = 0.9 km
Protected Station= WIBC, 13.5 kW, 551 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	001.1803	001.1803	183.000
01.00	1.0	1.0	0.2500	001.1803	001.1801	182.979
02.00	0.999	1.0	0.2495	001.1791	001.1784	182.959
03.00	0.999	1.0	0.2495	001.1791	001.1775	182.938
04.00	0.998	1.0	0.2490	001.1779	001.1751	182.918
05.00	0.997	1.0	0.2485	001.1768	001.1723	182.897
06.00	0.995	1.0	0.2475	001.1744	001.1680	182.877
07.00	0.993	1.0	0.2465	001.1720	001.1633	182.857
08.00	0.991	1.0	0.2455	001.1697	001.1583	182.837
09.00	0.989	1.0	0.2445	001.1673	001.1530	182.817
10.00	0.987	1.0	0.2435	001.1650	001.1473	182.798
11.00	0.984	1.0	0.2421	001.1614	001.1401	182.778
12.00	0.981	1.0	0.2406	001.1579	001.1326	182.759
13.00	0.978	1.0	0.2391	001.1543	001.1248	182.740
14.00	0.974	1.0	0.2372	001.1496	001.1155	182.722
15.00	0.97	1.0	0.2352	001.1449	001.1059	182.704
16.00	0.966	1.0	0.2333	001.1402	001.0960	182.686
17.00	0.962	1.0	0.2314	001.1355	001.0858	182.668
18.00	0.957	1.0	0.2290	001.1296	001.0743	182.651
19.00	0.952	1.0	0.2266	001.1237	001.0624	182.634
20.00	0.947	1.0	0.2242	001.1178	001.0503	182.618
21.00	0.942	1.0	0.2218	001.1118	001.0380	182.602
22.00	0.936	1.0	0.2190	001.1048	001.0243	182.586
23.00	0.931	1.0	0.2167	001.0989	001.0115	182.571
24.00	0.924	1.0	0.2134	001.0906	000.9963	182.556
25.00	0.918	1.0	0.2107	001.0835	000.9820	182.542
26.00	0.912	1.0	0.2079	001.0764	000.9675	182.528
27.00	0.905	1.0	0.2048	001.0682	000.9518	182.515
28.00	0.898	1.0	0.2016	001.0599	000.9359	182.502
29.00	0.89	1.0	0.1980	001.0505	000.9188	182.491
30.00	0.883	1.0	0.1949	001.0422	000.9026	182.479
31.00	0.875	1.0	0.1914	001.0328	000.8853	182.468
32.00	0.867	1.0	0.1879	001.0233	000.8678	182.458
33.00	0.859	1.0	0.1845	001.0139	000.8503	182.448
34.00	0.851	1.0	0.1811	001.0044	000.8327	182.438
35.00	0.842	1.0	0.1772	000.9938	000.8141	182.430
36.00	0.833	1.0	0.1735	000.9832	000.7954	182.422
37.00	0.824	1.0	0.1697	000.9726	000.7767	182.415
38.00	0.815	1.0	0.1661	000.9620	000.7580	182.408
39.00	0.805	1.0	0.1620	000.9501	000.7384	182.402
40.00	0.796	1.0	0.1584	000.9395	000.7197	182.396
41.00	0.786	1.0	0.1544	000.9277	000.7002	182.391
42.00	0.776	1.0	0.1505	000.9159	000.6807	182.387
43.00	0.765	1.0	0.1463	000.9029	000.6604	182.384
44.00	0.755	1.0	0.1425	000.8911	000.6410	182.381
45.00	0.744	1.0	0.1384	000.8781	000.6209	182.379
46.00	0.733	1.0	0.1343	000.8652	000.6010	182.378
47.00	0.722	1.0	0.1303	000.8522	000.5812	182.377
48.00	0.711	1.0	0.1264	000.8392	000.5615	182.376 (1)
49.00	0.699	1.0	0.1222	000.8250	000.5413	182.377
50.00	0.688	1.0	0.1183	000.8121	000.5220	182.378
51.00	0.676	1.0	0.1142	000.7979	000.5021	182.380
52.00	0.664	1.0	0.1102	000.7837	000.4825	182.382
53.00	0.652	1.0	0.1063	000.7696	000.4631	182.385
54.00	0.64	1.0	0.1024	000.7554	000.4440	182.389
55.00	0.627	1.0	0.0983	000.7401	000.4245	182.394
56.00	0.615	1.0	0.0946	000.7259	000.4059	182.398
57.00	0.602	1.0	0.0906	000.7105	000.3870	182.404
58.00	0.589	1.0	0.0867	000.6952	000.3684	182.410
59.00	0.576	1.0	0.0829	000.6799	000.3502	182.417
60.00	0.563	1.0	0.0792	000.6645	000.3323	182.425
61.00	0.55	1.0	0.0756	000.6492	000.3147	182.432
62.00	0.536	1.0	0.0718	000.6326	000.2970	182.441
63.00	0.523	1.0	0.0684	000.6173	000.2802	182.450
64.00	0.509	1.0	0.0648	000.6008	000.2634	182.460
65.00	0.495	1.0	0.0613	000.5843	000.2469	182.470
66.00	0.481	1.0	0.0578	000.5677	000.2309	182.481
67.00	0.467	1.0	0.0545	000.5512	000.2154	182.493
68.00	0.453	1.0	0.0513	000.5347	000.2003	182.504
69.00	0.439	1.0	0.0482	000.5182	000.1857	182.516
70.00	0.425	1.0	0.0452	000.5016	000.1716	182.529
71.00	0.411	1.0	0.0422	000.4851	000.1579	182.541
72.00	0.396	1.0	0.0392	000.4674	000.1444	182.555

E-2 W224DI.CP Mod. +40 dBu Tabulation Within WIBC(FM) 226B, cont.

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
73.00	0.382	1.0	0.0365	000.4509	000.1318	182.569
74.00	0.367	1.0	0.0337	000.4332	000.1194	182.584
75.00	0.352	1.0	0.0310	000.4155	000.1075	182.599
76.00	0.337	1.0	0.0284	000.3978	000.0962	182.614
77.00	0.323	1.0	0.0261	000.3812	000.0858	182.629
78.00	0.308	1.0	0.0237	000.3635	000.0756	182.644
79.00	0.293	1.0	0.0215	000.3458	000.0660	182.661
80.00	0.278	1.0	0.0193	000.3281	000.0570	182.677
81.00	0.263	1.0	0.0173	000.3104	000.0486	182.693
82.00	0.248	1.0	0.0154	000.2927	000.0407	182.710
83.00	0.233	1.0	0.0136	000.2750	000.0335	182.727
84.00	0.217	1.0	0.0118	000.2561	000.0268	182.745
85.00	0.202	1.0	0.0102	000.2384	000.0208	182.762
86.00	0.187	1.0	0.0087	000.2207	000.0154	182.780
87.00	0.172	1.0	0.0074	000.2030	000.0106	182.797
88.00	0.156	1.0	0.0061	000.1841	000.0064	182.816
89.00	0.141	1.0	0.0050	000.1664	000.0029	182.834
90.00	0.126	1.0	0.0040	000.1487	000.0000	182.851

(1) The +40 159.5 F(50-10) dBu contour lowest point above the site elevation = 182.4 meters, which will not reach any population, buildings or roads.

E-3 W224DI.CP Mod. +40 dBu Tabulation Within WTTS(FM) 222B

W224DI.CP Indianapolis, IN
74.1204(d) Showing
Translator or LPFM Maximum Licensed ERP = 0.25
Translator or LPFM Antenna Height AG = 183 Meters
W224DI Antenna Model = ERI 100A-1

Protected Station's Contour = 71.227 dBu
Translator's or LPFM's full Interference contour 111.227

Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 1.000
Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
Distance between stations = 41.0 km
Protected Station= WTTS, 37 kW, 574 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	304.5229	304.5229	183.000
01.00	1.0	1.0	0.2500	304.5229	304.4766	177.685
02.00	0.999	1.0	0.2495	304.2184	304.0331	172.383
03.00	0.999	1.0	0.2495	304.2184	303.8015	167.078
04.00	0.998	1.0	0.2490	303.9139	303.1736	161.800
05.00	0.997	1.0	0.2485	303.6094	302.4540	156.539
06.00	0.995	1.0	0.2475	303.0003	301.3405	151.328
07.00	0.993	1.0	0.2465	302.3913	300.1373	146.148
08.00	0.991	1.0	0.2455	301.7822	298.8453	141.000
09.00	0.989	1.0	0.2445	301.1732	297.4652	135.886
10.00	0.987	1.0	0.2435	300.5641	295.9979	130.808
11.00	0.984	1.0	0.2421	299.6506	294.1451	125.824
12.00	0.981	1.0	0.2406	298.7370	292.2089	120.889
13.00	0.978	1.0	0.2391	297.8234	290.1902	116.004
14.00	0.974	1.0	0.2372	296.6053	287.7949	111.245
15.00	0.97	1.0	0.2352	295.3873	285.3222	106.548
16.00	0.966	1.0	0.2333	294.1692	282.7735	101.916
17.00	0.962	1.0	0.2314	292.9511	280.1505	097.349
18.00	0.957	1.0	0.2290	291.4285	277.1649	092.944
19.00	0.952	1.0	0.2266	289.9058	274.1114	088.616
20.00	0.947	1.0	0.2242	288.3832	270.9916	084.367
21.00	0.942	1.0	0.2218	286.8606	267.8074	080.198
22.00	0.936	1.0	0.2190	285.0335	264.2784	076.225
23.00	0.931	1.0	0.2167	283.5108	260.9731	072.223
24.00	0.924	1.0	0.2134	281.3792	257.0527	068.553
25.00	0.918	1.0	0.2107	279.5520	253.3602	064.856
26.00	0.912	1.0	0.2079	277.7249	249.6175	061.253
27.00	0.905	1.0	0.2048	275.5932	245.5554	057.883
28.00	0.898	1.0	0.2016	273.4616	241.4523	054.618
29.00	0.89	1.0	0.1980	271.0254	237.0442	051.604
30.00	0.883	1.0	0.1949	268.8938	232.8688	048.553
31.00	0.875	1.0	0.1914	266.4576	228.3987	045.764
32.00	0.867	1.0	0.1879	264.0214	223.9028	043.090
33.00	0.859	1.0	0.1845	261.5852	219.3838	040.530
34.00	0.851	1.0	0.1811	259.1490	214.8443	038.086
35.00	0.842	1.0	0.1772	256.4083	210.0374	035.930
36.00	0.833	1.0	0.1735	253.6676	205.2214	033.898
37.00	0.824	1.0	0.1697	250.9269	200.3991	031.988
38.00	0.815	1.0	0.1661	248.1862	195.5734	030.201
39.00	0.805	1.0	0.1620	245.1410	190.5103	028.728
40.00	0.796	1.0	0.1584	242.4003	185.6894	027.188
41.00	0.786	1.0	0.1544	239.3550	180.6435	025.969
42.00	0.776	1.0	0.1505	236.3098	175.6124	024.878
43.00	0.765	1.0	0.1463	232.9600	170.3762	024.122
44.00	0.755	1.0	0.1425	229.9148	165.3869	023.288
45.00	0.744	1.0	0.1384	226.5651	160.2057	022.794
46.00	0.733	1.0	0.1343	223.2153	155.0584	022.432
47.00	0.722	1.0	0.1303	219.8656	149.9480	022.201
48.00	0.711	1.0	0.1264	216.5158	144.8774	022.097 (1)
49.00	0.699	1.0	0.1222	212.8615	139.6497	022.351
50.00	0.688	1.0	0.1183	209.5118	134.6716	022.505
51.00	0.676	1.0	0.1142	205.8575	129.5503	023.019
52.00	0.664	1.0	0.1102	202.2032	124.4887	023.662
53.00	0.652	1.0	0.1063	198.5490	119.4897	024.432
54.00	0.64	1.0	0.1024	194.8947	114.5562	025.327
55.00	0.627	1.0	0.0983	190.9359	109.5163	026.594
56.00	0.615	1.0	0.0946	187.2816	104.7265	027.737
57.00	0.602	1.0	0.0906	183.3228	099.8448	029.253
58.00	0.589	1.0	0.0867	179.3640	095.0484	030.891
59.00	0.576	1.0	0.0829	175.4052	090.3404	032.648
60.00	0.563	1.0	0.0792	171.4464	085.7232	034.523
61.00	0.55	1.0	0.0756	167.4876	081.1996	036.512
62.00	0.536	1.0	0.0718	163.2243	076.6292	038.882
63.00	0.523	1.0	0.0684	159.2655	072.3050	041.093
64.00	0.509	1.0	0.0648	155.0022	067.9485	043.685
65.00	0.495	1.0	0.0613	150.7389	063.7050	046.384
66.00	0.481	1.0	0.0578	146.4755	059.5770	049.188
67.00	0.467	1.0	0.0545	142.2122	055.5667	052.093
68.00	0.453	1.0	0.0513	137.9489	051.6766	055.096
69.00	0.439	1.0	0.0482	133.6856	047.9086	058.194
70.00	0.425	1.0	0.0452	129.4223	044.2650	061.383
71.00	0.411	1.0	0.0422	125.1589	040.7478	064.660
72.00	0.396	1.0	0.0392	120.5911	037.2647	068.311

E-3 W224DI.CP Mod. +40 dBu Tabulation Within WTTS(FM) 222B, cont.

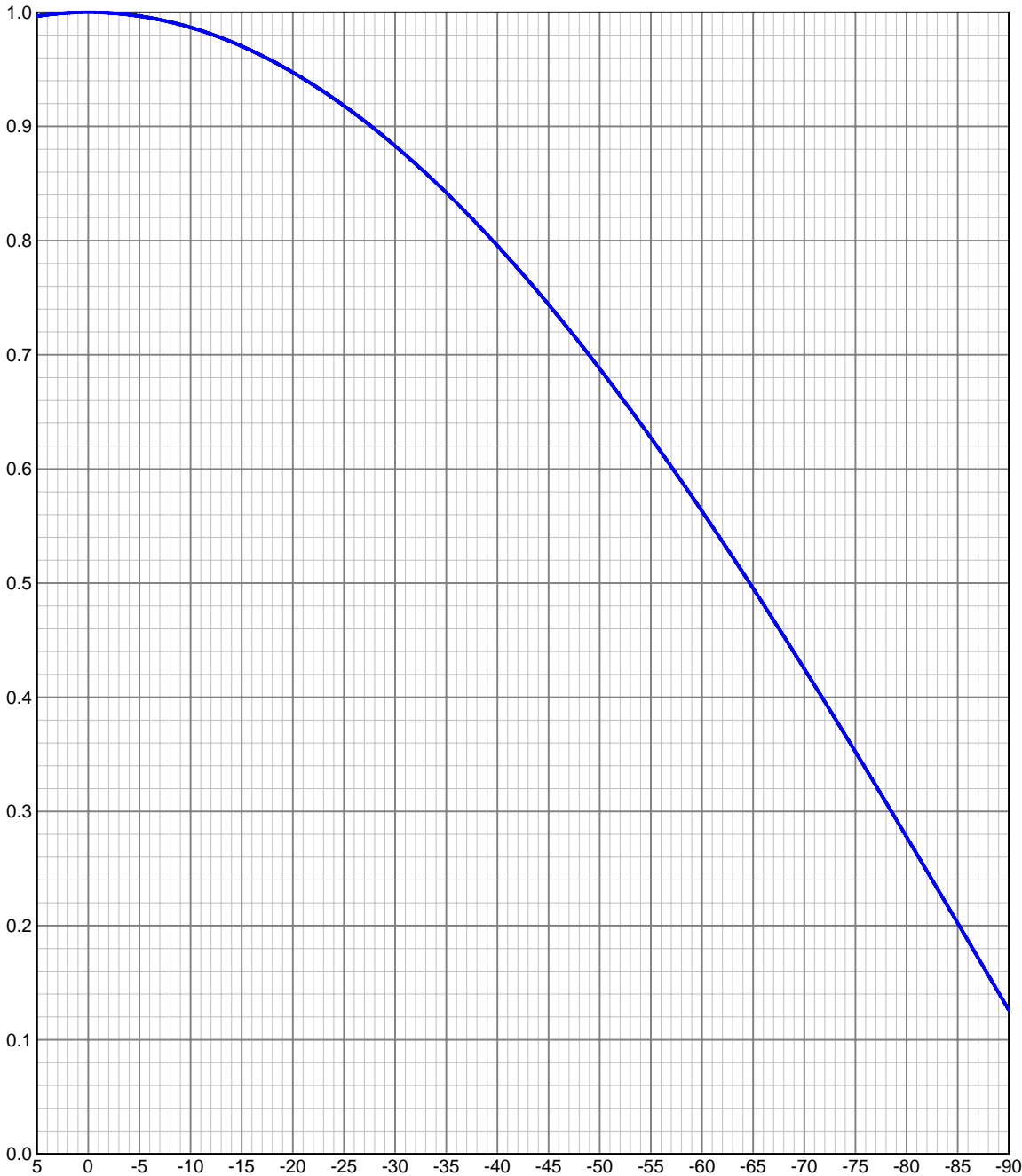
Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
73.00	0.382	1.0	0.0365	116.3278	034.0109	071.755
74.00	0.367	1.0	0.0337	111.7599	030.8052	075.569
75.00	0.352	1.0	0.0310	107.1921	027.7433	079.460
76.00	0.337	1.0	0.0284	102.6242	024.8270	083.424
77.00	0.323	1.0	0.0261	098.3609	022.1264	087.160
78.00	0.308	1.0	0.0237	093.7931	019.5007	091.257
79.00	0.293	1.0	0.0215	089.2252	017.0250	095.414
80.00	0.278	1.0	0.0193	084.6574	014.7006	099.629
81.00	0.263	1.0	0.0173	080.0895	012.5288	103.897
82.00	0.248	1.0	0.0154	075.5217	010.5106	108.213
83.00	0.233	1.0	0.0136	070.9538	008.6471	112.575
84.00	0.217	1.0	0.0118	066.0815	006.9074	117.281
85.00	0.202	1.0	0.0102	061.5136	005.3613	121.720
86.00	0.187	1.0	0.0087	056.9458	003.9723	126.193
87.00	0.172	1.0	0.0074	052.3779	002.7412	130.694
88.00	0.156	1.0	0.0061	047.5056	001.6579	135.523
89.00	0.141	1.0	0.0050	042.9377	000.7494	140.069
90.00	0.126	1.0	0.0040	038.3699	000.0000	144.630

(1) The +40 111.23 F(50-10) dBu contour within the second adjacent WTTS(FM) 222B second adjacent contour lowest point = 22.1 meters, which will not reach any population, buildings or roads.

ELEVATION PATTERN

Type:	100A1		Channel:	
Directivity:	Numeric	dBd	Location:	
Main Lobe:	0.41	-3.82	Beam Tilt:	0.00
Horizontal:	0.41	-3.82	Polarization:	Circular

Relative Field



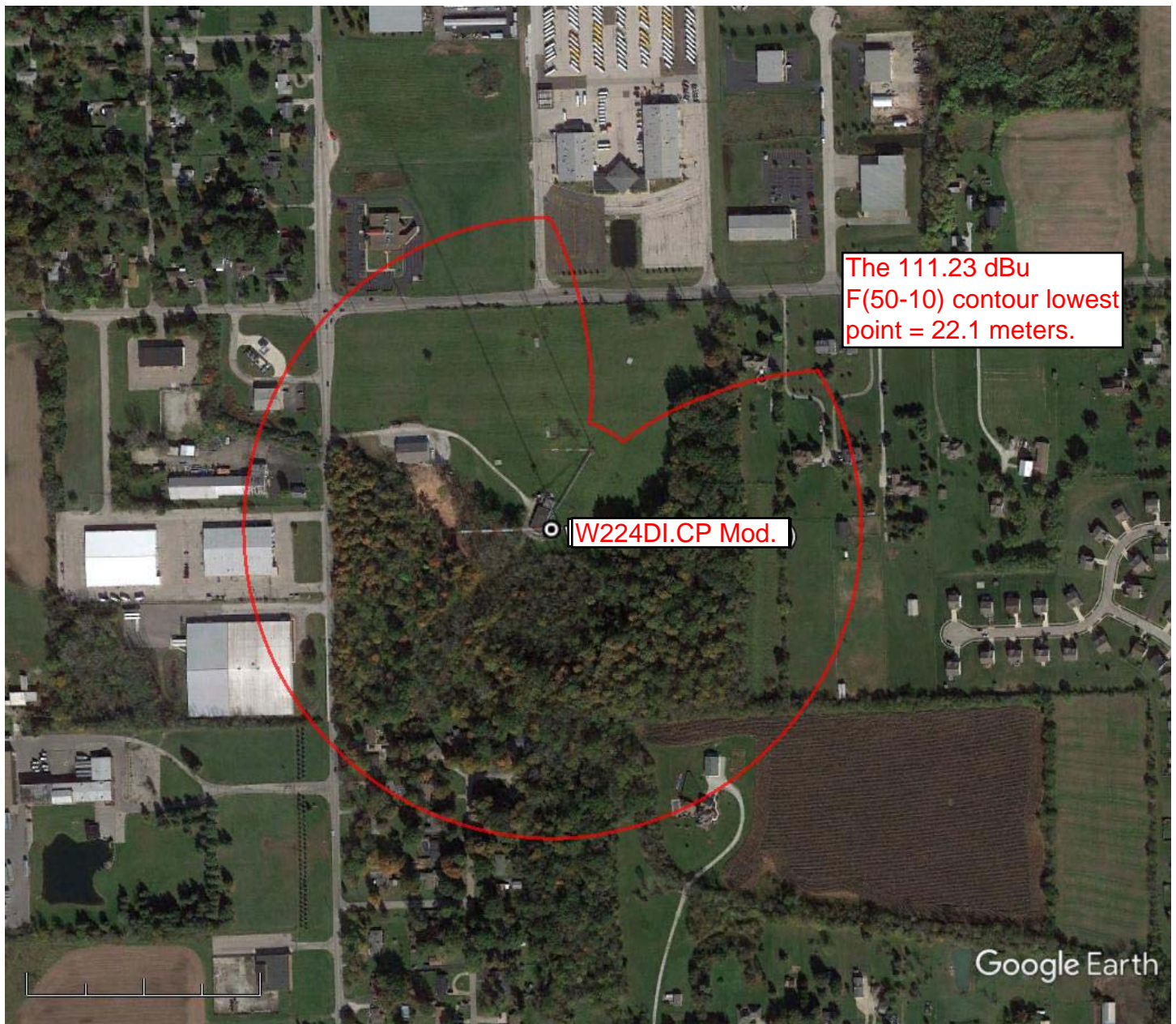
TABULATED DATA FOR ELEVATION PATTERN

Type: 100A1F

Polarization: Circular

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB					
5.00	0.997	-0.03	-6.75	0.994	-0.05	-27.00	0.905	-0.87	-50.50	0.682	-3.33	-74.00	0.367	-8.71
4.75	0.997	-0.03	-7.00	0.993	-0.06	-27.50	0.901	-0.90	-51.00	0.676	-3.40	-74.50	0.360	-8.88
4.50	0.997	-0.02	-7.25	0.993	-0.06	-28.00	0.898	-0.94	-51.50	0.670	-3.48	-75.00	0.352	-9.06
4.25	0.998	-0.02	-7.50	0.993	-0.07	-28.50	0.894	-0.97	-52.00	0.664	-3.56	-75.50	0.345	-9.25
4.00	0.998	-0.02	-7.75	0.992	-0.07	-29.00	0.890	-1.01	-52.50	0.658	-3.63	-76.00	0.337	-9.44
3.75	0.998	-0.02	-8.00	0.991	-0.07	-29.50	0.887	-1.04	-53.00	0.652	-3.72	-76.50	0.330	-9.63
3.50	0.998	-0.01	-8.25	0.991	-0.08	-30.00	0.883	-1.08	-53.50	0.646	-3.80	-77.00	0.323	-9.83
3.25	0.999	-0.01	-8.50	0.990	-0.08	-30.50	0.879	-1.12	-54.00	0.640	-3.88	-77.50	0.315	-10.03
3.00	0.999	-0.01	-8.75	0.990	-0.09	-31.00	0.875	-1.16	-54.50	0.634	-3.96	-78.00	0.308	-10.24
2.75	0.999	-0.01	-9.00	0.989	-0.09	-31.50	0.871	-1.20	-55.00	0.627	-4.05	-78.50	0.300	-10.45
2.50	0.999	-0.01	-9.25	0.989	-0.10	-32.00	0.867	-1.24	-55.50	0.621	-4.14	-79.00	0.293	-10.67
2.25	0.999	-0.01	-9.50	0.988	-0.10	-32.50	0.863	-1.28	-56.00	0.615	-4.23	-79.50	0.285	-10.89
2.00	0.999	0.00	-9.75	0.987	-0.11	-33.00	0.859	-1.32	-56.50	0.608	-4.32	-80.00	0.278	-11.13
1.75	1.000	0.00	-10.00	0.987	-0.12	-33.50	0.855	-1.36	-57.00	0.602	-4.41	-80.50	0.270	-11.36
1.50	1.000	0.00	-10.50	0.985	-0.13	-34.00	0.851	-1.41	-57.50	0.596	-4.50	-81.00	0.263	-11.61
1.25	1.000	0.00	-11.00	0.984	-0.14	-34.50	0.846	-1.45	-58.00	0.589	-4.60	-81.50	0.255	-11.86
1.00	1.000	0.00	-11.50	0.982	-0.15	-35.00	0.842	-1.49	-58.50	0.583	-4.69	-82.00	0.248	-12.12
0.75	1.000	0.00	-12.00	0.981	-0.17	-35.50	0.838	-1.54	-59.00	0.576	-4.79	-82.50	0.240	-12.39
0.50	1.000	0.00	-12.50	0.979	-0.18	-36.00	0.833	-1.59	-59.50	0.570	-4.89	-83.00	0.233	-12.67
0.25	1.000	0.00	-13.00	0.978	-0.20	-36.50	0.829	-1.63	-60.00	0.563	-4.99	-83.50	0.225	-12.96
0.00	1.000	0.00	-13.50	0.976	-0.21	-37.00	0.824	-1.68	-60.50	0.556	-5.09	-84.00	0.217	-13.26
-0.25	1.000	0.00	-14.00	0.974	-0.23	-37.50	0.819	-1.73	-61.00	0.550	-5.20	-84.50	0.210	-13.57
-0.50	1.000	0.00	-14.50	0.972	-0.25	-38.00	0.815	-1.78	-61.50	0.543	-5.30	-85.00	0.202	-13.89
-0.75	1.000	0.00	-15.00	0.970	-0.26	-38.50	0.810	-1.83	-62.00	0.536	-5.41	-85.50	0.195	-14.22
-1.00	1.000	0.00	-15.50	0.968	-0.28	-39.00	0.805	-1.88	-62.50	0.530	-5.52	-86.00	0.187	-14.56
-1.25	1.000	0.00	-16.00	0.966	-0.30	-39.50	0.800	-1.93	-63.00	0.523	-5.63	-86.50	0.179	-14.93
-1.50	1.000	0.00	-16.50	0.964	-0.32	-40.00	0.796	-1.99	-63.50	0.516	-5.75	-87.00	0.172	-15.30
-1.75	1.000	0.00	-17.00	0.962	-0.34	-40.50	0.791	-2.04	-64.00	0.509	-5.86	-87.50	0.164	-15.70
-2.00	0.999	0.00	-17.50	0.960	-0.36	-41.00	0.786	-2.10	-64.50	0.502	-5.98	-88.00	0.156	-16.11
-2.25	0.999	-0.01	-18.00	0.957	-0.38	-41.50	0.781	-2.15	-65.00	0.495	-6.10	-88.50	0.149	-16.54
-2.50	0.999	-0.01	-18.50	0.955	-0.40	-42.00	0.776	-2.21	-65.50	0.488	-6.22	-89.00	0.141	-17.00
-2.75	0.999	-0.01	-19.00	0.952	-0.42	-42.50	0.770	-2.27	-66.00	0.481	-6.35	-89.50	0.134	-17.48
-3.00	0.999	-0.01	-19.50	0.950	-0.45	-43.00	0.765	-2.32	-66.50	0.475	-6.48	-90.00	0.126	-17.99
-3.25	0.999	-0.01	-20.00	0.947	-0.47	-43.50	0.760	-2.38	-67.00	0.467	-6.60			
-3.50	0.998	-0.01	-20.50	0.945	-0.49	-44.00	0.755	-2.44	-67.50	0.460	-6.74			
-3.75	0.998	-0.02	-21.00	0.942	-0.52	-44.50	0.749	-2.51	-68.00	0.453	-6.87			
-4.00	0.998	-0.02	-21.50	0.939	-0.54	-45.00	0.744	-2.57	-68.50	0.446	-7.01			
-4.25	0.998	-0.02	-22.00	0.936	-0.57	-45.50	0.739	-2.63	-69.00	0.439	-7.15			
-4.50	0.997	-0.02	-22.50	0.933	-0.60	-46.00	0.733	-2.70	-69.50	0.432	-7.29			
-4.75	0.997	-0.03	-23.00	0.931	-0.63	-46.50	0.728	-2.76	-70.00	0.425	-7.43			
-5.00	0.997	-0.03	-23.50	0.928	-0.65	-47.00	0.722	-2.83	-70.50	0.418	-7.58			
-5.25	0.996	-0.03	-24.00	0.924	-0.68	-47.50	0.716	-2.90	-71.00	0.411	-7.73			
-5.50	0.996	-0.04	-24.50	0.921	-0.71	-48.00	0.711	-2.96	-71.50	0.403	-7.89			
-5.75	0.996	-0.04	-25.00	0.918	-0.74	-48.50	0.705	-3.03	-72.00	0.396	-8.04			
-6.00	0.995	-0.04	-25.50	0.915	-0.77	-49.00	0.699	-3.11	-72.50	0.389	-8.21			
-6.25	0.995	-0.05	-26.00	0.912	-0.80	-49.50	0.694	-3.18	-73.00	0.382	-8.37			
-6.50	0.994	-0.05	-26.50	0.908	-0.84	-50.00	0.688	-3.25	-73.50	0.374	-8.54			

E-5 W224DI.CP Mod. +40 dBu F(50-10) Contour Aerial Photo



Google Earth

feet
meters

1000

500



This map displays the coverage areas for two radio stations in Indiana. The W224DI.CP Mod. station is represented by a red circular contour, and the W236CR.AP station is represented by a black circular contour. The map includes various towns and cities, as well as major highways. A scale bar indicates a scale of 1:500,000.

W224DI.CP Mod. Station Data:

- BLFT20170707ABC
- Latitude: 39-45-36 N
- Longitude: 086-00-22 W
- ERP: 0.25 kW
- Channel: 224
- Frequency: 92.7 MHz
- AMSL Height: 442.0 m
- Elevation: 259.0 m
- Horiz. Pattern: Directional
- Vert. Pattern: No
- Prop Model: None

W236CR.AP Station Data:

- 60 dBu F(50-50) Contour

Common overlap area to W236CR.AP = 314.76 sq. km.
Total W236CR.AP area = 1118.9 sq. km. = 28.1%

W224DI.CP Mod. Station Data:

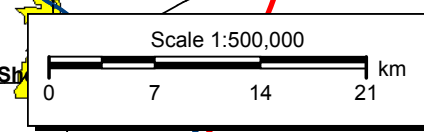
- 60 dBu F(50-50) Contour

Scale 1:500,000

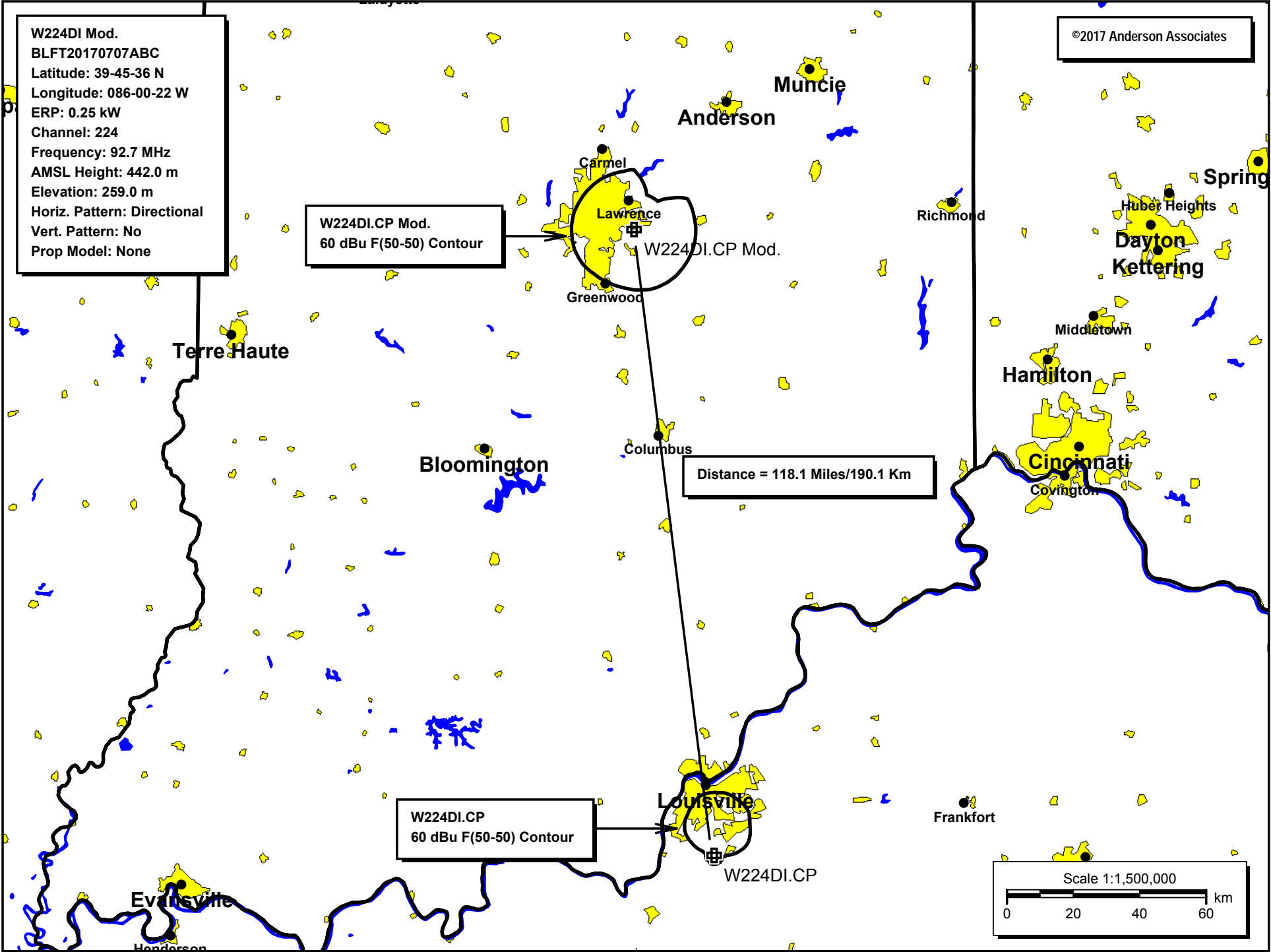
Scale bar: 0 7 14 21 km

W236CR.AP
60 dBu F(50-50) Contour

W224DI.CP Mod.
60 dBu F(50-50) Contour



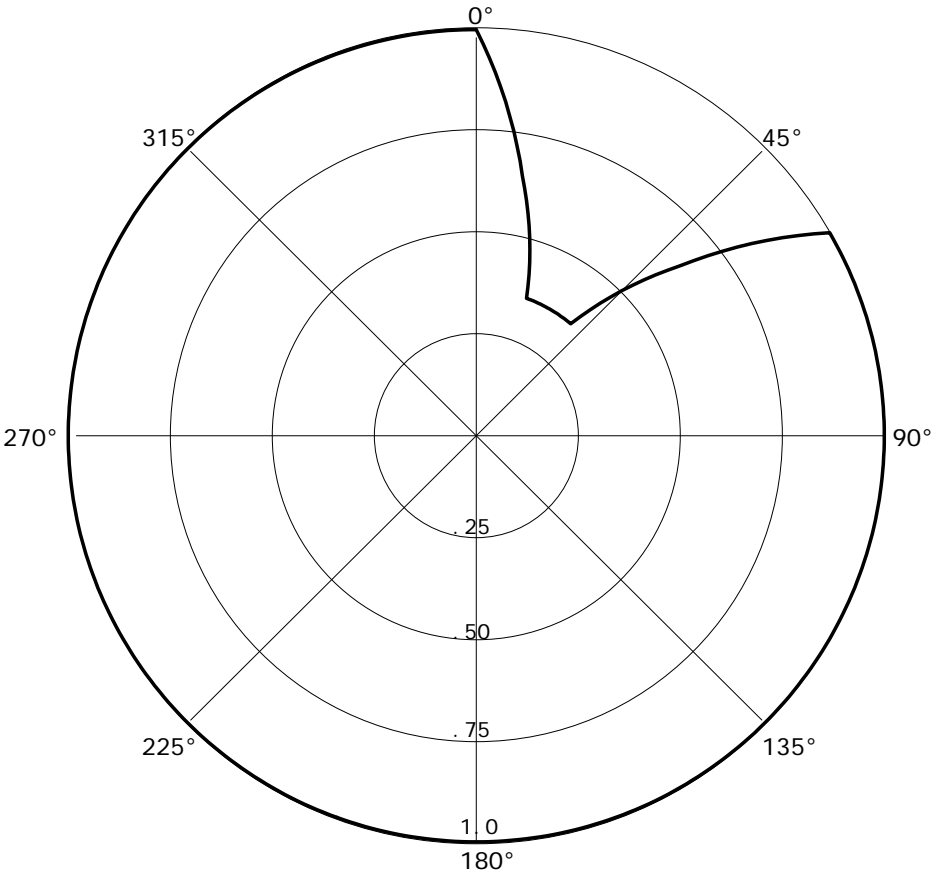
E-7 W224DI.CP Mod. 250 Mile Distance Plot



E-8 W224DI.CP Mod. Directional Antenna Pattern

Graph is Relative Field RMS(V)= .945

Azi	Field	dBk	kW
000	1.000	-10.458	0.090
010	0.650	-14.199	0.038
020	0.360	-19.332	0.012
030	0.360	-19.332	0.012
040	0.360	-19.332	0.012
050	0.650	-14.199	0.038
060	1.000	-10.458	0.090
070	1.000	-10.458	0.090
080	1.000	-10.458	0.090
090	1.000	-10.458	0.090
100	1.000	-10.458	0.090
110	1.000	-10.458	0.090
120	1.000	-10.458	0.090
130	1.000	-10.458	0.090
140	1.000	-10.458	0.090
150	1.000	-10.458	0.090
160	1.000	-10.458	0.090
170	1.000	-10.458	0.090
180	1.000	-10.458	0.090
190	1.000	-10.458	0.090
200	1.000	-10.458	0.090
210	1.000	-10.458	0.090
220	1.000	-10.458	0.090
230	1.000	-10.458	0.090
240	1.000	-10.458	0.090
250	1.000	-10.458	0.090
260	1.000	-10.458	0.090
270	1.000	-10.458	0.090
280	1.000	-10.458	0.090
290	1.000	-10.458	0.090
300	1.000	-10.458	0.090
310	1.000	-10.458	0.090
320	1.000	-10.458	0.090
330	1.000	-10.458	0.090
340	1.000	-10.458	0.090
350	1.000	-10.458	0.090



ASR Registration 1031014

Registration Detail

Reg Number	1031014	Status	Constructed
File Number	A1069323	Constructed	07/01/1956
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	39-45-36.0 N 086-00-22.0 W	Address	553 S POST RD
City, State	INDIANAPOLIS , IN		
Zip	46239	County	MARION
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
259.0	303.9
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
562.9	282.0

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	97-AGL-4554-OE	FAA Issue Date	10/24/1997
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Owner & Contact Information

FRN	0009961889	Owner Entity Type	Corporation
Assignor FRN	0003780368	Assignor ID	L00263768

Owner

Nexstar Broadcasting, Inc.	P: (972)373-8800
Attention To: Elizabeth Ryder	F: (972)373-8888
545 E. John Carpenter Freeway	E: eryder@nexstar.tv
Suite 700	
Irving , TX 75062	

Contact

Ryder , Elizabeth	P: (972)373-8800
Attention To: Elizabeth Ryder	F: (972)373-8888
545 E. John Carpenter Freeway	E: eryder@nexstar.tv
Suite 700	
Irving , TX 75062	