

## **Technical Report WPAY-FM Contingent Application**

This technical report has been developed in support of an application for a minor modification to WPAY-FM 281C at Portsmouth, OH, FCC file no. BLH-20060921ADI. A declass to channel 281C0, change in community of license to New Boston, OH, and a fully spaced site specification are requested. This application is filed as one of three contingent applications, including minor modifications to WNLT(FM) 282A at Harrison, OH, FCC file no. BLH-20090401AZX, changing its site and exchanging city of license with WORL(FM) 211B1 at Delhi Hills, OH, FCC File No. BLED-20070124AKG. The WPAY-FM declass, directional antenna, and allotment site specification are required to accommodate the WNLT(FM) fully spaced allocation reference point and proposed modified facilities.

The following exhibits are provided for the form 301 application:

- E-1 WPAY-FM Spacing study
- E-2 3" USGS Terrain HAAT Calculation
- E-3 Fully-spaced Reference Site Study
- E-4 WPAY-FM 70 dBu Mod. and Reference Plots
- E-5 Interference Plots to WNLT(FM) Mod. and WODB(FM).AP
- E-6 WNLT(FM) Mod. FMOVER Analysis
- E-7 WODB(FM).AP FMOVER Analysis
- E-8 Interference Plot to WLBC-FM 281B
- E-9 DA Pattern
- E-10 Reference Site Topographic Map
- E-11 ASR no. 1250086

# Anderson Associates

Broadcast Consultants  
1519 Euclid Avenue  
Bowling Green, KY 42103

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## **WPAY-FM Modification Exhibits:**

WPAY-FM is to declass to channel 281C0 at its current site at ASR no. 1250086, with a modification of its directional antenna to accommodate the contingent modification to WNLT(FM) relocation to ASR no.1011742, and operate at 2.0 kW ERP. Exhibit E-3 shows the fully spaced reference site will also accommodate the concurrent WNLT(FM) modification.

The channel study included in Exhibit E-1, demonstrates that WPAY-FM will be short-spaced to the WNLT(FM) 282A contingent modification, WODB(FM) 282A.AP, and WLBC-FM 281B. Therefore, CFR 73.215 processing is requested with respect to the WNLT(FM) 282A application and WODB(FM) 282A.AP. Interference contour plots and FMOVER analyses to both facilities are shown in exhibits E-5 through E-7. The existing CFR 73.213(a) spacing with respect to WLBC-FM 281B will continue to be upheld, and the modified interfering contour to the facility is actually decreased from the existing contour shown in exhibit E-8.

WPAY-FM will place a 70 dBu city grade contour over the proposed community of license of New Boston, OH, as shown in exhibit E-4.

## **WPAY-FM Antenna System:**

The modified facility will employ an ERI-MP-12AC-DA-HW 12 bay, half wavelength directional antenna, shown in exhibit E-9, at a COR AGL of 353 meters and operate at 100kW ERP. Using the three-second USGS terrain database, the calculated HAAT is 450 meters at its current tower site, ASR no. 1250086, shown in exhibit E-2.

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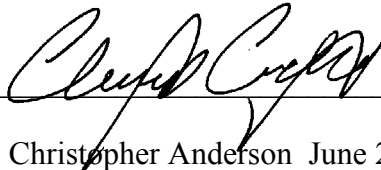
Broadcast Consultants  
1519 Euclid Avenue  
Bowling Green, KY 42103

## **RF Exposure Calculation:**

The RF contribution of the facility was calculated using the Commission's FMMODEL program. The resulting RF is  $0.151 \mu\text{W}/\text{cm}^2$  at 1360 meters from the base of the tower, which is well below the  $200 \mu\text{W}/\text{cm}^2$  maximum permissible for general public exposure, allowing its exclusion from consideration.

## **Conclusion:**

It is concluded that the minor modification of WPAY-FM is in full compliance with the Commission rules and policies.



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Christopher Anderson June 21, 2009  
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# E-1 WPAY-FM Spacing Study

REFERENCE		CLASS = C0 Int = C	DISPLAY DATES
38 41 00.0 N.		Current Spacings to 3rd Adj.	DATA 06-17-09
83 00 46.0 W.			SEARCH 06-17-09
----- Channel 281 - 104.1 MHz -----			

Call	Channel	Location		Azi	Dist	FCC	Margin
WPAY-FM	RSV 281C0	Portsmouth	OH	165.9	16.9	269.5	-252.6
WPAY-FM	APP-Z 281C0	Portsmouth	OH	0.0	0.0	269.5	-269.5
WPAY-FM	LIC-D 281C	Portsmouth	OH	0.0	0.0	280.5	-280.5
WODB	APP-N 282A	West Jefferson	OH	354.4	137.1	151.5	-14.4
WLBC-FM*	LIC 281B	Muncie	IN	309.7	261.6	271.5	-9.9
WNLTT**	LIC-N 282A	Harrison	OH	289.8	141.9	151.5	-9.6
WODB	RSV 282A	West Jefferson	OH	349.8	153.3	151.5	1.8
WXEG	LIC-Z 280A	Beavercreek	OH	318.6	154.9	151.5	3.4
WNLTT	LIC-N 282A	Harrison	OH	292.8	159.5	151.5	8.0
WTDA	LIC-Z 280A	Westerville	OH	2.7	164.0	151.5	12.5
WYWH-LP	LIC 283L1	Athens	OH	47.6	107.7	83.5	24.2
WXXQ-FM	LIC-N 280A	Whitesburg	KY	172.1	176.2	151.5	24.7
WCKQ	LIC-Z 281C3	Campbellsville	KY	234.8	255.8	225.5	30.4
WODB	LIC 282A	Richwood	OH	351.5	182.2	151.5	30.7
WDCI	LIC 281A	Bridgeport	WV	72.9	245.5	214.5	31.0
WCBJ	LIC 279A	Campton	KY	198.1	120.5	85.5	35.0
WJFZ-LP	LIC 281L1	Zanesville	OH	30.7	162.8	121.5	41.3
WJFY-LP	LIC 282L1	Newark	OH	19.6	152.1	110.5	41.6
WQAL	LIC 281B	Cleveland	OH	19.7	314.5	271.5	43.0
WWEL	LIC 280A	London	KY	209.0	195.1	151.5	43.6
WLKT	LIC-N 283C2	Lexington-fayette	KY	239.3	132.4	88.5	43.9
WRBI	LIC 280A	Batesville	IN	287.9	203.6	151.5	52.1
WGRR	LIC-Z 278B	Hamilton	OH	294.2	142.9	88.5	54.4
WJZA	LIC-Z 278A	Pickerington	OH	9.9	142.8	85.5	57.3
WETZ-FM	LIC-N 280A	New Martinsville	WV	58.6	211.0	151.5	59.5
AU7951504	VAC 279A	Mcconnelsville	OH	42.9	147.0	85.5	61.5
WVRC-FM	LIC 284A	Spencer	WV	84.7	150.0	85.5	64.5
WTQR	LIC 281C	Winston-salem	NC	137.0	346.4	280.5	65.9
WTQR	CP 281C	Winston-salem	NC	137.0	346.5	280.5	66.0
WTUE	LIC 284B	Dayton	OH	318.6	154.9	88.5	66.4
WLZT	LIC-D 227B	Chillicothe	OH	355.3	101.2	30.5	70.7
WWOH-LP	CP 283L1	Marietta	OH	57.9	156.7	83.5	73.2
WWOH-LP	LIC 283L1	Marietta	OH	58.2	157.5	83.5	74.0
R28892	DEL 227B	Chillicothe	OH	5.9	104.7	30.5	74.2
R29134	ADD 227B	Ashville	OH	5.9	104.7	30.5	74.2
WEZJ-FM	LIC-Z 282C3	Williamsburg	KY	206.0	238.8	162.5	76.3
WAYI	LIC 282A	Charlestown	IN	265.2	228.8	151.5	77.3
WJMD	LIC 284A	Hazard	KY	185.2	166.1	85.5	80.6
WCIR-FM	LIC 279B	Beckley	WV	118.3	169.9	88.5	81.4
AL9473	RSV 282A	Surgoinsville	TN	176.6	236.8	151.5	85.3
WEYE	LIC-N 282A	Surgoinsville	TN	175.4	239.2	151.5	87.7
WSTV-FM	LIC 279A	Frankfort	KY	253.4	173.7	85.5	88.2
WRKA	LIC 280A	Louisville	KY	259.6	244.2	151.5	92.7

\* WPAY-FM will continue to be a 73.213(a)facility with repect to WLBC-FM.

\*\* Contingent applications for the WPAY-FM modification declass to C0, and change in community of license to New Boston, OH, are to be filed with a modification to the WNLTT(FM) site location, and its change in community of license.

## E-2 WPAY-FM.Mod. HAAT Calculation

N. Lat. = 384100.0 W. Lng. = 830046.0

HAAT and Distance to Contour,  
FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC

Azi.	AV EL	HAAT	dBk	60-F5
000	171.7	504.3	13.62	71.47
045	196.6	479.4	18.69	82.47
090	197.1	478.9	20.00	85.42
135	238.8	437.2	20.00	82.50
180	263.0	413.0	20.00	80.72
225	261.6	414.4	20.00	80.83
270	232.7	443.3	18.38	79.13
315	245.8	430.2	16.65	73.85

Ave El= 225.91 M HAAT= 450.09 M AMSL= 676.0

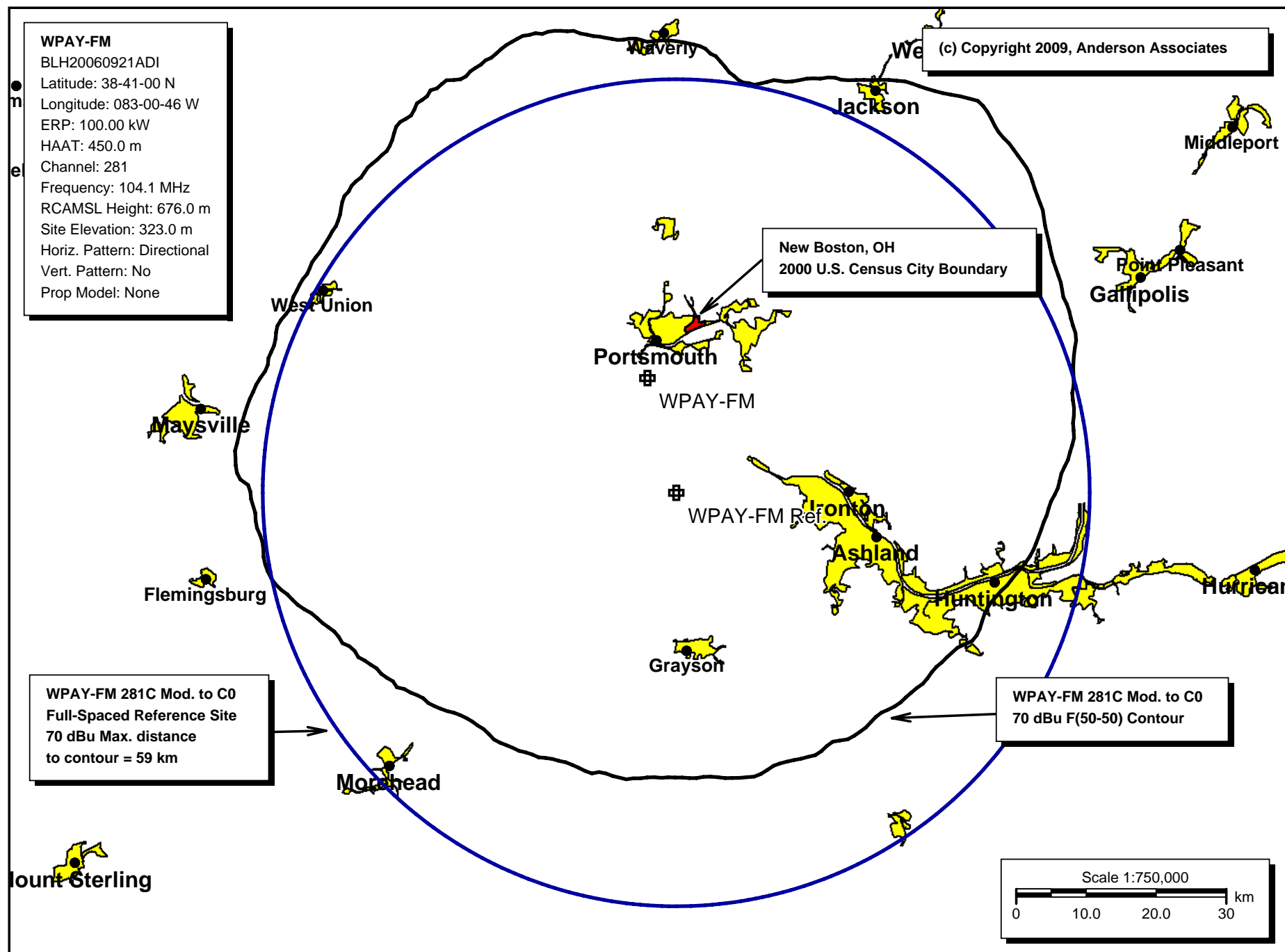
### E-3 WPAY-FM Reference Spacing Study

REFERENCE		DISPLAY DATES
38 32 09.0 N.	CLASS = C0 Int = C	DATA 06-16-09
82 57 56.0 W.	Current Spacings to 3rd Adj.	SEARCH 06-16-09
----- Channel 281 - 104.1 MHz -----		

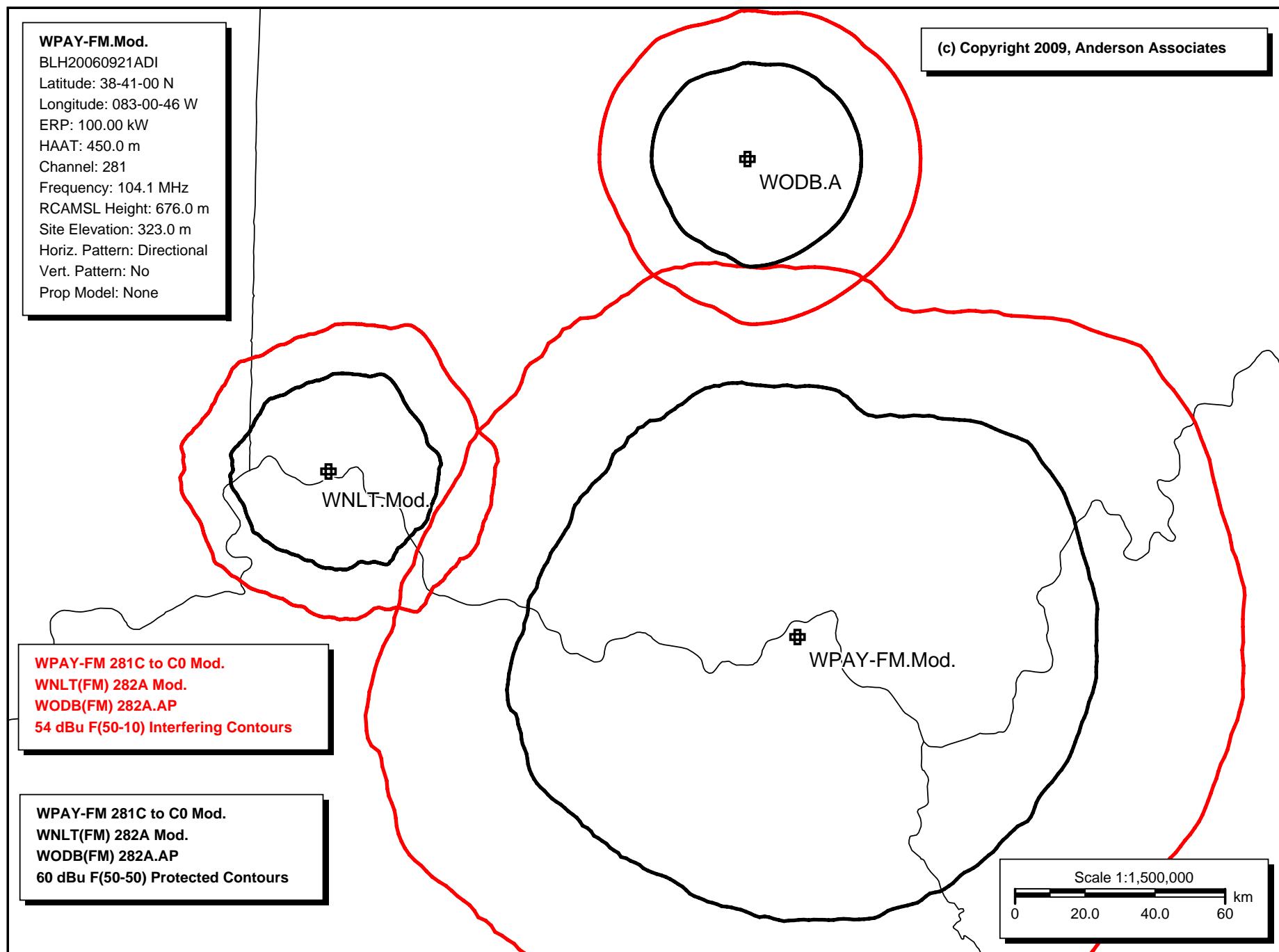
Call	Channel	Location	Azi	Dist	FCC	Margin
WPAY-FM	APP-Z 281C0	Portsmouth	OH 346.0	16.9	269.5	-252.6
WPAY-FM	RSV 281C0	Portsmouth	OH 0.0	0.0	269.5	-269.5
WPAY-FM	LIC-D 281C	Portsmouth	OH 346.0	16.9	280.5	-263.6
WNLT*	LIC-N 282A	Harrison	OH 295.2	152.0	151.5	0.47
WODB	APP-N 282A	West Jefferson	OH 353.5	153.9	151.5	2.4
WLBC-FM	LIC 281B	Muncie	IN 311.8	275.4	271.5	3.9
WXKQ-FM	LIC-N 280A	Whitesburg	KY 172.7	159.5	151.5	8.0
WXEG	LIC-Z 280A	Beavercreek	OH 321.2	170.1	151.5	18.6
WNLT	LIC-N 282A	Harrison	OH 297.4	170.2	151.5	18.7
WODB	RSV 282A	West Jefferson	OH 349.4	170.2	151.5	18.7
WCBJ	LIC 279A	Campton	KY 203.0	106.7	85.5	21.2
WCKQ	LIC-Z 281C3	Campbellsville	KY 238.5	250.3	225.5	24.8
WTDA	LIC-Z 280A	Westerville	OH 1.1	180.3	151.5	28.8
WWEL	LIC 280A	London	KY 212.6	183.2	151.5	31.7
WDCI	LIC 281A	Bridgeport	WV 69.0	246.9	214.5	32.4
WYWH-LP	LIC 283L1	Athens	OH 40.3	116.7	83.5	33.2
WLKT	LIC-N 283C2	Lexington-fayette	KY 246.6	128.7	88.5	40.2
WODB	LIC 282A	Richwood	OH 351.1	199.0	151.5	47.5
WTQR	LIC 281C	Winston-salem	NC 135.6	331.8	280.5	51.3
WTQR	CP 281C	Winston-salem	NC 135.6	331.8	280.5	51.3
WJFZ-LP	LIC 281L1	Zanesville	OH 26.8	175.2	121.5	53.7
WJFY-LP	LIC 282L1	Newark	OH 16.4	166.4	110.5	55.9
WQAL	LIC 281B	Cleveland	OH 18.1	328.6	271.5	57.1
WRBI	LIC 280A	Batesville	IN 291.8	213.0	151.5	61.5
WVRC-FM	LIC 284A	Spencer	WV 78.3	148.3	85.5	62.9
WEZJ-FM	LIC-Z 282C3	Williamsburg	KY 208.8	226.2	162.5	63.7
WJMD	LIC 284A	Hazard	KY 187.4	150.2	85.5	64.8
WETZ-FM	LIC-N 280A	New Martinsville	WV 54.3	216.6	151.5	65.1
WGRR	LIC-Z 278B	Hamilton	OH 299.2	154.0	88.5	65.5
AL9473	RSV 282A	Surgoinsville	TN 177.5	220.3	151.5	68.8
WCIR-FM	LIC 279B	Beckley	WV 113.8	159.1	88.5	70.6
WEYE	LIC-N 282A	Surgoinsville	TN 176.1	222.6	151.5	71.1
AU7951504	VAC 279A	Mcconnelsville	OH 37.7	156.8	85.5	71.4
WJZA	LIC-Z 278A	Pickerington	OH 7.4	158.4	85.5	72.9
WWOH-LP	CP 283L1	Marietta	OH 52.3	162.7	83.5	79.2
WWOH-LP	LIC 283L1	Marietta	OH 52.6	163.4	83.5	79.9
WAYI	LIC 282A	Charlestown	IN 269.3	232.1	151.5	80.6
WTUE	LIC 284B	Dayton	OH 321.2	170.1	88.5	81.6
WLZT	LIC-D 227B	Chillicothe	OH 354.0	117.9	30.5	87.4
WSTV-FM	LIC 279A	Frankfort	KY 259.0	173.8	85.5	88.3
R28892	DEL 227B	Chillicothe	OH 3.2	120.7	30.5	90.2
R29134	ADD 227B	Ashville	OH 3.2	120.7	30.5	90.2
WRKA	LIC 280A	Louisville	KY 263.6	245.9	151.5	94.4

\* WNLT(FM) contingent application at its modified coordinates.

# E-4 WPAY-FM Mod. 70 dBu and C0 Reference Contour Plots



## E-5 WPAY-FM Mod. Interference Contour Plots to WNLT(FM).Mod and WODB(FM).AP





# E-6 WPAY-FM Mod. to WNLT(FM) Mod. FMOver Analysis

USGS 03 SEC Terrain Data

WPAY-FM

Channel = 281C0

Max ERP = 100 kW

RCAMSL = 676 M

N. Lat. 38 41 00.0

W. Lng. 83 00 46.0

Protected

60 dBu

WNLT BLH20090401AZX

Channel = 282A

Max ERP = 2 kW

RCAMSL = 394.94 M

N. Lat. 39 06 18.0

W. Lng. 84 33 25.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
230.0	100.0000	0422.4	081.4	143.9	002.0000	0213.4	122.4	30.56	
231.0	100.0000	0422.3	081.4	143.9	002.0000	0213.4	121.1	30.82	
232.0	100.0000	0426.7	081.7	144.1	002.0000	0213.3	119.7	31.11	
233.0	100.0000	0432.2	082.1	144.3	002.0000	0213.3	118.3	31.40	
234.0	100.0000	0436.4	082.4	144.5	002.0000	0213.4	116.9	31.70	
235.0	100.0000	0441.2	082.8	144.7	002.0000	0213.6	115.4	32.02	
236.0	100.0000	0450.1	083.4	145.0	002.0000	0214.1	114.0	32.34	
237.0	100.0000	0457.3	084.0	145.2	002.0000	0214.6	112.5	32.68	
238.0	100.0000	0461.8	084.3	145.4	002.0000	0215.1	111.0	33.02	
239.0	100.0000	0465.6	084.5	145.5	002.0000	0215.4	109.5	33.39	
240.0	100.0000	0472.9	085.0	145.7	002.0000	0216.4	108.0	33.79	
241.0	100.0000	0477.9	085.4	145.8	002.0000	0217.0	106.5	34.19	
242.0	100.0000	0479.7	085.5	145.8	002.0000	0216.9	105.0	34.59	
243.0	100.0000	0479.5	085.5	145.7	002.0000	0216.4	103.5	34.98	
244.0	100.0000	0477.5	085.3	145.5	002.0000	0215.6	102.1	35.37	
245.0	100.0000	0473.4	085.1	145.3	002.0000	0214.7	100.6	35.75	
246.0	100.0000	0465.9	084.6	144.8	002.0000	0213.9	099.2	36.12	
247.0	100.0000	0460.7	084.2	144.5	002.0000	0213.4	097.9	36.51	
248.0	100.0000	0460.0	084.1	144.2	002.0000	0213.3	096.4	36.93	
249.0	100.0000	0460.4	084.2	144.0	002.0000	0213.3	095.0	37.36	
250.0	100.0000	0456.8	083.9	143.7	002.0000	0213.4	093.6	37.78	
251.0	100.0000	0451.1	083.5	143.2	002.0000	0212.2	092.4	38.13	
252.0	100.0000	0449.4	083.4	142.8	002.0000	0211.1	091.0	38.51	
253.0	100.0000	0449.6	083.4	142.5	002.0000	0209.8	089.6	38.89	
254.0	100.0000	0446.2	083.2	142.0	002.0000	0207.4	088.3	39.19	
255.0	100.0000	0447.4	083.2	141.7	002.0000	0206.0	087.0	39.58	
256.0	100.0000	0462.5	084.3	142.0	002.0000	0207.3	085.2	40.18	
257.0	100.0000	0466.2	084.6	141.8	002.0000	0206.1	083.7	40.60	
258.0	100.0000	0465.3	084.5	141.3	002.0000	0204.7	082.4	40.96	
259.0	100.0000	0462.4	084.3	140.7	002.0000	0202.6	081.2	41.28	
260.0	100.0000	0460.8	084.2	140.1	002.0000	0201.0	079.9	41.61	
261.0	096.6289	0458.2	083.7	139.3	002.0000	0200.0	078.9	41.90	
262.0	093.3156	0456.9	083.2	138.4	002.0000	0197.4	077.9	42.12	
263.0	090.0601	0457.8	083.0	137.7	002.0000	0193.2	076.9	42.29	
264.0	086.8624	0455.3	082.4	136.7	002.0000	0193.0	076.0	42.56	
265.0	083.7225	0454.3	082.0	135.8	002.0000	0195.0	075.2	42.92	
266.0	080.6404	0453.6	081.5	134.8	002.0000	0195.8	074.3	43.22	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
267.0	077.6161	0452.2	081.0	133.8	002.0000	0195.6	073.6	43.46
268.0	074.6496	0449.1	080.4	132.7	002.0000	0196.9	073.0	43.70
269.0	071.7409	0447.4	079.9	131.6	002.0000	0196.2	072.4	43.87
270.0	068.8900	0443.3	079.1	130.4	002.0000	0194.1	072.0	43.91
271.0	066.4225	0437.6	078.3	129.1	002.0000	0195.0	071.8	44.03
272.0	064.0000	0437.0	077.9	128.1	002.0000	0194.4	071.3	44.17
273.0	061.6225	0443.2	077.9	127.2	002.0000	0195.2	070.5	44.48
274.0	059.2900	0443.4	077.5	126.1	002.0000	0198.7	070.0	44.77
275.0	057.0025	0443.6	077.1	125.0	002.0000	0198.4	069.7	44.87
276.0	054.7600	0449.1	077.1	124.0	002.0000	0198.9	069.0	45.11
277.0	052.5625	0456.8	077.3	123.1	002.0000	0197.1	068.3	45.29
278.0	050.4100	0463.2	077.3	122.1	002.0000	0204.7	067.6	45.81
279.0	048.3025	0463.2	076.8	120.9	002.0000	0209.8	067.5	46.05
280.0	046.2400	0460.7	076.1	119.6	002.0000	0213.3	067.7	46.14
281.0	044.8900	0458.2	075.6	118.4	002.0000	0214.2	067.7	46.16
282.0	043.5600	0462.4	075.6	117.3	002.0000	0215.8	067.3	46.35
283.0	042.2500	0466.5	075.6	116.2	002.0000	0216.3	067.0	46.47
284.0	040.9600	0467.6	075.3	115.1	002.0000	0217.1	067.0	46.52
285.0	039.6900	0469.9	075.1	113.9	002.0000	0214.8	066.9	46.45
286.0	038.4400	0471.0	074.9	112.8	002.0000	0212.8	067.0	46.34
287.0	037.2100	0469.6	074.4	111.7	002.0000	0212.1	067.3	46.21
288.0	036.0000	0472.8	074.3	110.5	002.0000	0212.9	067.4	46.23
289.0	034.8100	0478.7	074.3	109.4	002.0000	0212.3	067.3	46.24
290.0	033.6400	0479.9	074.0	108.3	002.0000	0210.2	067.6	46.05
291.0	034.4569	0470.2	073.6	107.3	002.0000	0209.7	068.0	45.87
292.0	035.2836	0463.0	073.3	106.2	002.0000	0211.7	068.4	45.83
293.0	036.1201	0455.8	073.0	105.2	002.0000	0211.6	068.8	45.69
294.0	036.9664	0449.5	072.8	104.2	002.0000	0212.7	069.2	45.60
295.0	037.8225	0444.9	072.7	103.1	002.0000	0214.0	069.5	45.55
296.0	038.6884	0437.7	072.5	102.2	002.0000	0215.5	070.0	45.43
297.0	039.5641	0434.7	072.5	101.2	002.0000	0216.7	070.3	45.38
298.0	040.4496	0434.1	072.7	100.1	002.0000	0216.5	070.5	45.32
299.0	041.3449	0435.9	073.0	099.1	002.0000	0215.9	070.5	45.28
300.0	042.2500	0437.7	073.4	098.0	002.0000	0214.8	070.6	45.21
301.0	042.6409	0439.8	073.7	096.9	002.0000	0215.7	070.9	45.16
302.0	043.0336	0434.1	073.4	096.1	002.0000	0215.6	071.7	44.88
303.0	043.4281	0434.7	073.5	095.1	002.0000	0216.1	072.1	44.75
304.0	043.8244	0429.7	073.2	094.3	002.0000	0216.8	073.0	44.51
305.0	044.2225	0422.8	072.8	093.6	002.0000	0217.5	073.9	44.21
306.0	044.6224	0421.0	072.8	092.8	002.0000	0217.3	074.6	43.98
307.0	045.0241	0419.6	072.8	092.0	002.0000	0216.8	075.3	43.73
308.0	045.4276	0415.4	072.6	091.3	002.0000	0217.9	076.2	43.48
309.0	045.8329	0410.3	072.3	090.7	002.0000	0219.0	077.2	43.20
310.0	046.2400	0407.1	072.2	090.0	002.0000	0218.9	078.1	42.91
311.0	046.2400	0403.9	072.0	089.4	002.0000	0218.8	079.0	42.59
312.0	046.2400	0407.4	072.2	088.6	002.0000	0218.9	079.7	42.38
313.0	046.2400	0413.5	072.6	087.8	002.0000	0219.6	080.3	42.23
314.0	046.2400	0422.3	073.3	086.8	002.0000	0223.6	080.7	42.23
315.0	046.2400	0430.2	073.9	085.9	002.0000	0227.8	081.3	42.20
316.0	046.2400	0431.9	074.0	085.2	002.0000	0228.1	082.2	41.92
317.0	046.2400	0427.3	073.6	084.8	002.0000	0227.7	083.4	41.52

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
318.0	046.2400	0424.5	073.4	084.4	002.0000	0227.1	084.5	41.14
319.0	046.2400	0430.5	073.9	083.7	002.0000	0226.4	085.3	40.86
320.0	046.2400	0438.5	074.5	082.8	002.0000	0226.1	086.0	40.62
321.0	046.2400	0437.0	074.4	082.4	002.0000	0225.7	087.2	40.24
322.0	046.2400	0436.0	074.3	082.0	002.0000	0225.2	088.3	39.86
323.0	046.2400	0442.7	074.8	081.3	002.0000	0224.1	089.2	39.55
324.0	046.2400	0437.0	074.4	081.2	002.0000	0223.7	090.5	39.12
325.0	046.2400	0439.2	074.5	080.7	002.0000	0222.6	091.6	38.74
326.0	046.2400	0440.2	074.6	080.3	002.0000	0221.3	092.7	38.34
327.0	046.2400	0430.3	073.9	080.4	002.0000	0221.6	094.2	37.90
328.0	046.2400	0422.2	073.3	080.4	002.0000	0221.6	095.6	37.47
329.0	046.2400	0422.0	073.3	080.1	002.0000	0220.6	096.8	37.08
330.0	046.2400	0427.3	073.6	079.6	002.0000	0218.9	097.8	36.70
331.0	046.2400	0428.4	073.7	079.3	002.0000	0217.7	099.0	36.31
332.0	046.2400	0428.8	073.8	079.1	002.0000	0216.5	100.2	35.92
333.0	046.2400	0433.2	074.1	078.7	002.0000	0214.0	101.4	35.51
334.0	046.2400	0433.1	074.1	078.5	002.0000	0212.8	102.6	35.12
335.0	046.2400	0437.6	074.4	078.2	002.0000	0210.5	103.8	34.73
336.0	046.2400	0442.9	074.8	077.8	002.0000	0208.4	104.9	34.35
337.0	046.2400	0447.0	075.1	077.5	002.0000	0207.0	106.1	33.99
338.0	046.2400	0449.7	075.3	077.2	002.0000	0205.6	107.4	33.63
339.0	046.2400	0450.8	075.4	077.1	002.0000	0204.6	108.7	33.29
340.0	046.2400	0453.6	075.6	076.9	002.0000	0203.1	109.9	32.95
341.0	044.8900	0455.4	075.4	076.9	002.0000	0203.2	111.3	32.65
342.0	043.5600	0460.4	075.5	076.8	002.0000	0202.6	112.6	32.35
343.0	042.2500	0458.0	074.9	077.0	002.0000	0203.9	113.9	32.10
344.0	040.9600	0464.6	075.1	076.8	002.0000	0203.1	115.2	31.80
345.0	039.6900	0468.4	075.0	076.8	002.0000	0203.1	116.5	31.53
346.0	038.4400	0468.7	074.7	077.0	002.0000	0204.0	117.8	31.28
347.0	037.2100	0469.2	074.4	077.1	002.0000	0204.9	119.1	31.04
348.0	036.0000	0472.8	074.3	077.2	002.0000	0205.2	120.4	30.78
349.0	034.8100	0468.3	073.5	077.5	002.0000	0207.2	121.7	30.57
350.0	033.6400	0676.0	083.6	072.9	002.0000	0189.8	123.7	29.77

WNL T BLH20090401AZX  
Channel = 282A  
Max ERP = 2 kW  
RCAMSL = 394.94 M  
N. Lat. 39 06 18.0  
W. Lng. 84 33 25.0  
Protected  
60 dBu

WPAY-FM  
Channel = 281C0  
Max ERP = 100 kW  
RCAMSL = 676 M  
N. Lat. 38 41 00.0  
W. Lng. 83 00 46.0  
Interfering  
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
049.0	002.0000	0187.1	029.1	301.0	042.6512	0439.7	129.6	48.58	
050.0	002.0000	0186.1	029.1	300.9	042.6117	0439.8	129.1	48.70	
051.0	002.0000	0185.3	029.0	300.8	042.5717	0439.6	128.7	48.80	
052.0	002.0000	0184.7	029.0	300.7	042.5324	0439.4	128.2	48.91	
053.0	002.0000	0184.4	029.0	300.6	042.4950	0439.1	127.8	49.01	
054.0	002.0000	0185.0	029.0	300.6	042.4653	0438.9	127.3	49.12	
055.0	002.0000	0185.8	029.0	300.5	042.4370	0438.8	126.8	49.24	
056.0	002.0000	0187.0	029.1	300.4	042.4103	0438.6	126.3	49.35	
057.0	002.0000	0188.2	029.2	300.3	042.3830	0438.5	125.8	49.47	
058.0	002.0000	0189.4	029.3	300.3	042.3532	0438.3	125.4	49.59	
059.0	002.0000	0190.4	029.4	300.2	042.3202	0438.1	124.9	49.70	
060.0	002.0000	0191.5	029.5	300.1	042.2857	0437.9	124.4	49.81	
061.0	002.0000	0192.2	029.5	300.0	042.2386	0437.7	123.9	49.92	
062.0	002.0000	0193.6	029.6	299.9	042.1571	0437.6	123.4	50.03	
063.0	002.0000	0193.8	029.6	299.8	042.0420	0437.4	123.0	50.13	
064.0	002.0000	0193.5	029.6	299.6	041.9091	0437.1	122.6	50.21	
065.0	002.0000	0193.0	029.6	299.5	041.7683	0437.1	122.2	50.29	
066.0	002.0000	0192.6	029.5	299.3	041.6266	0437.0	121.8	50.38	
067.0	002.0000	0192.7	029.5	299.2	041.4923	0436.6	121.4	50.46	
068.0	002.0000	0193.4	029.6	299.0	041.3695	0436.0	121.0	50.54	
069.0	002.0000	0193.4	029.6	298.9	041.2278	0435.4	120.6	50.60	
070.0	002.0000	0192.6	029.5	298.7	041.0608	0434.8	120.2	50.66	
071.0	002.0000	0191.7	029.5	298.5	040.8909	0434.5	119.9	50.71	
072.0	002.0000	0190.6	029.4	298.3	040.7138	0434.2	119.6	50.77	
073.0	002.0000	0189.9	029.3	298.1	040.5413	0434.1	119.3	50.83	
074.0	002.0000	0190.9	029.4	297.9	040.4048	0434.0	118.8	50.92	
075.0	002.0000	0193.8	029.6	297.8	040.3027	0433.8	118.3	51.03	
076.0	002.0000	0198.0	029.9	297.7	040.2221	0433.8	117.8	51.17	
077.0	002.0000	0204.1	030.4	297.7	040.1763	0433.7	117.1	51.34	
078.0	002.0000	0209.6	030.8	297.6	040.1122	0433.8	116.4	51.50	
079.0	002.0000	0215.9	031.3	297.6	040.0541	0433.9	115.7	51.68	
080.0	002.0000	0220.2	031.6	297.4	039.9478	0434.2	115.1	51.83	
081.0	002.0000	0223.3	031.9	297.3	039.8111	0434.6	114.6	51.96	
082.0	002.0000	0225.1	032.0	297.1	039.6421	0434.8	114.2	52.05	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
083.0	002.0000	0226.1	032.1	296.9	039.4548	0434.8	113.8	52.13
084.0	002.0000	0226.6	032.1	296.6	039.2524	0435.1	113.5	52.20
085.0	002.0000	0227.9	032.2	296.4	039.0622	0435.7	113.1	52.29
086.0	002.0000	0227.5	032.2	296.2	038.8405	0436.6	112.8	52.36
087.0	002.0000	0222.4	031.8	295.8	038.5424	0439.0	112.9	52.38
088.0	002.0000	0219.2	031.5	295.5	038.2779	0441.6	112.9	52.43
089.0	002.0000	0218.8	031.5	295.3	038.0539	0443.6	112.7	52.52
090.0	002.0000	0218.9	031.5	295.0	037.8354	0444.8	112.4	52.59
091.0	002.0000	0218.5	031.5	294.8	037.6088	0446.1	112.2	52.65
092.0	002.0000	0216.8	031.4	294.5	037.3653	0447.6	112.1	52.69
093.0	002.0000	0217.4	031.4	294.2	037.1486	0448.8	111.9	52.76
094.0	002.0000	0217.3	031.4	293.9	036.9220	0449.6	111.7	52.80
095.0	002.0000	0216.1	031.3	293.7	036.6827	0450.7	111.6	52.83
096.0	002.0000	0215.6	031.3	293.4	036.4505	0452.6	111.5	52.89
097.0	002.0000	0215.7	031.3	293.1	036.2235	0454.9	111.4	52.96
098.0	002.0000	0214.8	031.2	292.8	035.9874	0457.2	111.3	53.02
099.0	002.0000	0215.8	031.3	292.6	035.7650	0459.2	111.1	53.10
100.0	002.0000	0216.5	031.3	292.3	035.5390	0461.1	110.9	53.17
101.0	002.0000	0216.7	031.4	292.0	035.3083	0462.9	110.8	53.22
102.0	002.0000	0215.8	031.3	291.7	035.0718	0464.4	110.8	53.25
103.0	002.0000	0214.2	031.2	291.5	034.8328	0466.1	110.8	53.25
104.0	002.0000	0213.0	031.1	291.2	034.5980	0468.3	110.8	53.28
105.0	002.0000	0211.5	031.0	290.9	034.3640	0471.5	110.9	53.32
106.0	002.0000	0212.1	031.0	290.6	034.1369	0474.6	110.8	53.40
107.0	002.0000	0209.9	030.8	290.3	033.9053	0477.7	110.9	53.42
108.0	002.0000	0210.0	030.8	290.0	033.6791	0479.7	110.9	53.46
109.0	002.0000	0211.4	031.0	289.8	033.9079	0480.4	110.8	53.54
110.0	002.0000	0212.9	031.1	289.5	034.2361	0480.3	110.7	53.61
111.0	002.0000	0212.7	031.0	289.2	034.5649	0479.5	110.7	53.62
112.0	002.0000	0212.1	031.0	288.9	034.8934	0478.4	110.8	53.61
113.0	002.0000	0212.9	031.1	288.6	035.2274	0476.2	110.8	53.59
114.0	002.0000	0215.0	031.2	288.4	035.5712	0474.3	110.7	53.61
115.0	002.0000	0217.1	031.4	288.1	035.9196	0473.1	110.6	53.64
116.0	002.0000	0216.4	031.3	287.8	036.2520	0472.0	110.7	53.62
117.0	002.0000	0216.1	031.3	287.5	036.5861	0471.2	110.8	53.60
118.0	002.0000	0214.5	031.2	287.2	036.9081	0470.2	111.1	53.55
119.0	002.0000	0213.8	031.1	287.0	037.2347	0469.5	111.2	53.53
120.0	002.0000	0212.7	031.0	286.7	037.5554	0469.3	111.4	53.51
121.0	002.0000	0209.1	030.8	286.5	037.8407	0469.6	111.8	53.44
122.0	002.0000	0204.9	030.5	286.3	038.1088	0470.2	112.3	53.37
123.0	002.0000	0197.2	029.9	286.1	038.3174	0470.8	113.0	53.23
124.0	002.0000	0198.9	030.0	285.8	038.6544	0471.2	113.0	53.27
125.0	002.0000	0198.4	030.0	285.6	038.9592	0471.2	113.2	53.25
126.0	002.0000	0198.8	030.0	285.3	039.2747	0470.8	113.4	53.23
127.0	002.0000	0195.9	029.8	285.1	039.5303	0470.3	113.8	53.14
128.0	002.0000	0194.4	029.7	284.9	039.8032	0469.6	114.1	53.07
129.0	002.0000	0195.1	029.7	284.7	040.1165	0468.7	114.3	53.04
130.0	002.0000	0195.1	029.7	284.4	040.4137	0467.8	114.5	52.99
131.0	002.0000	0194.6	029.7	284.2	040.6977	0467.5	114.8	52.94
132.0	002.0000	0196.8	029.8	283.9	041.0388	0467.6	114.9	52.96
133.0	002.0000	0196.8	029.8	283.7	041.3309	0467.5	115.1	52.92

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
134.0	002.0000	0195.4	029.7	283.5	041.5812	0467.5	115.5	52.85
135.0	002.0000	0195.6	029.8	283.3	041.8695	0466.9	115.7	52.80
136.0	002.0000	0194.5	029.7	283.1	042.1200	0466.5	116.1	52.73
137.0	002.0000	0192.8	029.6	282.9	042.3490	0466.5	116.5	52.65
138.0	002.0000	0194.7	029.7	282.7	042.6713	0466.3	116.7	52.63
139.0	002.0000	0199.3	030.0	282.4	043.0713	0465.1	116.7	52.62
140.0	002.0000	0200.7	030.1	282.1	043.3787	0463.4	116.9	52.55
141.0	002.0000	0203.7	030.4	281.9	043.7364	0461.6	117.1	52.49
142.0	002.0000	0207.1	030.6	281.6	044.1089	0459.8	117.2	52.44
143.0	002.0000	0211.6	031.0	281.3	044.5175	0458.6	117.3	52.42
144.0	002.0000	0213.3	031.1	281.0	044.8332	0458.2	117.6	52.37
145.0	002.0000	0214.2	031.2	280.8	045.1163	0458.4	118.0	52.32
146.0	002.0000	0217.7	031.4	280.6	045.4919	0458.8	118.2	52.31
147.0	002.0000	0218.3	031.5	280.4	045.7573	0459.4	118.5	52.26
148.0	002.0000	0214.2	031.2	280.3	045.8452	0459.6	119.1	52.12
149.0	002.0000	0206.8	030.6	280.3	045.7999	0459.5	119.9	51.91
150.0	002.0000	0200.3	030.1	280.3	045.7732	0459.4	120.6	51.72
151.0	002.0000	0193.4	029.6	280.4	045.7284	0459.3	121.4	51.53
152.0	002.0000	0185.5	029.0	280.4	045.6453	0459.1	122.1	51.33
153.0	002.0000	0181.9	028.8	280.4	045.7117	0459.2	122.7	51.20
154.0	002.0000	0180.3	028.7	280.3	045.8372	0459.6	123.1	51.10
155.0	002.0000	0180.1	028.6	280.2	046.0105	0459.9	123.5	51.02
156.0	002.0000	0177.6	028.5	280.1	046.0898	0460.1	124.1	50.90
157.0	002.0000	0174.2	028.2	280.1	046.1276	0460.2	124.6	50.77
158.0	002.0000	0167.8	027.8	280.1	046.0388	0460.0	125.3	50.59
159.0	002.0000	0163.6	027.4	280.2	046.0188	0459.9	125.8	50.44
160.0	002.0000	0162.5	027.3	280.1	046.1218	0460.2	126.3	50.35
161.0	002.0000	0162.0	027.3	280.0	046.2402	0460.7	126.7	50.26
162.0	002.0000	0164.5	027.5	279.8	046.6046	0461.7	127.1	50.24
163.0	002.0000	0167.3	027.7	279.6	046.9760	0462.4	127.4	50.21
164.0	002.0000	0169.5	027.9	279.5	047.3059	0462.8	127.8	50.16
165.0	002.0000	0171.9	028.1	279.3	047.6369	0463.1	128.1	50.10
166.0	002.0000	0173.1	028.1	279.2	047.8919	0463.3	128.6	50.02
167.0	002.0000	0174.3	028.2	279.1	048.1378	0463.2	129.0	49.94
168.0	002.0000	0176.5	028.4	278.9	048.4344	0463.1	129.4	49.86
169.0	002.0000	0394.9	041.4	273.3	060.9803	0444.0	126.2	51.11

**E-7 WPAY-FM Mod. to WODB(FM).AP FMOver Analysis**

USGS 03 SEC Terrain Data

WPAY-FM

Channel = 281C0

Max ERP = 100 kW

RCAMSL = 676 M

N. Lat. 38 41 00.0

W. Lng. 83 00 46.0

Protected

60 dBu

WODB-A BPH20070119ACO

Channel = 282A

Max ERP = 6 kW

RCAMSL = 369 M

N. Lat. 39 54 45.0

W. Lng. 83 10 16.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
294.0	036.9664	0449.5	072.8	206.4	006.0000	0094.3	119.2	32.63	
295.0	037.8225	0444.9	072.7	206.4	006.0000	0094.3	118.0	32.84	
296.0	038.6884	0437.7	072.5	206.3	006.0000	0094.4	116.7	33.07	
297.0	039.5641	0434.7	072.5	206.3	006.0000	0094.4	115.5	33.29	
298.0	040.4496	0434.1	072.7	206.4	006.0000	0094.3	114.2	33.51	
299.0	041.3449	0435.9	073.0	206.5	006.0000	0094.2	112.9	33.74	
300.0	042.2500	0437.7	073.4	206.7	006.0000	0094.0	111.6	33.98	
301.0	042.6409	0439.8	073.7	206.8	006.0000	0094.0	110.3	34.22	
302.0	043.0336	0434.1	073.4	206.6	006.0000	0094.2	109.1	34.46	
303.0	043.4281	0434.7	073.5	206.6	006.0000	0094.2	107.8	34.71	
304.0	043.8244	0429.7	073.2	206.3	006.0000	0094.3	106.6	34.97	
305.0	044.2225	0422.8	072.8	206.0	006.0000	0094.7	105.4	35.22	
306.0	044.6224	0421.0	072.8	205.9	006.0000	0094.7	104.1	35.49	
307.0	045.0241	0419.6	072.8	205.7	006.0000	0094.8	102.9	35.75	
308.0	045.4276	0415.4	072.6	205.5	006.0000	0095.0	101.7	36.02	
309.0	045.8329	0410.3	072.3	205.2	006.0000	0095.1	100.5	36.28	
310.0	046.2400	0407.1	072.2	204.9	006.0000	0095.2	099.3	36.56	
311.0	046.2400	0403.9	072.0	204.6	006.0000	0095.4	098.2	36.83	
312.0	046.2400	0407.4	072.2	204.5	006.0000	0095.4	096.9	37.13	
313.0	046.2400	0413.5	072.6	204.5	006.0000	0095.4	095.5	37.46	
314.0	046.2400	0422.3	073.3	204.6	006.0000	0095.3	094.1	37.81	
315.0	046.2400	0430.2	073.9	204.7	006.0000	0095.3	092.7	38.16	
316.0	046.2400	0431.9	074.0	204.5	006.0000	0095.4	091.5	38.49	
317.0	046.2400	0427.3	073.6	204.0	006.0000	0095.6	090.4	38.78	
318.0	046.2400	0424.5	073.4	203.5	006.0000	0095.8	089.3	39.08	
319.0	046.2400	0430.5	073.9	203.4	006.0000	0095.8	088.0	39.45	
320.0	046.2400	0438.5	074.5	203.4	006.0000	0095.8	086.6	39.83	
321.0	046.2400	0437.0	074.4	202.9	006.0000	0096.0	085.5	40.14	
322.0	046.2400	0436.0	074.3	202.4	006.0000	0096.3	084.4	40.46	
323.0	046.2400	0442.7	074.8	202.3	006.0000	0096.3	083.0	40.84	
324.0	046.2400	0437.0	074.4	201.6	006.0000	0096.8	082.1	41.11	
325.0	046.2400	0439.2	074.5	201.1	006.0000	0097.0	080.9	41.45	
326.0	046.2400	0440.2	074.6	200.7	006.0000	0097.1	079.8	41.76	
327.0	046.2400	0430.3	073.9	199.7	006.0000	0097.4	079.2	41.95	
328.0	046.2400	0422.2	073.3	198.8	006.0000	0097.6	078.6	42.14	
329.0	046.2400	0422.0	073.3	198.2	006.0000	0097.7	077.6	42.41	
330.0	046.2400	0427.3	073.6	197.7	006.0000	0097.8	076.4	42.76	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
331.0	046.2400	0428.4	073.7	197.1	006.0000	0097.9	075.4	43.05
332.0	046.2400	0428.8	073.8	196.4	006.0000	0097.9	074.5	43.31
333.0	046.2400	0433.2	074.1	195.9	006.0000	0097.9	073.3	43.63
334.0	046.2400	0433.1	074.1	195.1	006.0000	0097.9	072.5	43.88
335.0	046.2400	0437.6	074.4	194.5	006.0000	0097.8	071.4	44.19
336.0	046.2400	0442.9	074.8	193.9	006.0000	0097.8	070.3	44.52
337.0	046.2400	0447.0	075.1	193.2	006.0000	0098.1	069.2	44.84
338.0	046.2400	0449.7	075.3	192.4	006.0000	0098.9	068.3	45.16
339.0	046.2400	0450.8	075.4	191.5	006.0000	0100.2	067.5	45.47
340.0	046.2400	0453.6	075.6	190.6	006.0000	0101.6	066.6	45.82
341.0	044.8900	0455.4	075.4	189.5	006.0000	0103.2	066.2	46.06
342.0	043.5600	0460.4	075.5	188.5	006.0000	0104.5	065.5	46.34
343.0	042.2500	0458.0	074.9	187.3	006.0000	0106.5	065.4	46.48
344.0	040.9600	0464.6	075.1	186.3	006.0000	0108.9	064.8	46.83
345.0	039.6900	0468.4	075.0	185.2	006.0000	0111.2	064.4	47.09
346.0	038.4400	0468.7	074.7	184.0	006.0000	0114.2	064.2	47.30
347.0	037.2100	0469.2	074.4	182.8	006.0000	0116.6	064.2	47.45
348.0	036.0000	0472.8	074.3	181.7	006.0000	0118.0	064.0	47.60
349.0	034.8100	0468.3	073.5	180.4	006.0000	0119.1	064.4	47.53
350.0	033.6400	0468.0	073.1	179.2	006.0000	0120.1	064.5	47.53
351.0	032.4900	0468.1	072.8	178.0	006.0000	0120.3	064.7	47.48
352.0	031.3600	0470.1	072.5	176.9	006.0000	0120.4	064.9	47.44
353.0	030.2500	0471.5	072.2	175.8	006.0000	0120.4	065.1	47.37
354.0	029.1600	0473.2	071.9	174.7	006.0000	0120.3	065.3	47.29
355.0	028.0900	0475.7	071.7	173.6	006.0000	0120.3	065.6	47.21
356.0	027.0400	0482.6	071.7	172.5	006.0000	0120.3	065.6	47.21
357.0	026.0100	0491.9	072.0	171.3	006.0000	0120.3	065.4	47.25
358.0	025.0000	0498.5	072.0	170.3	006.0000	0120.2	065.6	47.21
359.0	024.0100	0501.6	071.7	169.2	006.0000	0120.2	066.0	47.07
000.0	023.0400	0504.3	071.5	168.2	006.0000	0120.2	066.5	46.91
001.0	023.0400	0506.5	071.6	167.1	006.0000	0120.1	066.6	46.87
002.0	023.0400	0508.4	071.7	166.0	006.0000	0120.0	066.8	46.80
003.0	023.0400	0509.4	071.8	165.0	006.0000	0119.8	067.1	46.70
004.0	023.0400	0509.2	071.8	164.0	006.0000	0119.6	067.5	46.56
005.0	023.0400	0508.7	071.8	163.0	006.0000	0119.4	068.0	46.39
006.0	023.0400	0507.5	071.7	162.1	006.0000	0119.3	068.6	46.21
007.0	023.0400	0506.3	071.6	161.1	006.0000	0119.2	069.2	46.02
008.0	023.0400	0505.0	071.5	160.3	006.0000	0119.1	069.8	45.82
009.0	023.0400	0503.4	071.4	159.4	006.0000	0119.1	070.5	45.61
010.0	023.0400	0498.9	071.1	158.7	006.0000	0119.0	071.4	45.33
011.0	023.0400	0488.5	070.4	158.1	006.0000	0119.0	072.7	44.94
012.0	023.0400	0484.1	070.1	157.5	006.0000	0119.0	073.6	44.66
013.0	023.0400	0472.7	069.2	157.1	006.0000	0119.0	075.0	44.25
014.0	023.0400	0461.5	068.4	156.7	006.0000	0119.0	076.3	43.85
015.0	023.0400	0449.3	067.6	156.4	006.0000	0118.9	077.7	43.44
016.0	023.0400	0442.5	067.1	155.9	006.0000	0118.9	078.8	43.11
017.0	023.0400	0434.1	066.6	155.5	006.0000	0118.9	080.0	42.77
018.0	023.0400	0432.0	066.5	155.0	006.0000	0118.8	080.9	42.52
019.0	023.0400	0435.6	066.7	154.3	006.0000	0118.9	081.5	42.33
020.0	023.0400	0436.5	066.7	153.7	006.0000	0118.8	082.3	42.10
021.0	024.2064	0437.3	067.3	152.8	006.0000	0118.8	082.8	41.97



Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
022.0	025.4016	0439.3	068.0	151.9	006.0000	0118.8	083.2	41.84
023.0	026.6256	0443.3	068.8	151.0	006.0000	0118.8	083.7	41.71
024.0	027.8784	0439.4	069.0	150.4	006.0000	0118.8	084.5	41.48
025.0	029.1600	0436.0	069.2	149.8	006.0000	0118.8	085.3	41.24
026.0	030.4704	0437.1	069.8	149.0	006.0000	0118.8	086.0	41.04
027.0	031.8096	0440.7	070.5	148.2	006.0000	0118.8	086.6	40.86
028.0	033.1776	0446.3	071.4	147.3	006.0000	0118.8	087.3	40.68
029.0	034.5744	0448.5	072.0	146.5	006.0000	0118.8	088.1	40.46
030.0	036.0000	0448.3	072.4	145.9	006.0000	0118.9	089.0	40.20
031.0	037.9456	0453.3	073.4	145.0	006.0000	0119.0	089.7	40.00
032.0	039.9424	0453.5	074.0	144.3	006.0000	0119.1	090.7	39.74
033.0	041.9904	0449.5	074.2	143.9	006.0000	0119.1	091.8	39.44
034.0	044.0896	0450.3	074.8	143.2	006.0000	0119.3	092.8	39.17
035.0	046.2400	0453.3	075.6	142.5	006.0000	0119.5	093.8	38.91
036.0	048.4416	0457.6	076.4	141.8	006.0000	0119.7	094.8	38.65
037.0	050.6944	0461.6	077.2	141.1	006.0000	0119.9	095.9	38.37
038.0	052.9984	0468.1	078.2	140.4	006.0000	0120.3	097.0	38.10
039.0	055.3536	0473.0	079.0	139.7	006.0000	0120.6	098.2	37.81
040.0	057.7600	0477.1	079.8	139.2	006.0000	0120.8	099.4	37.52
041.0	060.8400	0480.8	080.6	138.6	006.0000	0121.0	100.7	37.22
042.0	064.0000	0480.3	081.0	138.2	006.0000	0121.2	102.0	36.91
043.0	067.2400	0479.8	081.5	137.9	006.0000	0121.2	103.4	36.59
044.0	070.5600	0479.1	082.0	137.5	006.0000	0121.2	104.8	36.28
045.0	073.9600	0479.4	082.5	137.2	006.0000	0121.4	106.2	35.98
046.0	077.4400	0482.7	083.1	136.8	006.0000	0121.5	107.6	35.68
047.0	081.0000	0487.4	083.9	136.4	006.0000	0121.8	109.0	35.39
048.0	084.6400	0493.2	084.7	136.0	006.0000	0122.1	110.5	35.10
049.0	088.3600	0497.3	085.3	135.7	006.0000	0122.3	112.0	34.81
050.0	092.1600	0503.3	086.1	135.4	006.0000	0122.6	113.6	34.53
051.0	092.9296	0504.2	086.3	135.4	006.0000	0122.7	115.1	34.26
052.0	093.7024	0501.8	086.2	135.5	006.0000	0122.6	116.6	33.98
053.0	094.4784	0498.0	086.0	135.6	006.0000	0122.4	118.0	33.72
054.0	095.2576	0676.0	094.2	131.9	006.0000	0125.2	120.9	33.29

WODB-A BPH20070119ACO

Channel = 282A

Max ERP = 6 kW

RCAMSL = 369 M

N. Lat. 39 54 45.0

W. Lng. 83 10 16.0

Protected

60 dBu

WPAY-FM

Channel = 281C0

Max ERP = 100 kW

RCAMSL = 676 M

N. Lat. 38 41 00.0

W. Lng. 83 00 46.0

Interfering

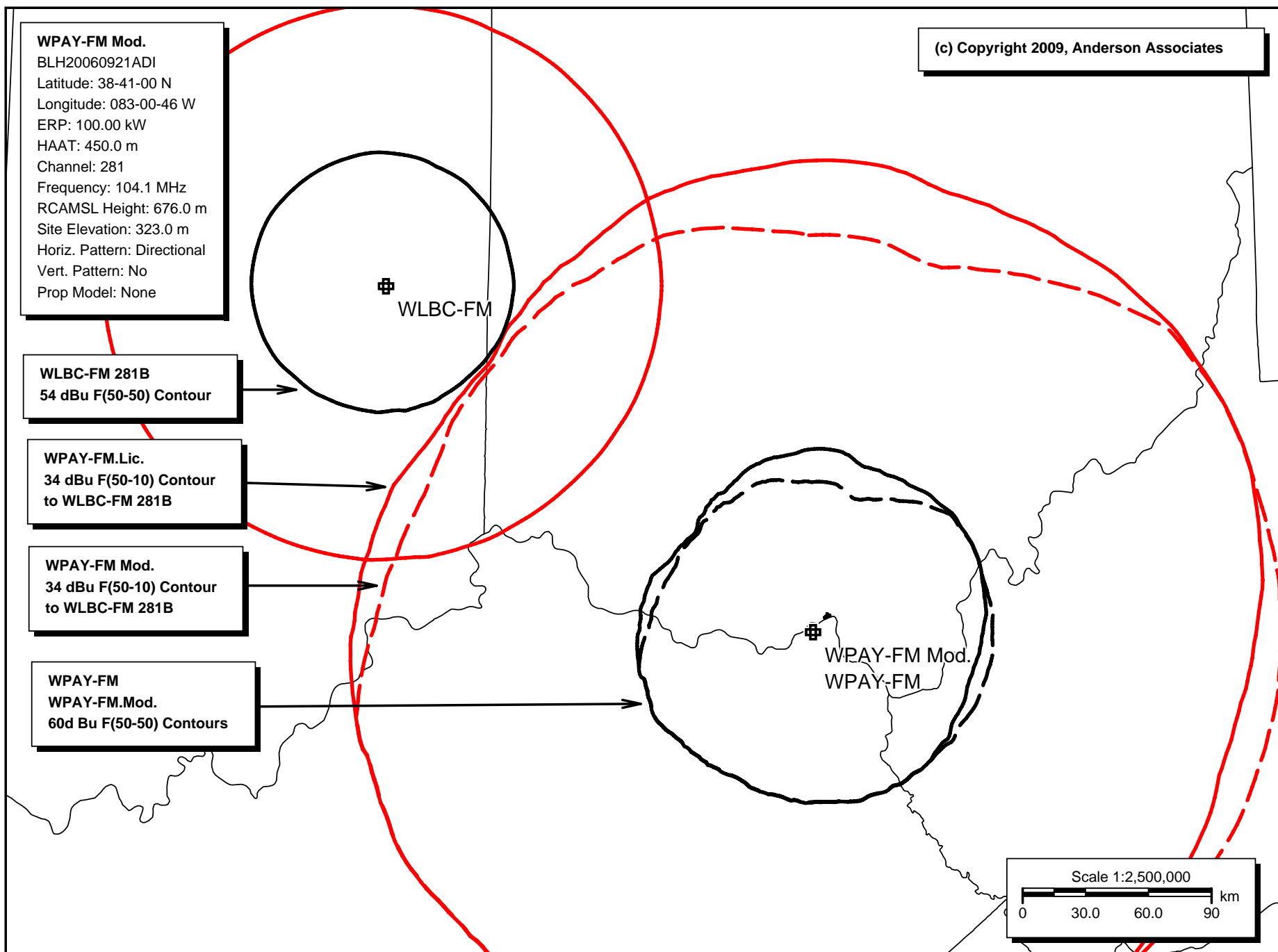
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
114.0	006.0000	0131.5	032.0	007.1	023.0400	0506.2	124.6	49.03	
115.0	006.0000	0131.8	032.0	007.0	023.0400	0506.3	124.1	49.17	
116.0	006.0000	0131.8	032.0	006.9	023.0400	0506.3	123.5	49.31	
117.0	006.0000	0131.9	032.0	006.9	023.0400	0506.4	123.0	49.45	
118.0	006.0000	0131.8	032.0	006.8	023.0400	0506.5	122.5	49.58	
119.0	006.0000	0131.8	032.0	006.7	023.0400	0506.7	122.0	49.72	
120.0	006.0000	0131.5	032.0	006.6	023.0400	0506.8	121.5	49.85	
121.0	006.0000	0131.3	031.9	006.4	023.0400	0507.0	121.0	49.98	
122.0	006.0000	0131.0	031.9	006.3	023.0400	0507.1	120.5	50.11	
123.0	006.0000	0130.6	031.9	006.2	023.0400	0507.3	120.0	50.24	
124.0	006.0000	0130.3	031.8	006.0	023.0400	0507.4	119.5	50.37	
125.0	006.0000	0129.7	031.8	005.9	023.0400	0507.6	119.0	50.49	
126.0	006.0000	0129.0	031.7	005.7	023.0400	0507.9	118.6	50.61	
127.0	006.0000	0128.5	031.6	005.6	023.0400	0508.1	118.2	50.73	
128.0	006.0000	0127.8	031.6	005.4	023.0400	0508.3	117.7	50.84	
129.0	006.0000	0127.1	031.5	005.2	023.0400	0508.5	117.3	50.96	
130.0	006.0000	0126.5	031.4	005.0	023.0400	0508.7	116.9	51.07	
131.0	006.0000	0125.8	031.4	004.9	023.0400	0508.8	116.5	51.17	
132.0	006.0000	0125.2	031.3	004.7	023.0400	0508.9	116.1	51.28	
133.0	006.0000	0124.6	031.2	004.5	023.0400	0509.0	115.7	51.38	
134.0	006.0000	0123.9	031.1	004.3	023.0400	0509.1	115.3	51.48	
135.0	006.0000	0123.0	031.0	004.1	023.0400	0509.2	115.0	51.57	
136.0	006.0000	0122.1	030.9	003.9	023.0400	0509.3	114.6	51.67	
137.0	006.0000	0121.4	030.9	003.7	023.0400	0509.4	114.3	51.76	
138.0	006.0000	0121.2	030.9	003.5	023.0400	0509.4	113.9	51.85	
139.0	006.0000	0120.9	030.8	003.3	023.0400	0509.4	113.6	51.95	
140.0	006.0000	0120.4	030.8	003.1	023.0400	0509.4	113.2	52.03	
141.0	006.0000	0120.0	030.7	002.8	023.0400	0509.3	112.9	52.12	
142.0	006.0000	0119.6	030.7	002.6	023.0400	0509.2	112.6	52.20	
143.0	006.0000	0119.3	030.7	002.4	023.0400	0508.9	112.2	52.27	
144.0	006.0000	0119.1	030.6	002.2	023.0400	0508.7	111.9	52.35	
145.0	006.0000	0119.0	030.6	002.0	023.0400	0508.3	111.6	52.42	
146.0	006.0000	0118.9	030.6	001.8	023.0400	0507.9	111.3	52.49	
147.0	006.0000	0118.8	030.6	001.5	023.0400	0507.5	111.0	52.56	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
148.0	006.0000	0118.8	030.6	001.3	023.0400	0507.1	110.7	52.63
149.0	006.0000	0118.8	030.6	001.1	023.0400	0506.6	110.4	52.69
150.0	006.0000	0118.8	030.6	000.8	023.0400	0506.2	110.1	52.75
151.0	006.0000	0118.8	030.6	000.6	023.0400	0505.6	109.9	52.81
152.0	006.0000	0118.8	030.6	000.4	023.0400	0505.1	109.6	52.86
153.0	006.0000	0118.8	030.6	000.1	023.0400	0504.5	109.4	52.91
154.0	006.0000	0118.9	030.6	359.9	023.1732	0503.9	109.1	52.99
155.0	006.0000	0118.8	030.6	359.6	023.4166	0503.3	108.9	53.08
156.0	006.0000	0118.9	030.6	359.4	023.6623	0502.6	108.7	53.16
157.0	006.0000	0119.0	030.6	359.1	023.9123	0501.8	108.4	53.25
158.0	006.0000	0119.0	030.6	358.8	024.1672	0501.2	108.2	53.33
159.0	006.0000	0119.1	030.6	358.6	024.4257	0500.6	108.1	53.41
160.0	006.0000	0119.1	030.6	358.3	024.6884	0499.8	107.9	53.48
161.0	006.0000	0119.2	030.6	358.0	024.9543	0498.7	107.7	53.55
162.0	006.0000	0119.3	030.6	357.8	025.2245	0497.2	107.5	53.60
163.0	006.0000	0119.4	030.7	357.5	025.4968	0495.4	107.4	53.64
164.0	006.0000	0119.6	030.7	357.2	025.7725	0493.6	107.2	53.68
165.0	006.0000	0119.8	030.7	357.0	026.0519	0491.5	107.1	53.70
166.0	006.0000	0120.0	030.7	356.7	026.3353	0489.3	107.0	53.72
167.0	006.0000	0120.1	030.7	356.4	026.6231	0486.6	106.9	53.72
168.0	006.0000	0120.2	030.7	356.1	026.9142	0483.7	106.8	53.71
169.0	006.0000	0120.2	030.7	355.8	027.2081	0481.3	106.7	53.71
170.0	006.0000	0120.2	030.8	355.6	027.5052	0478.8	106.7	53.71
171.0	006.0000	0120.2	030.8	355.3	027.8045	0477.0	106.6	53.72
172.0	006.0000	0120.3	030.8	355.0	028.1060	0475.7	106.6	53.74
173.0	006.0000	0120.3	030.8	354.7	028.4099	0474.5	106.5	53.76
174.0	006.0000	0120.3	030.8	354.4	028.7154	0474.0	106.5	53.79
175.0	006.0000	0120.3	030.8	354.1	029.0232	0473.6	106.5	53.83
176.0	006.0000	0120.4	030.8	353.8	029.3319	0472.7	106.5	53.84
177.0	006.0000	0120.4	030.8	353.6	029.6424	0472.5	106.6	53.88
178.0	006.0000	0120.3	030.8	353.3	029.9536	0472.0	106.6	53.90
179.0	006.0000	0120.1	030.7	353.0	030.2643	0471.4	106.7	53.91
180.0	006.0000	0119.5	030.7	352.7	030.5718	0470.9	106.8	53.90
181.0	006.0000	0118.5	030.6	352.4	030.8741	0470.8	107.0	53.89
182.0	006.0000	0117.7	030.5	352.2	031.1759	0470.5	107.2	53.87
183.0	006.0000	0116.3	030.3	351.9	031.4669	0469.7	107.4	53.82
184.0	006.0000	0114.2	030.1	351.7	031.7440	0468.9	107.8	53.74
185.0	006.0000	0111.7	029.8	351.4	032.0048	0468.3	108.2	53.65
186.0	006.0000	0109.6	029.5	351.2	032.2647	0468.0	108.6	53.57
187.0	006.0000	0107.2	029.2	351.0	032.5122	0468.1	109.0	53.50
188.0	006.0000	0105.3	029.0	350.8	032.7595	0468.3	109.3	53.44
189.0	006.0000	0103.9	028.8	350.5	033.0102	0468.8	109.7	53.39
190.0	006.0000	0102.5	028.6	350.3	033.2576	0468.9	110.0	53.34
191.0	006.0000	0101.0	028.4	350.1	033.4925	0468.5	110.4	53.27
192.0	006.0000	0099.4	028.2	349.9	033.7191	0467.8	110.8	53.17
193.0	006.0000	0098.2	028.1	349.7	033.9529	0467.4	111.1	53.11
194.0	006.0000	0097.8	028.0	349.5	034.2030	0467.3	111.3	53.07
195.0	006.0000	0097.8	028.0	349.3	034.4688	0467.5	111.5	53.05
196.0	006.0000	0097.9	028.0	349.1	034.7332	0468.1	111.7	53.05
197.0	006.0000	0097.9	028.0	348.8	034.9935	0468.7	112.0	53.04
198.0	006.0000	0097.8	028.0	348.6	035.2436	0469.6	112.2	53.03

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
199.0	006.0000	0097.6	028.0	348.4	035.4886	0470.8	112.5	53.02
200.0	006.0000	0097.3	027.9	348.2	035.7292	0472.0	112.8	53.01
201.0	006.0000	0097.0	027.9	348.0	035.9636	0472.7	113.1	52.99
202.0	006.0000	0096.5	027.8	347.8	036.1830	0472.9	113.4	52.94
203.0	006.0000	0096.0	027.8	347.7	036.3967	0472.5	113.7	52.86
204.0	006.0000	0095.6	027.7	347.5	036.6139	0471.4	114.1	52.77
205.0	006.0000	0095.2	027.6	347.3	036.8246	0470.3	114.4	52.68
206.0	006.0000	0094.7	027.6	347.2	037.0228	0469.5	114.8	52.59
207.0	006.0000	0093.8	027.4	347.0	037.1983	0469.2	115.2	52.50
208.0	006.0000	0093.0	027.3	346.9	037.3741	0469.2	115.5	52.42
209.0	006.0000	0092.4	027.3	346.7	037.5519	0469.5	115.9	52.35
210.0	006.0000	0092.4	027.3	346.6	037.7583	0469.8	116.3	52.30
211.0	006.0000	0092.7	027.3	346.4	037.9819	0470.0	116.6	52.25
212.0	006.0000	0093.0	027.3	346.2	038.2024	0469.6	116.9	52.19
213.0	006.0000	0093.4	027.4	346.0	038.4202	0468.8	117.2	52.11
214.0	006.0000	0093.7	027.4	345.8	038.6327	0467.9	117.5	52.03
215.0	006.0000	0094.0	027.5	345.7	038.8379	0467.7	117.8	51.96
216.0	006.0000	0094.1	027.5	345.5	039.0330	0467.6	118.2	51.89
217.0	006.0000	0094.3	027.5	345.4	039.2258	0467.9	118.5	51.83
218.0	006.0000	0094.6	027.6	345.2	039.4165	0468.2	118.9	51.76
219.0	006.0000	0094.8	027.6	345.1	039.6001	0468.4	119.3	51.69
220.0	006.0000	0094.8	027.6	344.9	039.7695	0468.4	119.7	51.61
221.0	006.0000	0094.6	027.6	344.8	039.9140	0468.5	120.1	51.53
222.0	006.0000	0094.2	027.5	344.7	040.0450	0468.5	120.5	51.43
223.0	006.0000	0093.7	027.4	344.6	040.1625	0468.3	121.0	51.33
224.0	006.0000	0093.2	027.4	344.5	040.2718	0467.9	121.4	51.21
225.0	006.0000	0092.7	027.3	344.5	040.3729	0467.6	121.9	51.10
226.0	006.0000	0092.1	027.2	344.4	040.4658	0467.3	122.3	50.99
227.0	006.0000	0091.6	027.1	344.3	040.5572	0466.9	122.8	50.87
228.0	006.0000	0091.1	027.1	344.2	040.6421	0466.5	123.2	50.75
229.0	006.0000	0090.6	027.0	344.2	040.7245	0466.0	123.7	50.63
230.0	006.0000	0090.1	026.9	344.1	040.7972	0465.6	124.1	50.51
231.0	006.0000	0089.5	026.9	344.1	040.8663	0465.2	124.6	50.39
232.0	006.0000	0088.9	026.8	344.0	040.9215	0464.8	125.1	50.27
233.0	006.0000	0088.2	026.7	344.0	040.9670	0464.6	125.5	50.15
234.0	006.0000	0369.0	049.7	333.6	046.2400	0432.0	120.1	51.12

## E-8 WPAY-FM Mod. Interference Plot to WLBC-FM 281B



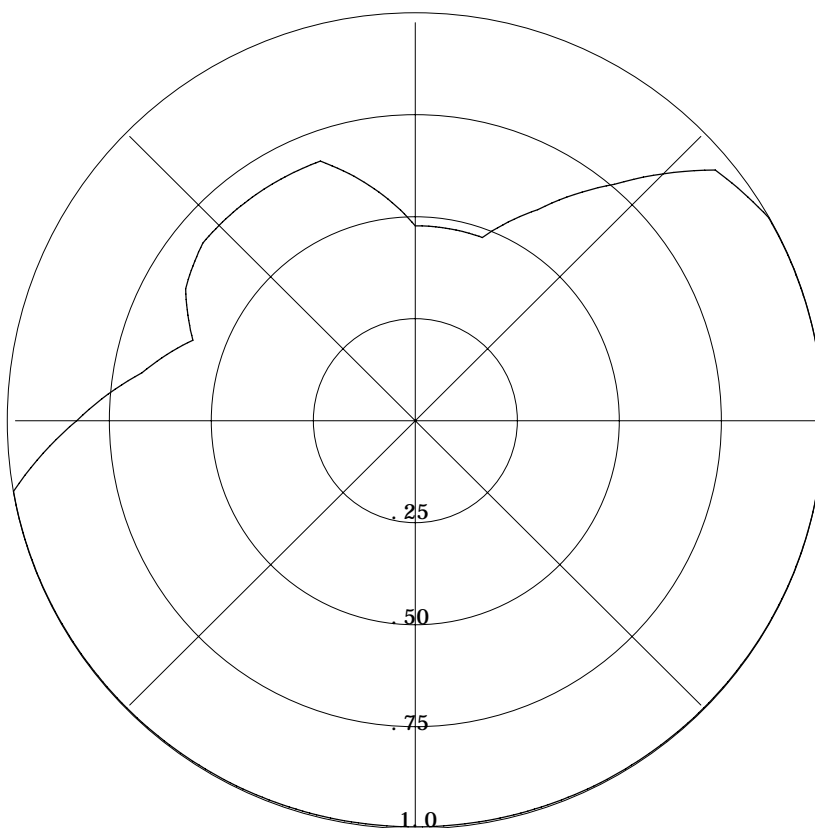
# E-9 WPAY-FM Mod. DA Pattern

RMS(V) = .876

Bearing    Field % Voltage

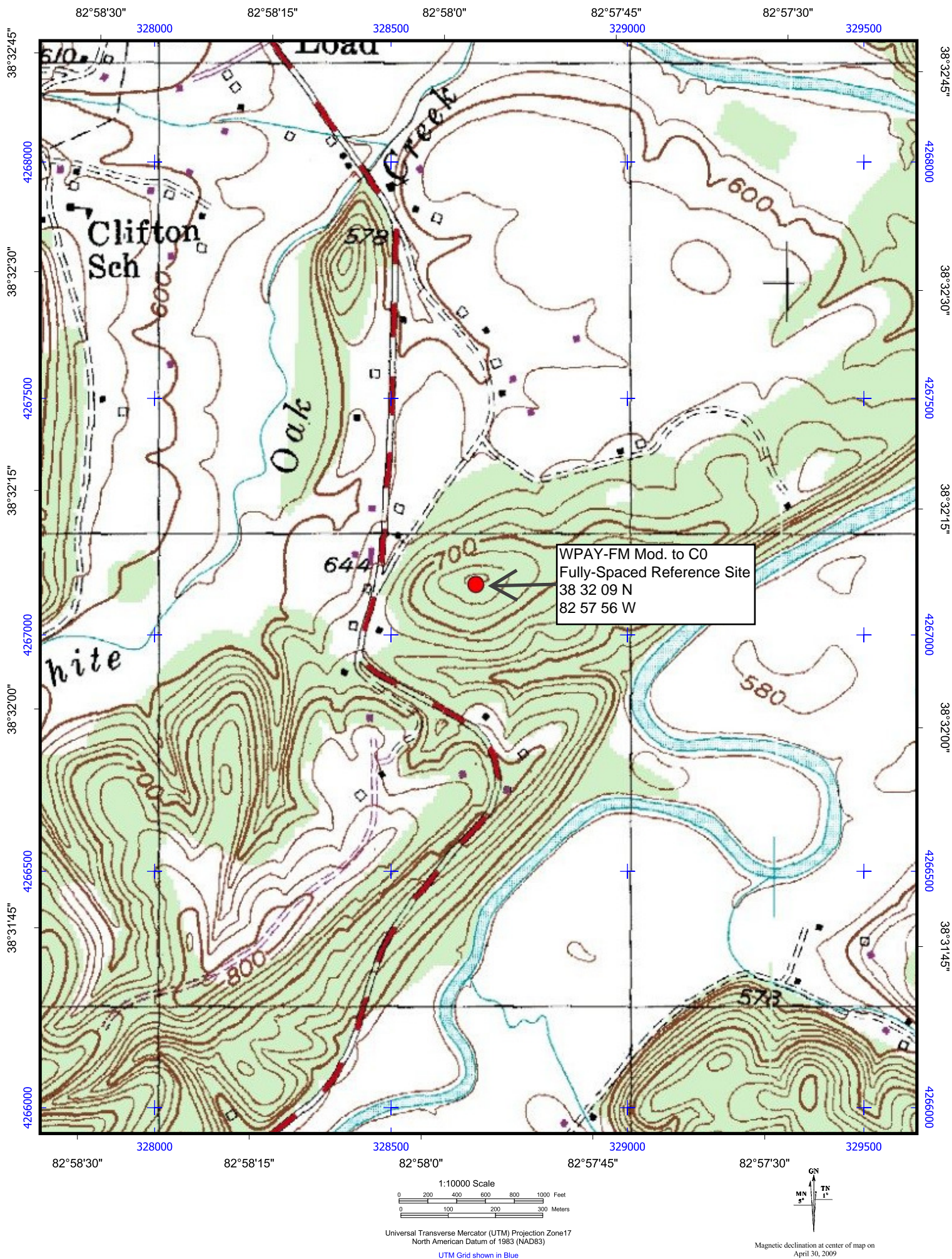
Graph is Percent Relative Field Voltage

000	=	0.480
010	=	0.480
020	=	0.480
030	=	0.600
040	=	0.760
050	=	0.960
060	=	1.000
070	=	1.000
080	=	1.000
090	=	1.000
100	=	1.000
110	=	1.000
120	=	1.000
130	=	1.000
140	=	1.000
150	=	1.000
160	=	1.000
170	=	1.000
180	=	1.000
190	=	1.000
200	=	1.000
210	=	1.000
220	=	1.000
230	=	1.000
240	=	1.000
250	=	1.000
260	=	1.000
270	=	0.830
280	=	0.680
290	=	0.580
300	=	0.650
310	=	0.680
320	=	0.680
330	=	0.680
340	=	0.680
350	=	0.580





# E-10 WPAY-FM Mod, Reference Site Topographical Map



Registration 1250086

 [Map Registration](#)

Registration Detail

Reg Number	1250086	Status	Constructed
File Number	A0614953	Constructed	09/01/2006
FAA Study	2005-ASO-1480-OE	EMI	No
FAA Issue Date	07/14/2005	NEPA	No

Antenna Structure

Structure Type            TOWER - Free standing or Guyed Structure used for Communications Purposes

Location (in NAD83 Coordinates)

Lat/Long	38-40-59.9 N 083-00-45.3 W	2 miles South and East of the Ohio River in Southshore, KY
City, State	Southshore , OH	
Center of AM Array		

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
323.2	371.9
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
695.1	370.9

Painting and Lighting Specifications

FAA Chapters 4, 7, 12  
Paint and Light in Accordance with FAA Circular Number 70/7460-1K  
.

Owner & Contact Information

FRN	0003780582	Licensee ID	L00132054
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Owner

Radio Stations WPAY/WPFB, Inc. 4505 Cenral Avenue Middletown , OH 45044	P: (513)422-3625 E:
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Contact

McCormick , Matthew H Esq 1300 North 17th St., 11th Floor Arlington , VA 22209 .	P: (703)812-0400 E: mccormick@fhhlaw.com
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Last Action Status

Status	Constructed	Received	11/19/2008
Purpose	Notification	Entered	11/19/2008
Mode	Interactive		

Related Applications

11/19/2008	A0614951 - Admin Update (AU)
11/19/2008	A0614953 - Notification (NT)
09/13/2005	A0463315 - New (NE)
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Comments

Comments

None  
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Automated Letters

11/20/2008	Authorization, Reference
09/18/2006	Construction Reminder, Reference 524087
09/14/2005	Authorization, Reference 448423
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