

**Comprehensive Engineering Exhibit**  
**W253BV Poughkeepsie, NY**  
**Facility ID No. 138571**

This exhibit is for a minor modification of W253BV, facility ID 138571 which is seeking a change in antenna height, antenna type, and a change in power. The proposed facility will continue to be a fill-in translator for WKIP (AM) Poughkeepsie, NY.

It is proposed to locate the transmit antenna 76.2 meters above ground on a newly registered, ASR#: 1324876, tower in Poughkeepsie NY that will be built soon. This new tower is immediately adjacent to the currently authorized location. It is proposed to utilize a Scala FMVMP-3, 3 bay vertically polarized directional antenna with an ERP of 0.230KW.

Below as Figure 1 is a spacing study from which it can be determined that this proposal is within the protected contour of WGNV-FM which is on a second adjacent channel. With respect to all other authorized facilities this proposal will not create any prohibited contour overlap.

Section 74.1204(d) states that *"The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable."*

We will demonstrate that a lack of population and/ or other factors allow this proposal to be compliant with 74.1204. The process commonly called "Living Way", as recently described in FCC 08-242 in connection with BPFT-19981001TA, allows for the use of U/D Analysis, also known as "signal strength ratio methodology." In this instant case the facilities of WGNV-FM and this proposal are second adjacent channels, which are to be afforded protection from signals 40 dB stronger.

Figure 2 is a map showing the predicted signal contour of WGNV-FM at the proposed translator location utilizing the FCC F50:50 curves. WGNV-FM is predicted to present a 66.1dBu signal level at the translator tower location. Also shown in Figure 2 are the contours of this proposal and that of the presently licensed facility, the primary AM station's 2mV/m contour along with its 25 mile radius.

The 106.1dBu contour (66.1dBu + 40 dB) of this proposal is the lowest value predicted to cause interference to WGNV-FM. Figure 3 depicts the predicted signal strength from the translator both at ground level, and at receiving antenna locations up to 2 meters above ground level of the translator. The 2 meter data is identified in the table as the "artificial plane," and as can be determined by the columns colored green, at no location from ground level to 2 meters above ground does the predicted signal of the proposed translator exceed that of 40 dB greater than the WGNV-FM 66.1dBu contour. Thus compliance with Section 74.1204(d) has been demonstrated.

Figure 4 is an aerial image showing that only single story buildings are in the vicinity of the tower.

## **RF Radiation Compliance**

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation."

The proposed antenna has been evaluated using "FM Model", as a worst case "Ring Stub" single bay being mounted with its center of radiation 76.0 meters above ground level, with an effective radiated power of 0.230 kilowatts in the vertical plane.

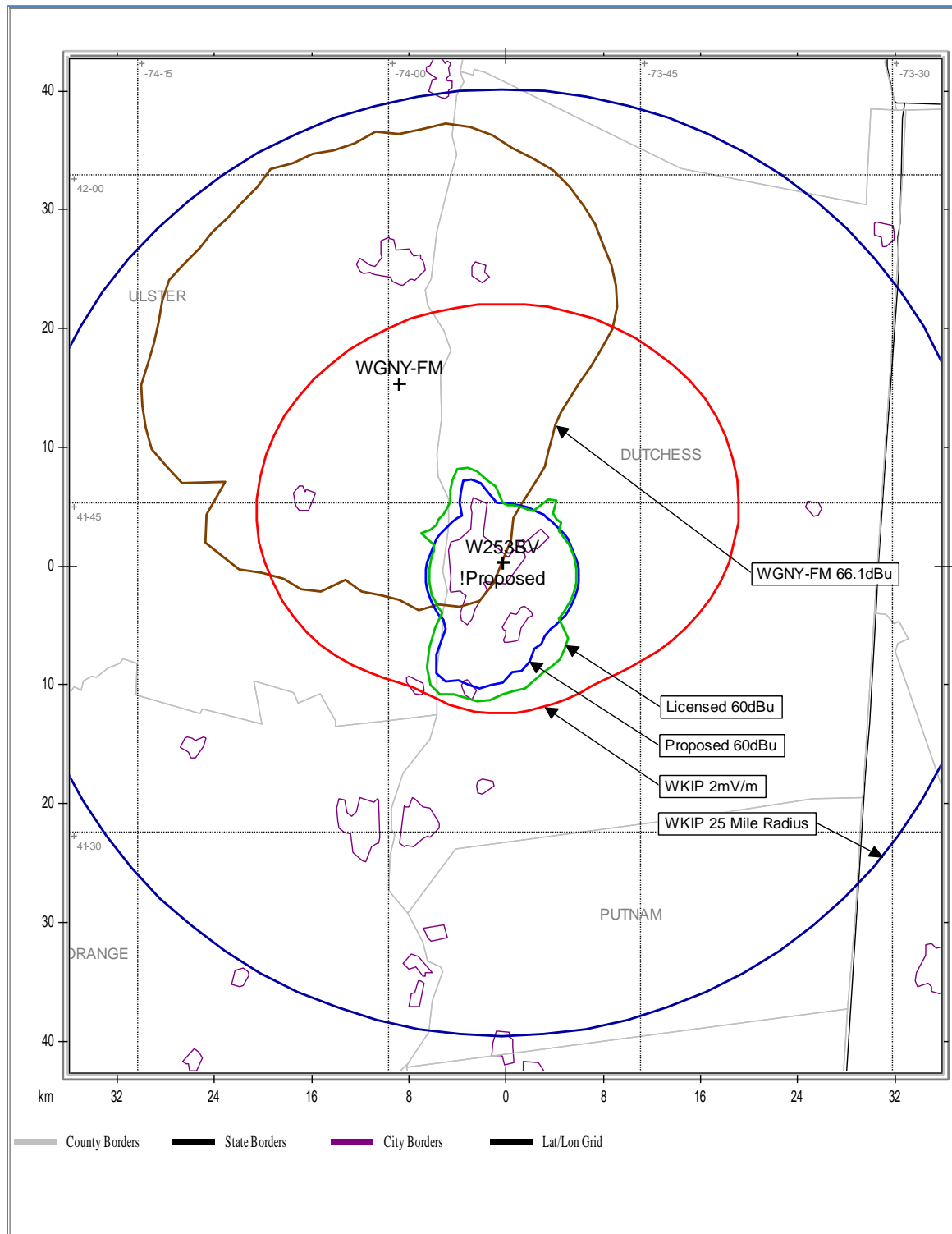
At 2 meters above the surface, at 17 meters from the closest point of approach, this proposal will contribute worst case, 1.33 microwatts per square centimeter, or 0.665% of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit and thus is categorically excluded from environmental processing for purposes of RF compliance, pursuant to Section 1.1307(b)(3)(ii).

The tower is surrounded by a fence with a locked gate restricting access from the general public with appropriate warning signs posted. The applicant will cooperate with other users of the tower site to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

**Figure 1. Spacing Study**

<p style="text-align: center;">iHeartMedia Troy Langham</p> <p style="text-align: center;">W253BV at new co-located Tower 15 June 23</p> <p style="text-align: center;">Ihm Licenses, LLC</p> <p>REFERENCE CH# 253D - 98.5 MHz, Pwr= 0.23 kW DA, HAAT= 15.8 M, COR= 121.9 M DISPLAY DATES  41 42 18.00 N. Average Protected F(50-50)= 6.94 km DATA 06-13-23  73 53 14.70 W. Standard Directional SEARCH 06-14-23</p>											
CH CITY	CALL	TYPE STATE	ANT AZI	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	IN= (Overlap	OUT= in km)	
253A	WCTW	LIC _CN	4.4	55.30	42 12 03.30	4.700	88.6	31.1	-40.3*	2.9	
Catskill		NY	184.5	BLH19970616KA	73 50 07.50	114	190	Ihm Licenses, LLC			
253D	W253BV	LIC DVN	0.0	0.00	41 42 18.00	0.200		---Reference---			
Poughkeepsie		NY	270.0	BLFT20160620AAW	73 53 14.00		147	Ihm Licenses, LLC			
255A	WGNV-FM	LIC ZCN	330.7	17.32	41 50 26.90	1.350	1.6	25.0	7.7	-8.2*	
Rosendale		NY	150.6	BLH20110203ADB	73 59 23.70	213	305	Sunrise Broadcasting Corp.			
251A	WKZE-FM	LIC ZCN	47.6	35.32	41 55 08.30	1.800	2.3	27.5	27.2	6.3	
Salisbury		CT	227.8	BLH19920911KD	73 34 20.40	184	437	Willpower Radio, LLC			
252A	WDAQ	LIC _CN	134.9	51.98	41 22 27.30	1.300	30.2	20.5	14.9	21.7	
Danbury		CT	315.2	BMLH20060420ACO	73 26 45.40	140	301	The Berkshire Broadcasting			
254B	WEPN-FM	LIC _CN	184.5	106.66	40 44 54.40	6.000	76.2	64.1	19.1	19.6	
New York		NY	4.4	BMLH20100414AAI	73 59 08.50	415	429	Emmis New York Radio Licen			
252A	WSUL	LIC ZCN	266.0	66.56	41 39 38.30	2.200	39.7	26.3	20.7	30.2	
Monticello		NY	85.5	BLH20000314ABK	74 41 12.60	163	579	Bold Gold Media Group, L.P			
256B	WPLR	LIC _CN	111.6	83.95	41 25 22.30	15.000	4.9	58.8	72.5	23.4	
New Haven		CT	292.2	BLH20010628ABF	72 57 04.40	276	375	Connoisseur Media Licenses			
253D	W253BQ	LIC DCN	100.0	88.15	41 33 44.00	0.250	57.7	18.1	24.1	48.2	
Meriden		CT	280.7	0000212216	72 50 38.00		337	Co-Channel Communications			
250D	W250CH	LIC DCN	121.5	44.80	41 29 36.30	0.250	0.2	4.2	37.9	37.9	
New Milford		CT	301.8	BLFT20170217ABF	73 25 43.40		309	The Berkshire Broadcasting			
250B	WSKQ-FM	LIC _CN	184.5	106.66	40 44 54.30	6.000	4.5	64.1	90.9	40.8	
New York		NY	4.4	BLH19940204KA	73 59 08.50	415	429	Wskq Licensing, Inc.			
253B	AL0582	RSV-A	251.4	170.42	41 11 56.30	50.000	115.0	36.1	46.8	95.0	
Freeland		PA	70.1	RM10697	75 49 04.71	150	566	From CDBS			
250A	WRIP	LIC ZCN	334.4	71.60	42 17 06.30	0.580	1.0	21.8	62.4	48.9	
Windham		NY	154.1	BLH20000803AAG	74 15 50.50	322	937	Rip Radio, LLC			
252D	W252DX	LIC DCN	176.2	75.70	41 01 32.00	0.015	11.7	7.9	53.5	52.6	
White Plains		NY	356.2	0000153768	73 49 37.00		257	Hudson-Westchester Radio,			
254D	W254AU	LIC _CN	38.2	72.21	42 12 50.30	0.250	10.1	7.1	56.2	52.9	
Great Barrington		MA	218.6	BLFT20070427ADH	73 20 41.30	-54	297	University Of Massachusetts			
250D	WRIP-FM1	LIC DCN	333.0	61.96	42 12 04.30	0.035	0.0	1.4	53.8	54.8	
Hunter		NY	152.8	BLFTB20030728AER	74 13 43.50		956	Rip Radio LLC			
253B	WKRZ	LIC _CN	251.4	170.42	41 11 56.30	8.700	104.9	53.4	56.9	85.0	
Freeland		PA	70.1	BLH20040326AFN	75 49 04.70	357	770	Audacy License, LLC			
253A	WBON	LIC ZCN	135.0	132.87	40 51 18.40	0.950	68.1	22.3	56.9	87.7	
Westhampton		NY	315.7	BLH20040401AKC	72 46 09.40	160	174	Jvc Media LLC, A Florida			
252D	W252DY	CP DCN	221.2	82.85	41 08 34.00	0.150	9.0	6.7	62.4	65.6	
Sussex		NJ	40.8	0000195181	74 32 23.00		406	Digital Radio Broadcasting			
252D	W252ED	LIC _CN	202.5	87.03	40 58 52.50	0.050	6.7	4.7	68.3	64.6	
Pompton Lakes		NJ	22.3	0000113361	74 17 04.80		99	Borough Of Pompton Lakes			
252A	WKJY	LIC _CN	168.3	115.68	40 41 08.30	3.000	35.0	22.2	70.6	79.1	
Hempstead		NY	348.5	BLH19860814KA	73 36 35.40	100	117	Connoisseur Media Licenses			
252D	W252BG	LIC _CN	40.0	85.78	42 17 39.30	0.013	6.0	4.2	74.0	70.8	
Lee		MA	220.4	BLFT20070427AAT	73 13 01.30	9	441	University Of Massachusetts			
256B	WANZ	LIC DCN	205.4	134.31	40 36 41.40	28.000	5.4	61.9	116.9	70.8	
Zarephath		NJ	24.9	BLH20030702AAO	74 34 10.60	200	265	Pillar Of Fire			
252D	W252CS	LIC DCN	184.9	95.84	40 50 45.80	0.120	7.7	5.5	76.8	73.8	
Palisades Park		NJ	4.9	0000212236	73 59 06.50		118	Sound Of Long Island, Inc.			
252D	W252AS	LIC _CN	120.5	88.63	41 17 48.30	0.019	5.3	3.7	76.7	74.6	
New Haven		CT	301.1	BLFT20040206ABE	72 58 23.30	68	111	Town Of Monroe, Connecticu			

**Figure 2. Contour Map**



**Figure 3. Distance to Interference Contour with Antenna Vertical Pattern**

<b>Proposed Antenna:</b> Scala FMVMP-3 <b>Proposed Power:</b> 0.23 kW <b>Antenna Height AGL:</b> 76 meters <b>Interference Contour:</b> 106.1 dBu f(50:10) <b>Artificial Rcv Antenna Height:</b> 2 meters <b>Distance (Free Space) Equation:</b> $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)) * 1000}$ <b>Field Strength (dBu) Equation:</b> $= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$								
Depression				Distance				
Angle	Antenna			from Ant.	Distance	Field Strength	Distance	Field Strength
Below	Relative	ERP	ERP	to Interf	from Ant. to	in dBu @	from Ant.	in dBu @
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	to Ground Level	Ground Level
0°	1.000	0.230	-6.38	527.06 m	infinite	---	infinite	---
-5°	0.921	0.195	-7.10	485.43 m	849.05 m	101.24 dBu	872.00 m	101.01 dBu
-10°	0.708	0.115	-9.38	373.37 m	426.15 m	104.95 dBu	437.67 m	104.72 dBu
-15°	0.418	0.040	-13.97	220.05 m	285.91 m	103.83 dBu	293.64 m	103.59 dBu
-20°	0.126	0.004	-24.38	66.36 m	216.36 m	95.83 dBu	222.21 m	95.60 dBu
-25°	0.100	0.002	-26.35	52.92 m	175.10 m	95.71 dBu	179.83 m	95.47 dBu
-30°	0.224	0.011	-19.40	117.80 m	148.00 m	104.12 dBu	152.00 m	103.89 dBu
-35°	0.242	0.014	-18.69	127.76 m	129.02 m	106.02 dBu	132.50 m	105.78 dBu
-40°	0.186	0.008	-21.01	97.82 m	115.12 m	104.69 dBu	118.24 m	104.45 dBu
-45°	0.093	0.002	-27.03	48.91 m	104.65 m	99.49 dBu	107.48 m	99.26 dBu
-50°	0.001	0.000	-66.38	0.53 m	96.60 m	60.84 dBu	99.21 m	60.61 dBu
-55°	0.069	0.001	-29.58	36.47 m	90.34 m	98.22 dBu	92.78 m	97.99 dBu
-60°	0.108	0.003	-25.72	56.87 m	85.45 m	102.56 dBu	87.76 m	102.33 dBu
-65°	0.118	0.003	-24.92	62.35 m	81.65 m	103.76 dBu	83.86 m	103.53 dBu
-70°	0.107	0.003	-25.79	56.45 m	78.75 m	103.21 dBu	80.88 m	102.98 dBu
-75°	0.082	0.002	-28.07	43.38 m	76.61 m	101.16 dBu	78.68 m	100.93 dBu
-80°	0.050	0.001	-32.40	26.35 m	75.14 m	97.00 dBu	77.17 m	96.77 dBu
-85°	0.015	0.000	-42.86	7.91 m	74.28 m	86.64 dBu	76.29 m	86.41 dBu
-90°	0.020	0.000	-40.32	10.59 m	74.00 m	89.22 dBu	76.00 m	88.98 dBu

**Figure 4. Ariel Image of Proposed Location**

