

## Minor Modification BNPFT- 20180507ABM Facility ID No. 202301

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This exhibit is for Minor Modification of the permit of Facility ID No. 202301, BNPFT-20180507ABM. It specifies only a change in height and in antenna configuration.

### **Antenna Location**

The proposed antenna is to be mounted on the existing support tower which is identified by registration number 1027446 at 65 meters above ground, having a horizontal plane azimuth gain pattern as given in **Figure 0** below. Below as **Figure 1** is an overlap and spacing study from which it can be determined that this proposal is within the licensed and permitted protected contour of **second** adjacent channel stations WYJB and WAJZ.

### **73.1204 Compliance**

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”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second or third adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents near the proposed translator antenna location.

**Concerning WAJZ;** In **Figure 2** a map showing the predicted 62.9 dBu signal contour of the protected WAJZ facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 102.9 dBu ( $62.9 + 40$ ) in a habitable/populated area. Utilizing the line of sight equation shown in **Figure 3** which considers the vertical elevation pattern of the proposed antenna, it has been determined that a 102.9 dBu signal developed by 250 watts, as proposed, emitted by the proposed antenna mounted 65 meters above ground, will not reach elevated habitable areas or ground level. With examination of the image in **Figure 4** it can be determined that no habitable space extends into the confines of this contour.

**Concerning WYJB;** In **Figure 2** a map showing the predicted 77.0 dBu signal contour of the protected WYJB facility at the proposed translator antenna location is given. This is a stronger signal than WAJZ, thus by protecting WAJZ, WYJB is inherently protected.

Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

### **Fill-in and Minor Change Status**

This proposal is to serve as a fill-in translator for station WOFX Facility ID 37233 Troy, New York. The map of **Figure 5** demonstrates that the proposed 60 dBu contour is contained within that of the 2 mV/m of that facility.

As there is no change in location the short and long from facility are considered to have the required service contour overlap.

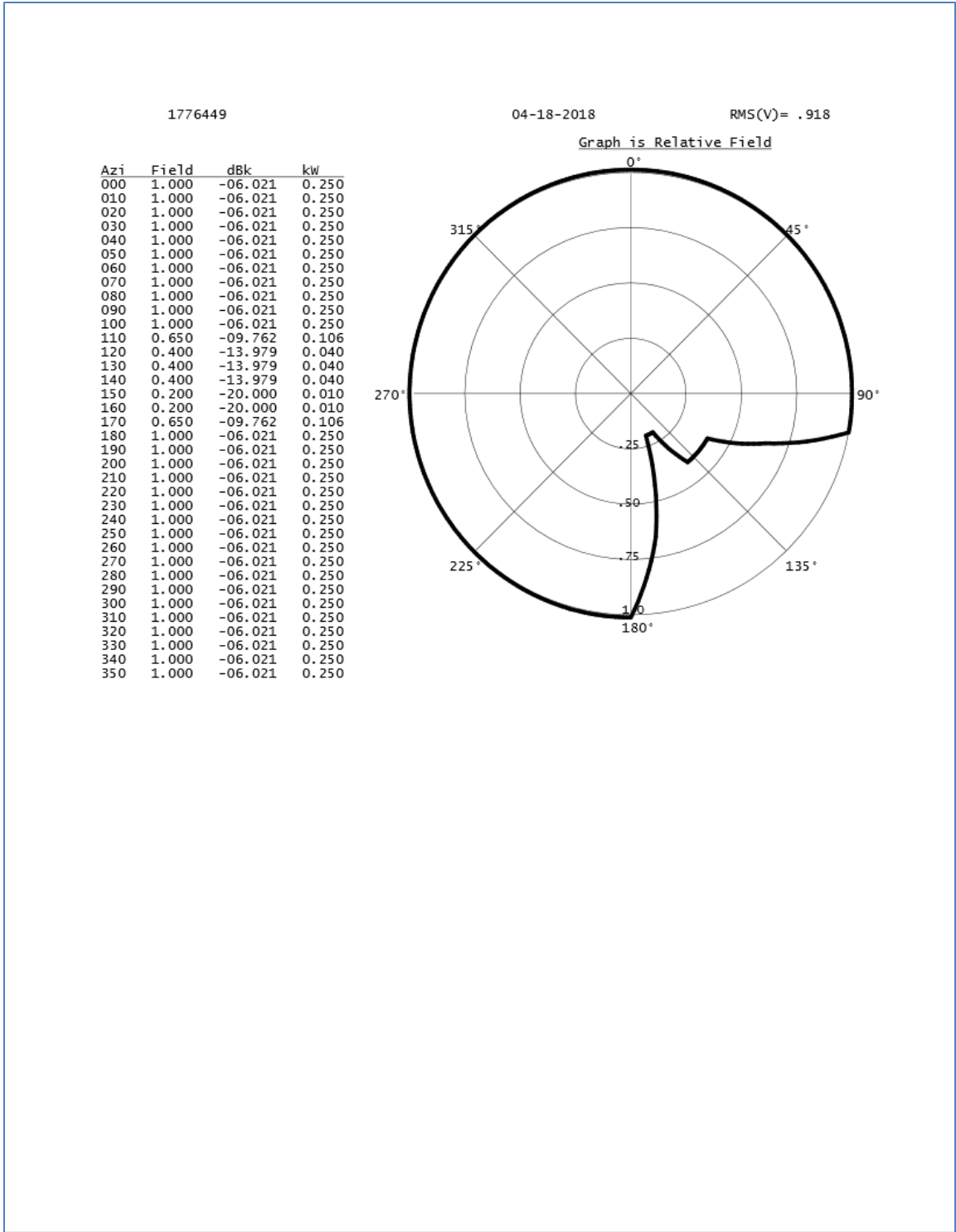
### **RF Fields Statement**

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 antenna system is an array of 4 "Scala"/Kathrine CL-FMV antenna mounted in a vertical stack, centered 69 meters above ground. For purposes of this analysis the FM Model program has been set to calculate values for a "Ring-and-Stub" type of antenna element array, operated with an effective radiated power of 0.25 Kilowatts in the vertical polarity. At 2 meters above the surface, at 11.2 meters from the base of the tower, this proposal will contribute worst case, 1.99 microwatts per square centimeter, or 0.2 percent of the allowable ANSI limit for controlled exposure, and 1.0 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower 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 0. Antenna Pattern

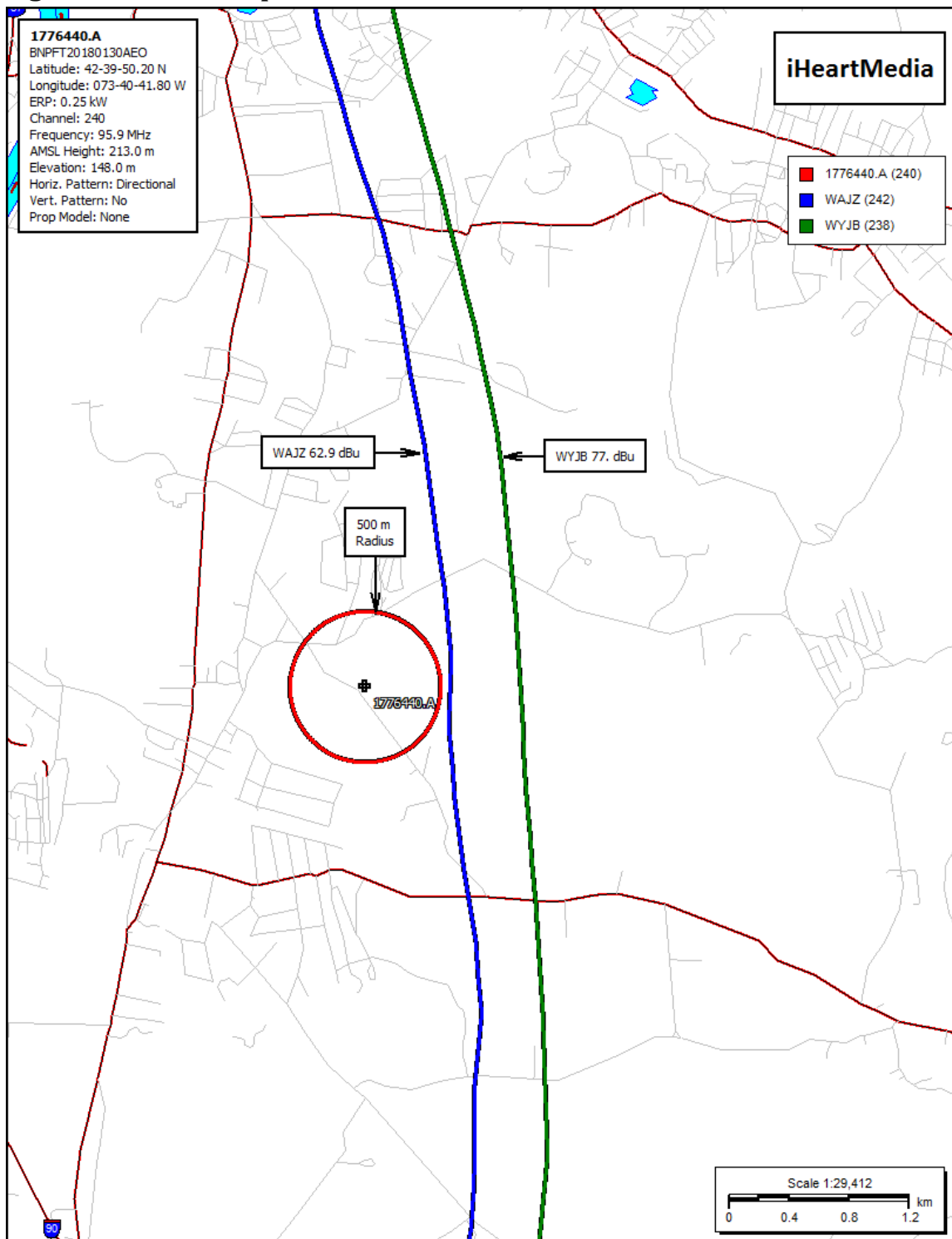


**Figure 1. Overlap and Spacing Study**

w240EC Mod Capstar TX, LLC										
REFERENCE 42 39 50.2 N. 73 40 41.8 W.		CH# 240D - 95.9 MHz, Pwr= 0.25 kW DA, HAAT= 93.1 M, COR= 217 M Average Protected F(50-50)= 12.43 km Standard Directional							DISPLAY DATES DATA 05-29-19 SEARCH 05-31-19	
CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
240D	W240EC	CP DV_	0.0	0.00	42 39 50.2	0.250		---	Reference---	
Albany		NY	0.0	BNPFT20180507ABM	73 40 41.8		213	Capstar TX, LLC		
238B	WYJB	LIC _CN	263.5	26.48	42 38 11.0	12.000	6.0	77.2	3.4	-52.5*
Albany		NY	83.2	BLH19860131KB	74 00 00.0	312	547	6 Johnson Road Licenses, I		
240A	WBEC-FM	LIC _CX	130.9	42.66	42 24 44.1	1.000	80.5	24.7	-44.6*	0.5
Pittsfield		MA	311.1	BMLH20171114AAT	73 17 06.6	170	567	Townsquare Media Pittsfiel		
240A	AL8455	RSV-A	0.3	82.20	43 24 12.0	6.000	102.0	39.7	-36.9*	-11.8
Queensbury		NY	180.3	RM10671	73 40 25.0	100	323			
242A	WAJZ	LIC NCX	263.5	26.53	42 38 11.0	0.470	1.5	32.1	8.0	-6.7*
Voorheesville		NY	83.3	BLH20020823AAO	74 00 02.0	293	532	6 Johnson Road Licenses, I		
240A	WCQL	LIC _CX	355.5	84.32	43 25 12.0	0.380	74.2	24.6	-6.3	1.1
Queensbury		NY	175.4	BMLH20070129AMR	73 45 37.0	388	668	Regional Radio Group, LLC		
293B	WPYX	LIC _CX	263.4	26.68	42 38 09.0	15.500	0.0	0.0	14.5R	12.2M
Albany		NY	83.1	BMLH20101012ADP	74 00 05.0	275	515	Capstar TX, LLC		
242D	W242AL	LIC _C_	30.4	38.47	42 57 44.0	0.080	0.6	5.3	24.5	30.5
Buskirk		NY	210.5	BLFT20100611AB8	73 26 21.0	-21	174	Absolute Broadcasting, LLC		
242D	W242AT	LIC _C_	82.3	39.15	42 42 36.0	0.250	1.1	7.1	30.6	31.0
Williamstown		MA	262.6	BMLFT20070409ACS	73 12 12.0	-220	220	University of Massachusett		
243D	W243EL	CP DC_	54.8	46.76	42 54 19.0	0.250	0.7	5.5	35.9	40.0
Bennington		VT	235.1	BNPFT20180426AAC	73 12 32.0		253	Shires Media Partnership,		
240A	WVOS-FM	LIC DCX	220.5	132.60	41 45 09.0	6.000	74.7	22.7	41.7	54.7
Liberty		NY	39.8	BMLH20180521ABA	74 43 01.0	100	553	Bold Gold Media Group, L.p		
241A	WPKF	LIC _CX	190.4	104.65	41 44 16.0	3.500	34.9	21.9	53.9	55.7
Poughkeepsie		NY	10.2	BLH20130702ACG	73 54 20.0	81	186	CC Licenses, LLC		
240L1	WJTH-LP	LIC _	258.2	114.57	42 26 46.5	0.100			46.5R	68.1M
Oneonta		NY	77.3	BLL20130222AAA	75 02 30.9		361	Spirit And Truth Christian		
239B	WKSS	LIC DCN	150.4	140.56	41 33 41.0	16.500	75.0	64.4	54.6	65.8
Hartford-meriden		CT	331.0	BMLH19980820KA	72 50 39.0	268	363	Capstar TX, LLC		
241B1	W00Z-FM	LIC _CN	294.1	133.38	43 08 39.0	7.400	53.5	40.5	64.1	59.6
Rome		NY	113.1	BLH19970926KB	75 10 45.0	184	429	Townsquare Media Licensee		
243B	WTIC-FM	LIC _CX	143.7	122.26	41 46 27.0	20.000	5.2	61.1	107.0	60.1
Hartford		CT	324.3	BMLH20131029ABW	72 48 20.0	247	334	Entercom License, LLC		
239D	W239BL	LIC DC_	194.1	110.52	41 41 58.0	0.250	31.9	21.5	62.4	66.4
Poughkeepsie		NY	13.9	BLFT20120305ADK	74 00 12.0	263	378	Digital Radio Broadcasting		
237A	WPVQ-FM	LIC _CX	87.2	87.75	42 41 53.0	0.610	1.6	20.2	78.9	66.0
Greenfield		MA	267.9	BLH20180405AAL	72 36 20.0	224	458	Saga Communications Of New		
243D	W243EI	CP DC_	185.4	85.71	41 53 47.0	0.150	0.7	5.5	69.5	77.6
Hyde Park		NY	5.4	BNPFT20180314ADC	73 46 34.0		177	Joseph Paul Ferraro		
243A	WYVS	LIC NCX	330.1	110.50	43 31 26.0	2.600	2.9	37.6	91.4	71.7
Speculator		NY	149.7	BLH20121127ALP	74 21 39.0	152	756	Tesiero, Joseph C		
241B	WSRS	LIC _CX	104.6	150.74	42 18 34.0	16.500	71.5	61.0	72.2	76.4
Worcester		MA	285.8	BMLH20051227AFL	71 54 13.0	263	503	Capstar TX, LLC		
242D	W242DF	CP _C_	21.9	100.85	43 30 16.0	0.250	1.1	9.2	84.2	89.8
Poultney		VT	202.3	BNPFT20180507ACJ	73 12 40.0		220	Pine Tree Broadcasting Com		
239B	WZID	LIC _CN	77.5	174.00	42 59 02.0	14.500	74.1	62.9	91.4	96.8
Manchester		NH	258.9	BLH19870928KA	71 35 22.0	282	431	Saga Communications Of New		

Terrain database is 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.

**Figure 2. Contour Map**

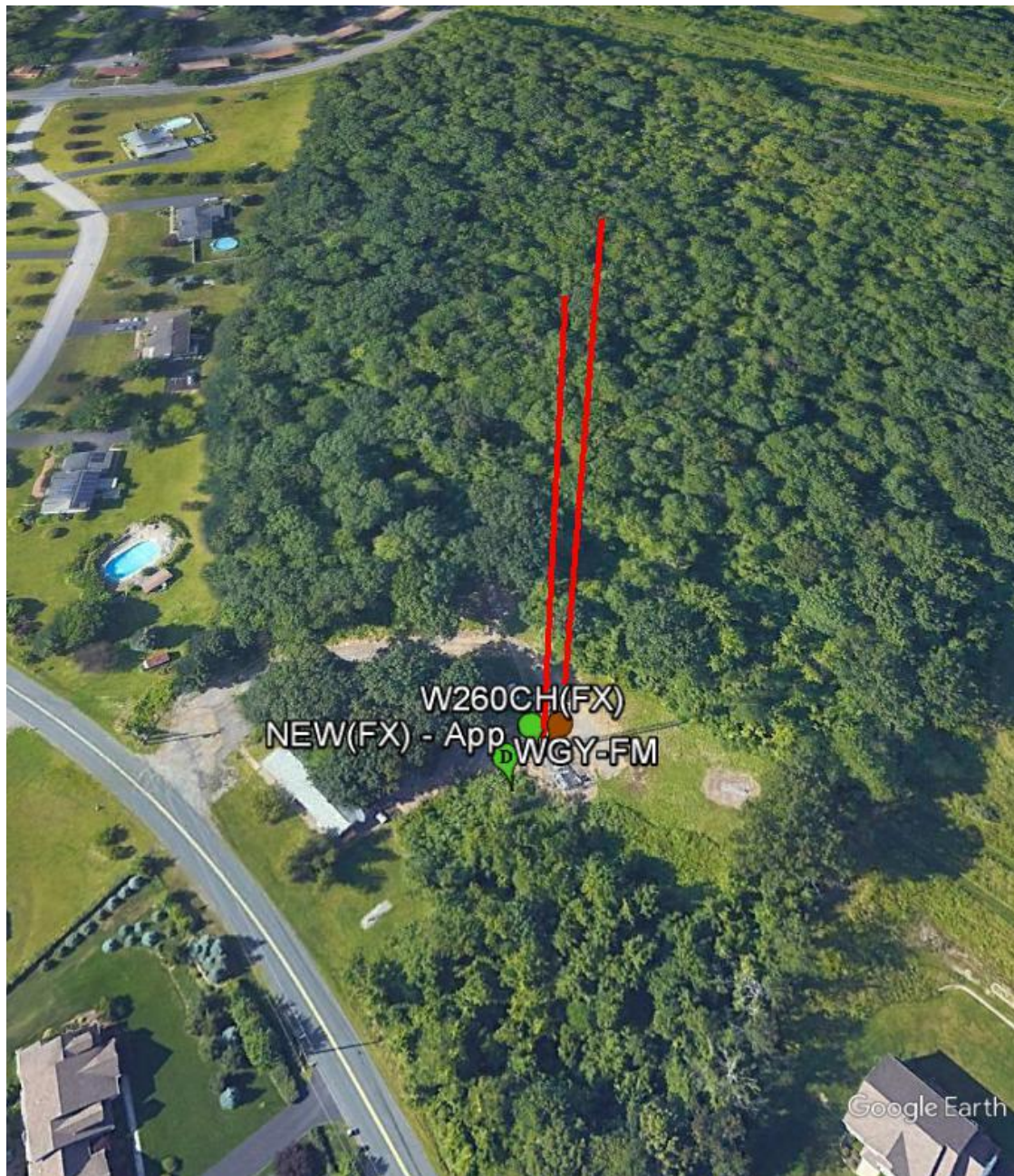


**Figure 3. Signal Level at or Near Ground Level**

<p> <b>Proposed Antenna:</b> Scala 4xCL-FMV 4 Stack  <b>Proposed Power:</b> 0.25 kW  <b>Antenna Height AGL:</b> 69 meters  <b>Interference Contour:</b> 102.9 dBu f(50:10)  <b>Artificial Rcv Antenna Height:</b> 2 meters  <b>Distance (Free Space) Equation:</b> <math>= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000</math>  <b>Field Strength (dBu) Equation</b> <math>" = 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]</math> </p>								
Depression				Distance				
Angle	Antenna			from Ant.	Distance from Ant. to	Field Strength	Distance from Ant.	Field Strength
Below	Relative	ERP	ERP	to Interf	Artificial Plane	in dBu @	to Ground Level	in dBu @
Horizon	Field	in kW	in dBk	Contour	Artificial Plane	Artificial Plane	Ground Level	Ground Level
0°	1.000	0.250	-6.02	794.27 m	infinite	---	infinite	---
-5°	0.825	0.170	-7.69	655.28 m	768.74 m	101.51 dBu	791.69 m	101.26 dBu
-10°	0.429	0.046	-13.37	340.74 m	385.84 m	101.82 dBu	397.36 m	101.56 dBu
-15°	0.027	0.000	-37.39	21.45 m	258.87 m	81.27 dBu	266.60 m	81.01 dBu
-20°	0.189	0.009	-20.49	150.12 m	195.89 m	100.59 dBu	201.74 m	100.33 dBu
-25°	0.186	0.009	-20.63	147.73 m	158.54 m	102.29 dBu	163.27 m	102.03 dBu
-30°	0.060	0.001	-30.46	47.66 m	134.00 m	93.92 dBu	138.00 m	93.66 dBu
-35°	0.067	0.001	-29.50	53.22 m	116.81 m	96.07 dBu	120.30 m	95.82 dBu
-40°	0.120	0.004	-24.44	95.31 m	104.23 m	102.12 dBu	107.34 m	101.87 dBu
-45°	0.091	0.002	-26.84	72.28 m	94.75 m	100.55 dBu	97.58 m	100.29 dBu
-50°	0.030	0.000	-36.48	23.83 m	87.46 m	91.61 dBu	90.07 m	91.35 dBu
-55°	0.015	0.000	-42.50	11.91 m	81.79 m	86.17 dBu	84.23 m	85.91 dBu
-60°	0.028	0.000	-37.08	22.24 m	77.36 m	92.07 dBu	79.67 m	91.82 dBu
-65°	0.024	0.000	-38.42	19.06 m	73.93 m	91.13 dBu	76.13 m	90.87 dBu
-70°	0.014	0.000	-43.10	11.12 m	71.30 m	86.76 dBu	73.43 m	86.50 dBu
-75°	0.010	0.000	-46.02	7.94 m	69.36 m	84.08 dBu	71.43 m	83.82 dBu
-80°	0.010	0.000	-46.02	7.94 m	68.03 m	84.24 dBu	70.06 m	83.99 dBu
-85°	0.010	0.000	-46.02	7.94 m	67.26 m	84.34 dBu	69.26 m	84.09 dBu
-90°	0.010	0.000	-46.02	7.94 m	67.00 m	84.38 dBu	69.00 m	84.12 dBu



**Figure 4. Image of Proposed Support Tower**



**Figure 5. Fill-in and Minor Change Contour Map**

