

# Minor Modification of Permit W275AZ; BMPFT-20190410AAD Facility ID No. 148955

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This exhibit is for minor modification of translator permit for W275AZ Facility ID No. 148955, BMPFT-20190410AAD. It specifies a change in location, antenna elevation and, antenna pattern only.

## **Antenna Location**

The proposed antenna is to be mounted on an existing tower in the antenna array of standard band stations WTMP and WMGG, identified by registration number 1041410 at 58 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 protected contour of **second** adjacent channel station WHPT; and **third** adjacent channel station WFUS.

## **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 WHPT;** In **Figure 2** a map showing the predicted 66.2 dBu signal contour of the protected 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 106.2 dBu ( $66.2 + 40$ ) 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 106.2 dBu signal developed by 160 watts, as proposed, emitted by the proposed antenna mounted 58 meters above ground, will not reach habitable areas or ground level. With examination of the image in **Figure 4** it can be determined that no habitable space extends above this height within the confines of this contour. 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.

**Concerning WFUS;** In **Figure 2** a map showing the predicted 82.3 dBu signal contour of the protected facility at the proposed translator antenna location is given. As this signal is due the same 40

dB protection, and is of higher value than that of WHPT, the demonstrated protection of the weaker WHPT provides for the protection of WFUS.

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 WFUS(FM), Facility ID 63984, Gulfport, FL. The map of **Figure 5** demonstrates that the proposed 60 dBu contour is contained within that of the WFUS(FM) facility. It can also be seen that the proposed and licensed facilities have service contour overlap.

### **RF Fields Statement**

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

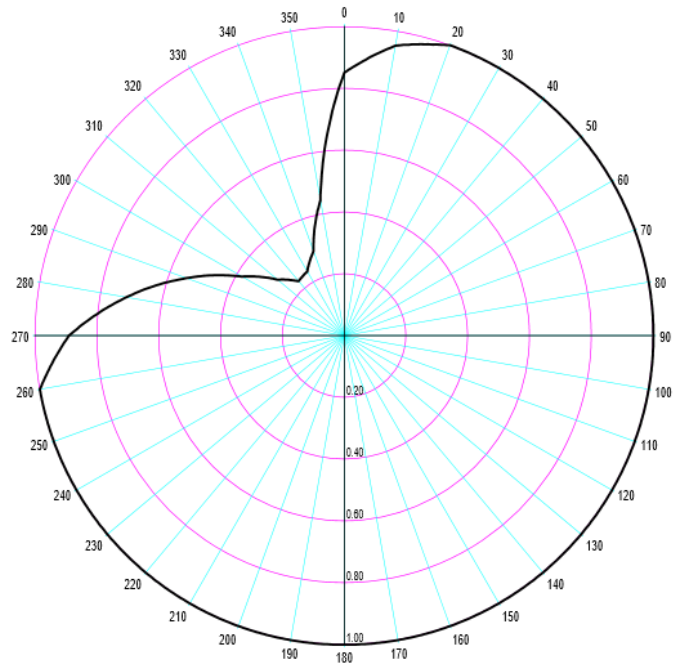
The proposed antenna system is an **ERI LP-5E-DA-HW**, a five (5) element, half-wave spaced antenna, mounted 58 meters above ground. As this element type is not modeled in any current RF Fields calculation computer program, for purposes of this analysis the FM Model RF Fields program has been set to calculate values for an array of "worst case" type of antenna element(s) "Ring Stub", operated with an effective radiated power of 0.16 Kilowatts in the Horizontal and Vertical plane. At 2 meters above the surface, at 276 meters from the base of the tower, this proposal will contribute worst case, 0.05 microwatts per square centimeter, or 0.01 percent of the allowable ANSI limit for controlled exposure, and 0.5 percent of the allowable limit for uncontrolled exposure. This figure is less than 5.0% 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 5.0% 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**

ComStudy

Horizontal Pattern

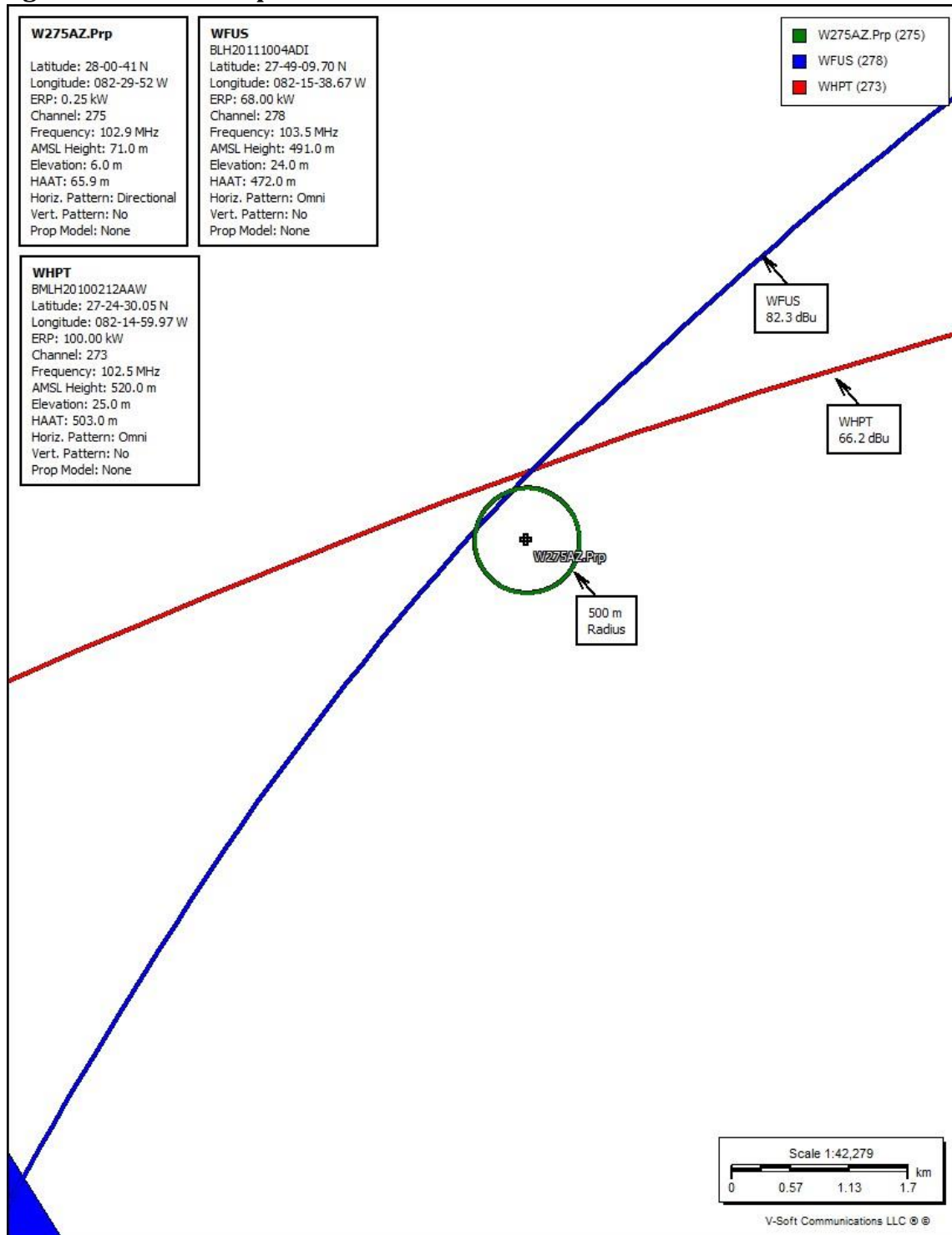


Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk
0.0	0.851	115.872	-9.360	90.0	1.000	160.000	-7.959	180.0	1.000	160.000	-7.959	270.0	0.891	127.021	-8.961
5.0	0.902	130.177	-8.855	95.0	1.000	160.000	-7.959	185.0	1.000	160.000	-7.959	275.0	0.803	103.169	-9.864
10.0	0.953	145.313	-8.377	100.0	1.000	160.000	-7.959	190.0	1.000	160.000	-7.959	280.0	0.716	82.025	-10.861
15.0	0.976	152.412	-8.170	105.0	1.000	160.000	-7.959	195.0	1.000	160.000	-7.959	285.0	0.630	63.504	-11.972
20.0	1.000	160.000	-7.959	110.0	1.000	160.000	-7.959	200.0	1.000	160.000	-7.959	290.0	0.544	47.350	-13.247
25.0	1.000	160.000	-7.959	115.0	1.000	160.000	-7.959	205.0	1.000	160.000	-7.959	295.0	0.463	34.299	-14.647
30.0	1.000	160.000	-7.959	120.0	1.000	160.000	-7.959	210.0	1.000	160.000	-7.959	300.0	0.382	23.348	-16.318
35.0	1.000	160.000	-7.959	125.0	1.000	160.000	-7.959	215.0	1.000	160.000	-7.959	305.0	0.332	17.636	-17.536
40.0	1.000	160.000	-7.959	130.0	1.000	160.000	-7.959	220.0	1.000	160.000	-7.959	310.0	0.282	12.724	-18.954
45.0	1.000	160.000	-7.959	135.0	1.000	160.000	-7.959	225.0	1.000	160.000	-7.959	315.0	0.256	10.486	-19.794
50.0	1.000	160.000	-7.959	140.0	1.000	160.000	-7.959	230.0	1.000	160.000	-7.959	320.0	0.230	8.464	-20.724
55.0	1.000	160.000	-7.959	145.0	1.000	160.000	-7.959	235.0	1.000	160.000	-7.959	325.0	0.235	8.836	-20.537
60.0	1.000	160.000	-7.959	150.0	1.000	160.000	-7.959	240.0	1.000	160.000	-7.959	330.0	0.240	9.216	-20.355
65.0	1.000	160.000	-7.959	155.0	1.000	160.000	-7.959	245.0	1.000	160.000	-7.959	335.0	0.265	11.236	-19.494
70.0	1.000	160.000	-7.959	160.0	1.000	160.000	-7.959	250.0	1.000	160.000	-7.959	340.0	0.291	13.549	-18.681
75.0	1.000	160.000	-7.959	165.0	1.000	160.000	-7.959	255.0	1.000	160.000	-7.959	345.0	0.368	21.668	-16.642
80.0	1.000	160.000	-7.959	170.0	1.000	160.000	-7.959	260.0	1.000	160.000	-7.959	350.0	0.445	31.684	-14.992
85.0	1.000	160.000	-7.959	175.0	1.000	160.000	-7.959	265.0	0.945	142.884	-8.450	355.0	0.648	67.185	-11.727

**Figure 1. Overlap and Spacing Study**

W275AZ at ASR 1040049 Citicasters Licenses, Inc.											
REFERENCE		CH#	275D	-	102.9 MHz,	Pwr= 0.16 kW DA,	HAAT= 65.9 M,	COR= 71 M	DISPLAY DATES		
28 00 41.00 N.									DATA	11-07-19	
82 29 52.00 W.									SEARCH	11-07-19	
Standard Directional											
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)	
278CO	WFUS	LIC	___	132.4	31.58	27 49 10.80	68.000	11.2	82.0	10.8	-51.3*
	Gulfport	FL		312.5	BLH20111004ADI	82 15 38.00	472	491	Citicasters Licenses, Inc.		
275D	W275AZ	CP	D	95.9	1.77	28 00 35.10	0.250		---Reference---		
	Tampa	FL		275.9	BMPFT20190410AAD	82 28 47.40		89	Citicasters Licenses, Inc.		
275D	W275AZ	LIC	___	185.7	13.28	27 53 33.00	0.200		---Reference---		
	Wesley Chapel	South FL		5.7	BLFT20141202AAY	82 30 40.00		55	Citicasters Licenses, Inc.		
273C	WHPT	LIC	___	159.9	71.31	27 24 31.20	100.000	12.6	86.9	48.9	-16.4*
	Sarasota	FL		340.0	BMLH20100212AAW	82 14 59.30	503	520	Cox Radio, Inc.		
276D	W276CX	LIC	D	305.7	32.61	28 10 57.00	0.250	40.3	24.2	-11.8*	0.8
	New Port Richey	FL		125.6	BLFT20170113AAI	82 46 04.40		414	Beasley Media Group Licens		
275D	W275AX	CP	D	97.3	58.00	27 56 37.10	0.240	43.1	12.8	5.6	14.1
	Bartow	FL		277.6	BPFT20180705AAG	81 54 43.30		182	Glades Media Company, LLC		
275D	W275AX	LIC	D	97.3	58.00	27 56 37.10	0.240	37.6	11.1	11.4	16.4
	Bartow	FL		277.6	BLFT20130906AAJ	81 54 43.30	143	182	Glades Media Company, LLC		
275C1	WJGO	LIC	N	161.5	178.43	26 29 17.30	96.000	152.7	57.3	15.9	88.6
	Tice	FL		341.8	BMLH20150427AAW	81 55 45.30	142	144	Renda Broadcasting Corp. O		
276C2	WOTW	LIC	Z	55.2	107.41	28 33 33.00	22.000	76.8	52.1	21.2	42.3
	Windermere	FL		235.7	BLH20090317ACS	81 35 38.30	227	259	Jvc Media Of Florida, LLC		
273D	W273CP	LIC	D	305.7	32.61	28 10 57.00	0.250	0.0	1.6	25.5	26.9
	New Port Richey	FL		125.6	BLFT20161209AAL	82 46 04.40		154	Cox Radio, Inc.		
275L1	WZEU-LP	LIC	___	357.3	63.53	28 34 56.00	0.012			36.6	31.4
	Weeki Wachee	FL		177.3	BLL20181119AAI	82 31 43.40	85	100	Weeki Wachee Community Rad		
276D	W276CR	CP	___	188.7	61.57	27 27 50.10	0.250	19.1	12.8	32.8	35.2
	Bradenton	FL		8.7	BPFT20190829AAB	82 35 32.40		99	Citicasters Licenses, Inc.		
276D	W276CR	LIC	D	188.7	61.57	27 27 50.10	0.250	15.2	10.2	37.1	36.1
	Bradenton	FL		8.7	BLFT20160115ABW	82 35 32.40		99	Citicasters Licenses, Inc.		
272D	W272EH	LIC	___	40.0	46.91	28 20 04.00	0.250		8.5	36.4	37.4
	Dade City	FL		220.1	BLFT20190709AAA	82 11 23.30		78	Radio World Inc.		
274L1	WXIO-LP	LIC	___	29.4	63.55	28 30 31.90	0.100			46.4	45.2
	Ridge Manor	FL		209.6	BLL20150225ACN	82 10 41.30	17	43	Anchor Of Our Soul Ministr		
274D	W274BB	LIC	___	85.6	87.27	28 04 10.00	0.038	9.3	6.5	68.5	67.6
	Haines City	FL		266.0	BLFT20150805AAS	81 36 39.00	66	102	Central Florida Educationa		
272C2	WXUS	LIC	___	4.4	131.17	29 11 15.90	50.000	6.0	52.6	116.4	77.8
	Dunnellon	FL		184.4	BMLH20011214AJZ	82 23 39.40	149	171	Jvc Media Of Florida, LLC		
221C3	WCTQ	LIC	___	178.0	95.37	27 09 04.20	11.500	0.0	0.0	11.5R	83.9M
	Venice	FL		358.0	BLH20040406ACI	82 27 50.30	145	147	Citicasters Licenses, Inc.		
275C	WEZI	LIC	___	19.6	267.62	30 16 34.90	100.000	173.0	73.1	85.5	164.9
	Jacksonville	FL		200.0	BMLH20130124AAQ	81 33 52.30	309	315	Cox Radio, Inc.		
274D	W274BR	LIC	D	27.8	112.37	28 54 16.90	0.250	17.5	11.9	85.8	87.7
	The Villages	FL		208.0	BLFT20190213AAB	81 57 35.30		105	Central Florida Educationa		
277C2	WXCZ	LIC	N	339.9	140.40	29 11 45.90	31.000	5.1	46.5	127.6	93.6
	Cedar Key	FL		159.6	BLH20180105AAI	82 59 45.40	140	140	Wgul-Fm, Inc.		
278D	W278CI	LIC	___	21.3	106.40	28 54 07.90	0.250		11.1	96.2	94.4
	Oxford	FL		201.5	BLFT20170227ABT	82 05 59.30		85	Marc Radio Gainesville, LL		
275L1	WIEB-LP	LIC	___	15.0	135.47	29 11 16.90	0.100			107.9	100.5
	Ocala	FL		195.2	BMLL20170301AAH	82 08 13.30	32	54	Institucion Educativa Beth		
278D	NEW	APP	D	37.3	114.45	28 49 43.00	0.080	0.6	7.0	104.5	106.5
	Leesburg-Eustis	FL		217.6	BNPFT20180503AAK	81 47 09.30		76	Wlbe 790, Inc.		
273D	W273CA	LIC	___	57.7	124.66	28 36 21.20	0.250	1.1	14.7	114.2	109.1
	Orlando	FL		238.2	BLFT20121018ACJ	81 25 04.30	143	169	Central Florida Educationa		

**Figure 2. Contour Map**

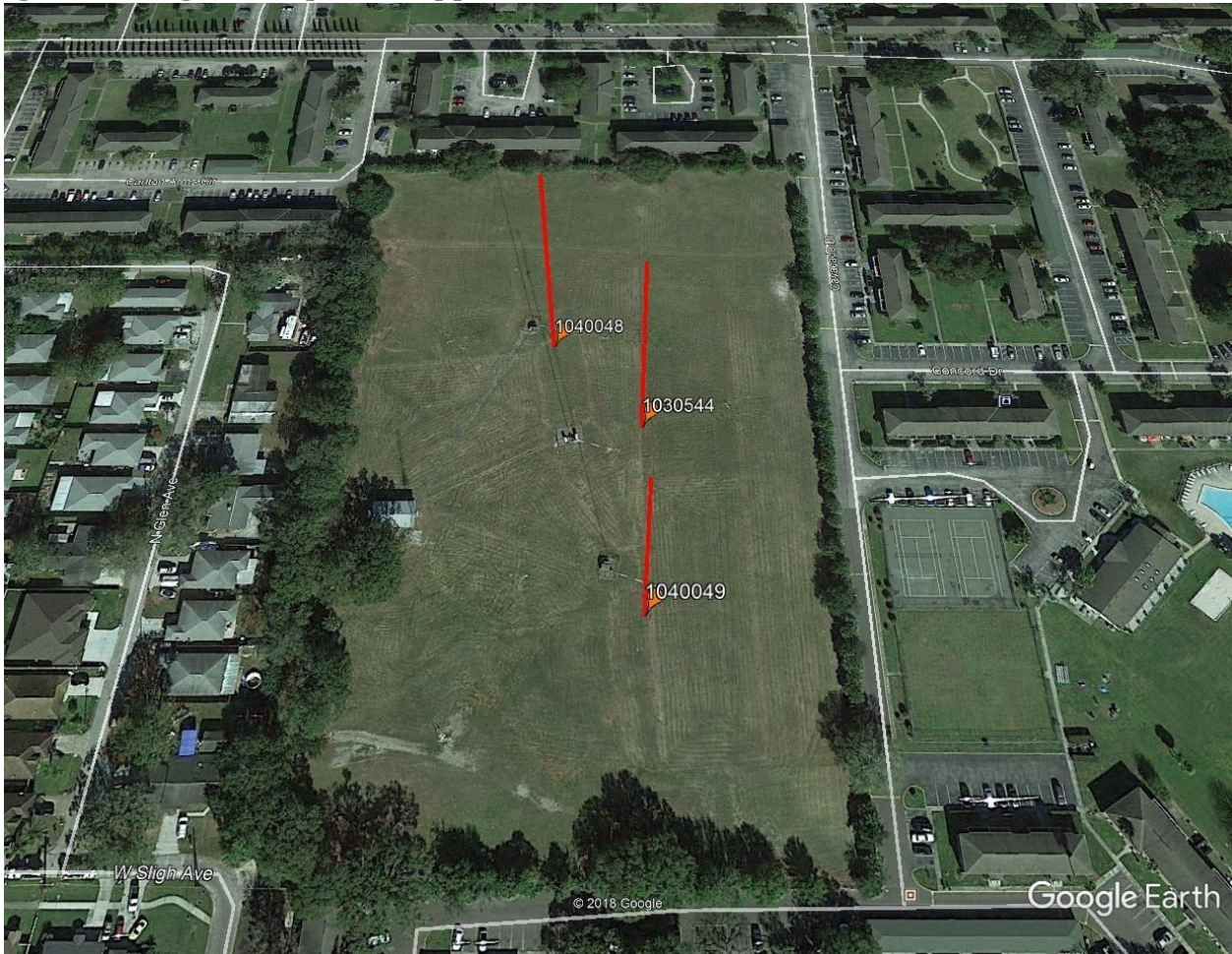


**Figure 3. Signal Level at or Near Ground Level**

<p>Proposed Antenna: LP-5E-DA-HW</p> <p>Proposed Power: 0.16 kW</p> <p>Antenna Height AGL: 58 meters</p> <p>Interference Contour: 106 dBu</p> <p>Artificial Rcv Antenna Height: 2 meters</p> <p>Distance (Free Space) Equation: <math>= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000</math></p> <p>Field Strength (dBu) Equation: <math>= 106.92 - (20 * (\text{LOG10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]</math></p>								
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	0.160	-7.96	444.69 m	infinite	---	infinite	---
-5°	0.924	0.137	-8.65	410.90 m	642.53 m	102.12 dBu	665.48 m	101.81 dBu
-10°	0.717	0.082	-10.85	318.84 m	322.49 m	105.90 dBu	334.01 m	105.60 dBu
-15°	0.439	0.031	-15.11	195.22 m	216.37 m	105.11 dBu	224.09 m	104.80 dBu
-20°	0.163	0.004	-23.72	72.48 m	163.73 m	98.92 dBu	169.58 m	98.62 dBu
-25°	0.053	0.000	-33.47	23.57 m	132.51 m	91.00 dBu	137.24 m	90.70 dBu
-30°	0.177	0.005	-23.00	78.71 m	112.00 m	102.94 dBu	116.00 m	102.63 dBu
-35°	0.210	0.007	-21.51	93.39 m	97.63 m	105.61 dBu	101.12 m	105.31 dBu
-40°	0.177	0.005	-23.00	78.71 m	87.12 m	105.12 dBu	90.23 m	104.81 dBu
-45°	0.111	0.002	-27.05	49.36 m	79.20 m	101.89 dBu	82.02 m	101.59 dBu
-50°	0.039	0.000	-36.14	17.34 m	73.10 m	93.50 dBu	75.71 m	93.20 dBu
-55°	0.020	0.000	-41.94	8.89 m	68.36 m	88.29 dBu	70.80 m	87.98 dBu
-60°	0.057	0.001	-32.84	25.35 m	64.66 m	97.87 dBu	66.97 m	97.56 dBu
-65°	0.074	0.001	-30.57	32.91 m	61.79 m	100.53 dBu	64.00 m	100.22 dBu
-70°	0.076	0.001	-30.34	33.80 m	59.59 m	101.07 dBu	61.72 m	100.77 dBu
-75°	0.068	0.001	-31.31	30.24 m	57.98 m	100.35 dBu	60.05 m	100.04 dBu
-80°	0.055	0.000	-33.15	24.46 m	56.86 m	98.67 dBu	58.89 m	98.37 dBu
-85°	0.040	0.000	-35.92	17.79 m	56.21 m	96.01 dBu	58.22 m	95.70 dBu
-90°	0.025	0.000	-40.00	11.12 m	56.00 m	91.96 dBu	58.00 m	91.65 dBu



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



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

