1.0 ANTENNA AND SITE ELEVATIONS - ROUNDED ON FCC 318 FORM

1.1 **Height of Site AMSL**
17.1 ft / 5.2 m

1.2 **Overall Height of Structure AGL**
100.0 ft / 30.5 m

1.3 **Antenna Height Radiation Center AGL**
100.0 ft / 30.5 m

1.4 **Antenna Height Radiation Center AMSL**
117.1 ft / 35.7 m

1.5 **Antenna Height Above Average Terrain (HAAT)**
14.4 ft / 4.4 m

2.0 LPFM EFFECTIVE RADIATED POWER

Pursuant to 47 C.F.R. Section 73.811(a) – Maximum Facilities: LPFM stations will be authorized to operate with maximum facilities of 100 watts Effective Radiated Power (ERP) at an antenna Height Above Average Terrain (HAAT) of 30 meters. An LPFM station with an antenna HAAT that exceeds 30 meters will not be permitted to operate with an ERP greater than that which would result in an F(50,50) 60 dBuV/m contour of 5.6 km. In no event will an ERP less than one watt be authorized. No facility will be authorized in excess of one watt ERP at 450 meters HAAT.

Since the calculated antenna HAAT is 4.4 m (25.6 m below 30.0 m AAT), the applicant proposes to operate with the maximum authorized ERP of 100 W. The proposed antenna HAAT of 4.4 m and ERP of 100 W produces an F(50,50) 60 dBuV/m service contour of 5.6 km. Therefore, the proposed power and height combination meets the FCC's LPFM power and antenna height requirements pursuant to Section 73.811(a) of the FCC rules.

3.0 SECOND ADJACENT WAIVER

Pursuant to 47 C.F.R. Section 73.807(e)(1) (*Waiver Of The Second-Adjacent Channel Separations*) of the FCC Rules, the following table

depicts the applicant's proposed channel which is available for the assignment of an LPFM station at the proposed location:

ERP *	Channel	Comments
100W	**240**	Channel 240 (95.9 MHz) meets the minimum spacing requirements pursuant to 47 C.F.R. Section 73.807(a)(1) of the FCC Rules for co-channel and first-adjacent channel stations. Channel 240 is short-spaced with one licensed second adjacent channel facility but meets the second-adjacent channel waiver requirements pursuant to 47 C.F.R. Section 73.807(e)(1) of the FCC Rules.

An LPFM station will not be authorized initially unless the minimum distance separations pursuant to Section 73.807 of the FCC Rules are met. The results of a channel spacing study demonstrate that the proposed LPFM facility is short-spaced with the following second adjacent channel licensed facilities:

- WXNY-FM
- WPLJ-FM

Pursuant to Section 73.807(e)(1) of the FCC Rules, the FCC requires an LPFM station to establish that its proposed operations will not result in interference to any authorized radio service. An LPFM station may do so by demonstrating that no actual interference will occur due to intervening terrain or lack of population. An LPFM station may use an undesired to desired signal strength ratio methodology to define areas of potential interference. Accordingly, the applicant hereby requests processing based on the "undesired-to-desired signal ratio method." Based on the undesired-to-desired signal ratio method, when contour overlap is caused to a second adjacent frequency, "interference is predicted to occur where the LPFM's undesired signal exceeds the protection station's desired signal by 40 dB or more."

WXNY-FM: FCC F(50,50) curves were used to determine the signal strength, in dBu, of WXNY-FM (Channel 242) at the proposed LPFM facility's transmitter site. The WXNY-FM signal strength at the proposed LPFM facility's transmitter site was calculated to be 86.345 dBu (Appendix A). Combining the 40 dB U/D ratio, the resulting interference contour for the proposed LPFM facility is the 126.345 dBu contour (86.345 + 40 = 126.345 dBu). There are several one-story buildings and no major four-lane highways within the F(50,10) 126.345 dBu interference zone; therefore, it must be demonstrated that the signal from the antenna will not reach below 1.83 m AGL (6.0 ft). Calculations demonstrate that the signal from a 1-bay NiCom BKG77 antenna would not penetrate below 1.83 m AGL (See table and elevation pastern in Appendix A). The signal would be at least 15.5 m AGL across all elevations below the horizontal; therefore, the proposed facility complies with Section 73.807(e)(1) of the FCC rules.

WPLJ-FM: FCC F(50,50) curves were used to determine the signal strength, in dBu, of WPLJ-FM (Channel 238 at the proposed LPFM facility's transmitter site. The WPLJ -FM signal strength at the proposed LPFM facility's transmitter site was calculated to be 86.693 dBu (Appendix A). Combining the 40 dB U/D ratio, the resulting interference contour for the proposed LPFM facility is the 126.693 dBu contour (86.693 + 40 = 126.693 dBu). The interference contour for WPLJ-FM is smaller than the interference contour for WXNY-FM and the signal would be at least 16.1 m AGL across all elevations below the horizontal; therefore, the proposed facility complies with Section 73.807(e)(1) of the FCC rules.

APPENDIX A – SECOND ADJACENT WAIVER

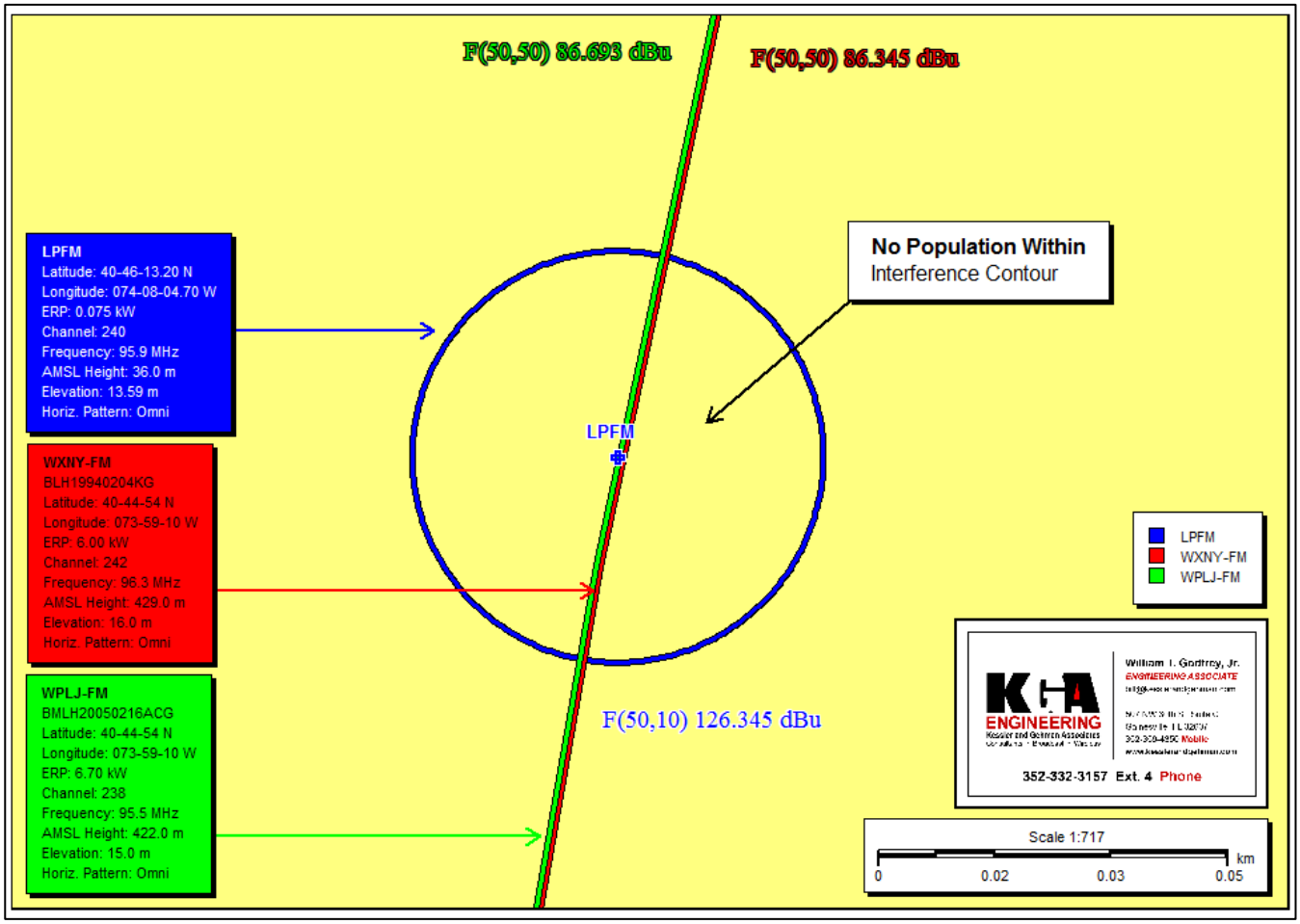
Short Spacing Undesired-to-Desired Ratio Calculation to second-adjacent channel facility:

1) WXNY-FM

Undesired-to-Desired Ratio Method:

F(50,50) Service Contour at proposed LPFM site:	**86.345 dBu**
Second-adjacent protection:	**+ 40 dB**
Interference-zone boundary:	**126.345 dBu**
Distance to F(50,10) 126.345 dBu:	**28.1 m**

The Interference Zone values above were calculated from map below:



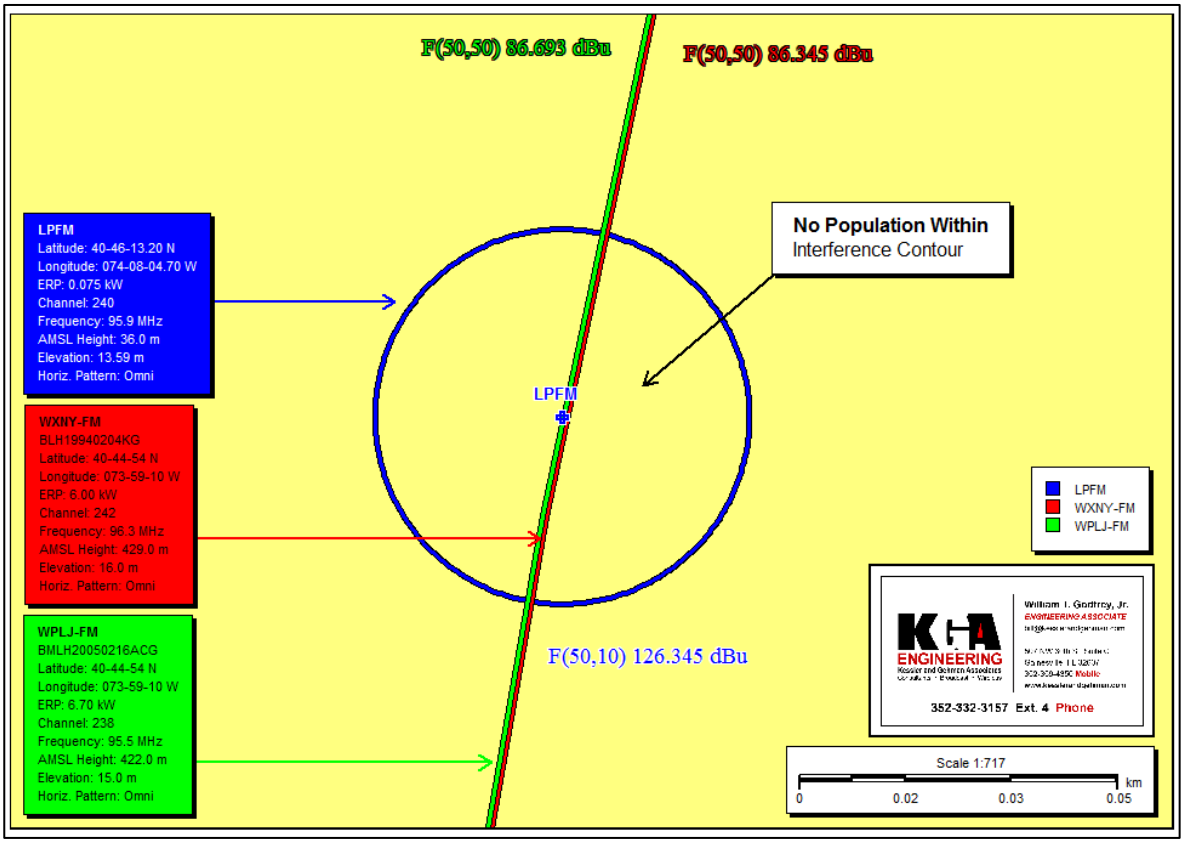
2) <u>WPLJ-FM</u>

<u>Undesired-to-Desired Ratio Method:</u>

F(50,50) Service Contour at proposed LPFM site:	**86.963 dBu**
Second-adjacent protection:	**+ 40 dB**
Interference-zone boundary:	**126.963 dBu**
Distance to F(50,10) 126.963 dBu:	**27.2 m**

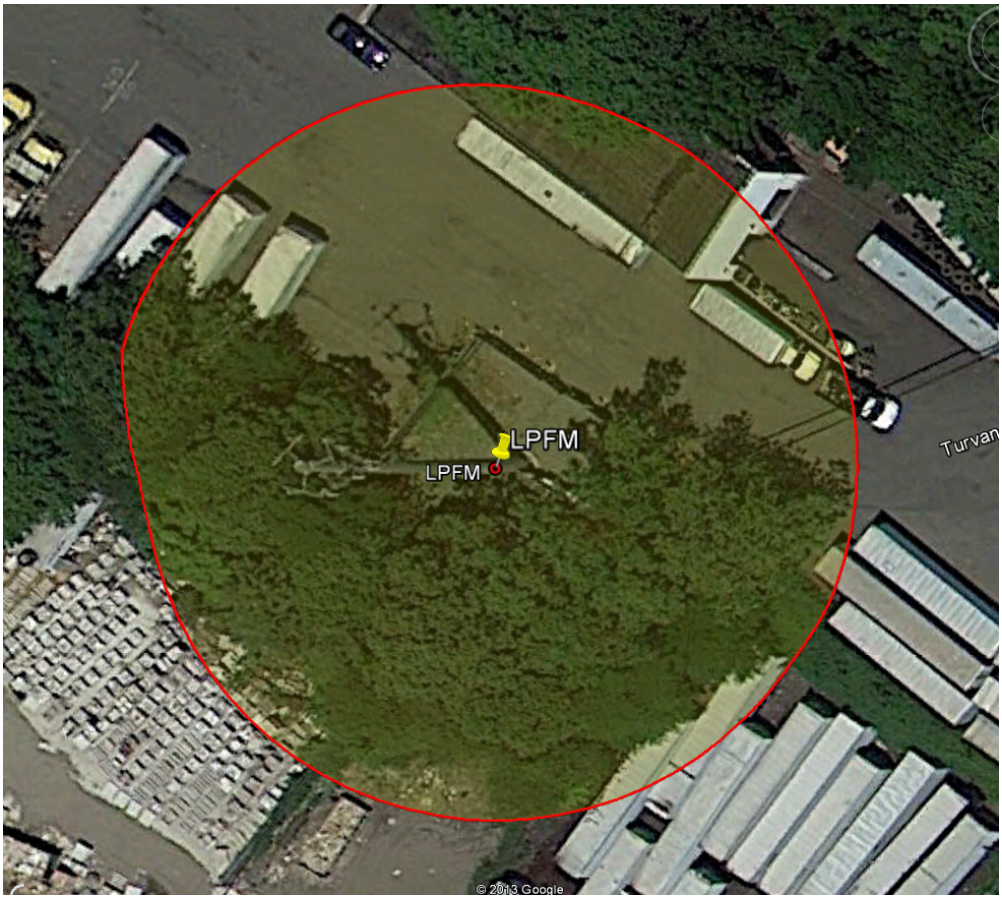
Since it has been shown that there would be no interference caused to WXNY-FM, it must also be true that there is no interference to WPLJ-FM since it's interference contour is smaller.

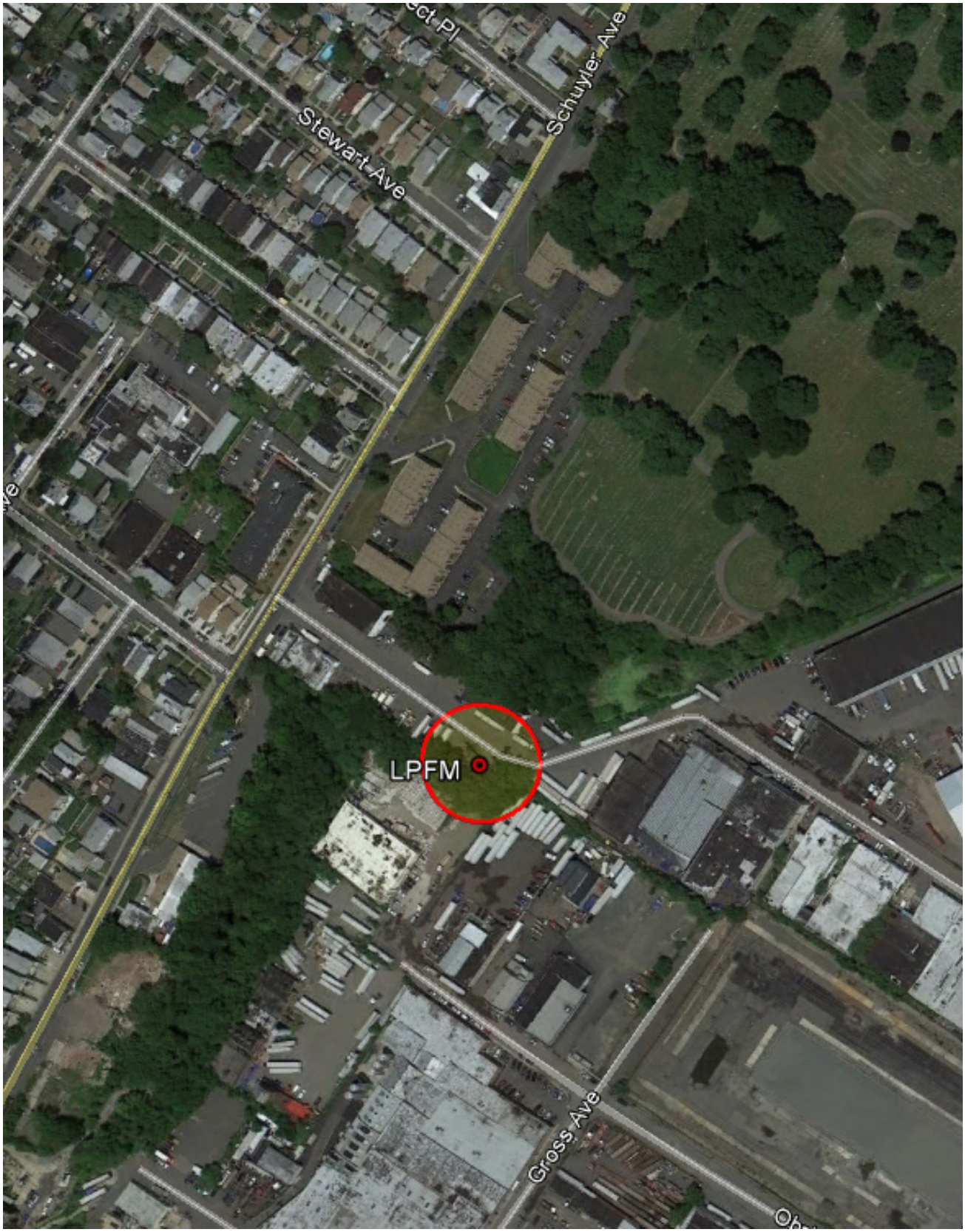
<u>Accordingly, it has been demonstrated that the proposed LPFM facility's operations will not result in interference to any authorized radio service pursuant to Section 73.807(e)(1) of the FCC Rules</u>.



```
Contour Parameters:
Type: FCC Contour
F(50-10)     FS: 126.345 dBu [360 Radials]
Population Database: 2010 US Census (PL)
Primary Terrain: 3 Second US Terrain
-----------------------------------------
Transmitter Information:
Call Letters: LPFM
Latitude: 40-46-13.20 N
Longitude: 074-08-04.70 W
ERP: 0.075 kW
Channel: 240
Frequency: 95.9 MHz
AMSL Height: 36.0 m
Elevation: 13.59 m
HAAT: 4.39 m
Horiz. Antenna Pattern: Omni
-----------------------------------------
Total Population Within Contour: 0
Total Housing Units Within Contour: 0
Total Area Within Contour: 0.00 sq. km
```

No Population (0.0) Within F(50,10) 126.345 dBu Interference Contour:




Stewart Ave
Schuyler Ave
LPFM
Gross Ave

The small buildings within the prohibited zone are single story with no roof access which means that the interference must be at or above 1.83 m AGL (6.0 ft). Calculations below demonstrate that the signal from a 1-bay BKG77 antenna would not penetrate below 1.83 m AGL and therefore complies with Section 73.807(e)(1) of the FCC rules.

Deg Below Hor	Relative Field	ERP (kW)	Distance to IX Contour From Antenna (m)	Horizontal Distance of IX Contour From Tower (m)	Vertical Clearance of IX Contour AGL (m)
0	1.000	0.10000	33.7	33.7	30.5
1	1.000	0.10000	33.7	33.7	29.9
2	1.000	0.10000	33.7	33.7	29.3
3	0.999	0.09980	33.7	33.6	28.7
4	0.999	0.09980	33.7	33.6	28.1
5	0.999	0.09980	33.7	33.6	27.6
6	0.999	0.09980	33.7	33.5	27.0
7	0.995	0.09900	33.6	33.3	26.4
8	0.991	0.09821	33.4	33.1	25.8
9	0.987	0.09742	33.3	32.9	25.3
10	0.982	0.09643	33.1	32.6	24.7
11	0.977	0.09545	33.0	32.3	24.2
12	0.972	0.09448	32.8	32.1	23.7
13	0.966	0.09332	32.6	31.7	23.2
14	0.960	0.09216	32.4	31.4	22.7
15	0.954	0.09101	32.2	31.1	22.2
16	0.947	0.08968	31.9	30.7	21.7
17	0.941	0.08855	31.7	30.4	21.2
18	0.934	0.08724	31.5	30.0	20.8
19	0.926	0.08575	31.2	29.5	20.3
20	0.918	0.08427	31.0	29.1	19.9
21	0.910	0.08281	30.7	28.7	19.5
22	0.900	0.08100	30.4	28.1	19.1
23	0.891	0.07939	30.1	27.7	18.8

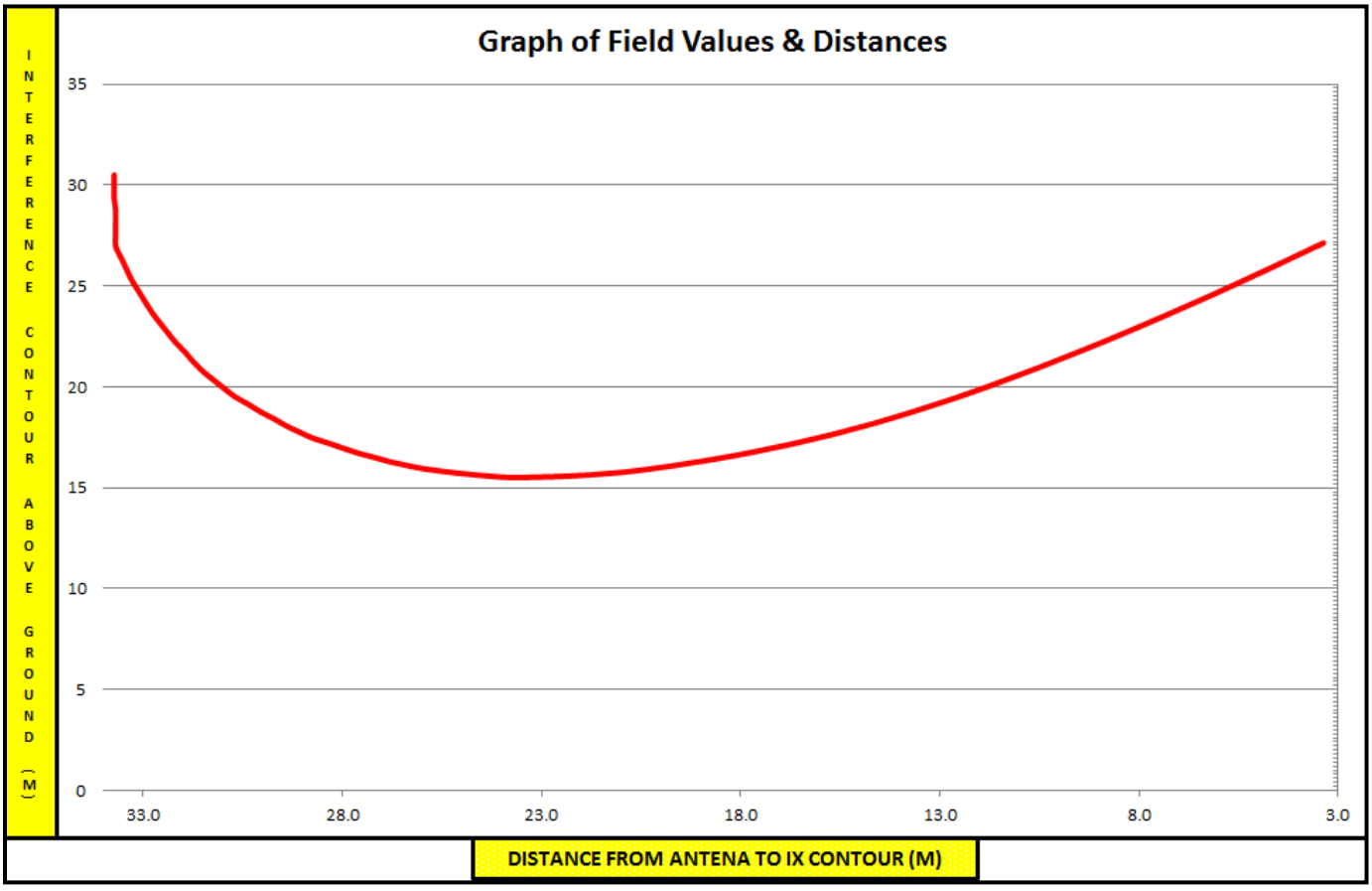
24	0.881	0.07762	29.7	27.1	18.4
25	0.872	0.07604	29.4	26.7	18.1
26	0.862	0.07430	29.1	26.1	17.8
27	0.852	0.07259	28.7	25.6	17.5
28	0.840	0.07056	28.3	25.0	17.2
29	0.829	0.06872	28.0	24.5	16.9
30	0.818	0.06691	27.6	23.9	16.7
31	0.806	0.06496	27.2	23.3	16.5
32	0.795	0.06320	26.8	22.7	16.3
33	0.783	0.06131	26.4	22.1	16.1
34	0.771	0.05944	26.0	21.6	16.0
35	0.758	0.05746	25.6	20.9	15.8
36	0.745	0.05550	25.1	20.3	15.7
37	0.732	0.05358	24.7	19.7	15.6
38	0.719	0.05170	24.3	19.1	15.6
39	0.706	0.04984	23.8	18.5	15.5
40	0.691	0.04775	23.3	17.9	15.5
41	0.676	0.04570	22.8	17.2	15.5
42	0.661	0.04369	22.3	16.6	15.6
43	0.646	0.04173	21.8	15.9	15.6
44	0.631	0.03982	21.3	15.3	15.7
45	0.616	0.03795	20.8	14.7	15.8
46	0.600	0.03600	20.2	14.1	15.9
47	0.584	0.03411	19.7	13.4	16.1
48	0.568	0.03226	19.2	12.8	16.3
49	0.553	0.03058	18.7	12.2	16.4
50	0.538	0.02894	18.1	11.7	16.6
51	0.523	0.02735	17.6	11.1	16.8
52	0.508	0.02581	17.1	10.5	17.0
53	0.494	0.02440	16.7	10.0	17.2
54	0.479	0.02294	16.2	9.5	17.4
55	0.465	0.02162	15.7	9.0	17.7
56	0.450	0.02025	15.2	8.5	17.9
57	0.436	0.01901	14.7	8.0	18.2

58	0.421	0.01772	14.2	7.5	18.5	
59	0.406	0.01648	13.7	7.1	18.8	
60	0.391	0.01529	13.2	6.6	19.1	
61	0.376	0.01414	12.7	6.1	19.4	
62	0.361	0.01303	12.2	5.7	19.7	
63	0.345	0.01190	11.6	5.3	20.1	
64	0.329	0.01082	11.1	4.9	20.5	
65	0.313	0.00980	10.6	4.5	20.9	
66	0.297	0.00882	10.0	4.1	21.3	
67	0.282	0.00795	9.5	3.7	21.7	
68	0.268	0.00718	9.0	3.4	22.1	
69	0.253	0.00640	8.5	3.1	22.5	
70	0.239	0.00571	8.1	2.8	22.9	
71	0.225	0.00506	7.6	2.5	23.3	
72	0.211	0.00445	7.1	2.2	23.7	
73	0.199	0.00396	6.7	2.0	24.1	
74	0.188	0.00353	6.3	1.7	24.4	
75	0.176	0.00310	5.9	1.5	24.8	
76	0.166	0.00276	5.6	1.4	25.1	
77	0.155	0.00240	5.2	1.2	25.4	
78	0.145	0.00210	4.9	1.0	25.7	
79	0.137	0.00188	4.6	0.9	26.0	
80	0.129	0.00166	4.4	0.8	26.2	
81	0.120	0.00144	4.0	0.6	26.5	
82	0.115	0.00132	3.9	0.5	26.7	
83	0.110	0.00121	3.7	0.5	26.8	
84	0.105	0.00110	3.5	0.4	27.0	
85	0.103	0.00106	3.5	0.3	27.0	
86	0.102	0.00104	3.4	0.2	27.1	
87	0.100	0.00100	3.4	0.2	27.1	
88	0.102	0.00104	3.4	0.1	27.1	
89	0.104	0.00108	3.5	0.1	27.0	
90	0.105	0.00110	3.5	0.0	27.0	
					15.5	**MIN**

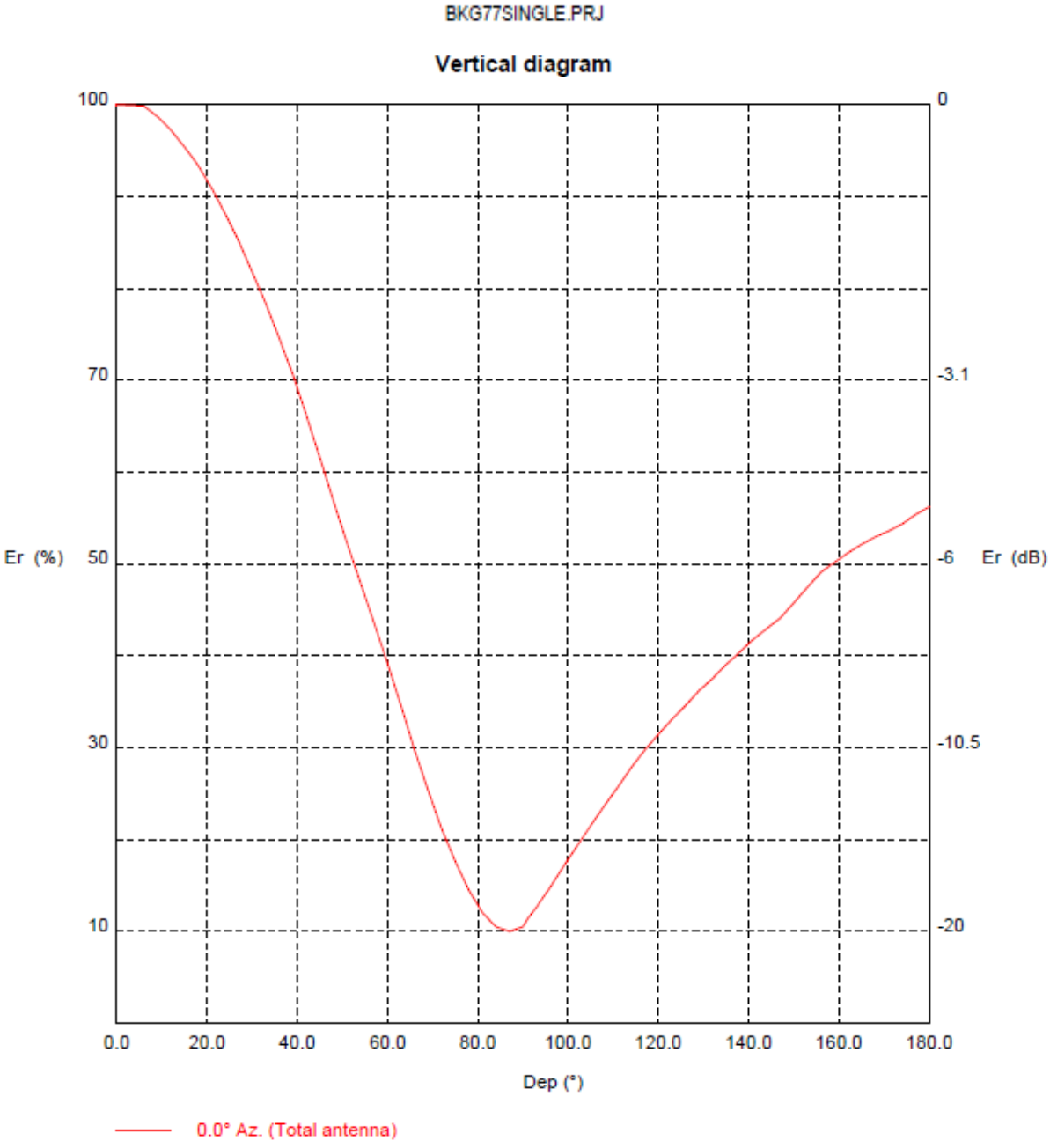
ERP (W)	ERP (kW)	Field Strength	
100.0	0.100	126.345	dBu
		2076.1	uV/m

Antenna Height R/C AGL (m)	30.5

1 mi =	1609.3 m



NiCom BKG77 1-Bay Antenna Elevation Pattern



NiCom BKG77 1-Bay Antenna Elevation Pattern Tabulation

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	373.6	60.0	39.1	57.2	120.0	31.5	37.0
1.0	100.0	373.5	61.0	37.6	52.8	121.0	32.0	38.3
2.0	100.0	373.4	62.0	36.1	48.6	122.0	32.6	39.6
3.0	99.9	373.3	63.0	34.5	44.6	123.0	33.1	41.0
4.0	99.9	373.1	64.0	32.9	40.5	124.0	33.6	42.2
5.0	99.9	372.9	65.0	31.3	36.6	125.0	34.1	43.5
6.0	99.9	372.8	66.0	29.7	33.0	126.0	34.6	44.7
7.0	99.5	369.9	67.0	28.2	29.8	127.0	35.2	46.2
8.0	99.1	367.0	68.0	26.8	26.8	128.0	35.7	47.6
9.0	98.7	364.1	69.0	25.3	23.9	129.0	36.2	49.1
10.0	98.2	360.5	70.0	23.9	21.3	130.0	36.7	50.3
11.0	97.7	356.9	71.0	22.5	18.9	131.0	37.1	51.5
12.0	97.2	353.3	72.0	21.1	16.6	132.0	37.6	52.7
13.0	96.6	348.9	73.0	19.9	14.8	133.0	38.1	54.1
14.0	96.0	344.5	74.0	18.8	13.2	134.0	38.6	55.6
15.0	95.4	340.1	75.0	17.6	11.6	135.0	39.1	57.0
16.0	94.7	335.4	76.0	16.6	10.2	136.0	39.5	58.4
17.0	94.1	330.8	77.0	15.5	9.0	137.0	40.0	59.7
18.0	93.4	326.1	78.0	14.5	7.8	138.0	40.4	61.1
19.0	92.6	320.4	79.0	13.7	7.0	139.0	40.9	62.5
20.0	91.8	314.7	80.0	12.9	6.2	140.0	41.4	63.9
21.0	91.0	309.1	81.0	12.0	5.4	141.0	41.8	65.3
22.0	90.0	302.7	82.0	11.5	5.0	142.0	42.2	66.5
23.0	89.1	296.5	83.0	11.0	4.5	143.0	42.6	67.8
24.0	88.1	290.3	84.0	10.5	4.1	144.0	43.0	69.0
25.0	87.2	283.8	85.0	10.3	4.0	145.0	43.4	70.3
26.0	86.2	277.4	86.0	10.2	3.9	146.0	43.8	71.6
27.0	85.2	271.1	87.0	10.0	3.7	147.0	44.1	72.8
28.0	84.0	263.9	88.0	10.2	3.9	148.0	44.7	74.7
29.0	82.9	256.8	89.0	10.4	4.0	149.0	45.3	76.5
30.0	81.8	249.8	90.0	10.5	4.1	150.0	45.8	78.4
31.0	80.6	242.9	91.0	11.4	4.8	151.0	46.4	80.3
32.0	79.5	236.1	92.0	12.0	5.4	152.0	46.9	82.3
33.0	78.3	229.3	93.0	12.7	6.0	153.0	47.5	84.3
34.0	77.1	222.0	94.0	13.4	6.7	154.0	48.0	86.2
35.0	75.8	214.7	95.0	14.1	7.4	155.0	48.6	88.2
36.0	74.5	207.6	96.0	14.8	8.2	156.0	49.1	90.2
37.0	73.2	200.4	97.0	15.6	9.1	157.0	49.5	91.5
38.0	71.9	193.3	98.0	16.4	10.0	158.0	49.8	92.8
39.0	70.6	186.3	99.0	17.1	11.0	159.0	50.2	94.1
40.0	69.1	178.6	100.0	17.9	11.9	160.0	50.5	95.4
41.0	67.6	170.9	101.0	18.6	12.9	161.0	50.9	96.8
42.0	66.1	163.5	102.0	19.3	13.9	162.0	51.2	98.1
43.0	64.6	156.0	103.0	20.1	15.0	163.0	51.5	99.2
44.0	63.1	148.7	104.0	20.8	16.2	164.0	51.8	100.4
45.0	61.6	141.6	105.0	21.5	17.3	165.0	52.1	101.6
46.0	60.0	134.4	106.0	22.3	18.5	166.0	52.4	102.7
47.0	58.4	127.5	107.0	23.0	19.7	167.0	52.7	103.7
48.0	56.8	120.7	108.0	23.7	21.0	168.0	53.0	104.8
49.0	55.3	114.4	109.0	24.4	22.2	169.0	53.2	105.7
50.0	53.8	108.2	110.0	25.1	23.5	170.0	53.4	106.5
51.0	52.3	102.2	111.0	25.7	24.8	171.0	53.6	107.4
52.0	50.8	96.6	112.0	26.5	26.2	172.0	53.9	108.4
53.0	49.4	91.1	113.0	27.2	27.6	173.0	54.1	109.4
54.0	47.9	85.8	114.0	27.9	29.0	174.0	54.4	110.5
55.0	46.5	80.7	115.0	28.5	30.4	175.0	54.7	111.9
56.0	45.0	75.7	116.0	29.2	31.8	176.0	55.1	113.3
57.0	43.6	71.0	117.0	29.8	33.1	177.0	55.4	114.7
58.0	42.1	66.2	118.0	30.4	34.4	178.0	55.7	115.9
59.0	40.6	61.6	119.0	30.9	35.7	179.0	56.0	117.0

NicomUsa, Inc