



Proposal #: **DCA-8564-4** Antenna Type: **TUE-O5-12/60H-B** Channel: **47 DTV**
 Call Letters: **WOWK-DT** Location: **Huntington, WV**

Electrical Specifications		Value		Remarks
		Ratio	dB	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	23.0	13.62	
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol	8.6	9.34	
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol	31.1	14.93	
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	11.6	10.64	
	Vpol			
Circularity		+/- 1.5 dB		
Axial Ratio		dB		
Beam Tilt		0.90 deg		
Average Power DTV		65 kW	18.13 dBk	
Antenna Input: T/L		7 3/16 in	75.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel 1.10 : 1		
Patterns	Azimuth	TUE-O5-47		
	Elevation	47EL-3090	47EL-3090-90	
Mechanical Specifications		Metric	English	Full Stack
Height with Lightning Protector	H4	m	ft	115.0 ft
Height Less Lightning Protector	H2	14.2 m	46.7 ft	112.0 ft
Height of Center of Radiation	H3	7.2 m	23.5 ft	Above tower top 81.5 ft Ch: 13
Basic Wind Speed	V	128.7 km/h	80 mi/h	TIA/EIA-222-F.
Force Coeff. x Projected Area	CfAc	16.91 m ²	182.0 ft ²	Above tower top 250 ft ²
Moment Arm	D1	m	ft	Above tower top 45 ft
Force Coeff. x Projected Area	CaAc	m ²	ft ²	ft ²
Moment Arm	D3	m	ft	ft
Pole Bury Length	D2	m	ft	ft
Weight	W	8.9 t	19,700 lbs	with tran. mast. 32,000 lbs
Radome				Weight is calculated without ice.
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

NOTE:

Prepared By : _____ EHM/WAK Approved By : _____ AJS/RLN
 Original Date : 31-Mar-00 **Revision: 4** **12/28/2000**

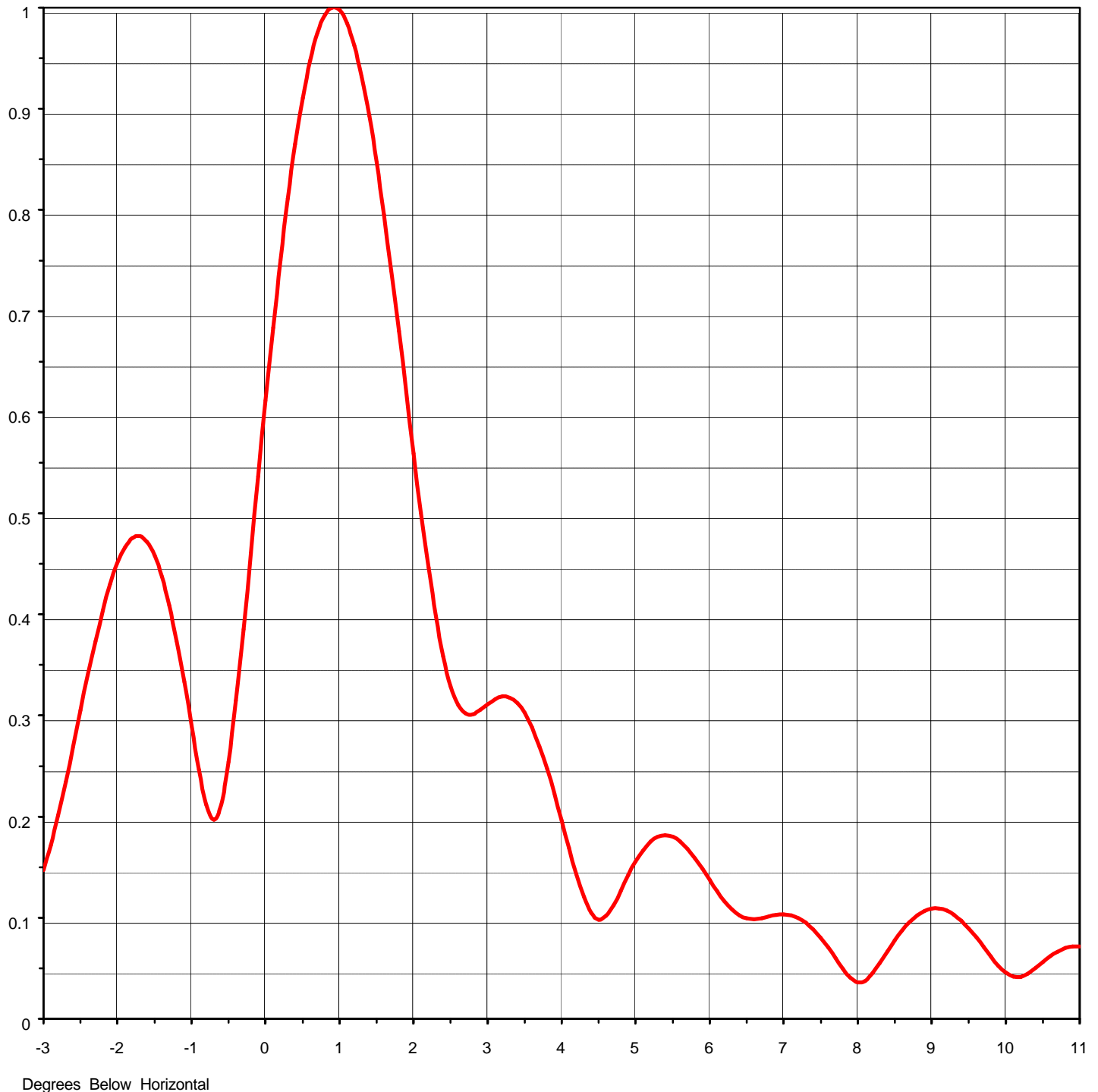


Proposal Number	DCA-8654	Revision:	4
Date	28-DEC-00		
Call Letters	WOWK-DT	Channel	47
Location	Huntington, WV		
Customer	Gateway Comm.		
Antenna Type	TUE-O5-12/60H-B		

ELEVATION PATTERN

RMS Gain at Main Lobe	23.00 (13.62 dB)
RMS Gain at Horizontal	8.60 (9.34 dB)
Calculated / Measured	Calculated

Beam Tilt	0.90 deg
Frequency	671.00 MHz
Drawing #	47EL-3090



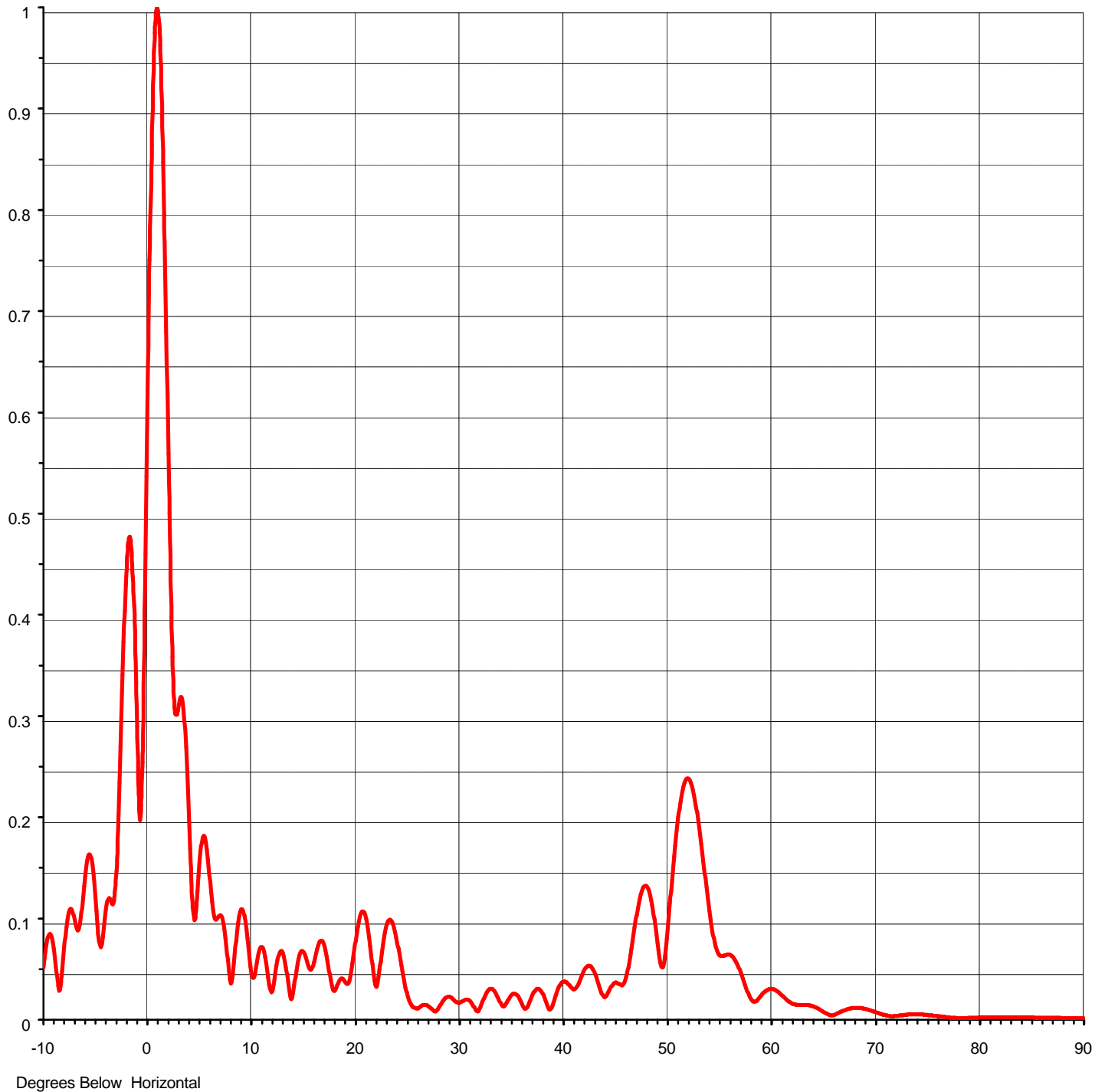


Proposal Number	DCA-8654	Revision:	4
Date	28-DEC-00		
Call Letters	WOWK-DT	Channel	47
Location	Huntington, WV		
Customer	Gateway Comm.		
Antenna Type	TUE-O5-12/60H-B		

ELEVATION PATTERN

RMS Gain at Main Lobe	23.00 (13.62 dB)
RMS Gain at Horizontal	8.60 (9.34 dB)
Calculated / Measured	Calculated

Beam Tilt	0.90 deg
Frequency	671.00 MHz
Drawing #	47EL-3090-90





Proposal Number **DCA-8654** Revision: **4**
 Date **28-DEC-00**
 Call Letters **WOWK-DT** Channel **47**
 Location **Huntington, WV**
 Customer **Gateway Comm.**
 Antenna Type **TUE-O5-12/60H-B**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **47EL-3090-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.052	2.4	0.359	10.6	0.056	30.5	0.019	51.0	0.191	71.5	0.004
-9.5	0.083	2.6	0.310	10.8	0.067	31.0	0.019	51.5	0.226	72.0	0.004
-9.0	0.070	2.8	0.301	11.0	0.072	31.5	0.012	52.0	0.238	72.5	0.004
-8.5	0.029	3.0	0.311	11.5	0.056	32.0	0.011	52.5	0.227	73.0	0.005
-8.0	0.072	3.2	0.319	12.0	0.027	32.5	0.023	53.0	0.198	73.5	0.005
-7.5	0.108	3.4	0.312	12.5	0.054	33.0	0.030	53.5	0.157	74.0	0.005
-7.0	0.098	3.6	0.288	13.0	0.068	33.5	0.027	54.0	0.115	74.5	0.005
-6.5	0.094	3.8	0.248	13.5	0.045	34.0	0.017	54.5	0.081	75.0	0.005
-6.0	0.142	4.0	0.196	14.0	0.022	34.5	0.015	55.0	0.064	75.5	0.004
-5.5	0.163	4.2	0.143	14.5	0.055	35.0	0.024	55.5	0.063	76.0	0.003
-5.0	0.121	4.4	0.105	15.0	0.068	35.5	0.025	56.0	0.064	76.5	0.003
-4.5	0.072	4.6	0.102	15.5	0.055	36.0	0.017	56.5	0.060	77.0	0.002
-4.0	0.108	4.8	0.127	16.0	0.053	36.5	0.011	57.0	0.049	77.5	0.002
-3.5	0.117	5.0	0.156	16.5	0.073	37.0	0.022	57.5	0.035	78.0	0.002
-3.0	0.147	5.2	0.175	17.0	0.076	37.5	0.030	58.0	0.022	78.5	0.002
-2.8	0.201	5.4	0.182	17.5	0.051	38.0	0.027	58.5	0.018	79.0	0.002
-2.6	0.269	5.6	0.175	18.0	0.028	38.5	0.015	59.0	0.023	79.5	0.002
-2.4	0.340	5.8	0.159	18.5	0.038	39.0	0.014	59.5	0.029	80.0	0.002
-2.2	0.403	6.0	0.137	19.0	0.039	39.5	0.029	60.0	0.030	80.5	0.002
-2.0	0.451	6.2	0.116	19.5	0.039	40.0	0.038	60.5	0.029	81.0	0.002
-1.8	0.475	6.4	0.102	20.0	0.071	40.5	0.036	61.0	0.025	81.5	0.003
-1.6	0.472	6.6	0.099	20.5	0.101	41.0	0.030	61.5	0.020	82.0	0.003
-1.4	0.437	6.8	0.101	21.0	0.104	41.5	0.035	62.0	0.016	82.5	0.003
-1.2	0.374	7.0	0.103	21.5	0.073	42.0	0.048	62.5	0.015	83.0	0.003
-1.0	0.289	7.2	0.100	22.0	0.034	42.5	0.054	63.0	0.015	83.5	0.002
-0.8	0.212	7.4	0.089	22.5	0.058	43.0	0.048	63.5	0.014	84.0	0.002
-0.6	0.212	7.6	0.071	23.0	0.090	43.5	0.033	64.0	0.013	84.5	0.002
-0.4	0.315	7.8	0.049	23.5	0.098	44.0	0.023	64.5	0.011	85.0	0.002
-0.2	0.460	8.0	0.036	24.0	0.081	44.5	0.030	65.0	0.007	85.5	0.002
0.0	0.612	8.2	0.045	24.5	0.053	45.0	0.036	65.5	0.005	86.0	0.002
0.2	0.750	8.4	0.067	25.0	0.027	45.5	0.035	66.0	0.005	86.5	0.002
0.4	0.865	8.6	0.087	25.5	0.014	46.0	0.039	66.5	0.007	87.0	0.002
0.6	0.947	8.8	0.102	26.0	0.011	46.5	0.064	67.0	0.009	87.5	0.002
0.8	0.992	9.0	0.109	26.5	0.014	47.0	0.097	67.5	0.011	88.0	0.002
1.0	0.998	9.2	0.107	27.0	0.014	47.5	0.124	68.0	0.012	88.5	0.002
1.2	0.962	9.4	0.097	27.5	0.009	48.0	0.132	68.5	0.012	89.0	0.002
1.4	0.893	9.6	0.080	28.0	0.010	48.5	0.118	69.0	0.010	89.5	0.001
1.6	0.795	9.8	0.071	28.5	0.019	49.0	0.084	69.5	0.009	90.0	0.001
1.8	0.680	10.0	0.052	29.0	0.023	49.5	0.052	70.0	0.007		
2.0	0.559	10.2	0.042	29.5	0.020	50.0	0.080	70.5	0.006		
2.2	0.446	10.4	0.045	30.0	0.017	50.5	0.139	71.0	0.004		

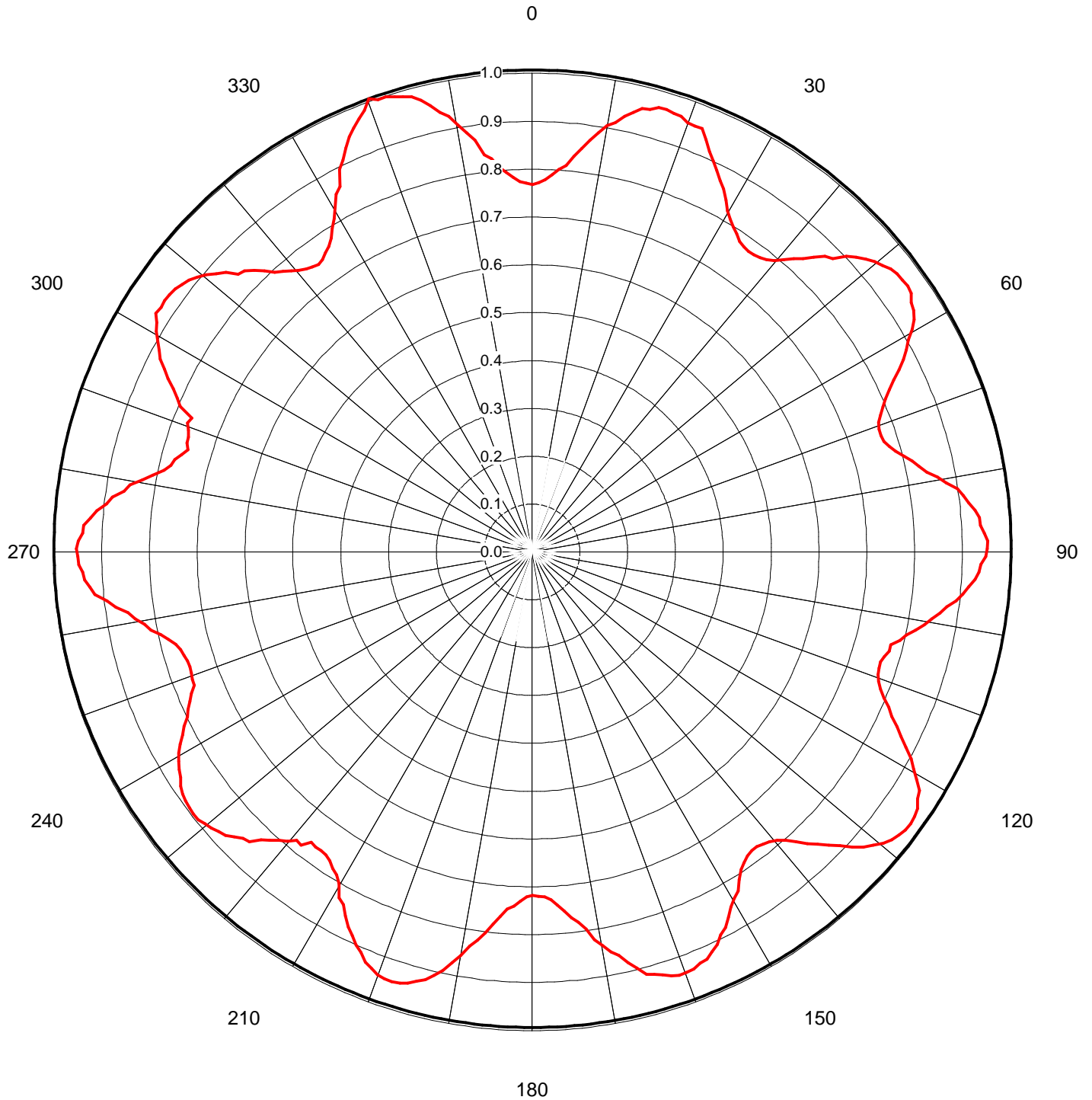


Proposal Number	DCA-8654	Revision:	4
Date	28-DEC-00		
Call Letters	WOWK-DT	Channel	47
Location	Huntington, WV		
Customer	Gateway Comm.		
Antenna Type	TUE-05-12/60H-B		

AZIMUTH PATTERN

Gain	1.35	(1.30 dB)
Calculated / Measured	Calculated	

Frequency	671.00 MHz
Drawing #	TUE-05-47





Proposal Number	DCA-8654	Revision:	4
Date	28-DEC-00		
Call Letters	WOWK-DT	Channel	47
Location	Huntington, WV		
Customer	Gateway Comm.		
Antenna Type	TUE-O5-12/60H-B		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUE-O5-47**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.761	45	0.863	90	0.950	135	0.875	180	0.724	225	0.855	270	0.953	315	0.822
1	0.765	46	0.873	91	0.947	136	0.857	181	0.727	226	0.867	271	0.949	316	0.807
2	0.771	47	0.897	92	0.938	137	0.842	182	0.736	227	0.878	272	0.941	317	0.790
3	0.782	48	0.910	93	0.933	138	0.824	183	0.748	228	0.883	273	0.939	318	0.779
4	0.794	49	0.923	94	0.927	139	0.808	184	0.754	229	0.889	274	0.925	319	0.768
5	0.803	50	0.934	95	0.914	140	0.796	185	0.771	230	0.893	275	0.914	320	0.760
6	0.823	51	0.941	96	0.904	141	0.787	186	0.788	231	0.899	276	0.896	321	0.752
7	0.842	52	0.950	97	0.892	142	0.783	187	0.808	232	0.899	277	0.884	322	0.747
8	0.861	53	0.954	98	0.873	143	0.779	188	0.826	233	0.899	278	0.862	323	0.743
9	0.880	54	0.956	99	0.861	144	0.779	189	0.840	234	0.896	279	0.851	324	0.747
10	0.897	55	0.957	100	0.847	145	0.783	190	0.863	235	0.893	280	0.828	325	0.754
11	0.906	56	0.954	101	0.834	146	0.791	191	0.881	236	0.887	281	0.809	326	0.761
12	0.924	57	0.944	102	0.818	147	0.799	192	0.900	237	0.877	282	0.787	327	0.773
13	0.936	58	0.939	103	0.801	148	0.816	193	0.914	238	0.871	283	0.776	328	0.789
14	0.948	59	0.929	104	0.791	149	0.834	194	0.927	239	0.863	284	0.770	329	0.804
15	0.950	60	0.915	105	0.775	150	0.843	195	0.935	240	0.854	285	0.759	330	0.824
16	0.958	61	0.898	106	0.775	151	0.855	196	0.944	241	0.842	286	0.749	331	0.847
17	0.960	62	0.885	107	0.769	152	0.872	197	0.949	242	0.828	287	0.754	332	0.856
18	0.956	63	0.869	108	0.765	153	0.888	198	0.951	243	0.817	288	0.755	333	0.889
19	0.956	64	0.853	109	0.766	154	0.897	199	0.950	244	0.802	289	0.761	334	0.903
20	0.947	65	0.833	110	0.767	155	0.912	200	0.947	245	0.794	290	0.767	335	0.924
21	0.946	66	0.815	111	0.774	156	0.922	201	0.939	246	0.785	291	0.763	336	0.942
22	0.947	67	0.800	112	0.784	157	0.932	202	0.931	247	0.775	292	0.794	337	0.955
23	0.928	68	0.790	113	0.798	158	0.934	203	0.917	248	0.761	293	0.807	338	0.969
24	0.909	69	0.779	114	0.815	159	0.940	204	0.907	249	0.762	294	0.822	339	0.980
25	0.893	70	0.770	115	0.828	160	0.942	205	0.891	250	0.758	295	0.840	340	1.000
26	0.879	71	0.766	116	0.847	161	0.942	206	0.879	251	0.757	296	0.856	341	0.992
27	0.862	72	0.766	117	0.865	162	0.938	207	0.861	252	0.757	297	0.873	342	0.993
28	0.851	73	0.768	118	0.883	163	0.931	208	0.842	253	0.762	298	0.884	343	0.987
29	0.833	74	0.776	119	0.904	164	0.925	209	0.834	254	0.765	299	0.896	344	0.982
30	0.814	75	0.785	120	0.920	165	0.920	210	0.808	255	0.772	300	0.908	345	0.978
31	0.803	76	0.800	121	0.936	166	0.903	211	0.794	256	0.784	301	0.917	346	0.965
32	0.793	77	0.813	122	0.953	167	0.887	212	0.787	257	0.797	302	0.929	347	0.950
33	0.784	78	0.826	123	0.960	168	0.869	213	0.777	258	0.815	303	0.925	348	0.932
34	0.774	79	0.839	124	0.971	169	0.858	214	0.772	259	0.826	304	0.928	349	0.921
35	0.770	80	0.860	125	0.975	170	0.842	215	0.770	260	0.844	305	0.926	350	0.899
36	0.768	81	0.875	126	0.977	171	0.827	216	0.771	261	0.855	306	0.923	351	0.880
37	0.769	82	0.897	127	0.976	172	0.803	217	0.768	262	0.879	307	0.917	352	0.862
38	0.772	83	0.907	128	0.971	173	0.786	218	0.785	263	0.896	308	0.911	353	0.829
39	0.777	84	0.917	129	0.965	174	0.775	219	0.784	264	0.919	309	0.901	354	0.818
40	0.787	85	0.927	130	0.957	175	0.759	220	0.797	265	0.928	310	0.891	355	0.799
41	0.800	86	0.936	131	0.943	176	0.746	221	0.806	266	0.938	311	0.876	356	0.788
42	0.816	87	0.937	132	0.930	177	0.734	222	0.819	267	0.941	312	0.862	357	0.777
43	0.829	88	0.945	133	0.913	178	0.727	223	0.831	268	0.949	313	0.841	358	0.767
44	0.846	89	0.951	134	0.893	179	0.726	224	0.851	269	0.950	314	0.836	359	0.764