



Proposal #: **DCA-10038-2** Antenna Type: **TUA-04-16/64H-1-T-R** Channel: **25 NTSC**
 Call Letters: **WEEK** Location: **Peoria, IL** **57 DTV**

Electrical Specifications		Value		Remarks	
		Ratio	dB		
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	31.0	14.91	N25;	D57: 34.1 (15.33 dB)
	Vpol				
RMS Gain at Horizontal over Halfwave Dipole	Hpol	14.3	11.55	N25;	D57: 6.6 (8.20 dB)
	Vpol				
Peak Directional Gain over Halfwave Dipole	Hpol				
	Vpol				
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol				
	Vpol				
Circularity		+/- 2.0 dB			
Axial Ratio		dB			
Beam Tilt		0.75 deg		N25;	D57: 0.80 deg
Peak TV Power	10% Aural	80 kW	19.03 dBk	+18 kW average DTV power	
Antenna Input:	T/L	7-3/16 in	75.0 ohm	Type:	EIA/DCA
Maximum Antenna Input VSWR		Pix +.5MHz	1.05 : 1	D57: Channel: 1.10 : 1	
		Color	1.08 : 1		
		Aural	1.10 : 1		
		Channel	1.10 : 1		
Patterns	Azimuth	TUA-O4-5390		D57: TUA-O4-7310	
	Elevation	16U310075	16U310075-90	N25	
		16U341080	16U341080-90	D57	
Mechanical Specifications		Metric	English		
Height with Lightning Protector	H4	20.1 m	66.1 ft		
Height Less Lightning Protector	H2	18.9 m	62.1 ft		
Height of Center of Radiation	H3	9.6 m	31.4 ft		
Basic Wind Speed	V	120.7 km/h	75 mi/h	TIA/EIA-222-F.	
Force Coeff. x Projected Area	CfAc	18.39 m²	198.0 ft²	Above base flange	
Moment Arm	D1	11.5 m	37.7 ft	Above base flange	
Force Coeff. x Projected Area	CaAc	m²	ft²		
Moment Arm	D3	m	ft		
Pole Bury Length	D2	m	ft		
Weight	W	5.0 t	11,000 lbs		
Radome	Full Cylindrical			Orange	
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F. See installation drawing P843-5212-403 for additional information.					

NOTE:

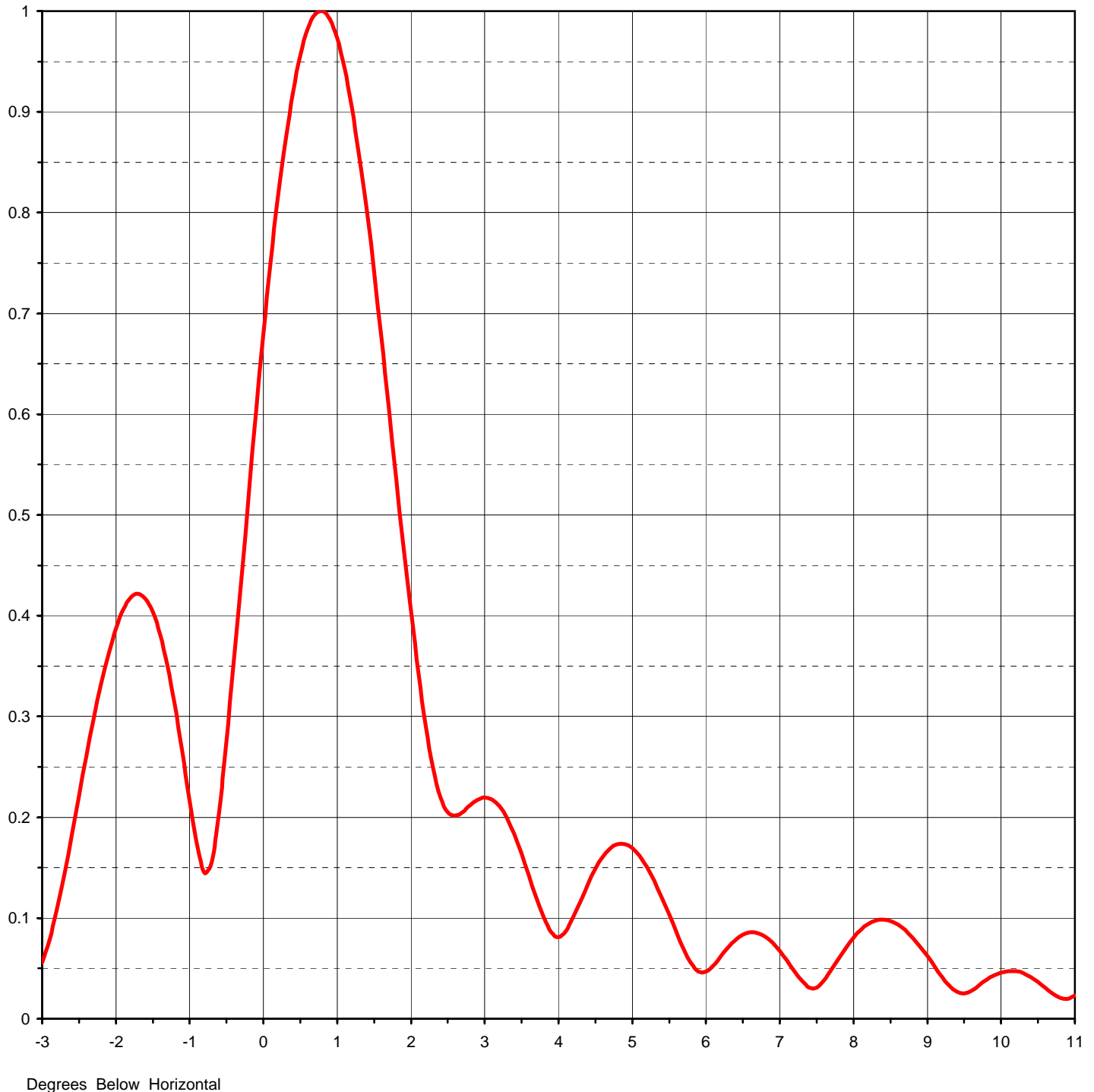
Prepared By : RLM
 Original Date : 12-Aug-02
 Approved By : RN
 Revision: 2 Rev. Date: 7-Jan-03



Proposal Number	DCA-10038	Revision:	2
Date	7-Jan-03		
Call Letters	WEEK	Channel	25
Location	Peoria, IL		
Customer	Granite Broadcasting Corporation		
Antenna Type	TUA-O4-16/64H-1-T-R		

ELEVATION PATTERN

RMS Gain at Main Lobe	31.00 (14.91 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	14.30 (11.55 dB)	Frequency	539.00 MHz
Calculated / Measured	Calculated	Drawing #	16U310075



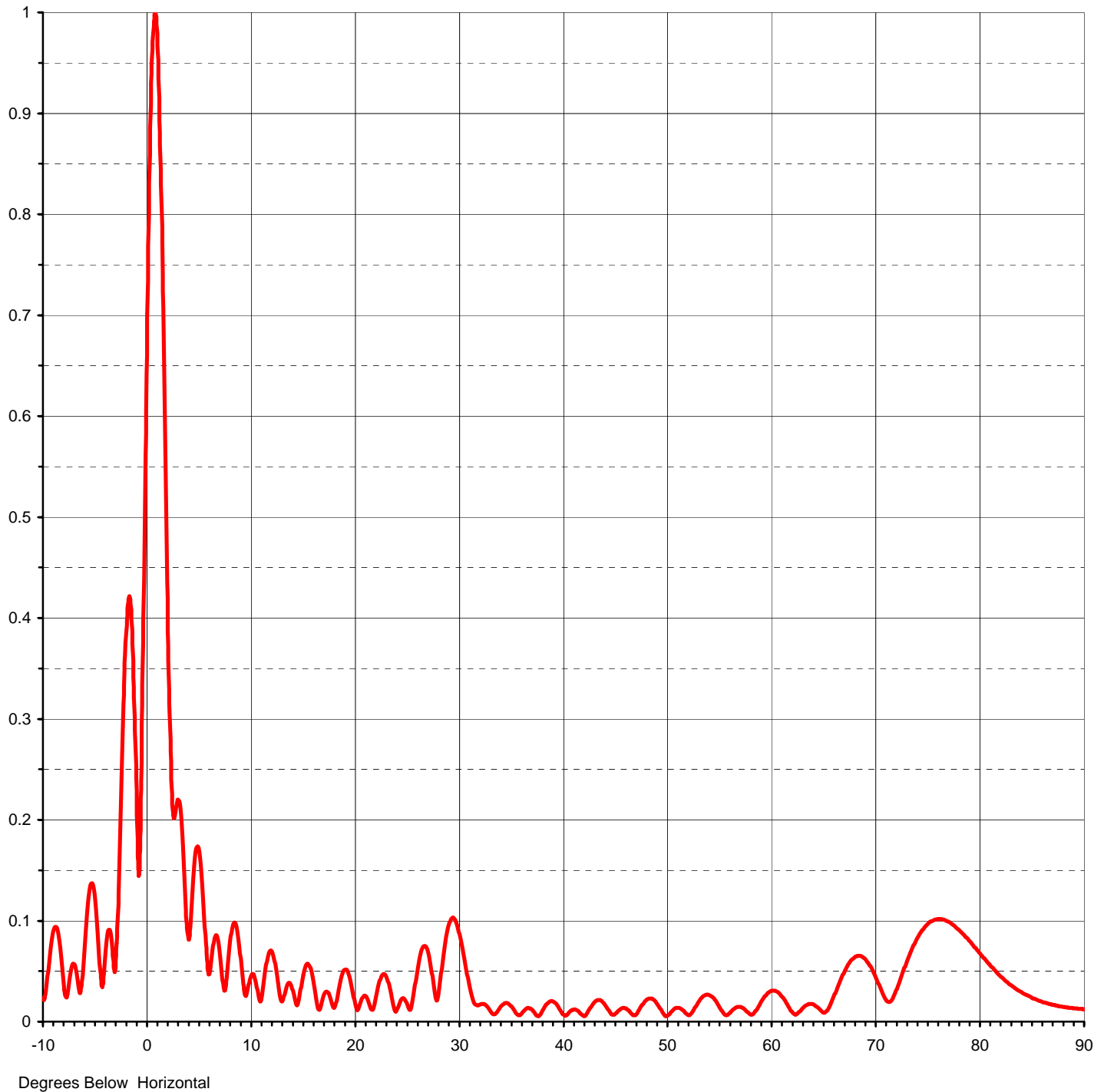


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Date	7-Jan-03		
Call Letters	WEEK	Channel	25
Location	Peoria, IL		
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Antenna Type	TUA-O4-16/64H-1-T-R		

ELEVATION PATTERN

RMS Gain at Main Lobe	31.00 (14.91 dB)
RMS Gain at Horizontal	14.30 (11.55 dB)
Calculated / Measured	Calculated

Beam Tilt	0.75 deg
Frequency	539.00 MHz
Drawing #	16U310075-90





Proposal Number **DCA-10038** Revision: **2**
 Date **7-Jan-03**
 Call Letters **WEEK** Channel **25**
 Location **Peoria, IL**
 Customer **Granite Broadcasting Corporation**
 Antenna Type **TUA-O4-16/64H-1-T-R**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **16U310075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.023	2.4	0.220	10.6	0.037	30.5	0.067	51.0	0.014	71.5	0.021
-9.5	0.050	2.6	0.201	10.8	0.025	31.0	0.038	51.5	0.012	72.0	0.032
-9.0	0.089	2.8	0.212	11.0	0.020	31.5	0.019	52.0	0.007	72.5	0.046
-8.5	0.085	3.0	0.220	11.5	0.053	32.0	0.017	52.5	0.010	73.0	0.060
-8.0	0.039	3.2	0.211	12.0	0.071	32.5	0.017	53.0	0.018	73.5	0.073
-7.5	0.038	3.4	0.184	12.5	0.051	33.0	0.012	53.5	0.025	74.0	0.083
-7.0	0.057	3.6	0.143	13.0	0.020	33.5	0.007	54.0	0.027	74.5	0.091
-6.5	0.030	3.8	0.100	13.5	0.034	34.0	0.014	54.5	0.023	75.0	0.097
-6.0	0.074	4.0	0.081	14.0	0.034	34.5	0.018	55.0	0.016	75.5	0.100
-5.5	0.131	4.2	0.101	14.5	0.016	35.0	0.016	55.5	0.008	76.0	0.101
-5.0	0.122	4.4	0.134	15.0	0.041	35.5	0.009	56.0	0.008	76.5	0.101
-4.5	0.050	4.6	0.161	15.5	0.057	36.0	0.007	56.5	0.013	77.0	0.099
-4.0	0.066	4.8	0.173	16.0	0.044	36.5	0.013	57.0	0.015	77.5	0.095
-3.5	0.087	5.0	0.169	16.5	0.015	37.0	0.012	57.5	0.012	78.0	0.090
-3.0	0.056	5.2	0.151	17.0	0.024	37.5	0.007	58.0	0.007	78.5	0.086
-2.8	0.108	5.4	0.121	17.5	0.029	38.0	0.009	58.5	0.010	79.0	0.080
-2.6	0.182	5.6	0.086	18.0	0.014	38.5	0.017	59.0	0.018	79.5	0.074
-2.4	0.261	5.8	0.055	18.5	0.031	39.0	0.020	59.5	0.026	80.0	0.068
-2.2	0.332	6.0	0.047	19.0	0.051	39.5	0.016	60.0	0.030	80.5	0.061
-2.0	0.387	6.2	0.062	19.5	0.046	40.0	0.008	60.5	0.030	81.0	0.056
-1.8	0.418	6.4	0.078	20.0	0.022	40.5	0.007	61.0	0.026	81.5	0.050
-1.6	0.417	6.6	0.086	20.5	0.015	41.0	0.012	61.5	0.019	82.0	0.045
-1.4	0.381	6.8	0.082	21.0	0.026	41.5	0.010	62.0	0.010	82.5	0.040
-1.2	0.311	7.0	0.068	21.5	0.016	42.0	0.006	62.5	0.007	83.0	0.036
-1.0	0.217	7.2	0.047	22.0	0.020	42.5	0.010	63.0	0.013	83.5	0.032
-0.8	0.145	7.4	0.031	22.5	0.042	43.0	0.019	63.5	0.017	84.0	0.029
-0.6	0.205	7.6	0.038	23.0	0.046	43.5	0.022	64.0	0.017	84.5	0.026
-0.4	0.354	7.8	0.060	23.5	0.029	44.0	0.018	64.5	0.013	85.0	0.024
-0.2	0.521	8.0	0.081	24.0	0.010	44.5	0.010	65.0	0.009	85.5	0.021
0.0	0.680	8.2	0.094	24.5	0.022	45.0	0.007	65.5	0.014	86.0	0.020
0.2	0.816	8.4	0.098	25.0	0.019	45.5	0.012	66.0	0.026	86.5	0.018
0.4	0.919	8.6	0.094	25.5	0.015	46.0	0.013	66.5	0.038	87.0	0.017
0.6	0.982	8.8	0.081	26.0	0.046	46.5	0.009	67.0	0.050	87.5	0.015
0.8	1.000	9.0	0.062	26.5	0.071	47.0	0.007	67.5	0.059	88.0	0.015
1.0	0.973	9.2	0.042	27.0	0.072	47.5	0.014	68.0	0.064	88.5	0.014
1.2	0.904	9.4	0.027	27.5	0.045	48.0	0.021	68.5	0.065	89.0	0.013
1.4	0.801	9.6	0.028	28.0	0.022	48.5	0.023	69.0	0.062	89.5	0.013
1.6	0.675	9.8	0.033	28.5	0.060	49.0	0.019	69.5	0.054	90.0	0.012
1.8	0.537	10.0	0.043	29.0	0.092	49.5	0.011	70.0	0.044		
2.0	0.403	10.2	0.047	29.5	0.103	50.0	0.005	70.5	0.032		
2.2	0.291	10.4	0.045	30.0	0.091	50.5	0.010	71.0	0.021		

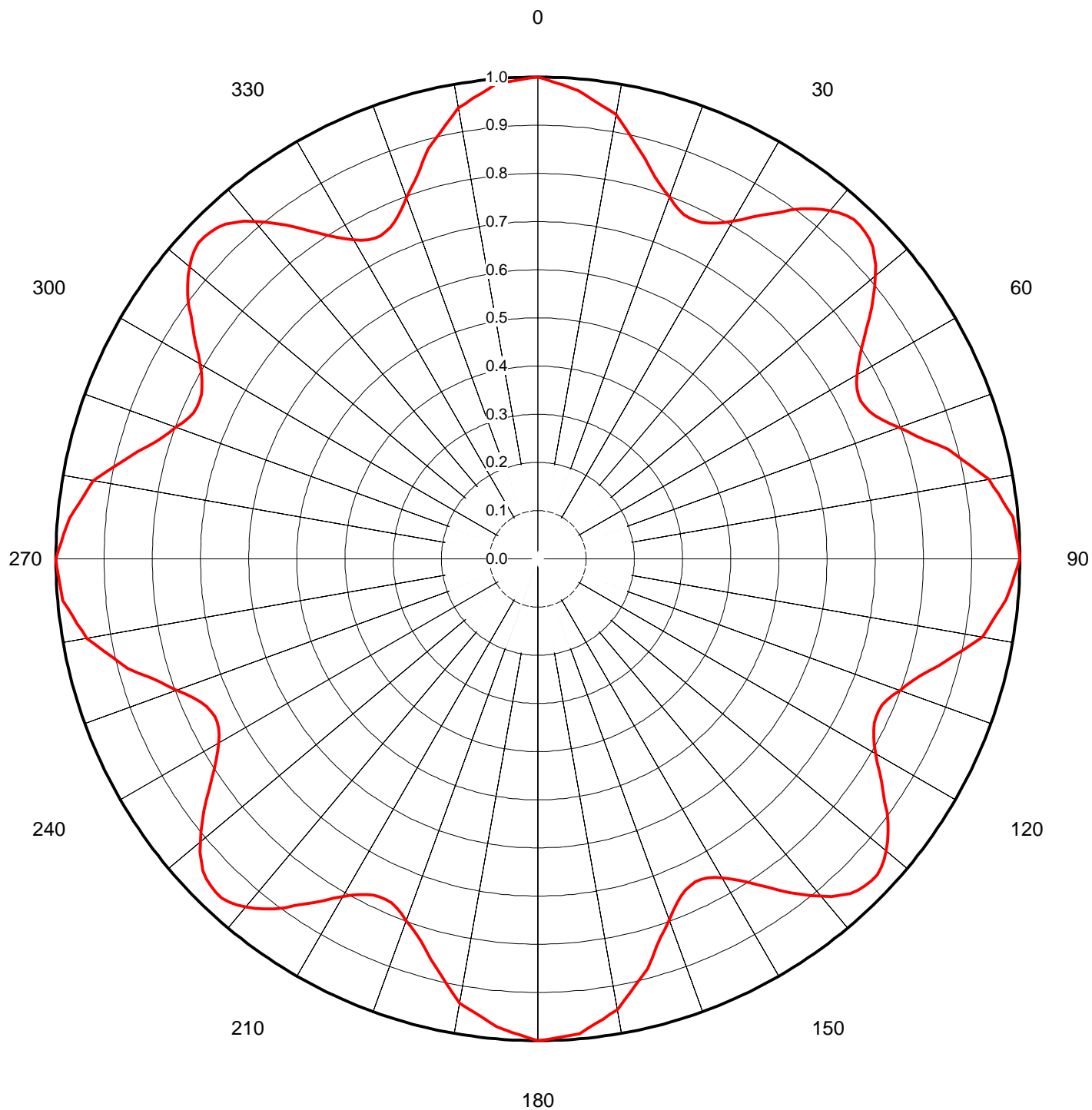


Proposal Number	DCA-10038	Revision:	2
Date	7-Jan-03		
Call Letters	WEEK	Channel	25
Location	Peoria, IL		
Customer	Granite Broadcasting Corporation		
Antenna Type	TUA-O4-16/64H-1-T-R		

AZIMUTH PATTERN

Gain **1.30** **(1.14 dB)**
Calculated / Measured **Calculated**

Frequency **539.00 MHz**
Drawing # **TUA-O4-5390**





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TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUA-O4-5390**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0.960	90	1.000	135	0.960	180	1.000	225	0.960	270	1.000	315	0.960
1	0.995	46	0.956	91	0.995	136	0.956	181	0.995	226	0.956	271	0.995	316	0.956
2	0.990	47	0.950	92	0.990	137	0.950	182	0.990	227	0.950	272	0.990	317	0.950
3	0.985	48	0.940	93	0.985	138	0.940	183	0.985	228	0.940	273	0.985	318	0.940
4	0.980	49	0.928	94	0.980	139	0.928	184	0.980	229	0.928	274	0.980	319	0.928
5	0.976	50	0.914	95	0.976	140	0.914	185	0.976	230	0.914	275	0.976	320	0.914
6	0.966	51	0.900	96	0.966	141	0.900	186	0.966	231	0.900	276	0.966	321	0.900
7	0.958	52	0.884	97	0.958	142	0.884	187	0.958	232	0.884	277	0.958	322	0.884
8	0.950	53	0.867	98	0.950	143	0.867	188	0.950	233	0.867	278	0.950	323	0.867
9	0.943	54	0.850	99	0.943	144	0.850	189	0.943	234	0.850	279	0.943	324	0.850
10	0.937	55	0.832	100	0.937	145	0.832	190	0.937	235	0.832	280	0.937	325	0.832
11	0.920	56	0.816	101	0.920	146	0.816	191	0.920	236	0.816	281	0.920	326	0.816
12	0.904	57	0.801	102	0.904	147	0.801	192	0.904	237	0.801	282	0.904	327	0.801
13	0.888	58	0.787	103	0.888	148	0.787	193	0.888	238	0.787	283	0.888	328	0.787
14	0.873	59	0.775	104	0.873	149	0.775	194	0.873	239	0.775	284	0.873	329	0.775
15	0.860	60	0.765	105	0.860	150	0.765	195	0.860	240	0.765	285	0.860	330	0.765
16	0.844	61	0.756	106	0.844	151	0.756	196	0.844	241	0.756	286	0.844	331	0.756
17	0.830	62	0.750	107	0.830	152	0.750	197	0.830	242	0.750	287	0.830	332	0.750
18	0.817	63	0.747	108	0.817	153	0.747	198	0.817	243	0.747	288	0.817	333	0.747
19	0.807	64	0.746	109	0.807	154	0.746	199	0.807	244	0.746	289	0.807	334	0.746
20	0.799	65	0.749	110	0.799	155	0.749	200	0.799	245	0.749	290	0.799	335	0.749
21	0.789	66	0.754	111	0.789	156	0.754	201	0.789	246	0.754	291	0.789	336	0.754
22	0.782	67	0.761	112	0.782	157	0.761	202	0.782	247	0.761	292	0.782	337	0.761
23	0.777	68	0.770	113	0.777	158	0.770	203	0.777	248	0.770	293	0.777	338	0.770
24	0.774	69	0.783	114	0.774	159	0.783	204	0.774	249	0.783	294	0.774	339	0.783
25	0.774	70	0.798	115	0.774	160	0.798	205	0.774	250	0.798	295	0.774	340	0.798
26	0.777	71	0.811	116	0.777	161	0.811	206	0.777	251	0.811	296	0.777	341	0.811
27	0.782	72	0.826	117	0.782	162	0.826	207	0.782	252	0.826	297	0.782	342	0.826
28	0.789	73	0.842	118	0.789	163	0.842	208	0.789	253	0.842	298	0.789	343	0.842
29	0.798	74	0.861	119	0.798	164	0.861	209	0.798	254	0.861	299	0.798	344	0.861
30	0.809	75	0.881	120	0.809	165	0.881	210	0.809	255	0.881	300	0.809	345	0.881
31	0.822	76	0.893	121	0.822	166	0.893	211	0.822	256	0.893	301	0.822	346	0.893
32	0.835	77	0.907	122	0.835	167	0.907	212	0.835	257	0.907	302	0.835	347	0.907
33	0.850	78	0.921	123	0.850	168	0.921	213	0.850	258	0.921	303	0.850	348	0.921
34	0.864	79	0.935	124	0.864	169	0.935	214	0.864	259	0.935	304	0.864	349	0.935
35	0.879	80	0.950	125	0.879	170	0.950	215	0.879	260	0.950	305	0.879	350	0.950
36	0.895	81	0.957	126	0.895	171	0.957	216	0.895	261	0.957	306	0.895	351	0.957
37	0.909	82	0.965	127	0.909	172	0.965	217	0.909	262	0.965	307	0.909	352	0.965
38	0.922	83	0.973	128	0.922	173	0.973	218	0.922	263	0.973	308	0.922	353	0.973
39	0.934	84	0.981	129	0.934	174	0.981	219	0.934	264	0.981	309	0.934	354	0.981
40	0.943	85	0.989	130	0.943	175	0.989	220	0.943	265	0.989	310	0.943	355	0.989
41	0.952	86	0.991	131	0.952	176	0.991	221	0.952	266	0.991	311	0.952	356	0.991
42	0.958	87	0.993	132	0.958	177	0.993	222	0.958	267	0.993	312	0.958	357	0.993
43	0.962	88	0.995	133	0.962	178	0.995	223	0.962	268	0.995	313	0.962	358	0.995
44	0.962	89	0.998	134	0.962	179	0.998	224	0.962	269	0.998	314	0.962	359	0.998