

EXHIBIT NO 1

ENGINEERING EXHIBIT  
APPLICATION FOR MODIFICATION OF  
CONSTRUCTION PERMIT  
WEIGEL BROADCASTING CO.  
STATION WYGN-LP  
SOUTH BEND, INDIANA

February 25, 2002

CH 25      37.8 KW (MAX-DA)      587 M AMSL

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EXHIBIT NO. 1

ENGINEERING STATEMENT  
APPLICATION FOR MODIFICATION OF  
CONSTRUCTION PERMIT  
WEIGEL BROADCASTING CO.  
SOUTH BEND, INDIANA  
CH 25      37.8 KW (MAX-DA)      587 M AMSL

The engineering exhibit, of which this statement is part, was prepared on behalf of Weigel Broadcasting Company, assignee of LPTV station WYGN-LP South Bend, Indiana. By means of this application, Weigel seeks to relocate the WYGN-LP to a new tower. The application modifies construction permit, File No. BPTTL-20010116AIA.

The FCC classifies the application as one for a "minor change" as the proposed 74 dBu contour encompasses a substantial portion of the existing 74 dBu contour. In addition, the proposal complies with the U.S./Canadian Television Agreement as the predicted 19 dBu interfering contour as shown on Figure 4 does not reach Canadian territory. The Federal Aviation Administration has been notified of the proposed tower construction. Upon FAA approval, the tower will be registered with the Commission.

Data for the Dielectric antenna to be employed is shown in Figures 1 and 2. In addition to the electrical beam tilt employed, the antenna will be mechanically tilted 0.34 degree at 60 degrees true. The radiation toward the

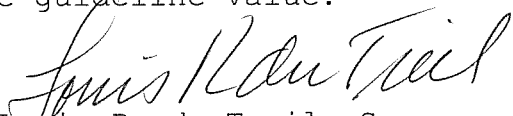
South Bend, Indiana  
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radio horizon for the proposed antenna is shown in Figure 3.

The proposed operation of WGYN-LP will protect all analog NTSC stations, including full service, Class A and LPTV. In addition, there will be no unacceptable interference to DTV stations.

The proposed facility is excluded from environmental processing under 47 CFR 1.1306. The facility will not have a significant environmental impact, as the radiofrequency radiation at the base of the tower is less than one percent of the ANSI guideline value for an uncontrolled environment.

Access to the tower will be restricted and appropriately marked with warning signs. When workers climb the tower, in concert with other users, the power of the station will be reduced or the station taken off the air, thereby preventing exposure to radiofrequency radiation in excess of the guideline value.

  
Louis R. du Treil, Sr.  
du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, FL 34237

February 25, 2002

Antenna Type **TLP-16B (C)**

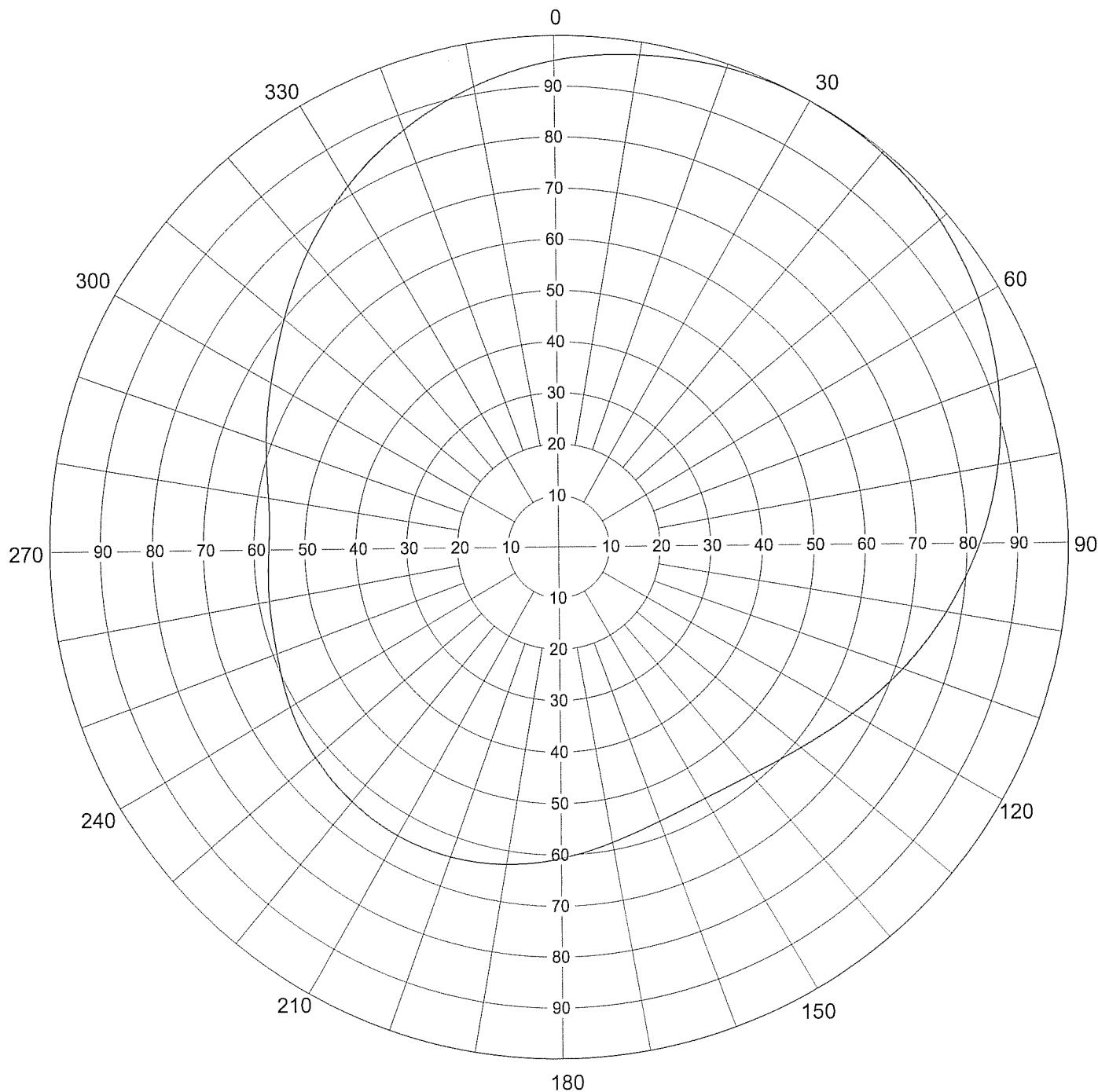
## AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**

Frequency  
Drawing #

**539 MHz**  
**TLP-B**



Remarks:

# Dielectric

Antenna Type **TLP-16B (C)**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TLP-B**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.951	45	0.990	90	0.826	135	0.597	180	0.607	225	0.637	270	0.570	315	0.728
1	0.954	46	0.989	91	0.820	136	0.594	181	0.609	226	0.636	271	0.570	316	0.734
2	0.956	47	0.987	92	0.815	137	0.591	182	0.611	227	0.634	272	0.570	317	0.740
3	0.959	48	0.985	93	0.810	138	0.589	183	0.614	228	0.633	273	0.570	318	0.747
4	0.962	49	0.983	94	0.804	139	0.586	184	0.616	229	0.632	274	0.570	319	0.753
5	0.964	50	0.981	95	0.799	140	0.583	185	0.618	230	0.631	275	0.571	320	0.759
6	0.966	51	0.979	96	0.793	141	0.581	186	0.619	231	0.629	276	0.572	321	0.765
7	0.968	52	0.977	97	0.787	142	0.579	187	0.621	232	0.628	277	0.573	322	0.771
8	0.971	53	0.975	98	0.782	143	0.577	188	0.623	233	0.626	278	0.575	323	0.777
9	0.973	54	0.972	99	0.776	144	0.575	189	0.625	234	0.625	279	0.577	324	0.783
10	0.975	55	0.970	100	0.771	145	0.574	190	0.627	235	0.623	280	0.579	325	0.789
11	0.977	56	0.967	101	0.765	146	0.573	191	0.628	236	0.621	281	0.581	326	0.795
12	0.979	57	0.964	102	0.759	147	0.571	192	0.630	237	0.619	282	0.584	327	0.801
13	0.980	58	0.961	103	0.754	148	0.570	193	0.632	238	0.618	283	0.587	328	0.806
14	0.982	59	0.958	104	0.748	149	0.569	194	0.633	239	0.616	284	0.590	329	0.812
15	0.984	60	0.955	105	0.742	150	0.569	195	0.634	240	0.613	285	0.593	330	0.817
16	0.986	61	0.952	106	0.737	151	0.568	196	0.636	241	0.611	286	0.596	331	0.823
17	0.988	62	0.949	107	0.731	152	0.568	197	0.637	242	0.609	287	0.600	332	0.828
18	0.990	63	0.946	108	0.726	153	0.568	198	0.638	243	0.607	288	0.603	333	0.834
19	0.991	64	0.942	109	0.720	154	0.568	199	0.639	244	0.605	289	0.607	334	0.839
20	0.993	65	0.939	110	0.714	155	0.568	200	0.640	245	0.602	290	0.610	335	0.844
21	0.994	66	0.935	111	0.709	156	0.568	201	0.641	246	0.600	291	0.614	336	0.849
22	0.995	67	0.932	112	0.703	157	0.569	202	0.642	247	0.598	292	0.618	337	0.854
23	0.996	68	0.928	113	0.698	158	0.569	203	0.643	248	0.596	293	0.622	338	0.859
24	0.997	69	0.924	114	0.692	159	0.570	204	0.643	249	0.594	294	0.625	339	0.864
25	0.998	70	0.920	115	0.687	160	0.571	205	0.644	250	0.592	295	0.629	340	0.869
26	0.999	71	0.916	116	0.682	161	0.572	206	0.644	251	0.590	296	0.633	341	0.874
27	0.999	72	0.912	117	0.676	162	0.573	207	0.645	252	0.589	297	0.637	342	0.879
28	0.999	73	0.908	118	0.671	163	0.574	208	0.645	253	0.587	298	0.641	343	0.883
29	1.000	74	0.904	119	0.666	164	0.575	209	0.645	254	0.586	299	0.646	344	0.888
30	1.000	75	0.899	120	0.661	165	0.577	210	0.645	255	0.584	300	0.650	345	0.893
31	1.000	76	0.895	121	0.656	166	0.578	211	0.645	256	0.583	301	0.654	346	0.897
32	0.999	77	0.890	122	0.651	167	0.580	212	0.645	257	0.582	302	0.659	347	0.902
33	0.999	78	0.886	123	0.646	168	0.582	213	0.645	258	0.581	303	0.663	348	0.906
34	0.999	79	0.881	124	0.641	169	0.584	214	0.645	259	0.580	304	0.668	349	0.910
35	0.998	80	0.876	125	0.637	170	0.586	215	0.644	260	0.579	305	0.673	350	0.914
36	0.998	81	0.872	126	0.632	171	0.588	216	0.644	261	0.578	306	0.678	351	0.919
37	0.998	82	0.867	127	0.628	172	0.590	217	0.643	262	0.577	307	0.683	352	0.923
38	0.997	83	0.862	128	0.624	173	0.592	218	0.643	263	0.576	308	0.688	353	0.927
39	0.996	84	0.857	129	0.619	174	0.594	219	0.642	264	0.575	309	0.694	354	0.930
40	0.996	85	0.852	130	0.615	175	0.596	220	0.641	265	0.574	310	0.699	355	0.934
41	0.995	86	0.847	131	0.612	176	0.598	221	0.640	266	0.573	311	0.705	356	0.938
42	0.994	87	0.842	132	0.608	177	0.600	222	0.640	267	0.572	312	0.711	357	0.941
43	0.993	88	0.836	133	0.604	178	0.603	223	0.639	268	0.572	313	0.716	358	0.944
44	0.992	89	0.831	134	0.601	179	0.605	224	0.638	269	0.571	314	0.722	359	0.948

Remarks:

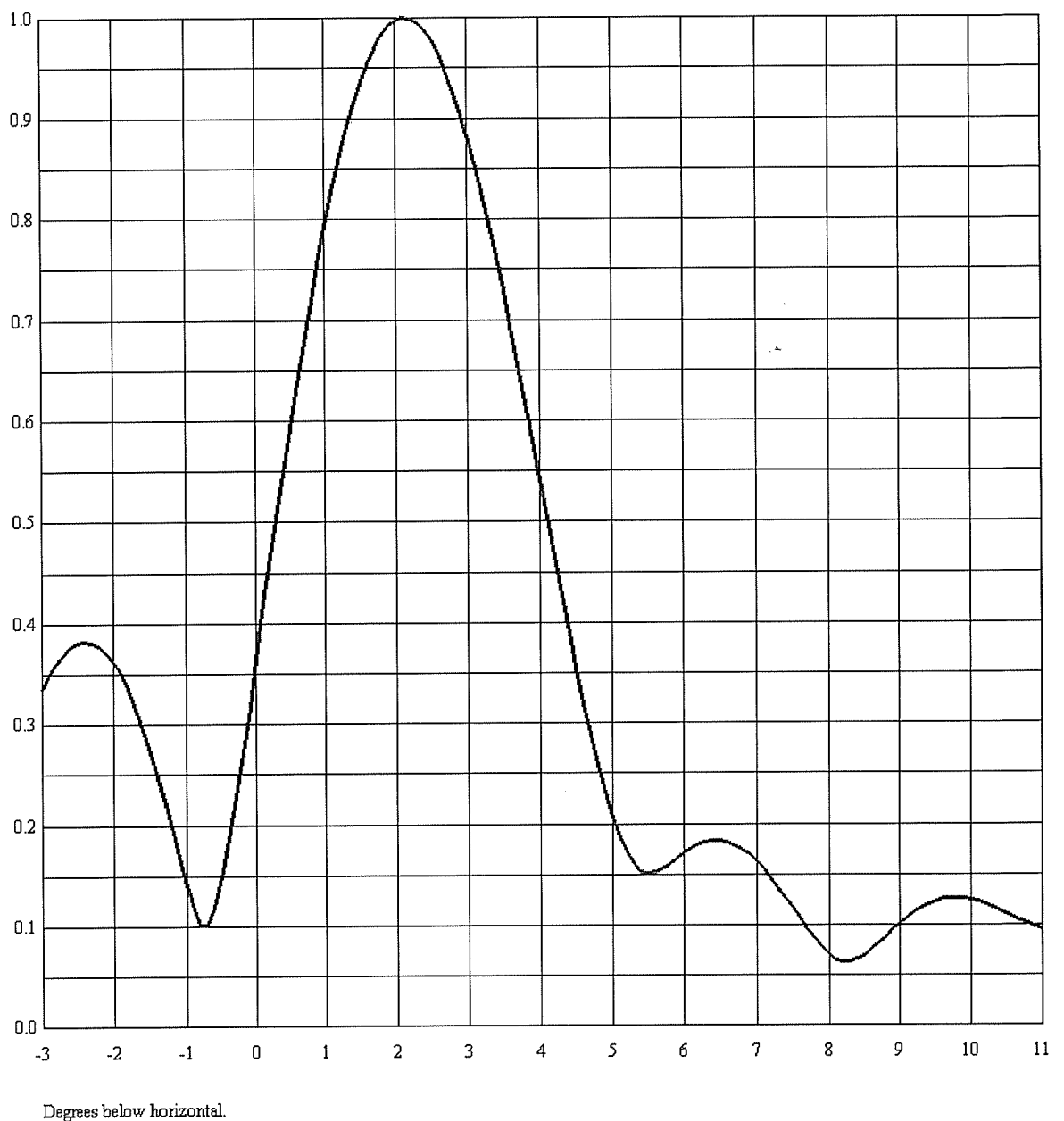


Antenna Type

TLP-16B/CP (C)

### Elevation Pattern

RMS Gain at Main Lobe	7.5	8.75 dB	Beam Tilt	2.15 degrees
RMS Gain at Horizontal	1.0	0.00 dB	Frequency	539 MHz
Calculated / Measured	Calculated		Drawing#	16L150215





Antenna Type

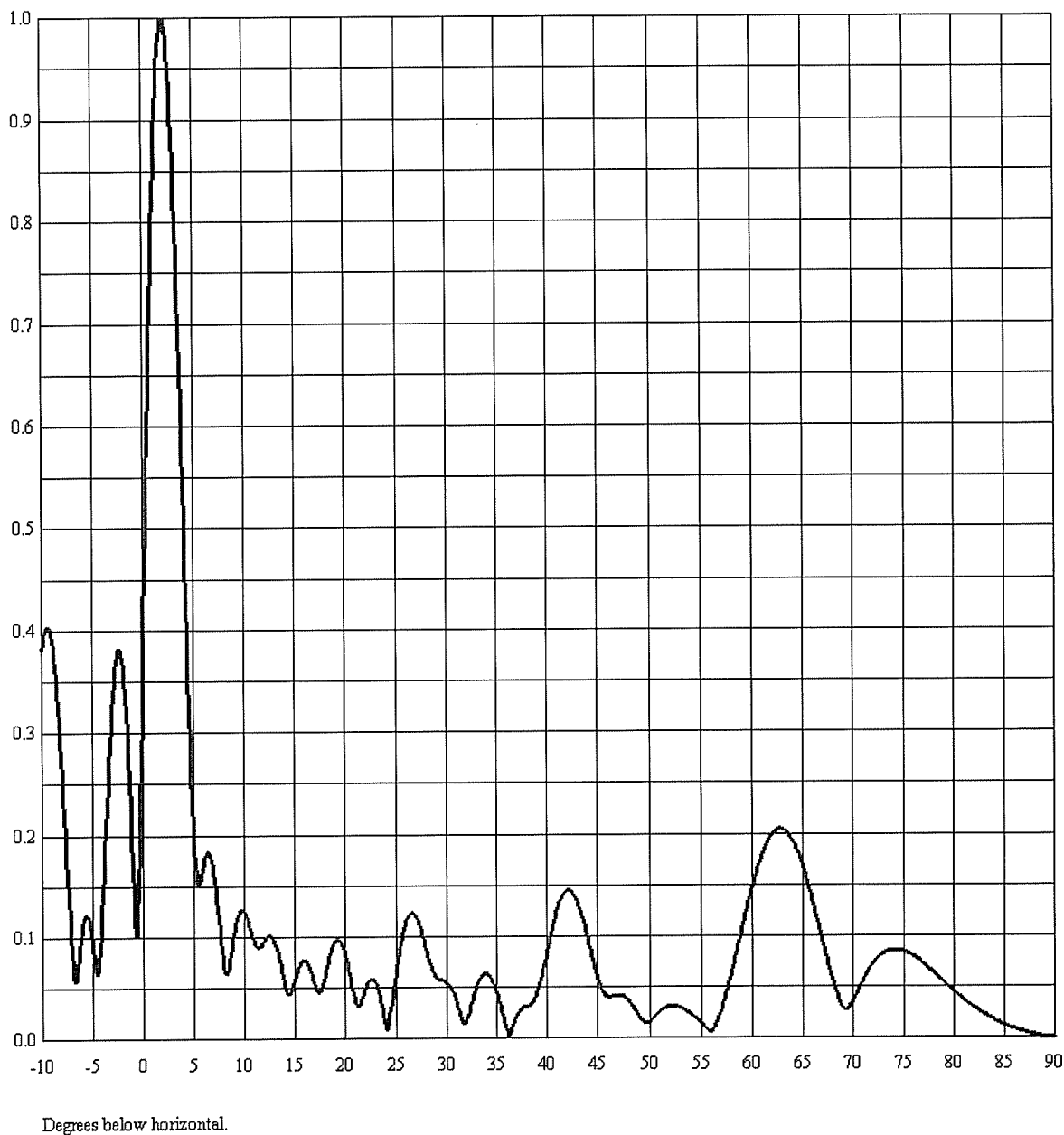
TLP-16B/CP (C)

### Elevation Pattern

RMS Gain at Main Lobe    **7.5**  
RMS Gain at Horizontal    **1.0**  
Calculated / Measured    **Calculated**

**8.75 dB**  
**0.00 dB**

Beam Tilt                    **2.15 degrees**  
Frequency                  **539 MHz**  
Drawing#                    **16L150215**





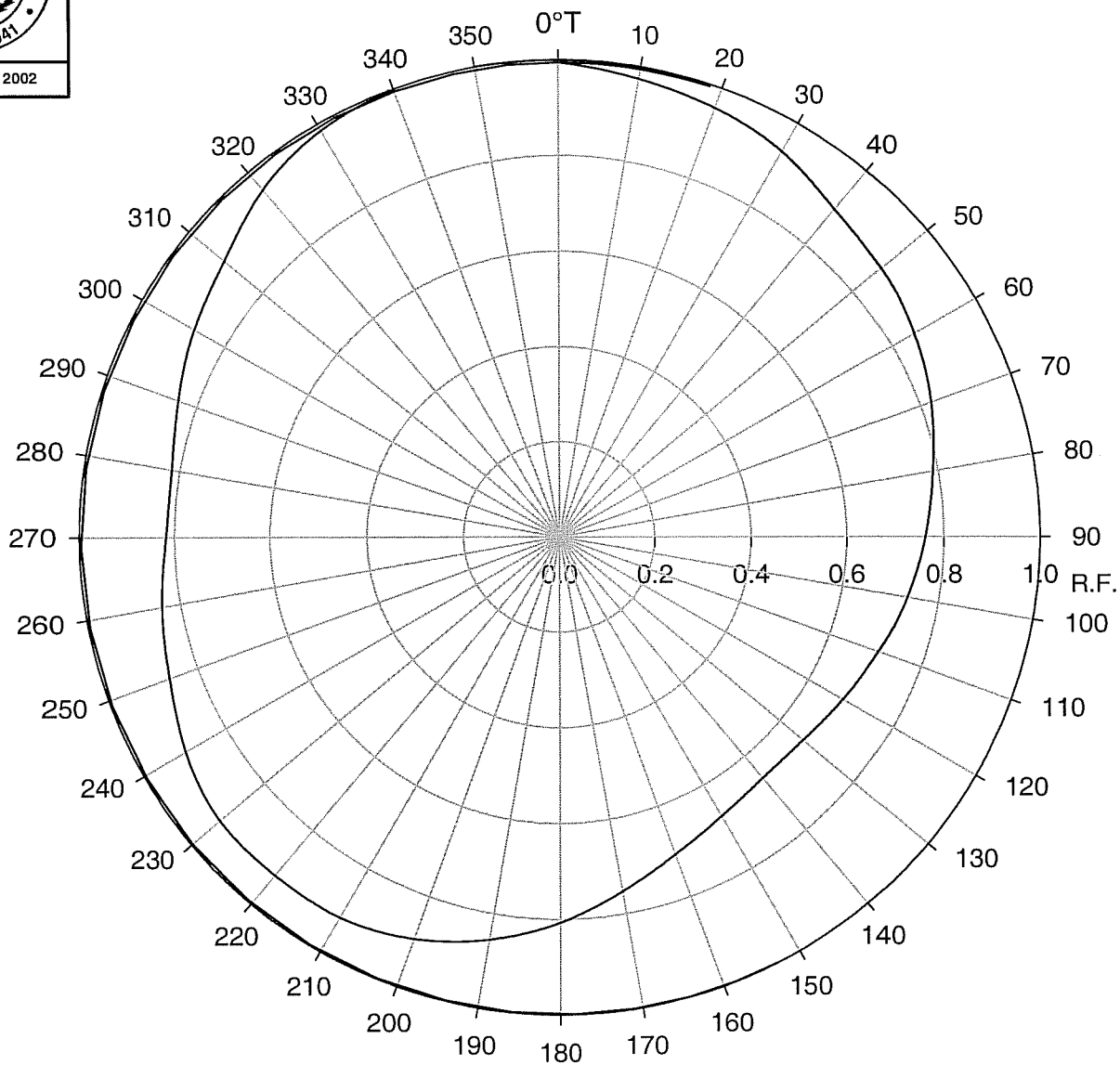
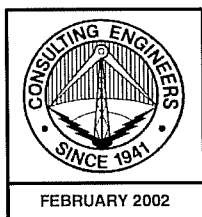


Antenna Type

TLP-16B/CP (C)

## TABULATION OF ELEVATION PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.380	2.4	0.988	10.6	0.108	30.5	0.048	51.0	0.026	71.5	0.066
-9.5	0.403	2.6	0.965	10.8	0.101	31.0	0.035	51.5	0.030	72.0	0.073
-9.0	0.389	2.8	0.929	11.0	0.095	31.5	0.019	52.0	0.032	72.5	0.079
-8.5	0.338	3.0	0.882	11.5	0.090	32.0	0.017	52.5	0.031	73.0	0.083
-8.0	0.256	3.2	0.826	12.0	0.097	32.5	0.034	53.0	0.030	73.5	0.085
-7.5	0.158	3.4	0.762	12.5	0.102	33.0	0.051	53.5	0.027	74.0	0.086
-7.0	0.071	3.6	0.692	13.0	0.095	33.5	0.061	54.0	0.023	74.5	0.086
-6.5	0.071	3.8	0.618	13.5	0.076	34.0	0.063	54.5	0.019	75.0	0.085
-6.0	0.112	4.0	0.541	14.0	0.052	34.5	0.057	55.0	0.015	75.5	0.083
-5.5	0.120	4.2	0.465	14.5	0.044	35.0	0.044	55.5	0.009	76.0	0.080
-5.0	0.089	4.4	0.390	15.0	0.058	35.5	0.027	56.0	0.006	76.5	0.076
-4.5	0.067	4.6	0.320	15.5	0.073	36.0	0.008	56.5	0.015	77.0	0.072
-4.0	0.143	4.8	0.258	16.0	0.077	36.5	0.009	57.0	0.029	77.5	0.068
-3.5	0.248	5.0	0.207	16.5	0.068	37.0	0.022	57.5	0.046	78.0	0.064
-3.0	0.336	5.2	0.171	17.0	0.052	37.5	0.029	58.0	0.065	78.5	0.059
-2.8	0.360	5.4	0.153	17.5	0.047	38.0	0.032	58.5	0.086	79.0	0.055
-2.6	0.376	5.6	0.152	18.0	0.062	38.5	0.035	59.0	0.107	79.5	0.050
-2.4	0.382	5.8	0.160	18.5	0.083	39.0	0.045	59.5	0.128	80.0	0.046
-2.2	0.378	6.0	0.171	19.0	0.096	39.5	0.062	60.0	0.148	80.5	0.041
-2.0	0.362	6.2	0.180	19.5	0.096	40.0	0.085	60.5	0.166	81.0	0.037
-1.8	0.336	6.4	0.184	20.0	0.082	40.5	0.107	61.0	0.181	81.5	0.033
-1.6	0.299	6.6	0.182	20.5	0.058	41.0	0.126	61.5	0.192	82.0	0.030
-1.4	0.252	6.8	0.175	21.0	0.036	41.5	0.139	62.0	0.200	82.5	0.026
-1.2	0.198	7.0	0.163	21.5	0.035	42.0	0.145	62.5	0.204	83.0	0.023
-1.0	0.141	7.2	0.147	22.0	0.049	42.5	0.143	63.0	0.204	83.5	0.020
-0.8	0.102	7.4	0.127	22.5	0.058	43.0	0.133	63.5	0.200	84.0	0.017
-0.6	0.119	7.6	0.107	23.0	0.055	43.5	0.117	64.0	0.192	84.5	0.015
-0.4	0.186	7.8	0.087	23.5	0.037	44.0	0.098	64.5	0.180	85.0	0.013
-0.2	0.271	8.0	0.071	24.0	0.012	44.5	0.077	65.0	0.166	85.5	0.010
0.0	0.363	8.2	0.063	24.5	0.028	45.0	0.058	65.5	0.149	86.0	0.009
0.2	0.456	8.4	0.066	25.0	0.063	45.5	0.045	66.0	0.131	86.5	0.007
0.4	0.548	8.6	0.076	25.5	0.093	46.0	0.040	66.5	0.111	87.0	0.005
0.6	0.636	8.8	0.089	26.0	0.114	46.5	0.041	67.0	0.091	87.5	0.004
0.8	0.718	9.0	0.102	26.5	0.123	47.0	0.042	67.5	0.072	88.0	0.003
1.0	0.793	9.2	0.113	27.0	0.119	47.5	0.041	68.0	0.053	88.5	0.002
1.2	0.857	9.4	0.121	27.5	0.106	48.0	0.036	68.5	0.038	89.0	0.001
1.4	0.911	9.6	0.126	28.0	0.087	48.5	0.029	69.0	0.028	89.5	0.000
1.6	0.953	9.8	0.127	28.5	0.070	49.0	0.021	69.5	0.029	90.0	0.000
1.8	0.982	10.0	0.125	29.0	0.060	49.5	0.016	70.0	0.037		
2.0	0.997	10.2	0.121	29.5	0.057	50.0	0.016	70.5	0.047		
2.2	0.999	10.4	0.115	30.0	0.055	50.5	0.021	71.0	0.057		



## ANTENNA RADIATION PATTERN TOWARD RADIO HORIZON

TV STATION WYGN-LP  
SOUTH BEND, INDIANA  
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida



## PREDICTED COVERAGE CONTOUR

TV STATION WYGN-LP  
SOUTH BEND, INDIANA  
CH 25 37.8 KW (MAX-DA) 587 M AMSL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida