PRELIMINARY SPECIFICATION FOR ERI TRASAR ® HORIZONTALLY POLARIZED COAXIAL SLOTTED ARRAY ANTENNA

Prepared For
Indianapolis Community Television Inc.
3901 HWY 121 South
Bedford, TX 76021
June 17, 2008

ANTENNA TYPE:
ATW32H3-HSWC-44H

SPECIFICATION NO:

PRELIMINARY SPECIFICATION FOR ERI TRASAR ® HORIZONTALLY POLARIZED COAXIAL SLOTTED ARRAY ANTENNA

ELECTRICAL CHARACTERISTICS:

CHANNEL:	*44*	
FREQUENCY RANGE:	*650.00 - 656.00 MHz*	
AZIMUTH PATTERN NUMBER:	*Hor Pol:*	*ATW-WC*
ELEVATION PATTERN NUMBER:	*Hor Pol:*	*ATW32H3H*
AZIMUTH DIRECTIVITY:	*Hor Pol:*	*1.40 (1.46 dB)*
ELEVATION DIRECTIVITY:	*Hor Pol:*	*32.00 (15.05 dBd)*
PEAK POWER GAIN:	*Hor Pol:*	*44.80 (16.51 dBd)*
GAIN AT HORIZONTAL:	*Hor Pol:*	*22.08 (13.44 dBd)*
ELECTRICAL BEAM TILT:	*-0.75 Degrees*	
INPUT POWER REQUIRED:	*22.304 kW Average Power, 8VSB Digital*	
MAXIMUM INPUT POWER:	*CONTACT ERI*	
INPUT TYPE:	*CONTACT ERI*	
ANTENNA VSWR (MAXIMUM):	*DTV: 1.10 Over 6 MHz of Channel*	

PRELIMINARY SPECIFICATION FOR ERI TRASAR ® HORIZONTALLY POLARIZED COAXIAL SLOTTED ARRAY ANTENNA

MECHANICAL CHARACTERISTICS:

*MOUNTING CONFIGURATION: *(Tower Interface supplied and installed by others.)*	*Side Mount*
HEIGHT OF ANTENNA:	*54.3 feet*
HEIGHT OF CENTER OF RADIATION:	*27.1 feet*
OVERALL HEIGHT (A):	*57.3 feet*
DEICING:	*Pressurized Radome Enclosure*
RADOME DIAMETER (C):	*CONTACT ERI*
RADOME COLOR:	*AVIATION ORANGE (standard)*
CLIMBING DEVICE:	*NOT APPLICABLE*
CALCULATED WEIGHT[1]:	*CONTACT ERI*
ANTENNA AREA:	*CONTACT ERI*

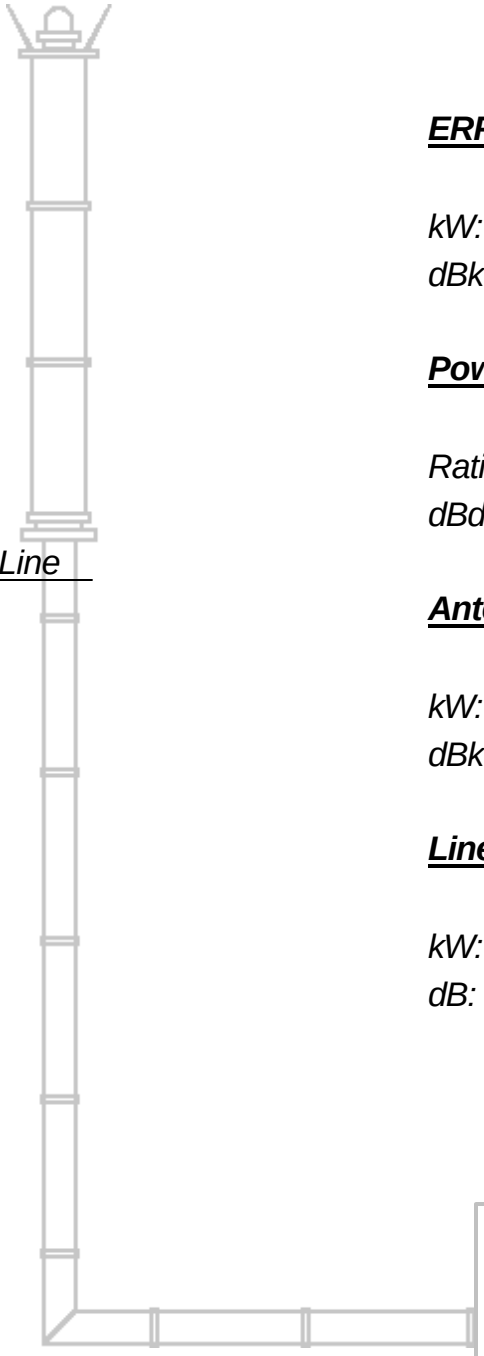
This antenna is designed to be supported by a structure that can resist the antenna base reactions and which provides a support that is rigid in the three transitional and three rotational degrees of freedom.

[1] Calculated weight is based on the PRELIMINARY design of the antenna. The actual weight of the antenna will be within ± 10% of the calculated weight. The actual weight will be given in the technical manual that accompanies the antenna. This figure is for the antenna only and does not include the antenna input section.

Note: Localized conditions may require higher wind speed specifications than TIA/EIA specifications. Check with local authorities to verify wind speed requirements.

Broadcast Antenna System
Power Analysis

Type: ATW32H3-HSWC-44H



ERP: ***Hor Pol:***

kW:	*999.20*
dBk:	*30.00*

Transmission Line:

Type:
MACX675B
6-1/8" 75 ohm MACXLine® Rigid Line
Vert. Length: 961 ft.
Horz. Length: 200 ft.
Attenuation:
0.116 dB/100 ft.
Efficiency: 73.25 %

Power Gain:

Ratio:	*44.80*
dBd:	*16.51*

Antenna Input:

kW:	*22.30*
dBk:	*13.48*

Line Loss:

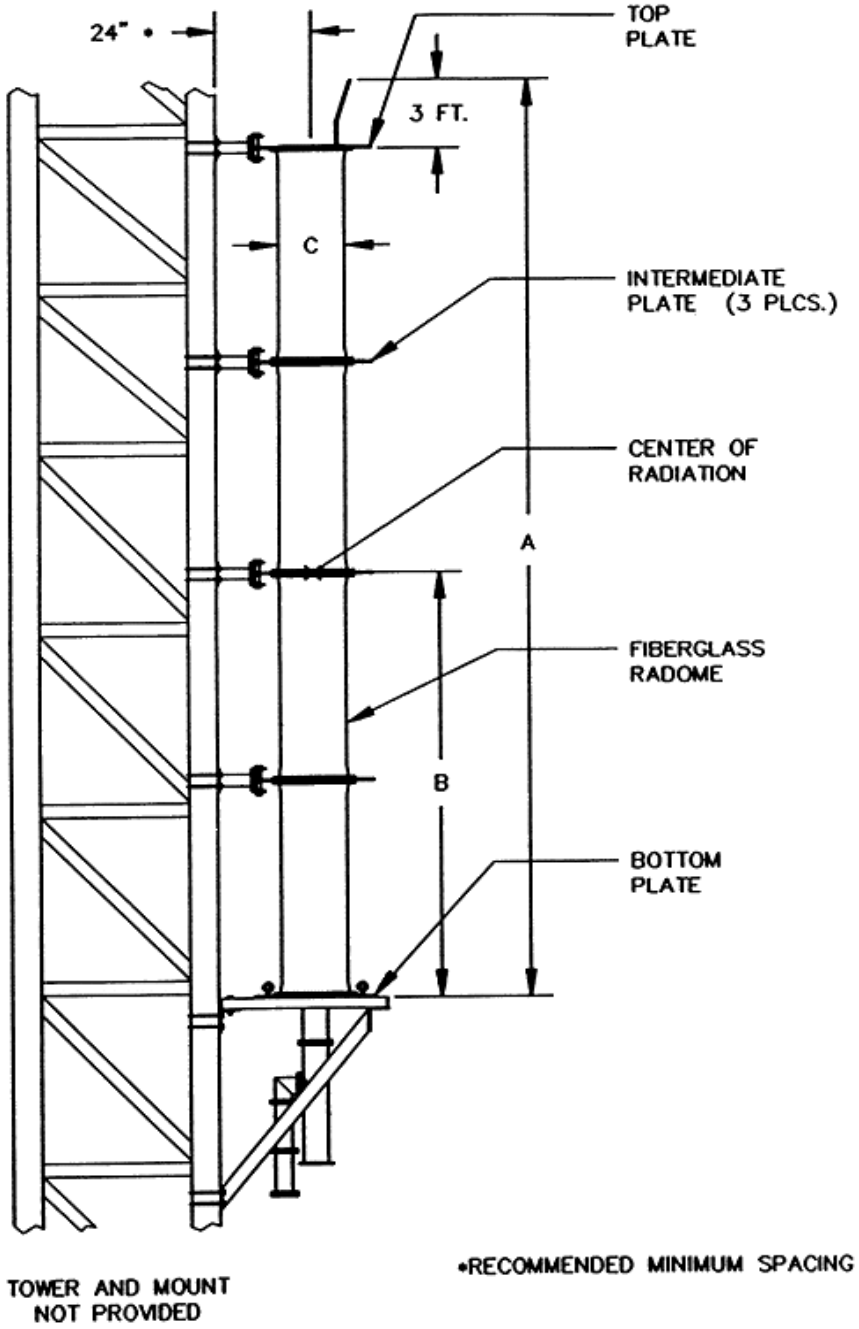
kW:	*8.15*
dB:	*1.35*

Transmitter Power

kW:	*30.45*
dBk:	*14.84*

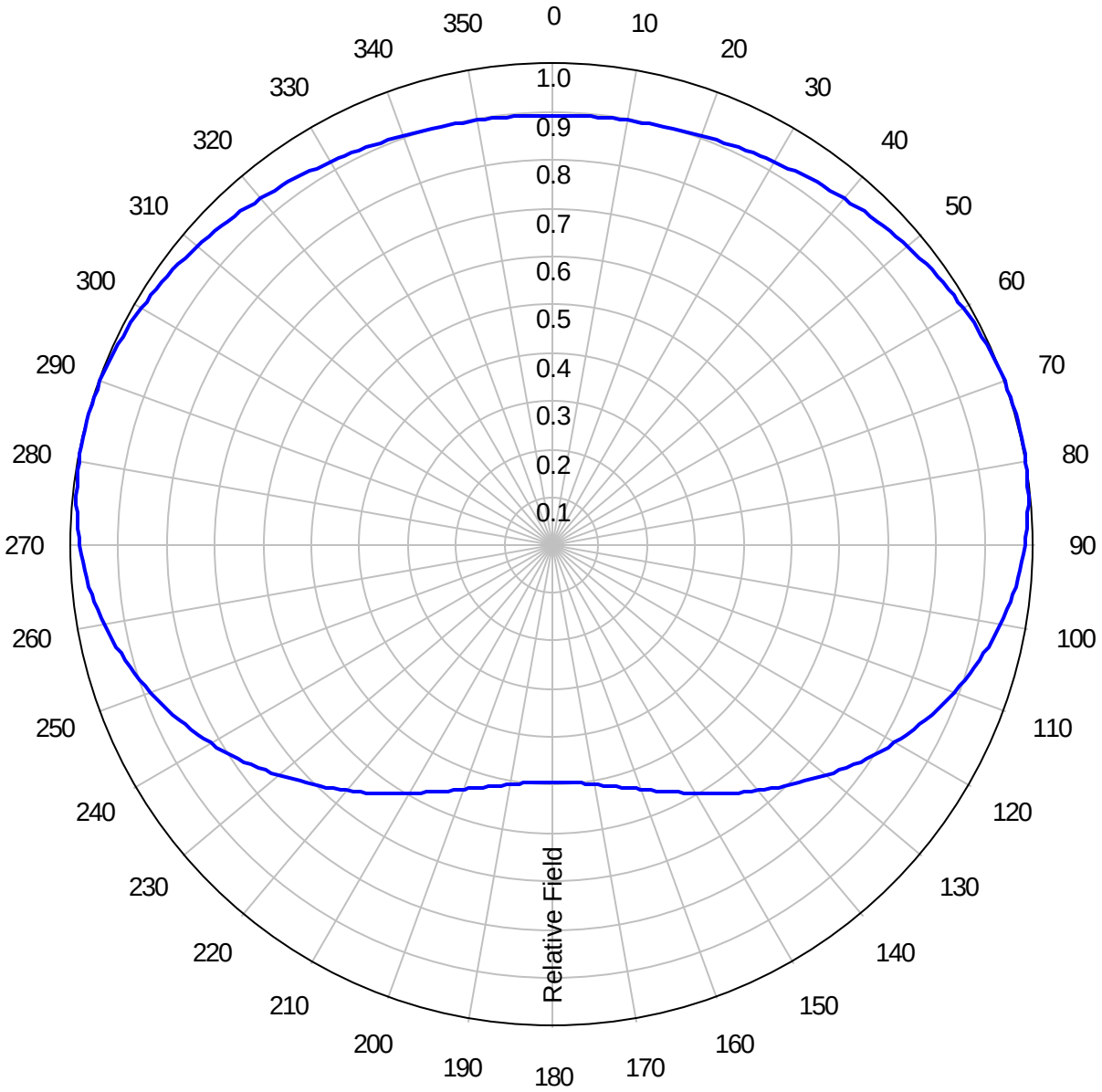
TYPICAL MOUNTING CONFIGURATION SHOWN. ACTUAL MOUNTING CONFIGURATION MAY VARY.

SIDE MOUNT ANTENNA DIMENSIONS AND TOWER ATTACHMENT DETAILS



AZIMUTH PATTERN

Type:	ATW-WC	
	Numeric	dBd
Directivity:	1.40	1.46
Peak(s) at:		
Polarization:	Horizontal	
Channel:	44	
Location:	Bedford, TX 76021	
Note:		



Electronics Research, Inc.
7777 Gardner Road
Chandler, Indiana U.S.A 47610

6.17.08

AZIMUTH TABULATED DATA

Type: ATW-WC

Polarization: Horizontal

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	0.893	-0.98	92	0.974	-0.23	184	0.492	-6.16	276	0.993	-0.06
2	0.893	-0.98	94	0.967	-0.29	186	0.495	-6.11	278	0.996	-0.03
4	0.894	-0.97	96	0.960	-0.35	188	0.498	-6.06	280	0.998	-0.02
6	0.894	-0.97	98	0.952	-0.43	190	0.502	-5.99	282	0.999	-0.01
8	0.895	-0.96	100	0.943	-0.51	192	0.508	-5.88	284	1.000	0.00
10	0.896	-0.95	102	0.933	-0.60	194	0.514	-5.78	286	1.000	0.00
12	0.897	-0.94	104	0.923	-0.70	196	0.521	-5.66	288	0.999	-0.01
14	0.899	-0.92	106	0.912	-0.80	198	0.529	-5.53	290	0.998	-0.02
16	0.901	-0.91	108	0.900	-0.92	200	0.537	-5.40	292	0.996	-0.03
18	0.903	-0.89	110	0.888	-1.03	202	0.547	-5.24	294	0.994	-0.05
20	0.905	-0.87	112	0.875	-1.16	204	0.557	-5.08	296	0.992	-0.07
22	0.907	-0.85	114	0.861	-1.30	206	0.568	-4.91	298	0.989	-0.10
24	0.910	-0.82	116	0.847	-1.44	208	0.580	-4.73	300	0.985	-0.13
26	0.913	-0.79	118	0.833	-1.59	210	0.593	-4.54	302	0.981	-0.17
28	0.916	-0.76	120	0.818	-1.74	212	0.606	-4.35	304	0.977	-0.20
30	0.920	-0.72	122	0.803	-1.91	214	0.619	-4.17	306	0.973	-0.24
32	0.924	-0.69	124	0.788	-2.07	216	0.633	-3.97	308	0.968	-0.28
34	0.928	-0.65	126	0.772	-2.25	218	0.648	-3.77	310	0.964	-0.32
36	0.932	-0.61	128	0.757	-2.42	220	0.663	-3.57	312	0.959	-0.36
38	0.936	-0.57	130	0.741	-2.60	222	0.678	-3.38	314	0.955	-0.40
40	0.941	-0.53	132	0.725	-2.79	224	0.694	-3.17	316	0.950	-0.45
42	0.945	-0.49	134	0.709	-2.99	226	0.709	-2.99	318	0.945	-0.49
44	0.950	-0.45	136	0.694	-3.17	228	0.725	-2.79	320	0.941	-0.53
46	0.955	-0.40	138	0.678	-3.38	230	0.741	-2.60	322	0.936	-0.57
48	0.959	-0.36	140	0.663	-3.57	232	0.757	-2.42	324	0.932	-0.61
50	0.964	-0.32	142	0.648	-3.77	234	0.772	-2.25	326	0.928	-0.65
52	0.968	-0.28	144	0.633	-3.97	236	0.788	-2.07	328	0.924	-0.69
54	0.973	-0.24	146	0.619	-4.17	238	0.803	-1.91	330	0.920	-0.72
56	0.977	-0.20	148	0.606	-4.35	240	0.818	-1.74	332	0.916	-0.76
58	0.981	-0.17	150	0.593	-4.54	242	0.833	-1.59	334	0.913	-0.79
60	0.985	-0.13	152	0.580	-4.73	244	0.847	-1.44	336	0.910	-0.82
62	0.989	-0.10	154	0.568	-4.91	246	0.861	-1.30	338	0.907	-0.85
64	0.992	-0.07	156	0.557	-5.08	248	0.875	-1.16	340	0.905	-0.87
66	0.994	-0.05	158	0.547	-5.24	250	0.888	-1.03	342	0.903	-0.89
68	0.996	-0.03	160	0.537	-5.40	252	0.900	-0.92	344	0.901	-0.91
70	0.998	-0.02	162	0.529	-5.53	254	0.912	-0.80	346	0.899	-0.92
72	0.999	-0.01	164	0.521	-5.66	256	0.923	-0.70	348	0.897	-0.94
74	1.000	0.00	166	0.514	-5.78	258	0.933	-0.60	350	0.896	-0.95
76	1.000	0.00	168	0.508	-5.88	260	0.943	-0.51	352	0.895	-0.96
78	0.999	-0.01	170	0.502	-5.99	262	0.952	-0.43	354	0.894	-0.97
80	0.998	-0.02	172	0.498	-6.06	264	0.960	-0.35	356	0.894	-0.97
82	0.996	-0.03	174	0.495	-6.11	266	0.967	-0.29	358	0.893	-0.98
84	0.993	-0.06	176	0.492	-6.16	268	0.974	-0.23	360	0.893	-0.98
86	0.989	-0.10	178	0.491	-6.18	270	0.980	-0.18			
88	0.985	-0.13	180	0.490	-6.20	272	0.985	-0.13			
90	0.980	-0.18	182	0.491	-6.18	274	0.989	-0.10			

AZIMUTH PATTERN
FCC FILING FORMAT

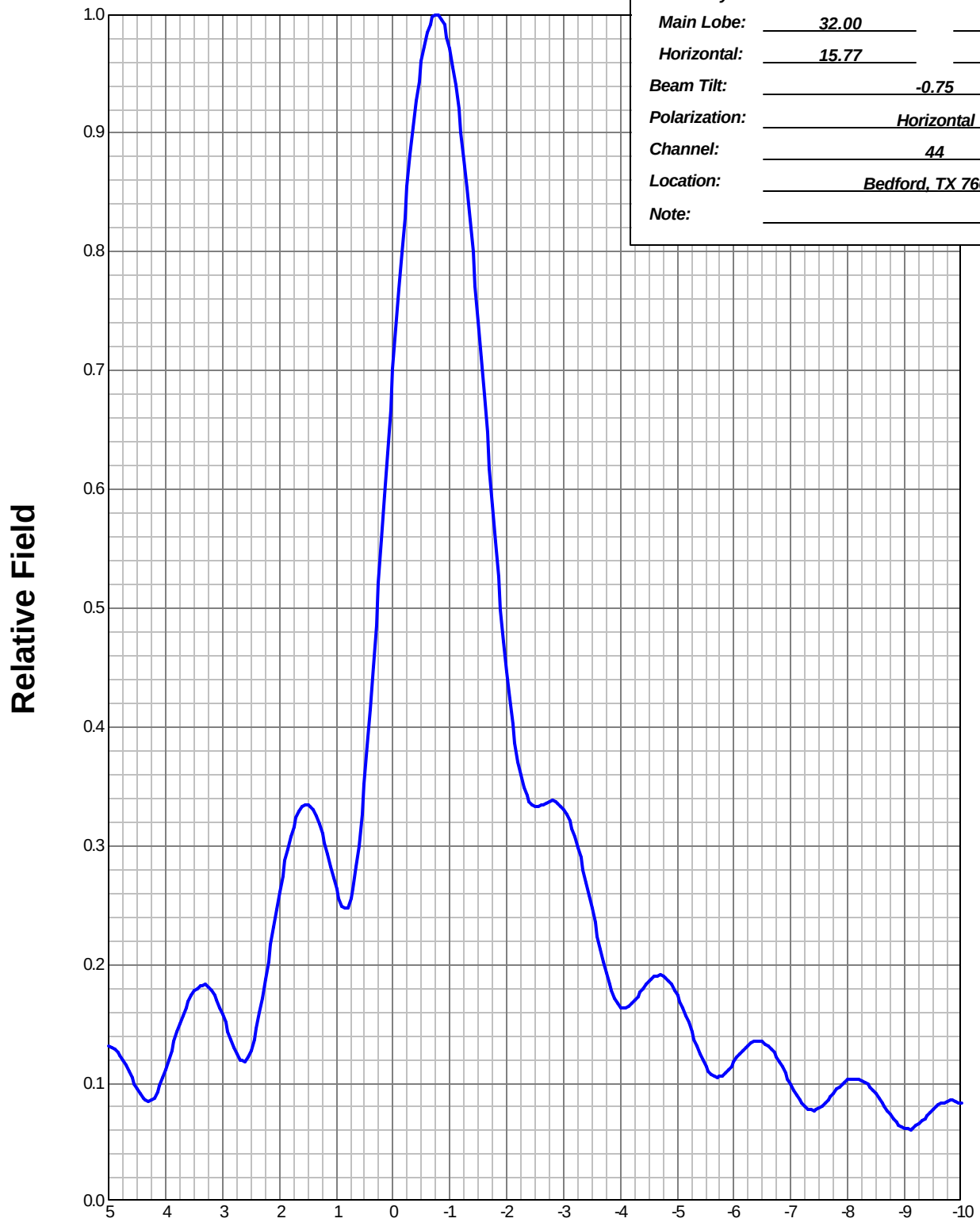
Type: ATW-WC

Polarization: Horizontal

Angle	Field	ERP (kW)	ERP (dBk)
0	0.893	796.812	29.014
10	0.896	802.174	29.043
20	0.905	818.370	29.129
30	0.920	845.723	29.272
40	0.941	884.773	29.468
50	0.964	928.553	29.678
60	0.985	969.449	29.865
70	0.998	995.208	29.979
80	0.998	995.208	29.979
90	0.980	959.632	29.821
100	0.943	888.538	29.487
110	0.888	787.914	28.965
120	0.818	668.589	28.252
130	0.741	548.642	27.393
140	0.663	439.218	26.427
150	0.593	351.368	25.458
160	0.537	288.138	24.596
170	0.502	251.803	24.011
180	0.490	239.908	23.800
190	0.502	251.803	24.011
200	0.537	288.138	24.596
210	0.593	351.368	25.458
220	0.663	439.218	26.427
230	0.741	548.642	27.393
240	0.818	668.589	28.252
250	0.888	787.914	28.965
260	0.943	888.538	29.487
270	0.980	959.632	29.821
280	0.998	995.208	29.979
290	0.998	995.208	29.979
300	0.985	969.449	29.865
310	0.964	928.553	29.678
320	0.941	884.773	29.468
330	0.920	845.723	29.272
340	0.905	818.370	29.129
350	0.896	802.174	29.043

ELEVATION PATTERN

Type:	ATW32H3H	
Directivity:	Numeric	dBd
Main Lobe:	32.00	15.05
Horizontal:	15.77	11.98
Beam Tilt:	-0.75	
Polarization:	Horizontal	
Channel:	44	
Location:	Bedford, TX 76021	
Note:		



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ELEVATION TABULATED DATA

Type: ATW32H3H

Polarization: Horizontal

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
5.00	0.132	-17.59	**-6.50**	0.135	-17.39	**-42.00**	0.029	-30.75	**-88.00**	0.006	-44.44
4.75	0.119	-18.49	**-6.75**	0.122	-18.27	**-43.00**	0.018	-34.89	**-89.00**	0.003	-50.46
4.50	0.095	-20.45	**-7.00**	0.099	-20.09	**-44.00**	0.030	-30.46	**-90.00**	0.000	-40.00
4.25	0.086	-21.26	**-7.25**	0.081	-21.88	**-45.00**	0.019	-34.42			
4.00	0.111	-19.09	**-7.50**	0.079	-22.05	**-46.00**	0.028	-31.06			
3.75	0.150	-16.48	**-7.75**	0.092	-20.72	**-47.00**	0.025	-32.04			
3.50	0.178	-14.99	**-8.00**	0.103	-19.74	**-48.00**	0.021	-33.56			
3.25	0.180	-14.87	**-8.25**	0.103	-19.79	**-49.00**	0.031	-30.17			
3.00	0.158	-16.03	**-8.50**	0.091	-20.82	**-50.00**	0.019	-34.42			
2.75	0.125	-18.06	**-8.75**	0.074	-22.67	**-51.00**	0.028	-31.06			
2.50	0.127	-17.92	**-9.00**	0.062	-24.15	**-52.00**	0.028	-31.06			
2.25	0.187	-14.56	**-9.25**	0.066	-23.61	**-53.00**	0.019	-34.42			
2.00	0.261	-11.67	**-9.50**	0.078	-22.16	**-54.00**	0.031	-30.17			
1.75	0.316	-10.01	**-9.75**	0.085	-21.41	**-55.00**	0.026	-31.70			
1.50	0.335	-9.50	**-10.00**	0.083	-21.62	**-56.00**	0.020	-33.98			
1.25	0.311	-10.14	**-11.00**	0.057	-24.88	**-57.00**	0.032	-29.90			
1.00	0.263	-11.60	**-12.00**	0.059	-24.58	**-58.00**	0.027	-31.37			
0.75	0.256	-11.85	**-13.00**	0.060	-24.44	**-59.00**	0.020	-33.98			
0.50	0.352	-9.07	**-14.00**	0.041	-27.74	**-60.00**	0.032	-29.90			
0.25	0.522	-5.65	**-15.00**	0.057	-24.88	**-61.00**	0.032	-29.90			
0.00	0.702	-3.07	**-16.00**	0.035	-29.12	**-62.00**	0.020	-33.98			
-0.25	0.855	-1.36	**-17.00**	0.048	-26.38	**-63.00**	0.028	-31.06			
-0.50	0.961	-0.35	**-18.00**	0.038	-28.40	**-64.00**	0.036	-28.87			
-0.75	0.999	-0.01	**-19.00**	0.036	-28.87	**-65.00**	0.030	-30.46			
-1.00	0.971	-0.26	**-20.00**	0.041	-27.74	**-66.00**	0.020	-33.98			
-1.25	0.877	-1.14	**-21.00**	0.028	-31.06	**-67.00**	0.030	-30.46			
-1.50	0.742	-2.59	**-22.00**	0.041	-27.74	**-68.00**	0.039	-28.18			
-1.75	0.587	-4.63	**-23.00**	0.025	-32.04	**-69.00**	0.035	-29.12			
-2.00	0.446	-7.01	**-24.00**	0.038	-28.40	**-70.00**	0.023	-32.77			
-2.25	0.360	-8.87	**-25.00**	0.025	-32.04	**-71.00**	0.022	-33.15			
-2.50	0.333	-9.55	**-26.00**	0.033	-29.63	**-72.00**	0.033	-29.63			
-2.75	0.337	-9.45	**-27.00**	0.028	-31.06	**-73.00**	0.040	-27.96			
-3.00	0.331	-9.60	**-28.00**	0.029	-30.75	**-74.00**	0.038	-28.40			
-3.25	0.299	-10.49	**-29.00**	0.029	-30.75	**-75.00**	0.029	-30.75			
-3.50	0.247	-12.15	**-30.00**	0.026	-31.70	**-76.00**	0.019	-34.42			
-3.75	0.193	-14.29	**-31.00**	0.029	-30.75	**-77.00**	0.018	-34.89			
-4.00	0.164	-15.70	**-32.00**	0.024	-32.40	**-78.00**	0.026	-31.70			
-4.25	0.170	-15.39	**-33.00**	0.029	-30.75	**-79.00**	0.034	-29.37			
-4.50	0.186	-14.61	**-34.00**	0.023	-32.77	**-80.00**	0.037	-28.64			
-4.75	0.190	-14.42	**-35.00**	0.028	-31.06	**-81.00**	0.037	-28.64			
-5.00	0.174	-15.19	**-36.00**	0.024	-32.40	**-82.00**	0.034	-29.37			
-5.25	0.144	-16.83	**-37.00**	0.027	-31.37	**-83.00**	0.030	-30.46			
-5.50	0.114	-18.86	**-38.00**	0.025	-32.04	**-84.00**	0.024	-32.40			
-5.75	0.105	-19.53	**-39.00**	0.024	-32.40	**-85.00**	0.019	-34.42			
-6.00	0.118	-18.56	**-40.00**	0.027	-31.37	**-86.00**	0.014	-37.08			
-6.25	0.132	-17.59	**-41.00**	0.022	-33.15	**-87.00**	0.010	-40.00			