



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
A CONSTRUCTION PERMIT FOR AN
AUXILIARY BROADCAST FACILITY FOR
KXVO - OMAHA, NEBRASKA
DTV - CH. 29 - 630 kW - 434 m HAAT**

Prepared for: Mitts Telecasting Company, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by Mitts Telecasting Company, LLC, licensee of KXVO, channel 29, licensed to Omaha, Nebraska, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a construction permit for an auxiliary digital broadcast facility to supplement its licensed facility, file number 0000189614.

DIRECTIONAL ANTENNA

The applicant intends to re-purpose an existing Dielectric model TFU-24WB/VP-R C160 elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 411.5 meters, and a height above average terrain of 434 meters. The antenna's horizontal azimuth radiation patterns for both its horizontally

STATEMENT OF JOHN E. HIDLE, P.E.
KXVO - Omaha, Nebraska
PAGE 2

and vertically polarized components and its vertical elevation pattern, showing its radiation characteristics above and below the horizontal plane are shown and tabulated in the antenna exhibit. This antenna will be shared as an auxiliary antenna with KPTM.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours for both the main licensed and proposed auxiliary facilities were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted Noise Limited (40.23 dBu) contours for both the licensed main facility and the proposed auxiliary facility and demonstrates that the auxiliary contour resides wholly within the licensed contour, as required by the Commission's Rules. The Principal Community (48 dBu) contour of the auxiliary facility also completely encompasses Omaha, Nebraska.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed KXVO site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

The licensee of KXVO is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KXVO antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

As shown in Appendix A the proposed KXVO channel 29 auxiliary facility, as proposed herein, will operate with a maximum ERP of 630 kW from an elliptically polarized directional transmitting antenna with a centerline height of 411.8 meters above ground level (AGL). Considering the elevation pattern provided elsewhere in this submission, the vertical plane relative field factor is less than 0.200 at all depression angles greater than 8 degrees. The proposed KXVO channel 29 auxiliary facility is predicted to produce a worst-case power density at two meters above ground level, at 1125 meters from the tower base, of $1.016 \mu\text{W}/\text{cm}^2$, which is 0.27% of the FCC guideline value of $375.33 \mu\text{W}/\text{cm}^2$ for an "uncontrolled" environment, and 0.054% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant. Further, the Applicant will continue to cooperate/coordinate with other site users and reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

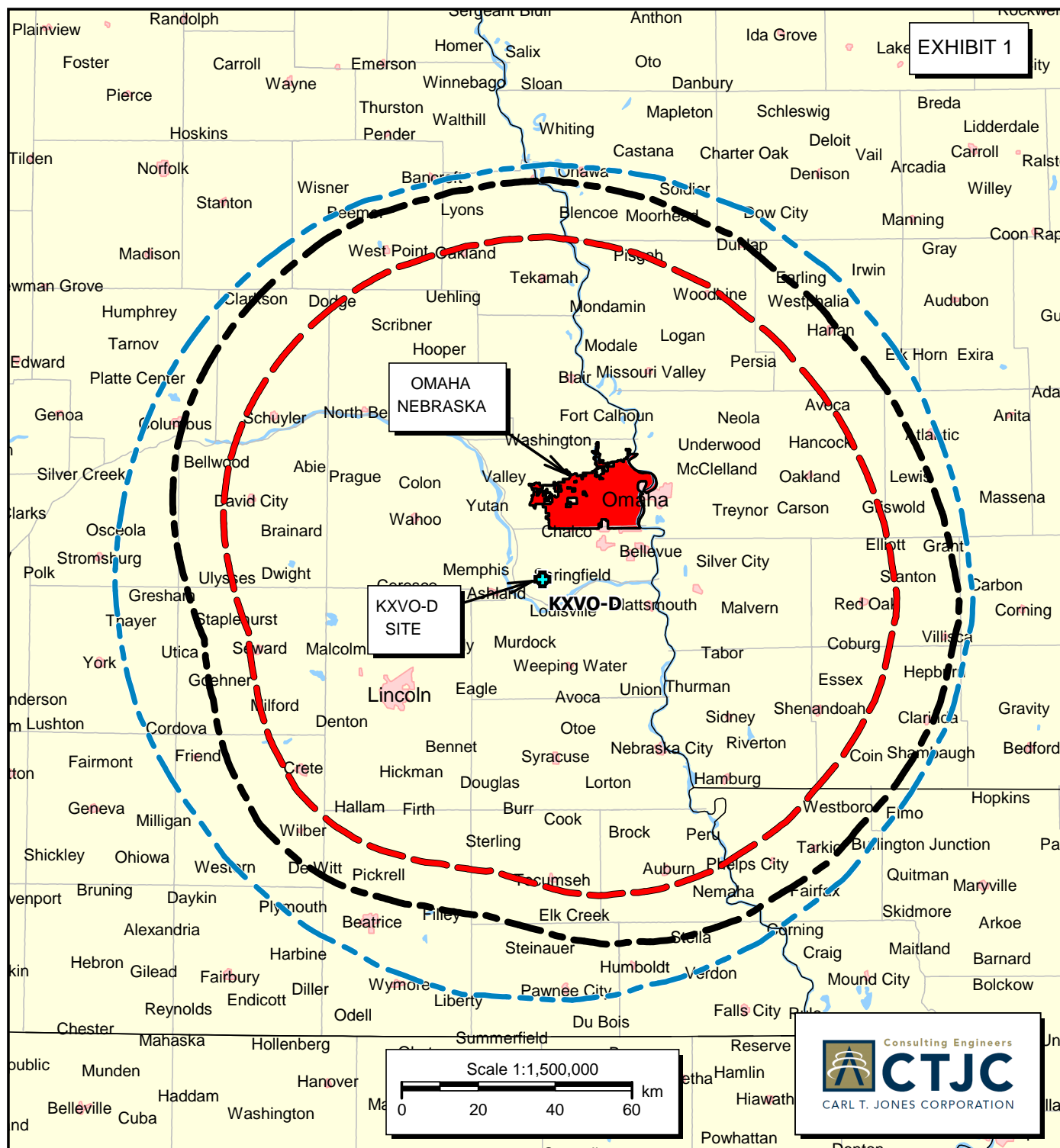
STATEMENT OF JOHN E. HIDLE, P.E.
KXVO - Omaha, Nebraska
PAGE 4

SUMMARY

It is submitted that the instant application for a construction permit to provide an auxiliary DTV facility for KXVO, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: April 29, 2022





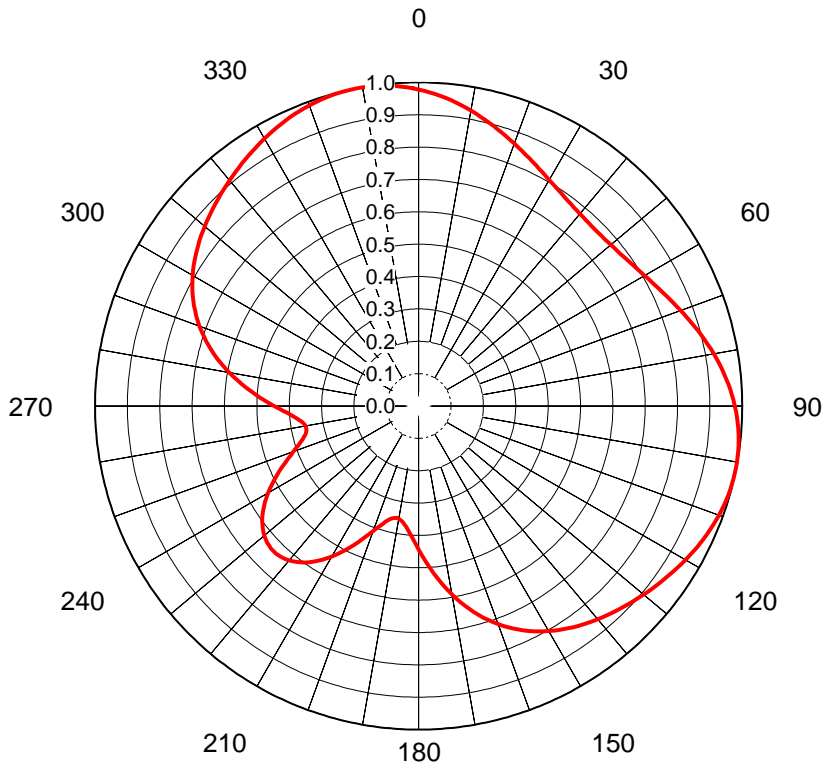
PREDICTED COVERAGE CONTOURS

KXVO-D AUXILIARY - OMAHA, NEBRASKA
DTV Channel 29 - 630 kW ERP - 434 M HAAT
APRIL, 2022

Predicted Noise Limited 40.23 dBu
 F(50,90) Coverage Contour

Licensed Main NL 40.23 dBu
 F(50,90) Coverage Contour

Predicted Principal Community 48 dBu
 F(50,90) Coverage Contour



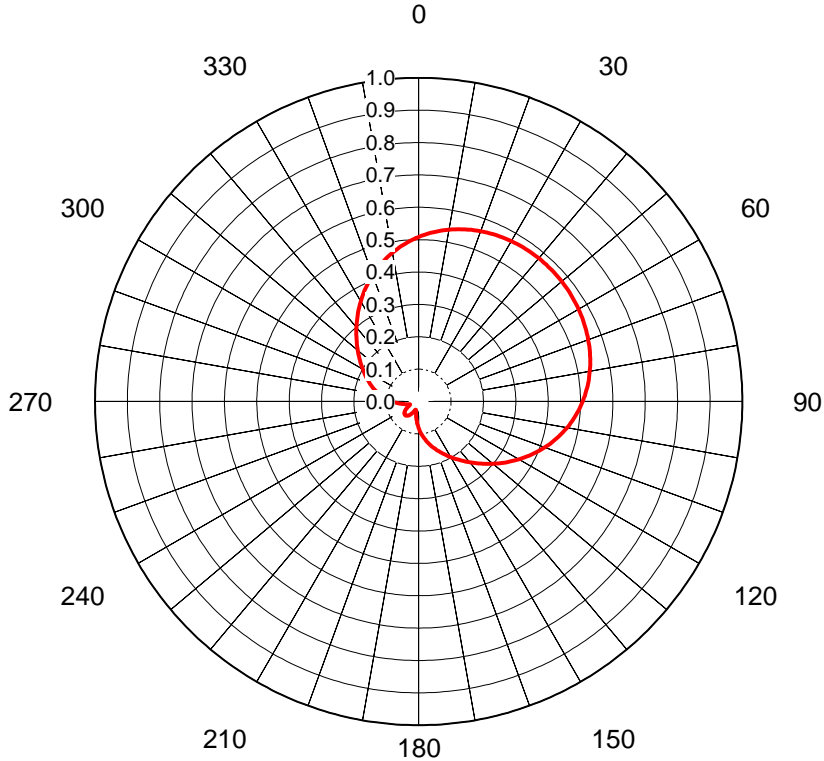
AZIMUTH PATTERN Horizontal Polarization

Proposal No. **KPTM/KXVO**
 Date **14-Dec-21**
 Call Letters **KXVO**
 Channel **29**
 Frequency **563 MHz**
 Antenna Type **TFU-24WB/VP-R C160**
 Gain **1.64 (2.16dB)**
 Calculated

Pattern Number **WB-C160-29 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.978	36	0.784	72	0.875	108	0.992	144	0.840	180	0.444	216	0.598	252	0.390	288	0.699	324	0.928
1	0.974	37	0.781	73	0.881	109	0.990	145	0.834	181	0.430	217	0.605	253	0.381	289	0.710	325	0.932
2	0.970	38	0.779	74	0.888	110	0.987	146	0.829	182	0.417	218	0.612	254	0.373	290	0.721	326	0.936
3	0.965	39	0.777	75	0.894	111	0.985	147	0.823	183	0.405	219	0.618	255	0.366	291	0.731	327	0.941
4	0.961	40	0.775	76	0.901	112	0.982	148	0.816	184	0.394	220	0.623	256	0.361	292	0.741	328	0.945
5	0.955	41	0.774	77	0.907	113	0.979	149	0.810	185	0.384	221	0.627	257	0.357	293	0.751	329	0.949
6	0.950	42	0.772	78	0.914	114	0.975	150	0.803	186	0.375	222	0.630	258	0.355	294	0.760	330	0.954
7	0.945	43	0.772	79	0.920	115	0.972	151	0.796	187	0.367	223	0.633	259	0.354	295	0.768	331	0.958
8	0.939	44	0.771	80	0.926	116	0.968	152	0.789	188	0.361	224	0.634	260	0.355	296	0.777	332	0.962
9	0.933	45	0.771	81	0.932	117	0.964	153	0.781	189	0.357	225	0.635	261	0.358	297	0.785	333	0.966
10	0.927	46	0.771	82	0.938	118	0.960	154	0.773	190	0.354	226	0.634	262	0.363	298	0.792	334	0.970
11	0.921	47	0.772	83	0.944	119	0.956	155	0.765	191	0.353	227	0.633	263	0.369	299	0.800	335	0.973
12	0.915	48	0.772	84	0.949	120	0.952	156	0.756	192	0.353	228	0.630	264	0.377	300	0.807	336	0.977
13	0.908	49	0.773	85	0.955	121	0.948	157	0.747	193	0.356	229	0.627	265	0.386	301	0.813	337	0.980
14	0.902	50	0.775	86	0.960	122	0.943	158	0.738	194	0.360	230	0.623	266	0.396	302	0.820	338	0.983
15	0.895	51	0.777	87	0.964	123	0.939	159	0.728	195	0.365	231	0.618	267	0.408	303	0.826	339	0.986
16	0.889	52	0.779	88	0.969	124	0.934	160	0.717	196	0.372	232	0.612	268	0.420	304	0.832	340	0.988
17	0.882	53	0.781	89	0.973	125	0.930	161	0.707	197	0.381	233	0.605	269	0.433	305	0.837	341	0.991
18	0.876	54	0.784	90	0.977	126	0.925	162	0.695	198	0.390	234	0.597	270	0.446	306	0.843	342	0.993
19	0.869	55	0.787	91	0.981	127	0.921	163	0.684	199	0.400	235	0.589	271	0.461	307	0.848	343	0.995
20	0.863	56	0.790	92	0.984	128	0.916	164	0.672	200	0.412	236	0.580	272	0.475	308	0.853	344	0.997
21	0.857	57	0.794	93	0.987	129	0.912	165	0.659	201	0.423	237	0.570	273	0.490	309	0.859	345	0.998
22	0.850	58	0.798	94	0.990	130	0.907	166	0.646	202	0.436	238	0.560	274	0.505	310	0.863	346	0.999
23	0.844	59	0.802	95	0.992	131	0.903	167	0.633	203	0.448	239	0.549	275	0.520	311	0.868	347	1.000
24	0.838	60	0.806	96	0.994	132	0.898	168	0.619	204	0.461	240	0.537	276	0.535	312	0.873	348	1.000
25	0.833	61	0.811	97	0.996	133	0.893	169	0.605	205	0.474	241	0.525	277	0.550	313	0.878	349	1.000
26	0.827	62	0.816	98	0.997	134	0.889	170	0.591	206	0.487	242	0.513	278	0.565	314	0.882	350	1.000
27	0.822	63	0.821	99	0.998	135	0.884	171	0.577	207	0.500	243	0.500	279	0.580	315	0.887	351	0.999
28	0.816	64	0.826	100	0.999	136	0.879	172	0.562	208	0.513	244	0.487	280	0.594	316	0.892	352	0.998
29	0.811	65	0.832	101	0.999	137	0.875	173	0.547	209	0.525	245	0.474	281	0.609	317	0.896	353	0.997
30	0.807	66	0.838	102	0.999	138	0.870	174	0.532	210	0.537	246	0.461	282	0.623	318	0.901	354	0.995
31	0.802	67	0.843	103	0.999	139	0.865	175	0.517	211	0.549	247	0.448	283	0.636	319	0.905	355	0.993
32	0.798	68	0.849	104	0.998	140	0.860	176	0.502	212	0.560	248	0.436	284	0.650	320	0.910	356	0.991
33	0.794	69	0.856	105	0.997	141	0.855	177	0.487	213	0.570	249	0.423	285	0.662	321	0.914	357	0.988
34	0.791	70	0.862	106	0.996	142	0.850	178	0.472	214	0.580	250	0.412	286	0.675	322	0.919	358	0.985
35	0.787	71	0.868	107	0.994	143	0.845	179	0.458	215	0.589	251	0.400	287	0.687	323	0.923	359	0.982

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided.
 No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.



AZIMUTH PATTERN Vertical Polarization

Proposal No. **KPTM/KXVO**
 Date **14-Dec-21**
 Call Letters **KXVO**
 Channel **29**
 Frequency **563 MHz**
 Antenna Type **TFU-24WB/VP-R C160**
 Gain **2.64 (4.21dB)**
 Calculated

Pattern Number **WB-C160-29 Vpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.508	36	0.576	72	0.554	108	0.425	144	0.225	180	0.082	216	0.053	252	0.028	288	0.152	324	0.322
1	0.512	37	0.577	73	0.552	109	0.420	145	0.221	181	0.078	217	0.054	253	0.029	289	0.156	325	0.328
2	0.515	38	0.577	74	0.550	110	0.415	146	0.216	182	0.074	218	0.056	254	0.030	290	0.160	326	0.334
3	0.519	39	0.577	75	0.548	111	0.409	147	0.212	183	0.070	219	0.057	255	0.032	291	0.164	327	0.340
4	0.522	40	0.578	76	0.546	112	0.403	148	0.207	184	0.067	220	0.057	256	0.034	292	0.167	328	0.346
5	0.525	41	0.578	77	0.544	113	0.398	149	0.203	185	0.063	221	0.058	257	0.037	293	0.171	329	0.352
6	0.528	42	0.578	78	0.542	114	0.392	150	0.198	186	0.059	222	0.059	258	0.039	294	0.175	330	0.358
7	0.531	43	0.578	79	0.539	115	0.386	151	0.194	187	0.055	223	0.059	259	0.042	295	0.179	331	0.364
8	0.534	44	0.578	80	0.537	116	0.381	152	0.190	188	0.052	224	0.059	260	0.046	296	0.183	332	0.369
9	0.537	45	0.578	81	0.534	117	0.375	153	0.186	189	0.048	225	0.059	261	0.049	297	0.187	333	0.375
10	0.539	46	0.578	82	0.532	118	0.369	154	0.182	190	0.045	226	0.059	262	0.052	298	0.191	334	0.381
11	0.542	47	0.578	83	0.529	119	0.363	155	0.178	191	0.042	227	0.059	263	0.056	299	0.195	335	0.387
12	0.544	48	0.578	84	0.526	120	0.357	156	0.174	192	0.039	228	0.059	264	0.060	300	0.200	336	0.393
13	0.546	49	0.577	85	0.523	121	0.351	157	0.170	193	0.036	229	0.058	265	0.063	301	0.204	337	0.398
14	0.549	50	0.577	86	0.520	122	0.345	158	0.166	194	0.033	230	0.058	266	0.067	302	0.208	338	0.404
15	0.551	51	0.577	87	0.517	123	0.340	159	0.162	195	0.031	231	0.057	267	0.071	303	0.213	339	0.410
16	0.553	52	0.576	88	0.513	124	0.334	160	0.158	196	0.029	232	0.056	268	0.075	304	0.217	340	0.415
17	0.555	53	0.576	89	0.510	125	0.328	161	0.154	197	0.028	233	0.055	269	0.079	305	0.222	341	0.421
18	0.556	54	0.575	90	0.507	126	0.322	162	0.150	198	0.027	234	0.053	270	0.083	306	0.226	342	0.426
19	0.558	55	0.574	91	0.503	127	0.316	163	0.147	199	0.027	235	0.052	271	0.087	307	0.231	343	0.432
20	0.560	56	0.574	92	0.499	128	0.310	164	0.143	200	0.027	236	0.051	272	0.090	308	0.236	344	0.437
21	0.561	57	0.573	93	0.495	129	0.305	165	0.139	201	0.028	237	0.049	273	0.094	309	0.241	345	0.442
22	0.563	58	0.572	94	0.491	130	0.299	166	0.135	202	0.029	238	0.047	274	0.098	310	0.246	346	0.447
23	0.564	59	0.571	95	0.487	131	0.293	167	0.132	203	0.030	239	0.045	275	0.102	311	0.251	347	0.452
24	0.566	60	0.570	96	0.483	132	0.288	168	0.128	204	0.031	240	0.044	276	0.106	312	0.256	348	0.457
25	0.567	61	0.569	97	0.479	133	0.282	169	0.124	205	0.033	241	0.042	277	0.110	313	0.261	349	0.462
26	0.568	62	0.568	98	0.475	134	0.277	170	0.120	206	0.035	242	0.040	278	0.114	314	0.266	350	0.467
27	0.569	63	0.567	99	0.470	135	0.271	171	0.116	207	0.037	243	0.038	279	0.118	315	0.272	351	0.471
28	0.570	64	0.566	100	0.465	136	0.266	172	0.113	208	0.039	244	0.036	280	0.122	316	0.277	352	0.476
29	0.571	65	0.565	101	0.461	137	0.261	173	0.109	209	0.041	245	0.034	281	0.125	317	0.282	353	0.480
30	0.572	66	0.564	102	0.456	138	0.255	174	0.105	210	0.043	246	0.032	282	0.129	318	0.288	354	0.485
31	0.573	67	0.562	103	0.451	139	0.250	175	0.101	211	0.045	247	0.031	283	0.133	319	0.294	355	0.489
32	0.574	68	0.561	104	0.446	140	0.245	176	0.097	212	0.047	248	0.030	284	0.137	320	0.299	356	0.493
33	0.575	69	0.559	105	0.441	141	0.240	177	0.094	213	0.048	249	0.029	285	0.141	321	0.305	357	0.497
34	0.575	70	0.558	106	0.436	142	0.235	178	0.090	214	0.050	250	0.028	286	0.144	322	0.311	358	0.501
35	0.576	71	0.556	107	0.431	143	0.230	179	0.086	215	0.052	251	0.028	287	0.148	323	0.316	359	0.505

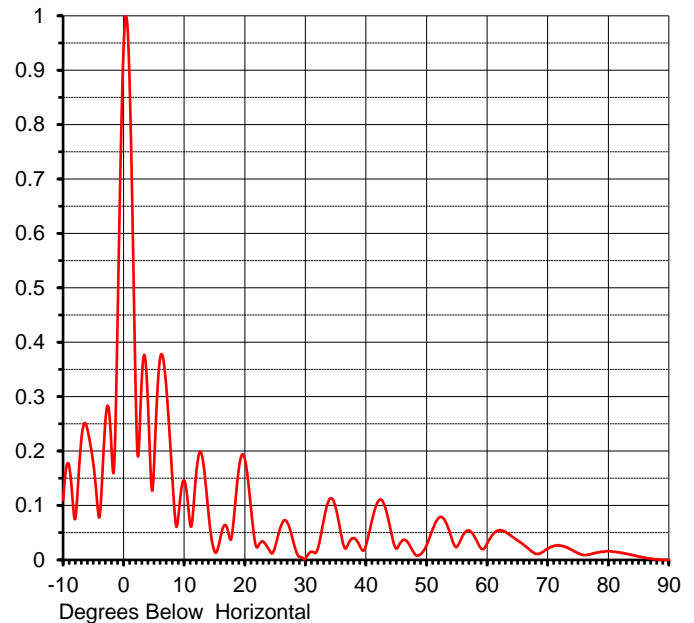
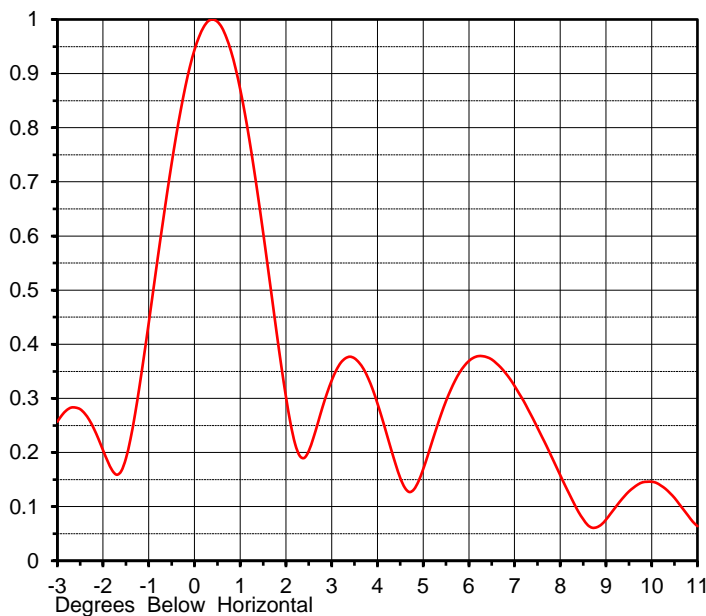
This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided.
 No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

ELEVATION PATTERN

Proposal No. **KPTM/KXVO**
 Date **14-Dec-21**
 Call Letters **KXVO**
 Channel **29**
 Frequency **563 MHz**
 Antenna Type **TFU-24WB/VP-R C160**

RMS Directivity at Main Lobe **21.6 (13.35 dB)**
 RMS Directivity at Horizontal **19.3 (12.86 dB)**
Calculated

Beam Tilt **0.50 deg**
 Pattern Number **24W216050-29**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.110	10.0	0.146	30.0	0.002	50.0	0.027	70.0	0.021
-9.0	0.173	11.0	0.064	31.0	0.015	51.0	0.056	71.0	0.026
-8.0	0.075	12.0	0.161	32.0	0.019	52.0	0.077	72.0	0.026
-7.0	0.219	13.0	0.188	33.0	0.071	53.0	0.073	73.0	0.024
-6.0	0.241	14.0	0.087	34.0	0.112	54.0	0.045	74.0	0.018
-5.0	0.177	15.0	0.016	35.0	0.096	55.0	0.024	75.0	0.012
-4.0	0.078	16.0	0.042	36.0	0.042	56.0	0.045	76.0	0.009
-3.0	0.257	17.0	0.061	37.0	0.027	57.0	0.054	77.0	0.010
-2.0	0.204	18.0	0.056	38.0	0.040	58.0	0.041	78.0	0.013
-1.0	0.440	19.0	0.166	39.0	0.025	59.0	0.021	79.0	0.015
0.0	0.944	20.0	0.186	40.0	0.027	60.0	0.030	80.0	0.016
1.0	0.871	21.0	0.097	41.0	0.073	61.0	0.047	81.0	0.015
2.0	0.303	22.0	0.023	42.0	0.107	62.0	0.054	82.0	0.013
3.0	0.333	23.0	0.034	43.0	0.102	63.0	0.052	83.0	0.011
4.0	0.291	24.0	0.019	44.0	0.059	64.0	0.044	84.0	0.009
5.0	0.169	25.0	0.024	45.0	0.021	65.0	0.036	85.0	0.006
6.0	0.369	26.0	0.063	46.0	0.036	66.0	0.028	86.0	0.004
7.0	0.323	27.0	0.069	47.0	0.031	67.0	0.019	87.0	0.002
8.0	0.158	28.0	0.034	48.0	0.012	68.0	0.011	88.0	0.001
9.0	0.076	29.0	0.006	49.0	0.010	69.0	0.013	89.0	0.000
						90.0	0.000	90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided.
 No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

KXVO
Channel 29 - Omaha, Nebraska
ERP = 630000.00 WATTS

APPENDIX A

Maximum ERP 630 kW

Polarization ----- 2 Circular
 Antenna Height Above Ground -- 411.5 meters 1350.1 feet
 FCC Uncontrolled RFR Limit ---- 375.33 $\mu\text{W}/\text{cm}^2$

Maximum Computed Power Density 1.016 $\mu\text{W}/\text{cm}^2$
 0.27% of limit

Angle Below Horizontal (degrees)	<Point X> Horiz Distance from tower to 2 m AGL (meters)	Slant Distance from antenna to Point X (meters)	Vertical Pattern (REL. FIELD)	KXVO ERP (kW)	KXVO Calculated Power Density $\mu\text{W}/\text{cm}^2$	Percent Limit	Limit Exceeded?
0			0.944	561.4157			
5	4680.6	4698.5	0.169	17.9934	0.054	0.01%	No
10	2322.4	2358.2	0.146	13.4291	0.161	0.04%	No
15	1528.3	1582.2	0.016	0.1613	0.004	0.00%	No
20	1125.1	1197.3	0.186	21.7955	1.016	0.27%	No
25	878.2	969.0	0.024	0.3629	0.026	0.01%	No
30	709.3	819.0	0.002	0.0025	0.000	0.00%	No
35	584.8	713.9	0.096	5.8061	0.761	0.20%	No
40	488.0	637.1	0.027	0.4593	0.076	0.02%	No
45	409.5	579.1	0.021	0.2778	0.055	0.01%	No
50	343.6	534.6	0.027	0.4593	0.107	0.03%	No
55	286.7	499.9	0.024	0.3629	0.097	0.03%	No
60	236.4	472.8	0.030	0.5670	0.169	0.05%	No
65	191.0	451.8	0.036	0.8165	0.267	0.07%	No
70	149.0	435.8	0.021	0.2778	0.098	0.03%	No
75	109.7	423.9	0.012	0.0907	0.034	0.01%	No
80	72.2	415.8	0.016	0.1613	0.062	0.02%	No
85	35.8	411.1	0.006	0.0227	0.009	0.00%	No
90	0.0	409.5	0.000	0.0000	0.000	0.00%	No

