

Technical Summary
Request for Special Temporary Authority
Engineering Exhibit

KPXG-TV – Salem, OR

Facility ID: 5801

Licensee "ION TELEVISION LICENSE, LLC" is currently authorized to operate on DTV channel 22. The Antenna Structure Registration Number is 1204059 with a Latitude of 45° 31' 20.5" N+ and a Longitude of 122° 44' 49.5" W-.

The purpose of this application is to request special temporary authority to operate from Antenna Structure Registration Number 1204059 with a Latitude of 45° 31' 20.5" N+ and a Longitude of 122° 44' 49.5" W-. The HAAT is 466.31 m (AGL 199.65 m) with an AMSL of 541.95 m. An ERP of 800 kW will be utilized.

Antenna System

A directional side-mounted antenna will be utilized. It will be affixed to an existing guyed tower structure and will not increase the overall height of the structure. Elevation and Azimuth patterns are attached.

RF Hazard (Environmental)

Human Exposure measurements were calculated using the OET- 65 equation and the outcome is compliant with FCC 1.1310. Furthermore, the calculation is under 5% of the limit categorically excluding the application from further environmental evaluations.

Calculated Maximum	Calculated Exposure	Percent of Limit
mW/cm ²	mW/cm ²	
0.347	0.011295	3.25%

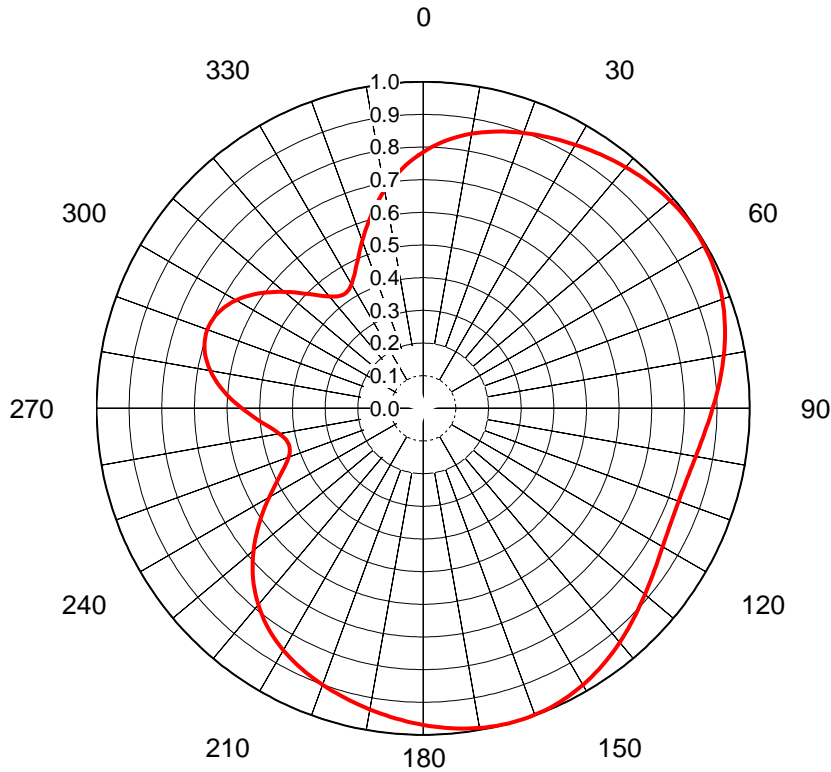
The station will coordinate with other(s) to comply with access, antenna and/or tower issues related to RF Exposure.

73.622 Maximum ERP and Antenna Height

This application does exceed the maximum ERP for the specified HAAT. However, this application is compliant with the "Largest Station in the Market" provision. KGW-TV has a service area of 47,398.0 sq. km. and KPXG (STA) would be compliant with a service area of 36,334.4 sq. km.

AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-71679-2**
 Date **22-Apr-21**
 Call Letters **KPXG**
 Channel **22**
 Frequency **521 MHz**
 Antenna Type **TFU-24WB/VP-R C160**
 Gain **1.53 (1.85dB)**
 Calculated



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.785	36	0.952	72	0.969	108	0.833	144	0.955	180	0.969	216	0.818	252	0.429	288	0.702
1	0.793	37	0.955	73	0.965	109	0.833	145	0.959	181	0.966	217	0.810	253	0.427	289	0.703
2	0.801	38	0.958	74	0.961	110	0.833	146	0.963	182	0.963	218	0.802	254	0.425	290	0.703
3	0.809	39	0.961	75	0.957	111	0.833	147	0.967	183	0.960	219	0.794	255	0.426	291	0.703
4	0.817	40	0.964	76	0.953	112	0.833	148	0.971	184	0.957	220	0.785	256	0.427	292	0.702
5	0.824	41	0.967	77	0.949	113	0.834	149	0.975	185	0.953	221	0.776	257	0.430	293	0.700
6	0.830	42	0.970	78	0.944	114	0.835	150	0.978	186	0.950	222	0.767	258	0.435	294	0.697
7	0.837	43	0.973	79	0.940	115	0.836	151	0.982	187	0.947	223	0.757	259	0.441	295	0.693
8	0.843	44	0.976	80	0.935	116	0.838	152	0.984	188	0.943	224	0.747	260	0.447	296	0.688
9	0.848	45	0.978	81	0.930	117	0.840	153	0.987	189	0.940	225	0.736	261	0.455	297	0.682
10	0.854	46	0.981	82	0.925	118	0.842	154	0.990	190	0.936	226	0.725	262	0.464	298	0.676
11	0.859	47	0.983	83	0.921	119	0.845	155	0.992	191	0.933	227	0.714	263	0.474	299	0.669
12	0.864	48	0.985	84	0.916	120	0.847	156	0.994	192	0.930	228	0.702	264	0.484	300	0.661
13	0.869	49	0.987	85	0.911	121	0.850	157	0.995	193	0.926	229	0.690	265	0.495	301	0.653
14	0.873	50	0.989	86	0.906	122	0.854	158	0.997	194	0.923	230	0.678	266	0.507	302	0.644
15	0.878	51	0.990	87	0.901	123	0.857	159	0.998	195	0.919	231	0.665	267	0.518	303	0.634
16	0.882	52	0.992	88	0.896	124	0.861	160	0.999	196	0.915	232	0.652	268	0.531	304	0.624
17	0.886	53	0.993	89	0.891	125	0.865	161	1.000	197	0.912	233	0.639	269	0.543	305	0.613
18	0.890	54	0.994	90	0.887	126	0.869	162	1.000	198	0.908	234	0.626	270	0.555	306	0.602
19	0.894	55	0.994	91	0.882	127	0.873	163	1.000	199	0.904	235	0.612	271	0.567	307	0.591
20	0.897	56	0.995	92	0.878	128	0.877	164	1.000	200	0.901	236	0.599	272	0.579	308	0.579
21	0.901	57	0.995	93	0.873	129	0.882	165	0.999	201	0.897	237	0.585	273	0.591	309	0.567
22	0.905	58	0.995	94	0.869	130	0.887	166	0.999	202	0.893	238	0.571	274	0.602	310	0.555
23	0.908	59	0.995	95	0.865	131	0.891	167	0.998	203	0.889	239	0.558	275	0.614	311	0.542
24	0.912	60	0.994	96	0.861	132	0.896	168	0.997	204	0.885	240	0.544	276	0.624	312	0.530
25	0.915	61	0.994	97	0.858	133	0.901	169	0.995	205	0.880	241	0.531	277	0.634	313	0.518
26	0.919	62	0.993	98	0.854	134	0.906	170	0.994	206	0.876	242	0.518	278	0.644	314	0.506
27	0.922	63	0.991	99	0.851	135	0.911	171	0.992	207	0.871	243	0.505	279	0.653	315	0.495
28	0.925	64	0.990	100	0.848	136	0.916	172	0.990	208	0.866	244	0.493	280	0.662	316	0.484
29	0.929	65	0.988	101	0.845	137	0.921	173	0.988	209	0.861	245	0.482	281	0.669	317	0.473
30	0.932	66	0.986	102	0.843	138	0.926	174	0.986	210	0.856	246	0.471	282	0.676	318	0.464
31	0.936	67	0.984	103	0.840	139	0.931	175	0.983	211	0.850	247	0.462	283	0.683	319	0.455
32	0.939	68	0.981	104	0.838	140	0.936	176	0.981	212	0.844	248	0.453	284	0.688	320	0.447
33	0.942	69	0.978	105	0.837	141	0.941	177	0.978	213	0.838	249	0.445	285	0.693	321	0.440
34	0.945	70	0.975	106	0.835	142	0.946	178	0.975	214	0.831	250	0.439	286	0.697	322	0.434
35	0.949	71	0.972	107	0.834	143	0.950	179	0.972	215	0.825	251	0.433	287	0.700	323	0.430

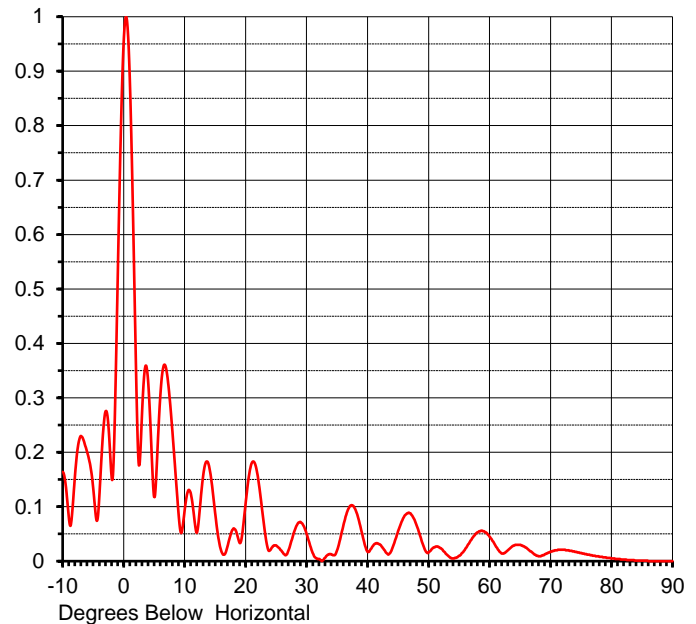
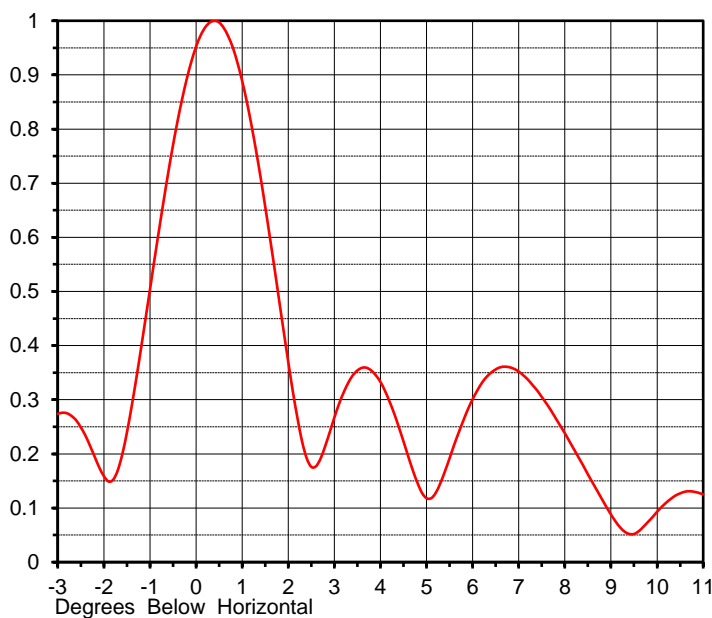
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ELEVATION PATTERN

Proposal No. **C-71679-2**
 Date **22-Apr-21**
 Call Letters **KPXG**
 Channel **22**
 Frequency **521 MHz**
 Antenna Type **TFU-24WB/VP-R C160**

RMS Directivity at Main Lobe **21.3 (13.29 dB)**
 RMS Directivity at Horizontal **19.3 (12.86 dB)**
Calculated

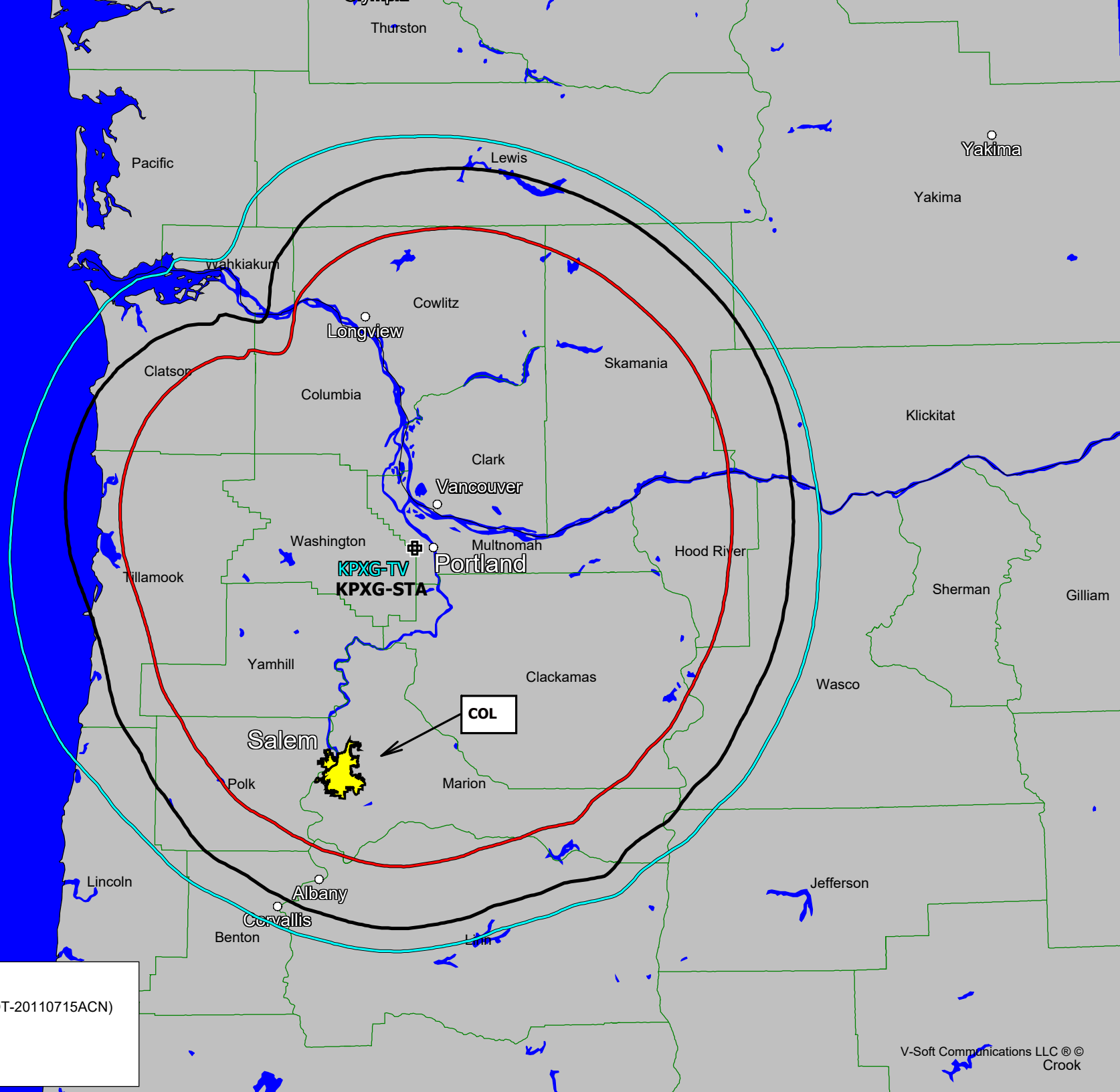
Beam Tilt **0.50 deg**
 Pattern Number **24W213050**






Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.164	10.0	0.093	30.0	0.050	50.0	0.016	70.0	0.017
-9.0	0.082	11.0	0.125	31.0	0.015	51.0	0.026	71.0	0.020
-8.0	0.154	12.0	0.052	32.0	0.004	52.0	0.024	72.0	0.021
-7.0	0.230	13.0	0.153	33.0	0.006	53.0	0.012	73.0	0.020
-6.0	0.201	14.0	0.175	34.0	0.013	54.0	0.005	74.0	0.017
-5.0	0.135	15.0	0.089	35.0	0.020	55.0	0.010	75.0	0.015
-4.0	0.116	16.0	0.019	36.0	0.064	56.0	0.022	76.0	0.012
-3.0	0.274	17.0	0.026	37.0	0.099	57.0	0.039	77.0	0.010
-2.0	0.159	18.0	0.060	38.0	0.095	58.0	0.053	78.0	0.008
-1.0	0.503	19.0	0.034	39.0	0.055	59.0	0.055	79.0	0.007
0.0	0.952	20.0	0.106	40.0	0.017	60.0	0.045	80.0	0.005
1.0	0.889	21.0	0.180	41.0	0.030	61.0	0.028	81.0	0.004
2.0	0.370	22.0	0.156	42.0	0.031	62.0	0.014	82.0	0.003
3.0	0.267	23.0	0.068	43.0	0.016	63.0	0.020	83.0	0.002
4.0	0.333	24.0	0.020	44.0	0.022	64.0	0.029	84.0	0.001
5.0	0.118	25.0	0.029	45.0	0.055	65.0	0.030	85.0	0.001
6.0	0.301	26.0	0.017	46.0	0.082	66.0	0.025	86.0	0.000
7.0	0.352	27.0	0.019	47.0	0.088	67.0	0.016	87.0	0.000
8.0	0.238	28.0	0.055	48.0	0.067	68.0	0.009	88.0	0.000
9.0	0.088	29.0	0.072	49.0	0.033	69.0	0.012	89.0	0.000
								90.0	0.000

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KPXG-STA
BLCDT-20110715ACN
Latitude: 45-31-20.50 N
Longitude: 122-44-49.50 W
ERP: 800.00 kW
Channel: 22
Frequency: 521.0 MHz
AGL: 199.65 m
HAAT: 466.31 m
AMSL: 541.95 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.5
Prop Model: None



Contour Legend

-  Dipole Adjusted Noise Limited (BLCDT-20110715ACN)
-  Dipole Adjusted Noise Limited (STA)
-  48dBu Service (STA)