Technical Summary
Request for Special Temporary Authority
Engineering Exhibit

WPXU-TV – Jacksonville, NC

Facility ID: 37971

Licensee “ION MEDIA JACKSONVILLE LICENSE, INC” currently has an approved construction permit to operate on Post-Repack DTV channel 16. The Antenna Structure Registration Number is 1006934 with a Latitude of 34° 29’ 42.0” N+ and a Longitude of 77° 29’ 18.0” W-. WPXU-TV has been assigned Repack Phase 5 with a transition completion date of 9/6/2019.

WPXU-TV is currently operating under an approved STA from the same antenna structure (1006934) on its Pre-Repack DTV channel 34. This application is to request authority to operate on Post-Repack DTV channel 16 from the same location. The HAAT is 165.66 m (AGL 163.67 m) with an AMSL of 172.67 m. An ERP of 5 kW will be utilized.

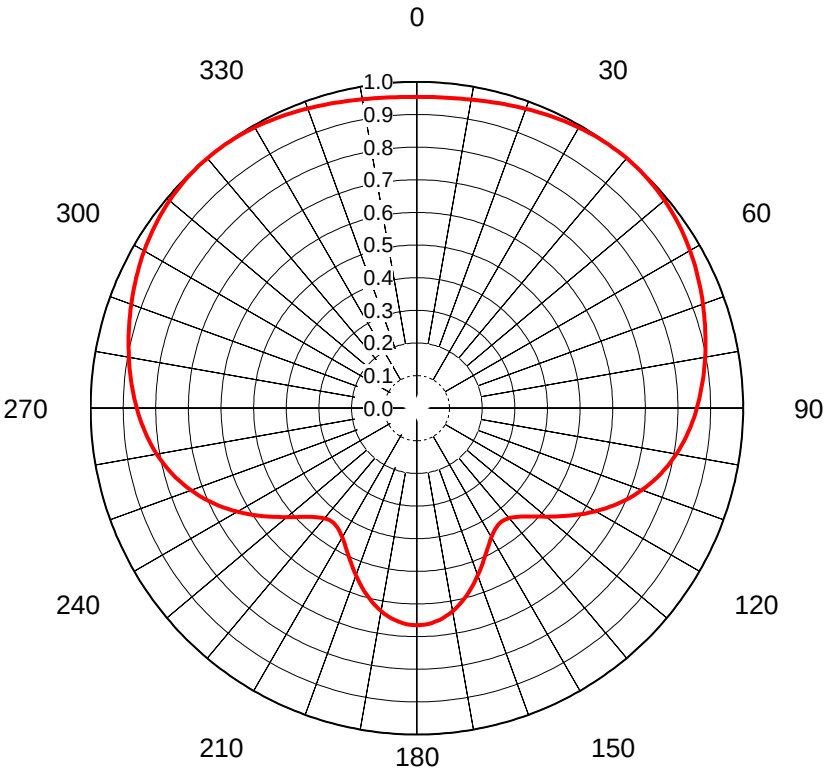
Antenna System

A side mounted directional 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. The proposed STA operation will not expand the station’s noise limited contour. *Please note that the antenna azimuth pattern should be rotated 315°.*

RF Hazard (Environmental)

Compliance with RF Hazard (Environmental) is provided in the attached RF Hazard Statement.

Dielectric®



AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	
Date	**17-Jul-19**
Call Letters	**WPXU**
Channel	**16**
Frequency	**485 MHz**
Antenna Type	**TFU-8WB-R C160**
Gain	**1.52 (1.82dB)**
	Calculated
Pattern Number	**WB-C160-16**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.954	36	0.999	72	0.926	108	0.751	144	0.434	180	0.665	216	0.435	252	0.753	288	0.924	324	0.999
1	0.954	37	0.999	73	0.922	109	0.743	145	0.435	181	0.665	217	0.435	253	0.761	289	0.928	325	0.998
2	0.954	38	1.000	74	0.919	110	0.734	146	0.438	182	0.664	218	0.436	254	0.769	290	0.932	326	0.998
3	0.955	39	1.000	75	0.915	111	0.725	147	0.441	183	0.662	219	0.438	255	0.776	291	0.935	327	0.997
4	0.955	40	1.000	76	0.912	112	0.716	148	0.445	184	0.660	220	0.441	256	0.784	292	0.938	328	0.996
5	0.956	41	1.000	77	0.908	113	0.706	149	0.451	185	0.656	221	0.445	257	0.790	293	0.942	329	0.995
6	0.956	42	1.000	78	0.904	114	0.696	150	0.457	186	0.653	222	0.450	258	0.797	294	0.945	330	0.994
7	0.957	43	0.999	79	0.901	115	0.686	151	0.464	187	0.648	223	0.456	259	0.803	295	0.949	331	0.992
8	0.958	44	0.998	80	0.897	116	0.676	152	0.471	188	0.643	224	0.463	260	0.809	296	0.952	332	0.991
9	0.959	45	0.998	81	0.893	117	0.665	153	0.479	189	0.638	225	0.471	261	0.815	297	0.955	333	0.989
10	0.960	46	0.997	82	0.890	118	0.654	154	0.488	190	0.631	226	0.480	262	0.821	298	0.959	334	0.988
11	0.962	47	0.995	83	0.886	119	0.643	155	0.497	191	0.625	227	0.489	263	0.826	299	0.962	335	0.986
12	0.963	48	0.994	84	0.882	120	0.632	156	0.506	192	0.617	228	0.498	264	0.831	300	0.965	336	0.985
13	0.964	49	0.993	85	0.878	121	0.620	157	0.516	193	0.609	229	0.509	265	0.836	301	0.968	337	0.983
14	0.966	50	0.991	86	0.874	122	0.609	158	0.526	194	0.601	230	0.519	266	0.841	302	0.971	338	0.981
15	0.968	51	0.989	87	0.870	123	0.597	159	0.536	195	0.593	231	0.530	267	0.846	303	0.973	339	0.979
16	0.969	52	0.987	88	0.866	124	0.586	160	0.546	196	0.584	232	0.542	268	0.850	304	0.976	340	0.977
17	0.971	53	0.985	89	0.862	125	0.574	161	0.556	197	0.574	233	0.553	269	0.854	305	0.979	341	0.976
18	0.973	54	0.983	90	0.858	126	0.562	162	0.565	198	0.565	234	0.565	270	0.858	306	0.981	342	0.974
19	0.975	55	0.980	91	0.854	127	0.551	163	0.575	199	0.555	235	0.576	271	0.863	307	0.984	343	0.972
20	0.976	56	0.978	92	0.849	128	0.539	164	0.584	200	0.545	236	0.588	272	0.867	308	0.986	344	0.970
21	0.978	57	0.975	93	0.845	129	0.528	165	0.593	201	0.535	237	0.600	273	0.870	309	0.988	345	0.969
22	0.980	58	0.972	94	0.840	130	0.517	166	0.602	202	0.526	238	0.611	274	0.874	310	0.990	346	0.967
23	0.982	59	0.969	95	0.835	131	0.507	167	0.610	203	0.516	239	0.623	275	0.878	311	0.991	347	0.965
24	0.984	60	0.966	96	0.830	132	0.497	168	0.618	204	0.506	240	0.634	276	0.882	312	0.993	348	0.964
25	0.985	61	0.963	97	0.825	133	0.487	169	0.625	205	0.497	241	0.646	277	0.885	313	0.994	349	0.962
26	0.987	62	0.960	98	0.819	134	0.478	170	0.632	206	0.488	242	0.657	278	0.889	314	0.996	350	0.961
27	0.989	63	0.957	99	0.814	135	0.469	171	0.638	207	0.479	243	0.668	279	0.893	315	0.997	351	0.960
28	0.990	64	0.954	100	0.808	136	0.462	172	0.643	208	0.471	244	0.678	280	0.896	316	0.998	352	0.959
29	0.992	65	0.950	101	0.802	137	0.455	173	0.648	209	0.464	245	0.689	281	0.900	317	0.998	353	0.958
30	0.993	66	0.947	102	0.795	138	0.449	174	0.653	210	0.457	246	0.699	282	0.903	318	0.999	354	0.957
31	0.994	67	0.944	103	0.789	139	0.444	175	0.657	211	0.451	247	0.709	283	0.907	319	0.999	355	0.956
32	0.996	68	0.940	104	0.782	140	0.440	176	0.660	212	0.446	248	0.718	284	0.910	320	1.000	356	0.955
33	0.997	69	0.937	105	0.774	141	0.437	177	0.662	213	0.441	249	0.727	285	0.914	321	1.000	357	0.955
34	0.998	70	0.933	106	0.767	142	0.435	178	0.664	214	0.438	250	0.736	286	0.917	322	1.000	358	0.954
35	0.998	71	0.930	107	0.759	143	0.434	179	0.665	215	0.436	251	0.745	287	0.921	323	0.999	359	0.954

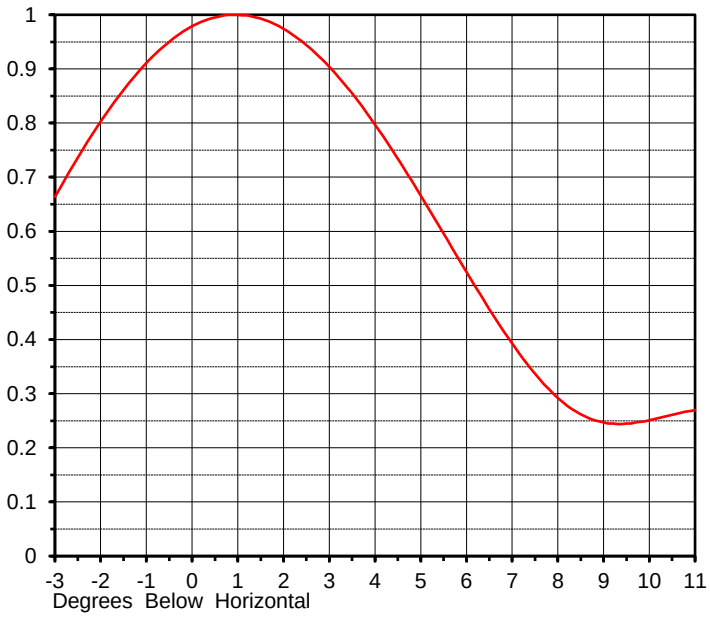
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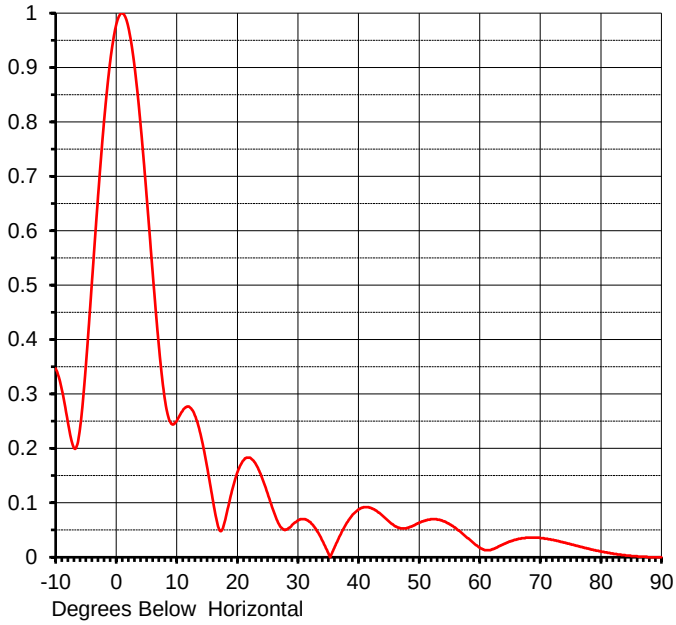
ELEVATION PATTERN

Proposal No.	
Date	**17-Jul-19**
Call Letters	**WPXU**
Channel	**16**
Frequency	**485 MHz**
Antenna Type	**TFU-8WB-R C160**

RMS Directivity at Main Lobe	**7.5 (8.75 dB)**	Beam Tilt	**1.05 deg**
RMS Directivity at Horizontal	**7.2 (8.57 dB)**	Pattern Number	**08W075105-485**

Calculated





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.347	10.0	0.251	30.0	0.068	50.0	0.063	70.0	0.035
-9.0	0.309	11.0	0.270	31.0	0.070	51.0	0.067	71.0	0.034
-8.0	0.249	12.0	0.277	32.0	0.065	52.0	0.070	72.0	0.032
-7.0	0.201	13.0	0.260	33.0	0.051	53.0	0.069	73.0	0.030
-6.0	0.235	14.0	0.222	34.0	0.031	54.0	0.066	74.0	0.027
-5.0	0.354	15.0	0.166	35.0	0.008	55.0	0.061	75.0	0.024
-4.0	0.508	16.0	0.102	36.0	0.017	56.0	0.054	76.0	0.021
-3.0	0.664	17.0	0.051	37.0	0.041	57.0	0.045	77.0	0.018
-2.0	0.803	18.0	0.069	38.0	0.062	58.0	0.035	78.0	0.016
-1.0	0.911	19.0	0.117	39.0	0.078	59.0	0.026	79.0	0.013
0.0	0.979	20.0	0.156	40.0	0.088	60.0	0.018	80.0	0.011
1.0	1.000	21.0	0.178	41.0	0.092	61.0	0.013	81.0	0.009
2.0	0.974	22.0	0.183	42.0	0.091	62.0	0.014	82.0	0.007
3.0	0.904	23.0	0.172	43.0	0.085	63.0	0.019	83.0	0.005
4.0	0.797	24.0	0.148	44.0	0.076	64.0	0.024	84.0	0.004
5.0	0.666	25.0	0.117	45.0	0.066	65.0	0.029	85.0	0.002
6.0	0.525	26.0	0.084	46.0	0.057	66.0	0.032	86.0	0.002
7.0	0.393	27.0	0.058	47.0	0.053	67.0	0.035	87.0	0.001
8.0	0.292	28.0	0.051	48.0	0.054	68.0	0.036	88.0	0.000
9.0	0.247	29.0	0.059	49.0	0.058	69.0	0.036	89.0	0.000
								90.0	0.000

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WPXU-STA
Latitude: 34-29-42 N
Longitude: 077-29-18 W
ERP: 5.00 kW
Channel: 16
Frequency: 485.0 MHz
AGL: 163.67 m
HAAT: 165.66 m
AMSL: 172.67 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 1.05
Prop Model: None

COL

WPXU-CP
WPXU-STA

Contour Legend
- Dipole Adjusted Noise Limited (0000072136)
- Dipole Adjusted Noise Limited (STA)
- 48dBu Service (STA)

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