Consulting Engineers
CTJC
CARL T. JONES CORPORATION

STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF A REQUEST FOR A
SPECIAL TEMPORARY AUTHORIZATION (STA)
TO MAKE TRANSITION USING AN INTERIM ANTENNA
PENDING INSTALLATION OF THE MAIN ANTENNA
WTVH - SYRACUSE, NEW YORK
DTV - CH. 18 - 140.5 kW - 266.3 m HAAT

Prepared for: WTVH LICENSE 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 WTVH LICENSE LLC, licensee of WTVH, facility ID number 74151, licensed to Syracuse, New York, to prepare this statement and associated exhibits in support of a request for STA to transition to channel 18 using an interim temporary antenna. WTVH has installed its permanent main transmitter but is not able to secure the installation of its authorized main antenna prior to the phase 8 completion date, March 13, 2020. Therefore, WTVH herein requests authorization to make its transition using a temporary interim operation using an interim antenna. Once the main antenna, as authorized by construction permit, file number 0000094502, is installed and operational WTVH will be ready to license and commence operation on its final post transition broadcast facility.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WTVH 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

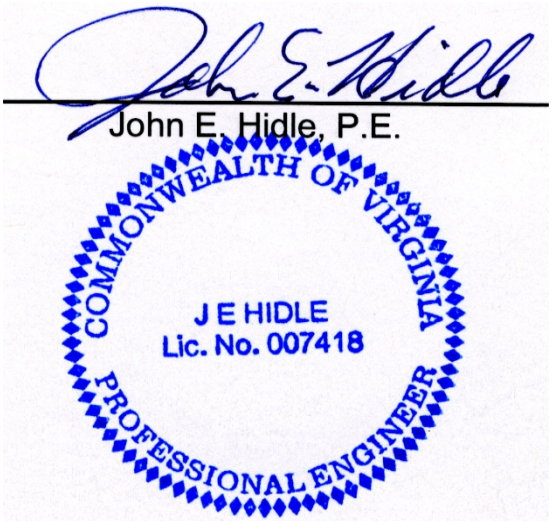
The licensee of WTVH is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WTVH antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

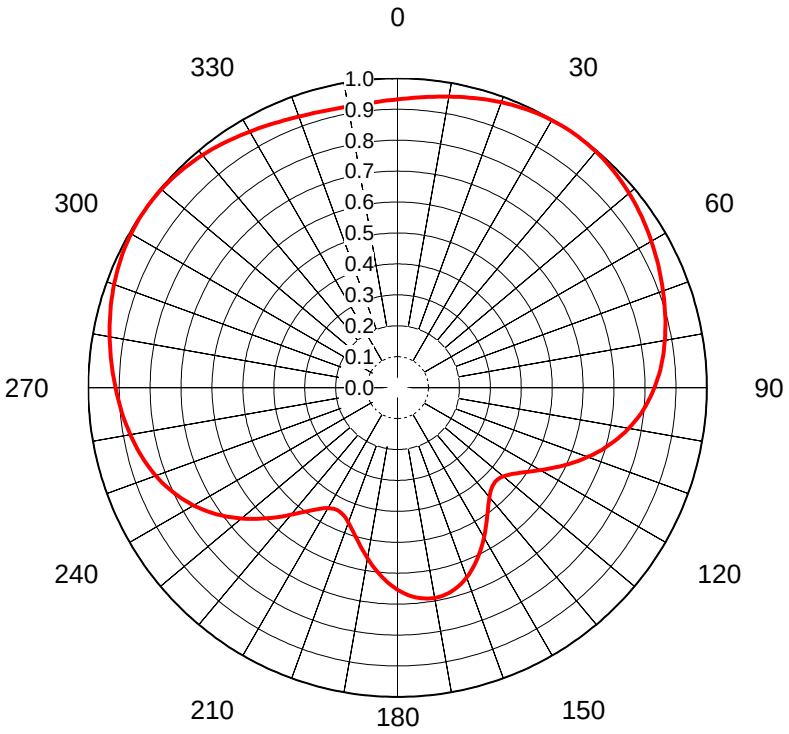
As shown in Appendix A the proposed WTVH channel 18 post-transition interim STA facility proposed herein will operate with a maximum ERP of 140.5 kW from an elliptically polarized directional transmitting antenna with a centerline height of 137.2 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this application, the vertical plane relative field factor is less than 0.200 at all depression angles greater than 14 degrees. The proposed WTVH STA facility is predicted to produce a worst-case power density at two meters above ground level, at 161.1 meters from the tower base, of 1.955 $\mu W/cm^2$, which is 0.59% of the FCC guideline value of 331.33 $\mu W/cm^2$ for an “uncontrolled” environment, and 0.118% 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.

SUMMARY

It is submitted that the instant request for STA for WTVH to make its transition to channel 18 using a temporary interim antenna facility until the authorized permanent main antenna can be installed, as described herein, does comply 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: February 26, 2020

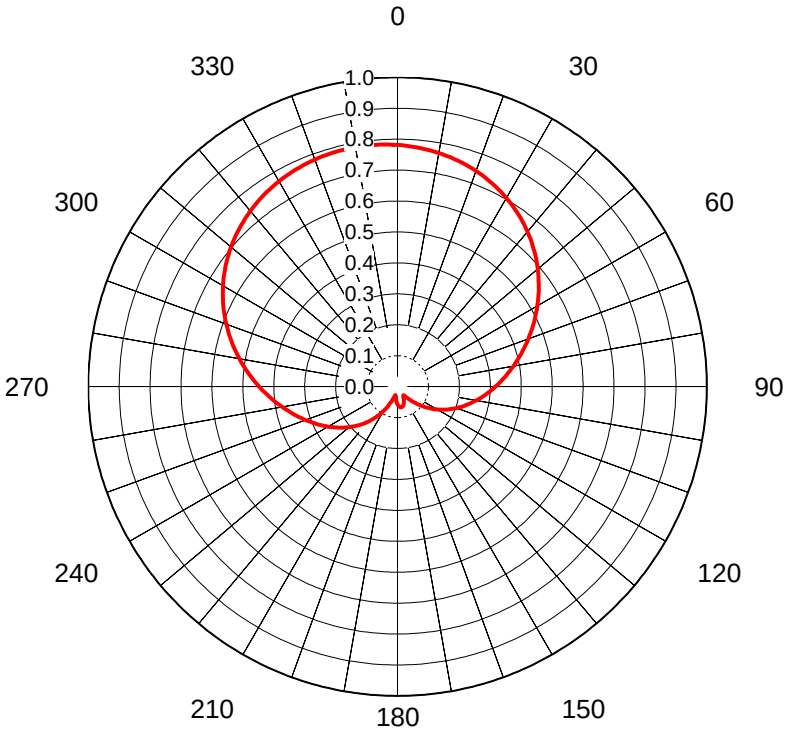




AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**WTVH Interim CH 18**
Date	**19-Feb-20**
Call Letters	**WTVH**
Channel	**18**
Frequency	**497 MHz**
Antenna Type	**TFU-8WB/VP-R C160**
Gain	**1.5 (1.76dB)**
	Calculated
Pattern Number	**WB-C160-18 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.932	36	1.000	72	0.907	108	0.678	144	0.496	180	0.654	216	0.494	252	0.843	288	0.970	324	0.972
1	0.934	37	0.999	73	0.903	109	0.667	145	0.506	181	0.646	217	0.504	253	0.848	289	0.973	325	0.969
2	0.936	38	0.999	74	0.900	110	0.655	146	0.516	182	0.638	218	0.514	254	0.852	290	0.975	326	0.966
3	0.938	39	0.998	75	0.896	111	0.643	147	0.527	183	0.630	219	0.525	255	0.857	291	0.978	327	0.964
4	0.940	40	0.997	76	0.893	112	0.631	148	0.538	184	0.621	220	0.537	256	0.861	292	0.980	328	0.961
5	0.943	41	0.996	77	0.889	113	0.619	149	0.548	185	0.611	221	0.549	257	0.866	293	0.983	329	0.958
6	0.945	42	0.994	78	0.885	114	0.607	150	0.559	186	0.602	222	0.561	258	0.870	294	0.985	330	0.956
7	0.948	43	0.993	79	0.882	115	0.594	151	0.570	187	0.591	223	0.573	259	0.874	295	0.987	331	0.953
8	0.950	44	0.991	80	0.878	116	0.582	152	0.581	188	0.581	224	0.585	260	0.877	296	0.989	332	0.950
9	0.953	45	0.989	81	0.874	117	0.569	153	0.591	189	0.571	225	0.598	261	0.881	297	0.991	333	0.948
10	0.955	46	0.987	82	0.870	118	0.557	154	0.601	190	0.560	226	0.610	262	0.885	298	0.992	334	0.945
11	0.958	47	0.985	83	0.865	119	0.545	155	0.611	191	0.549	227	0.622	263	0.888	299	0.994	335	0.943
12	0.961	48	0.983	84	0.861	120	0.533	156	0.621	192	0.538	228	0.635	264	0.892	300	0.995	336	0.941
13	0.963	49	0.980	85	0.856	121	0.522	157	0.630	193	0.528	229	0.647	265	0.895	301	0.996	337	0.939
14	0.966	50	0.978	86	0.852	122	0.511	158	0.638	194	0.517	230	0.658	266	0.899	302	0.997	338	0.936
15	0.969	51	0.975	87	0.847	123	0.500	159	0.646	195	0.507	231	0.670	267	0.902	303	0.998	339	0.934
16	0.972	52	0.972	88	0.842	124	0.490	160	0.653	196	0.497	232	0.681	268	0.905	304	0.998	340	0.933
17	0.974	53	0.970	89	0.836	125	0.481	161	0.660	197	0.488	233	0.693	269	0.909	305	0.998	341	0.931
18	0.977	54	0.967	90	0.831	126	0.472	162	0.666	198	0.480	234	0.703	270	0.912	306	0.998	342	0.929
19	0.979	55	0.964	91	0.825	127	0.464	163	0.672	199	0.472	235	0.714	271	0.915	307	0.998	343	0.928
20	0.982	56	0.960	92	0.819	128	0.457	164	0.677	200	0.464	236	0.724	272	0.919	308	0.998	344	0.927
21	0.984	57	0.957	93	0.812	129	0.451	165	0.681	201	0.458	237	0.734	273	0.922	309	0.998	345	0.926
22	0.986	58	0.954	94	0.806	130	0.447	166	0.684	202	0.452	238	0.744	274	0.925	310	0.997	346	0.925
23	0.988	59	0.951	95	0.799	131	0.443	167	0.687	203	0.448	239	0.753	275	0.929	311	0.996	347	0.924
24	0.990	60	0.947	96	0.792	132	0.440	168	0.689	204	0.445	240	0.762	276	0.932	312	0.995	348	0.924
25	0.992	61	0.944	97	0.784	133	0.439	169	0.690	205	0.443	241	0.770	277	0.935	313	0.994	349	0.923
26	0.993	62	0.941	98	0.776	134	0.439	170	0.690	206	0.442	242	0.778	278	0.938	314	0.993	350	0.923
27	0.995	63	0.937	99	0.768	135	0.440	171	0.690	207	0.442	243	0.786	279	0.942	315	0.991	351	0.923
28	0.996	64	0.934	100	0.759	136	0.442	172	0.689	208	0.443	244	0.794	280	0.945	316	0.989	352	0.924
29	0.997	65	0.931	101	0.750	137	0.446	173	0.687	209	0.446	245	0.801	281	0.948	317	0.988	353	0.924
30	0.998	66	0.927	102	0.741	138	0.450	174	0.684	210	0.450	246	0.808	282	0.952	318	0.986	354	0.925
31	0.999	67	0.924	103	0.731	139	0.456	175	0.681	211	0.455	247	0.814	283	0.955	319	0.984	355	0.925
32	0.999	68	0.920	104	0.721	140	0.462	176	0.677	212	0.461	248	0.820	284	0.958	320	0.981	356	0.926
33	1.000	69	0.917	105	0.711	141	0.470	177	0.672	213	0.468	249	0.826	285	0.961	321	0.979	357	0.928
34	1.000	70	0.914	106	0.700	142	0.478	178	0.666	214	0.476	250	0.832	286	0.964	322	0.977	358	0.929
35	1.000	71	0.910	107	0.689	143	0.487	179	0.660	215	0.484	251	0.837	287	0.967	323	0.974	359	0.931



AZIMUTH PATTERN
Verttical Polarization

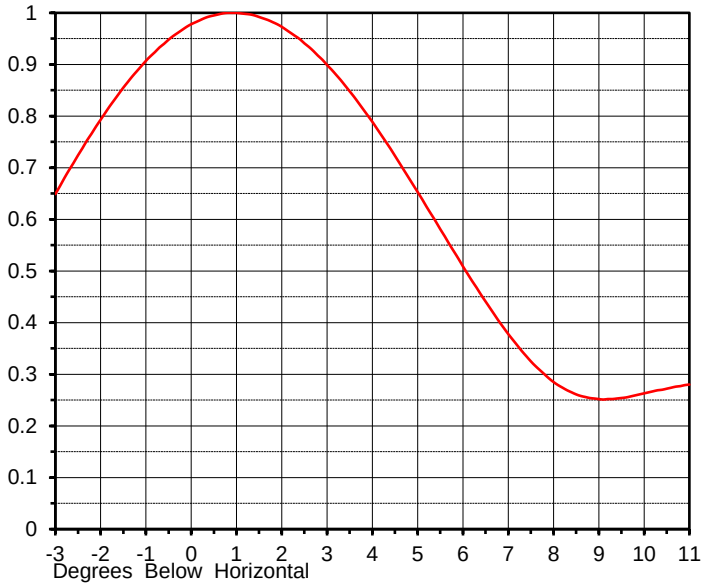
Proposal No.	**WTVH Interim CH 18**
Date	**19-Feb-20**
Call Letters	**WTVH**
Channel	**18**
Frequency	**497 MHz**
Antenna Type	**TFU-8WB/VP-R C160**
Gain	**2.65 (4.24dB)**
	Calculated
Pattern Number	**WB-C160-18 Vpol**

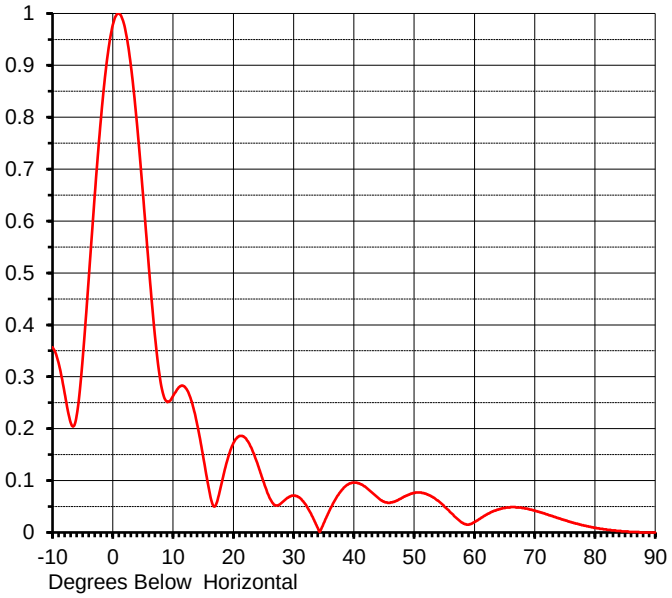
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.781	36	0.676	72	0.435	108	0.214	144	0.035	180	0.057	216	0.125	252	0.328	288	0.576	324	0.753
1	0.781	37	0.670	73	0.428	109	0.208	145	0.034	181	0.055	217	0.131	253	0.334	289	0.582	325	0.755
2	0.779	38	0.665	74	0.421	110	0.203	146	0.034	182	0.053	218	0.137	254	0.340	290	0.589	326	0.758
3	0.778	39	0.659	75	0.414	111	0.197	147	0.034	183	0.051	219	0.142	255	0.346	291	0.596	327	0.760
4	0.777	40	0.654	76	0.407	112	0.192	148	0.035	184	0.048	220	0.148	256	0.353	292	0.602	328	0.762
5	0.776	41	0.648	77	0.401	113	0.186	149	0.036	185	0.046	221	0.154	257	0.359	293	0.609	329	0.765
6	0.774	42	0.642	78	0.394	114	0.181	150	0.038	186	0.043	222	0.159	258	0.365	294	0.615	330	0.767
7	0.773	43	0.636	79	0.387	115	0.175	151	0.040	187	0.040	223	0.165	259	0.372	295	0.621	331	0.769
8	0.771	44	0.630	80	0.380	116	0.170	152	0.042	188	0.038	224	0.170	260	0.378	296	0.628	332	0.770
9	0.769	45	0.624	81	0.374	117	0.164	153	0.044	189	0.035	225	0.176	261	0.385	297	0.634	333	0.772
10	0.767	46	0.618	82	0.367	118	0.158	154	0.046	190	0.033	226	0.182	262	0.392	298	0.640	334	0.774
11	0.765	47	0.611	83	0.360	119	0.153	155	0.049	191	0.031	227	0.187	263	0.399	299	0.646	335	0.775
12	0.763	48	0.605	84	0.354	120	0.147	156	0.051	192	0.030	228	0.193	264	0.405	300	0.651	336	0.777
13	0.761	49	0.598	85	0.348	121	0.142	157	0.053	193	0.029	229	0.198	265	0.412	301	0.657	337	0.778
14	0.759	50	0.592	86	0.341	122	0.136	158	0.055	194	0.028	230	0.204	266	0.419	302	0.663	338	0.779
15	0.756	51	0.585	87	0.335	123	0.130	159	0.057	195	0.029	231	0.209	267	0.426	303	0.668	339	0.780
16	0.754	52	0.578	88	0.329	124	0.125	160	0.059	196	0.030	232	0.215	268	0.433	304	0.673	340	0.781
17	0.751	53	0.571	89	0.322	125	0.119	161	0.061	197	0.032	233	0.220	269	0.440	305	0.679	341	0.782
18	0.748	54	0.564	90	0.316	126	0.114	162	0.062	198	0.035	234	0.226	270	0.447	306	0.684	342	0.783
19	0.745	55	0.557	91	0.310	127	0.108	163	0.064	199	0.038	235	0.231	271	0.454	307	0.689	343	0.784
20	0.742	56	0.550	92	0.304	128	0.103	164	0.065	200	0.042	236	0.237	272	0.462	308	0.693	344	0.784
21	0.739	57	0.543	93	0.298	129	0.097	165	0.066	201	0.046	237	0.242	273	0.469	309	0.698	345	0.785
22	0.736	58	0.536	94	0.293	130	0.092	166	0.067	202	0.050	238	0.248	274	0.476	310	0.703	346	0.785
23	0.732	59	0.529	95	0.287	131	0.087	167	0.067	203	0.055	239	0.253	275	0.483	311	0.707	347	0.786
24	0.729	60	0.522	96	0.281	132	0.081	168	0.068	204	0.060	240	0.259	276	0.490	312	0.711	348	0.786
25	0.725	61	0.515	97	0.275	133	0.076	169	0.068	205	0.065	241	0.264	277	0.498	313	0.715	349	0.786
26	0.721	62	0.507	98	0.269	134	0.071	170	0.068	206	0.070	242	0.270	278	0.505	314	0.719	350	0.786
27	0.717	63	0.500	99	0.264	135	0.066	171	0.068	207	0.075	243	0.275	279	0.512	315	0.723	351	0.786
28	0.713	64	0.493	100	0.258	136	0.062	172	0.067	208	0.080	244	0.281	280	0.519	316	0.727	352	0.786
29	0.709	65	0.486	101	0.253	137	0.057	173	0.067	209	0.086	245	0.287	281	0.526	317	0.731	353	0.786
30	0.704	66	0.479	102	0.247	138	0.053	174	0.066	210	0.091	246	0.292	282	0.534	318	0.734	354	0.785
31	0.700	67	0.471	103	0.241	139	0.049	175	0.065	211	0.097	247	0.298	283	0.541	319	0.738	355	0.785
32	0.695	68	0.464	104	0.236	140	0.045	176	0.064	212	0.103	248	0.304	284	0.548	320	0.741	356	0.784
33	0.691	69	0.457	105	0.230	141	0.042	177	0.062	213	0.108	249	0.310	285	0.555	321	0.744	357	0.784
34	0.686	70	0.450	106	0.225	142	0.039	178	0.061	214	0.114	250	0.316	286	0.562	322	0.747	358	0.783
35	0.681	71	0.443	107	0.219	143	0.037	179	0.059	215	0.119	251	0.322	287	0.569	323	0.750	359	0.782

ELEVATION PATTERN

Proposal No.	**WTVH Interim CH 18**
Date	**19-Feb-20**
Call Letters	**WTVH**
Channel	**18**
Frequency	**497 MHz**
Antenna Type	**TFU-8WB/VP-R C160**

RMS Directivity at Main Lobe	**7.6 (8.81 dB)**	Beam Tilt	**1.05 deg**
RMS Directivity at Horizontal	**7.3 (8.63 dB)**	Pattern Number	**08W076105-18**
	Calculated		





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.357	10.0	0.263	30.0	0.071	50.0	0.076	70.0	0.042
-9.0	0.327	11.0	0.280	31.0	0.067	51.0	0.077	71.0	0.039
-8.0	0.269	12.0	0.280	32.0	0.054	52.0	0.074	72.0	0.035
-7.0	0.212	13.0	0.255	33.0	0.033	53.0	0.069	73.0	0.031
-6.0	0.225	14.0	0.208	34.0	0.009	54.0	0.061	74.0	0.027
-5.0	0.334	15.0	0.146	35.0	0.018	55.0	0.050	75.0	0.024
-4.0	0.488	16.0	0.081	36.0	0.043	56.0	0.039	76.0	0.020
-3.0	0.649	17.0	0.051	37.0	0.065	57.0	0.028	77.0	0.017
-2.0	0.793	18.0	0.092	38.0	0.082	58.0	0.019	78.0	0.014
-1.0	0.907	19.0	0.139	39.0	0.092	59.0	0.015	79.0	0.011
0.0	0.978	20.0	0.172	40.0	0.096	60.0	0.020	80.0	0.009
1.0	1.000	21.0	0.186	41.0	0.094	61.0	0.027	81.0	0.007
2.0	0.973	22.0	0.182	42.0	0.087	62.0	0.034	82.0	0.005
3.0	0.899	23.0	0.163	43.0	0.077	63.0	0.040	83.0	0.004
4.0	0.789	24.0	0.133	44.0	0.067	64.0	0.044	84.0	0.003
5.0	0.653	25.0	0.098	45.0	0.059	65.0	0.047	85.0	0.002
6.0	0.509	26.0	0.067	46.0	0.057	66.0	0.049	86.0	0.001
7.0	0.378	27.0	0.052	47.0	0.061	67.0	0.048	87.0	0.001
8.0	0.285	28.0	0.057	48.0	0.067	68.0	0.047	88.0	0.000
9.0	0.252	29.0	0.067	49.0	0.072	69.0	0.045	89.0	0.000
								90.0	0.000

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RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

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

As shown in Appendix A the proposed WTVH channel 18 post-transition interim STA facility proposed herein will operate with a maximum ERP of 140.5 kW from an elliptically polarized directional transmitting antenna with a centerline height of 137.2 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this application, the vertical plane relative field factor is less than 0.200 at all depression angles greater than 14 degrees. The proposed WTVH STA facility is predicted to produce a worst-case power density at two meters above ground level, at 161.1 meters from the tower base, of 1.955 $\mu W/cm^2$, which is 0.59% of the FCC guideline value of 331.33 $\mu W/cm^2$ for an “uncontrolled” environment, and 0.118% 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 and coordinate with other any other site users and reduce power 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.

WTVH
Channel 18 - Syracuse, New York
ERP = 140500.00 WATTS

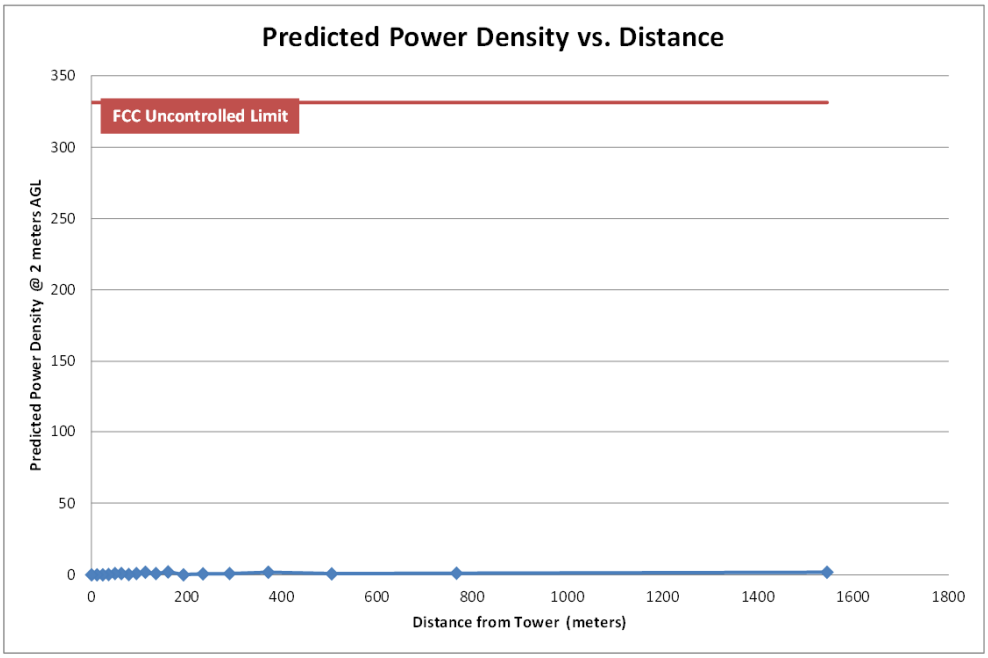
APPENDIX A

Maximum ERP 140.5 kW

Polarization ----------	2	Circular		
Antenna Height Above Ground -	137.2	meters	450.1	feet
FCC Uncontrolled RFR Limit ----	331.33	µW/cm²		

Maximum Computed Power Density *1.955* µW/cm²
0.59% 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)	WTVH ERP (kW)	WTVH Calculated Power Density µW/cm²	Percent Limit	Limit Exceeded?
1			1.000	140.5000			
5	1545.3	1551.2	0.653	59.9105	1.663	0.50%	No
10	766.8	778.6	0.263	9.7182	1.071	0.32%	No
15	504.6	522.4	0.146	2.9949	0.733	0.22%	No
20	371.5	395.3	0.172	4.1566	1.777	0.54%	No
25	289.9	319.9	0.098	1.3494	0.881	0.27%	No
30	234.2	270.4	0.071	0.7083	0.647	0.20%	No
35	193.1	235.7	0.018	0.0455	0.055	0.02%	No
40	161.1	210.3	0.096	1.2948	1.955	0.59%	No
45	135.2	191.2	0.059	0.4891	0.894	0.27%	No
50	113.4	176.5	0.076	0.8115	1.740	0.53%	No
55	94.7	165.0	0.050	0.3513	0.861	0.26%	No
60	78.1	156.1	0.020	0.0562	0.154	0.05%	No
65	63.0	149.2	0.047	0.3104	0.932	0.28%	No
70	49.2	143.9	0.042	0.2478	0.800	0.24%	No
75	36.2	140.0	0.024	0.0809	0.276	0.08%	No
80	23.8	137.3	0.009	0.0114	0.040	0.01%	No
85	11.8	135.7	0.002	0.0006	0.002	0.00%	No
90	0.0	135.2	0.000	0.0000	0.000	0.00%	No



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