



TFU-24GTH/VP-R TC O6SP

Proposal Number: C-70315-2
Date: 24-Feb-17
Customer: Graham Media
Location: Jacksonville, FL

Electrical Specifications

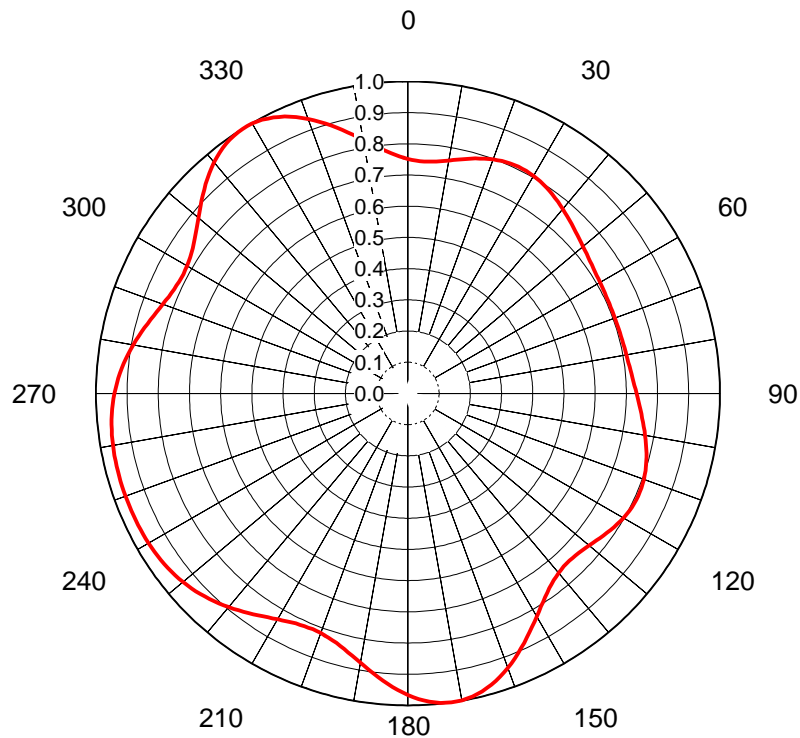
Polarity	Elliptical		
Azimuth Pattern	Directional		
Antenna Input	8-3/16" 75	75 Ohm	EIA/DCA
VSWR	Channel	1.15 : 1	
Bandwidth	6 mHz		
Rated Input Power	85 kW	(19.29 dBk)	Maximum combined average power

Mechanical Specifications

Mounting	Top of Stack		
Environmental Protection	Full Radome		
Height	50.5 ft (15.4m)	less Lightning Protector	54.5 ft (16.6m) with Lightning Protector
Weight	13100 lb (5.9t)	Excludes Mounts	
Effective Projected Area	148.8 ft ² (13.8m ²)	TIA-222-G	Basic Wind Speed 108 m/h (173.8 km/h)

Channel Specifications

	Call	CH	Freq	Hpol ERP	Vpol ERP	TPO	Peak Main Lob Hpol Gain	Peak Main Lobe Vpol Gain	Peak at Horizontal Hpol Gain	Peak at Horizontal Vpol Gain
1	WJXT	18	497 mHz	1000.0 kW (30.00 dBk)	300.0 kW (24.77 dBk)	56.7 kW (17.54 dBk)	21.60 (13.35dB)	6.48 (8.12dB)	14.67 (11.66dB)	4.40 (6.43dB)
2	WCWJ	20	509 mHz	750.0 kW (28.75 dBk)	225.0 kW (23.52 dBk)	42.2 kW (16.26 dBk)	21.81 (13.39dB)	6.54 (8.16dB)	14.81 (11.70dB)	4.44 (6.48dB)



AZIMUTH PATTERN Horizontal Polarization

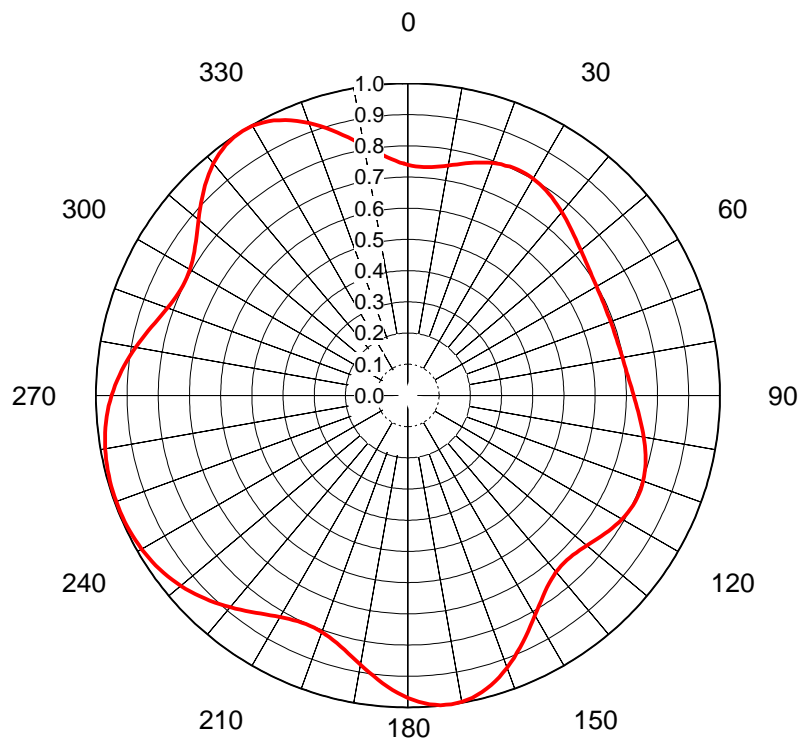
Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WJXT 18**
 Frequency **497 mHz**
 Antenna Type **TFU-24GTH/VP-R TC-C**

Gain **1.38 (1.41dB)**
Calculated

Directional
 Drawing # **TFU-O6SP**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.751	36	0.788	72	0.706	108	0.801	144	0.772	180	0.967	216	0.870	252	0.963	288	0.846
1	0.749	37	0.784	73	0.706	109	0.803	145	0.779	181	0.959	217	0.876	253	0.963	289	0.841
2	0.746	38	0.781	74	0.707	110	0.805	146	0.787	182	0.951	218	0.882	254	0.963	290	0.836
3	0.746	39	0.776	75	0.707	111	0.806	147	0.796	183	0.942	219	0.888	255	0.963	291	0.832
4	0.745	40	0.772	76	0.708	112	0.808	148	0.805	184	0.933	220	0.894	256	0.962	292	0.827
5	0.746	41	0.768	77	0.708	113	0.808	149	0.815	185	0.924	221	0.900	257	0.962	293	0.824
6	0.747	42	0.764	78	0.709	114	0.808	150	0.826	186	0.914	222	0.905	258	0.961	294	0.820
7	0.749	43	0.759	79	0.710	115	0.808	151	0.837	187	0.905	223	0.911	259	0.961	295	0.818
8	0.752	44	0.755	80	0.711	116	0.807	152	0.848	188	0.895	224	0.916	260	0.960	296	0.816
9	0.755	45	0.751	81	0.713	117	0.805	153	0.859	189	0.886	225	0.921	261	0.959	297	0.816
10	0.758	46	0.747	82	0.714	118	0.803	154	0.871	190	0.876	226	0.925	262	0.958	298	0.815
11	0.762	47	0.743	83	0.716	119	0.801	155	0.882	191	0.868	227	0.929	263	0.956	299	0.816
12	0.766	48	0.739	84	0.717	120	0.798	156	0.893	192	0.859	228	0.934	264	0.955	300	0.817
13	0.770	49	0.736	85	0.720	121	0.795	157	0.905	193	0.852	229	0.937	265	0.953	301	0.820
14	0.775	50	0.733	86	0.722	122	0.791	158	0.916	194	0.844	230	0.941	266	0.951	302	0.823
15	0.779	51	0.730	87	0.724	123	0.787	159	0.926	195	0.838	231	0.944	267	0.949	303	0.827
16	0.783	52	0.727	88	0.727	124	0.783	160	0.937	196	0.832	232	0.947	268	0.947	304	0.832
17	0.787	53	0.724	89	0.730	125	0.779	161	0.946	197	0.827	233	0.949	269	0.944	305	0.838
18	0.791	54	0.722	90	0.733	126	0.775	162	0.955	198	0.823	234	0.951	270	0.941	306	0.844
19	0.795	55	0.720	91	0.736	127	0.770	163	0.963	199	0.820	235	0.953	271	0.937	307	0.852
20	0.798	56	0.717	92	0.739	128	0.766	164	0.971	200	0.817	236	0.955	272	0.934	308	0.859
21	0.801	57	0.716	93	0.743	129	0.762	165	0.978	201	0.816	237	0.956	273	0.929	309	0.868
22	0.803	58	0.714	94	0.747	130	0.758	166	0.984	202	0.815	238	0.958	274	0.925	310	0.876
23	0.805	59	0.713	95	0.751	131	0.755	167	0.989	203	0.816	239	0.959	275	0.921	311	0.886
24	0.807	60	0.711	96	0.755	132	0.752	168	0.993	204	0.816	240	0.960	276	0.916	312	0.895
25	0.808	61	0.710	97	0.759	133	0.749	169	0.996	205	0.818	241	0.961	277	0.911	313	0.904
26	0.808	62	0.709	98	0.764	134	0.747	170	0.999	206	0.820	242	0.961	278	0.905	314	0.914
27	0.808	63	0.708	99	0.768	135	0.746	171	0.999	207	0.824	243	0.962	279	0.900	315	0.924
28	0.808	64	0.708	100	0.772	136	0.745	172	1.000	208	0.827	244	0.962	280	0.894	316	0.933
29	0.806	65	0.707	101	0.776	137	0.746	173	0.999	209	0.832	245	0.963	281	0.888	317	0.942
30	0.805	66	0.707	102	0.780	138	0.746	174	0.997	210	0.836	246	0.963	282	0.882	318	0.951
31	0.803	67	0.706	103	0.784	139	0.749	175	0.994	211	0.841	247	0.963	283	0.876	319	0.959
32	0.801	68	0.706	104	0.788	140	0.751	176	0.991	212	0.846	248	0.963	284	0.870	320	0.967
33	0.798	69	0.706	105	0.792	141	0.755	177	0.985	213	0.852	249	0.963	285	0.864	321	0.974
34	0.795	70	0.706	106	0.795	142	0.760	178	0.980	214	0.858	250	0.963	286	0.858	322	0.980
35	0.792	71	0.706	107	0.798	143	0.766	179	0.974	215	0.864	251	0.963	287	0.852	323	0.985

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AZIMUTH PATTERN Horizontal Polarization

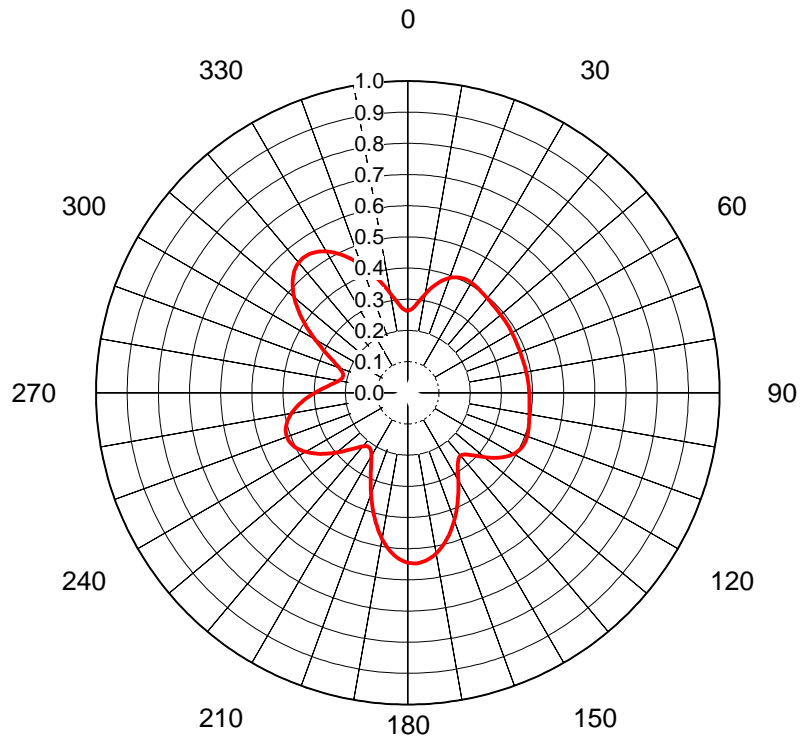
Proposal No. **C-70315-2**
Date **24-Feb-17**
Call Letters **WCWJ 20**
Frequency **509 mHz**
Antenna Type **TFU-24GTH/VP-R TC-C**

Gain **1.39 (1.44dB)**
Calculated

Directional
Drawing # **TFU-O6SP-H-20**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.739	36	0.785	72	0.692	108	0.798	144	0.759	180	0.970	216	0.857	252	0.995	288	0.831
1	0.737	37	0.781	73	0.692	109	0.800	145	0.767	181	0.962	217	0.864	253	0.994	289	0.825
2	0.734	38	0.779	74	0.692	110	0.803	146	0.775	182	0.954	218	0.872	254	0.993	290	0.820
3	0.734	39	0.772	75	0.693	111	0.804	147	0.784	183	0.945	219	0.879	255	0.993	291	0.816
4	0.733	40	0.768	76	0.694	112	0.805	148	0.793	184	0.936	220	0.886	256	0.992	292	0.811
5	0.735	41	0.763	77	0.695	113	0.805	149	0.804	185	0.926	221	0.893	257	0.990	293	0.808
6	0.736	42	0.758	78	0.696	114	0.805	150	0.814	186	0.916	222	0.900	258	0.989	294	0.805
7	0.738	43	0.754	79	0.697	115	0.804	151	0.826	187	0.906	223	0.907	259	0.987	295	0.804
8	0.741	44	0.749	80	0.698	116	0.803	152	0.837	188	0.896	224	0.914	260	0.985	296	0.802
9	0.745	45	0.744	81	0.700	117	0.801	153	0.849	189	0.886	225	0.921	261	0.983	297	0.802
10	0.748	46	0.740	82	0.702	118	0.799	154	0.860	190	0.876	226	0.927	262	0.980	298	0.802
11	0.753	47	0.736	83	0.704	119	0.796	155	0.872	191	0.866	227	0.933	263	0.978	299	0.805
12	0.757	48	0.731	84	0.706	120	0.793	156	0.884	192	0.857	228	0.939	264	0.975	300	0.807
13	0.762	49	0.727	85	0.708	121	0.789	157	0.896	193	0.848	229	0.944	265	0.971	301	0.810
14	0.767	50	0.724	86	0.711	122	0.785	158	0.907	194	0.840	230	0.950	266	0.968	302	0.814
15	0.772	51	0.720	87	0.714	123	0.781	159	0.918	195	0.833	231	0.955	267	0.963	303	0.820
16	0.776	52	0.717	88	0.717	124	0.776	160	0.929	196	0.826	232	0.959	268	0.959	304	0.826
17	0.781	53	0.714	89	0.720	125	0.772	161	0.939	197	0.820	233	0.963	269	0.955	305	0.833
18	0.785	54	0.711	90	0.724	126	0.767	162	0.949	198	0.814	234	0.968	270	0.950	306	0.840
19	0.789	55	0.708	91	0.727	127	0.762	163	0.958	199	0.810	235	0.971	271	0.944	307	0.848
20	0.793	56	0.706	92	0.731	128	0.757	164	0.966	200	0.807	236	0.975	272	0.939	308	0.857
21	0.796	57	0.704	93	0.736	129	0.753	165	0.973	201	0.805	237	0.978	273	0.933	309	0.866
22	0.799	58	0.702	94	0.740	130	0.748	166	0.980	202	0.802	238	0.980	274	0.927	310	0.876
23	0.800	59	0.700	95	0.744	131	0.745	167	0.986	203	0.802	239	0.983	275	0.921	311	0.886
24	0.803	60	0.698	96	0.749	132	0.741	168	0.991	204	0.802	240	0.985	276	0.914	312	0.896
25	0.804	61	0.697	97	0.754	133	0.738	169	0.994	205	0.804	241	0.987	277	0.907	313	0.906
26	0.805	62	0.696	98	0.758	134	0.736	170	0.998	206	0.805	242	0.989	278	0.900	314	0.916
27	0.805	63	0.695	99	0.763	135	0.735	171	0.999	207	0.808	243	0.990	279	0.893	315	0.926
28	0.805	64	0.694	100	0.768	136	0.733	172	1.000	208	0.811	244	0.992	280	0.886	316	0.936
29	0.804	65	0.693	101	0.772	137	0.734	173	0.999	209	0.816	245	0.993	281	0.879	317	0.945
30	0.803	66	0.692	102	0.777	138	0.734	174	0.998	210	0.820	246	0.993	282	0.872	318	0.954
31	0.800	67	0.692	103	0.781	139	0.737	175	0.995	211	0.825	247	0.994	283	0.864	319	0.962
32	0.798	68	0.692	104	0.785	140	0.739	176	0.993	212	0.831	248	0.995	284	0.857	320	0.970
33	0.795	69	0.692	105	0.789	141	0.743	177	0.988	213	0.837	249	0.995	285	0.850	321	0.976
34	0.792	70	0.692	106	0.792	142	0.747	178	0.983	214	0.844	250	0.995	286	0.844	322	0.983
35	0.789	71	0.692	107	0.795	143	0.753	179	0.976	215	0.850	251	0.995	287	0.837	323	0.988

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AZIMUTH PATTERN Vertical Polarization

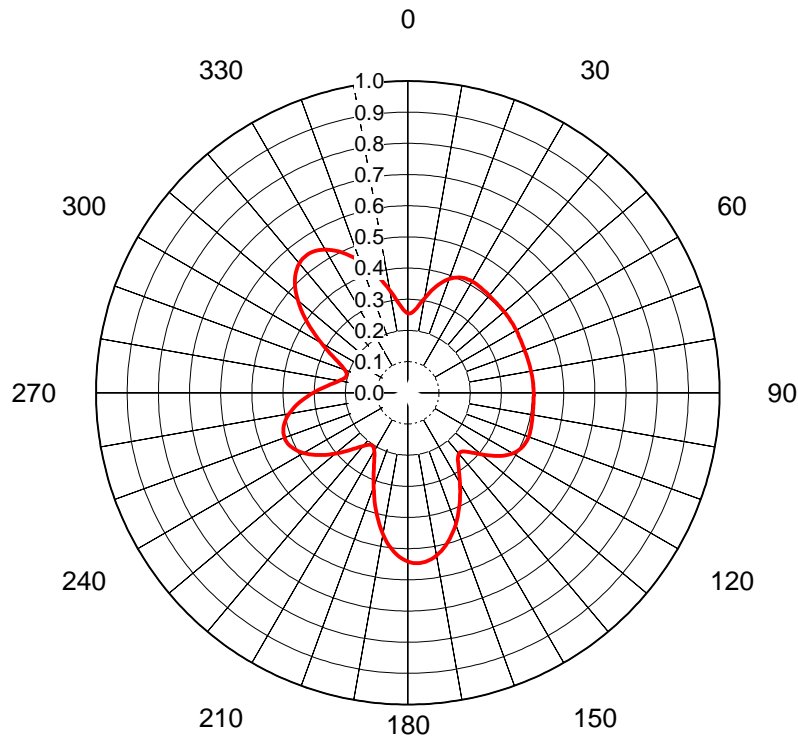
Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WJXT 18**
 Frequency **497 mHz**
 Antenna Type **TFU-24GTH/VP-R TC-C**

 Gain **2.03 (3.08dB)**
Calculated

 Directional
 Drawing # **TFU-O6SP-V-D18**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.263	36	0.401	72	0.383	108	0.406	144	0.274	180	0.545	216	0.214	252	0.411	288	0.222	324	0.547
1	0.264	37	0.400	73	0.384	109	0.407	145	0.280	181	0.542	217	0.215	253	0.410	289	0.227	325	0.545
2	0.267	39	0.397	74	0.384	110	0.408	146	0.287	182	0.538	218	0.217	254	0.407	290	0.234	326	0.542
3	0.270	40	0.396	75	0.384	111	0.408	147	0.295	183	0.534	219	0.220	255	0.404	291	0.241	327	0.539
4	0.275	41	0.395	76	0.384	112	0.408	148	0.304	184	0.528	220	0.224	256	0.400	292	0.250	328	0.534
5	0.281	42	0.394	77	0.385	113	0.408	149	0.314	185	0.521	221	0.229	257	0.396	293	0.259	329	0.529
6	0.288	43	0.393	78	0.385	114	0.407	150	0.324	186	0.514	222	0.235	258	0.391	294	0.269	330	0.523
7	0.296	44	0.392	79	0.385	115	0.406	151	0.335	187	0.506	223	0.242	259	0.385	295	0.281	331	0.517
8	0.304	45	0.392	80	0.386	116	0.405	152	0.346	188	0.496	224	0.248	260	0.379	296	0.292	332	0.510
9	0.313	46	0.391	81	0.386	117	0.402	153	0.357	189	0.486	225	0.256	261	0.372	297	0.305	333	0.502
10	0.321	47	0.391	82	0.386	118	0.400	154	0.369	190	0.476	226	0.264	262	0.365	298	0.318	334	0.494
11	0.330	48	0.390	83	0.387	119	0.396	155	0.380	191	0.464	227	0.272	263	0.358	299	0.331	335	0.485
12	0.338	49	0.390	84	0.387	120	0.392	156	0.391	192	0.452	228	0.281	264	0.350	300	0.345	336	0.476
13	0.347	50	0.389	85	0.388	121	0.387	157	0.403	193	0.440	229	0.289	265	0.341	301	0.358	337	0.467
14	0.355	51	0.389	86	0.388	122	0.382	158	0.414	194	0.427	230	0.298	266	0.333	302	0.372	338	0.457
15	0.362	52	0.389	87	0.388	123	0.376	159	0.425	195	0.414	231	0.307	267	0.324	303	0.386	339	0.446
16	0.370	53	0.388	88	0.389	124	0.370	160	0.436	196	0.400	232	0.316	268	0.316	304	0.400	340	0.436
17	0.376	54	0.388	89	0.389	125	0.362	161	0.446	197	0.386	233	0.324	269	0.307	305	0.414	341	0.425
18	0.382	55	0.388	90	0.389	126	0.355	162	0.457	198	0.372	234	0.333	270	0.298	306	0.427	342	0.414
19	0.387	56	0.387	91	0.390	127	0.347	163	0.467	199	0.358	235	0.341	271	0.289	307	0.440	343	0.403
20	0.392	57	0.387	92	0.390	128	0.338	164	0.476	200	0.345	236	0.350	272	0.281	308	0.452	344	0.391
21	0.396	58	0.386	93	0.391	129	0.330	165	0.485	201	0.331	237	0.358	273	0.272	309	0.464	345	0.380
22	0.400	59	0.386	94	0.391	130	0.321	166	0.494	202	0.318	238	0.365	274	0.264	310	0.476	346	0.369
23	0.402	60	0.386	95	0.392	131	0.313	167	0.502	203	0.305	239	0.372	275	0.256	311	0.486	347	0.357
24	0.405	61	0.385	96	0.392	132	0.304	168	0.510	204	0.292	240	0.379	276	0.248	312	0.496	348	0.346
25	0.406	62	0.385	97	0.393	133	0.296	169	0.517	205	0.281	241	0.385	277	0.242	313	0.506	349	0.335
26	0.407	63	0.385	98	0.394	134	0.288	170	0.523	206	0.269	242	0.391	278	0.235	314	0.514	350	0.324
27	0.408	64	0.384	99	0.395	135	0.281	171	0.529	207	0.259	243	0.396	279	0.229	315	0.521	351	0.314
28	0.408	65	0.384	100	0.396	136	0.275	172	0.534	208	0.250	244	0.400	280	0.224	316	0.528	352	0.304
29	0.408	66	0.384	101	0.397	137	0.270	173	0.539	209	0.241	245	0.404	281	0.220	317	0.534	353	0.295
30	0.408	67	0.384	102	0.398	138	0.267	174	0.542	210	0.234	246	0.407	282	0.217	318	0.538	354	0.287
31	0.407	68	0.383	103	0.400	139	0.264	175	0.545	211	0.227	247	0.410	283	0.215	319	0.542	355	0.280
32	0.406	69	0.383	104	0.401	140	0.263	176	0.547	212	0.222	248	0.411	284	0.214	320	0.545	356	0.274
33	0.405	70	0.383	105	0.402	141	0.264	177	0.548	213	0.218	249	0.413	285	0.214	321	0.547	357	0.269
34	0.404	71	0.383	106	0.404	142	0.266	178	0.548	214	0.216	250	0.413	286	0.216	322	0.548	358	0.266
35	0.402			107	0.405	143	0.269	179	0.547	215	0.214	251	0.413	287	0.218	323	0.548	359	0.264

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AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WCWJ 20**
 Frequency **509 mHz**
 Antenna Type **TFU-24GTH/VP-R TC-C**

 Gain **2.02 (3.05dB)**
Calculated

 Directional
 Drawing # **TFU-O6SP-V-D20**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.255	36	0.410	72	0.399	108	0.412	144	0.274	180	0.542	216	0.206	252	0.419	288	0.207
1	0.254	37	0.409	73	0.399	109	0.412	145	0.282	181	0.538	217	0.209	253	0.418	289	0.210
2	0.255	38	0.409	74	0.400	110	0.413	146	0.291	182	0.533	218	0.212	254	0.415	290	0.215
3	0.258	39	0.407	75	0.400	111	0.412	147	0.301	183	0.527	219	0.217	255	0.412	291	0.221
4	0.262	40	0.407	76	0.400	112	0.412	148	0.312	184	0.520	220	0.223	256	0.408	292	0.228
5	0.267	41	0.406	77	0.400	113	0.411	149	0.323	185	0.512	221	0.229	257	0.403	293	0.237
6	0.274	42	0.406	78	0.401	114	0.409	150	0.334	186	0.503	222	0.236	258	0.398	294	0.246
7	0.281	43	0.405	79	0.401	115	0.407	151	0.346	187	0.494	223	0.243	259	0.393	295	0.257
8	0.290	44	0.405	80	0.401	116	0.405	152	0.358	188	0.483	224	0.251	260	0.386	296	0.268
9	0.298	45	0.405	81	0.402	117	0.402	153	0.370	189	0.472	225	0.259	261	0.380	297	0.280
10	0.308	46	0.404	82	0.402	118	0.398	154	0.382	190	0.460	226	0.268	262	0.372	298	0.293
11	0.317	47	0.404	83	0.402	119	0.393	155	0.394	191	0.448	227	0.276	263	0.365	299	0.307
12	0.326	48	0.404	84	0.403	120	0.388	156	0.405	192	0.435	228	0.285	264	0.357	300	0.321
13	0.336	49	0.404	85	0.403	121	0.383	157	0.417	193	0.421	229	0.294	265	0.348	301	0.335
14	0.345	50	0.404	86	0.403	122	0.376	158	0.428	194	0.407	230	0.303	266	0.340	302	0.349
15	0.353	51	0.404	87	0.403	123	0.369	159	0.439	195	0.393	231	0.313	267	0.331	303	0.364
16	0.361	52	0.404	88	0.404	124	0.361	160	0.449	196	0.378	232	0.322	268	0.322	304	0.378
17	0.369	53	0.403	89	0.404	125	0.353	161	0.459	197	0.364	233	0.331	269	0.313	305	0.393
18	0.376	54	0.403	90	0.404	126	0.345	162	0.469	198	0.349	234	0.340	270	0.303	306	0.407
19	0.383	55	0.403	91	0.405	127	0.336	163	0.479	199	0.335	235	0.348	271	0.294	307	0.421
20	0.388	56	0.403	92	0.404	128	0.326	164	0.487	200	0.321	236	0.357	272	0.285	308	0.435
21	0.393	57	0.402	93	0.404	129	0.317	165	0.496	201	0.307	237	0.365	273	0.276	309	0.448
22	0.398	58	0.402	94	0.404	130	0.308	166	0.504	202	0.293	238	0.372	274	0.268	310	0.460
23	0.402	59	0.402	95	0.405	131	0.298	167	0.511	203	0.280	239	0.380	275	0.259	311	0.472
24	0.405	60	0.401	96	0.405	132	0.290	168	0.518	204	0.268	240	0.386	276	0.251	312	0.483
25	0.407	61	0.401	97	0.405	133	0.281	169	0.525	205	0.257	241	0.393	277	0.243	313	0.494
26	0.409	62	0.401	98	0.406	134	0.274	170	0.530	206	0.246	242	0.398	278	0.236	314	0.503
27	0.411	63	0.400	99	0.406	135	0.267	171	0.535	207	0.237	243	0.403	279	0.229	315	0.512
28	0.412	64	0.400	100	0.407	136	0.262	172	0.539	208	0.228	244	0.408	280	0.223	316	0.520
29	0.412	65	0.400	101	0.407	137	0.258	173	0.543	209	0.221	245	0.412	281	0.217	317	0.527
30	0.413	66	0.400	102	0.408	138	0.255	174	0.545	210	0.215	246	0.415	282	0.212	318	0.533
31	0.412	67	0.399	103	0.409	139	0.254	175	0.547	211	0.210	247	0.418	283	0.209	319	0.538
32	0.412	68	0.399	104	0.410	140	0.255	176	0.548	212	0.207	248	0.419	284	0.206	320	0.542
33	0.412	69	0.399	105	0.410	141	0.258	177	0.548	213	0.205	249	0.421	285	0.204	321	0.545
34	0.411	70	0.399	106	0.411	142	0.262	178	0.547	214	0.204	250	0.421	286	0.204	322	0.547
35	0.410	71	0.399	107	0.412	143	0.267	179	0.545	215	0.204	251	0.421	287	0.205	323	0.548

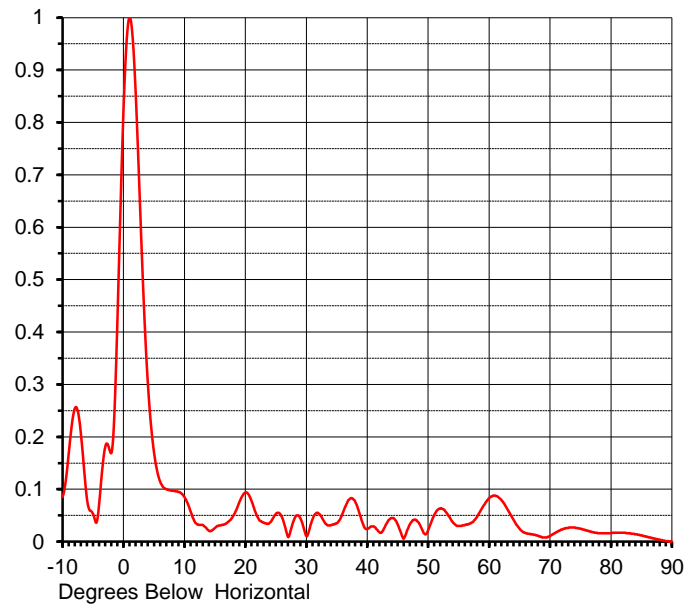
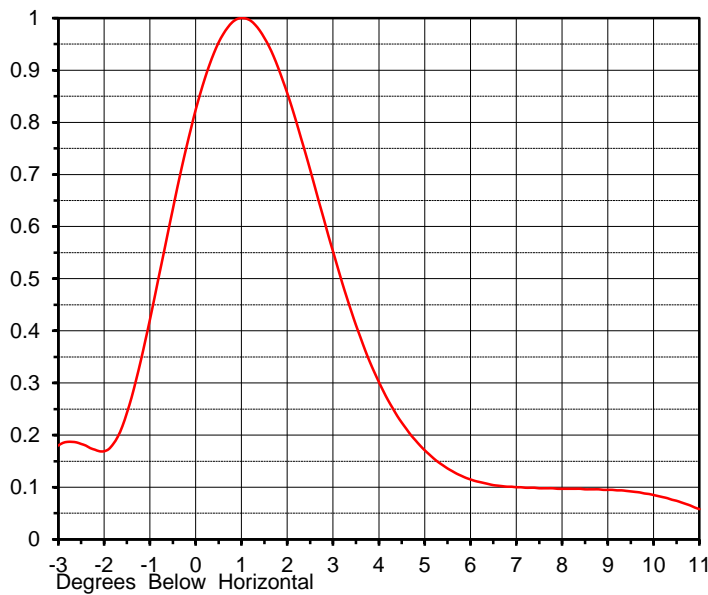
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ELEVATION PATTERN

Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WJXT 18**
 Frequency **497 mHz**
 Antenna Type **TFU-24GTH/VP-R TC-O6S**

RMS Directivity at Main Lobe **18.80 (12.74 dB)**
 RMS Directivity at Horizontal **12.80 (11.07 dB)**
Calculated

Beam Tilt **1.00 deg**
 Drawing Number **24G188100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.085	10.0	0.085	30.0	0.011	50.0	0.022	70.0	0.011
-9.0	0.167	11.0	0.058	31.0	0.042	51.0	0.051	71.0	0.018
-8.0	0.254	12.0	0.034	32.0	0.054	52.0	0.063	72.0	0.023
-7.0	0.207	13.0	0.032	33.0	0.037	53.0	0.055	73.0	0.026
-6.0	0.082	14.0	0.021	34.0	0.031	54.0	0.038	74.0	0.027
-5.0	0.053	15.0	0.026	35.0	0.035	55.0	0.030	75.0	0.025
-4.0	0.072	16.0	0.031	36.0	0.055	56.0	0.032	76.0	0.021
-3.0	0.180	17.0	0.036	37.0	0.080	57.0	0.035	77.0	0.018
-2.0	0.169	18.0	0.049	38.0	0.077	58.0	0.047	78.0	0.016
-1.0	0.421	19.0	0.075	39.0	0.044	59.0	0.067	79.0	0.016
0.0	0.824	20.0	0.094	40.0	0.024	60.0	0.083	80.0	0.016
1.0	1.000	21.0	0.078	41.0	0.029	61.0	0.088	81.0	0.017
2.0	0.856	22.0	0.047	42.0	0.018	62.0	0.080	82.0	0.017
3.0	0.552	23.0	0.036	43.0	0.031	63.0	0.062	83.0	0.016
4.0	0.302	24.0	0.036	44.0	0.045	64.0	0.042	84.0	0.014
5.0	0.171	25.0	0.053	45.0	0.033	65.0	0.025	85.0	0.012
6.0	0.115	26.0	0.047	46.0	0.006	66.0	0.016	86.0	0.009
7.0	0.100	27.0	0.009	47.0	0.033	67.0	0.014	87.0	0.006
8.0	0.097	28.0	0.042	48.0	0.041	68.0	0.011	88.0	0.004
9.0	0.095	29.0	0.045	49.0	0.023	69.0	0.008	89.0	0.001
								90.0	0.000

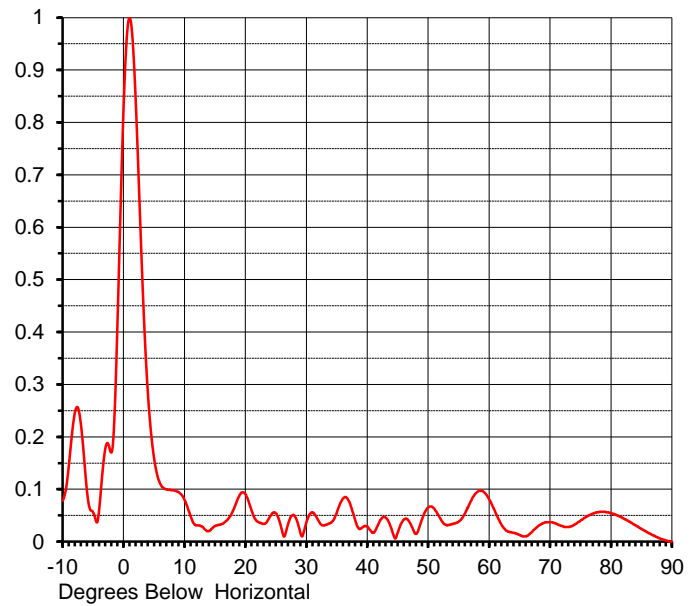
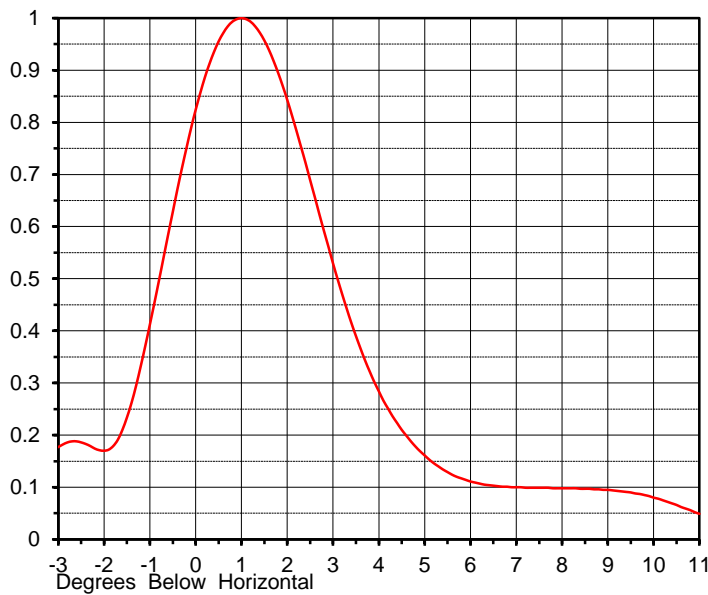
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ELEVATION PATTERN

Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WCWJ 20**
 Frequency **509 MHz**
 Antenna Type **TFU-24GTH/VP-R TC-O6S**

RMS Directivity at Main Lobe **18.90 (12.76 dB)**
 RMS Directivity at Horizontal **12.80 (11.07 dB)**
Calculated

Beam Tilt **1.00 deg**
 Drawing Number **24G189100**

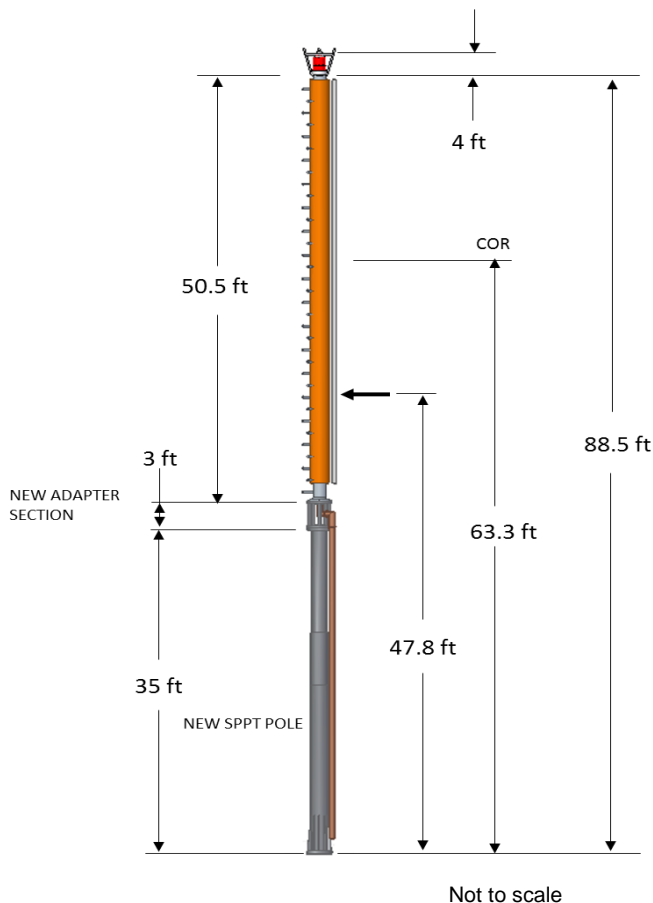


Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.078	10.0	0.080	30.0	0.036	50.0	0.065	70.0	0.037
-9.0	0.142	11.0	0.049	31.0	0.056	51.0	0.063	71.0	0.034
-8.0	0.245	12.0	0.031	32.0	0.040	52.0	0.044	72.0	0.030
-7.0	0.225	13.0	0.028	33.0	0.031	53.0	0.032	73.0	0.028
-6.0	0.097	14.0	0.020	34.0	0.036	54.0	0.034	74.0	0.032
-5.0	0.056	15.0	0.030	35.0	0.055	55.0	0.038	75.0	0.040
-4.0	0.060	16.0	0.033	36.0	0.082	56.0	0.053	76.0	0.048
-3.0	0.177	17.0	0.041	37.0	0.077	57.0	0.077	77.0	0.053
-2.0	0.170	18.0	0.060	38.0	0.042	58.0	0.094	78.0	0.056
-1.0	0.412	19.0	0.087	39.0	0.025	59.0	0.096	79.0	0.057
0.0	0.824	20.0	0.091	40.0	0.029	60.0	0.081	80.0	0.054
1.0	1.000	21.0	0.060	41.0	0.017	61.0	0.057	81.0	0.050
2.0	0.843	22.0	0.038	42.0	0.038	62.0	0.033	82.0	0.045
3.0	0.529	23.0	0.034	43.0	0.046	63.0	0.020	83.0	0.038
4.0	0.284	24.0	0.047	44.0	0.024	64.0	0.017	84.0	0.031
5.0	0.161	25.0	0.054	45.0	0.017	65.0	0.013	85.0	0.024
6.0	0.111	26.0	0.022	46.0	0.042	66.0	0.010	86.0	0.018
7.0	0.100	27.0	0.033	47.0	0.036	67.0	0.018	87.0	0.012
8.0	0.098	28.0	0.050	48.0	0.015	68.0	0.029	88.0	0.006
9.0	0.095	29.0	0.018	49.0	0.043	69.0	0.036	89.0	0.002
								90.0	0.000

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MECHANICALS

Proposal No. **C-70315-2**
 Date **24-Feb-17**
 Call Letters **WJXT** **18**
 Frequency **497 MHz**
 Antenna Type **TFU-24GTH/VP-R TC-C**



Top of Stack

Mechanical Specification without ice TIA-222-G

Height AGL(z) 882 ft (268.8 m)
 Basic Wind Speed 108 m/h (173.8 km/h)

Structure Class III
 Exposure Category C
 Topography Category 1

Mechanical Specifications

		antenna only	full stack
Height with Lightning Protector	H4	54.5 ft (16.6m)	92.5 ft (28.2m)
Height less Lightning Protector	H2	50.5 ft (15.4m)	88.5 ft (27m)
Height of Center of Radiation	H3	25.25 ft (7.7m)	63.3 ft (19.3m)
Effective Projected Area	(EPA) _S	148.8 ft ² (13.8m ²)	238.2 ft ² (22.1m ²)
Moment Arm	D1	26.3 ft (8m)	48.1 ft (14.7m)

Weight W 13100 lb (5.9t) 30100 lb (13.7t)

Antenna designed in accordance with AISC specifications for design of structural steel as prescribed by TIA-222-G

Prepared by: CAB
 Rev. No.2 by: RMS

Date: 24-Feb-17
 Date: 21-Nov-17

ME: 

EE:

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Summary

Proposal No.	C-70315-2	
Date	24-Feb-17	
Call Letters	WJXT	18 DTV
Frequency	497 MHz	
Antenna Type	TFU-24GTH/VP-R TC-O6SI	

Antenna

	Hpol	Vpol
ERP:	1000.0 kW (30.00 dBk)	300.0 kW (24.77 dBk)
Peak Gain*	21.60 (13.35 dB)	6.48 (8.12 dB)

Antenna Input Power **46.3 kW (16.65 dBk)**

Transmission Line

Type	Rigid	Attenuation	(0.88 dB)
Size	8-3/16"	Efficiency	81.6%
Impedence	75 Ohm		
Length	1090 ft	332.2 m	

Transmitter Output

56.7 kW (17.54 dBk)

Transmitter filter losses not included

* Directivity and Gain are with respect to half wave dipole.

**Antenna Gain includes feed system losses

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Summary

Proposal No.	C-70315-2
Date	24-Feb-17
Call Letters	WCWJ 20
Frequency	509 MHz
Antenna Type	TFU-24GTH/VP-R TC-O6SI

Antenna

	Hpol	Vpol
ERP:	750.0 kW (28.75 dBk)	225.0 kW (23.52 dBk)
Peak Gain*	21.81 (13.39 dB)	6.54 (8.16 dB)

Antenna Input Power	34.4 kW (15.36 dBk)
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Transmission Line

Type	Rigid	Attenuation	(0.89 dB)
Size	8-3/16"	Efficiency	81.4%
Impedence	75 Ohm		
Length	1090 ft	332.2 m	

Transmitter Output

42.2 kW (16.26 dBk)

Transmitter filter losses not included

* Directivity and Gain are with respect to half wave dipole.

**Antenna Gain includes feed system losses

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