Antenna Model: **TFU-8WB-R C160**

Reference Number:	**20200504WTG**
Date:	**4-May-20**
Customer:	**TEGNA**
Location:	**Greensboro, NORTH CAROLINA**

Electrical Specifications

Polarization:	**Horizontal**		
Azimuth Pattern:	**C160**		
Antenna Input:	**4-1/16 in 50 Ohm EIA/DCA**		
VSWR:	Channel	**1.15:1**	Band **1.15:1**
Bandwidth:	**470-698 MHz**		
Rated Input Power:	**20 kW**	**(13.01 dBk)**	**Maximum Average Power**

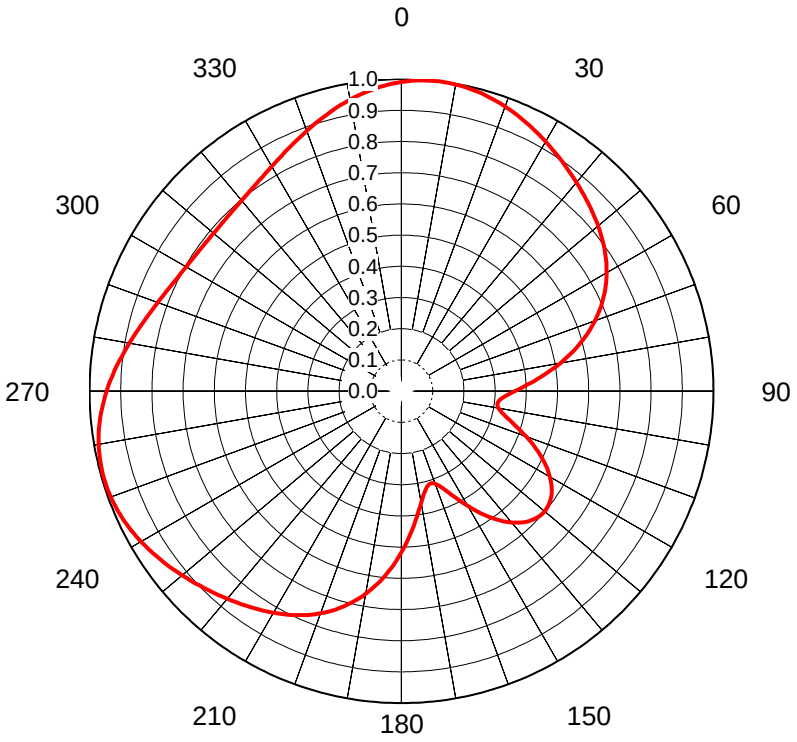
Mechanical Specifications

Mounting:	**Side Mounted**
Environmental Protection:	**Full Radome**
Height:	**14.4 ft (4.4m)**
Weight:	**570 lb (259 kg)** mounts excluded
Effective Projected Area:	**23.9 ft² (2.2m²)**

Channel Specifications

Call	Ch	Freq	Hpol ERP	TPO	Peak Gain Main Lobe Hpol	Peak Gain at Horizontal Hpol
WFMY	35	599	268 kW (24.28 dBk)	33.4 kW (15.24 dBk)	13.44 (11.28dB)	12.57 (10.99dB)

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AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**20200504WTG**
Date	**4-May-20**
Call Letters	**WFMY**
Channel	**35**
Frequency	**599 MHz**
Antenna Type	**TFU-8WB-R C160**
Gain	**1.69 (2.27dB)**
	Calculated
Pattern Number	**WB-C160-35 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.991	36	0.893	72	0.634	108	0.397	144	0.506	180	0.517	216	0.850	252	0.993	288	0.840	324	0.808
1	0.993	37	0.888	73	0.621	109	0.411	145	0.493	181	0.532	217	0.855	253	0.994	289	0.835	325	0.812
2	0.995	38	0.883	74	0.607	110	0.425	146	0.480	182	0.548	218	0.859	254	0.994	290	0.831	326	0.815
3	0.997	39	0.878	75	0.593	111	0.439	147	0.467	183	0.563	219	0.864	255	0.993	291	0.826	327	0.819
4	0.998	40	0.873	76	0.578	112	0.453	148	0.453	184	0.578	220	0.869	256	0.992	292	0.822	328	0.823
5	0.999	41	0.868	77	0.563	113	0.466	149	0.439	185	0.593	221	0.874	257	0.991	293	0.818	329	0.827
6	1.000	42	0.863	78	0.548	114	0.480	150	0.425	186	0.607	222	0.879	258	0.990	294	0.814	330	0.832
7	1.000	43	0.858	79	0.532	115	0.493	151	0.411	187	0.621	223	0.883	259	0.988	295	0.811	331	0.837
8	1.000	44	0.853	80	0.517	116	0.505	152	0.398	188	0.634	224	0.888	260	0.986	296	0.808	332	0.842
9	0.999	45	0.848	81	0.501	117	0.517	153	0.384	189	0.647	225	0.893	261	0.983	297	0.805	333	0.847
10	0.998	46	0.843	82	0.485	118	0.529	154	0.371	190	0.659	226	0.898	262	0.980	298	0.802	334	0.852
11	0.997	47	0.838	83	0.468	119	0.539	155	0.359	191	0.671	227	0.903	263	0.977	299	0.799	335	0.858
12	0.995	48	0.833	84	0.452	120	0.549	156	0.348	192	0.683	228	0.908	264	0.973	300	0.797	336	0.863
13	0.993	49	0.828	85	0.436	121	0.558	157	0.338	193	0.694	229	0.913	265	0.969	301	0.795	337	0.869
14	0.991	50	0.823	86	0.421	122	0.567	158	0.329	194	0.704	230	0.918	266	0.965	302	0.793	338	0.875
15	0.988	51	0.817	87	0.405	123	0.574	159	0.322	195	0.714	231	0.923	267	0.960	303	0.792	339	0.881
16	0.985	52	0.812	88	0.391	124	0.581	160	0.316	196	0.724	232	0.928	268	0.955	304	0.790	340	0.888
17	0.982	53	0.806	89	0.377	125	0.586	161	0.312	197	0.733	233	0.933	269	0.950	305	0.789	341	0.894
18	0.979	54	0.800	90	0.364	126	0.591	162	0.310	198	0.742	234	0.938	270	0.945	306	0.788	342	0.900
19	0.975	55	0.794	91	0.351	127	0.594	163	0.311	199	0.750	235	0.943	271	0.940	307	0.788	343	0.906
20	0.971	56	0.788	92	0.341	128	0.597	164	0.313	200	0.758	236	0.947	272	0.934	308	0.787	344	0.913
21	0.967	57	0.781	93	0.331	129	0.599	165	0.317	201	0.765	237	0.952	273	0.928	309	0.787	345	0.919
22	0.962	58	0.774	94	0.323	130	0.599	166	0.323	202	0.773	238	0.956	274	0.922	310	0.787	346	0.925
23	0.958	59	0.767	95	0.317	131	0.599	167	0.331	203	0.780	239	0.960	275	0.916	311	0.787	347	0.931
24	0.953	60	0.759	96	0.313	132	0.597	168	0.340	204	0.786	240	0.964	276	0.910	312	0.787	348	0.937
25	0.949	61	0.751	97	0.311	133	0.595	169	0.351	205	0.792	241	0.968	277	0.904	313	0.788	349	0.943
26	0.944	62	0.743	98	0.310	134	0.591	170	0.364	206	0.798	242	0.972	278	0.898	314	0.788	350	0.949
27	0.939	63	0.734	99	0.312	135	0.586	171	0.377	207	0.804	243	0.975	279	0.892	315	0.789	351	0.954
28	0.934	64	0.725	100	0.316	136	0.581	172	0.391	208	0.810	244	0.979	280	0.886	316	0.791	352	0.959
29	0.929	65	0.715	101	0.322	137	0.575	173	0.405	209	0.815	245	0.982	281	0.880	317	0.792	353	0.964
30	0.923	66	0.705	102	0.329	138	0.567	174	0.421	210	0.820	246	0.984	282	0.874	318	0.794	354	0.969
31	0.918	67	0.694	103	0.338	139	0.559	175	0.436	211	0.826	247	0.987	283	0.868	319	0.795	355	0.973
32	0.913	68	0.683	104	0.348	140	0.550	176	0.452	212	0.831	248	0.989	284	0.862	320	0.798	356	0.978
33	0.908	69	0.672	105	0.359	141	0.540	177	0.468	213	0.836	249	0.990	285	0.856	321	0.800	357	0.981
34	0.903	70	0.660	106	0.371	142	0.529	178	0.484	214	0.840	250	0.992	286	0.851	322	0.802	358	0.985
35	0.898	71	0.647	107	0.384	143	0.518	179	0.501	215	0.845	251	0.993	287	0.845	323	0.805	359	0.988

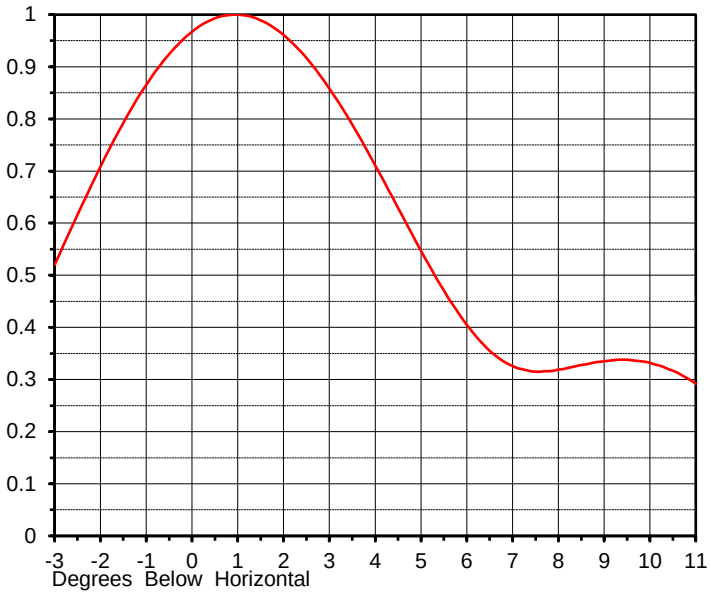
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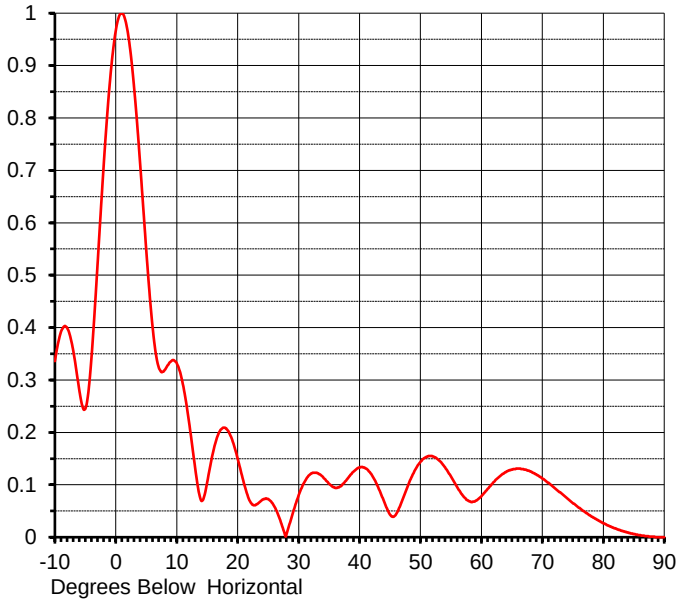
ELEVATION PATTERN

Proposal No.	**20200504WTG**
Date	**4-May-20**
Call Letters	**WFMY**
Channel	**35**
Frequency	**599 MHz**
Antenna Type	**TFU-8WB-R C160**

RMS Directivity at Main Lobe	**8.0 (9.01 dB)**	Beam Tilt	**1.05 deg**
RMS Directivity at Horizontal	**7.5 (8.75 dB)**	Pattern Number	**08W080105-35**

Calculated





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.336	10.0	0.332	30.0	0.080	50.0	0.144	70.0	0.112
-9.0	0.392	11.0	0.292	31.0	0.106	51.0	0.153	71.0	0.104
-8.0	0.400	12.0	0.221	32.0	0.121	52.0	0.154	72.0	0.094
-7.0	0.357	13.0	0.134	33.0	0.123	53.0	0.147	73.0	0.085
-6.0	0.281	14.0	0.070	34.0	0.115	54.0	0.134	74.0	0.075
-5.0	0.245	15.0	0.105	35.0	0.102	55.0	0.116	75.0	0.065
-4.0	0.342	16.0	0.164	36.0	0.094	56.0	0.096	76.0	0.056
-3.0	0.520	17.0	0.201	37.0	0.098	57.0	0.079	77.0	0.048
-2.0	0.708	18.0	0.208	38.0	0.111	58.0	0.069	78.0	0.040
-1.0	0.865	19.0	0.189	39.0	0.125	59.0	0.069	79.0	0.033
0.0	0.967	20.0	0.150	40.0	0.133	60.0	0.078	80.0	0.027
1.0	1.000	21.0	0.104	41.0	0.131	61.0	0.092	81.0	0.021
2.0	0.961	22.0	0.069	42.0	0.119	62.0	0.105	82.0	0.017
3.0	0.858	23.0	0.062	43.0	0.097	63.0	0.116	83.0	0.012
4.0	0.711	24.0	0.071	44.0	0.069	64.0	0.124	84.0	0.009
5.0	0.547	25.0	0.073	45.0	0.043	65.0	0.129	85.0	0.006
6.0	0.405	26.0	0.059	46.0	0.044	66.0	0.131	86.0	0.004
7.0	0.326	27.0	0.032	47.0	0.070	67.0	0.129	87.0	0.002
8.0	0.319	28.0	0.005	48.0	0.100	68.0	0.126	88.0	0.001
9.0	0.335	29.0	0.044	49.0	0.126	69.0	0.120	89.0	0.000
								90.0	0.000

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Summary

Proposal No.	**20200504WTG**
Date	**4-May-20**
Call Letters	**WFMY**
Channel	**35**
Frequency	**599 MHz**
Antenna Type	**TFU-8WB-R C160**

Antenna

	Hpol	
ERP:	**268 kW**	**(24.28 dBk)**
Peak Gain	13.44	(11.28 dBd)

Antenna Input Power

19.9 kW **(13.00 dBk)**

Transmission Line

Type:	**Rigid**	Attenuation:	**(2.24 dB)**
Size:	**6-1/8"**	Efficiency:	**59.7%**
Impedance:	**75 Ohm**		
Length:	**1875 ft**	**571.5 m**	

Transmitter Output

33.4 kW **(15.24 dBk)**

Transmitter filter losses not included

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