

**Antenna Model:** **TLP-16C**

Reference Number: **wyes**  
 Date: **26-May-23**  
 Customer: **WYES - Aux ch 28**  
 Location: **New Orleans, LA**

### Electrical Specifications

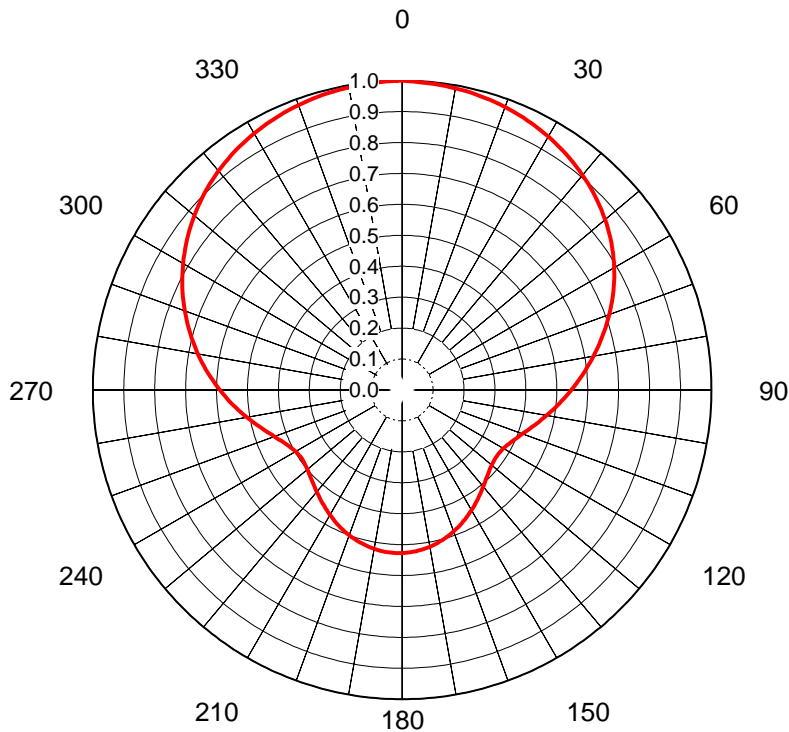
Polarization: **Horizontal**  
 Azimuth Pattern: **C**  
 Antenna Input: **1-5/8 50 Ohm**  
 VSWR: **Channel 1.08 : 1**  
 Bandwidth: **6 MHz**  
 Rated Input Power: **4.0 kW** **Maximum Average Power**

### Mechanical Specifications

Mounting: **Side Mounted**  
 Environmental Protection: **Slot Cover**  
 Height: **32.3 ft ( 9.8 m)**  
 Weight: **308 lb (140 kg)** Excludes Mounts  
 Effective Projected Area: **42.1 ft² (3.9 m²)** Basic Wind Speed: **90 mph (145 km/h)**

### Channel Specifications

Call	Ch	Freq	Hpol ERP	TPO	Peak Gain Main Lobe Hpol	Peak Gain at Horizontal Hpol
WYES	28	557	125 kW (20.97 dBk)	6.27 kW (7.97 dBk)	34.09 (15.33dB)	27.80 (14.44dB)



## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **wyes**  
Date **26-May-23**  
Call Letters **WYES**  
Channel **28**  
Frequency **557 MHz**  
Antenna Type **TLP-16C**  
Gain **2.09 (3.2dB)**  
Calculated

Pattern Number **TLP-C-28 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.924	72	0.696	108	0.425	144	0.424	180	0.527	216	0.444	252	0.452	288	0.733
1	0.999	37	0.920	73	0.687	109	0.420	145	0.428	181	0.528	217	0.440	253	0.459	289	0.741
2	0.998	38	0.916	74	0.679	110	0.414	146	0.432	182	0.528	218	0.437	254	0.465	290	0.748
3	0.997	39	0.912	75	0.670	111	0.410	147	0.437	183	0.528	219	0.433	255	0.472	291	0.755
4	0.996	40	0.907	76	0.662	112	0.405	148	0.441	184	0.527	220	0.430	256	0.479	292	0.763
5	0.995	41	0.903	77	0.653	113	0.401	149	0.445	185	0.527	221	0.426	257	0.487	293	0.770
6	0.995	42	0.898	78	0.645	114	0.396	150	0.449	186	0.526	222	0.423	258	0.494	294	0.777
7	0.994	43	0.893	79	0.637	115	0.393	151	0.453	187	0.525	223	0.419	259	0.502	295	0.784
8	0.993	44	0.889	80	0.628	116	0.389	152	0.457	188	0.524	224	0.416	260	0.510	296	0.791
9	0.992	45	0.884	81	0.620	117	0.386	153	0.461	189	0.523	225	0.413	261	0.517	297	0.798
10	0.990	46	0.878	82	0.611	118	0.383	154	0.465	190	0.522	226	0.410	262	0.525	298	0.804
11	0.989	47	0.873	83	0.603	119	0.381	155	0.469	191	0.520	227	0.407	263	0.533	299	0.811
12	0.988	48	0.868	84	0.595	120	0.378	156	0.472	192	0.518	228	0.405	264	0.541	300	0.818
13	0.986	49	0.862	85	0.587	121	0.377	157	0.476	193	0.517	229	0.402	265	0.549	301	0.824
14	0.985	50	0.857	86	0.579	122	0.375	158	0.480	194	0.515	230	0.400	266	0.557	302	0.830
15	0.983	51	0.851	87	0.571	123	0.374	159	0.483	195	0.512	231	0.398	267	0.565	303	0.837
16	0.981	52	0.845	88	0.563	124	0.373	160	0.487	196	0.510	232	0.396	268	0.573	304	0.843
17	0.980	53	0.839	89	0.555	125	0.373	161	0.490	197	0.508	233	0.395	269	0.581	305	0.849
18	0.978	54	0.833	90	0.547	126	0.373	162	0.493	198	0.505	234	0.394	270	0.590	306	0.855
19	0.976	55	0.826	91	0.539	127	0.374	163	0.497	199	0.503	235	0.393	271	0.598	307	0.860
20	0.973	56	0.820	92	0.532	128	0.375	164	0.500	200	0.500	236	0.393	272	0.606	308	0.866
21	0.971	57	0.813	93	0.524	129	0.376	165	0.502	201	0.497	237	0.394	273	0.614	309	0.872
22	0.969	58	0.806	94	0.517	130	0.378	166	0.505	202	0.494	238	0.395	274	0.622	310	0.877
23	0.966	59	0.799	95	0.510	131	0.380	167	0.508	203	0.491	239	0.396	275	0.630	311	0.882
24	0.964	60	0.792	96	0.502	132	0.382	168	0.510	204	0.488	240	0.398	276	0.638	312	0.887
25	0.961	61	0.784	97	0.495	133	0.385	169	0.513	205	0.484	241	0.400	277	0.646	313	0.892
26	0.958	62	0.777	98	0.488	134	0.387	170	0.515	206	0.481	242	0.403	278	0.654	314	0.897
27	0.955	63	0.769	99	0.481	135	0.390	171	0.517	207	0.477	243	0.406	279	0.663	315	0.902
28	0.952	64	0.761	100	0.474	136	0.394	172	0.519	208	0.474	244	0.410	280	0.671	316	0.907
29	0.949	65	0.754	101	0.468	137	0.397	173	0.520	209	0.470	245	0.414	281	0.679	317	0.911
30	0.946	66	0.746	102	0.461	138	0.401	174	0.522	210	0.467	246	0.419	282	0.686	318	0.916
31	0.942	67	0.737	103	0.455	139	0.404	175	0.523	211	0.463	247	0.423	283	0.694	319	0.920
32	0.939	68	0.729	104	0.448	140	0.408	176	0.524	212	0.459	248	0.429	284	0.702	320	0.924
33	0.935	69	0.721	105	0.442	141	0.412	177	0.525	213	0.455	249	0.434	285	0.710	321	0.928
34	0.932	70	0.713	106	0.436	142	0.416	178	0.526	214	0.452	250	0.440	286	0.718	322	0.932
35	0.928	71	0.704	107	0.430	143	0.420	179	0.527	215	0.448	251	0.446	287	0.725	323	0.935

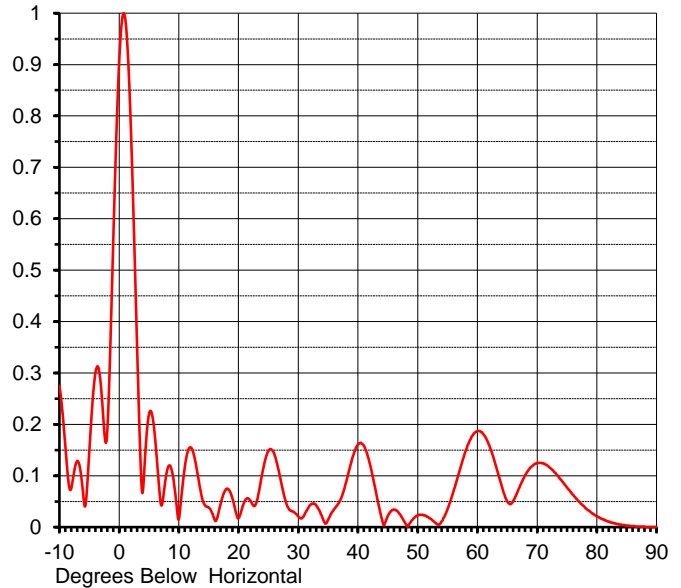
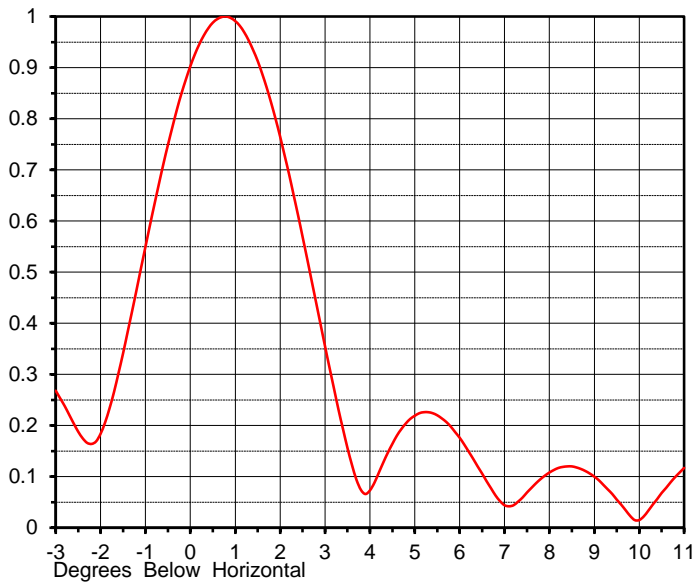
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## ELEVATION PATTERN

Proposal No. **wyes**  
 Date **26-May-23**  
 Call Letters **WYES**  
 Channel **28**  
 Frequency **557 MHz**  
 Antenna Type **TLP-16C**

RMS Directivity at Main Lobe **16.3 ( 12.13 dB )**  
 RMS Directivity at Horizontal **13.3 ( 11.24 dB )**  
**Calculated**

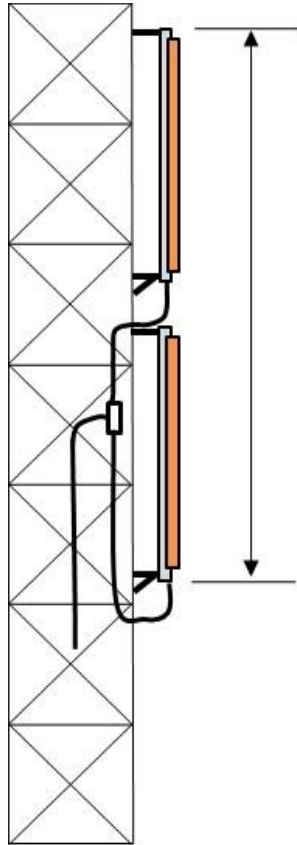
Beam Tilt **0.75 deg**  
 Pattern Number **16L163075-28**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.275	10.0	0.015	30.0	0.021	50.0	0.023	70.0	0.125
-9.0	0.157	11.0	0.117	31.0	0.023	51.0	0.023	71.0	0.124
-8.0	0.076	12.0	0.155	32.0	0.043	52.0	0.017	72.0	0.117
-7.0	0.129	13.0	0.113	33.0	0.042	53.0	0.008	73.0	0.106
-6.0	0.061	14.0	0.052	34.0	0.020	54.0	0.011	74.0	0.092
-5.0	0.146	15.0	0.038	35.0	0.014	55.0	0.035	75.0	0.077
-4.0	0.298	16.0	0.014	36.0	0.035	56.0	0.070	76.0	0.063
-3.0	0.268	17.0	0.045	37.0	0.052	57.0	0.109	77.0	0.050
-2.0	0.184	18.0	0.074	38.0	0.087	58.0	0.147	78.0	0.038
-1.0	0.550	19.0	0.055	39.0	0.132	59.0	0.175	79.0	0.029
0.0	0.903	20.0	0.017	40.0	0.161	60.0	0.187	80.0	0.021
1.0	0.991	21.0	0.050	41.0	0.158	61.0	0.181	81.0	0.015
2.0	0.765	22.0	0.051	42.0	0.123	62.0	0.159	82.0	0.011
3.0	0.355	23.0	0.048	43.0	0.069	63.0	0.123	83.0	0.007
4.0	0.073	24.0	0.106	44.0	0.016	64.0	0.083	84.0	0.005
5.0	0.219	25.0	0.148	45.0	0.022	65.0	0.050	85.0	0.003
6.0	0.176	26.0	0.142	46.0	0.034	66.0	0.051	86.0	0.002
7.0	0.044	27.0	0.095	47.0	0.025	67.0	0.076	87.0	0.001
8.0	0.108	28.0	0.046	48.0	0.006	68.0	0.101	88.0	0.001
9.0	0.100	29.0	0.031	49.0	0.013	69.0	0.117	89.0	0.000
								90.0	0.000

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## MECHANICAL SPECIFICATIONS



32.3 ft ( 9.8 m)

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 Call Letters **WYES**  
 Channel **28**  
 Frequency **557 MHz**  
 Antenna Type **TLP-16C**

### Preliminary Specifications

#### Side Mounted

With TIA-222-F

Basic Wind Speed 90 mph (145 km/h)

#### Mechanical Specifications

#### without ice

Height	H2	32.3 ft ( 9.8 m)	
Height of Center of Radiation	H3	16.2 ft (5 m)	
Effective Projected Area	(EPA) <sub>S</sub>	42.1 ft <sup>2</sup> (3.9 m <sup>2</sup> )	mounts excluded
Weight	W	308 lb (140 kg)	mounts excluded

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

Mechanical data is based on listed criteria and should be verified by the tower engineer.

**Prepared by:** Benco

**Date:** 26-May-23

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## Summary

Proposal No.	<b>wyes</b>
Date	<b>26-May-23</b>
Call Letters	<b>WYES</b>
Channel	<b>28</b>
Frequency	<b>557 MHz</b>
Antenna Type	<b>TLP-16C</b>

## Antenna

		Hpol
ERP:	<b>125 kW</b>	<b>( 20.97 dBk )</b>
Peak Gain	34.09	( 15.33 dBd )

<b>Antenna Input Power</b>	<b>3.67 kW</b>	<b>( 5.64 dBk )</b>
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## Transmission Line

Type:	<b>Flexline Air</b>	Attenuation:	<b>( 2.33 dB )</b>
Size:	<b>3"</b>	Efficiency:	<b>58.5%</b>
Impedance:	<b>50 Ohm</b>		
Length:	<b>600 ft</b>	<b>182.9 m</b>	

## Transmitter Output

	<b>6.27 kW</b>	<b>( 7.97 dBk )</b>
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Transmitter filter losses not included

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