

ENGINEERING EXHIBIT

Application for License To Cover BMPCDT-20081217AAL

prepared for

Esteem Broadcasting of North Carolina LLC

WYDO(DT) Greenville, NC

Facility ID 35582

Ch. 47 200 kW 542 m

Esteem Broadcasting of North Carolina LLC (“*Esteem*”) is licensee of WYDO(DT), Facility ID 35582, Greenville, NC. *Esteem* has completed construction related to the channel change and relocation of the WYDO digital television facility as authorized in its construction permit (“CP,” file number BMPCDT-20081217AAL). The CP authorizes operation on Channel 47 using a directional antenna at 200 kW effective radiated power (“ERP”) at 542 meters antenna height above average terrain (“HAAT”).

The CP specifies a horizontally polarized antenna, Dielectric model TLP-16M(C). *Esteem* installed an alternate antenna having the same directional pattern, a Dielectric TFU-16DSB-M/VP. The as-built antenna is elliptically polarized, with 20 percent vertical polarization. The maximum horizontally polarized ERP is 200 kW as specified in the CP, and the maximum vertically polarized ERP is 40 kW. The vertically polarized component does not exceed the horizontally polarized component at any azimuth.

The directional antenna’s azimuthal patterns are depicted in **Figures 1** and **1A** for horizontal and vertical polarization, respectively. There is no change to the horizontally polarized directional pattern from that as authorized in the CP or the amount of electrical beamtilt (1.5 degrees). The antenna’s elevation pattern is depicted in **Figures 2** and **2A**.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



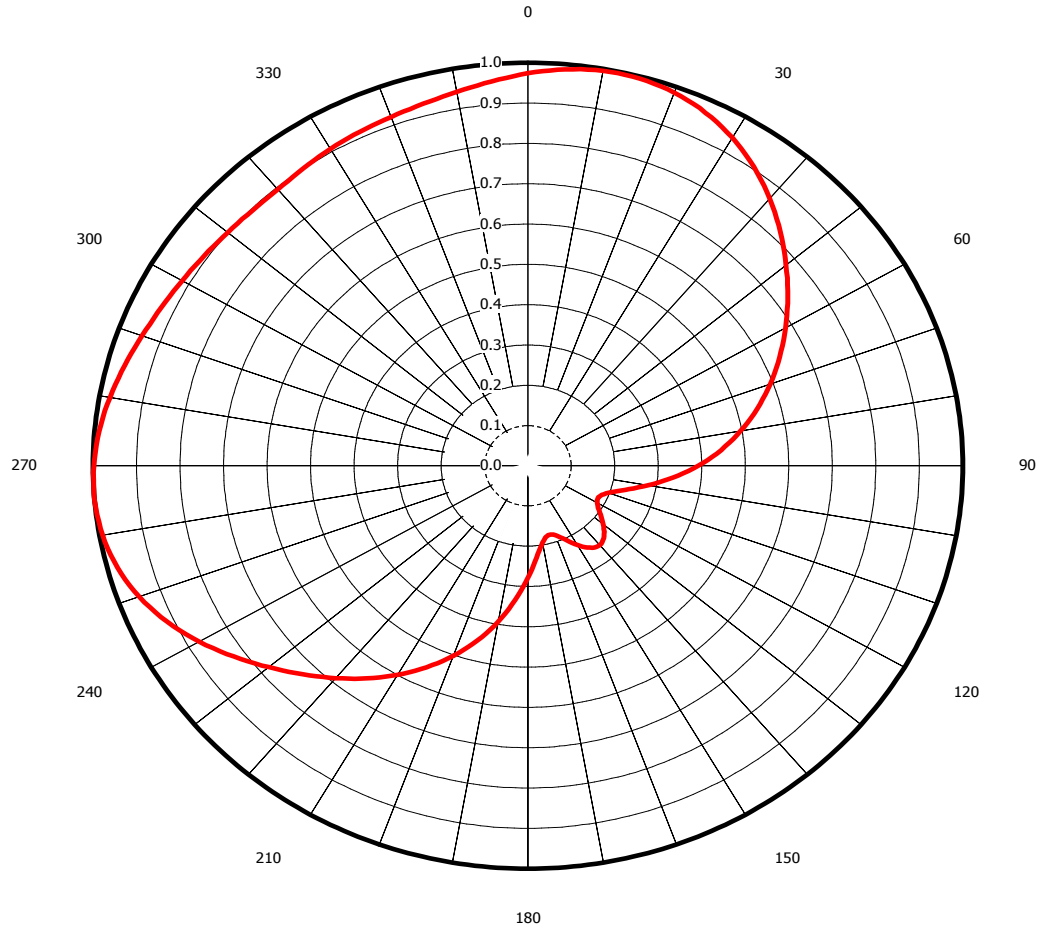
Joseph M. Davis, P.E.
August 4, 2009

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

Figure 1, 1A Antenna Horizontal Plane Pattern
Figure 2, 2A Antenna Vertical Plane (Elevation) Pattern

**Azimuth Pattern - Relative Field
(True North)**



Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field
0	0.974	90	0.392	180	0.278	270	0.998
10	0.995	100	0.280	190	0.393	280	0.976
20	0.985	110	0.197	200	0.502	290	0.944
30	0.940	120	0.184	210	0.599	300	0.918
40	0.865	130	0.226	220	0.688	310	0.901
50	0.775	140	0.257	230	0.778	320	0.895
60	0.684	150	0.227	240	0.873	330	0.908
70	0.593	160	0.183	250	0.951	340	0.921
80	0.497	170	0.194	260	0.993	350	0.942

Additional Azimuths (°T):	13	116	164	267
Relative Field:	0.996	0.179	0.178	1.000

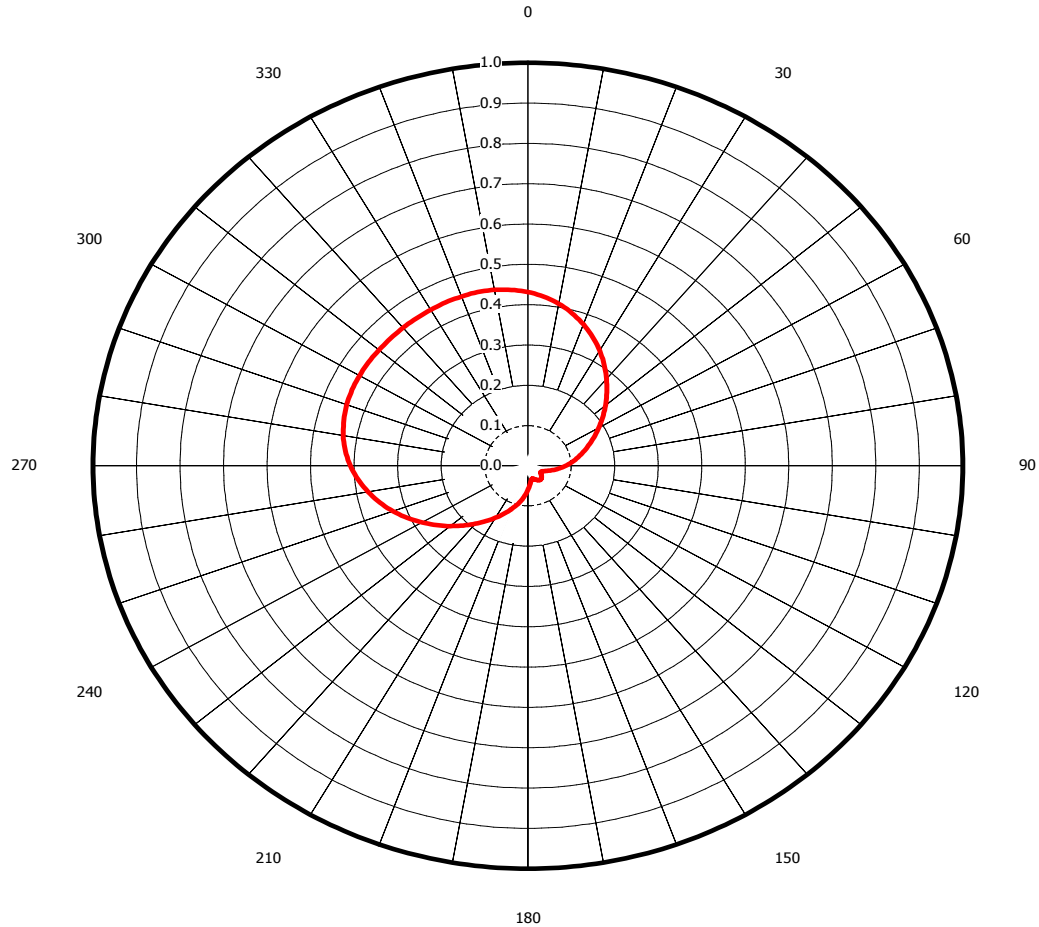


Figure 1
Antenna Horizontal Plane Pattern
Horizontal Polarization
WYDO(DT) Greenville, NC
Facility ID 35582
Ch. 47 200 kW 542 m

prepared for
**Esteem Broadcasting
of North Carolina LLC**

August, 2009

**Azimuth Pattern - Relative Field
(True North)**



Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field	Azimuth (°T)	Relative Field
0	0.431	90	0.087	180	0.060	270	0.408
10	0.408	100	0.060	190	0.087	280	0.431
20	0.373	110	0.039	200	0.116	290	0.443
30	0.330	120	0.034	210	0.149	300	0.447
40	0.281	130	0.041	220	0.188	310	0.447
50	0.233	140	0.045	230	0.233	320	0.447
60	0.188	150	0.041	240	0.281	330	0.447
70	0.149	160	0.034	250	0.330	340	0.447
80	0.116	170	0.039	260	0.373	350	0.443



Figure 1A
Antenna Horizontal Plane Pattern
Vertical Polarization
WYDO(DT) Greenville, NC
Facility ID 35582
Ch. 47 200 kW 542 m

prepared for
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of North Carolina LLC

August, 2009



Date
Call Letters
Location
Customer
Antenna Type

WYDO Channel
Greenville, NC

ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

15.5 (11.90 dB)
7.3 (8.63 dB)
Calculated

Beam Tilt
Frequency
Drawing #

1.50 Degrees
MHz
16B155150-90

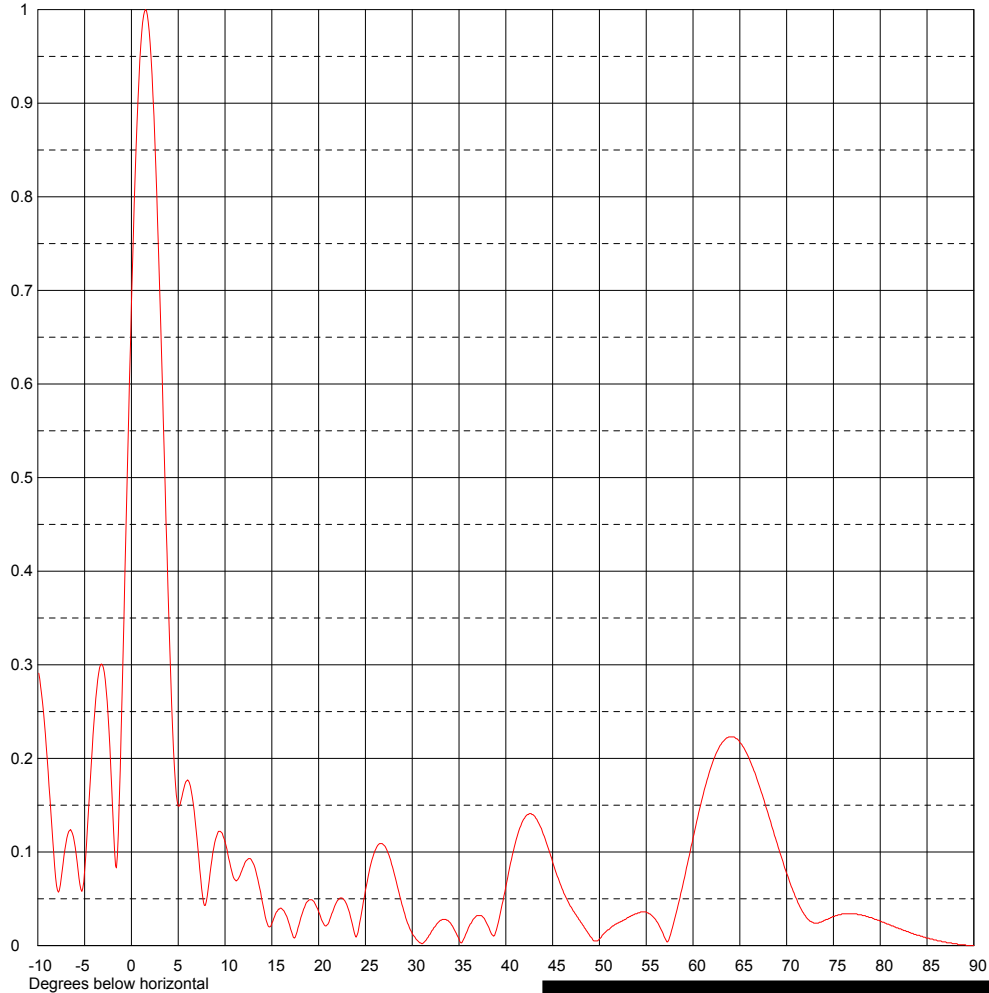


Figure 2
Antenna Vertical (Elevation)
Plane Pattern
WYDO-DT Greenville, NC
Facility ID 35582
Ch. 47 200 kW 542 m

prepared for
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August, 2009





Proposal Number **C-03447**
Date **14-Apr-09**
Call Letters **WYDO** Channel **47**
Location **Greenville, NC**
Customer
Antenna Type **TFU-16DSB-M/VP**

ELEVATION PATTERN

RMS Gain at Main Lobe	15.50 (11.90 dB)	Beam Tilt	1.50 deg
RMS Gain at Horizontal	7.30 (8.63 dB)	Frequency	671.00 MHz
Calculated / Measured	Calculated	Drawing #	16B155150

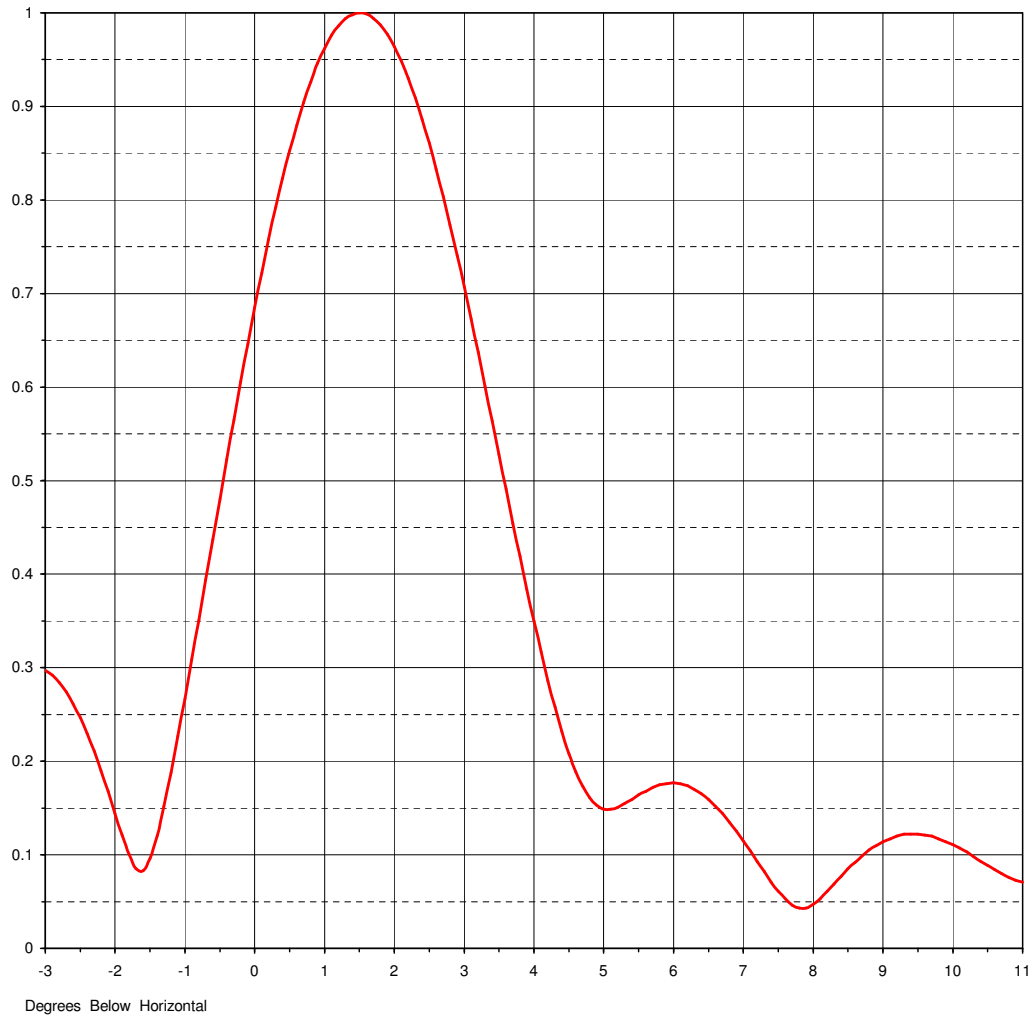


Figure 2A
Antenna Vertical (Elevation)
Plane Pattern - Detail
WYDO-DT Greenville, NC
Facility ID 35582
Ch. 47 200 kW 542 m

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