PATTERN CERTIFICATION

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Method of Measurement

The azimuth pattern for "WCFB", Dielectric Document Sketch # 07, was measured in the following manner.

A single 4.4 to1 scale model "DCRM" bay radiator was mounted on a similarly scaled model of the tower according to information provided to Dielectric by the customer; refer to Dielectric Document Sketch # 07. The antenna under test, all parasitics, all known tower appurtenances, and the tower section were rotated through 360 degrees while receiving a signal at the appropriate frequency from a linear cavity-backed source antenna. Both the horizontal and vertical polarization azimuth patterns were measured in an anechoic test range.

The transmit and scale model antennas are mounted at identical elevations and at opposite ends of the chamber. A Hewlett Packard model 8752C-network analyzer was used to supply the RF signal to the source antenna at 4.4 times the fundamental FM frequency and to receive the signal intercepted by the antenna under test. The received signal was converted to a relative level, referenced to the source. This level was stored on a computer acting as the master controller. The computer controls the measurement system via IEEE-488 control bus through a GPIB card.

MSO NO: C-01331

DATE: July 10, 2007

PATTERN NO: 07

FM AZIMUTH PATTERN APPROVAL

The azimuth pattern of the horizontal polarization and vertical polarization as supplied by Dielectric in the document labeled " Pattern 07 ", is acknowledged as acceptable. We understand that Dielectric does not guarantee or predict signal strength in any particular location.

_____
(Customer's name)

By: _____
(Name typed or printed)

Title: _____

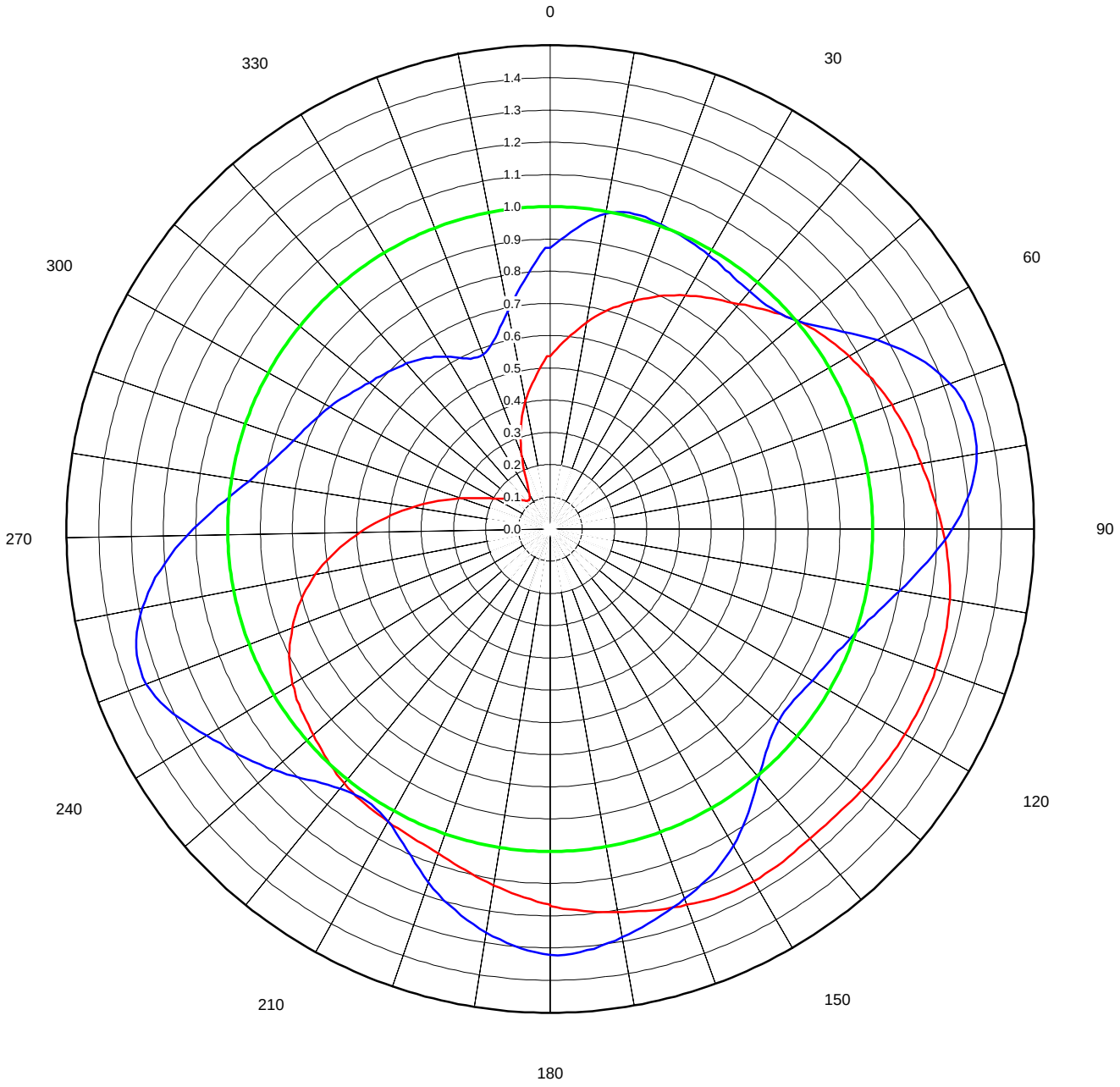
_____
(Signature)

Proposal Number	**C-01331**
Date	**10-Jul-07**
Call Letters	**WCFB**
Location	**Daytona, FL**
Customer	**COX Radio**
Antenna Type	**DCRM8CP**
Frequency	**94.50 MHz**
Drawing #:	**7**

AZIMUTH PATTERN

HPOL Gain	**1.63**	**(2.12 dB)**
VPOL Gain	**1.84**	**(2.65 dB)**

Blue	**HPOL**
Red	**VPOL**
Green	**RMS**



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TABULATION OF HORIZONTAL AZIMUTH PATTERN

Angle	Field	dBk	ERP kW
0	0.871	18.804	75.934
10	0.993	19.939	98.603
20	1.005	20.045	101.032
30	0.981	19.832	96.203
40	0.962	19.663	92.528
50	1.015	20.126	102.942
60	1.171	21.374	137.200
70	1.319	22.402	173.866
80	1.343	22.561	180.338
90	1.246	21.908	155.159
100	1.100	20.826	120.938
110	0.990	19.915	98.067
120	0.939	19.453	88.163
130	0.925	19.327	85.644
140	1.006	20.056	101.304
150	1.135	21.099	128.787
160	1.220	21.727	148.830
170	1.285	22.177	165.073
180	1.320	22.411	174.222
190	1.266	22.048	160.248
200	1.159	21.283	134.366
210	1.036	20.309	107.376
220	1.035	20.298	107.096
230	1.138	21.119	129.401
240	1.243	21.889	154.486
250	1.342	22.552	179.975
260	1.289	22.204	166.116
270	1.125	21.026	126.650
280	0.946	19.515	89.436
290	0.842	18.503	70.842
300	0.781	17.852	60.978
310	0.721	17.164	52.047
320	0.680	16.645	46.180
330	0.623	15.887	38.790
340	0.580	15.262	33.591
350	0.689	16.765	47.474

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TABULATION OF VERTICAL AZIMUTH PATTERN

Angle	Field	dBk	ERP kW
0	0.536	14.589	28.767
10	0.650	16.256	42.228
20	0.751	17.515	56.424
30	0.836	18.447	69.935
40	0.911	19.186	82.915
50	1.012	20.103	102.395
60	1.070	20.588	114.489
70	1.128	21.047	127.259
80	1.169	21.353	136.567
90	1.216	21.698	147.843
100	1.258	21.992	158.203
110	1.271	22.085	161.620
120	1.270	22.076	161.276
130	1.260	22.011	158.883
140	1.252	21.955	156.846
150	1.262	22.020	159.224
160	1.240	21.870	153.815
170	1.206	21.630	145.552
180	1.169	21.353	136.567
190	1.119	20.974	125.134
200	1.065	20.544	113.336
210	1.036	20.309	107.376
220	1.015	20.126	102.942
230	0.973	19.760	94.619
240	0.932	19.390	86.899
250	0.857	18.655	73.366
260	0.742	17.405	55.012
270	0.589	15.403	34.697
280	0.431	12.689	18.574
290	0.293	9.342	8.595
300	0.195	5.780	3.785
310	0.147	3.362	2.169
320	0.116	1.303	1.350
330	0.123	1.794	1.511
340	0.247	7.862	6.112
350	0.403	12.097	16.209

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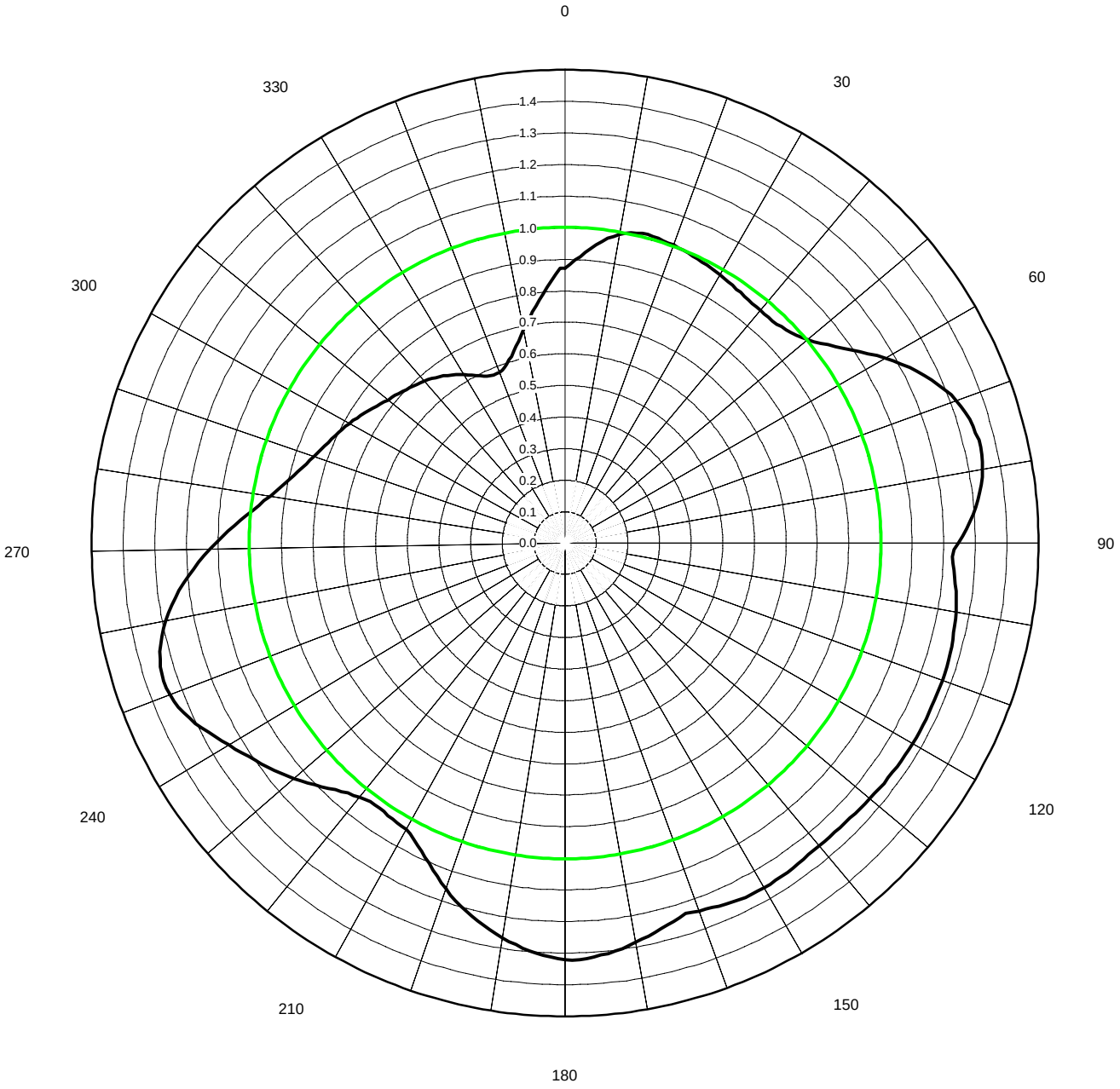
AZIMUTH PATTERN

HPOL Gain	**1.63**	**(2.12) dB**	**Black**	**Composite**
VPOL Gain	**1.84**	**(2.65) dB**	**Green**	**RMS**



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TABULATION OF COMPOSITE AZIMUTH PATTERN

Angle	Field	dBk	Power kW	Input Power
0	0.871	18.804	75.934	100.000
10	0.993	19.939	98.603	100.000
20	1.005	20.045	101.032	100.000
30	0.981	19.832	96.203	100.000
40	0.962	19.663	92.528	100.000
50	1.015	20.126	102.942	100.000
60	1.171	21.374	137.200	100.000
70	1.319	22.402	173.866	100.000
80	1.343	22.561	180.338	100.000
90	1.246	21.908	155.159	100.000
100	1.258	21.992	158.203	100.000
110	1.271	22.085	161.620	100.000
120	1.270	22.076	161.276	100.000
130	1.260	22.011	158.883	100.000
140	1.252	21.955	156.846	100.000
150	1.262	22.020	159.224	100.000
160	1.240	21.870	153.815	100.000
170	1.285	22.177	165.073	100.000
180	1.320	22.411	174.222	100.000
190	1.266	22.048	160.248	100.000
200	1.159	21.283	134.366	100.000
210	1.036	20.309	107.376	100.000
220	1.035	20.298	107.096	100.000
230	1.138	21.119	129.401	100.000
240	1.243	21.889	154.486	100.000
250	1.342	22.552	179.975	100.000
260	1.289	22.204	166.116	100.000
270	1.125	21.026	126.650	100.000
280	0.946	19.515	89.436	100.000
290	0.842	18.503	70.842	100.000
300	0.781	17.852	60.978	100.000
310	0.721	17.164	52.047	100.000
320	0.680	16.645	46.180	100.000
330	0.623	15.887	38.790	100.000
340	0.580	15.262	33.591	100.000
350	0.689	16.765	47.474	100.000

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CUSTOMER GAIN SUMMARY

Azimuth Pattern Gain of Horizontal Polarization	**1.63**	**(2.12 dB)**
Elevation Pattern Gain Per Polarization	**4.30**	**(6.33 dB)**
Peak Gain at Horizontal Polarization	**7.01**	**(8.46 dB)**

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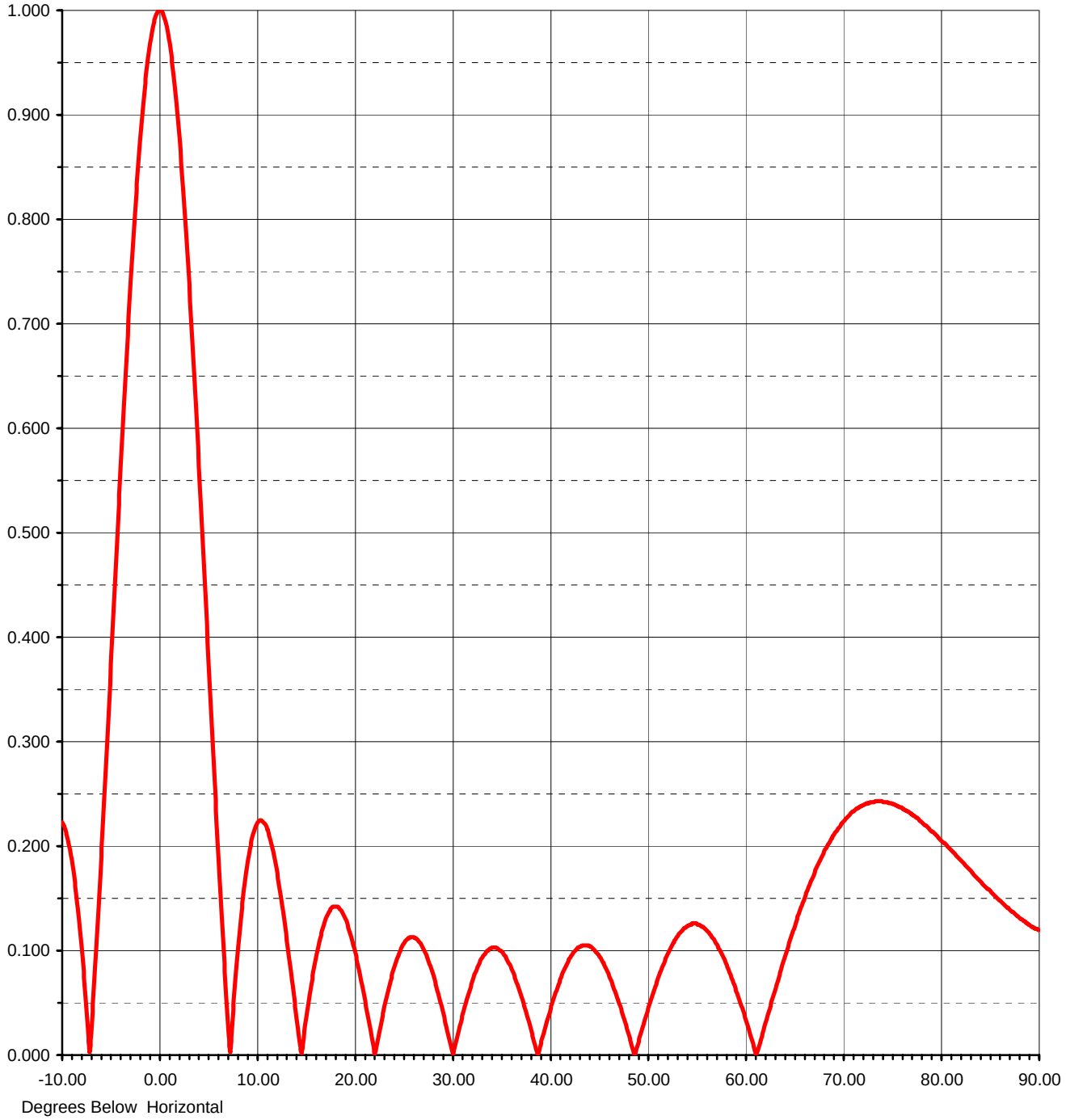
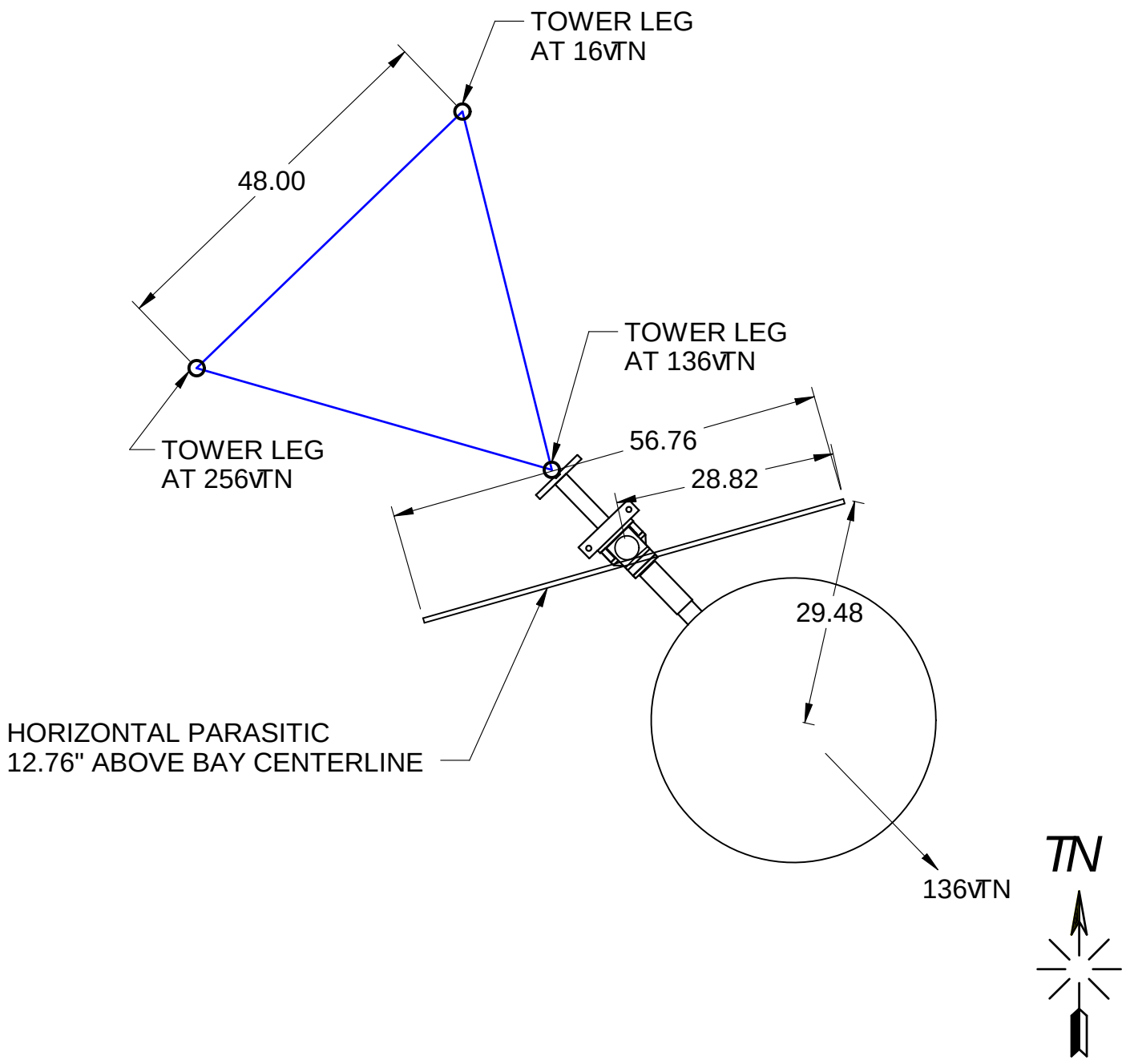
Drawing #	

ELEVATION PATTERN

RMS Gain at Main Lobe	**4.30**	**(6.33 dB)**	Beam Tilt	**0.00 deg**
Per Polarization			Frequency	**94.50 MHz**
Calculated / Measured	**Calculated**			



REV:	REVISION NOTE CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.
A	SEE SHEET #1



WCFB 94.5 MHz
DCRM8CP
DAYTONA BEACH, FL
PATTERN 07
KAM 7/10/07

Dielectric
A Unit of SPX Corporation
Raymond, ME

A	GAGE CODE 08441	DRAWING NO: PATTERN_07
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