Doug Vernier
1600 Picturesque Drive
Cedar Falls, Iowa 50613
Telecommunication Consultants

May 17, 2021

WQHA (TV), Aguada, PR

Engineering Statement:

Western New Life, Inc. desires a license to cover C.P. construction 0000125304, Facility 3255, FRN 0011886371.

Coordinates per C.P: N. Lat. 18-13-56.5, W. Long. 66-45-42.

Base Elevation: 908 m, COR AMSL: 946.1m, COR AG: 38.1 m, HAAT: 455.3 m

Overall Antenna Structure Height: 46.7 m AG

Frequency: 536.0-542.0 MHz, ERP: 13.2222 dBk, 21 kW, Polarization: H

Antenna: JAM JA/SS-16/25 SHP, gain: 14.18 dBd, Directional cardioide, Beam tilt = 0.8° (rounded)

Transmission Line: 106.68 m, 1 5/8" Heliax, loss = 1.80 dB, 8 connectors loss = 0.8 dB

Total Losses: = 2.6 dB

ERP = 13.222 dBk, 21 kW

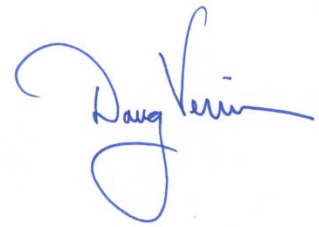
TPO = 13.222 dBk + 2.6 dB loss – 14.18 dB: TPO = 1.642 dBk = 1.46 kW

Attachment #1 is an exhibit by Aurio Matos Chaparro, Technical Consultant with a certification that all appropriate medical entities have been contacted as per 47 CFR 15.242(a)(1)).

Attachment #2 is an antenna proof from Jampro Antennas, Inc, Sacramento, California. It should be noted that the azimuth pattern therein, will be rotated, as per the CP by 335 degrees. The antenna has been installed according to the manufacturer's specifications.

Attachment #3 if a coverage map showing city grade coverage to the principal city Aguada.

The permittee/licensee in coordination with other users of the site will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.



WESTERN NEW LIFE, INC.
P.O. Box 7707
Caguas, P.R. 00726

CERTIFICATION OF MEDICAL FACILITY NOTIFICATION FOR LICENSE APPLICATION OF WQHA-DT IN AGUADA, PUERTO RICO, FCC FACILITY ID # 3255

The undersigned hereby certifies that notifications of Commencement of Operations were sent to approximately 277 medical facilities within the coverage area of WQHA on May 1, 2021.

These medical facility notifications were in compliance with the requirements of the FCC Construction Permit Special Conditions for WQHA (File Number 0000065599). Call Sign File Number WQHA 0000125304, Facility ID 3255.

The medical facility notifications included the following technical information.

STATION INFORMATION:

WQHA-DT serving Aguada, P.R.
FCC File Number: 0000065599
FCC Facility ID: 3255
DTV Channel: 25
Frequency Band: From 536Mhz to 542Mhz
Estimated Broadcast Date: May 16, 2021
Antenna Effective Radiated Power: 21kw
Antenna Location: 18-13-56.5 N 66-45-42 W (NAD83)
Technical Contact: Ramon Albandoz (787) 993-9706

This certification is for the use as an exhibit for the station's 302-TV License Application to demonstrate compliance with the conditions for the underlying Construction Permit.

Affirmed this May 1, 2021.

Aurio Matos Chaparro
Technical Consultant

JAMPRO ANTENNAS, INC.

WESTERN NEW LIFE

STATION WQHA-DT

JA/SS-16/25-SHC

CH. 25

MARCH 22, 2018

SERIAL NUMBER 19187-A

JAMPRO ANTENNAS, INC.
6340 Sky Creek Drive, Sacramento, California 95828
P.O. Box 292880, Sacramento, California 95829-2880
(916) 383-1177 FAX (916) 383-1182

INTRODUCTION

The JAMPRO JA-SS slot antenna is designed for use on a TV channel as stated in the electrical specification of the order. This type of antenna is available with various patterns, input powers, and TV bands. The input power rating to the antenna, as supplied, is shown on the order.

The power ratings indicated are the peak visual power ratings and include 20% aural power.

Refer to the drawings and specifications sheet to determine the input size and power rating of this antenna.

This booklet does not cover the technical design of this slot antenna. The purpose of the book is to enable the rigging personnel to understand the antenna and recommend methods of installing and care of the slot antenna. Refer to the JAMPRO technical data catalog pertaining to slot-type antennas.

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ANTENNA SPECIFICATIONS

MODEL JA/SS-16/25-SHC **SERIAL NO** 19187-A

ELECTRICAL SPECIFICATIONS

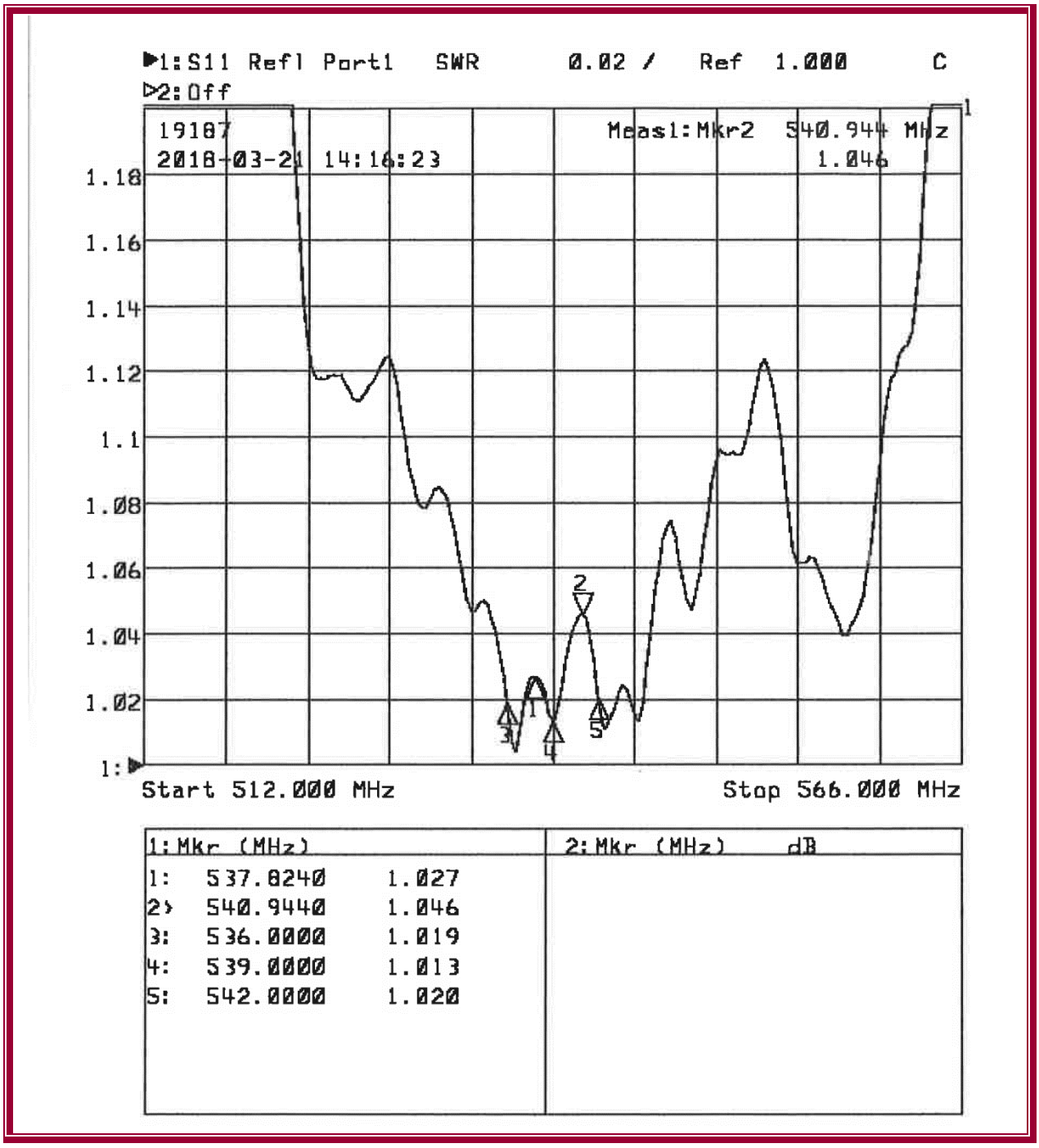
CHANNEL:	25 (536-542 MHz)
POLARIZATION:	Horizontal
AZIMUTH PATTERN:	Cardioid
PEAK GAIN:	26.2x / 14.18dBd
BEAM TILT:	0.8°
NULL FILL:	15% (optimized)
INPUT POWER:	2 kW
INPUT IMPEDANCE:	50 ohms, nominal
MAXIMUM VSWR:	1.05:1 or better over channel 25
BROADBAND VSWR:	1.1:1 or better over 528-552 MHz
ELECTRICAL DE-ICER:	none
INPUT CONNECTION:	1-5/8" EIA (f), Flanged

MECHANICAL/ENVIRONMENTAL SPECIFICATIONS

WEIGHT:	301 lbs. (137 kg), no ice
EFFECTIVE PROJECTED AREA (EPA):	47 ft^2 (4.3 m^2), no ice, per TIA-222-G
PRESSURIZATION:	10 psi max, 3–5 psi operating
ANTI-ICING PROTECTION:	Radome

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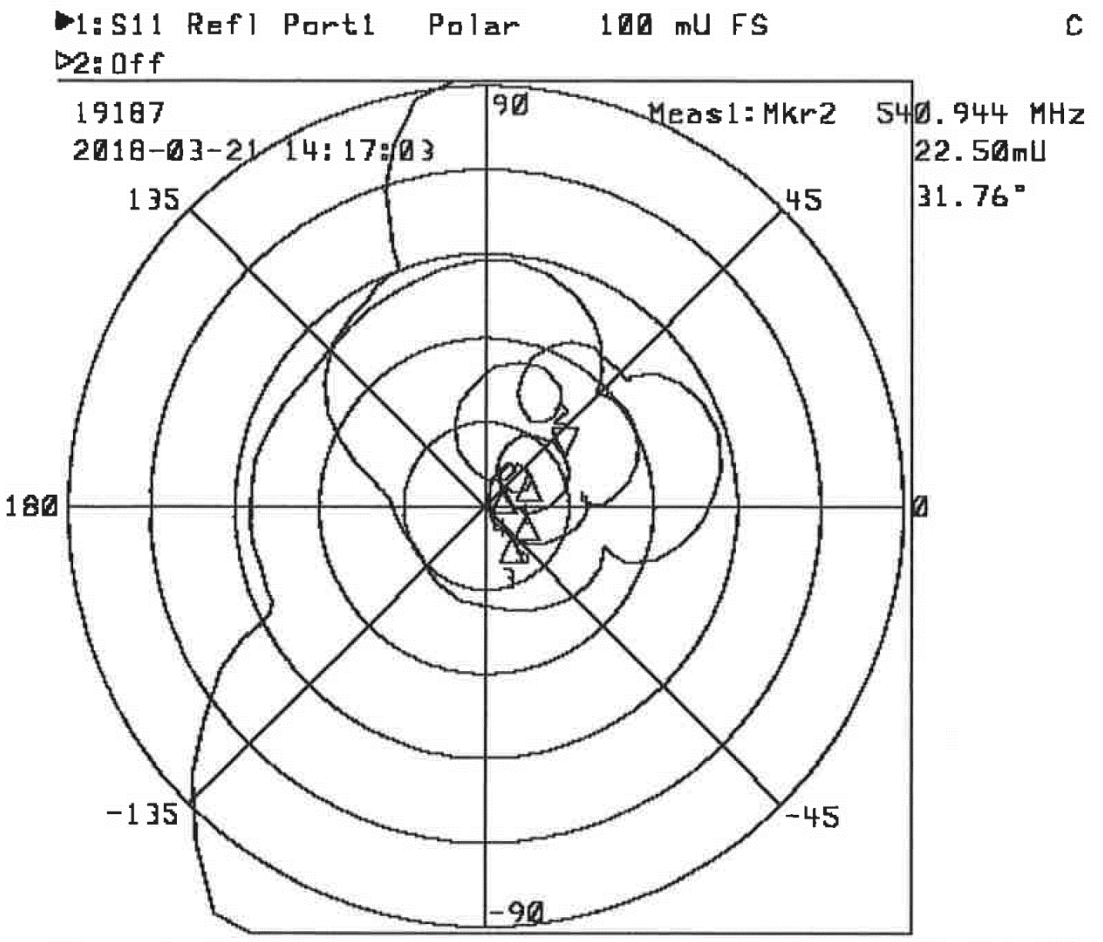
VSWR DATA PLOT



1: Mkr (MHz)		2: Mkr (MHz)	dB
1:	537.8240	1.027	
2›	540.9440	1.046	
3:	536.0000	1.019	
4:	539.0000	1.013	
5:	542.0000	1.020	

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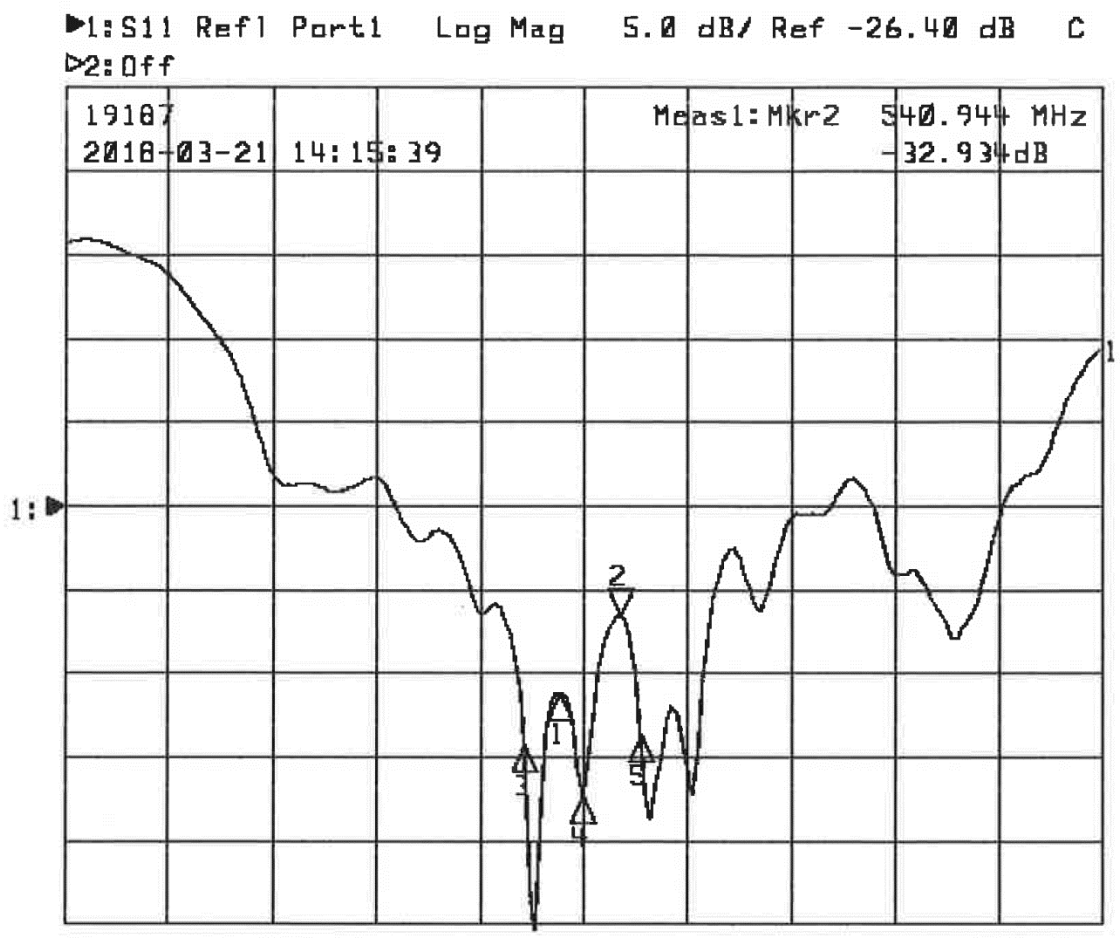
COMPLEX IMPEDANCE DATA PLOT



1:Mkr (MHz)	U	Deg	2:Mkr (MHz)	dB
1: 537.824	13.24m	38.32		
2› 540.944	22.50m	31.76		
3: 536.000	9.361m	-47.11		
4: 539.000	6.612m	48.51		
5: 542.000	10.07m	-7.327		

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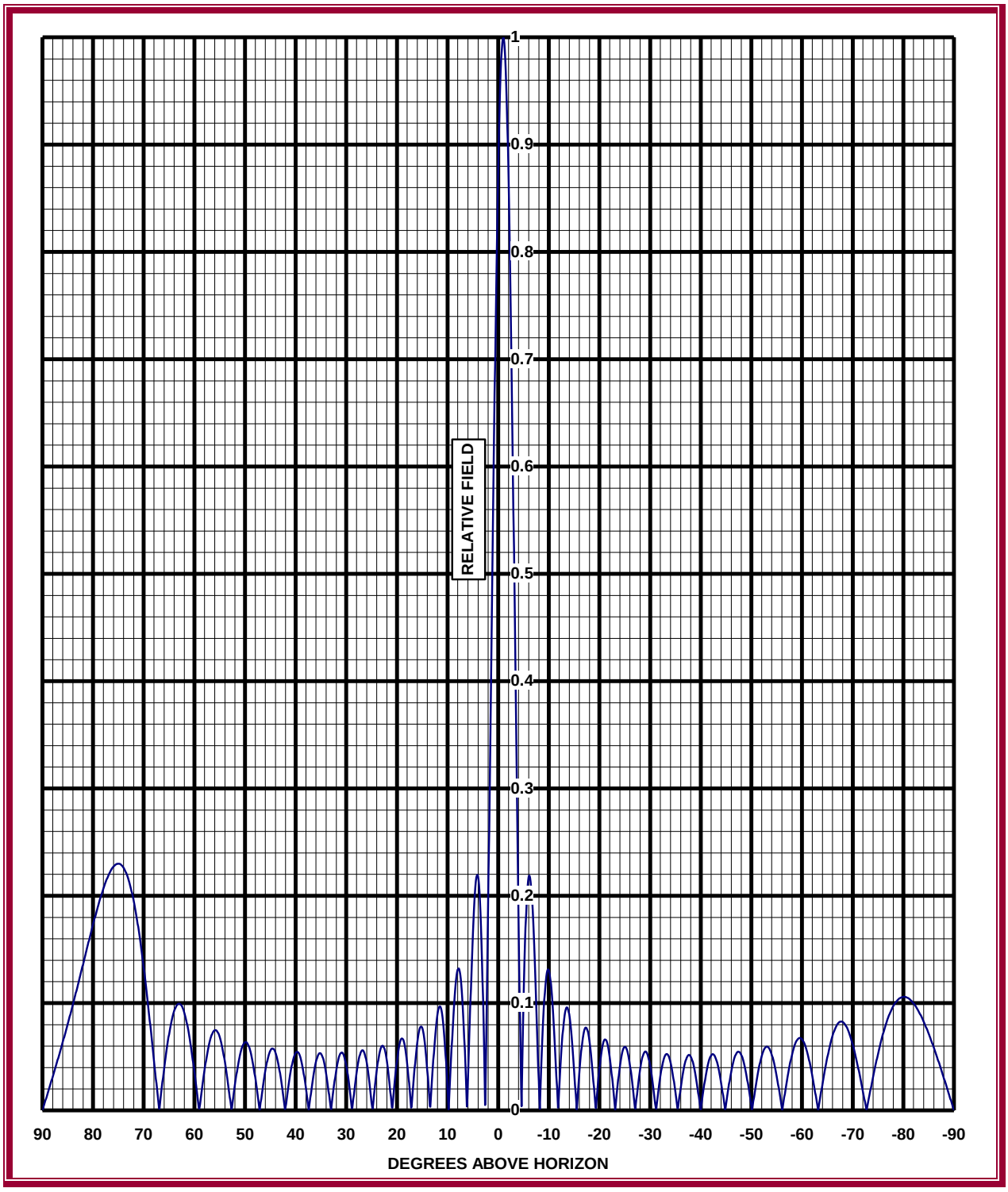
RETURN LOSS DATA PLOT



1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 537.8240	-37.542		
2› 540.9440	-32.934		
3: 536.0000	-40.644		
4: 539.0000	-43.593		
5: 542.0000	-40.011		

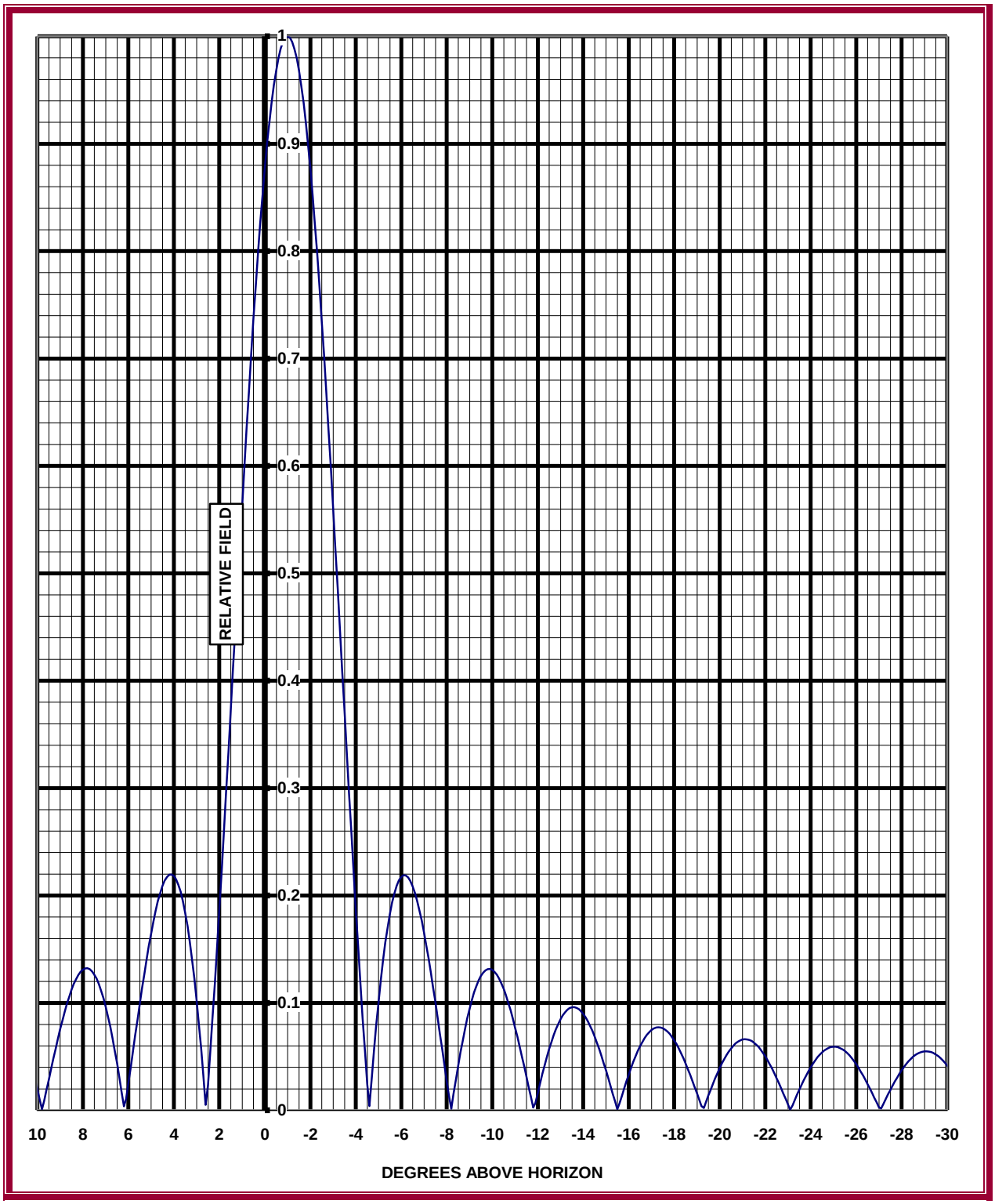
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ELEVATION PATTERN PLOT



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ELEVATION PATTERN PLOT - EXPANDED



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ELEVATION PATTERN TABULATION

ELEVATION PATTERN TABULATION

RELATIVE FIELD VS ELEVATION ANGLE

ELEVATION ANGLE	RELATIVE FIELD	ELEVATION ANGLE	RELATIVE FIELD	ELEVATION ANGLE	RELATIVE FIELD
10	0.020	-26	0.043	-61	0.055
9	0.075	-27	0.003	-62	0.033
8	0.131	-28	0.037	-63	0.005
7	0.097	-29	0.055	-64	0.024
6	0.025	-30	0.042	-65	0.050
5	0.165	-31	0.006	-66	0.069
4	0.218	-32	0.031	-67	0.080
3	0.103	-33	0.052	-68	0.082
2	0.186	-34	0.045	-69	0.076
1	0.561	-35	0.016	-70	0.061
0	0.877	-36	0.020	-71	0.041
-1	1.000	-37	0.046	-72	0.018
-2	0.877	-38	0.050	-73	0.006
-3	0.561	-39	0.032	-74	0.031
-4	0.187	-40	0.001	-75	0.053
-5	0.102	-41	0.033	-76	0.071
-6	0.217	-42	0.051	-77	0.086
-7	0.166	-43	0.048	-78	0.097
-8	0.027	-44	0.026	-79	0.103
-9	0.094	-45	0.006	-80	0.106
-10	0.131	-46	0.036	-81	0.104
-11	0.077	-47	0.053	-82	0.100
-12	0.016	-48	0.052	-83	0.093
-13	0.085	-49	0.033	-84	0.083
-14	0.090	-50	0.004	-85	0.072
-15	0.037	-51	0.027	-86	0.059
-16	0.033	-52	0.050	-87	0.045
-17	0.075	-53	0.059	-88	0.030
-18	0.065	-54	0.052	-89	0.015
-19	0.016	-55	0.032	-90	0.000
-20	0.039	-56	0.003		
-21	0.066	-57	0.027		
-22	0.050	-58	0.052		
-23	0.005	-59	0.065		
-24	0.040	-60	0.066		
-25	0.059				

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PACKING LIST

Date: 22-Mar-18

PACKING LIST
19187-A
JA/SS-16/25 SHC
WESTERN NEW LIFE, INC.

ITEM #	QTY (req/spare)	MODEL #	DESCRIPTION	BOX #	Q/A
1	2	npn	Instruction Manual	1	MM
2	2	19187-A-010	JA/SS-16/25 Radiating Element	1	MM
3	2	19187-A-020	Input Transformer, 1-5/8" to 7/8"	1	MM
4	1	19187-A-025	RCTQ-2121-575-F w/Elbows	1	MM
5	2	19187-A-CABLES	7/8" Cable w/Connectors, 18' Long	1	MM
6	3	774-00328-00	1-5/8" O-Ring	1	MM
7	4	071-00001-99	7/8" Anchor Insulator	1	MM
8	4	774-00215-00	7/8" O-Ring	1	MM
9	8/1	205-00016-00	SS Bolt, 5/16" x 1-3/4"	1	MM
10	4/1	205-00014-00	SS Bolt, 5/16" x 1-1/2"	1	MM
11	12/1	223-00001-00	SS LW, 5/16"	1	MM
12	12/1	234-00001-00	SS Nut, 5/16"	1	MM
13	6/1	203-00007-00	SS Bolt, 1/4" x 3/4"	1	MM
14	6/1	203-00012-00	SS Bolt, 1/4" x 1-1/4"	1	MM
15	12/1	222-00001-00	SS LW, 1/4"	1	MM
16	6/1	233-00001-00	SS Nut, 1/4"	1	MM
17	6	077-00011-00	Slot Mounting Bracket	1	MM
18	2	077-00048-00	Power Divider "Z" Bracket	1	MM
19	12/1	207-00014-00	SS Bolt, 1/2" x 1-1/2"	1	MM
20	12/1	225-00001-00	SS LW, 1/2"	1	MM
21	12/1	236-00001-00	SS Nut, 1/2"	1	MM
22	18	401-00025-00	HDG U-Bolt, 4"	1	MM
23	18	401-00021-00	HDG U-Bolt, 3-1/2"	1	MM
24	36/3	290-00002-00	HDG FW, 3/8"	1	MM
25	36/3	300-00002-00	HDG LW, 3/8"	1	MM
26	36/3	309-00001-00	HDG Nut, 3/8"	1	MM
27	2	777-00001-2G	Silicone Grease	1	MM
28	2	149-00018-34	SS Shim, 1-5/8, (Power Divider)	1	MM
29	6	149-00061-00	SS Slot Shim	1	MM
30	4	526-00072-00	SS Hose Clamp, 6872	1	MM
31	4	526-00024-00	SS Hose Clamp, 6824	1	MM
32	6	19187-A-130	SS Shim, 1/4"	1	MM
33	1	527-00004-00	WrapLock, 50ft	1	MM

3-22-18

UNPACKING

EQUIPMENT SUPPLIED

The equipment furnished normally includes support mounting brackets and slot antenna.

RECEIVING AND ANTENNA INSPECTION

Upon receipt of the antenna system, the boxes and packing should be thoroughly checked against the packing list for completeness. The antenna's miscellaneous items should be unpacked and thoroughly inspected for damage.

Any materials found to be missing or damaged should be noted, and JAMPRO ANTENNAS, INC. should be notified for disposition. File a shipper damage report with the shipping company. It is recommended that the antenna installation not be started until all the hardware is on site to prevent any down time during installation.

INSTALLATION PROCEDURES

INSTALLATION SEQUENCE

1) Inspect antenna for shipping damage.

2) Check components to packing list. Call JAMPRO if any parts are missing or damaged.

3) Lay out slot with radome down. Support at ends of bay with wood cribbing.

4) Install the rigid feed lines using bolts and O-rings (supplied). Verify proper line connected to proper bay. NOTE: Bays marked on top and bottom (e.g., Bay 1 marked T1 for top). IMPORTANT: Verify inner conductors are properly oriented. If installed improperly, the antenna will have high VSWR.

5) Install mounting brackets according to installation drawing.

6) Hoist bay into place on tower.

7) Care should be exercised to prevent the antenna from striking the tower on its way up. Such bumps may damage the pole reflectors and/or radome. In such event, the damaged part must be repaired or replaced.

8) Install the mounting bracket to the tower or mounting pipe using U-bolts supplied.

9) Pressurize the transmission line and antenna system and check for leaks. NOTE: The antenna system is pressurized up through and including the point where the rigid 15-inch long line sections connect to the slot flange feed inputs. A gas block seal is located inside the bays at that point.
Do not operate the antenna if there is an air leak. Leaks must be repaired before operation.

10) Verify the following points:

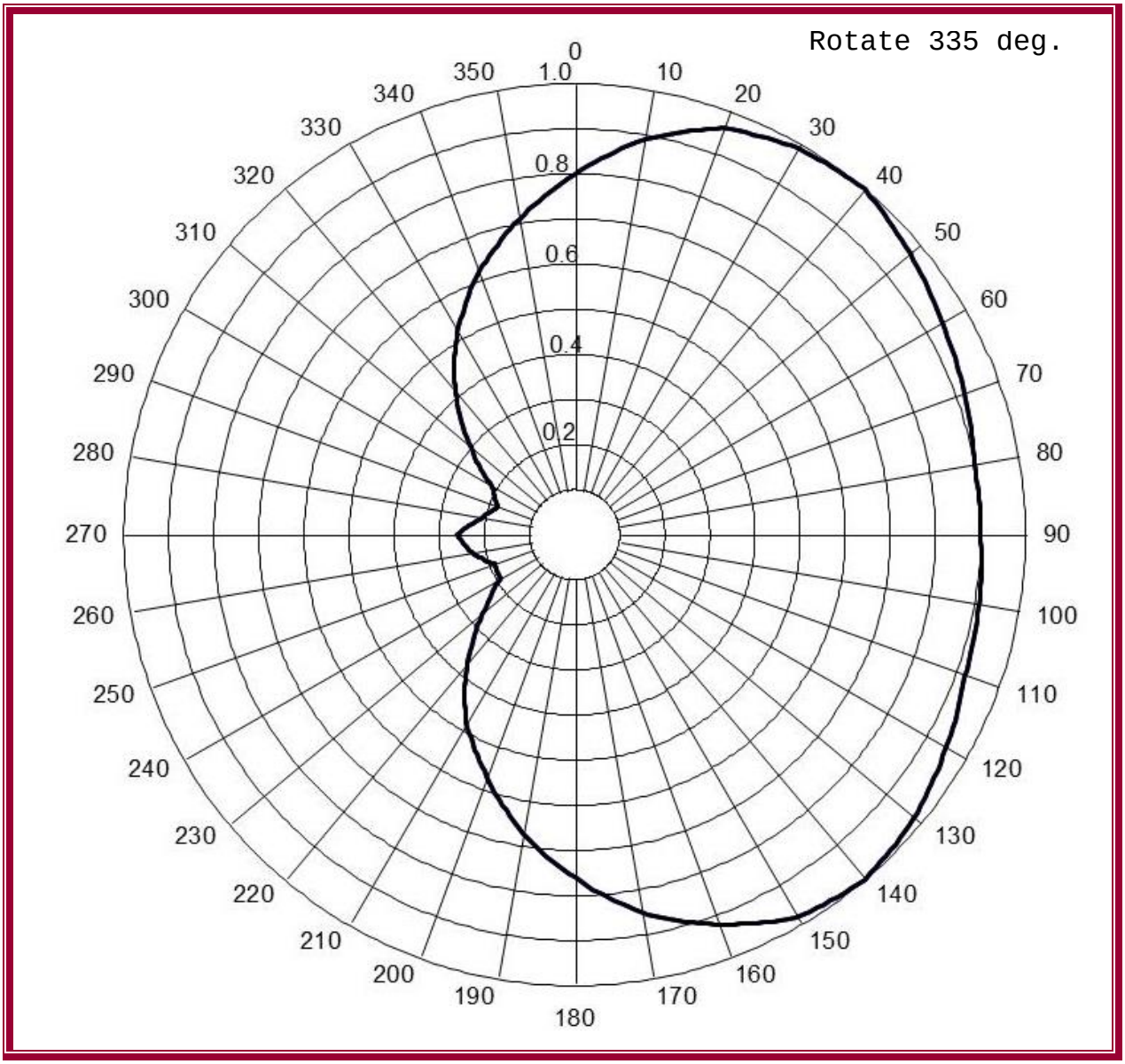
    a) Antenna is installed at proper heading (to be determined by chief engineer).

    b) All bolts are tight.

    c) All lines are properly secured to the tower, with no leaks.

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AZIMUTH PATTERN



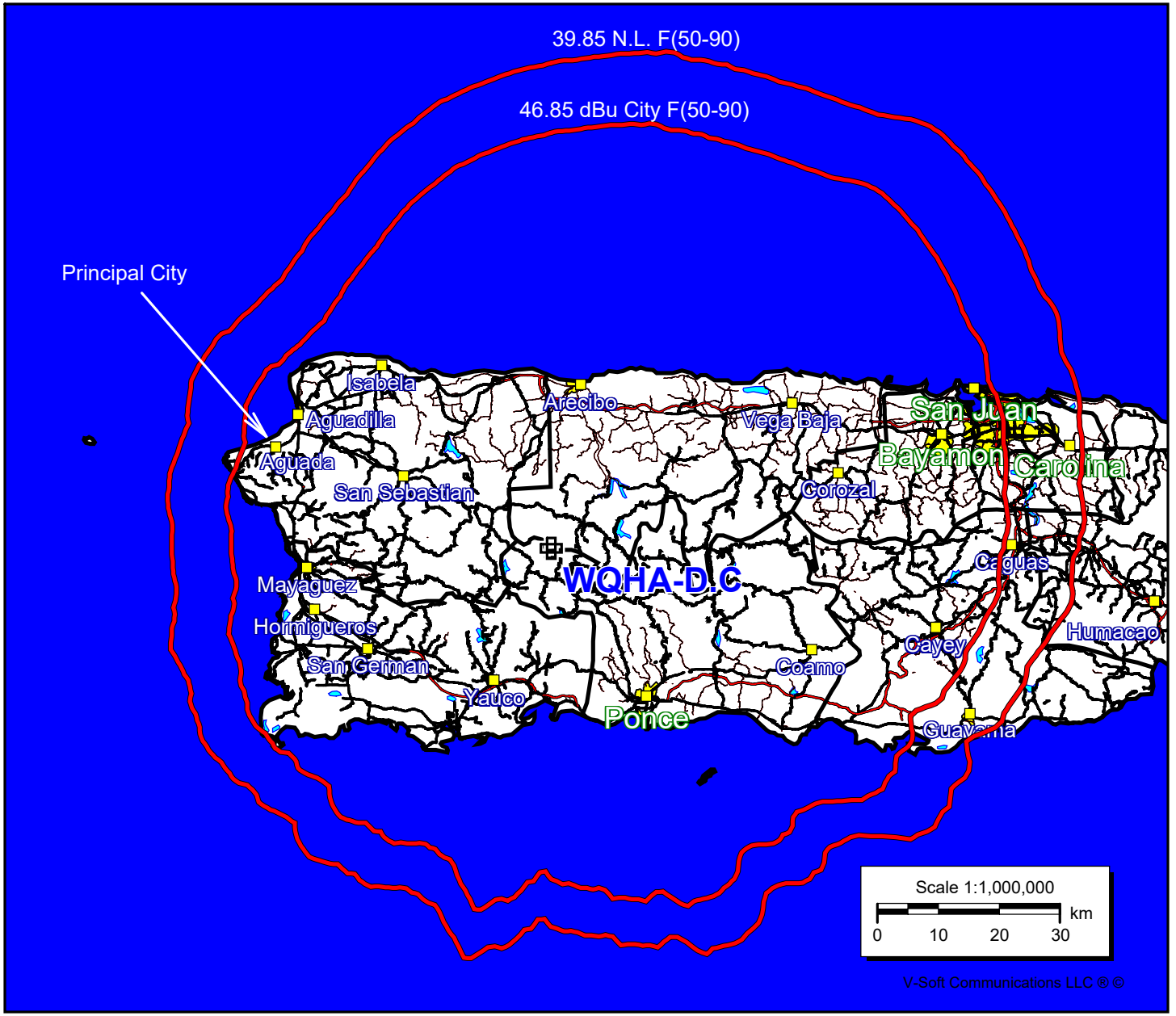
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AZIMUTH PATTERN TABULATION

AZIMUTH	FIELD	dB
0	0.800	-1.938
10	0.890	-1.012
20	0.960	-0.355
30	0.990	-0.087
40	1.000	0.000
50	0.970	-0.265
60	0.940	-0.537
70	0.920	-0.724
80	0.900	-0.915
90	0.900	-0.915
100	0.910	-0.819
110	0.920	-0.724
120	0.950	-0.446
130	0.980	-0.175
140	1.000	0.000
150	0.980	-0.175
160	0.920	-0.724
170	0.850	-1.412
180	0.760	-2.384
190	0.670	-3.479
200	0.570	-4.883
210	0.480	-6.375
220	0.370	-8.636
230	0.260	-11.701
240	0.190	-14.425
250	0.190	-14.425
260	0.230	-12.765
270	0.260	-11.701
280	0.210	-13.556
290	0.180	-14.895
300	0.210	-13.556
310	0.300	-10.458
320	0.410	-7.744
330	0.520	-5.680
340	0.620	-4.152
350	0.710	-2.975

Dipole-corrected Noise Limited Service Contours

WQHA-D.C
0000125304
Latitude: 18-13-56.50 N
Longitude: 066-45-42 W
ERP: 21.00 kW
Channel: 25
Frequency: 539.0 MHz
AMSL Height: 946.1 m
Elevation: 908.0 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.75
Prop Model: None



Doug Vernier
1600 Picturesque Dr.
Cedar Falls, Iowa 50613
Telecommunication Consultants