

ENGINEERING EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHZ 50 KW-D 1 KW-N DA-2 U

ENGINEERING EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
FORT MYERS BROADCASTING COMPANY
RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
FACILITY ID 48329
1200 KHZ 50 KW-D 1 KW-N DA-2 U

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ENGINEERING EXHIBIT
MODIFICATION OF APPLICATION
FOR CONSTRUCTION PERMIT
FORT MYERS BROADCASTING COMPANY
RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
FACILITY ID 48329
1200 KHZ 50 KW-D 1 KW-N DA-2 U

Engineering Statement

The engineering exhibit of which this statement is part was prepared on behalf of Fort Myers Broadcasting Company, licensee of AM broadcast station WPTK Pine Island Center, Florida, Facility ID 48329. Station WPTK is licensed for operation on 1200 kilohertz employing daytime power of 10 kilowatts and nighttime power of 1.0 kilowatt. An application on file with the Commission seeks a change in facilities for WPTK, File Number BP-19880620AJ. This modification replaces the previously filed material.

The applicant seeks a construction permit, which authorizes an increase in daytime power to 50 kilowatts while employing a new directional antenna pattern. No change is proposed in the existing nighttime operation.

Notification of the proposed tower construction to the Federal Aviation Administration is not required. The proposal meets the requirements of the FCC rules.

Transmitter Location

The existing transmitter site will be employed. Two new towers will be added to the existing three towers. No change is proposed in the towers employed for nighttime use.

Figure 1 is a map showing the transmitter location. Photographs of the site have been

previously filed with the Commission. The geographic coordinates for the center of the array are:

26° 42' 52" North Latitude

82° 02' 46" West Longitude.

Figure 2 is a transmitter site plat, which shows the location of the existing three towers and the proposed new towers, with the existing and proposed ground system. Copper straps will be positioned between towers as shown, on which existing and proposed radials will be terminated and bonded. The ground system copper wire radials for the new towers will extend from each tower base out to a distance of 62.5 meters (205 feet) or to the property boundary. Radials between adjacent towers will be shortened and bonded to a copper strap. The entire ground system will be buried approximately 10 cm (6 to 8 inches).

The height of the existing towers will remain unchanged at 60.3 meters (198 feet) AGL. The two new towers will have an overall height of 58.8 meters (193 feet) AGL. The height of each existing radiator is 85.6 electrical degrees.¹ The proposed radiators will be 83.5 electrical degrees in height.

Proposed Directional Antenna

During daytime hours, WPTK will operate with the proposed four-tower directional antenna system. Sheet 5 is a polar graph of the directional antenna standard pattern and Figure 6 is a tabulation of pattern values. The directional pattern was determined employing the method contained in 47 CFR 73.150.

No change is proposed in the existing nighttime directional antenna pattern.

¹ The Commission's CDBS incorrectly shows the height of the existing towers at 90 electrical degrees.

Proposed Coverage Contours

Sheet 2 of Figure 7 shows the proposed 5 and 0.5 mV/m contours for the proposed WPTK daytime operation. All of Pine Island Center, Florida is located within the proposed 5-mV/m contour.

The proposed 1,000 mV/m contour is shown on Sheet 1 of Figure 7. There are 39 persons residing within the proposed contour according to the 2000 Census. The proposal therefore complies with the provisions 47 CFR 73.24. The applicant recognizes the obligation to resolve blanketing interference problems.

For comparison purposes, the existing daytime coverage contours are shown in Figure 8.

Daytime Allocation Study

Figure 9 is a daytime allocation report consisting of three sheets. Sheet 1 shows the daytime allocation situation with pertinent stations located in Florida. The proposal meets the requirements of 47 CFR 73.37 except for existing contour overlap with stations WPSP (1190 kHz) and WNMA (1210 kHz). Existing grandfathered contour overlap with these stations is reduced by the proposal.

Sheet 2 of Figure 9 shows the allocation situation with Class A station WOAI San Antonio, Texas. The proposed 0.005 mV/m contour will not overlap the WOAI 0.1 mV/m normally protected contour. The four points marked on the map are employed for the critical hours study as discussed below.

Sheet 3 of Figure 9 shows the allocation situation with Cuban stations. Where there is existing contour overlap, it will be reduced.

Information employed in determination of contour locations is shown in Figure 10. Except for the field strength measurements noted, all conductivity values are from Figure M-3. Measurements taken on WPTK are contained in Figure 11. These measurements were made by Don Charles, employing a recently calibrated field strength meter.

With respect to critical hours protection to Class A station WOAI, calculations of permitted field strength were calculated at the four point shown on Sheet 2 of Figure 9, with results summarized below.

<u>Point ID</u>	<u>Geographic Coordinates</u>	<u>From WPTK</u>		<u>Permissible Field Strength (mV/m)</u>	<u>Standard Pattern Value (mV/m)</u>
		<u>Dist (km)</u>	<u>Az (deg. T)</u>		
A	25-45-00 97-10-12	1,513	269.3	917	880
B	27-37-48 97-12-36	1,504	277.3	997	766
C	28-44-24 95-38-25	1,357	282.6	833	698
D	29-33-36 92-25-12	1,254	287.4	719	659

The standard pattern radiation value is the highest occurring within the vertical angle of protection, which is between zero and 5.5, 5.6, 6.9 and 7.9 degrees for each of the four points, respectively.

Environmental Considerations²

The proposed WPTK operation was evaluated for potential exposure of the general public and workers to electromagnetic radiation in accordance with OET Bulletin 65, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, Edition 97-01, August 1997. Based on Table 2 of Supplement A of OET Bulletin 65, the minimum “worse case” distance for towers with power of 50 kilowatts at which the electric and magnetic fields are predicted to fall below the guideline value is 4 meters. Fences at this distance will be installed around the base of each tower, unless measurements show that a lesser distance meets the guideline value. In addition, warning signs have and will be posted. The fences will assure that persons on the WPTK property outside of the fenced area will not be exposed to radiofrequency field levels in excess of the FCC guideline.

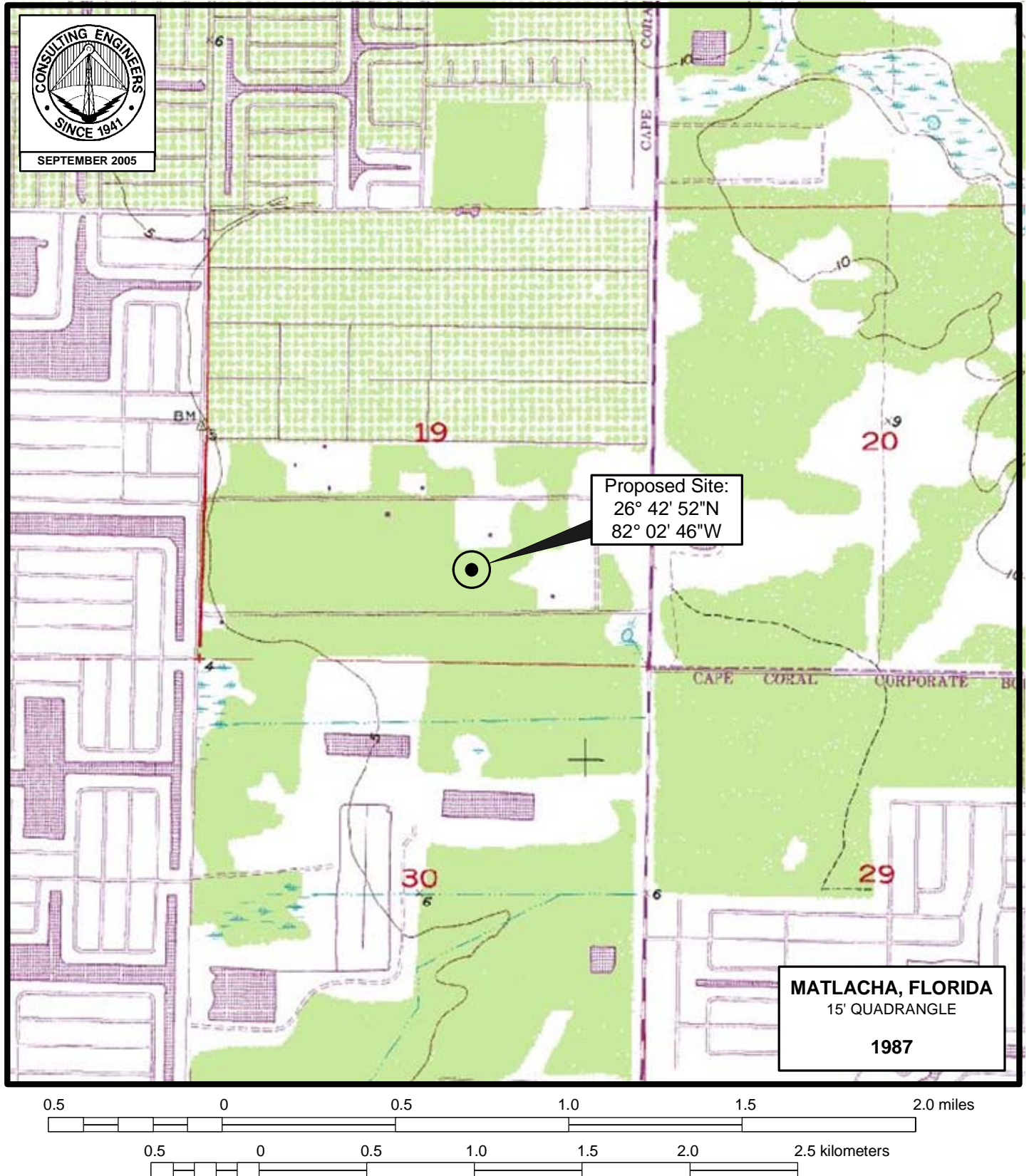


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941 329 6000

September 8, 2005

² This statement addresses only human exposure to radiofrequency radiation and not the other non-radiofrequency radiation matters listed in the National Environmental Policy Act of 1969.

Figure 1

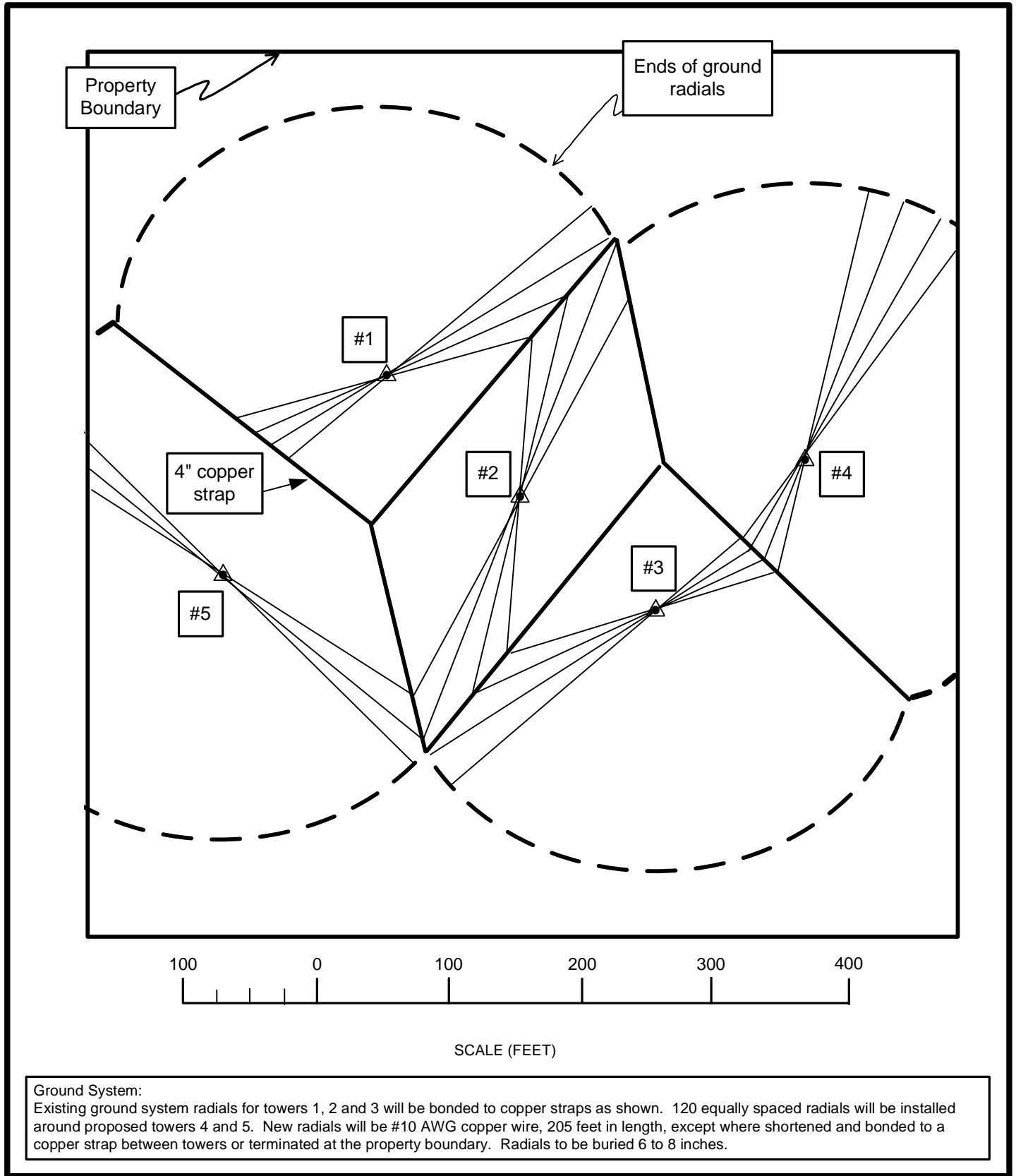


PROPOSED TRANSMITTER SITE

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2

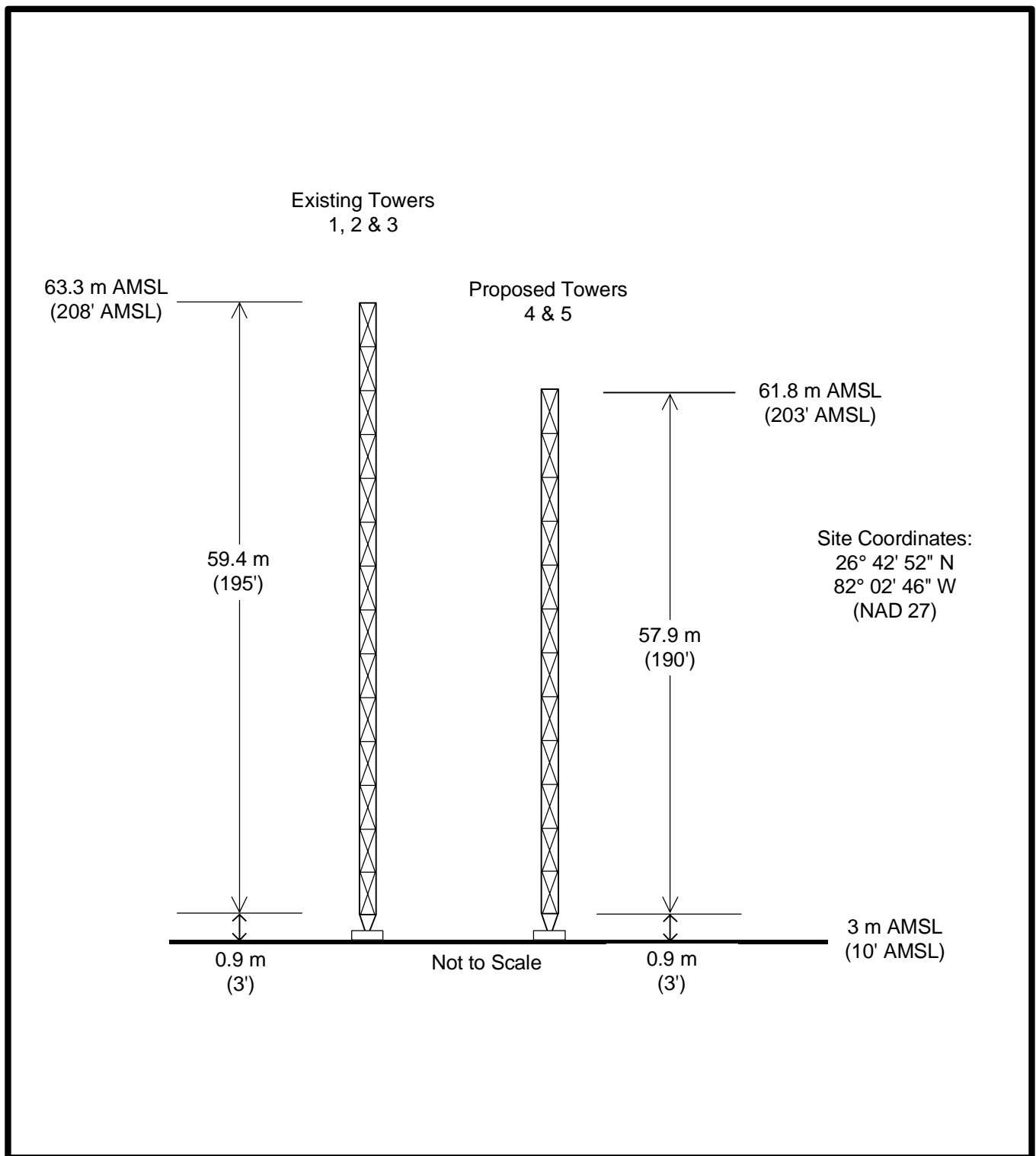


PROPERTY BOUNDARY AND ANTENNA GROUND SYSTEM

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHz 50 KW-D 1 KW-N DA-2 U

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Figure 3



ANTENNA ELEMENTS

AM STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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Specifications for Proposed Daytime Directional Antenna System

Frequency	1200 kHz
Hours of Operation	Unlimited
Power	50 KW Day, 1 KW Night
Number of Towers	5
Type of Towers	Uniform cross section, guyed and base insulated.

Tower Height:

Above Base Insulator	Towers 1, 2 & 3	59.4 m (195')	85.6°
	Towers 4 & 5	57.9 m (190')	83.5°
Above Ground Level	Towers 1, 2 & 3	60.3 m (198')	
	Towers 4 & 5	58.8 m (193')	
Above Mean Sea Level	Towers 1, 2 & 3	63.3 m (208')	
	Towers 4 & 5	61.8 m (203')	

Tower Arrangement:

<u>Tower No.</u>	<u>Spacing (deg)/(m)</u>	<u>Orientation (deg. True)</u>
1 NW	0.0	0.0
2 C	60/41.6	130
3 SE	120/83.3	130
4 NE	144.3/100.1	100.1
5 SW	84.6/58.7	218.5

Daytime Parameters:

<u>Tower No.</u>	<u>Field Ratio</u>	<u>Phase (degrees)</u>
1 NW	1.000	0.0
3 SE	1.318	151.5
4 NE	1.762	4.3
5 SW	1.080	95.5

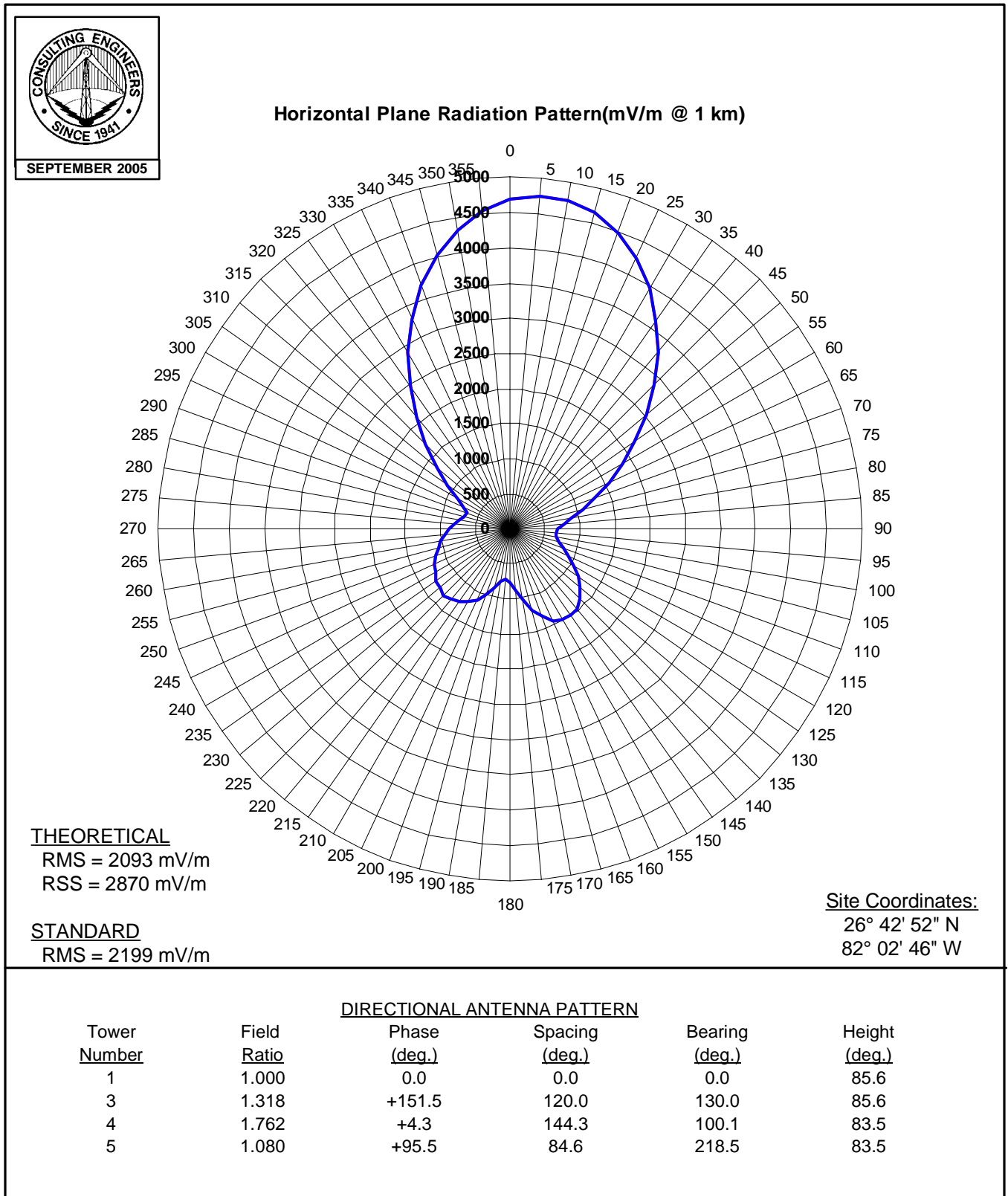
Ground System:

The existing ground system radials for existing towers 1, 2 and 3 will be bonded to copper straps as shown in Figure 2. 120 equally spaced radials will be installed around proposed towers 4 and 5. New radials will consist of #10 AWG copper wire, 205 feet in length, except where shortened and bonded to a copper strap between towers or where terminated at the property boundary. Radials will be buried 6 to 8 inches.

Geographic Coordinates:
(Center of Array – NAD 27)

26° 42' 52" North Latitude
82° 02' 46" West Longitude

Figure 5



PROPOSED DAYTIME HORIZONTAL PLANE STANDARD RADIATION PATTERN

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 6

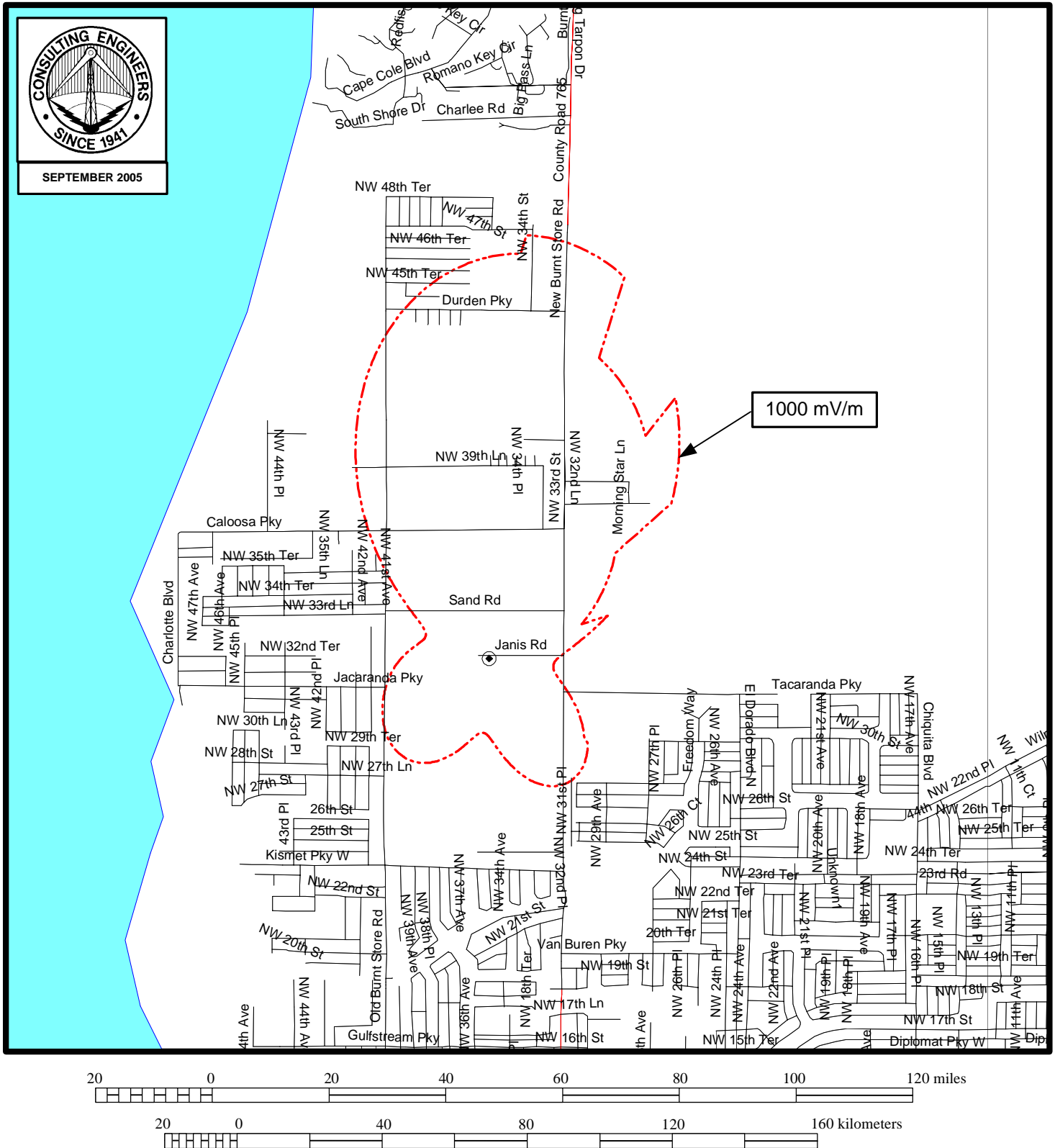
TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHZ 50 KW-D 1 W-N DA-2 U

DAYTIME RADIATION PATTERN
(Radiation Values at One Kilometer)

<u>Tower Number</u>	<u>Field Ratio</u>	<u>Phase (deg.)</u>	<u>Spacing (deg.)</u>	<u>Bearing (deg.)</u>	<u>Height (deg.)</u>
1	1.000	0.0	0.0	0.0	85.6
3	1.318	+151.5	120.0	130.0	85.6
4	1.762	+4.3	144.3	100.1	83.5
5	1.080	+95.5	84.6	218.5	83.5

<u>Input Power (kW)</u>	<u>Loop Loss (ohms)</u>	<u>Theo. RMS (mV/m)</u>	<u>Theo. RSS (mV/m)</u>	<u>Q Factor (mV/m)</u>	<u>Standard RMS (mV/m)</u>
50	1.0	2093	2870	71.7	2199

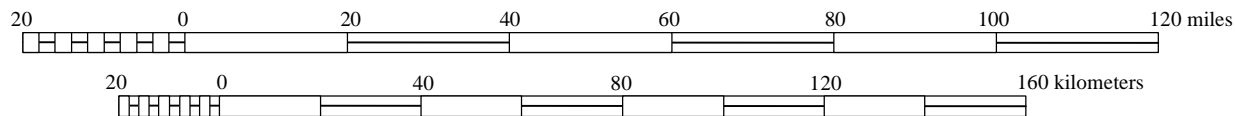
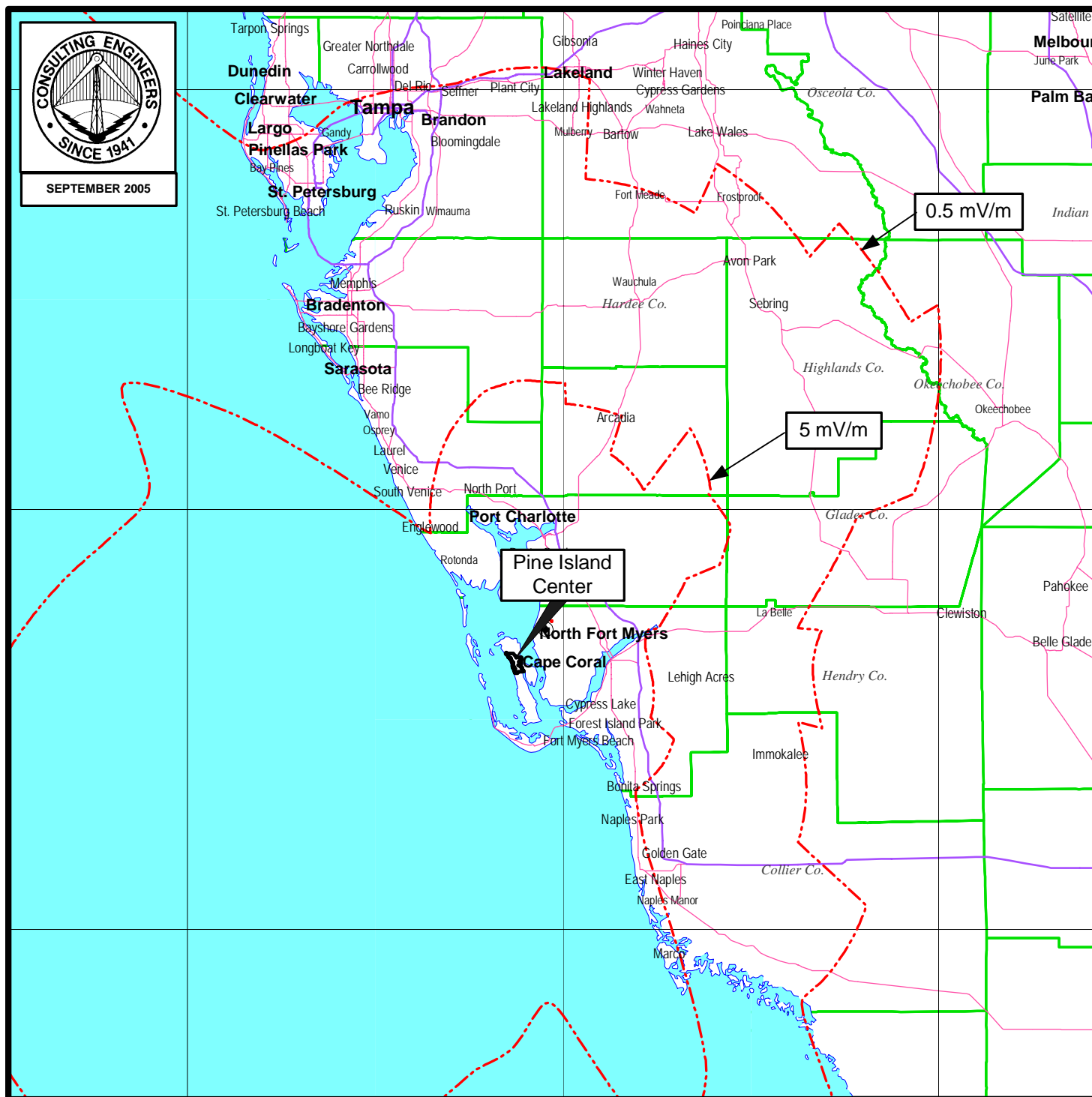
<u>Azimuth (mV/m)</u>	<u>Field (mV/m)</u>	<u>Azimuth (mV/m)</u>	<u>Field (mV/m)</u>	<u>Azimuth (mV/m)</u>	<u>Field (mV/m)</u>	<u>Azimuth (mV/m)</u>	<u>Field (mV/m)</u>
0	4680	90	680	180	769	270	870
5	4747	95	644	185	727	275	799
10	4731	100	655	190	770	280	730
15	4635	105	710	195	872	285	674
20	4466	110	800	200	995	290	657
25	4232	115	915	205	1112	295	708
30	3945	120	1044	210	1208	300	845
35	3618	125	1176	215	1276	305	1066
40	3265	130	1297	220	1313	310	1353
45	2900	135	1398	225	1323	315	1694
50	2536	140	1468	230	1309	320	2072
55	2183	145	1500	235	1277	325	2475
60	1853	150	1487	240	1233	330	2887
65	1554	155	1429	245	1181	335	3292
70	1292	160	1328	250	1124	340	3675
75	1071	165	1192	255	1065	345	4019
80	895	170	1037	260	1003	350	4308
85	764	175	885	265	938	355	4532



PROPOSED DAYTIME COVERAGE CONTOUR

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

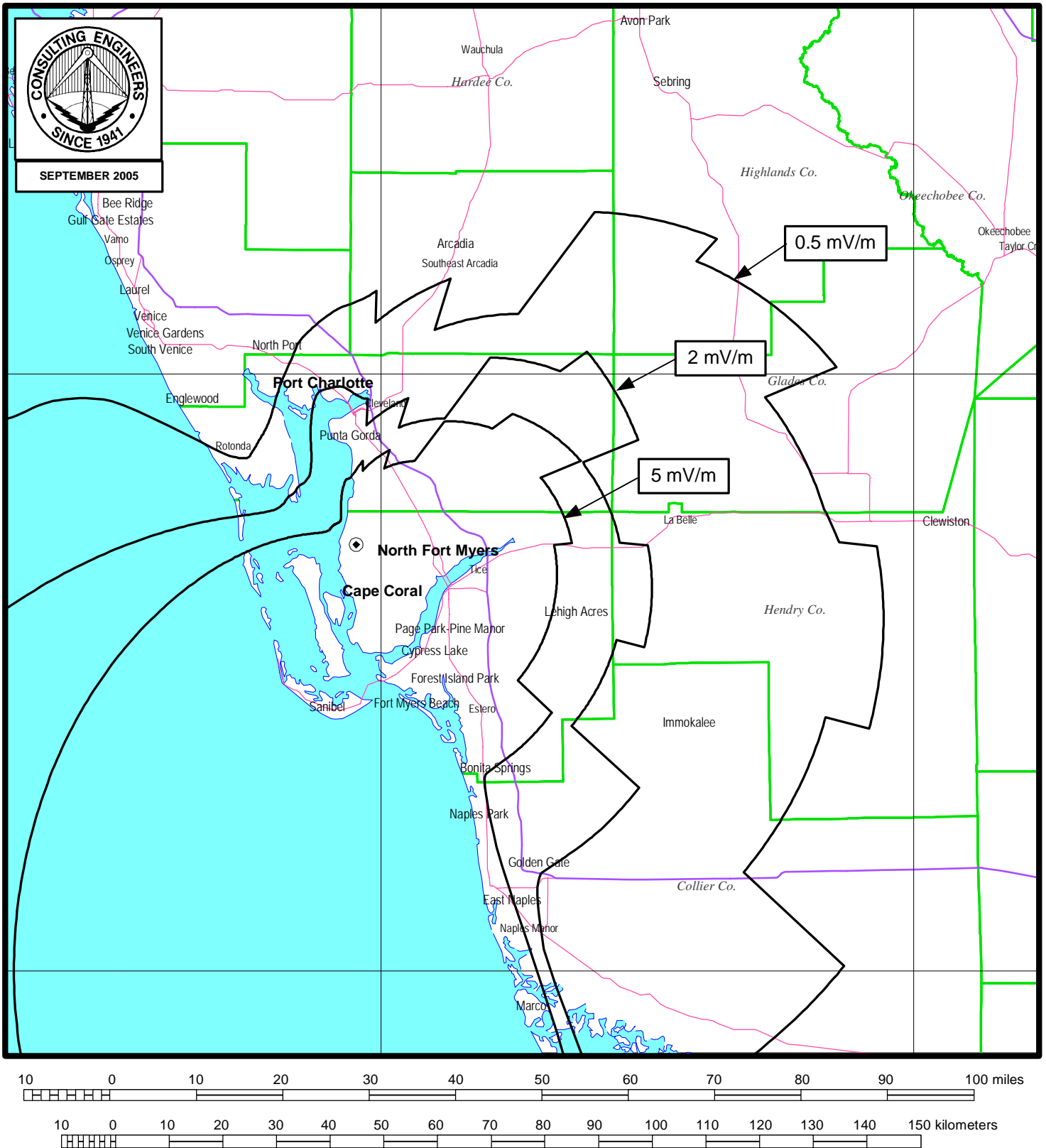


PROPOSED DAYTIME COVERAGE CONTOURS

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

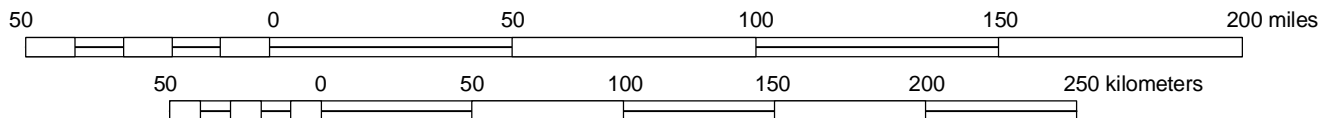
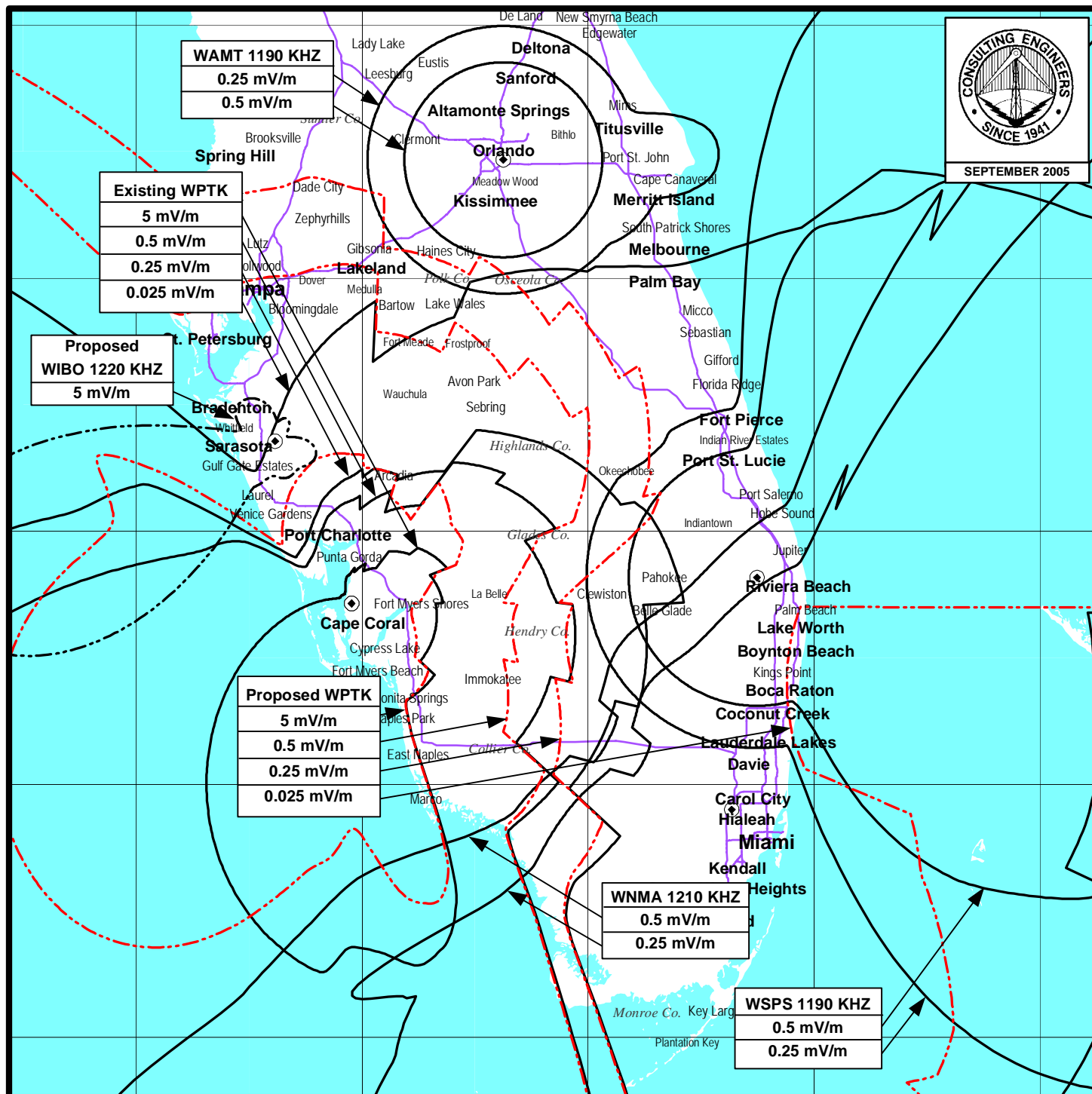
Figure 8



EXISTING DAYTIME COVERAGE CONTOURS

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

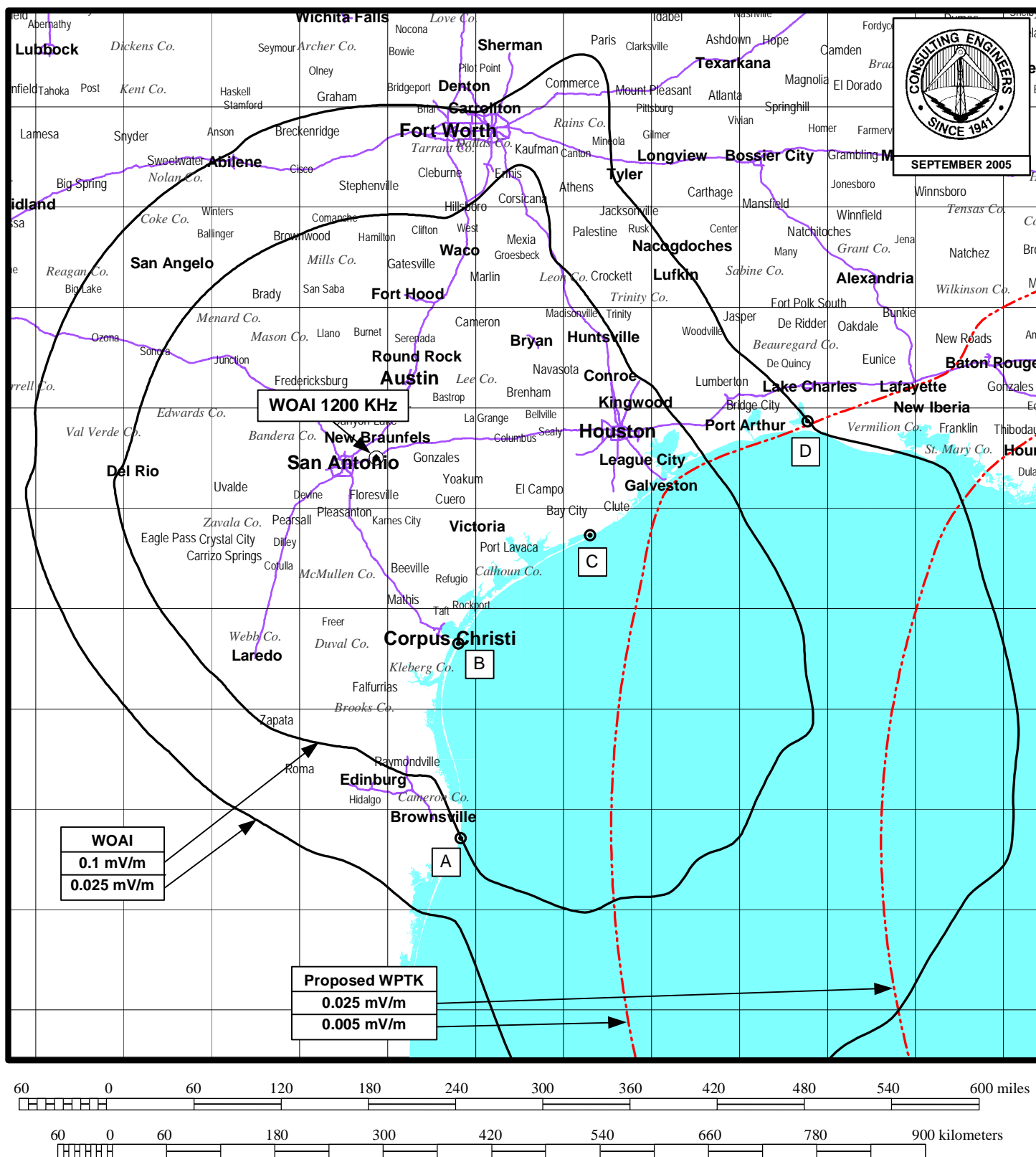
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DAYTIME ALLOCATION STUDY ALLOCATION WITH FLORIDA STATIONS

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

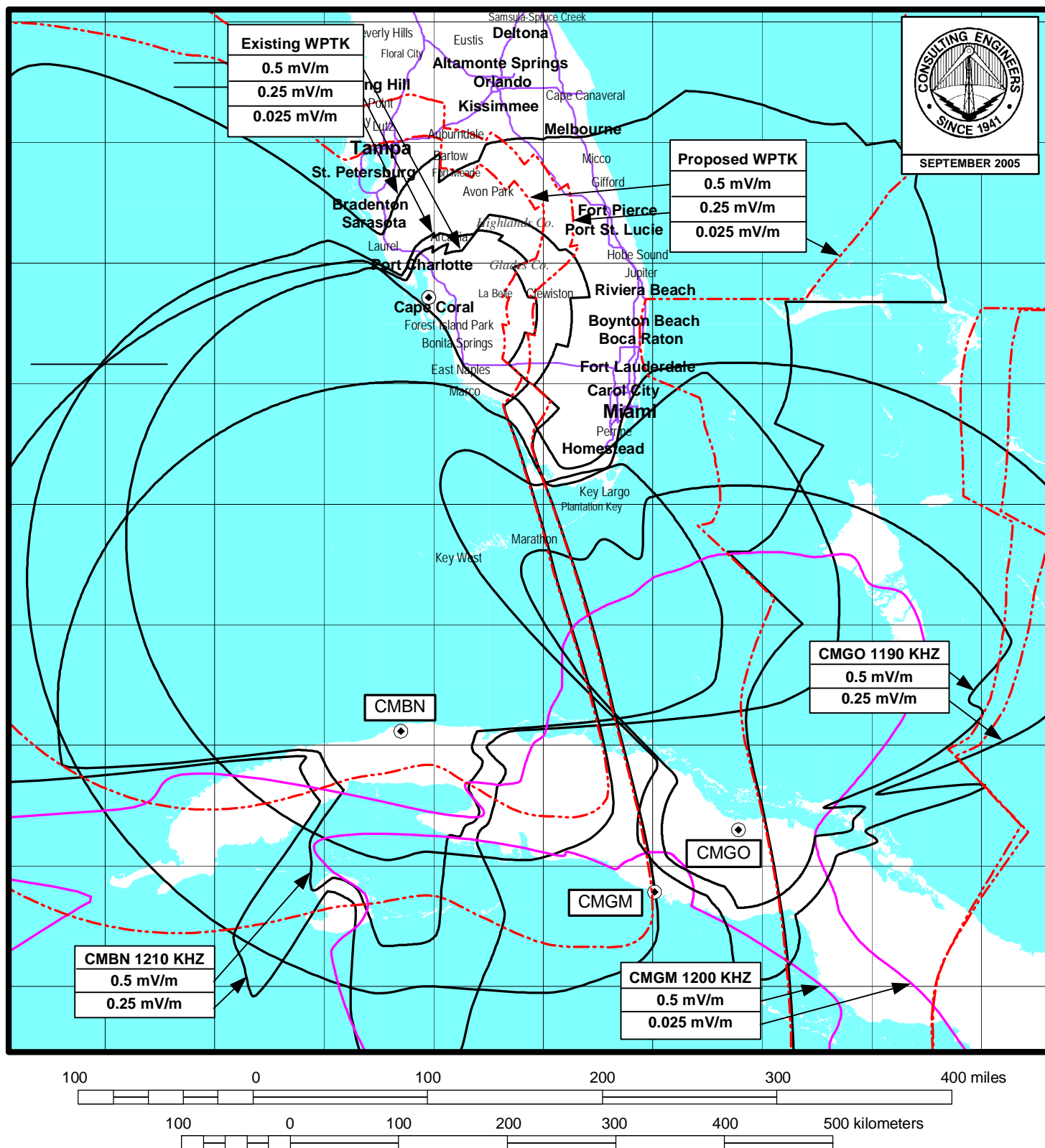
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DAYTIME ALLOCATION STUDY ALLOCATION WITH FLORIDA STATIONS

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY ALLOCATION WITH CUBAN STATIONS

RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 kHz 50 KW-D 1 KW-N DA-2 U

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

ENGINEERING EXHIBIT
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RADIO STATION WPTK
PINE ISLAND CENTER, FLORIDA
1200 KHZ 50 KW-D 1 KW-N DA-2 U

Data Employed in Calculation of Groundwave Contours

Existing WPTK Pine Island Center, Florida
1200 kHz, 10 KW-D, 1 KW-N, DA-2, U
26-42-52, 082-02-46
Licensed Daytime Standard Radiation Pattern
Conductivity: M-3, measurements from BP-20030109AEX and Figure 11

Proposed WPTK Pine Island Center, Florida
1200 kHz, 50 KW-D, 1 KW-N, DA-2, U
26-42-52, 082-02-46
Proposed Daytime Standard Radiation Pattern – Figure 5
Conductivity: M-3, measurements from BP-20030109AEX and Figure 11

WOAI San Antonio, Texas
1200 kHz, 50 KW-U
29-30-07, 098-07-43
Radiation: 400.7 mV/m/km for 1 kW
Conductivity: M-3

WPSP Royal Palm Beach, Florida
1190 kHz, 0.69 KW-D, 0.41 KW-N, DA-N, U
26-49-01, 080-15-07
Radiation: 300 mV/m/km for 1 kW
Conductivity: M-3

WAMT Pine Castle, Florida
1190 kHz 5 KW-D
28-28-00, 081-22-29
Radiation: 296.1 mV/m/km for 1 kW
Conductivity: M-3

CMGO Yaguajay, Cuba
1190 kHz, 1 KW-U
22-18-00, 079-13-00
Radiation: 332.8 mV/m/km at 1 kW
Conductivity: Region 2

CMGM Trinidad 1, Cuba
1200 kHz, 1 KW-U
21-47-00, 079-59-00
Radiation: 317.8 mV/m/km for 1 kW
Conductivity: Region 2

WNMA Miami Springs, Florida
1210 kHz, 47 KW-D, 2.5 KW-N, DA-2, U
25-54-00, 080-21-49
Licensed Standard Radiation Pattern
Conductivity: M-3 and measurements in BP-20030109AEX

CMBN Guanabacoa, Cuba
1210 kHz, 1 KW-U
23-07-00, 082-18-00
Radiation: 336.6 mV/m/km at 1 kW
Conductivity: Region 2

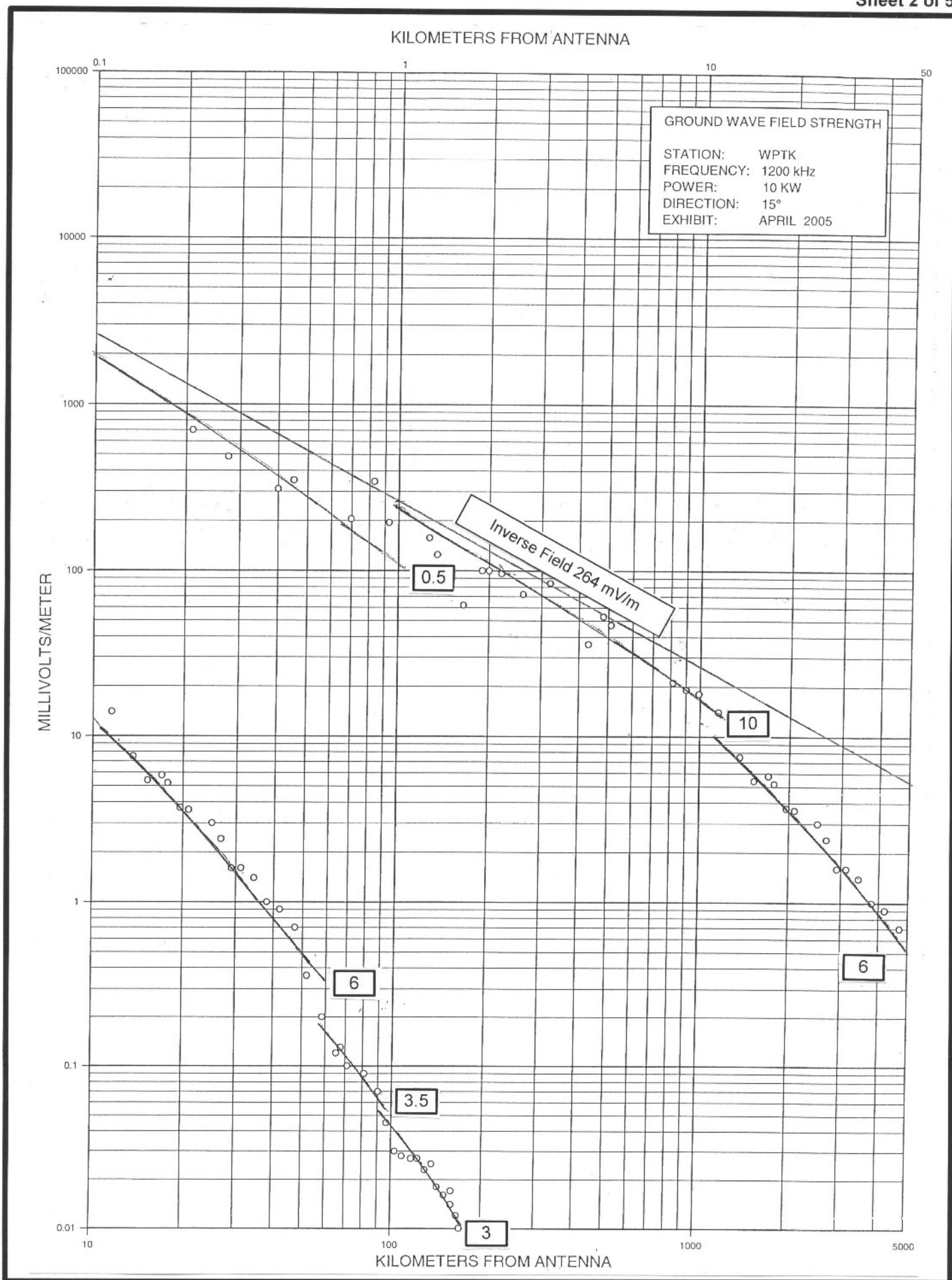
WIBQ Sarasota, Florida
CP 1220 kHz, 5 KW, DA-D
27-21-17, 082-23-06
CP Standard Radiation Pattern (BP-20021016AAB)
Conductivity: M-3

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WPTK FIELD STRENGTH MEASUREMENTS
15° TRUE

DIST.	FIELD	TIME	DATE
(KM)	MV/M	(LOCAL)	
0.21	700	1555	4/22/2005
0.28	485	1600	4/22/2005
0.40	310	1604	4/22/2005
0.45	350	1610	4/22/2005
0.70	205	1614	4/22/2005
0.83	345	1618	4/22/2005
0.93	195	1624	4/22/2005
1.27	158	1628	4/22/2005
1.35	125	1632	4/22/2005
1.65	62	1635	4/22/2005
1.90	100	1640	4/22/2005
2.00	100	1648	4/22/2005
2.20	96	1642	4/22/2005
2.60	72	1655	4/22/2005
3.20	84	1700	4/22/2005
4.30	36	1710	4/22/2005
4.80	53	1714	4/22/2005
5.10	47	1718	4/22/2005
8.15	21	1730	4/22/2005
9.00	19	1733	4/22/2005
9.90	18	1738	4/22/2005
11.50	14	1748	4/22/2005
13.60	7.5	1755	4/22/2005
15.20	5.4	1807	4/22/2005
17.00	5.8	1816	4/22/2005
17.80	5.2	912	4/23/2005
19.60	3.7	919	4/23/2005
20.90	3.6	929	4/23/2005

DIST.	FIELD	TIME	DATE
(KM)	MV/M	(LOCAL)	
25.00	3.0	948	4/23/2005
26.80	2.4	1004	4/23/2005
29.10	1.6	1014	4/23/2005
31.20	1.6	1025	4/23/2005
34.40	1.4	1033	4/23/2005
38.00	1.0	1041	4/23/2005
42.00	0.90	1053	4/23/2005
47.10	0.70	1100	4/23/2005
51.90	0.36	1112	4/23/2005
58.50	0.20	1126	4/23/2005
65.30	0.12	1142	4/23/2005
67.50	0.13	1152	4/23/2005
71.20	0.100	1204	4/23/2005
81.00	0.090	1217	4/23/2005
90.20	0.070	1236	4/23/2005
96.40	0.045	1250	4/23/2005
103.00	0.030	1314	4/23/2005
109.00	0.028	1329	4/23/2005
117.00	0.027	1347	4/23/2005
123.00	0.027	1400	4/23/2005
130.00	0.023	1427	4/23/2005
137.00	0.025	1443	4/23/2005
143.00	0.018	1143	4/24/2005
151.00	0.016	1200	4/24/2005
159.00	0.015	1232	4/24/2005
166.00	0.012	1246	4/24/2005
170.00	0.010	1304	4/24/2005
174.00	0.009	1312	4/24/2005



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WPTK FIELD STRENGTH MEASUREMENTS
25° TRUE

DIST.	FIELD	TIME	DATE
(KM)	MV/M	(LOCAL)	
100.00	0.095	1525	4/23/2005
108.00	0.092	1538	4/23/2005
114.00	0.09	1604	4/23/2005
121.00	0.035	1619	4/23/2005
128.00	0.062	1633	4/23/2005
133.00	0.023	1654	4/23/2005
139.00	0.030	1712	4/23/2005
145.00	0.028	1728	4/23/2005
150.00	0.027	935	4/24/2005
154.00	0.028	944	4/24/2005
155.00	0.027	954	4/24/2005
164.00	0.026	1032	4/24/2005
175.00	0.026	1446	4/21/2005

