

APPLICATION FOR CONSTRUCTION PERMIT INFORMATION
RADIO STATION WRSO
ORLOVISTA, FLORIDA

810 KHZ 10 KW - D 1 KW - N DA-2

April 26, 2013

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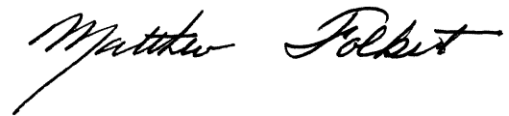
Executive Summary - WRSO

This engineering exhibit supports an application for construction permit for radio station WRSO in Orlovista, Florida. A minor change for a nighttime power increase is proposed.

WRSO is presently licensed to operate fulltime on 810 kilohertz with 10 kilowatts daytime and 400 watts nighttime, utilizing different directional antennas during daytime and nighttime hours. By means of this present application, the licensee proposes to increase nighttime power to 1 kilowatt. An additional tower is proposed to supplement the existing four-tower array to be utilized for the new nighttime pattern. The nighttime service is proposed from the same site location as the presently licensed facility. The daytime service will remain the same.

The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class B station operating on one of the channels listed in 73.25(b), the proposal satisfies 47 CFR 73.21(a)(3) which permits operation with a nominal power of not less than 0.25 kilowatt nor more than 50 kilowatts at any time.

The Federal Aviation Administration has not been notified of the proposal as the new tower construction is less than 200 feet and satisfies the analysis of the FCC TOWAIR program.



Matthew Folkert

April 26, 2013

Broadcast Facility - WRSO

The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33, 73.45, 73.150, 73.152, 73.160, 73.182(a)-(i), 73.186, 73.189 and 73.1650. Information included herein demonstrates compliance with all relevant requirements. The technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice.

Proposed Transmitter Location

The location of the proposed WRSO facility will continue at NAD27 coordinates:

28-34-18 North

81-26-02 West

The existing four towers and one new tower will be utilized for the nighttime pattern.

Directional Antenna Towers

A total of five towers will be employed for the proposed nighttime directional antenna pattern. The radiating elements for towers 1-4 are 92.5 meters (303 feet) in height and have an overall height of 94.2 meters (309 feet) above ground level. The radiating element for tower 5 is 59.4 meters (195 feet) in height and has an overall height of 60.3 meters (198 feet) above ground level.

Ground System

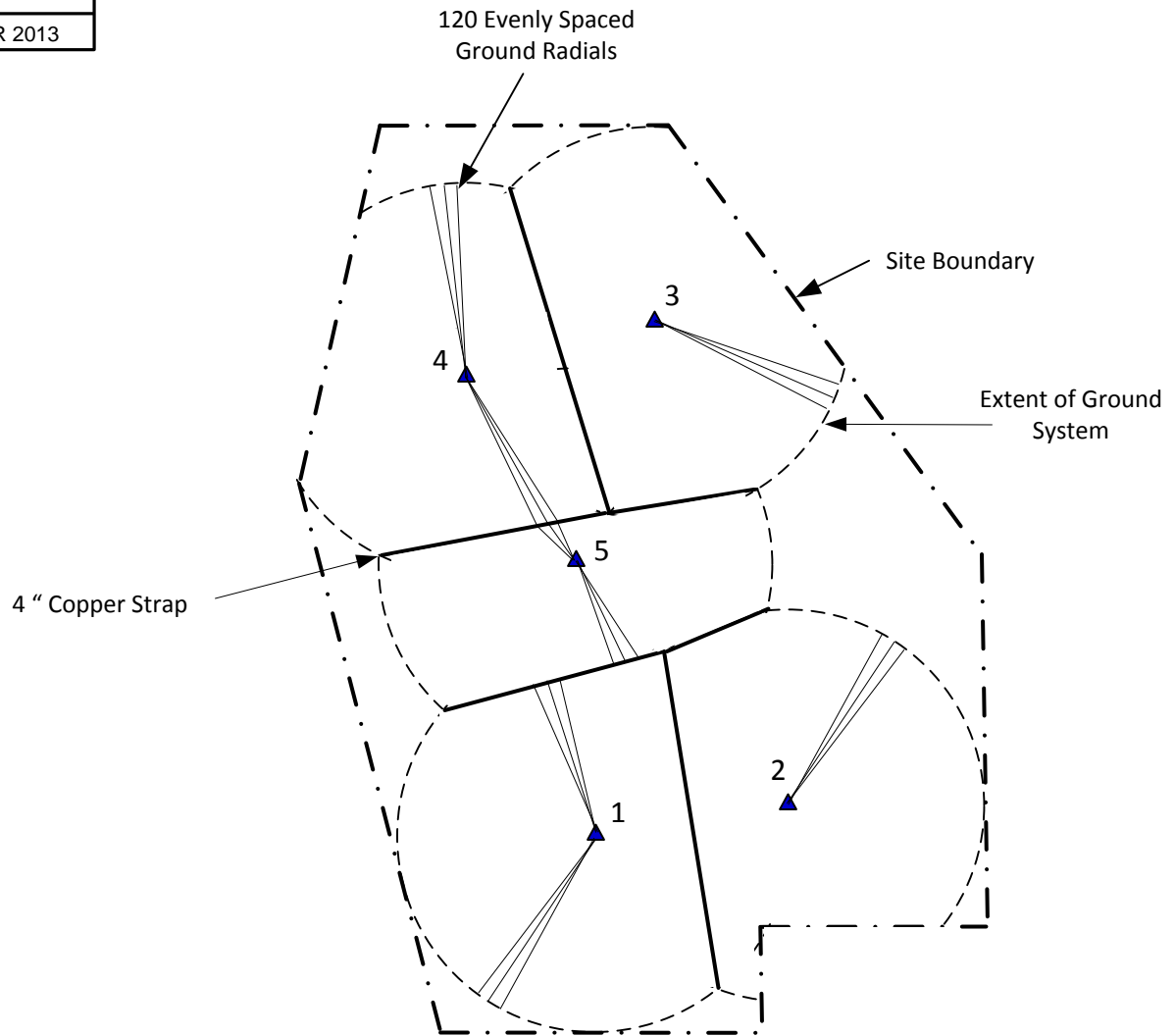
The existing ground system at the transmitter site consists of 120 equally-spaced buried copper wire radials surrounding the existing four towers and extending to a length of 92.5 meters each except where overlap of radials between adjacent towers and site boundaries would occur. The new ground radials for the proposed fifth tower will interface to the existing system as shown on the following antenna site plat.

Proposed Nighttime Directional Antenna Pattern

A polar graph of the proposed nighttime horizontal plane standard radiation pattern appears on the following pages. Pertinent information with regard to its parameters and characteristics are shown along with the polar graph.



APR 2013



Site Coordinates(NAD 27)

28° 34' 18" N
81° 26' 02" W

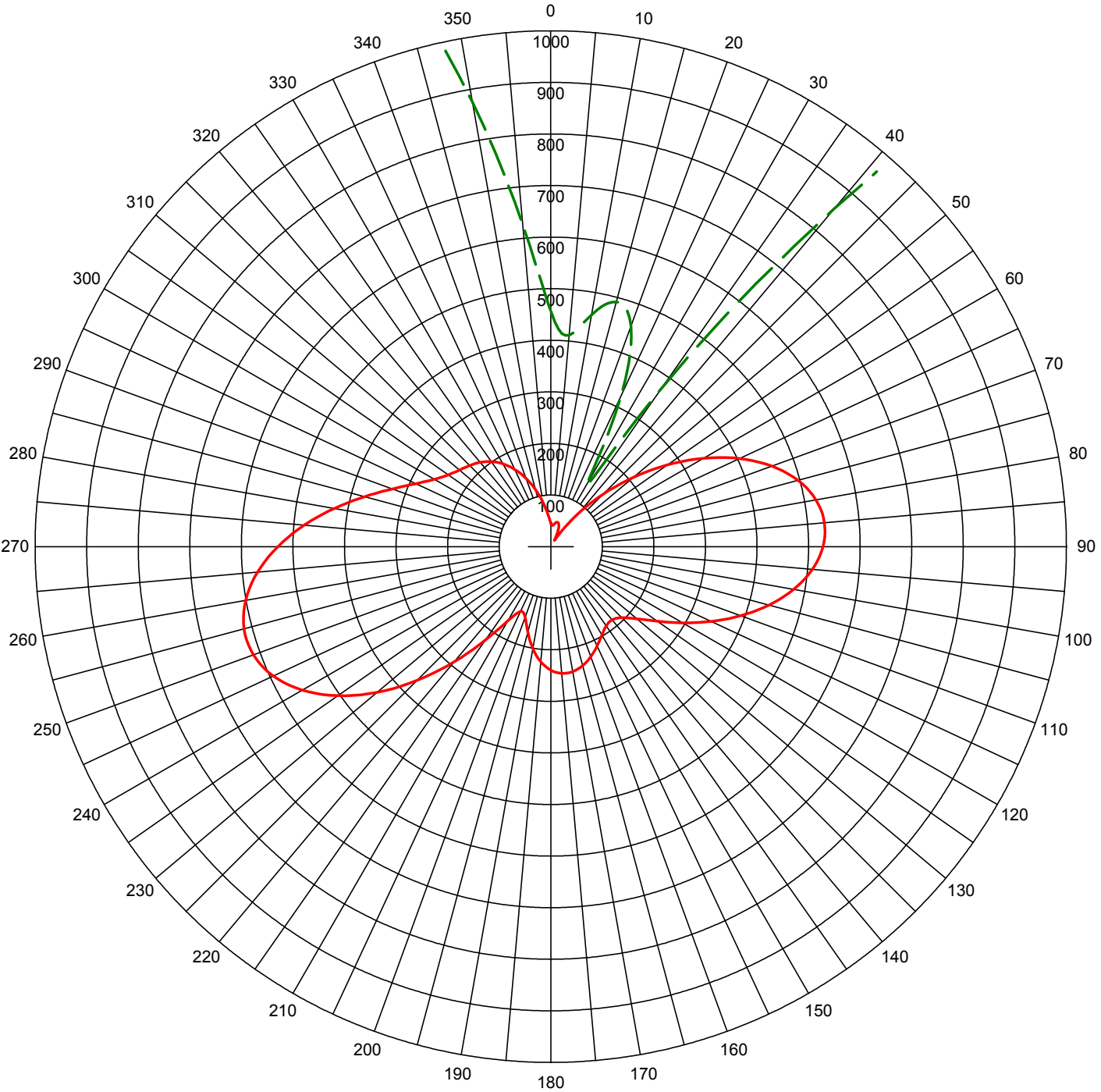
0 200 400
Scale
(feet)

ANTENNA SITE PLAT

RADIO STATION WRSO
ORLOVISTA, FLORIDA
810 KHZ 10 KW-D 1 KW-N U DA-2

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

AM Directional Pattern



Standard Horizontal Plane Pattern

— Pattern (mV/m @ 1km)
— Pattern X10

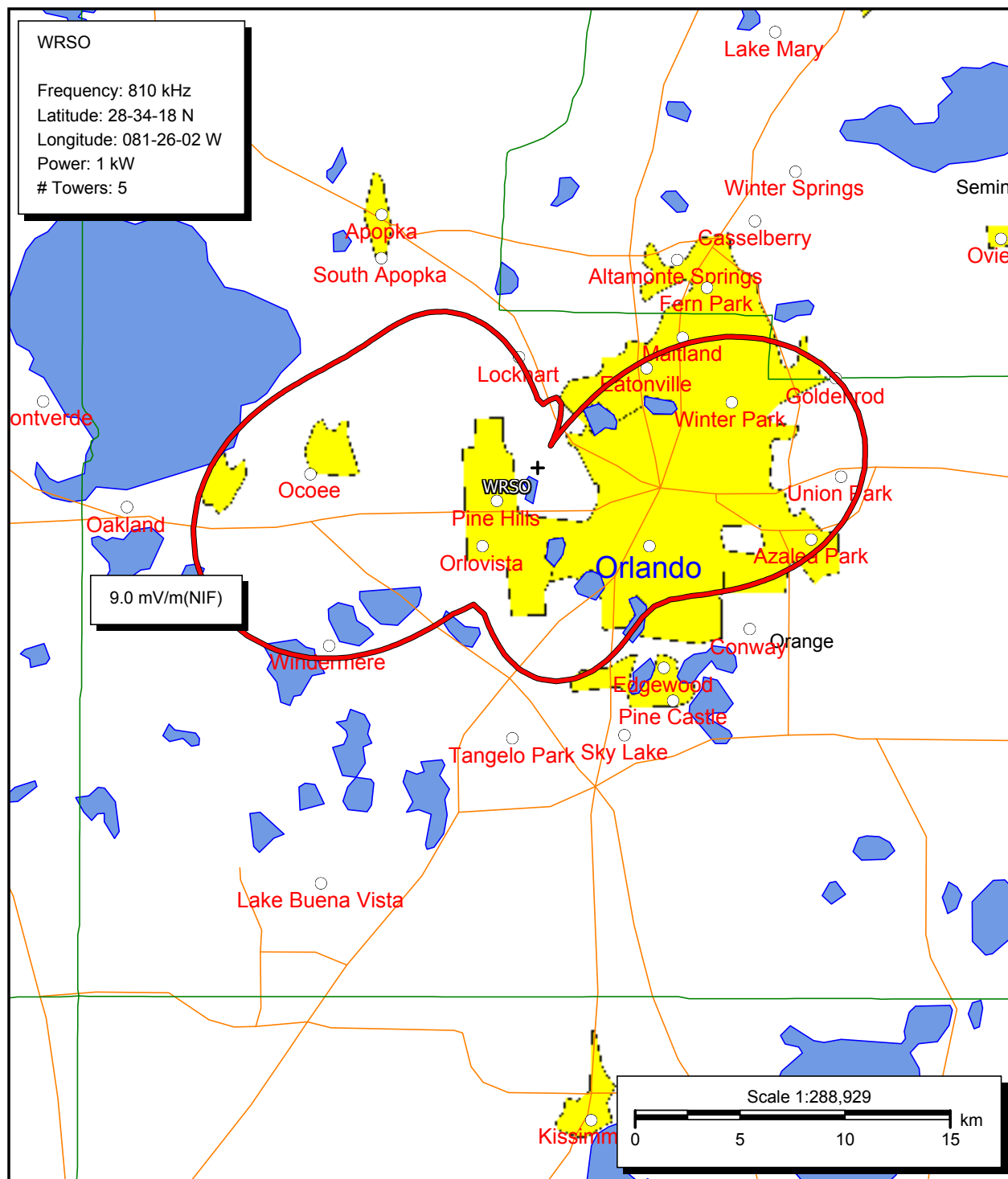
#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.667	-215.5	90.0	81.6	90.0	0	0	0.0	0.0	0.0	0.0
3	0.112	-146.2	225.0	7.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.755	19.4	208.1	343.4	90.0	0	0	0.0	0.0	0.0	0.0
5	0.282	-115.8	119.2	355.9	57.8	0	0	0.0	0.0	0.0	0.0

Call: WRSO
Freq: 810 kHz
ORLOVISTA, FL, US
Hours: N
Lat: 28-34-18 N
Lng: 081-26-02 W
Power: 1.0 kW
Theo RMS: 313.5 mV/m@1km
 @ 1.0 kW
Theo RSS: 438.4 mV/m
Std RMS: 329.4 mV/m

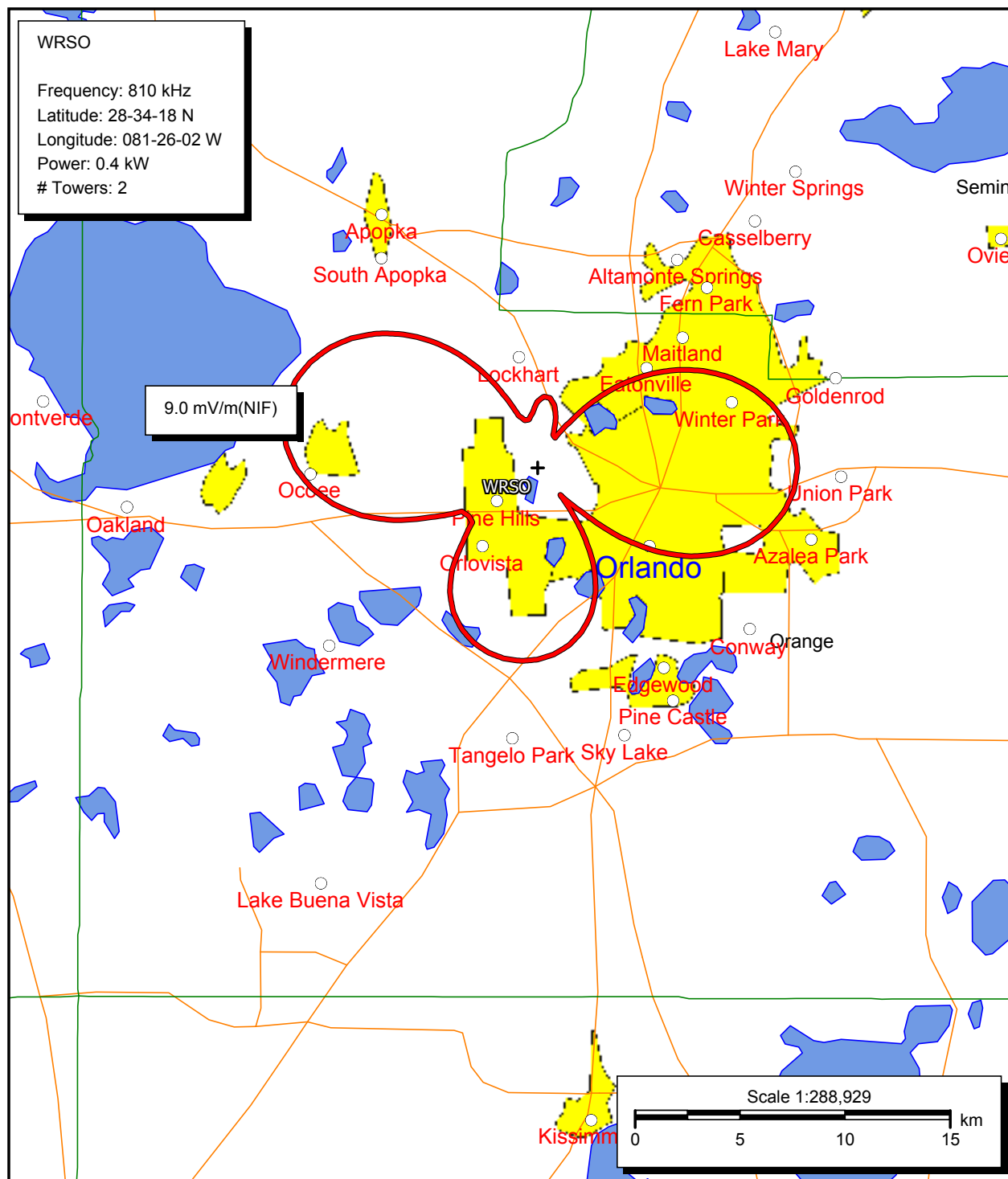
Proposed Nighttime Horizontal Plane Standard Radiation Pattern

Principal Community Coverage and Service Contours - WRSO

The proposed facility complies with the community coverage requirements of 47 C.F.R. Section 73.24(i). The nighttime 9.0 mV/m interference-free contour encompass the entire principal community to be served. Maps showing the proposed and existing nighttime field strength service contours appear on the following pages.



Proposed Nighttime Field Strength Contour



Existing Nighttime Field Strength Contour

Allocation Requirements - WRSO

The proposed facility complies with the requirements of 47 C.F.R. Section 73.37, 73.182 and 73.187. A nighttime allocation study shows protection to all stations and international allotments operating on the co-channel and adjacent channel frequencies.

The following figures support a conclusion that this proposal comports with all interference protection requirements. Maps showing the field strength contours requiring study and tabulations of pertinent data regarding the nighttime allocation studies appear on the following pages.

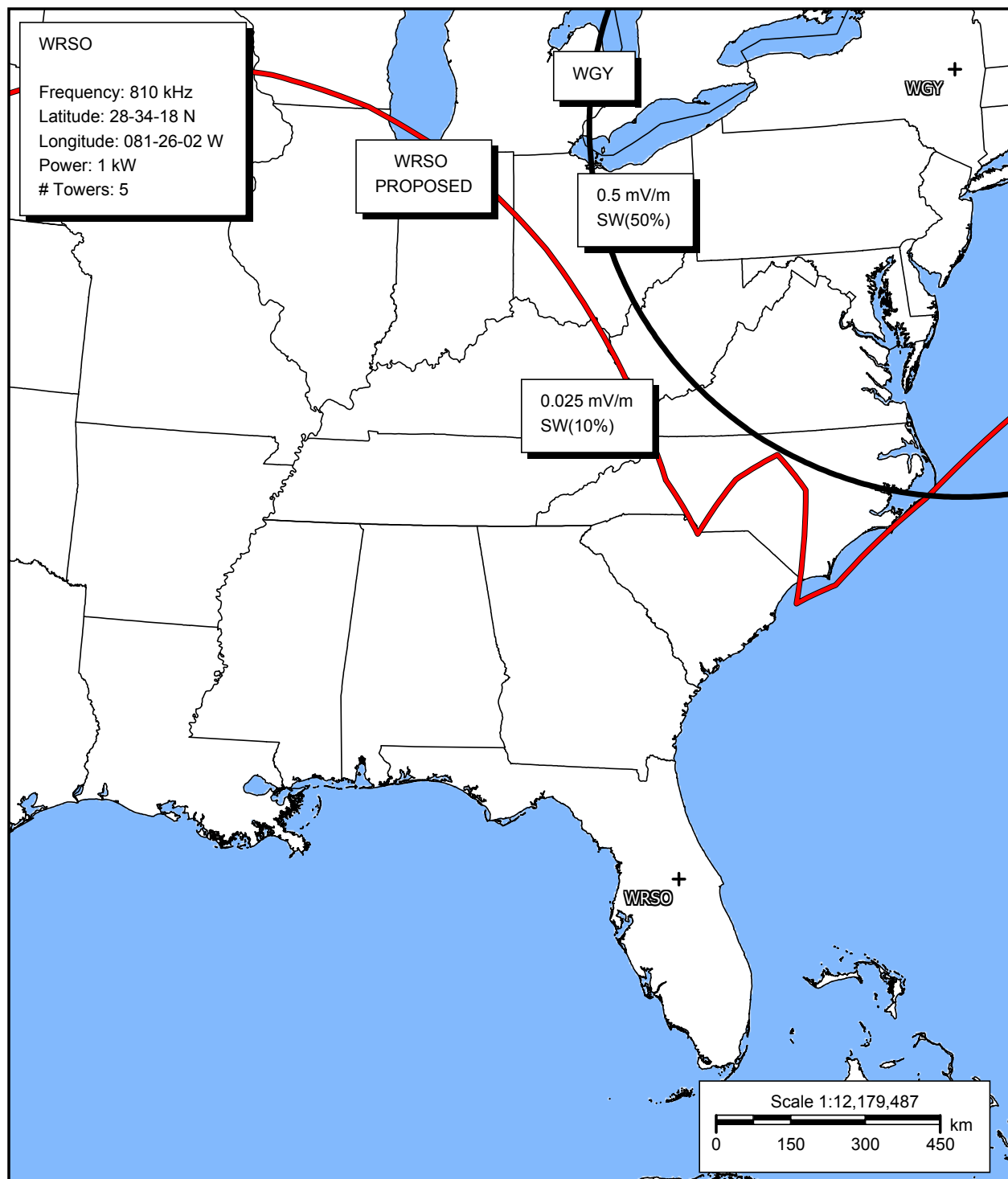
Nighttime Allocation Study

Call: WRSO
Freq: 810 kHz
ORLOVISTA, FL, US
Hours: N
Lat: 28-34-18 N
Lng: 081-26-02 W
Power: 1.0 kW
Theo RMS: 313.5 mV/m @ 1km @ 1.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.667	-215.5	90.0	81.6	90.0	0	0	0.0	0.0	0.0	0.0
3	0.112	-146.2	225.0	7.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.755	19.4	208.1	343.4	90.0	0	0	0.0	0.0	0.0	0.0
5	0.282	-115.8	119.2	355.9	57.8	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
WGY (190)	US	NY	SCHENECTADY	52.21	0.500	47.89S	47.59	0.30
WCKA 50% = 11.372, 25% = 11.372; WGY=11.37	US	AL	JACKSONVILLE	75.63	2.843	187.95	187.47	0.48
KGO (120)	US	CA	SAN FRANCISCO	6.84	0.500	365.75S	364.31	1.44
XEMQ1/O 50% = 7.323, 25% = 8.816; XEOE/A=5.54 XEIC/A=4.78 XEIN/A=2.80 WSJC=2.49 WGY=2.25 WHB=2.24	MX	YC	MERIDA	47.89	3.662	382.32	380.17	2.15
C6B3-B 50% = 2.837, 25% = 3.24; WGY=2.84 WRSO=1.30 WCKA=0.86	BF		FREEPORT	62.28	2.820	226.40	202.00	24.41
WSJC 50% = 15.154, 25% = 15.68; WCKA=10.33 WHB=8.31 WGY=7.34 WBAP=4.03	US	MS	MAGEE	57.22	3.920	342.58	275.61	66.97
XERB1/O 50% = 6.128, 25% = 7.548; XEOE/A=4.90 XEIC/A=3.68 WGY=2.38 XEIN/A=2.27 WSJC=2.20 WCKA=1.95	MX	QR	COZUMEL	58.35	3.064	262.52	192.00	70.52
WKVM 50% = 5.258, 25% = 5.258; WGY=4.09 CX14-A=3.31	US	PR	SAN JUAN	19.08	1.314	344.50	270.81	73.68
XEIC/A 50% = 6.504, 25% = 7.789; XEOE/A=6.50 XEIN/A=3.22 WHB=2.04 WGY=1.96	MX	CA	CAMPECHE	35.68	3.252	455.81	372.93	82.88
TGMM-B (40) 50% = 2.581, 25% = 2.982; XEOE/A=2.12 XEIC/A=1.47 XEIN/A=0.95 WGY=0.88 WSJC=0.74	GT		RADIOMOPAN	20.36	1.291	316.93S	166.24	150.69
XE/O 50% = 7.235, 25% = 8.014; XEOE/A=5.88 XEIC/A=4.21 XEIN/A=2.72 WGY=2.12	MX	QR	FELIPE CARRILLO	45.83	3.617	394.64	227.65	166.99
XEFW/O 50% = 5.16, 25% = 7.123; XEOE/A=3.84 XEIN/A=2.49 XEIC/A=2.38 WHB=2.38 XEMAX/A=2.06 KYTY=2.03 KGO=1.95 XERSV1/A=1.78 XEAGR/A=1.77	MX	TA	TAMPICO	14.72	2.379	808.34	613.78	194.56

Call Letters	Ct St City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
XEFW1/O	MX TA TAMPICO	14.72	2.379	808.34	613.78	194.56
50% = 5.16, 25% = 7.123; XEOE/A=3.84 XEIN/A=2.49 XEIC/A=2.38 WHB=2.38 XEMAX/A=2.06 KYTY=2.03 KGO=1.95 XERSV1/A=1.78 XEAGR/A=1.77						
XEFW/O	MX VE CD. CUAUHEMOC	14.71	2.388	812.07	613.46	198.61
50% = 5.194, 25% = 7.136; XEOE/A=3.87 XEIN/A=2.51 XEIC/A=2.39 WHB=2.36 XEMAX/A=2.06 KYTY=2.01 KGO=1.95 XEAGR/A=1.77 XERSV1/A=1.77						
WWBA	US FL LARGO	342.73	3.646	531.94	322.80	209.14
50% = 14.07, 25% = 14.585; WBAP=14.07 HJED-A=3.84						
XERI/O	MX TA REYNOSA	18.04	3.001	831.60	573.85	257.76
50% = 6.002, 25% = 8.194; WHB=4.59 KYTY=3.87 WSJC=2.79 XERSV1/A=2.30 KXOI=2.24 WGY=2.14 WCKA=2.06 KGO=2.05						
CMMB-D	CU GUANTANAMO	20.64	1.836	444.85	184.66	260.19
50% = 3.672, 25% = 3.863; WKVM=3.67 WGY=1.20						
WHB	US MO KANSAS CITY	18.16	1.909	525.79	216.93	308.87
50% = 7.268, 25% = 7.637; WGY=6.41 WBAP=3.43 XEROK/A=2.35						
KYTY	US TX SOMERSET	20.98	3.324	792.23	458.51	333.72
50% = 11.613, 25% = 13.296; KXOI=7.45 WBAP=6.97 XEROK/A=5.55 WHB=5.32 WGY=3.70						
WPLK	US FL PALATKA	372.55	3.357	450.50	101.97	348.52
50% = 11.858, 25% = 13.427; XEROK/A=9.37 WJAT=7.26 WDSC=3.79 WPJM=3.59 WSHO=3.52						
YSAX-D (45)	ES SAN SALVADOR	10.70	1.273	595.35S	137.08	458.26
50% = 2.547, 25% = 3.106; XEOE/A=2.55 XEIC/A=1.22 XEIN/A=1.00 WKVM=0.81						
WBAP (110)	US TX FORT WORTH	30.45	0.500	820.95G	335.27	485.69
XEOE/A	MX CS TAPACHULA	12.55	2.465	981.75	269.39	712.35
50% = 4.93, 25% = 5.285; XEIN/A=3.87 XEIC/A=3.06 XEAGR/A=1.38 WGY=1.31						
XEHT/O	MX TL HUAMANTLA	10.98	3.058	1392.41	573.20	819.21
50% = 6.116, 25% = 7.591; XEOE/A=5.28 XEIN/A=3.09 XEIC/A=2.46 XEAGR/A=2.33 XEMAX/A=2.29 KGO=1.86						
XEHT1/O	MX TL HUAMANTLA	10.97	3.068	1398.34	572.52	825.82
50% = 6.136, 25% = 7.608; XEOE/A=5.30 XEIN/A=3.10 XEIC/A=2.47 XEAGR/A=2.33 XEMAX/A=2.29 KGO=1.86						
KXOI	US TX CRANE	14.40	3.592	1247.18	381.07	866.11
50% = 12.372, 25% = 14.678; XEROK/A=12.37 WBAP=5.80 KGO=3.98 WHB=3.59						
KLVB	US CO BRIGHTON	8.66	1.952	1127.16	238.84	888.32
50% = 6.076, 25% = 7.808; XEROK/A=4.51 KXOI=4.07 KGO=2.67 WGY=2.62 WHB=2.29 WBAP=2.19						
YSFA-B (40)	ES SAN VICENTE	6.73	1.444	1072.95S	138.38	934.57
50% = 2.888, 25% = 3.301; XEOE/A=2.89 XEIC/A=1.14 XEIN/A=1.12						
XEYM/O	MX MC MORELIA	7.65	2.530	1653.75	608.22	1045.53
50% = 5.242, 25% = 7.035; XEOE/A=3.38 XEMAX/A=3.10 KGO=2.53 XEAGR/A=2.31 XERSV1/A=2.20 XEIN/A=2.19 KXOI=1.98 KYTY=1.76						

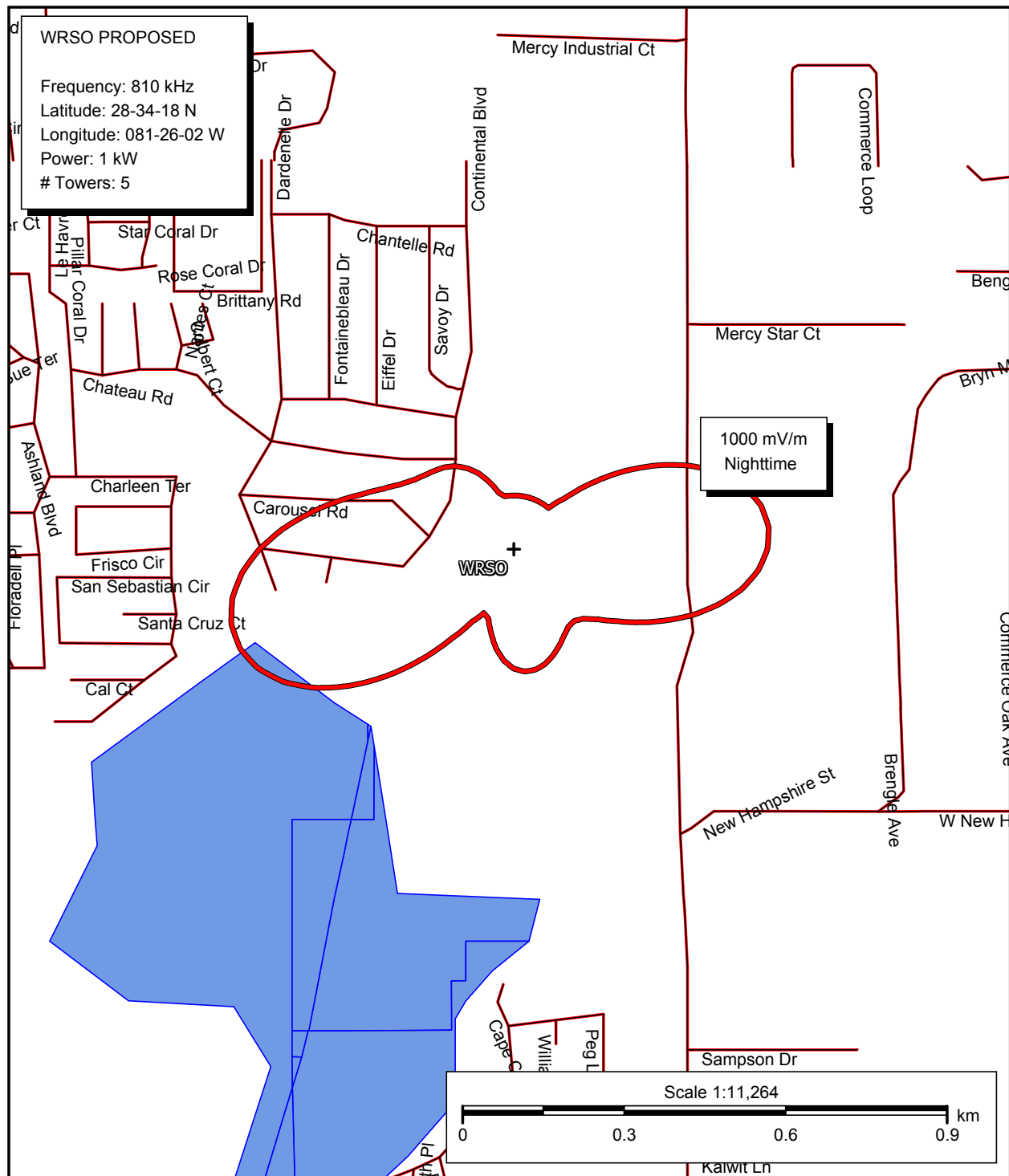


Nighttime Allocation Study

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

Blanketing - WRSO

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 300 persons. At the proposed location, during nighttime hours, the proposed 1,000 mV/m contour encompasses 248 persons. Thus, the requirements of 47 CFR 73.24(g) are met.



Blanketing

Environmental Protection - WRSO

The proposed facility is excluded from environmental processing under the requirements of 47 C.F.R. Section 1.1306. The proposed tower 5 is located within the area subtended by the existing four towers on the site. Therefore, pursuant to Section 1.1306(B)(Note 3) of the FCC Rules, the instant proposal is categorically excluded from environmental processing. The proposed facility will not have a significant environmental impact and will comply with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments.

The proposed WRSO operation will be evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 1 through 4 of Supplement A to OET Bulletin 65, the worst case interpolated distances at which the electric and magnetic fields would fall below ANSI guidelines will be calculated before construction. The areas surrounding the base of each tower will be appropriately restricted with a fence having the required minimum radius unless field measurement data indicates otherwise. The fences will assure that persons on the property outside the fenced areas will not be exposed to radiofrequency field levels in excess of those recommended by the ANSI. In addition, warning signs will be posted.