

**Southern Stone Communications, LLC**

**Modify BLFT- 20160906ADZ**

**W231CN**

**Daytona Beach, FL.**

**April - 2017**

**Technical Statement:**

The attached technical statement and related exhibits are prepared by EME Communications for Southern Stone Communications, LLC; Daytona Beach, FL. The purpose is to specify a new antenna site, operating channel, HAGL, HAAT, HAMSL and antenna system. Since the channel change is the 53<sup>rd</sup> IF from the licensed channel, this proposal is considered a minor change.

The applicant proposes to continue to re-broadcast the signal of WHOG-FM, Licensed to Ormond-By-The-Sea, Florida. Attached as exhibit 2 is a plot that shows the proposed will not extend the 60 DBu contour of WHOG-FM.

The applicant proposes to employ a one (1) bay Scala CA-5-CP-RM directional antenna system. A rotation of 225 degrees is proposed

**Interference Study:**

Attached as exhibit 1 is an interference study that show the proposed has overlapping contours with the following facilities:

- 1- WTKS-FM, Cocoa Beach, FL. 3<sup>rd</sup> adjacent therefore 74.1204(d) wavier requested.
- 2- WOMX-FM, Orlando, FL. 2<sup>nd</sup> adjacent located on same supporting structure therefore 74.1204(d) wavier requested.

Both stations are located on the same supporting structure and utilizing the same antenna.

**Proposed Site:**

Tower ID: 1020771  
Distance: 0.03 km    Bearing: 233.9 degrees  
Coordinates (NAD27): 29-10-24.37 N, 081-09-25.99 W  
Status: Constructed  
Action Date: 11/24/2015  
Construction Date: 04/01/1982  
Location: 900 N INDIAN LAKE RD (#302756), DAYTONA, FL  
Height (AG): 184.40 m, Elevation: 12.20 m, Structure Height: 167.60 m  
Circular Number: 70/7460-1K  
FAA Number: 2014-ASO-7838-OE    FAA Chapter: 3, 4, 5, 12  
The terrain data employed in all studies is the FCC 30 Sec database provided by V-Soft Communications.

**Interference Concerns to WTKS-FM:**

The protected contour of WTKS-FM and WOMX-FM at the proposed site is 68.001 DBu. By adding the U/D of the proposed operation, the interfering contour is 108.001 DBu.

As demonstrated in the attached V-Soft X-Field output, the interfering contour extends from the tower well above the ground around the supporting structure. Also attached is a Google Earth map that clearly the area within the 108.001 DBu contour is completely unoccupied and has no major roads running through the contour. The interfering contour comes 4.689 meters (15.05 feet) to ground level at the closest point.

**Conclusion:**

Southern Stone Communications, LLC proposes to re-locate W231CN and re-broadcast WHOG-FM. It is believed this statement and attached exhibits should pass muster with the Commission's staff and therefore be granted.

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Moultrie, GA 31768-0349  
229-890-2506

## EXHIBIT - 1

REFERENCE CH# 284D - 104.7 MHz, Pwr= 0.02 kW DA, HAAT= 24.2 M, COR= 33.1 M DISPLAY DATES  
 29 10 24.4 N. Average Protected F(50-50)= 3.74 km DATA 04-05-17  
 81 09 26.0 W. Standard Directional SEARCH 04-05-17

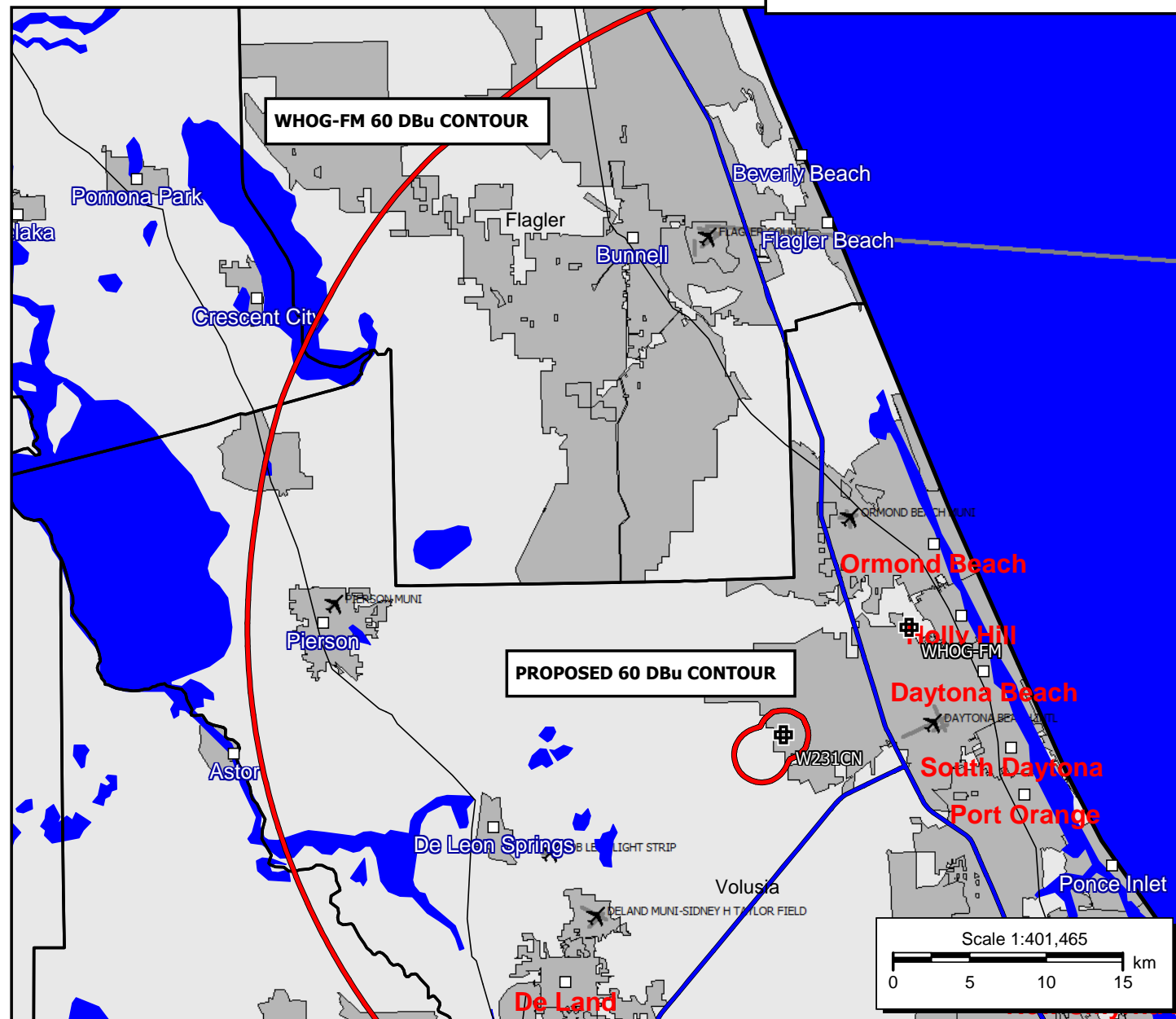
CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
284D Daytona Beach	W284AV	LIC _C_	FL	83.3 263.4	14.60 BLFT20120827AEK	29 11 19.0 81 00 28.0	0.120 87	32.9 90	9.8 Miracle Media Group, LLC	-19.9*	0.4
281C Cocoa Beach	WTKS-FM	LIC _C_	FL	173.1 353.1	66.36 BMLH20031010ADD	28 34 51.0 81 04 32.0	100.000 487	12.5 500	86.1 Clear Channel Broadcasting	50.9	-19.9*
286C Orlando	WOMX-FM	LIC _C_	FL	173.1 353.1	66.36 BMLH20030924ABI	28 34 51.0 81 04 32.0	100.000 487	12.5 500	86.1 Cbs Radio Stations Inc.	50.9	-19.9*
283D Ormond Beach	W283CF	LIC _C_	FL	37.6 217.7	18.00 BLFT20160727ADG	29 18 06.0 81 02 38.0	0.001	2.5 32	1.8 Southern Stone Communicati	13.8	13.9
284D Orlando	W284CJ	LIC DC_	FL	186.2 6.2	67.63 BLFT20170227AAV	28 34 07.0 81 13 55.0	0.250	47.7 130	14.1 Q-broadcasting Corporation	16.6	44.3
283C Atlantic Beach	WOKV-FM	LIC _C_	FL	342.3 162.1	128.75 BMLH20130124ABI	30 16 34.0 81 33 53.0	100.000 309	105.6 315	72.8 Cox Radio, Inc.	21.6	53.7
284C1 Tampa	WRBQ-FM	LIC NC_	FL	221.6 41.1	183.90 BLH20100122AAR	27 55 53.8 82 24 04.6	100.000 174	158.4 181	61.1 Wxtu License Limited Partn	21.8	110.8
283D Altamonte Springs	W283AN	LIC _C_	FL	204.9 24.8	69.49 BLFT20120904AAI	28 36 22.0 81 27 25.0	0.221 153	24.3 182	16.2 Clear Channel Broadcasting	41.6	48.3
284L1 Ocala	WITG-LP	LIC _C_	FL	271.2 90.7	95.14 BMLL20101025ABK	29 11 16.0 82 08 14.0	0.074 35	60	72.2 Witg, Inc.		81.4
283D Cocoa Beach	W248AH	CP _C_	FL	157.6 337.8	99.61 BPFT20161020ABC	28 20 40.5 80 46 09.1	0.250	13.1 58	9.4 Debra Sears Graham	84.0	88.0

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
 In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
 "\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

**WHOG-FM**  
BLH20150928AEN  
Latitude: 29-14-11 N  
Longitude: 081-04-22 W  
ERP: 48.00 kW  
Channel: 239  
Frequency: 95.7 MHz  
AMSL Height: 103.0 m  
Elevation: 9.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

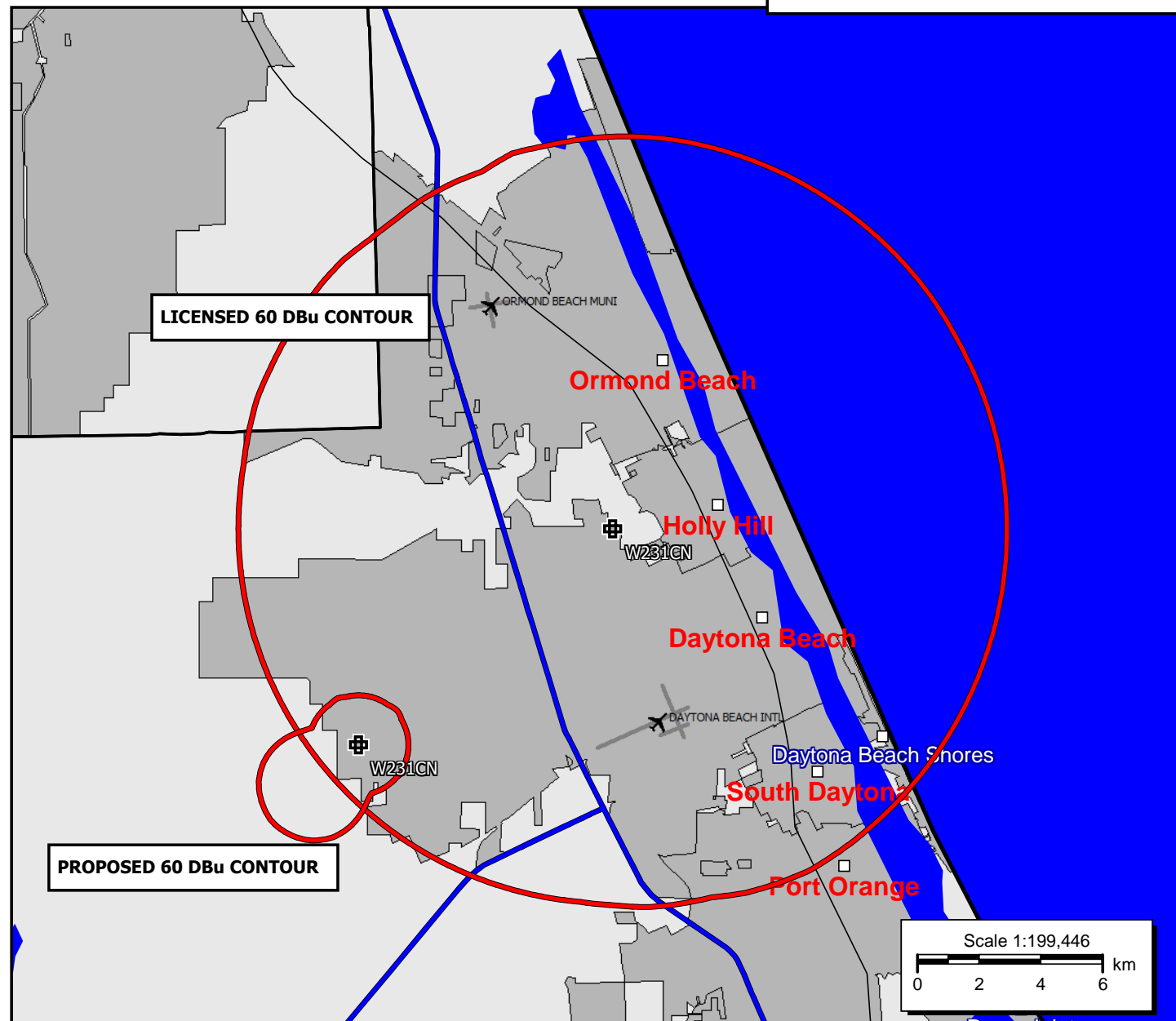
**W231CN**  
BLFT20160906ADZ  
Latitude: 29-10-24 N  
Longitude: 081-09-26 W  
ERP: 0.02 kW  
Channel: 284  
Frequency: 104.7 MHz  
AMSL Height: 32.64 m  
Elevation: 10.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

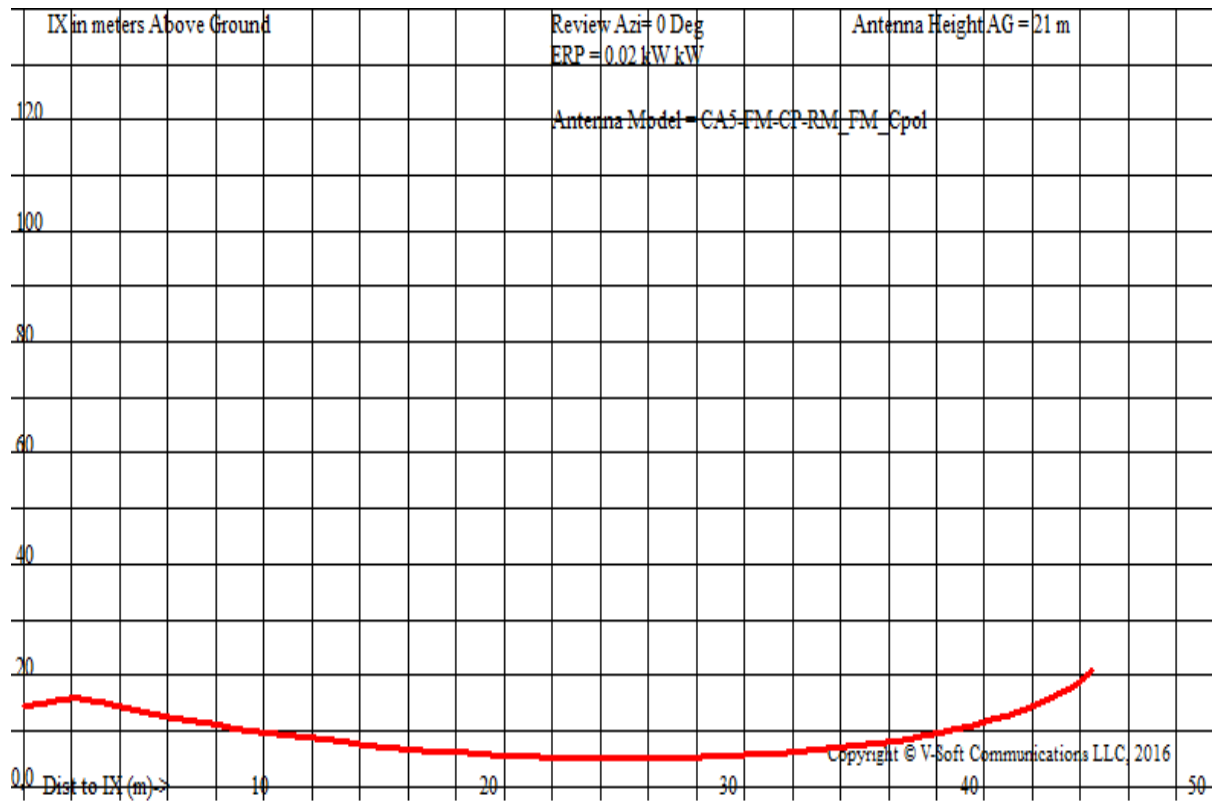
EXHIBIT-2



**W231CN**  
**BLFT20160906ADZ**  
Latitude: 29-14-11 N  
Longitude: 081-04-22 W  
ERP: 0.25 kW  
Channel: 231  
Frequency: 94.1 MHz  
AMSL Height: 98.0 m  
Elevation: 9.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

**W231CN**  
**BLFT20160906ADZ**  
Latitude: 29-10-24 N  
Longitude: 081-09-26 W  
ERP: 0.02 kW  
Channel: 284  
Frequency: 104.7 MHz  
AMSL Height: 32.64 m  
Elevation: 10.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None



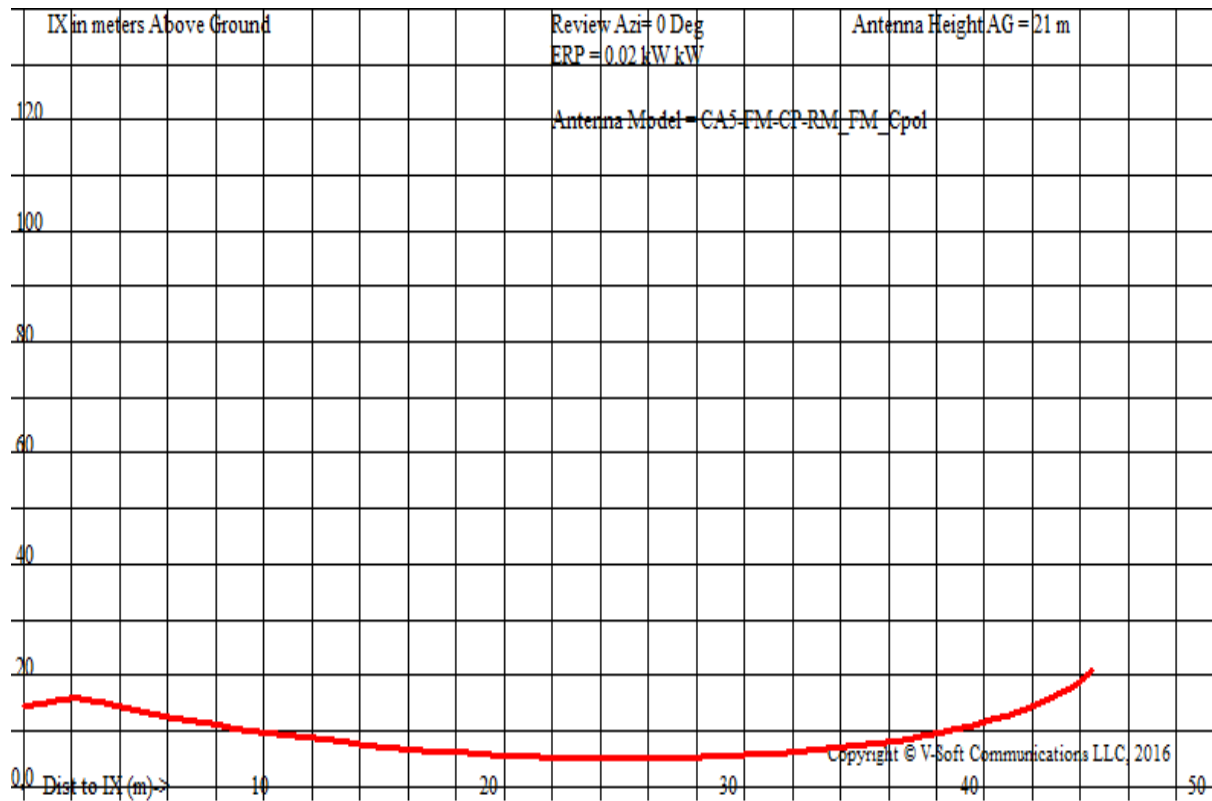


W231CN ,  
 74.1204(d) Showing  
 Translator or LPFM Maximum Licensed ERP = 0.02  
 Translator or LPFM Antenna Height AG = 21 Meters  
 W231CN Antenna Model = CA5-FM-CP-RM\_FM\_Cpol

Protected Station's Contour = 68.00125 dBu  
 Translator's or LPFM's full Interference contour 108.00125

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 0.133  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.0 kW  
 Distance between stations = 66.4 km  
 Protected Station= WOMX-F, 100 kW, 500 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	0.13	0.0027	045.5385	045.5385	021.000
05.0	0.982	0.13	0.0026	044.7324	044.5622	017.101
10.0	0.952	0.13	0.0024	043.3663	042.7074	013.470
15.0	0.915	0.13	0.0022	041.6540	040.2347	010.219
20.0	0.866	0.13	0.0020	039.4363	037.0580	007.512
25.0	0.796	0.13	0.0017	036.2486	032.8524	005.681
30.0	0.718	0.13	0.0014	032.7103	028.3279	004.645
35.0	0.628	0.13	0.0011	028.6118	023.4374	004.589
40.0	0.528	0.13	0.0007	024.0580	018.4295	005.536
45.0	0.423	0.13	0.0005	019.2764	013.6305	007.370
50.0	0.329	0.13	0.0003	014.9958	009.6391	009.513
55.0	0.247	0.13	0.0002	011.2343	006.4438	011.797
60.0	0.190	0.13	0.0001	008.6523	004.3262	013.507
65.0	0.142	0.13	0.0001	006.4528	002.7271	015.152
70.0	0.134	0.13	0.0000	006.1022	002.0871	015.266
75.0	0.135	0.13	0.0000	006.1477	001.5911	015.062
80.0	0.142	0.13	0.0001	006.4528	001.1205	014.645
85.0	0.150	0.13	0.0001	006.8308	000.5953	014.195
90.0	0.157	0.13	0.0001	007.1632	000.0000	013.837



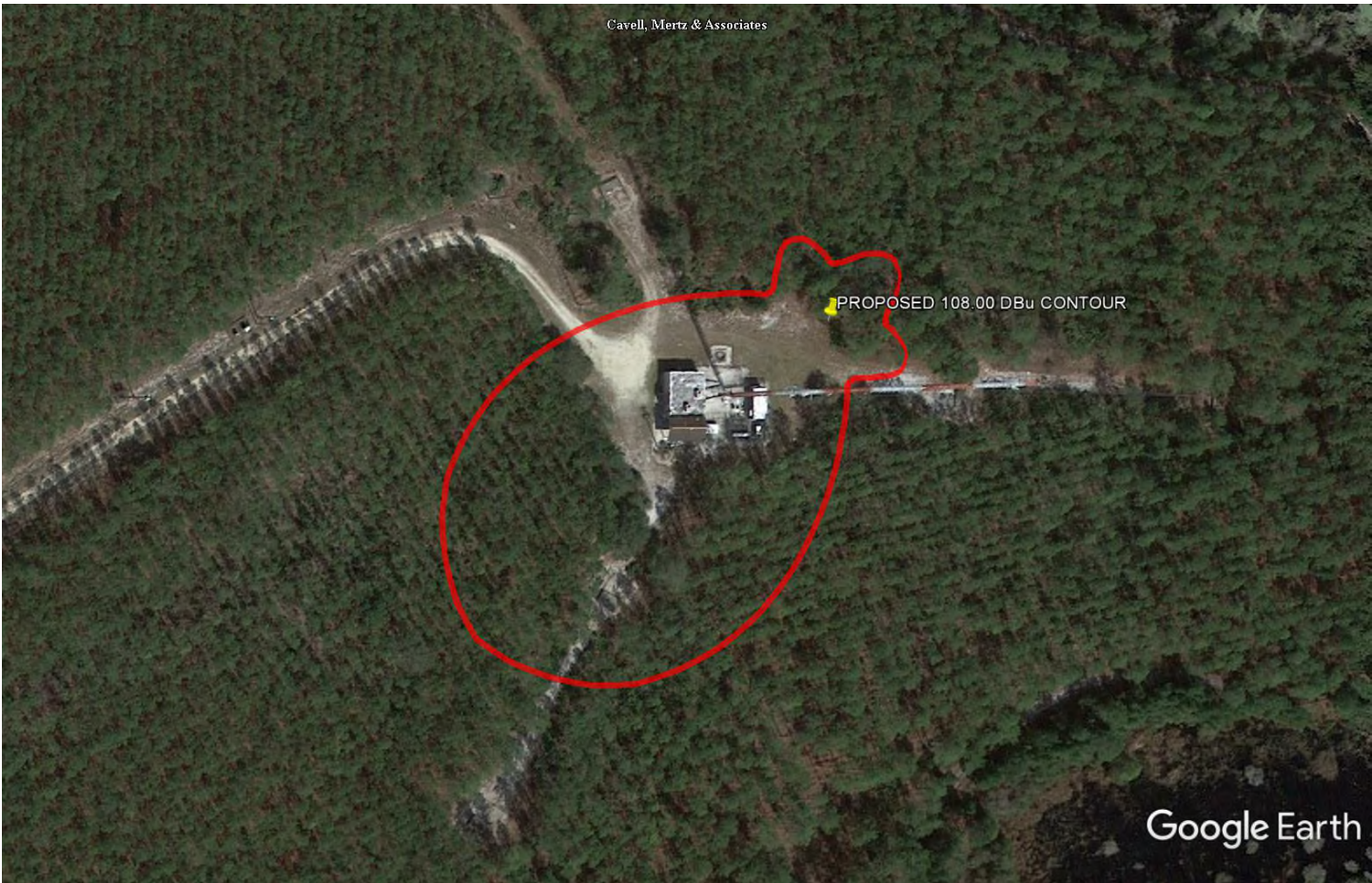
W231CN ,  
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 Translator or LPFM Antenna Height AG = 21 Meters  
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Protected Station's Contour = 68.00125 dBu  
 Translator's or LPFM's full Interference contour 108.00125

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 0.133  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.0 kW  
 Distance between stations = 66.4 km  
 Protected Station= WTKS-F, 100 kW, 500 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	0.13	0.0027	045.5385	045.5385	021.000
05.0	0.982	0.13	0.0026	044.7324	044.5622	017.101
10.0	0.952	0.13	0.0024	043.3663	042.7074	013.470
15.0	0.915	0.13	0.0022	041.6540	040.2347	010.219
20.0	0.866	0.13	0.0020	039.4363	037.0580	007.512
25.0	0.796	0.13	0.0017	036.2486	032.8524	005.681
30.0	0.718	0.13	0.0014	032.7103	028.3279	004.645
35.0	0.628	0.13	0.0011	028.6118	023.4374	004.589
40.0	0.528	0.13	0.0007	024.0580	018.4295	005.536
45.0	0.423	0.13	0.0005	019.2764	013.6305	007.370
50.0	0.329	0.13	0.0003	014.9958	009.6391	009.513
55.0	0.247	0.13	0.0002	011.2343	006.4438	011.797
60.0	0.190	0.13	0.0001	008.6523	004.3262	013.507
65.0	0.142	0.13	0.0001	006.4528	002.7271	015.152
70.0	0.134	0.13	0.0000	006.1022	002.0871	015.266
75.0	0.135	0.13	0.0000	006.1477	001.5911	015.062
80.0	0.142	0.13	0.0001	006.4528	001.1205	014.645
85.0	0.150	0.13	0.0001	006.8308	000.5953	014.195
90.0	0.157	0.13	0.0001	007.1632	000.0000	013.837





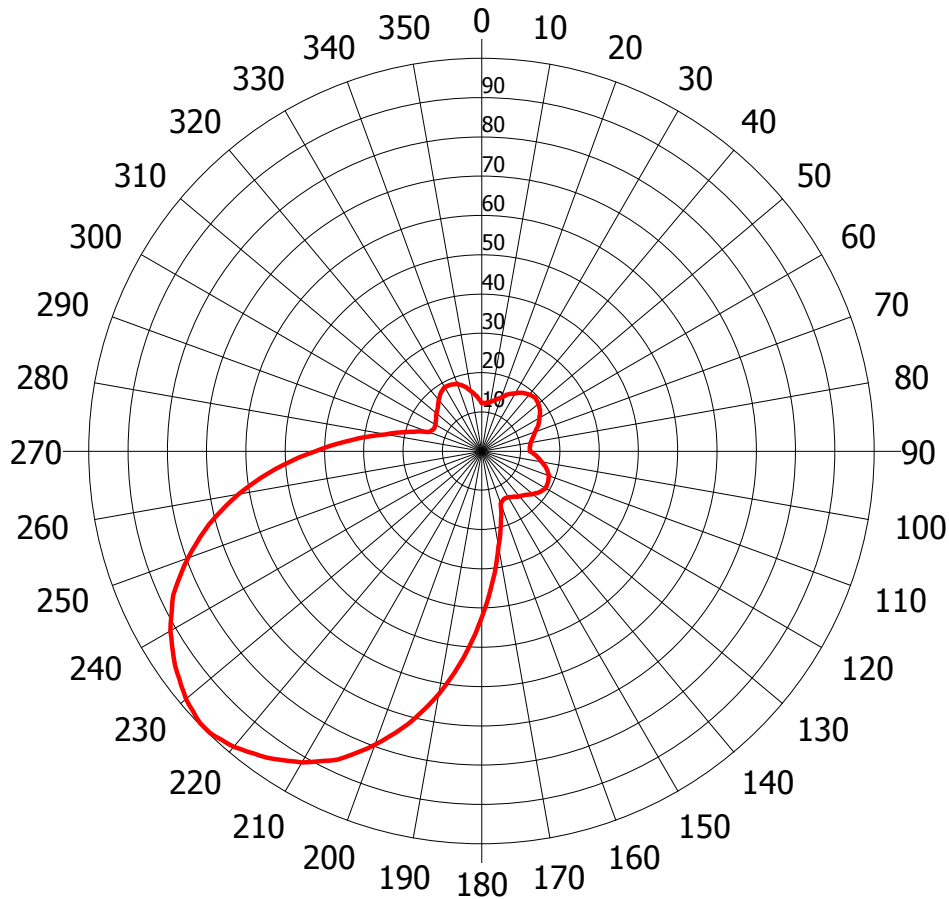
Google Earth

Google Earth





# W231CN PROPOSED PATTERN



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	0.123	-35.19	0.000	-18.20	180	0.423	-24.46	0.004	-7.47
10	0.127	-34.91	0.000	-17.92	190	0.628	-21.03	0.008	-4.04
20	0.145	-33.76	0.000	-16.77	200	0.796	-18.97	0.013	-1.98
30	0.170	-32.38	0.001	-15.39	210	0.915	-17.76	0.017	-0.77
40	0.188	-31.51	0.001	-14.52	220	0.982	-17.15	0.019	-0.16
50	0.188	-31.51	0.001	-14.52	230	0.982	-17.15	0.019	-0.16
60	0.170	-32.38	0.001	-15.39	240	0.915	-17.76	0.017	-0.77
70	0.145	-33.76	0.000	-16.77	250	0.796	-18.97	0.013	-1.98
80	0.127	-34.91	0.000	-17.92	260	0.628	-21.03	0.008	-4.04
90	0.123	-35.19	0.000	-18.20	270	0.423	-24.46	0.004	-7.47
100	0.155	-33.18	0.000	-16.19	280	0.247	-29.14	0.001	-12.15
110	0.183	-31.74	0.001	-14.75	290	0.142	-33.94	0.000	-16.95
120	0.189	-31.46	0.001	-14.47	300	0.135	-34.38	0.000	-17.39
130	0.170	-32.38	0.001	-15.39	310	0.150	-33.47	0.000	-16.48
140	0.150	-33.47	0.000	-16.48	320	0.170	-32.38	0.001	-15.39
150	0.135	-34.38	0.000	-17.39	330	0.189	-31.46	0.001	-14.47
160	0.142	-33.94	0.000	-16.95	340	0.183	-31.74	0.001	-14.75
170	0.247	-29.14	0.001	-12.15	350	0.155	-33.18	0.000	-16.19

Rotation Angle = 0