

**Channel Study**

REFERENCE	CH#	270D - 101.9 MHz, Pwr= 0.11 kW, HAAT= 267.9 M, COR= 274 M		Average Protected F(50-50)= 17.4 km		Omni-directional		DISPLAY DATES			
30 16 34.0 N.								DATA	09-17-15		
81 33 51.0 W.								SEARCH	09-17-15		
CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
270D Jacksonville Beach	W270CD!	CP C FL	C	0.0	0.00	30 16 34.0	0.140	55.3	17.3	-72.7	-72.9
				0.0	BMPFT20150619AAM	81 33 51.0		241	Educational Media Foundati		
270C Daytona Beach	WJHM	LIC NC FL	NC	171.0	152.24	28 55 10.0	92.000	187.4	84.8	-52.5*<	12.2
				351.1	BMLH20081010ATQ	81 19 08.0	483	493	Cbs Radio Stations Inc.		
270D Jacksonville Beach	W270CD!	LIC C FL	C	78.7	16.45	30 18 18.0	0.038	21.6	6.5	-22.5	-45.5
				258.8	BLFT20120514AFH	81 23 47.0	71	73	Educational Media Foundati		
268C Brunswick	WSOL-FM	LIC C GA	C	344.7	62.65	30 49 16.0	100.000	12.1	83.2	33.2	-21.2*<
				164.7	BMLH20070320AJI	81 44 14.0	446	450	Citicasters Licenses, Inc.		
272D Jacksonville	W272CQ	LIC C FL	C	0.0	0.00	30 16 34.0	0.099	0.7	16.4	-18.1*<	-17.1*<
				0.0	BLFT20141027AEY	81 33 51.0		259	Chesapeake-portsmouth Broa		
271D St. Augustine	W271CJ	LIC DC FL	DC	154.5	52.31	29 51 01.0	0.250	21.7	14.4	13.4	12.2
				334.6	BLFT20140708ABS	81 19 49.0		137	Phillips Broadcasting, Llc		
267D St. Augustine	W267BX	CP C FL	C	153.7	47.38	29 53 34.9	0.250	1.1	7.1	29.0	39.6
				333.8	BMPFT20150623AAJ	81 20 45.8		32	Cornerstone Broadcasting C		
273C1 Waycross	WYNR	LIC CX GA	CX	338.4	105.08	31 09 22.0	97.000	10.2	72.9	77.5	31.5
				158.2	BMLH20140627ABP	81 58 19.0	303	319	Amfm Radio Licenses, L.l.c		
270C3 Pearson	WPNG	LIC CX GA	CX	313.6	170.47	31 19 36.0	13.000	108.3	41.0	44.7	73.7
				132.9	BLH20100722CZW	82 51 54.0	140	203	Broadcast South, Llc		
271C3 Watertown	WQLC	LIC CN FL	CN	268.0	119.51	30 13 58.0	9.000	57.2	38.5	44.8	55.0
				87.4	BLH19920818KB	82 48 18.0	162	199	Dockins Broadcast Group, L		
217C3 Folkston	WATY	CP CX GA	CX	344.7	62.65	30 49 16.0	3.800	39.5	26.0	11.5R	51.2M
				164.7	BMPED20150422AAI	81 44 14.0	151	155	The Foundation For Public		
217A Palatka	WHIF	LIC CN FL	CN	182.2	69.24	29 39 07.0	1.700	39.5	26.0	9.5R	59.7M
				2.2	BLED19960329KB	81 35 32.0	97	102	Putnam Radio Ministries, I		
271C0 Tybee Island	WZAT	LIC C GA	C	6.1	198.72	32 03 29.0	100.000	119.4	80.5	61.9	92.3
				186.2	BLH20110830ABO	81 20 19.0	405	410	Cumulus Licensing Llc		

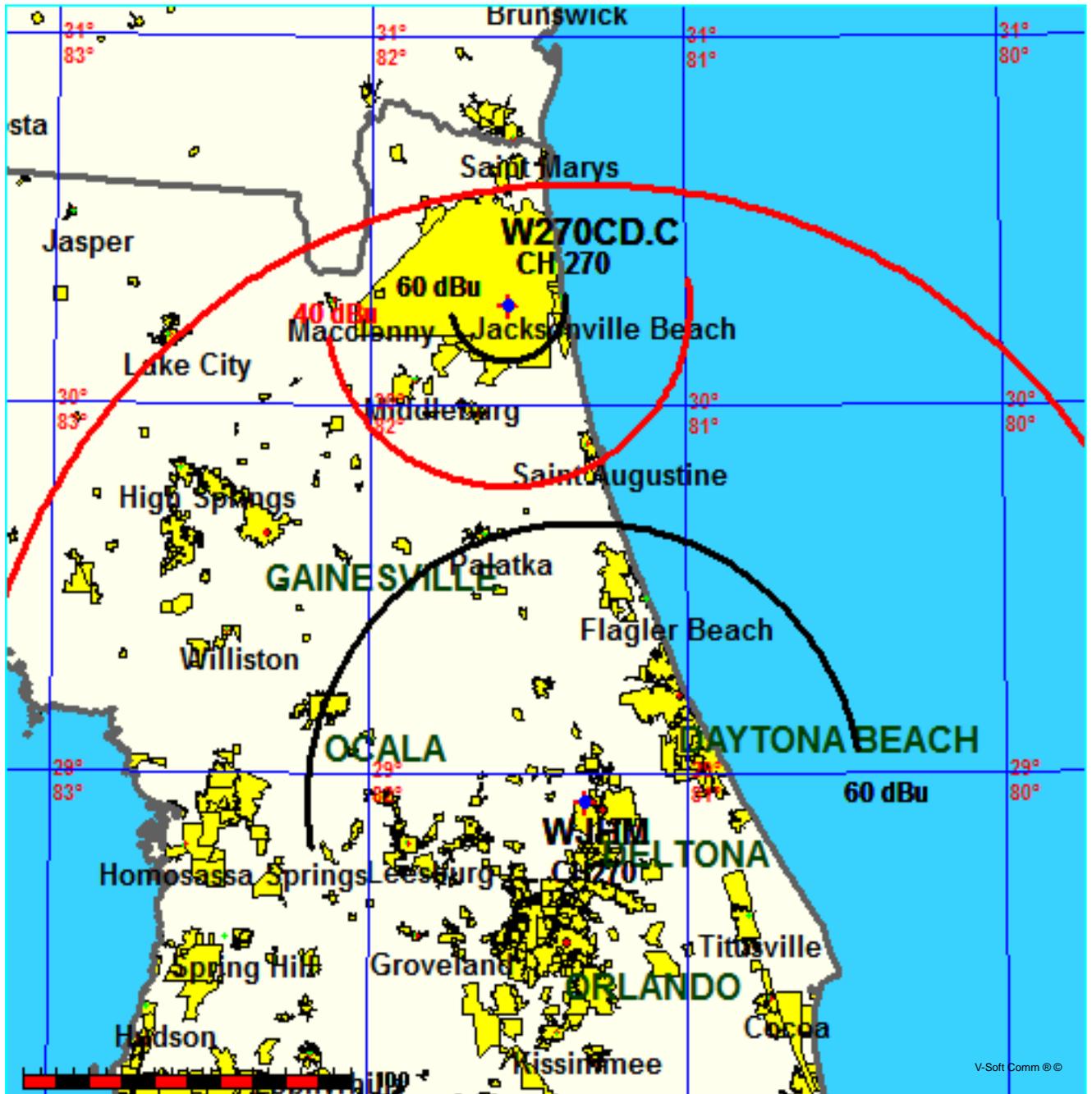
Terrain database is FCC NGDC 30 Sec,R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin  
 Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd  
 All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E),  
 Beamtlt(Y,N,X)  
 "\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
 < = Station meets FCC minimum distance spacing for its class.  
 < = Contour Overlap

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FMCommander Single Allocation Study - 09-17-2015 - FCC NGDC 30 Sec  
W270CD.C's Overlaps (In= -52.45 km, Out= 12.16 km)

W270CD.C CH 270 D  
Lat= 30 16 34.0, Lng= 81 33 51.0  
0.11 kW 267.9 M HAAT, 274 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

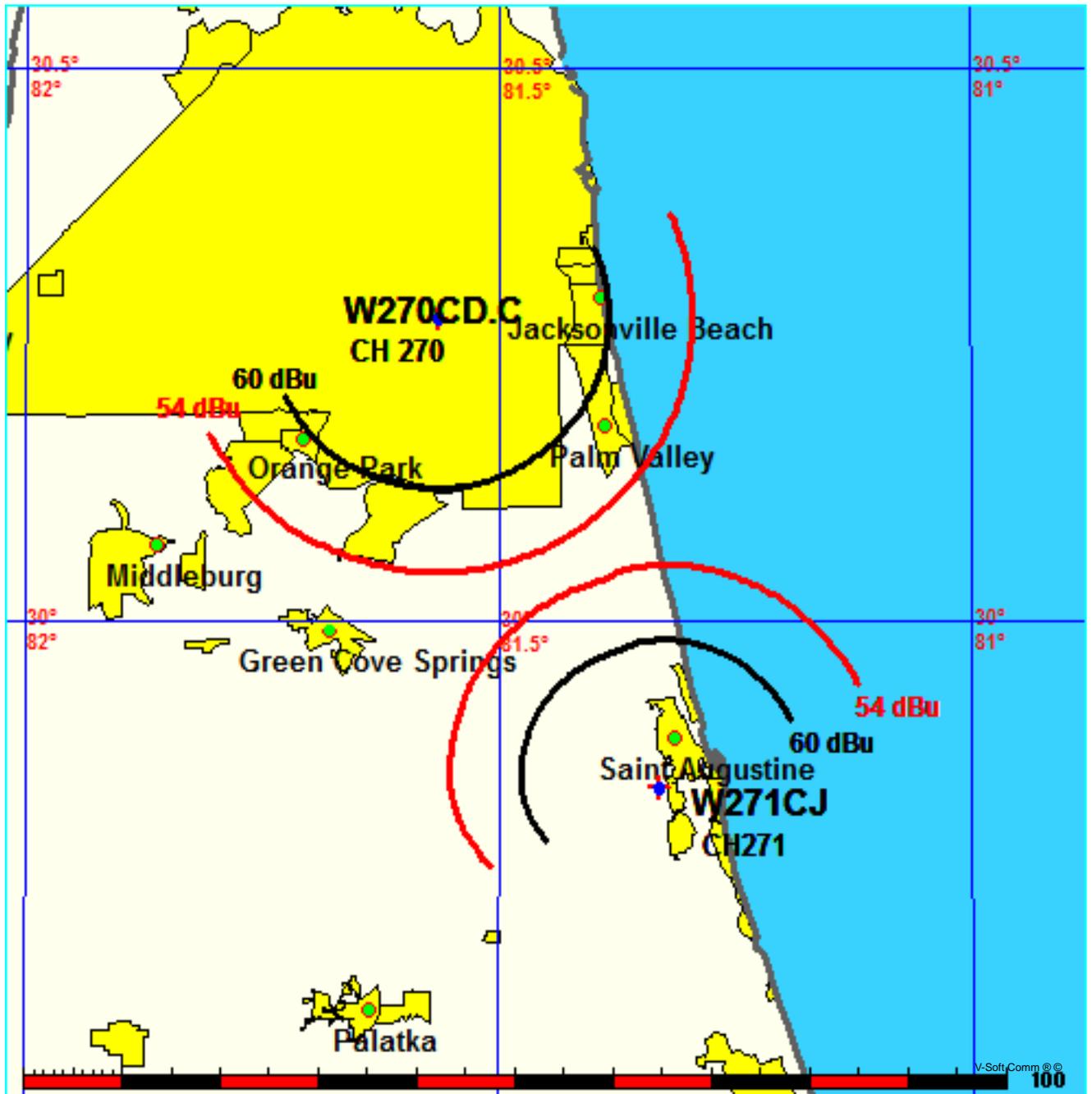
WJHM CH 270 C 73.215 N BMLH20081010ATQ  
Lat= 28 55 10.0, Lng= 81 19 08.0  
92.0 kW 483 M HAAT, 493 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 09-17-2015 - FCC NGDC 30 Sec  
W270CD.C's Overlaps (In= 13.39 km, Out= 12.25 km)

W270CD.C CH 270 D  
Lat= 30 16 34.0, Lng= 81 33 51.0  
0.11 kW 267.9 M HAAT, 274 M COR  
Prot.= 60 dBu, Intef.= 54 dBu

W271CJ CH 271 D DA BLFT20140708ABS  
Lat= 29 51 01.0, Lng= 81 19 49.0  
0.25 kW 0 M HAAT, 137 M COR  
Prot.= 60 dBu, Intef.= 54 dBu



**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 13-A  
Jacksonville Beach, FL*

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station WSOL-FM, channel 268C, Brunswick, GA. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W270CD.P:	110 watts
The proposed COR for W270CD.P:	265 meters
WSOL-FM F(50/50) contour at proposed site:	68.3dBu
The F(50/10) contour of proposed W270CD.P:	108.3dBu

The predicted distance to the 108.3dbu interfering contour is 282.9 meters. Taking into account the vertical elevation pattern of the Nicom BKG77 twp bay antenna and the height above ground of 265M, it has been determined that the interfering contour of 108.3dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 182.9M above ground at a distance of 194m from the antenna.

As can be seen in Exhibit 13-A2 there are no surrounding structures which are tall enough to enter the interfering contour within the 282.9m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1  
 74.1204(d) Showing  
 W270CD  
 Jacksonville Beach, FL

ERP (kw): 0.11  
 Height of Antenna above Ground (m): 265  
 Translator's IX Contour: 108.3  
 Antenna Type: Nicom BKG77-2-HW

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1	0.1100	282.9413	265.000
5	0.988	0.1074	279.5460	240.636
10	0.952	0.0997	269.3601	218.226
15	0.881	0.0854	249.2713	200.484
20	0.791	0.0688	223.8066	188.454
25	0.686	0.0518	194.0977	182.971
30	0.577	0.0366	163.2571	183.371
35	0.463	0.0236	131.0018	189.860
40	0.354	0.0138	100.1612	200.618
45	0.256	0.0072	72.4330	213.782
50	0.174	0.0033	49.2318	227.286
55	0.104	0.0012	29.4259	240.896
60	0.061	0.0004	17.2594	250.053
65	0.028	0.0001	7.9224	257.820
70	0.007	0.0000	1.9806	263.139
75	0.008	0.0000	2.2635	262.814
80	0.009	0.0000	2.5465	262.492
85	0.009	0.0000	2.5465	262.463
90	0.009	0.0000	2.5465	262.454

**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 13-A  
Jacksonville Beach, FL*

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is co-located with second adjacent translator W272CQ, Jacksonville, FL, with a vertical separation of 15m. Using the free space calculation with an effective radiated power of 99 watts for W272CQ, the resulting signal level at the proposed antenna for W270CD is 133dbu. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W270CD.P:	110 watts
The proposed COR for W270CD.P:	265 meters
W272CQ F(50/50) contour at proposed site:	133dBu
The F(50/10) contour of proposed W270CD.P:	173dBu

The predicted distance to the 173dbu interfering contour is .16 meters. Taking into account the vertical elevation pattern of the Nicom BKG77 two bay antenna and the height above ground of 265M, it has been determined that the interfering contour of 173dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 264.95M above ground at a distance of .1m from the antenna.

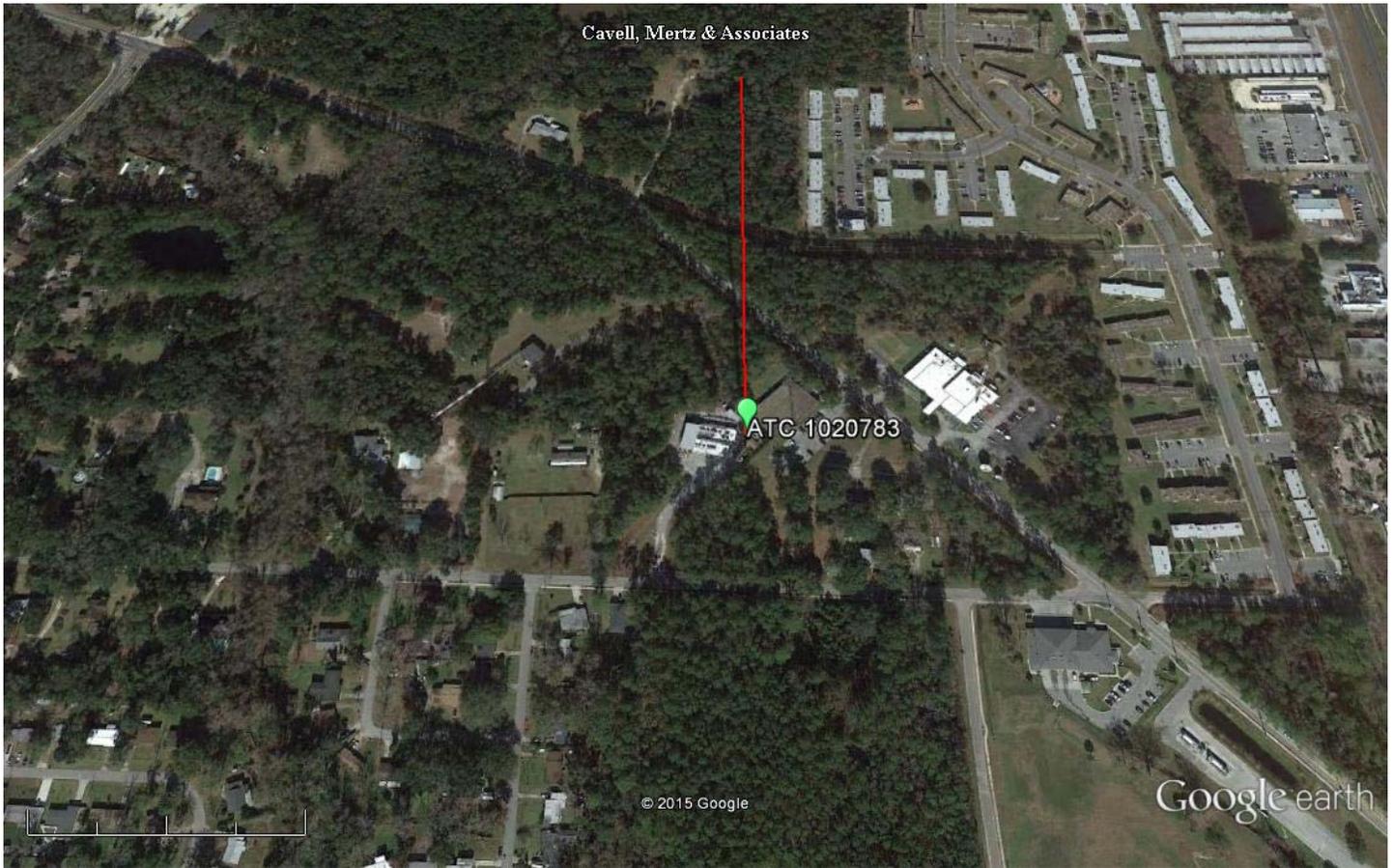
As can be seen in Exhibit 13-A2 there are no surrounding structures which are tall enough to enter the interfering contour within the .16m distance from the antenna.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1  
 74.1204(d) Showing  
 W270CD  
 Jacksonville Beach, FL

ERP (kw): 0.11  
 Height of Antenna above Ground (m): 265  
 Translator's IX Contour: 173  
 Antenna Type: Nicom BKG77-2-HW

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1	0.1100	0.1647	265.000
5	0.988	0.1074	0.1627	264.986
10	0.952	0.0997	0.1568	264.973
15	0.881	0.0854	0.1451	264.962
20	0.791	0.0688	0.1303	264.955
25	0.686	0.0518	0.1130	264.952
30	0.577	0.0366	0.0950	264.952
35	0.463	0.0236	0.0763	264.956
40	0.354	0.0138	0.0583	264.963
45	0.256	0.0072	0.0422	264.970
50	0.174	0.0033	0.0287	264.978
55	0.104	0.0012	0.0171	264.986
60	0.061	0.0004	0.0100	264.991
65	0.028	0.0001	0.0046	264.996
70	0.007	0.0000	0.0012	264.999
75	0.008	0.0000	0.0013	264.999
80	0.009	0.0000	0.0015	264.999
85	0.009	0.0000	0.0015	264.999
90	0.009	0.0000	0.0015	264.999



Google earth



Green Pin Marker:

NAD 27

30 16' 34.1" N 81 33' 51.4" W

Red Line Marker: 290m at zero degrees true north