

Channel Study

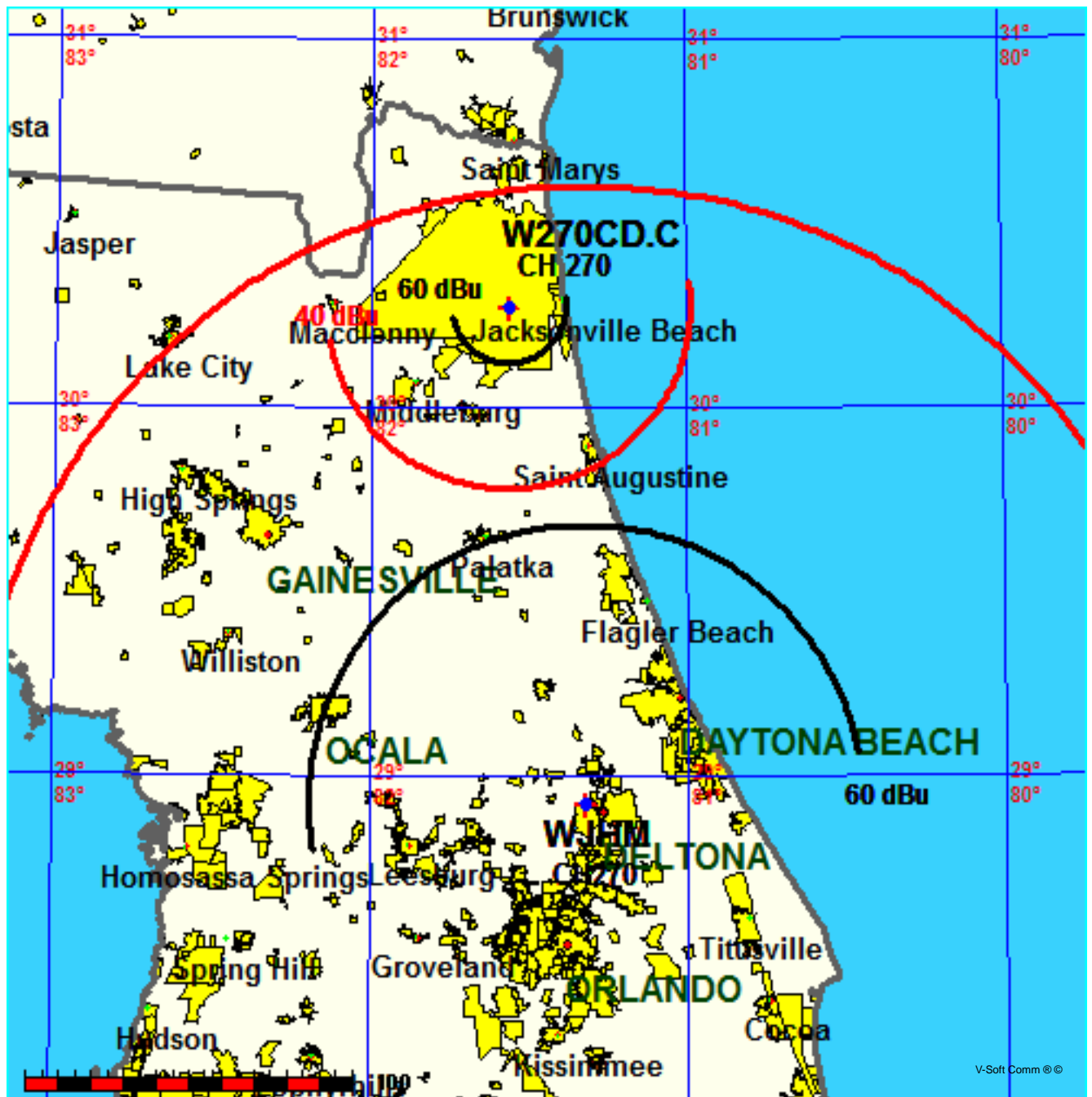
REFERENCE		CH# 270D - 101.9 MHz, Pwr= 0.11 kW, HAAT= 267.9 M, COR= 274 M								DISPLAY DATES	
30 16 34.0 N.		Average Protected F(50-50)= 17.4 km								DATA 09-17-15	
81 33 51.0 W.		Omni-directional								SEARCH 09-17-15	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)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

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),
 Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 < = Station meets FCC minimum distance spacing for its class.
 < = Contour Overlap

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

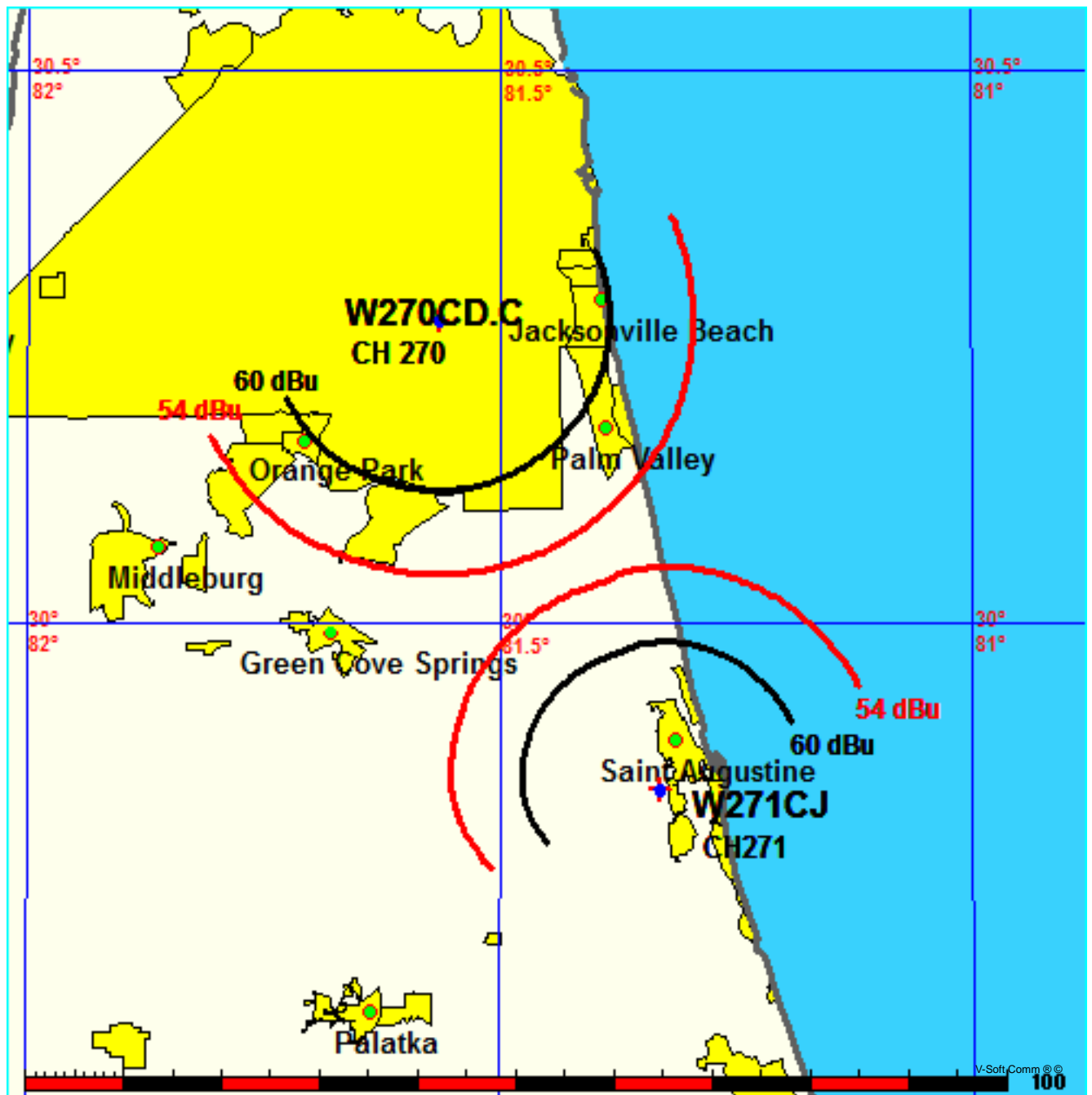
WJHM CH 270 C 73.215 N BMLH20081010ATQ
Lat= 28 55 10.0, Lng= 81 19 08.0
92.0 kW 483 M HAAT, 493 M COR
Prot.= 60 dBu, Intef.= 40 dBu



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.

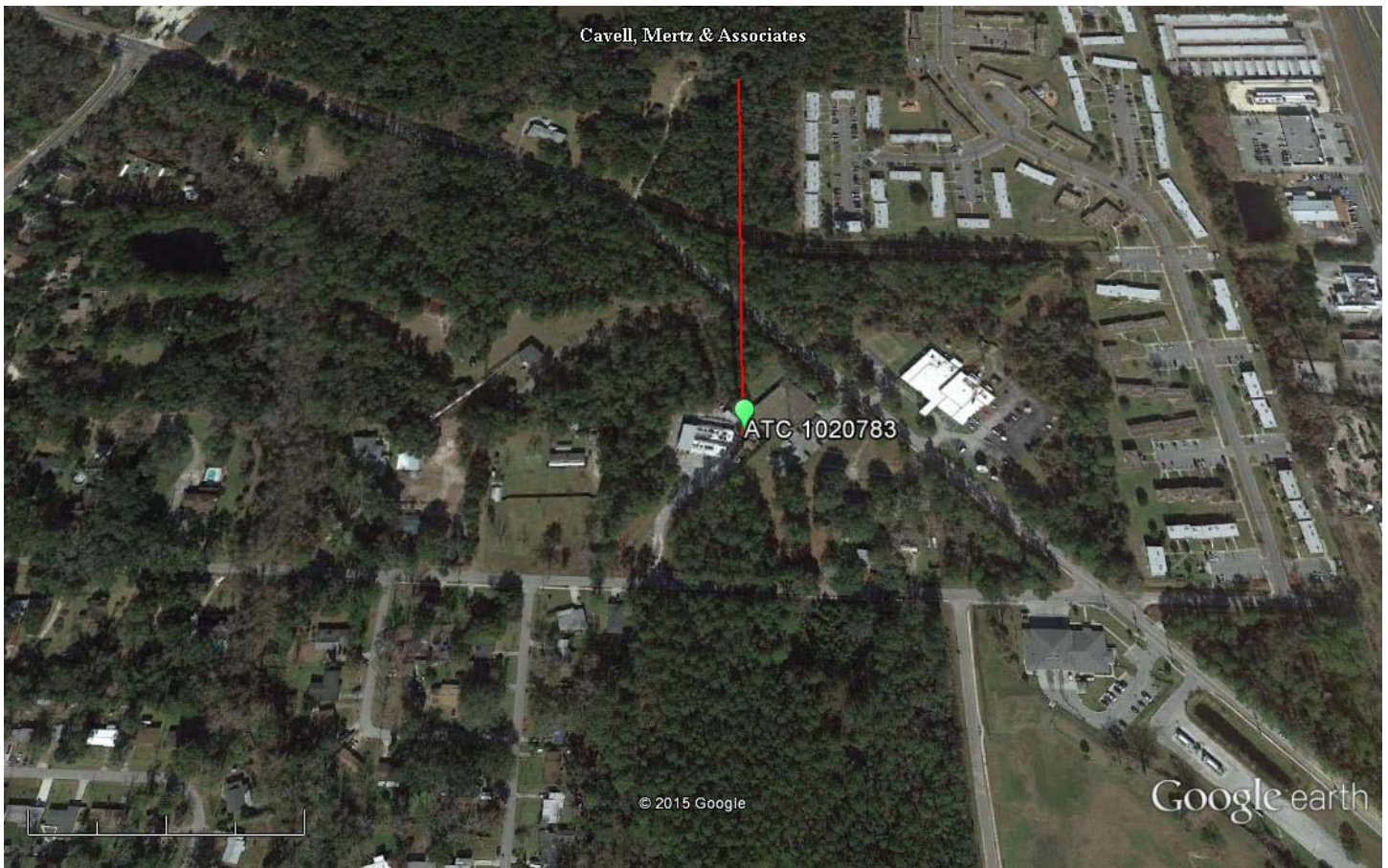
As can be seen in Exhibit 13-A2 there are no surrounding structures which are tall enough to enter the interfering contour within the .16m distance from the antenna.

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

feet 1000
meters 300



Green Pin Marker:

NAD 27

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

Red Line Marker: 290m at zero degrees true north