

**OVIEDO W235CI CP (BMPFT-20131017AIN)
MINOR MODIFICATION FILED
CONTINGENT WITH AN
AMENDED APPLICATION (BPFT-20140523AAV) TO
MODIFY W288BI TO IF CHANNEL 235**

This is a minor modification for construction permit **BMPFT-20131017AIN** requesting a change in site and channel to IF channel 288. It will rebroadcast AM station WORL at Altamonte Springs, FL(facility ID # 212810). This application is filed simultaneously and contingent with an application to modify the W288BI to IF channel 235.

Allocation discussion:

All exhibits utilize the FCC 30 second terrain database.

- E1 Channel study
- E1A Interference analysis to WOMX-FM
- E1B Interference analysis to WOCL
- E1C Aerial photograph of maximum interference area
- E1D Antenna vertical elevation
- E2 60 dBu and 2 mV/m contours
- E3 ASR - NADCON conversion

A channel study is included as E1 demonstrating compliance with §74.1204 with the exception of 2nd adjacent channel stations WOMX-FM and WOCL which are analyzed below. A plot of the proposed 60 dBu is provided as E2 showing that it is entirely contained within the WORL 2 mV/m and 40 km radius and that it overlaps the original W288CJ long form CP 60 dBu.


The proposed facility will be located inside the protected contour of 2nd adjacent channel stations WOMX-FM and WOCL. Exhibit E1A demonstrates that the WOMX-FM contour at the proposed site is 94.88 dBu yielding an interference contour of 134.88 dBu or 20 meters. An analysis of the interference using V-Soft's XField and the proposed antenna's vertical elevation pattern shows that the interference contour is at least 61.4 meters above ground level. The WOCL contour at the site is 85.02 dBu yielding an interference contour of 125.02 dBu or 62.22 meters. E1B shows that contour is at least 49.5 meters above ground level

Clearly, these interference contours will not reach any populated area or major highways as evidenced by the aerial photograph provided as E1C. Based on this showing, a waiver of Section 74.1204 is requested in accordance with *Living Way Ministries, Inc.* (FCC 08-242).

RF Exposure Calculation:

The proposed facility will utilize an ERI 100A two bay 1/2 wave spaced antenna mounted at 67 meters AGL. The maximum RF contribution was calculated as 3.95 $\mu\text{Watts}/\text{cm}^2$ or 2.0% of the maximum public exposure and less than the 5% requiring consideration using the formula provided below and a worst case F factor of 1.0.

$$S \text{ (RF in } \mu\text{Watts}/\text{cm}^2) = \frac{33.4 (F^2 - \text{Vertical Factor}) \times (\text{H ERP} + \text{V ERP in Watts})}{R^2 \text{ (distance to radiation center in meters} - 2 \text{ m)}}$$


Charles M. Anderson October 7, 2014

E1 CHANNEL STUDY

REFERENCE
28 39 33.0 N.
81 13 38.0 W.

CH# 288D - 105.5 MHz, Pwr= 0.25 kW, HAAT= 65.1 M, COR= 77 M
Average Protected F(50-50)= 10.55 km
Omni-directional

DISPLAY DATES
DATA 10-07-14
SEARCH 10-07-14

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
286C Orlando	WOMX-FM	LIC _C_ FL	120.4 300.5	17.17 BMLH20030924ABI	28 34 51.0 81 04 32.0	100.000 487	12.5 500	85.9 Cbs Radio Stations Inc.	-5.7	-69.9* (1)
290C DeLand	WOCL	LIC _C_ FL	342.9 162.8	30.28 BLH20070424AAM	28 55 10.0 81 19 08.0	100.000 484	12.5 494	86.1 Cbs Radio Stations Inc.	6.9	-56.9* (1)
288D Orlando	W288BI	CP _C_ FL	252.3 72.2	19.55 BMPFT20140213ABG	28 36 20.0 81 25 05.0	0.250	50.8 160	15.4 Pennsylvania Media Associa	-41.4*	-30.0 (2)
288D Deltona	W288BI	LIC _C_ FL	16.1 196.1	27.67 BLFT20070404ACO	28 53 54.0 81 08 54.0	0.050 62	23.1 71	6.9 Pennsylvania Media Associa	-6.7	-17.9 (3)
288C1 New Port Richey	WDUV	LIC _CX FL	251.0 70.2	159.74 BLH20090715AHU	28 10 56.0 82 46 06.0	33.000 458	163.9 461	72.0 Cox Radio, Inc.	-14.3*	53.7
288C3 St. Augustine Beach	WYRE-FM	LIC ZC_ FL	355.7 175.6	132.77 BLH19991223AAS	29 51 00.0 81 19 50.0	16.000 125	106.9 129	38.3 Air Augustine, Inc.	14.9	57.1
288D Melbourne	W288CG	CP _C_ FL	130.1 310.3	67.91 BNPFT20130318AGB	28 15 54.0 80 41 47.0	0.099 113	37.3 115	10.9 Radio Assist Ministry, Inc	20.1	21.8

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.
All separation margins (if shown) include rounding
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 protected contour.

- (1) See E1A, E1B and E1C for disproof of 2nd adjacent channel interference.
- (2) Contingent application filed to change to IF channel 235.
- (3) W288BI CP constructed and form 350 filed. This facility no longer requires protection.

E1A WOMX-FM ANALYSIS

W235CI.C OVIEDO, FL

74.1204(d) Showing

Translator or LPFM Maximum Licensed ERP = 0.25

Translator or LPFM Antenna Height AG = 67 Meters

W235CI.C Antenna Model = SHPX2H

Protected Station's Contour = 94.88274 dBu

Translator's or LPFM's full Interference contour 134.88274

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 1.000

Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW

Distance between stations = 17.2 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)
00.00	1.0	1.0	0.2500	019.9909	019.9909	067.000
05.00	0.984	1.0	0.2421	019.6711	019.5962	065.286
10.00	0.938	1.0	0.2200	018.7515	018.4666	063.744
15.00	0.865	1.0	0.1871	017.2922	016.7029	062.524
20.00	0.772	1.0	0.1490	015.4330	014.5023	061.722
25.00	0.665	1.0	0.1106	013.2940	012.0484	061.382
30.00	0.553	1.0	0.0765	011.0550	009.5739	061.473
35.00	0.442	1.0	0.0488	008.8360	007.2380	061.932
40.00	0.339	1.0	0.0287	006.7769	005.1914	062.644
45.00	0.248	1.0	0.0154	004.9578	003.5057	063.494
50.00	0.172	1.0	0.0074	003.4384	002.2102	064.366
55.00	0.112	1.0	0.0031	002.2390	001.2842	065.166
60.00	0.068	1.0	0.0012	001.3594	000.6797	065.823
65.00	0.037	1.0	0.0003	000.7397	000.3126	066.330
70.00	0.018	1.0	0.0001	000.3598	000.1231	066.662
75.00	0.007	1.0	0.0000	000.1399	000.0362	066.865
80.00	0.002	1.0	0.0000	000.0400	000.0069	066.961
85.00	0.001	1.0	0.0000	000.0200	000.0017	066.980
90.00	0.0	1.0	0.0000	000.0020	000.0000	066.998

W1B WOCL ANALYSIS

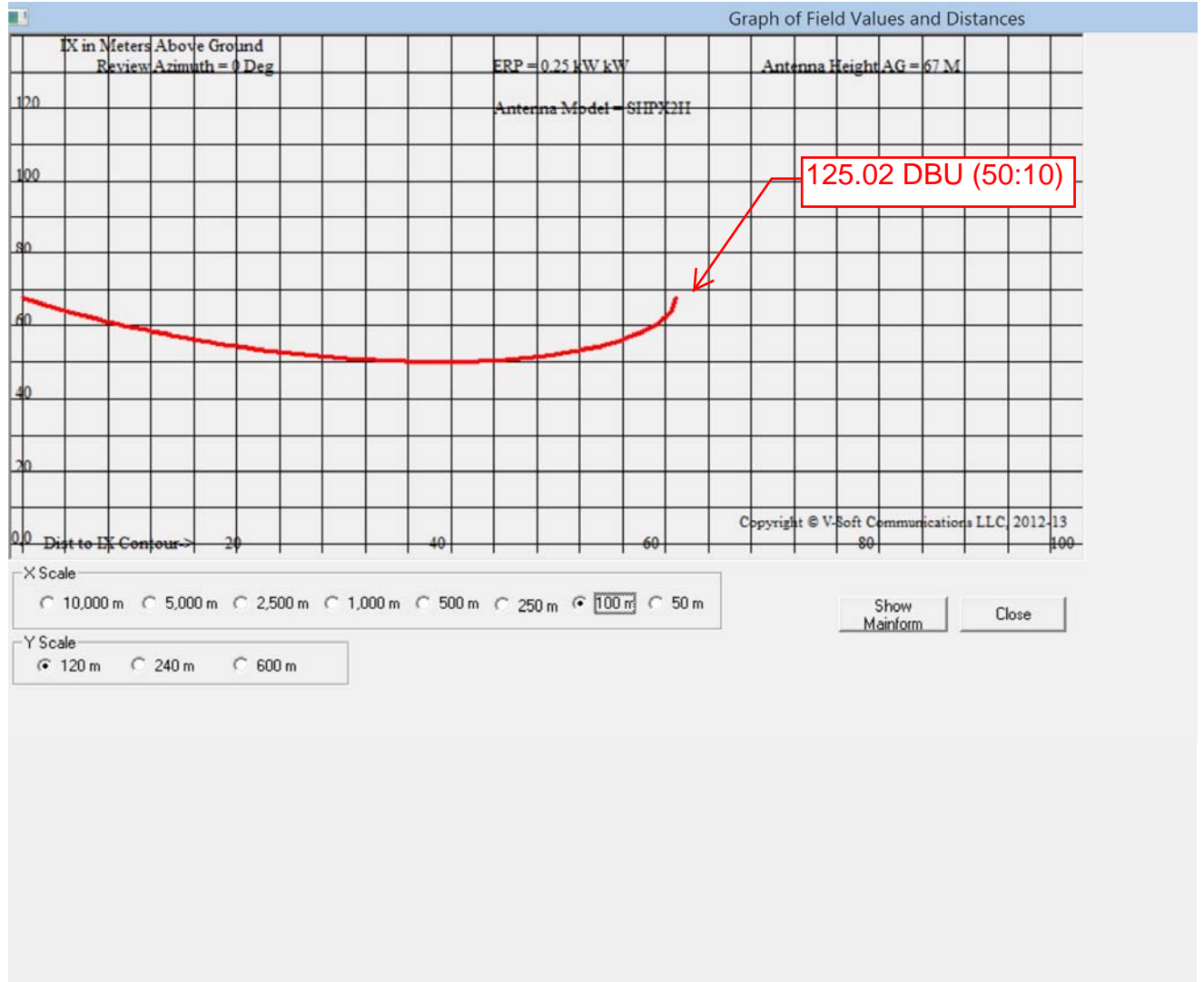
W235CI.C OVIEDO, FL
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 67 Meters
 W235CI.C Antenna Model = SHPX2H

Protected Station's Contour = 85.02053 dBu
 Translator's or LPFM's full Interference contour 125.02053

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 30.3 km
 Protected Station= WOCL, 100 kW, 494 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)
00.00	1.0	1.0	0.2500	062.2219	062.2219	067.000
05.00	0.984	1.0	0.2421	061.2264	060.9934	061.664
10.00	0.938	1.0	0.2200	058.3642	057.4775	056.865
15.00	0.865	1.0	0.1871	053.8220	051.9880	053.070
20.00	0.772	1.0	0.1490	048.0353	045.1384	050.571
25.00	0.665	1.0	0.1106	041.3776	037.5008	049.513
30.00	0.553	1.0	0.0765	034.4087	029.7988	049.796
35.00	0.442	1.0	0.0488	027.5021	022.5284	051.225
40.00	0.339	1.0	0.0287	021.0932	016.1584	053.442
45.00	0.248	1.0	0.0154	015.4310	010.9114	056.089
50.00	0.172	1.0	0.0074	010.7022	006.8792	058.802
55.00	0.112	1.0	0.0031	006.9689	003.9972	061.291
60.00	0.068	1.0	0.0012	004.2311	002.1155	063.336
65.00	0.037	1.0	0.0003	002.3022	000.9730	064.913
70.00	0.018	1.0	0.0001	001.1200	000.3831	065.948
75.00	0.007	1.0	0.0000	000.4356	000.1127	066.579
80.00	0.002	1.0	0.0000	000.1244	000.0216	066.877
85.00	0.001	1.0	0.0000	000.0622	000.0054	066.938
90.00	0.0	1.0	0.0000	000.0062	000.0000	066.994

E1B WOCL INTERFERENCE GRAPH





E1C
125.02 DBU MAXIMUM

W235CI.C (288)

Pratt-Place

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Google earth

Google earth

feet
meters



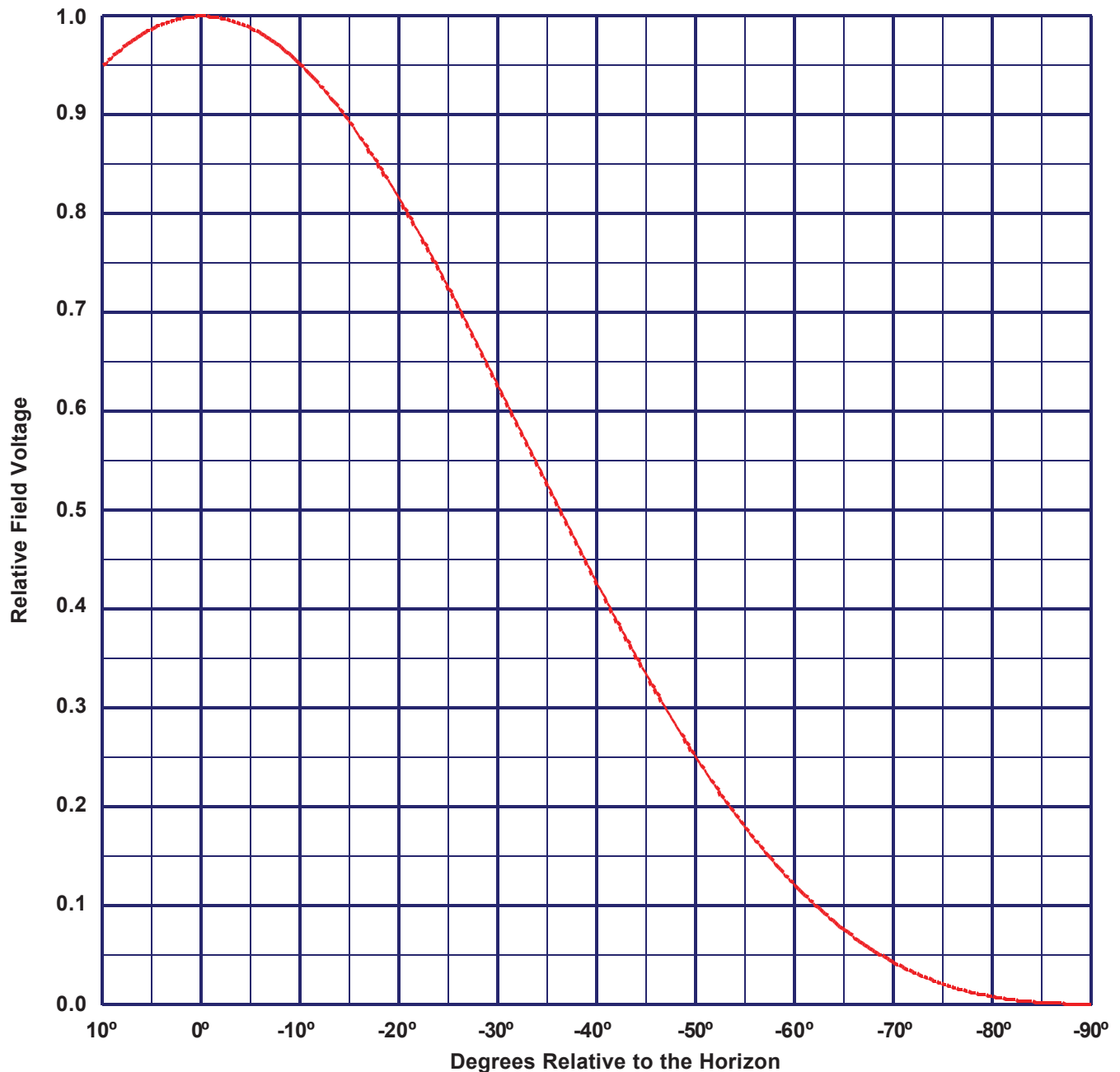


Vertical Plane Relative Field Pattern

ERI TYPE SHP, SHPX, MP, MPX, LP OR LPX ELEMENTS

A 2 level, .5 wave-length spaced non directional antenna

with 0° beam tilt, 0% null fill and a H/V maximum power ratio of 1.000



Vertical Polarization Gain:

Maximum: 0.702 (-1.535 dB)

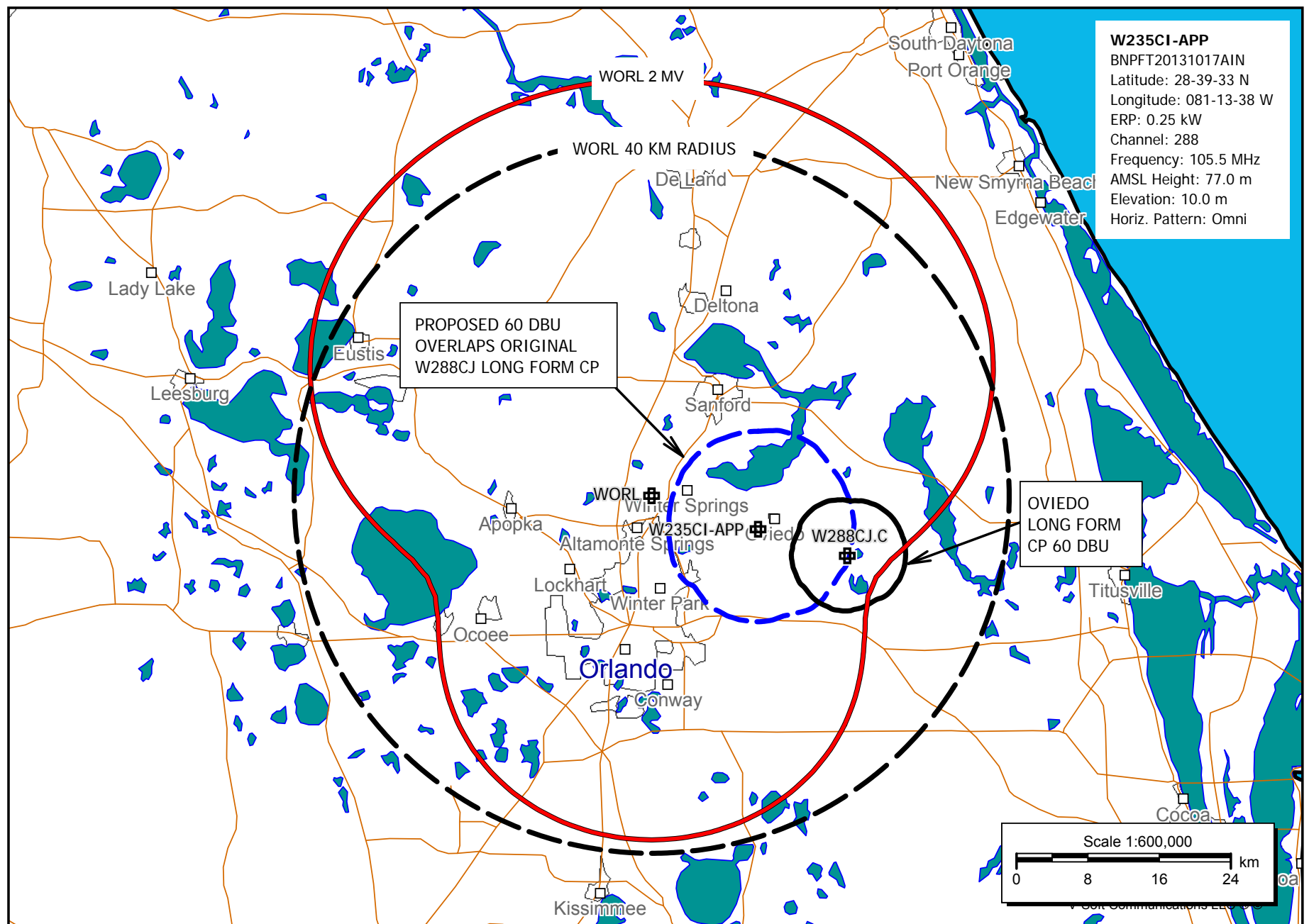
Horizontal Plane: 0.702 (-1.535 dB)

Horizontal Polarization Gain:

Maximum: 0.702 (-1.535 dB)

Horizontal Plane: 0.702 (-1.535 dB)

EXHIBIT E2



E3 Registration 1030064

 [Map Registration](#)

Registration Detail

Reg Number	1030064	Status	Constructed
File Number	A0641774	Constructed	03/22/1997
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	28-39-34.1 N 081-13-36.8 W	Address	1701 EAST BROADWAY (#303054)
City, State	OVIEDO , FL		
Zip	32765	County	SEMINOLE
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
10.3	78.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
88.3	75.8

Painting and Lighting Specifications

FAA Chapters 4, 5, 6, 8, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	2008-ASO-1653-OE	FAA Issue Date	05/09/2008
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Owner & Contact Information

FRN	0014350276	Owner Entity Type
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Owner

SpectraSite Communications, LLC. through American Towers, LLC. Attention To: Compliance Dept. 1898 Leland Drive, Suite A Marietta , GA 30067	P: (678)265-6770 F: E:
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Contact

Dept. , Compliance 1898 Leland Drive, Suite A Marietta , GA 30067	P: (678)265-6770 F: E:
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Last Action Status

Status	Constructed	Received	06/25/2009
Purpose	Notification	Entered	06/25/2009

Output from NADCON for station W235CI

North American Datum Conversion

NAD 83 to NAD 27

NADCON Program Version 2.11

Transformation #: 1 Region: Conus

Latitude

Longitude

NAD 27 datum values:

28 39 33.10891

81 13 37.56475

NAD 83 datum values:

28 39 34.10000

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81 13 36.80000
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NAD 27 - NAD 83 shift values:

-0.99109

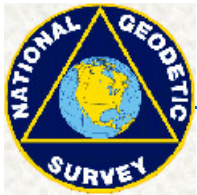
0.76475 (secs.)

-30.512

20.767 (meters)

Magnitude of total shift:

36.908 (meters)



NGS HOME PAGE