

W221CG APPLICATION FOR MINOR CHANGE

This technical report has been developed in support of an application for a minor modification to FM translator W221CG's CP (BPFT-20100217AAA) requesting a change in channel to first adjacent channel 222, a change ERP to 250 Watts vertical only, an increase in HAAT and a change in antenna.

Allocations analysis:

Allocation exhibits are provided as required by FCC form 349 as follows:

E1 Interference channel study on requested channel 222

E1A Interference plot to W222AF

E1B Interference study to WZGC on third adjacent channel

E1C Proposed directional pattern

E1D Vertical elevation pattern

E1E Aerial map

E2 60 dBu plots

E2A 60 dBu overlap plot

E3 HAAT tabulation

E4 ASR

Exhibit E1 demonstrates clearance to all facilities with the exception of third adjacent channel WZGC which is addressed below. Exhibit E2 shows that the proposed 60 dBu is contained within the primary station's 60 dBu, and E2A demonstrates overlap between the proposed 60 dBu and the licensed W221CG 60 dBu. The FCC 30 second terrain database provided by V-Soft Communications has been used throughout this study.

The proposed W221CG channel 222 facility will be located inside the WZGC third adjacent channel's 60 dBu contour. Therefore, an interference analysis has been conducted based on the D/U ratio of +40 dB at the proposed site. The WZGC contour at that site is 79.655 dBu and the proposed interference contour of 119.655 dBu (50,10) is at a distance of 115.4 meters. Based on the proposed radiation center height above ground of 53 meters that yields a depression angle of 24.7 degrees and a reduced ERP of 0.137 kW. The resulting 119.655 dBu (50,10) interfering contour is 85.4 meters which will not reach any buildings or major highways. An aerial photograph is included as E1E demonstrating that the closest house is 90 meters away. Consequently, based on this

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showing that the interfering contour will not reach a populated area, a waiver of Section 74.1204 is requested.

Further vertical clearance is demonstrated in the following table.

| Depression Angle (Deg) | F | ERP X F ² kW | 119.655 dBu meters | Vertical Clearance meters |
|------------------------|------|-------------------------|--------------------|---------------------------|
| 24.7 | .740 | 0.137 | 85.4 | 17.3 |
| 30 | .645 | 0.104 | 74.7 | 15.7 |
| 35 | .562 | 0.079 | 64.9 | 15.8 |
| 40 | .470 | 0.055 | 54.1 | 18.2 |
| 45 | .360 | 0.032 | 41.3 | 23.8 |
| 50 | .250 | 0.016 | 29.2 | 30.6* |

* At 63 meters horizontal distance from the tower. No further analysis needed based on attached aerial photograph.

Proposed site, antenna and RF calculation:

The RF contribution for the proposed facility at ASR#1018983 has been calculated to be 0.416 *uWatts/cm²* using the formula provided below and a composite CLFM vertically polarized antenna skewed 120 degrees (130 and 250 degrees True). The elevation pattern is provided in exhibit E1D. This is 0.2% of the maximum permissible 200 micro-Watts/cm² exposure for general population/uncontrolled exposure and less than the 5% of that level that is excluded from consideration. A vertical factor of .36 at 45 degrees depression angle was used for a worst case analysis.

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


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E1

| REFERENCE 33 49 19.0 N. 84 40 49.0 W. | | CH# | 222D - 92.3 MHZ, Pwr= 0.25 kW DA, HAAT= 49.4 M, COR= 340 M Average Protected F(50-50)= 9.21 km Standard Directional | | | | | | DISPLAY DATA 01-22-11 | DATES SEARCH 01-24-11 |
|---|----------------------------|---------------|---|--------------------------|--------------------------|--------------------|-------------------|---------------------------------------|--|--------------------------|
| CH CITY | CALL | TYPE STATE | ANT <-- | DIST FILE # | LAT LNG | PWR(kW) HAAT(M) | INT(km) COR(M) | PRO(km) | *IN* LICENSEE (Overlap in km) | *OUT* |
| 221D | W221CG Kennesaw | LIC _V_ GA | 300.2 120.1 | 12.5 BLFT20100125AIL | 33 52 43.0 84 47 52.0 | 0.038 | 9.5 341 | 6.7 Cumulus Licensing Llc | -3.6 | -3.7 |
| 223D | W221CG Lithia Springs | CP _C_ GA | 0.0 0.0 | 0.0 BPFT20100217AAA | 33 49 19.0 84 40 49.0 | 0.120 | 8.5 324 | 6.0 Cumulus Licensing Llc | -10.7* | -9.0* |
| 225C1 | WZGC Atlanta | LIC NC_ GA | 92.9 273.1 | 31.6 BMLH20080226ABQ | 33 48 26.0 84 20 21.8 | 66.000 340 | 9.9 612 | 72.4 CBS Radio Inc. of Atlanta (1) | 12.9 | -41.7* |
| 222C0 | WDEF-FM Chattanooga | LIC _C_ TN | 338.2 157.8 | 157.2 BMLH20050831ADG | 35 08 06.0 85 19 25.0 | 100.000 360 | 191.6 743 | 87.5 Jackson Telecasters, Inc. | -36.4* | 63.2 |
| 222D | W222AF Marietta | LIC _CN GA | 33.2 213.3 | 20.8 BLFT19970707TI | 33 58 41.0 84 33 25.0 | 0.010 130 | 23.7 433 | 7.0 Immanuel Broadcasting Netw | -5.4* | 6.1 |
| 275D | W275BK Decatur | LIC _C_ GA | 106.1 286.3 | 30.8 BLFT20100401AGD | 33 44 41.0 84 21 36.0 | 0.160 | 21.7 580 | 20.6 Roa Licenses, Llc | 9.5R | 21.3M |
| 220A | WCLK Atlanta | CP NCX GA | 107.8 287.9 | 26.5 BPED20081024ABB | 33 44 56.0 84 24 27.0 | 2.500 94 | 2.2 372 | 23.6 Clark Atlanta University | 14.2 | 1.9 |
| 220A | WCLK Atlanta | LIC ZC_ GA | 107.8 287.9 | 26.5 BLED20010712ACT | 33 44 56.0 84 24 26.0 | 6.000 94 | 2.2 372 | 23.6 Clark Atlanta University | 14.3 | 1.9 |
| 221A | WBTR-FM Carrollton | LIC _CN GA | 227.6 47.4 | 42.3 BLH19861029KC | 33 33 54.0 85 01 02.0 | 0.580 194 | 31.2 498 | 21.0 Wyai, Inc. | 4.4 | 11.6 |
| 223C3 | WEKS Zebulon | LIC _CX GA | 169.2 349.3 | 77.1 BLH20060714AAC | 33 08 20.0 84 31 31.0 | 12.000 145 | 57.1 380 | 38.0 Legacy Media - South Atlan | 11.5 | 27.1 |
| 219C2 | WCCV Cartersville | LIC DC_ GA | 318.9 138.7 | 49.9 BLED20010327AAC | 34 09 34.0 85 02 13.0 | 7.300 285 | 1.7 518 | 28.1 Immanuel Broadcasting Netw | 44.8 | 21.5 |
| 222A | WMOQ Bostwick | LIC _CX GA | 94.3 274.9 | 104.4 BLH20071022BXC | 33 44 49.0 83 33 23.0 | 3.000 100 | 72.9 324 | 22.3 Bostwick Broadcasting Grou | 22.5 | 52.8 |
| 222C0 | WLWI-FM Montgomery | LIC _CX AL | 222.3 41.4 | 211.6 BMLH20070402ADQ | 32 24 13.0 86 11 47.0 | 100.000 334 | 173.4 397 | 73.3 Cumulus Licensing Llc | 31.8 | 116.6 |
| 221D | W221AZ Lilburn | LIC DCN GA | 82.7 263.0 | 47.1 BLFT19950802TO | 33 52 28.0 84 10 26.0 | 0.027 82 | 4.8 372 | 3.3 Toccoa Falls College | 33.9 | 31.9 |
| 221D | W221AW North Canton | LIC _C_ GA | 15.8 195.9 | 52.2 BLFT20050420ABJ | 34 16 26.0 84 31 32.0 | 0.010 | 14.6 602 | 10.4 Immanuel Broadcasting Netw | 35.1 | 38.3 |
| 219C3 | WMVW Peachtree City | LIC DCX GA | 160.1 340.2 | 68.3 BLED20100510AKQ | 33 14 39.0 84 25 49.0 | 13.000 75 | 2.7 323 | 27.2 Life Radio Ministries Inc | 55.4 | 40.2 |
| 221A | WJGA-FM Jackson | LIC _CN GA | 132.3 312.7 | 89.7 BLH19861029KB | 33 16 37.0 83 57 59.0 | 2.150 114 | 28.5 304 | 19.4 Earnhart Broadcasting Co., | 49.5 | 53.2 |
| 276D | 641708 Atlanta Junction | APP _C_ GA | 315.9 135.7 | 65.1 BNPFT20030314CKD | 34 14 30.0 85 10 22.0 | 0.250 | 7.1 213 | 7.1 Alabama Christian Radio In | 9.5R | 55.6M |
| 222C | WLWI-FM Montgomery | CP NCX AL | 225.6 44.5 | 258.6 BPH20091030AHL | 32 10 39.0 86 38 33.0 | 100.000 494 | 190.5 557 | 86.5 Cumulus Licensing Llc | 61.6 | 150.0 |
| 222A | WLZN Macon | LIC NCN GA | 140.0 320.5 | 151.5 BLH19920813KB | 32 46 26.0 83 38 15.0 | 3.000 100 | 75.0 211 | 23.7 Cumulus Licensing Llc | 64.9 | 88.2 |
| 219A | WPIL Hefflin | LIC DCX AL | 254.2 73.7 | 83.2 BLED20100420AIG | 33 36 55.0 85 32 41.0 | 1.300 26 | 1.6 339 | 11.4 Alabama Christian Radio In | 73.2 | 70.7 |

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. 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 protected contour.

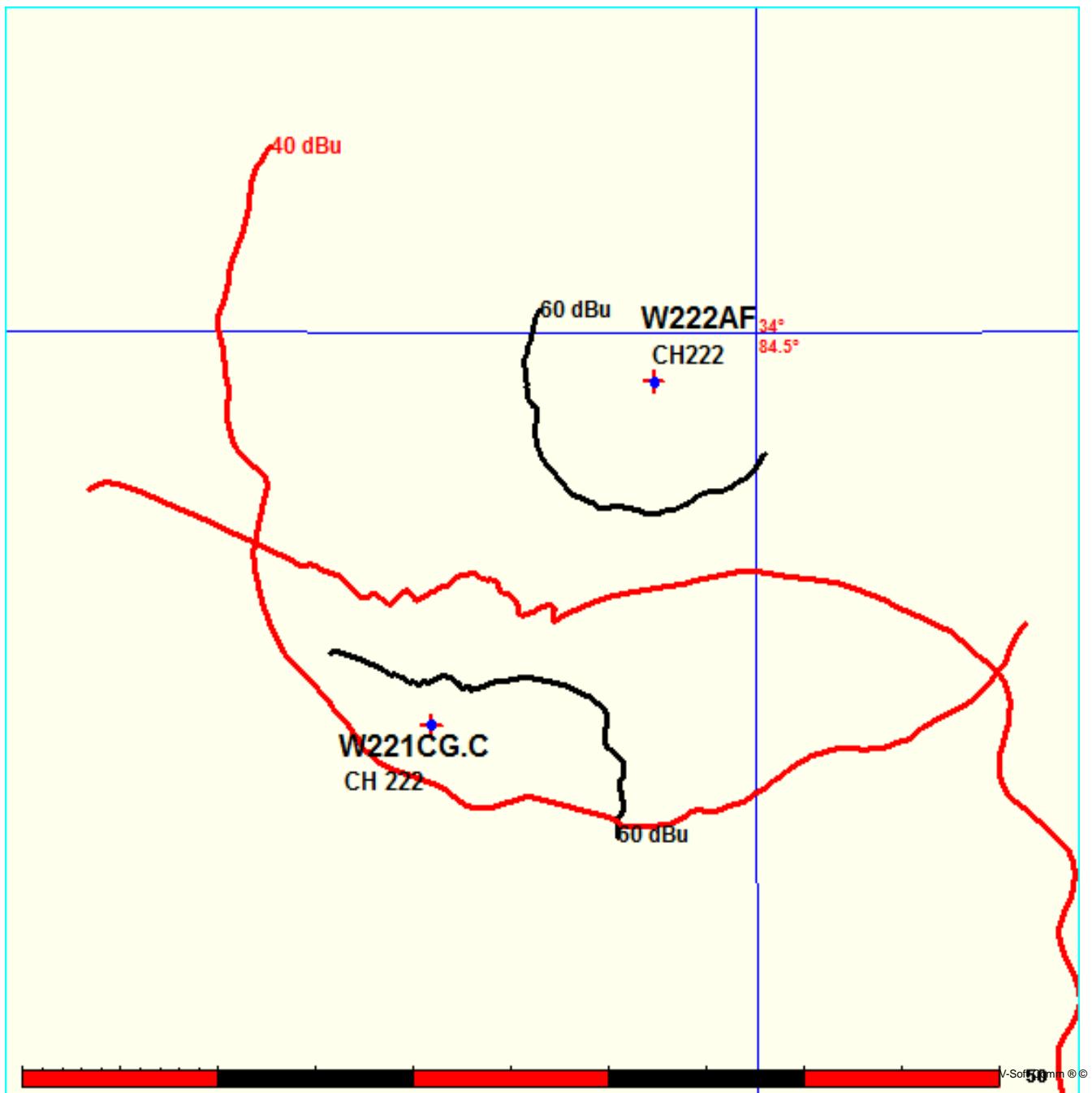
(1) See interference analysis in technical report,

E1A W221CG - W222AF PLOT

FMCommander Single Allocation Study - 01-24-2011 - FCC NGDC 30 Sec
W221CG.C's Overlaps (In= -5.37 km, Out= 6.1 km)

W221CG.C CH 222 D DA
Lat= 33 49 19.0, Lng= 84 40 49.0
0.25 kW 49.4 M HAAT, 340 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W222AF CH 222 D BLFT19970707TI
Lat= 33 58 41.0, Lng= 84 33 25.0
0.01 kW 130 M HAAT, 433 M COR
Prot.= 60 dBu, Intef.= 40 dBu



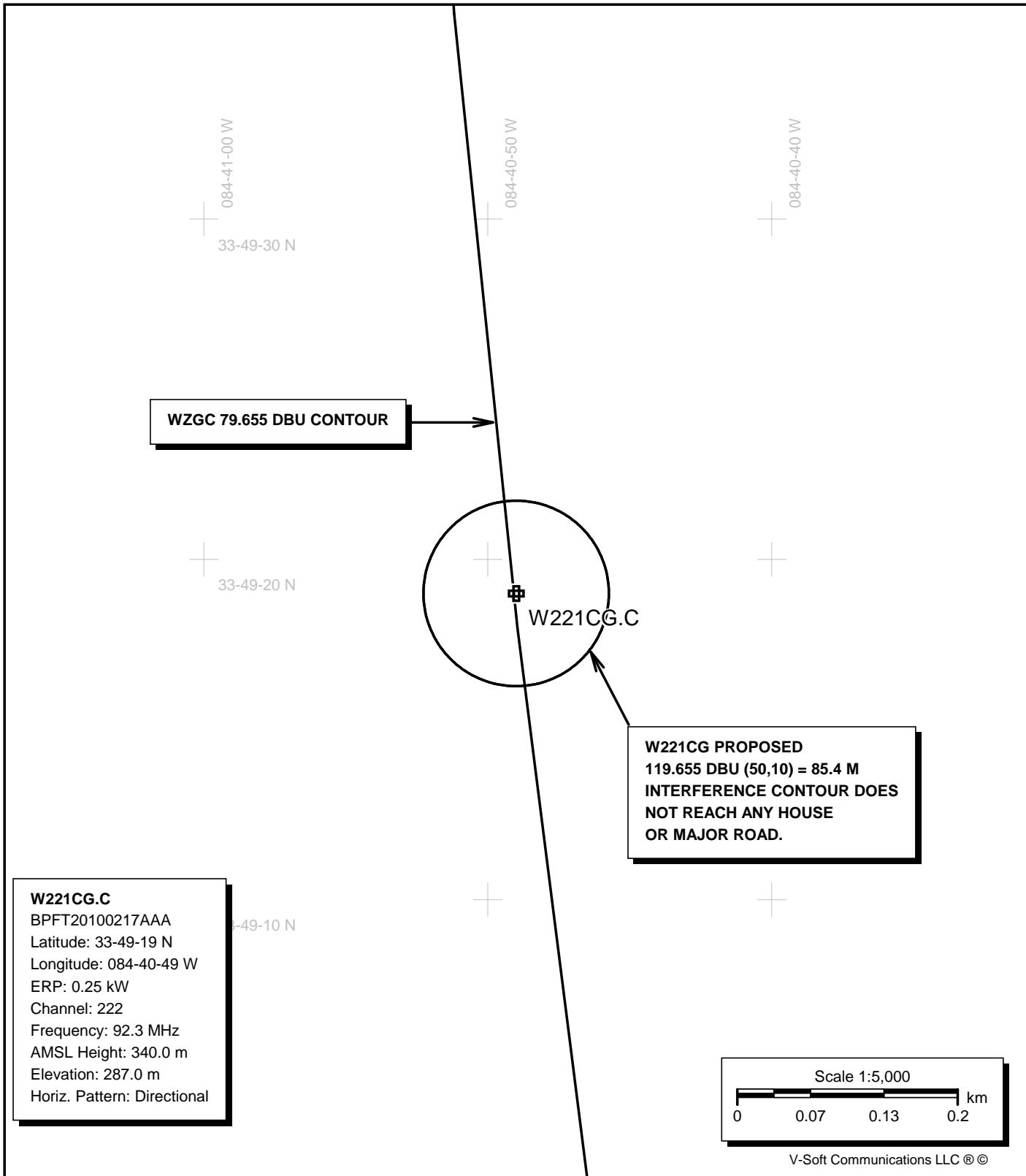


EXHIBIT E1B

221CG PROPOSED CHANNEL 222 INTERFERENCE CONTOUR

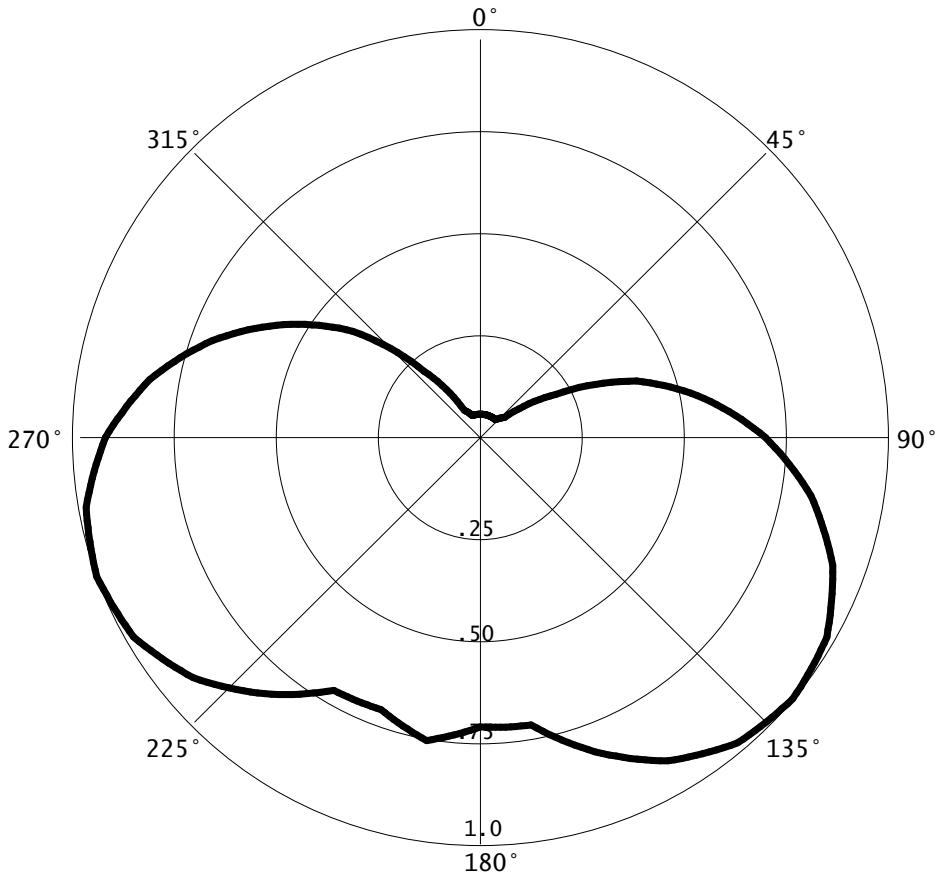
W221CG.C

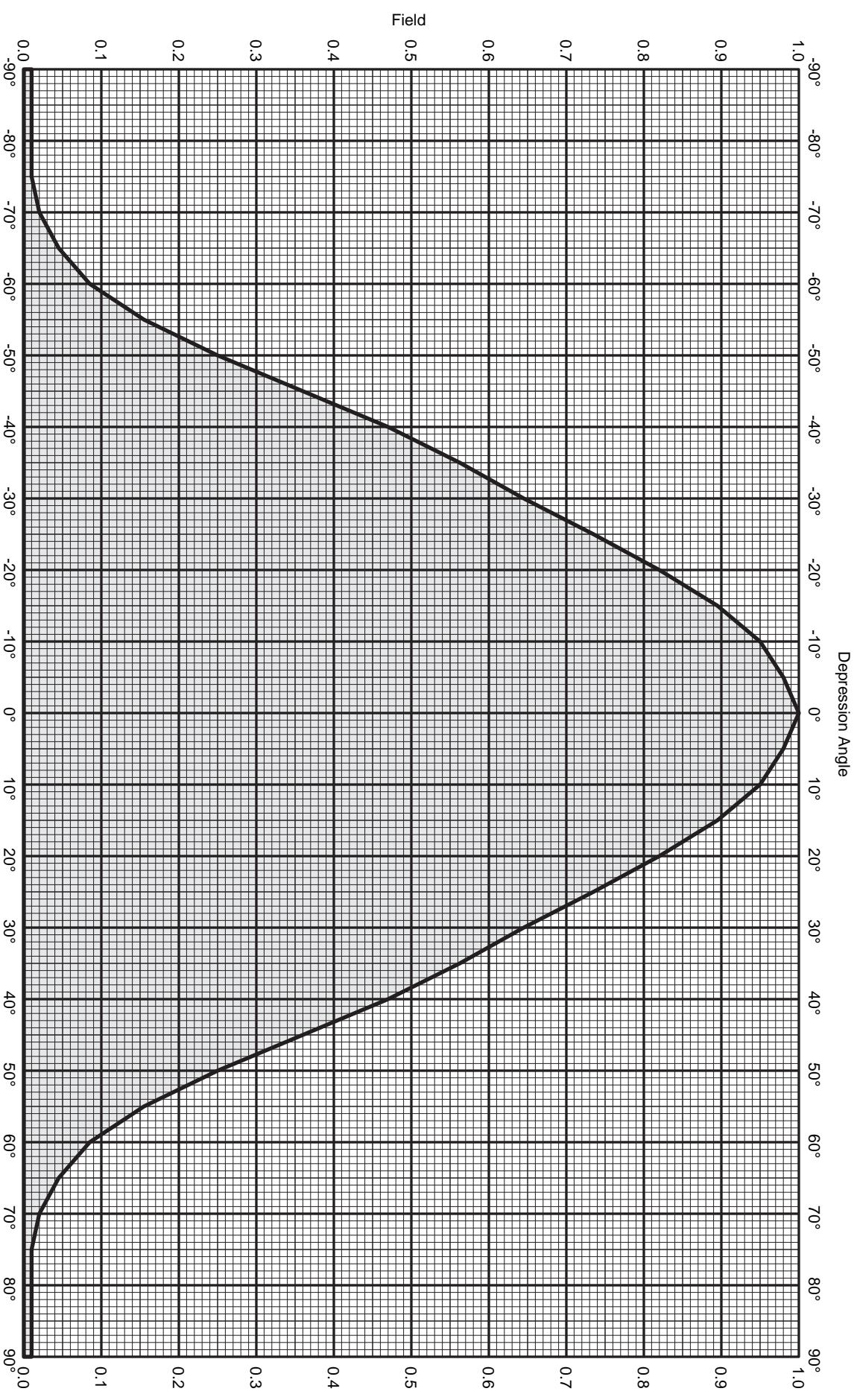
01-24-2011

RMS(V) = .678

EIC DA PATTERNGraph is Relative Field

| Azi | Field | dbk | kW |
|-----|-------|-------|-------|
| 000 | 0.058 | -30.8 | 0.001 |
| 010 | 0.058 | -30.8 | 0.001 |
| 020 | 0.058 | -30.8 | 0.001 |
| 030 | 0.058 | -30.8 | 0.001 |
| 040 | 0.058 | -30.8 | 0.001 |
| 050 | 0.078 | -28.2 | 0.002 |
| 060 | 0.214 | -19.4 | 0.011 |
| 070 | 0.408 | -13.8 | 0.042 |
| 080 | 0.557 | -11.1 | 0.078 |
| 090 | 0.699 | -09.1 | 0.122 |
| 100 | 0.823 | -07.7 | 0.169 |
| 110 | 0.919 | -06.8 | 0.211 |
| 120 | 0.981 | -06.2 | 0.241 |
| 130 | 1.000 | -06.0 | 0.250 |
| 140 | 0.981 | -06.2 | 0.241 |
| 150 | 0.919 | -06.8 | 0.211 |
| 160 | 0.823 | -07.7 | 0.169 |
| 170 | 0.718 | -08.9 | 0.129 |
| 180 | 0.712 | -09.0 | 0.127 |
| 190 | 0.757 | -08.4 | 0.143 |
| 200 | 0.712 | -09.0 | 0.127 |
| 210 | 0.718 | -08.9 | 0.129 |
| 220 | 0.823 | -07.7 | 0.169 |
| 230 | 0.919 | -06.8 | 0.211 |
| 240 | 0.981 | -06.2 | 0.241 |
| 250 | 1.000 | -06.0 | 0.250 |
| 260 | 0.981 | -06.2 | 0.241 |
| 270 | 0.919 | -06.8 | 0.211 |
| 280 | 0.823 | -07.7 | 0.169 |
| 290 | 0.699 | -09.1 | 0.122 |
| 300 | 0.557 | -11.1 | 0.078 |
| 310 | 0.408 | -13.8 | 0.042 |
| 320 | 0.214 | -19.4 | 0.011 |
| 330 | 0.078 | -28.2 | 0.002 |
| 340 | 0.058 | -30.8 | 0.001 |
| 350 | 0.058 | -30.8 | 0.001 |





CL-FM Log-periodic

FM

7.0 dBd (9.15 dBi)

Vertical radiation pattern

KATHREIN

SCALA DIVISION

Post Office Box 4580
Medford, OR 97501 (USA)

Phone: (541) 779-6500
Fax: (541) 779-3991
<http://www.kathrein-scala.com>



CL-FM Log-periodic

FM

7.0 dBd (9.15 dBi)

Vertical polarization

Vertical radiation pattern

| Angle | Field | Rel.dB | dBd | PwrMult | Angle | Field | Rel.dB | dBd | PwrMult |
|-------|-------|--------|--------|---------|-------|-------|--------|-------|---------|
| -90 | 0.010 | -40.00 | -33.00 | 0.00 | -45 | 0.360 | -8.87 | -1.87 | 0.65 |
| -89 | 0.010 | -40.00 | -33.00 | 0.00 | -44 | 0.382 | -8.36 | -1.36 | 0.73 |
| -88 | 0.010 | -40.00 | -33.00 | 0.00 | -43 | 0.404 | -7.87 | -0.87 | 0.82 |
| -87 | 0.010 | -40.00 | -33.00 | 0.00 | -42 | 0.426 | -7.41 | -0.41 | 0.91 |
| -86 | 0.010 | -40.00 | -33.00 | 0.00 | -41 | 0.448 | -6.97 | 0.03 | 1.01 |
| -85 | 0.010 | -40.00 | -33.00 | 0.00 | -40 | 0.470 | -6.56 | 0.44 | 1.11 |
| -84 | 0.010 | -40.00 | -33.00 | 0.00 | -39 | 0.488 | -6.22 | 0.78 | 1.20 |
| -83 | 0.010 | -40.00 | -33.00 | 0.00 | -38 | 0.507 | -5.90 | 1.10 | 1.29 |
| -82 | 0.010 | -40.00 | -33.00 | 0.00 | -37 | 0.525 | -5.59 | 1.41 | 1.38 |
| -81 | 0.010 | -40.00 | -33.00 | 0.00 | -36 | 0.544 | -5.29 | 1.71 | 1.48 |
| -80 | 0.010 | -40.00 | -33.00 | 0.00 | -35 | 0.562 | -5.00 | 2.00 | 1.59 |
| -79 | 0.010 | -40.00 | -33.00 | 0.00 | -34 | 0.579 | -4.75 | 2.25 | 1.68 |
| -78 | 0.010 | -40.00 | -33.00 | 0.00 | -33 | 0.595 | -4.50 | 2.50 | 1.78 |
| -77 | 0.010 | -40.00 | -33.00 | 0.00 | -32 | 0.612 | -4.26 | 2.74 | 1.88 |
| -76 | 0.010 | -40.00 | -33.00 | 0.00 | -31 | 0.628 | -4.03 | 2.97 | 1.98 |
| -75 | 0.010 | -40.00 | -33.00 | 0.00 | -30 | 0.645 | -3.81 | 3.19 | 2.09 |
| -74 | 0.012 | -38.42 | -31.42 | 0.00 | -29 | 0.663 | -3.57 | 3.43 | 2.20 |
| -73 | 0.014 | -37.08 | -30.08 | 0.00 | -28 | 0.681 | -3.34 | 3.66 | 2.32 |
| -72 | 0.016 | -35.92 | -28.92 | 0.00 | -27 | 0.699 | -3.11 | 3.89 | 2.45 |
| -71 | 0.018 | -34.89 | -27.89 | 0.00 | -26 | 0.717 | -2.89 | 4.11 | 2.58 |
| -70 | 0.020 | -33.98 | -26.98 | 0.00 | -25 | 0.735 | -2.67 | 4.33 | 2.71 |
| -69 | 0.025 | -32.04 | -25.04 | 0.00 | -24 | 0.752 | -2.48 | 4.52 | 2.83 |
| -68 | 0.030 | -30.46 | -23.46 | 0.00 | -23 | 0.769 | -2.28 | 4.72 | 2.96 |
| -67 | 0.035 | -29.12 | -22.12 | 0.01 | -22 | 0.786 | -2.09 | 4.91 | 3.10 |
| -66 | 0.040 | -27.96 | -20.96 | 0.01 | -21 | 0.803 | -1.91 | 5.09 | 3.23 |
| -65 | 0.045 | -26.94 | -19.94 | 0.01 | -20 | 0.820 | -1.72 | 5.28 | 3.37 |
| -64 | 0.053 | -25.51 | -18.51 | 0.01 | -19 | 0.835 | -1.57 | 5.43 | 3.49 |
| -63 | 0.061 | -24.29 | -17.29 | 0.02 | -18 | 0.850 | -1.41 | 5.59 | 3.62 |
| -62 | 0.069 | -23.22 | -16.22 | 0.02 | -17 | 0.865 | -1.26 | 5.74 | 3.75 |
| -61 | 0.077 | -22.27 | -15.27 | 0.03 | -16 | 0.880 | -1.11 | 5.89 | 3.88 |
| -60 | 0.085 | -21.41 | -14.41 | 0.04 | -15 | 0.895 | -0.96 | 6.04 | 4.01 |
| -59 | 0.099 | -20.09 | -13.09 | 0.05 | -14 | 0.906 | -0.86 | 6.14 | 4.11 |
| -58 | 0.113 | -18.94 | -11.94 | 0.06 | -13 | 0.917 | -0.75 | 6.25 | 4.21 |
| -57 | 0.127 | -17.92 | -10.92 | 0.08 | -12 | 0.928 | -0.65 | 6.35 | 4.32 |
| -56 | 0.141 | -17.02 | -10.02 | 0.10 | -11 | 0.939 | -0.55 | 6.45 | 4.42 |
| -55 | 0.155 | -16.19 | -9.19 | 0.12 | -10 | 0.950 | -0.45 | 6.55 | 4.52 |
| -54 | 0.174 | -15.19 | -8.19 | 0.15 | -9 | 0.956 | -0.39 | 6.61 | 4.58 |
| -53 | 0.193 | -14.29 | -7.29 | 0.19 | -8 | 0.962 | -0.34 | 6.66 | 4.64 |
| -52 | 0.212 | -13.47 | -6.47 | 0.23 | -7 | 0.968 | -0.28 | 6.72 | 4.70 |
| -51 | 0.231 | -12.73 | -5.73 | 0.27 | -6 | 0.974 | -0.23 | 6.77 | 4.75 |
| -50 | 0.250 | -12.04 | -5.04 | 0.31 | -5 | 0.980 | -0.18 | 6.82 | 4.81 |
| -49 | 0.272 | -11.31 | -4.31 | 0.37 | -4 | 0.984 | -0.14 | 6.86 | 4.85 |
| -48 | 0.294 | -10.63 | -3.63 | 0.43 | -3 | 0.988 | -0.10 | 6.90 | 4.89 |
| -47 | 0.316 | -10.01 | -3.01 | 0.50 | -2 | 0.992 | -0.07 | 6.93 | 4.93 |
| -46 | 0.338 | -9.42 | -2.42 | 0.57 | -1 | 0.996 | -0.03 | 6.97 | 4.97 |
| | | | | | 0 | 1.000 | 0.00 | 7.00 | 5.01 |



CL-FM Log-periodic
FM
7.0 dBd (9.15 dBi)
Vertical polarization

Vertical radiation pattern

| Angle | Field | Rel.dB | dBd | PwrMult | Angle | Field | Rel.dB | dBd | PwrMult |
|-------|-------|--------|-------|---------|-------|-------|--------|--------|---------|
| 0 | 1.000 | 0.00 | 7.00 | 5.01 | 45 | 0.360 | -8.87 | -1.87 | 0.65 |
| 1 | 0.996 | -0.03 | 6.97 | 4.97 | 46 | 0.338 | -9.42 | -2.42 | 0.57 |
| 2 | 0.992 | -0.07 | 6.93 | 4.93 | 47 | 0.316 | -10.01 | -3.01 | 0.50 |
| 3 | 0.988 | -0.10 | 6.90 | 4.89 | 48 | 0.294 | -10.63 | -3.63 | 0.43 |
| 4 | 0.984 | -0.14 | 6.86 | 4.85 | 49 | 0.272 | -11.31 | -4.31 | 0.37 |
| 5 | 0.980 | -0.18 | 6.82 | 4.81 | 50 | 0.250 | -12.04 | -5.04 | 0.31 |
| 6 | 0.974 | -0.23 | 6.77 | 4.75 | 51 | 0.231 | -12.73 | -5.73 | 0.27 |
| 7 | 0.968 | -0.28 | 6.72 | 4.70 | 52 | 0.212 | -13.47 | -6.47 | 0.23 |
| 8 | 0.962 | -0.34 | 6.66 | 4.64 | 53 | 0.193 | -14.29 | -7.29 | 0.19 |
| 9 | 0.956 | -0.39 | 6.61 | 4.58 | 54 | 0.174 | -15.19 | -8.19 | 0.15 |
| 10 | 0.950 | -0.45 | 6.55 | 4.52 | 55 | 0.155 | -16.19 | -9.19 | 0.12 |
| 11 | 0.939 | -0.55 | 6.45 | 4.42 | 56 | 0.141 | -17.02 | -10.02 | 0.10 |
| 12 | 0.928 | -0.65 | 6.35 | 4.32 | 57 | 0.127 | -17.92 | -10.92 | 0.08 |
| 13 | 0.917 | -0.75 | 6.25 | 4.21 | 58 | 0.113 | -18.94 | -11.94 | 0.06 |
| 14 | 0.906 | -0.86 | 6.14 | 4.11 | 59 | 0.099 | -20.09 | -13.09 | 0.05 |
| 15 | 0.895 | -0.96 | 6.04 | 4.01 | 60 | 0.085 | -21.41 | -14.41 | 0.04 |
| 16 | 0.880 | -1.11 | 5.89 | 3.88 | 61 | 0.077 | -22.27 | -15.27 | 0.03 |
| 17 | 0.865 | -1.26 | 5.74 | 3.75 | 62 | 0.069 | -23.22 | -16.22 | 0.02 |
| 18 | 0.850 | -1.41 | 5.59 | 3.62 | 63 | 0.061 | -24.29 | -17.29 | 0.02 |
| 19 | 0.835 | -1.57 | 5.43 | 3.49 | 64 | 0.053 | -25.51 | -18.51 | 0.01 |
| 20 | 0.820 | -1.72 | 5.28 | 3.37 | 65 | 0.045 | -26.94 | -19.94 | 0.01 |
| 21 | 0.803 | -1.91 | 5.09 | 3.23 | 66 | 0.040 | -27.96 | -20.96 | 0.01 |
| 22 | 0.786 | -2.09 | 4.91 | 3.10 | 67 | 0.035 | -29.12 | -22.12 | 0.01 |
| 23 | 0.769 | -2.28 | 4.72 | 2.96 | 68 | 0.030 | -30.46 | -23.46 | 0.00 |
| 24 | 0.752 | -2.48 | 4.52 | 2.83 | 69 | 0.025 | -32.04 | -25.04 | 0.00 |
| 25 | 0.735 | -2.67 | 4.33 | 2.71 | 70 | 0.020 | -33.98 | -26.98 | 0.00 |
| 26 | 0.717 | -2.89 | 4.11 | 2.58 | 71 | 0.018 | -34.89 | -27.89 | 0.00 |
| 27 | 0.699 | -3.11 | 3.89 | 2.45 | 72 | 0.016 | -35.92 | -28.92 | 0.00 |
| 28 | 0.681 | -3.34 | 3.66 | 2.32 | 73 | 0.014 | -37.08 | -30.08 | 0.00 |
| 29 | 0.663 | -3.57 | 3.43 | 2.20 | 74 | 0.012 | -38.42 | -31.42 | 0.00 |
| 30 | 0.645 | -3.81 | 3.19 | 2.09 | 75 | 0.010 | -40.00 | -33.00 | 0.00 |
| 31 | 0.628 | -4.03 | 2.97 | 1.98 | 76 | 0.010 | -40.00 | -33.00 | 0.00 |
| 32 | 0.612 | -4.26 | 2.74 | 1.88 | 77 | 0.010 | -40.00 | -33.00 | 0.00 |
| 33 | 0.595 | -4.50 | 2.50 | 1.78 | 78 | 0.010 | -40.00 | -33.00 | 0.00 |
| 34 | 0.579 | -4.75 | 2.25 | 1.68 | 79 | 0.010 | -40.00 | -33.00 | 0.00 |
| 35 | 0.562 | -5.00 | 2.00 | 1.59 | 80 | 0.010 | -40.00 | -33.00 | 0.00 |
| 36 | 0.544 | -5.29 | 1.71 | 1.48 | 81 | 0.010 | -40.00 | -33.00 | 0.00 |
| 37 | 0.525 | -5.59 | 1.41 | 1.38 | 82 | 0.010 | -40.00 | -33.00 | 0.00 |
| 38 | 0.507 | -5.90 | 1.10 | 1.29 | 83 | 0.010 | -40.00 | -33.00 | 0.00 |
| 39 | 0.488 | -6.22 | 0.78 | 1.20 | 84 | 0.010 | -40.00 | -33.00 | 0.00 |
| 40 | 0.470 | -6.56 | 0.44 | 1.11 | 85 | 0.010 | -40.00 | -33.00 | 0.00 |
| 41 | 0.448 | -6.97 | 0.03 | 1.01 | 86 | 0.010 | -40.00 | -33.00 | 0.00 |
| 42 | 0.426 | -7.41 | -0.41 | 0.91 | 87 | 0.010 | -40.00 | -33.00 | 0.00 |
| 43 | 0.404 | -7.87 | -0.87 | 0.82 | 88 | 0.010 | -40.00 | -33.00 | 0.00 |
| 44 | 0.382 | -8.36 | -1.36 | 0.73 | 89 | 0.010 | -40.00 | -33.00 | 0.00 |
| | | | | | 90 | 0.010 | -40.00 | -33.00 | 0.00 |



EXHIBIT E1E
AERIAL MAP OF SITE
SHOWING
CLEARANCE TO
NEAREST HOUSE

Imagery ©2011 DigitalGlobe, USDA Farm Service Agency, GeoEye, U.S. Geological Survey -

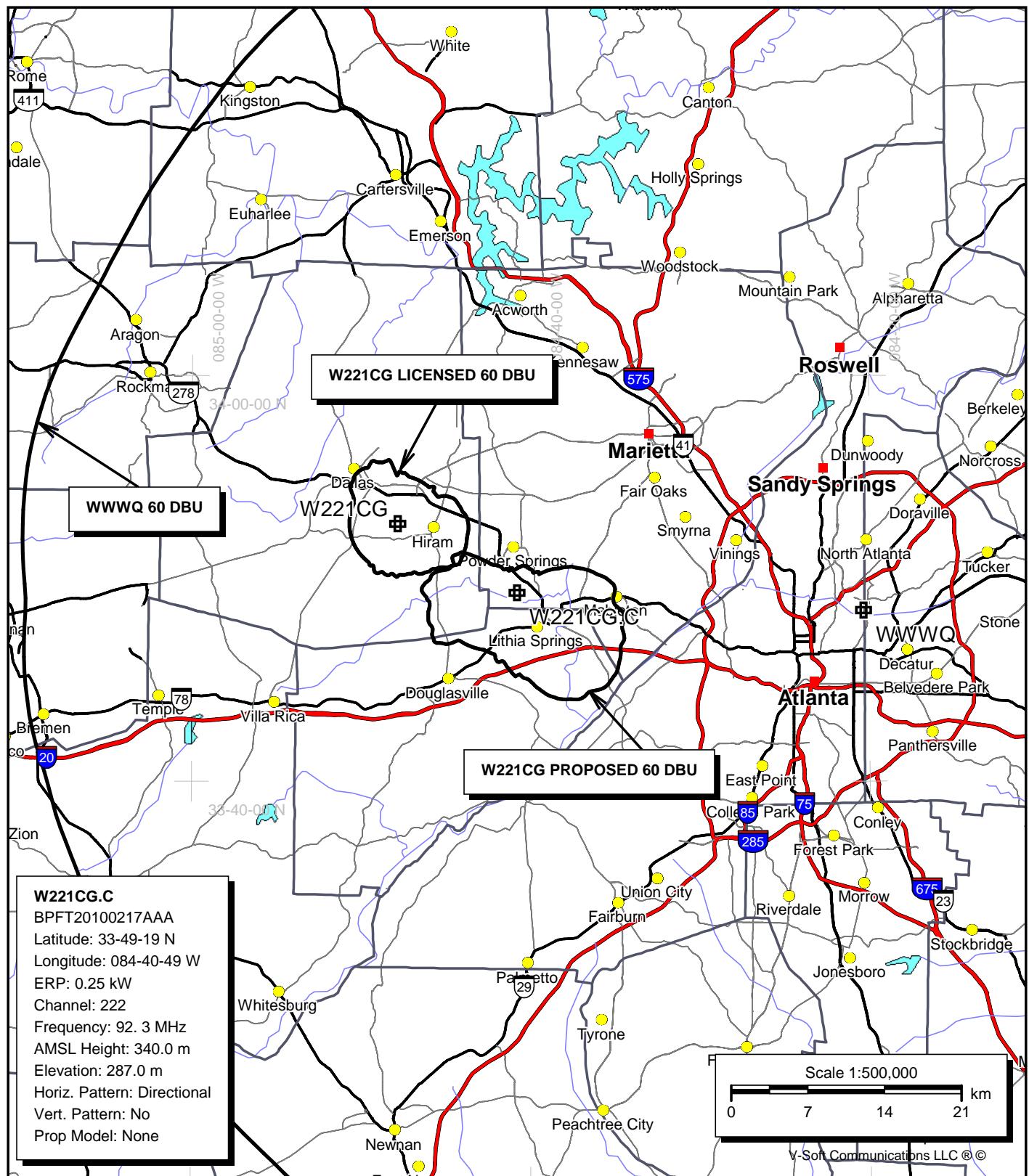


EXHIBIT E2

W221CG PROPOSED - LICENSED AND WWWQ 60 DBU CONTOURS

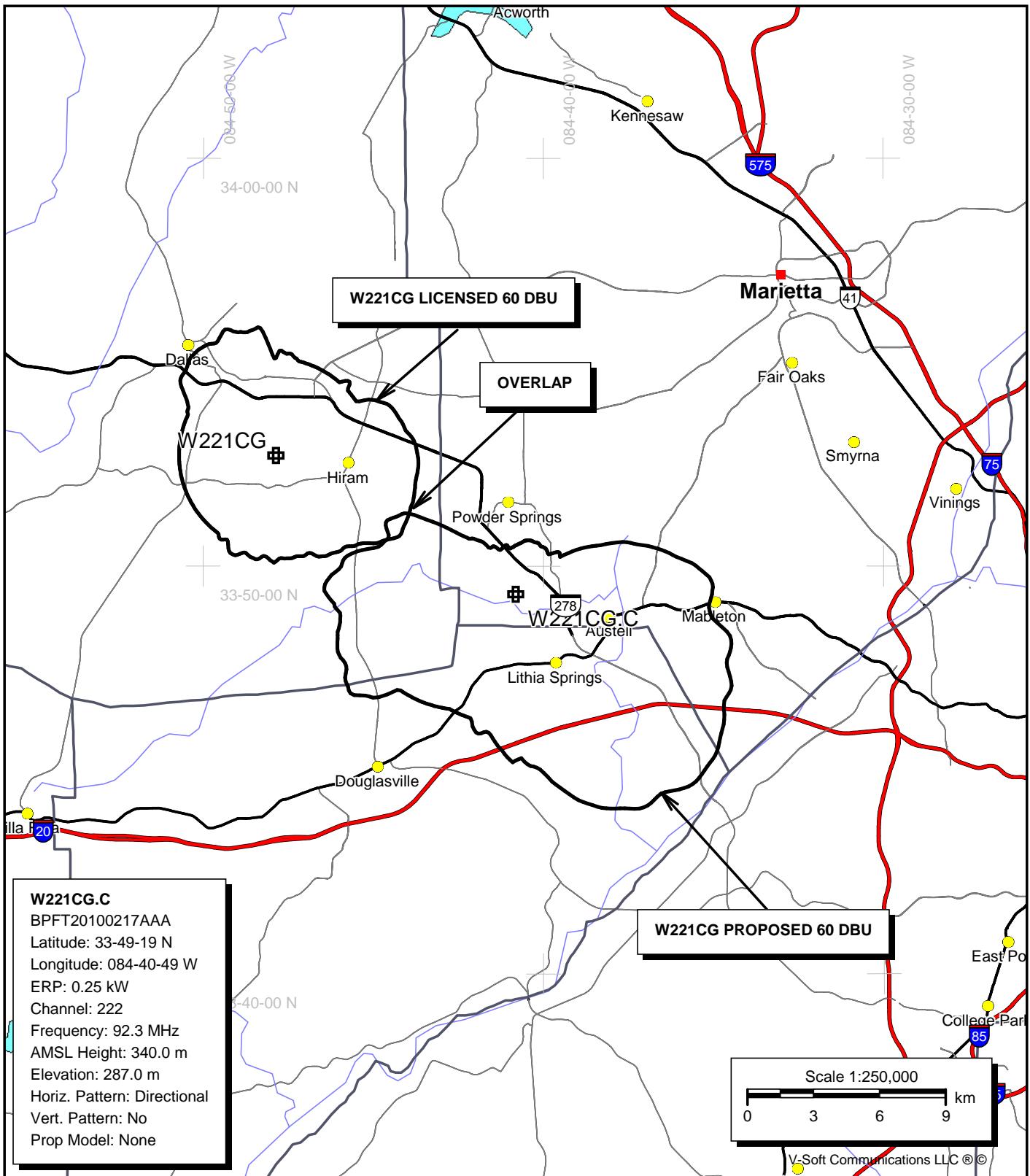


EXHIBIT E2A

221CG PROPOSED AND LICENSED 60 DBU CONTOURS OVERLAP

E3 HAAT AND CONTOUR TABULATION

N. Lat. = 334919.0 W. Lng. = 844049.0

HAAT and Distance to Contour,

V-Soft 3-16 km, 131 pts Method - FCC 30 SEC

| Azi. | AV EL | HAAT | ERP kW | dBk | 60-F5 |
|------|-------|------|--------|--------|-------|
| 000 | 293.0 | 47.0 | 0.0008 | -30.75 | 2.21 |
| 030 | 279.7 | 60.3 | 0.0008 | -30.75 | 2.46 |
| 060 | 286.1 | 53.9 | 0.0114 | -19.41 | 4.43 |
| 090 | 273.2 | 66.8 | 0.1222 | -9.13 | 8.90 |
| 120 | 268.0 | 72.0 | 0.2406 | -6.19 | 10.93 |
| 150 | 258.3 | 81.7 | 0.2111 | -6.75 | 11.23 |
| 180 | 292.0 | 48.0 | 0.1267 | -8.97 | 7.53 |
| 210 | 335.8 | 4.2 | 0.1289 | -8.90 | 6.00 |
| 240 | 294.2 | 45.8 | 0.2406 | -6.19 | 8.73 |
| 270 | 292.8 | 47.2 | 0.2111 | -6.75 | 8.58 |
| 300 | 291.3 | 48.7 | 0.0776 | -11.10 | 6.71 |
| 330 | 296.6 | 43.4 | 0.0015 | -28.18 | 2.43 |

Ave El= 288.42 M HAAT= 51.58 M AMSL= 340 M

ASR Registration Search

Registration 1018983

E4

 [Map Registration](#)
Registration Detail

| | | | |
|----------------|------------------|-------------|-------------|
| Reg Number | 1018983 | Status | Constructed |
| File Number | A0710196 | Constructed | 09/18/1992 |
| FAA Study | 2010-ASO-6308-OE | EMI | No |
| FAA Issue Date | 12/30/2010 | NEPA | No |

Antenna Structure

Structure Type MAST - Mast

Location (in NAD83 Coordinates)

Lat/Long 33-49-19.4 N 084-40-48.8 W

5300 HIRAM-LITHIA SPRINGS RD SW

City, State POWDER SPRINGS , GA

Center of AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level

Overall Height Above Ground (AGL)

286.8

80.5

Overall Height Above Mean Sea Level

Overall Height Above Ground w/o Appurtenances

367.3

76.2

Painting and Lighting Specifications

FAA Chapters 4, 8, 12

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

Owner & Contact Information

FRN 0003800307 Licensee ID L00270093

Owner

Verizon Wireless (VAW) LLC
 Attention To: Regulatory
 1120 Sanctuary Pkwy, #150 GASA5REG
 Alpharetta , GA 30009-7630

P: (770)797-1070
 E: Network.Regulatory@VerizonWireless.com

Contact

Janjua , Jerri L
 1120 Sanctuary Pkwy, #150 GASA5REG
 Alpharetta , GA 30009-7630

P: (770)797-1070
 E: Network.Regulatory@VerizonWireless.com

Last Action Status

| | | | |
|---------|--------------|----------|------------|
| Status | Constructed | Received | 01/05/2011 |
| Purpose | Notification | Entered | 01/05/2011 |
| Mode | Interactive | | |

Related Applications

| | |
|---------------------------|------------------------------|
| 01/05/2011 | A0710195 - Modification (MD) |
| 01/05/2011 | A0710196 - Notification (NT) |
| 12/05/2006 | A0529793 - Admin Update (AU) |
| Related applications (11) | |