

Technical Report K254AS.CP Minor Modification

This technical report is submitted for a minor modification to K254AS.CP at Nashville, AR, FCC file no. BPFT-20130116AAD. A move to the first adjacent channel 253, with corresponding changes in tower site and antenna are requested. The translator will continue to serve as a fill-in to rebroadcast KNLL(FM) 213C1 at Nashville, AR, FCC facility I.D. 85071.

K254AS.CP Modification Analysis:

An overlap study in Exhibit E-1 shows the K254AS.CP modification will not produce any interference overlap to current facilities.

The translator is to be relocated to an eleven (11) meter tower at coordinates:

33 52 16N 93 55 49W NAD 27.

A Nicom BKG77 single bay directional antenna, rotated at a 110 degree azimuth (exhibits E-2 and E-3) will be mounted at a COR AGL of 10 meters, 120 meters AMSL, at a HAAT of 11 meters, calculated using the FCC HAAT calculator with twelve radials, and operate at 0.250 kW ERP. The translator modification 60 dBu F(50-50) contour overlaps the current K254AS licensed facility and is completely contained within the primary KNLL(FM) 60 dBu F(50-50) contour, shown in exhibits E-4 and E-5.

Anderson Associates

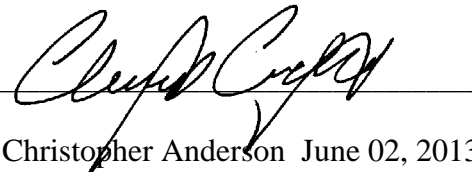
Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

RF Exposure Calculation:

The RF contribution was calculated using the Commission's FMMODEL program using a double V type antenna. The single bay Nicom antenna at a COR AGL of 10 meters and 0.250 kW ERP result in an RF of $71.8 \mu\text{W}/\text{cm}^2$ to the ground, which is below the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure.

Conclusion:

It is concluded that the modification to the K254AS.CP complies with all Commission rules and policies.



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E-1 K254AS.CP Mod. Overlap Study

REFERENCE

CH# 253D - 98.5 MHz, Pwr= 0.25 kW DA, HAAT= 11.0 M, COR= 120 M

DISPLAY DATES

33 52 16.0 N.

Average Protected F(50-50)= 7.1 km

DATA 06-02-13

93 55 49.0 W.

Standard Directional

SEARCH 06-04-13

| CH | CALL | TYPE | ANT | AZI. | DIST | LAT. | Pwr(kW) | INT(km) | PRO(km) | *IN* | *OUT* |
|-------------|---------|------|-------|-------|-----------------|------------|---------|---------|----------------------------|----------|--------|
| CITY | | | STATE | <-- | FILE # | LNG. | HAAT(M) | COR(M) | LICENSEE | (Overlap | in km) |
| 253C2 | KGAP | LIC | NCN | 254.4 | 104.52 | 33 36 47.0 | 50.000 | 128.7 | 42.7 | -29.8* | 43.4 |
| Clarksville | | | TX | 73.8 | BLH19960111KM | 95 01 03.0 | 94 | 216 | American Media Investments | | |
| 253C0 | KURB | LIC | CY | 51.5 | 167.29 | 34 47 56.0 | 100.000 | 179.0 | 76.7 | -18.9* | 67.1 |
| Little Rock | | | AR | 232.3 | BLH19880727KA | 92 29 44.0 | 392 | 518 | Radio License Holding Cbc, | | |
| 254D | K254AS | CP | C | 158.4 | 13.94 | 33 45 16.0 | 0.250 | 25.3 | 16.9 | -18.4* | -13.1* |
| Nashville | | | AR | 338.4 | BPFT20130116AAD | 93 52 29.0 | | 263 | First Ventures Capital Par | | |
| 254D | K254AS | LIC | V | 48.7 | 9.78 | 33 55 45.0 | 0.010 | 4.4 | 3.2 | -1.7 | -3.5 |
| Nashville | | | AR | 228.8 | BLFT20110511AHJ | 93 51 02.0 | | 117 | First Ventures Capital Par | | |
| 251C | KTAL-FM | CP | CX | 183.7 | 107.85 | 32 54 11.0 | 100.000 | 12.5 | 85.8 | 88.3 | 20.8 |
| Texarkana | | | TX | 3.7 | BPH20110516ABT | 94 00 20.0 | 484 | 554 | Access.1 Louisiana Holding | | |
| 251C0 | KTAL-FM | LIC | CX | 183.7 | 107.85 | 32 54 11.0 | 100.000 | 11.8 | 81.1 | 89.0 | 25.5 |
| Texarkana | | | TX | 3.7 | BMLH20110418ABH | 94 00 20.0 | 415 | 486 | Access.1 Louisiana Holding | | |
| 255D | K255BH | LIC | C | 36.6 | 60.95 | 34 18 38.0 | 0.250 | 1.1 | 13.6 | 52.8 | 45.6 |
| Glenwood | | | AR | 216.8 | BLFT20080925AGK | 93 32 04.0 | 102 | 303 | Mls Broadcasting, Inc. | | |

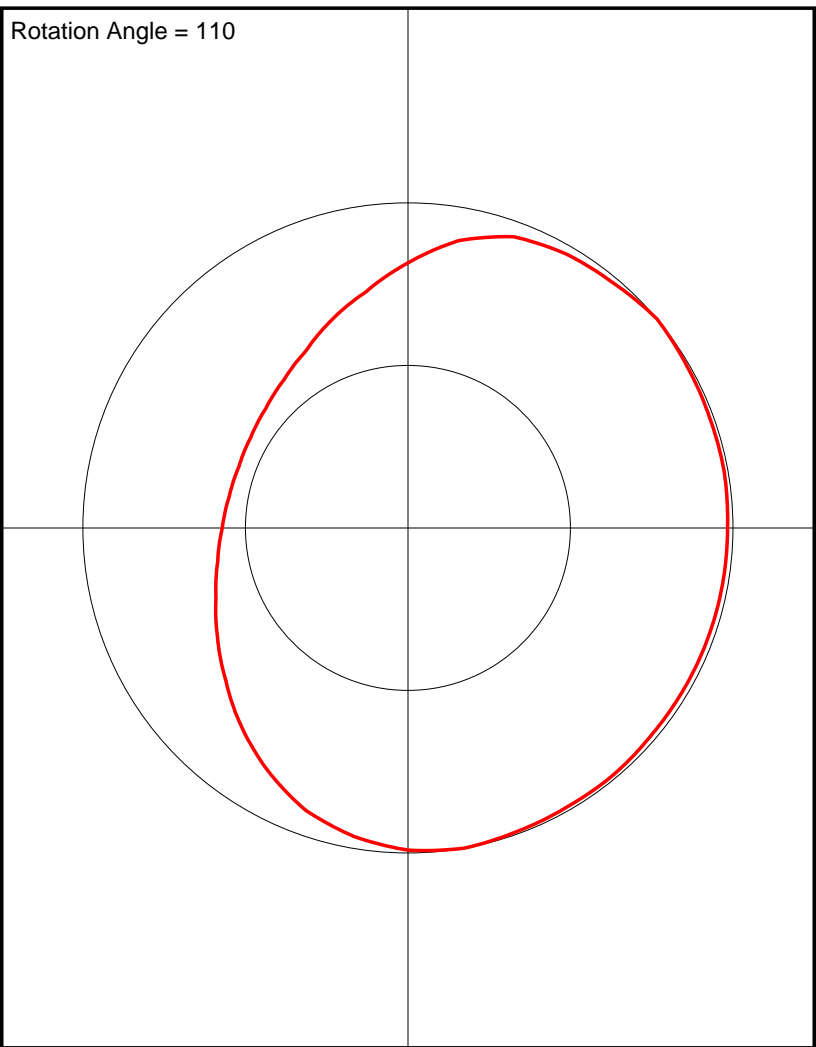
Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding
Ant Column: (D= DA Standard, 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.

E-2 K254AS.CP Mod. Antenna Pattern

Post-Rotation Antenna Pattern....

| Azimuth (deg) | Relative Field |
|---------------|----------------|
| 0.0 | 0.815 |
| 10.0 | 0.897 |
| 20.0 | 0.953 |
| 30.0 | 0.973 |
| 40.0 | 0.983 |
| 50.0 | 1.000 |
| 60.0 | 0.992 |
| 70.0 | 0.988 |
| 80.0 | 0.988 |
| 90.0 | 0.983 |
| 100.0 | 0.983 |
| 110.0 | 0.983 |
| 120.0 | 0.983 |
| 130.0 | 0.983 |
| 140.0 | 0.988 |
| 150.0 | 0.988 |
| 160.0 | 0.992 |
| 170.0 | 1.000 |
| 180.0 | 0.991 |
| 190.0 | 0.963 |
| 200.0 | 0.923 |
| 210.0 | 0.862 |
| 220.0 | 0.797 |
| 230.0 | 0.731 |
| 240.0 | 0.676 |
| 250.0 | 0.628 |
| 260.0 | 0.594 |
| 270.0 | 0.571 |
| 280.0 | 0.558 |
| 290.0 | 0.553 |
| 300.0 | 0.558 |
| 310.0 | 0.571 |
| 320.0 | 0.594 |
| 330.0 | 0.628 |
| 340.0 | 0.682 |
| 350.0 | 0.738 |

Rotation Angle = 110



E-3 Nicom BKG77-1 Reference Pattern

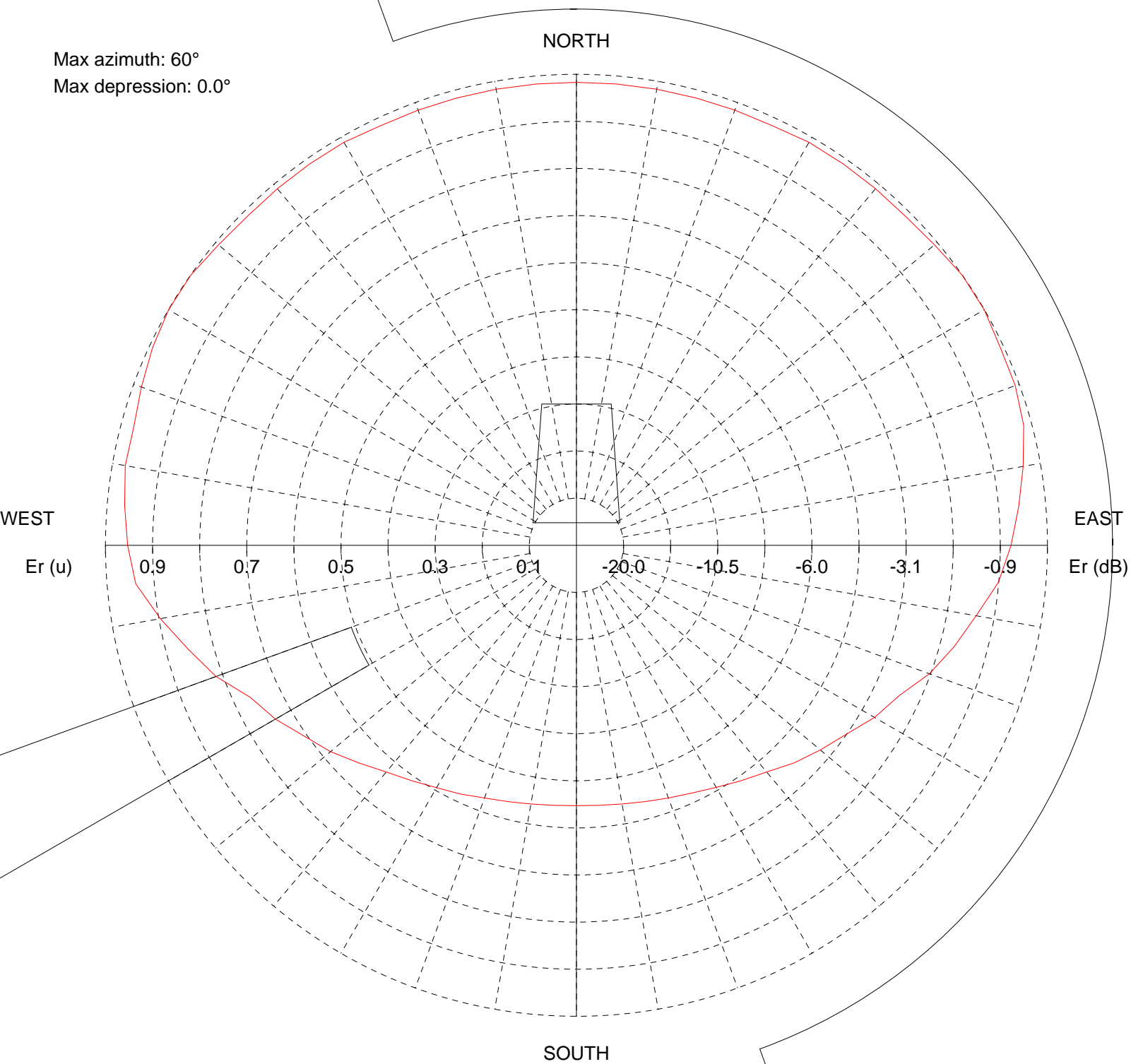
Site name: 1 BAY ANTENNA

TX station: Frequency:
100.00 MHz

Horizontal diagram of Maxima

Max azimuth: 60°

Max depression: 0.0°



— 0.0° depres. (Total antenna), Gain (dBd): -3.03 ERP T.max (KW): 0.498

ERP E.max (KW): 0.387

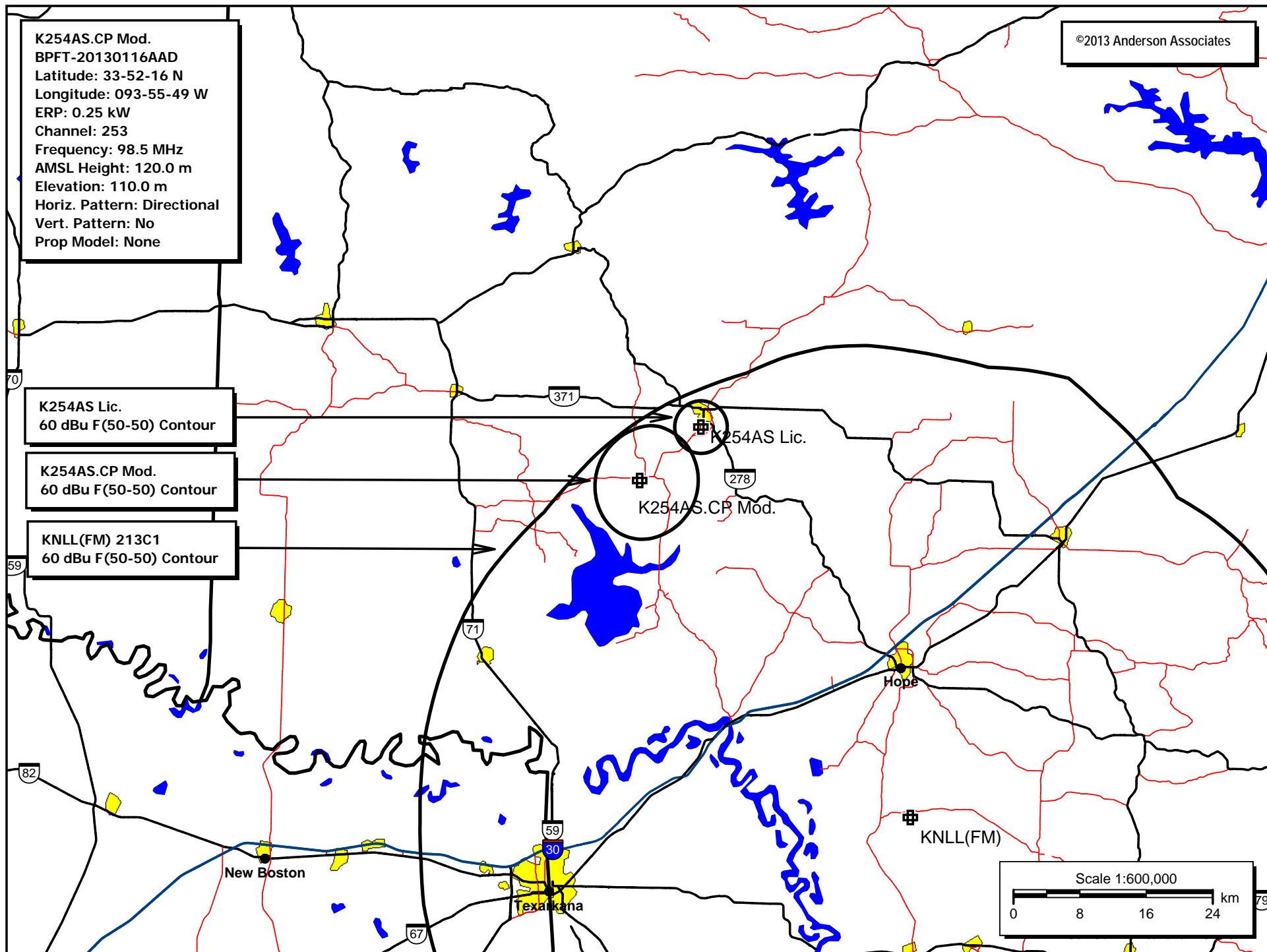
TX station: Frequency:
100.00 MHz

Site name: 1 BAY ANTENNA

Horizontal diagram of Maxima

| Az (°) | Dep (°) | Er (%) | ERP (W) | Az (°) | Dep (°) | Er (%) | ERP (W) | Az (°) | Dep (°) | Er (%) | ERP (W) |
|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
| 0.0 | 0.0 | 98.3 | 373.6 | 120.0 | 0.0 | 73.1 | 206.6 | 240.0 | 0.0 | 73.8 | 210.7 |
| 5.0 | 0.0 | 98.3 | 373.6 | 125.0 | 0.0 | 69.9 | 189.2 | 245.0 | 0.0 | 76.4 | 225.7 |
| 10.0 | 0.0 | 98.3 | 373.6 | 130.0 | 0.0 | 67.6 | 176.7 | 250.0 | 0.0 | 81.5 | 256.6 |
| 15.0 | 0.0 | 98.3 | 373.6 | 135.0 | 0.0 | 65.3 | 165.1 | 255.0 | 0.0 | 85.3 | 281.6 |
| 20.0 | 0.0 | 98.3 | 373.6 | 140.0 | 0.0 | 62.8 | 152.7 | 260.0 | 0.0 | 89.7 | 311.1 |
| 25.0 | 0.0 | 98.3 | 373.6 | 145.0 | 0.0 | 61.0 | 144.0 | 265.0 | 0.0 | 93.9 | 341.1 |
| 30.0 | 0.0 | 98.8 | 377.5 | 150.0 | 0.0 | 59.4 | 136.3 | 270.0 | 0.0 | 95.3 | 351.1 |
| 35.0 | 0.0 | 98.8 | 377.5 | 155.0 | 0.0 | 58.0 | 130.3 | 275.0 | 0.0 | 96.3 | 358.5 |
| 40.0 | 0.0 | 98.8 | 377.5 | 160.0 | 0.0 | 57.1 | 126.1 | 280.0 | 0.0 | 97.3 | 366.1 |
| 45.0 | 0.0 | 98.8 | 377.5 | 165.0 | 0.0 | 56.3 | 122.8 | 285.0 | 0.0 | 97.3 | 366.1 |
| 50.0 | 0.0 | 99.2 | 380.8 | 170.0 | 0.0 | 55.8 | 120.3 | 290.0 | 0.0 | 98.3 | 373.6 |
| 55.0 | 0.0 | 100.0 | 386.5 | 175.0 | 0.0 | 55.4 | 118.7 | 295.0 | 0.0 | 99.3 | 381.4 |
| 60.0 | 0.0 | 100.0 | 386.7 | 180.0 | 0.0 | 55.3 | 118.2 | 300.0 | 0.0 | 100.0 | 386.7 |
| 65.0 | 0.0 | 99.3 | 381.4 | 185.0 | 0.0 | 55.4 | 118.7 | 305.0 | 0.0 | 100.0 | 386.5 |
| 70.0 | 0.0 | 99.1 | 380.0 | 190.0 | 0.0 | 55.8 | 120.3 | 310.0 | 0.0 | 99.2 | 380.8 |
| 75.0 | 0.0 | 98.3 | 373.6 | 195.0 | 0.0 | 56.3 | 122.8 | 315.0 | 0.0 | 98.8 | 377.5 |
| 80.0 | 0.0 | 96.3 | 358.5 | 200.0 | 0.0 | 57.1 | 126.1 | 320.0 | 0.0 | 98.8 | 377.5 |
| 85.0 | 0.0 | 94.3 | 343.8 | 205.0 | 0.0 | 58.3 | 131.4 | 325.0 | 0.0 | 98.8 | 377.5 |
| 90.0 | 0.0 | 92.3 | 329.3 | 210.0 | 0.0 | 59.4 | 136.5 | 330.0 | 0.0 | 98.8 | 377.5 |
| 95.0 | 0.0 | 90.0 | 312.9 | 215.0 | 0.0 | 61.0 | 144.0 | 335.0 | 0.0 | 98.3 | 373.6 |
| 100.0 | 0.0 | 86.2 | 287.1 | 220.0 | 0.0 | 62.8 | 152.7 | 340.0 | 0.0 | 98.3 | 373.6 |
| 105.0 | 0.0 | 83.0 | 266.7 | 225.0 | 0.0 | 65.3 | 165.1 | 345.0 | 0.0 | 98.3 | 373.6 |
| 110.0 | 0.0 | 79.7 | 245.9 | 230.0 | 0.0 | 68.2 | 179.6 | 350.0 | 0.0 | 98.3 | 373.6 |
| 115.0 | 0.0 | 75.6 | 221.0 | 235.0 | 0.0 | 70.6 | 192.7 | 355.0 | 0.0 | 98.3 | 373.6 |

E-4 K254AS.CP Mod. 60 dBu Contour Plot



E-5 K254AS.CP Mod. Enhanced 60 dBu Contour Plot

