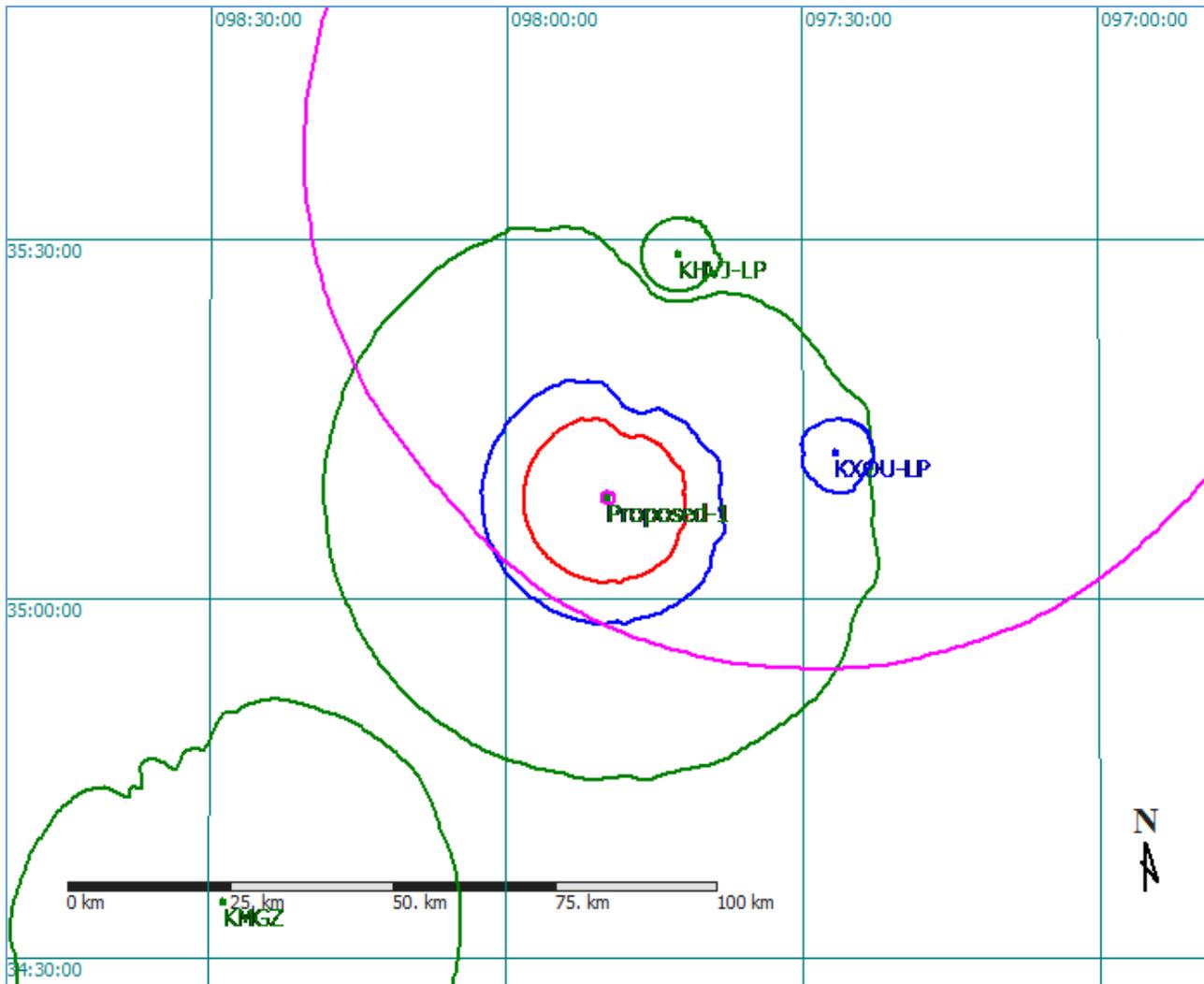


**INTERFERENCE AND OVERLAP REQUIREMENTS  
K236BP  
CHICKASHA, OK**

The study below demonstrates that the proposed facility will not create prohibited overlap to any other licensed full-power facility or pending application other to third adjacent stations KBRU (FID #11964) (the “Protected Station”). The green contours represent co-channel interfering (40 dBu) to co-channel protected (60 dBu) contours. Blue contours represent first-adjacent channel interfering (54 dBu) to first-adjacent protected (60 dBu) contours. Magenta contours represent second and third-adjacent channel interfering (100 dBu) to second and third-adjacent protected (60 dBu) contours. Red contours represent co-channel protected (60 dBu) to co-channel interfering (40 dBu) contours.



The Protected Station is authorized to broadcast with 94.9 kilowatts at 372 meters HAAT from a site that is 59.54 kilometers from the proposed translator site. The predicted strength of the Protected Station at the proposed translator site is 67.5 dBu. Consequentially, 107.5 dBu is the lowest value predicted to cause interference to the Protected Station.

The facility proposed herein will utilize a four-bay Shively 6812B antenna that employs half-wave spacing. The elevation pattern for the proposed antenna accompanies the application.

| <b>Proposed Antenna:</b> Shively Labs Versa2une Four-bay <u>Half-wave-spaced</u> .<br><b>Proposed Power:</b> 0.25 kW<br><b>Antenna Height AGL:</b> 107 meters<br><b>Interference Contour:</b> 107.5 dBu<br><b>Artificial Rcv Antenna Height:</b> 12 meters<br><b>Distance (Free Space) Equation:</b> $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)}) * 1000$<br><b>Field Strength (dBu) Equation:</b> $= 106.92 - (20 * (\text{LOG}_{10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$ |          |       |        |           |                  |                  |                 |                |
|--|----------|-------|--------|-----------|------------------|------------------|-----------------|----------------|
| Depression   |          |       |        |           | Distance         |                  |                 |                |
| Angle  | Antenna  |       |        | from Ant. | Distance         | Field Streng     | Distance        | Field Strength |
| Below  | Relative | ERP   | ERP    | to Interf | rom Ant. to      | in dBu @         | from Ant.       | in dBu @       |
| Horizon  | Field    | in kW | in dBk | Contour   | Artificial Plane | Artificial Plane | to Ground Level | Ground Level   |
| 0°   | 0.998    | 0.249 | -6.04  | 466.77 m  | infinite         |                  | infinite        |                |
| -5°  | 0.963    | 0.232 | -6.35  | 450.40 m  | 1090.00 m        | 99.82 dBu        | 1227.69 m       | 98.79 dBu      |
| -10°   | 0.858    | 0.184 | -7.35  | 401.29 m  | 547.08 m         | 104.81 dBu       | 616.19 m        | 103.77 dBu     |
| -15°   | 0.703    | 0.124 | -9.08  | 328.80 m  | 367.05 m         | 106.54 dBu       | 413.42 m        | 105.51 dBu     |
| -20°   | 0.519    | 0.067 | -11.72 | 242.74 m  | 277.76 m         | 106.33 dBu       | 312.85 m        | 105.30 dBu     |
| -25°   | 0.331    | 0.027 | -15.62 | 154.81 m  | 224.79 m         | 104.26 dBu       | 253.18 m        | 103.23 dBu     |
| -30°   | 0.162    | 0.007 | -21.83 | 75.77 m   | 190.00 m         | 99.51 dBu        | 214.00 m        | 98.48 dBu      |
| -35°   | 0.026    | 0.000 | -37.72 | 12.16 m   | 165.63 m         | 84.82 dBu        | 186.55 m        | 83.78 dBu      |
| -40°   | 0.071    | 0.001 | -29.00 | 33.21 m   | 147.79 m         | 94.53 dBu        | 166.46 m        | 93.50 dBu      |
| -45°   | 0.130    | 0.004 | -23.74 | 60.80 m   | 134.35 m         | 100.61 dBu       | 151.32 m        | 99.58 dBu      |
| -50°   | 0.155    | 0.006 | -22.21 | 72.49 m   | 124.01 m         | 102.84 dBu       | 139.68 m        | 101.80 dBu     |
| -55°   | 0.155    | 0.006 | -22.21 | 72.49 m   | 115.97 m         | 103.42 dBu       | 130.62 m        | 102.39 dBu     |
| -60°   | 0.140    | 0.005 | -23.10 | 65.48 m   | 109.70 m         | 103.02 dBu       | 123.55 m        | 101.98 dBu     |
| -65°   | 0.116    | 0.003 | -24.73 | 54.25 m   | 104.82 m         | 101.78 dBu       | 118.06 m        | 100.75 dBu     |
| -70°   | 0.090    | 0.002 | -26.94 | 42.09 m   | 101.10 m         | 99.89 dBu        | 113.87 m        | 98.86 dBu      |
| -75°   | 0.065    | 0.001 | -29.76 | 30.40 m   | 98.35 m          | 97.30 dBu        | 110.77 m        | 96.27 dBu      |
| -80°   | 0.041    | 0.000 | -33.76 | 19.18 m   | 96.47 m          | 93.47 dBu        | 108.65 m        | 92.43 dBu      |
| -85°   | 0.021    | 0.000 | -39.58 | 9.82 m    | 95.36 m          | 87.76 dBu        | 107.41 m        | 86.72 dBu      |
| -90°   | 0.001    | 0.000 | -66.02 | 0.47 m    | 95.00 m          | 61.34 dBu        | 107.00 m        | 60.31 dBu      |

The table on the previous page depicts the predicted signal strength from the proposed translator both at ground level, and at receiving antenna locations up to 12 meters. The 12 meter “artificial plane” is significantly higher than any structure within the potential free-space zone of interference.

As can be determined by the columns colored green, at no location from ground level to 12 meters above the ground does the predicted signal of the proposed translator exceed that of the Protected Station by 40 dBu or more.

Finally, the aerial image that follows illustrates that no nearby structure pierces the 12 meter artificial plane utilized in the table.



The Applicant respectfully submits that since a lack of population exists in the area of actual interference, the processing pursuant to 47 C.F.R § 74.1204(d) is appropriate for the instant application.