

**JCE LICENSES, LLC
KCKN
FACILITY ID# 57721
ROSWELL, NEW MEXICO
1020 KHz
50 KW DAY
Form 301-AM**

PURPOSE OF APPLICATION

This application is being prepared on behalf of JCE Licenses, LLC. (JCE). JCE hereby submits this application to modify construction permit BP-20061004AEN. The construction permit authorizes a minor change in pattern values for KCKN. The previously existing three tower day antenna system was utilized to achieve the modified pattern. These three towers are also part of the existing and un-modified night six tower antenna system as licensed under BL-19930823AC. No alterations were made to any of the existing radiators in the day or the night antenna system. After proof measurements were made and the measurement data was analyzed, it was determined that three of the radials in the major lobes exceeded the maximum standard pattern values. A daytime allocation study was performed. The study demonstrates that no interference would occur to existing licensees or applicants in the bearings of the major lobes. The measured pattern is as follows:

MEASURED DAYTIME DIRECTIONAL RADIATION VALUES

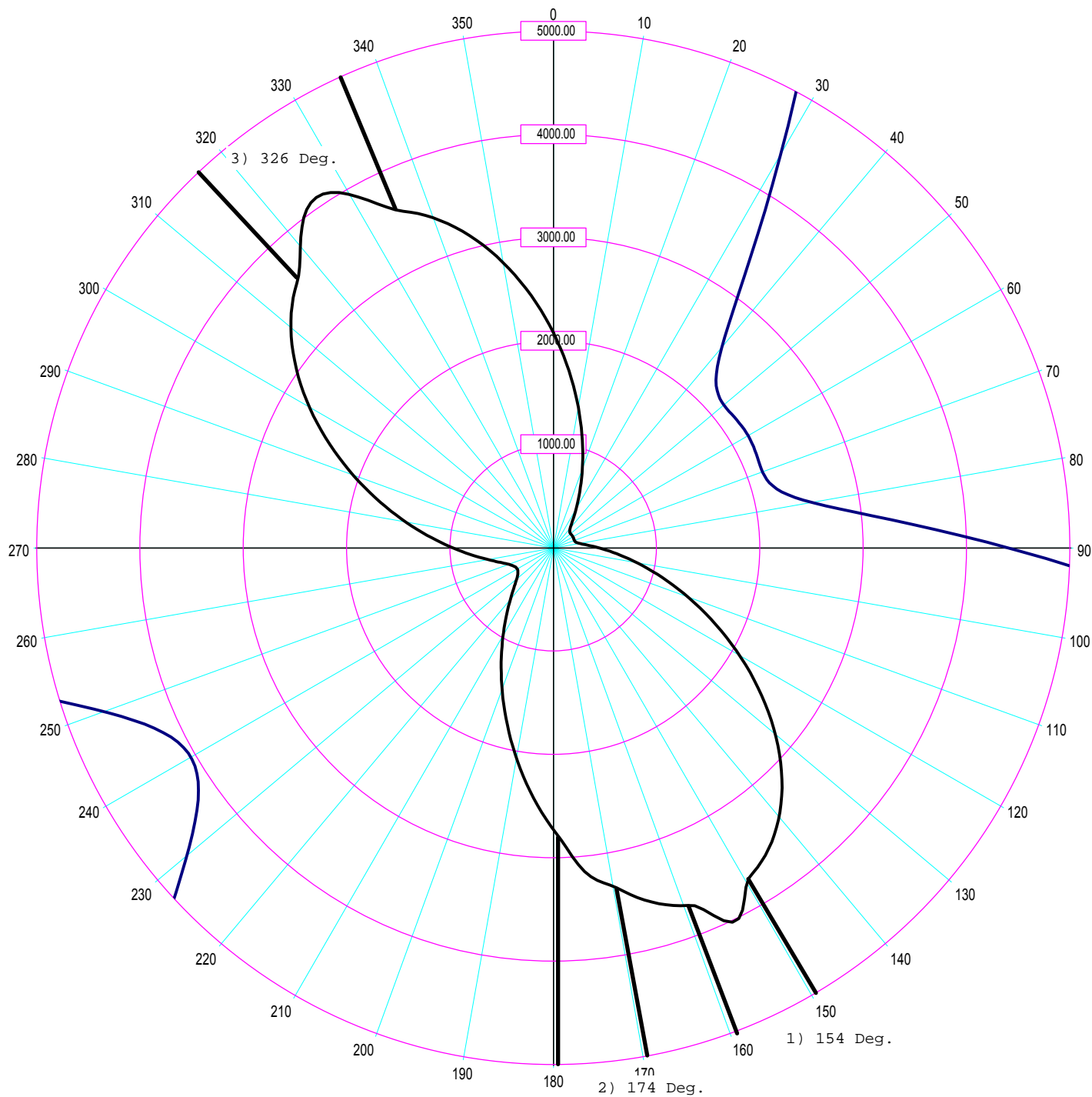
| Radial Deg ° T | Measured mV/m | CP Maximum mV/m | Standard Pattern Max mV/m |
|-----------------------|--------------------------|----------------------------|--------------------------------------|
| 51 | 204.0 | 215.19 | 215.199 |
| 69 | 194.5 | 215.19 | 215.199 |
| 154* | 4017.45 | | 3747.32 |
| 174* | 3173.4 | | 3099.3 |
| 240 | 360.47 | 405.11 | 405.11 |
| 326* | 4093 | | 3747.32 |

JCE requests the following augmentations to the standard pattern:

| Radial ° T | Standard Pattern | SPAN | Augmented Value |
|-------------------|-------------------------|-------------|------------------------|
| 154 | 3747.21 | 10° | 4017.5 |
| 174 | 3099.3 | 10° | 3173.4 |
| 326 | 3747.3 | 20° | 4093.00 |

OTHER CHANGES

Other minor changes include correction of the ASR numbers and heights of the daytime towers. No other modifications or augmentations of the pattern in the construction permit minima values of the pattern were made or are requested in this application. See the following pages for the daytime contour allocation study demonstrating no interference utilizing the augmented pattern and a table of distances to contours for the augmented pattern.



| | | | | | | | | | |
|----------------------|------------------|----|-------|-------|---------|-------------|--------|----------|-----------|
| Callsign | :KCKN | T# | Field | Phase | Spacing | Orientation | Height | Top Load | Tower Ref |
| Frequency | :1020 kHz | 1 | 0.550 | 346.0 | 140.0 | 240.0 | 90.0 | 0.0 | 0 |
| Power | :50.000 kw | 2 | 1.000 | 0.0 | 0.0 | 0.0 | 90.0 | 0.0 | 0 |
| ERSS | :2133 mV/m/km | 3 | 0.640 | 6.0 | 140.0 | 60.0 | 90.0 | 0.0 | 0 |
| Theoret. Pattern RMS | :2012 mV/m/km | | | | | | | | |
| Standard Pattern RMS | :2114 mV/m/km | | | | | | | | |
| Modified Pattern RMS | :2148.94 mV/m/km | | | | | | | | |
| Latitude | :33-27-53.0 N | | | | | | | | |
| Longitude | :104-29-58.0 W | | | | | | | | |
| Number Augmentations | :3 | | | | | | | | |

| Azim | Field [mV/m] |
|-------|--------------|
| 0.0 | 2080.016 |
| 5.0 | 1720.087 |
| 10.0 | 1382.832 |
| 15.0 | 1080.049 |
| 20.0 | 819.549 |
| 25.0 | 605.654 |
| 30.0 | 440.199 |
| 35.0 | 323.514 |
| 40.0 | 253.729 |
| 45.0 | 222.783 |
| 50.0 | 215.265 |
| 55.0 | 216.279 |
| 60.0 | 217.432 |
| 65.0 | 216.279 |
| 70.0 | 215.265 |
| 75.0 | 222.783 |
| 80.0 | 253.729 |
| 85.0 | 323.514 |
| 90.0 | 440.199 |
| 95.0 | 605.654 |
| 100.0 | 819.549 |
| 105.0 | 1080.049 |
| 110.0 | 1382.832 |
| 115.0 | 1720.087 |
| 120.0 | 2080.016 |
| 125.0 | 2446.960 |
| 130.0 | 2802.210 |
| 135.0 | 3125.436 |
| 140.0 | 3396.601 |
| 145.0 | 3598.065 |
| 150.0 | 3743.509 |
| 155.0 | 3990.790 |
| 160.0 | 3682.360 |
| 165.0 | 3535.272 |
| 170.0 | 3322.399 |
| 175.0 | 3108.848 |
| 180.0 | 2726.644 |
| 185.0 | 2395.086 |
| 190.0 | 2062.870 |
| 195.0 | 1744.931 |
| 200.0 | 1452.679 |

| Azim | Field [mV/m] |
|-------|--------------|
| 205.0 | 1193.795 |
| 210.0 | 972.485 |
| 215.0 | 790.080 |
| 220.0 | 645.814 |
| 225.0 | 537.635 |
| 230.0 | 462.965 |
| 235.0 | 419.352 |
| 240.0 | 405.029 |
| 245.0 | 419.352 |
| 250.0 | 462.965 |
| 255.0 | 537.635 |
| 260.0 | 645.814 |
| 265.0 | 790.080 |
| 270.0 | 972.485 |
| 275.0 | 1193.795 |
| 280.0 | 1452.679 |
| 285.0 | 1744.931 |
| 290.0 | 2062.870 |
| 295.0 | 2395.086 |
| 300.0 | 2726.644 |
| 305.0 | 3039.866 |
| 310.0 | 3315.653 |
| 315.0 | 3535.272 |
| 320.0 | 3807.641 |
| 325.0 | 4083.323 |
| 330.0 | 3948.500 |
| 335.0 | 3607.290 |
| 340.0 | 3396.601 |
| 345.0 | 3125.436 |
| 350.0 | 2802.209 |
| 355.0 | 2446.960 |

KCKN Modified Day Pattern Distance to Contours
N 33° 27' 53" W104° 29' 58"

| Azimuth Deg. T | Contour mV/m Dist. K 0.005 | Contour mV/m Dist. K 0.025 | Contour mV/m Dist. K 0.25 | Contour mV/m Dist. K 0.50 | Contour mV/m Dist. K 5.00 | Contour mV/m Dist. K 25.00 |
|---------------------------|---|---|--|--|--|---|
| 0 | 635.337 | 472.337 | 258.819 | 205.095 | 92.107 | 40.399 |
| 1 | 638.487 | 475.612 | 262.728 | 209.356 | 90.677 | 39.525 |
| 2 | 642.411 | 479.663 | 267.432 | 214.424 | 89.204 | 38.662 |
| 3 | 638.52 | 475.903 | 264.346 | 211.712 | 87.686 | 37.772 |
| 4 | 634.514 | 472.032 | 261.168 | 208.92 | 86.183 | 36.858 |
| 5 | 630.393 | 468.051 | 257.9 | 206.114 | 84.645 | 35.96 |
| 6 | 626.156 | 463.957 | 254.639 | 203.299 | 83.064 | 35.037 |
| 7 | 621.803 | 459.752 | 251.332 | 200.406 | 81.439 | 34.096 |
| 8 | 617.333 | 455.454 | 247.936 | 197.435 | 79.839 | 33.171 |
| 9 | 612.746 | 451.086 | 244.451 | 194.386 | 78.205 | 32.222 |
| 10 | 608.048 | 446.606 | 240.876 | 191.331 | 76.53 | 31.266 |
| 11 | 603.257 | 442.013 | 237.211 | 188.29 | 74.82 | 30.316 |
| 12 | 598.348 | 437.307 | 233.613 | 185.174 | 73.136 | 29.356 |
| 13 | 593.32 | 432.488 | 229.932 | 181.983 | 71.411 | 28.404 |
| 14 | 588.174 | 427.555 | 226.163 | 178.716 | 69.671 | 27.441 |
| 15 | 582.909 | 422.508 | 222.308 | 175.496 | 67.936 | 26.493 |
| 16 | 577.526 | 417.42 | 218.531 | 172.248 | 66.163 | 25.533 |
| 17 | 572.025 | 412.234 | 214.671 | 168.929 | 64.404 | 24.596 |
| 18 | 566.408 | 406.938 | 210.729 | 165.594 | 62.632 | 23.643 |
| 19 | 560.689 | 401.534 | 206.743 | 162.294 | 60.828 | 22.717 |
| 20 | 554.889 | 396.023 | 202.831 | 158.929 | 59.068 | 21.795 |
| 21 | 548.98 | 390.497 | 198.847 | 155.505 | 57.275 | 20.88 |
| 22 | 542.967 | 384.886 | 194.792 | 152.187 | 55.484 | 19.99 |
| 23 | 536.854 | 379.182 | 190.772 | 148.815 | 53.71 | 19.102 |
| 24 | 530.649 | 373.391 | 186.803 | 145.391 | 51.941 | 18.244 |
| 25 | 524.384 | 367.555 | 182.78 | 142.053 | 50.19 | 17.395 |
| 26 | 518.076 | 361.75 | 178.711 | 138.726 | 48.452 | 16.568 |
| 27 | 511.711 | 355.891 | 174.763 | 135.368 | 46.741 | 15.771 |
| 28 | 505.303 | 349.994 | 170.833 | 132.054 | 45.052 | 15.002 |
| 29 | 498.876 | 344.078 | 166.891 | 128.827 | 43.407 | 14.254 |
| 30 | 492.452 | 338.289 | 163.123 | 125.602 | 41.781 | 13.54 |
| 31 | 486.129 | 332.571 | 159.384 | 122.509 | 40.22 | 12.859 |
| 32 | 479.88 | 326.915 | 155.686 | 119.475 | 38.713 | 12.213 |
| 33 | 473.74 | 321.358 | 152.225 | 116.503 | 37.26 | 11.601 |
| 34 | 475.122 | 315.948 | 148.856 | 113.731 | 35.893 | 11.036 |
| 35 | 471.592 | 310.869 | 145.601 | 111.053 | 34.588 | 10.512 |
| 36 | 468.424 | 306.014 | 142.594 | 108.493 | 33.388 | 10.023 |
| 37 | 465.695 | 301.432 | 139.81 | 106.187 | 32.27 | 9.587 |
| 38 | 465.475 | 297.168 | 137.22 | 104.048 | 31.249 | 9.194 |
| 39 | 460.387 | 293.36 | 134.848 | 102.089 | 30.342 | 8.845 |
| 40 | 459.342 | 289.955 | 132.745 | 100.327 | 29.532 | 8.544 |
| 41 | 456.867 | 286.953 | 130.955 | 98.829 | 28.846 | 8.284 |
| 42 | 455.864 | 284.365 | 129.412 | 97.549 | 28.255 | 8.064 |
| 43 | 456.89 | 283.87 | 128.114 | 96.474 | 27.757 | 7.888 |
| 44 | 457.869 | 285.055 | 127.052 | 95.593 | 27.365 | 7.744 |
| 45 | 457.868 | 285.207 | 126.211 | 94.896 | 27.059 | 7.63 |
| 46 | 459.484 | 286.941 | 125.568 | 94.363 | 26.825 | 7.542 |
| 47 | 460.867 | 288.408 | 125.101 | 93.976 | 26.654 | 7.48 |

| | | | | | | |
|-----|---------|---------|---------|---------|--------|--------|
| 48 | 462.448 | 290.048 | 124.792 | 93.713 | 26.538 | 7.439 |
| 49 | 463.52 | 291.156 | 124.604 | 93.557 | 26.466 | 7.414 |
| 50 | 465.795 | 293.448 | 124.509 | 93.478 | 26.43 | 7.402 |
| 51 | 466.57 | 294.228 | 124.484 | 93.457 | 26.421 | 7.398 |
| 52 | 468.333 | 295.986 | 124.511 | 93.479 | 26.431 | 7.402 |
| 53 | 470.35 | 297.991 | 124.571 | 93.529 | 26.454 | 7.41 |
| 54 | 471.887 | 299.514 | 124.649 | 93.594 | 26.484 | 7.42 |
| 55 | 471.637 | 300.675 | 124.735 | 93.665 | 26.516 | 7.432 |
| 56 | 470.506 | 301.77 | 124.817 | 93.734 | 26.547 | 7.443 |
| 57 | 470.45 | 302.755 | 124.889 | 93.795 | 26.575 | 7.452 |
| 58 | 465.249 | 303.805 | 124.944 | 93.843 | 26.596 | 7.46 |
| 59 | 465.86 | 304.15 | 124.978 | 93.873 | 26.609 | 7.464 |
| 60 | 466.378 | 304.425 | 124.99 | 93.883 | 26.613 | 7.466 |
| 61 | 466.25 | 303.913 | 124.978 | 93.873 | 26.609 | 7.464 |
| 62 | 466.418 | 303.81 | 124.944 | 93.843 | 26.596 | 7.46 |
| 63 | 465.534 | 302.52 | 124.889 | 93.795 | 26.575 | 7.452 |
| 64 | 463.964 | 300.577 | 124.817 | 93.734 | 26.547 | 7.443 |
| 65 | 462.971 | 299.376 | 124.735 | 93.665 | 26.516 | 7.432 |
| 66 | 461.162 | 296.303 | 124.649 | 93.594 | 26.484 | 7.42 |
| 67 | 459.832 | 294.014 | 124.571 | 93.529 | 26.454 | 7.41 |
| 68 | 457.732 | 290.859 | 124.511 | 93.479 | 26.431 | 7.402 |
| 69 | 456.434 | 288.747 | 124.484 | 93.457 | 26.421 | 7.398 |
| 70 | 454.337 | 285.901 | 124.509 | 93.478 | 26.43 | 7.402 |
| 71 | 453.194 | 284.353 | 124.604 | 93.557 | 26.466 | 7.414 |
| 72 | 452.738 | 282.181 | 124.792 | 93.713 | 26.538 | 7.439 |
| 73 | 452.847 | 280.715 | 125.101 | 93.976 | 26.654 | 7.48 |
| 74 | 450.497 | 277.918 | 125.568 | 94.363 | 26.825 | 7.542 |
| 75 | 447.474 | 278.995 | 126.211 | 94.896 | 27.059 | 7.63 |
| 76 | 444.984 | 280.407 | 127.052 | 95.593 | 27.365 | 7.744 |
| 77 | 444.615 | 282.188 | 128.114 | 96.474 | 27.757 | 7.888 |
| 78 | 444.37 | 284.365 | 129.412 | 97.549 | 28.255 | 8.064 |
| 79 | 446.6 | 286.953 | 130.955 | 98.829 | 28.846 | 8.284 |
| 80 | 450.232 | 289.955 | 132.745 | 100.327 | 29.532 | 8.544 |
| 81 | 455.145 | 293.36 | 134.848 | 102.089 | 30.342 | 8.845 |
| 82 | 460.514 | 297.168 | 137.22 | 104.048 | 31.249 | 9.194 |
| 83 | 466.299 | 301.432 | 139.81 | 106.187 | 32.27 | 9.587 |
| 84 | 472.453 | 306.014 | 142.594 | 108.493 | 33.388 | 10.023 |
| 85 | 479.189 | 310.869 | 145.601 | 111.053 | 34.588 | 10.512 |
| 86 | 486.019 | 315.948 | 148.856 | 113.731 | 35.893 | 11.036 |
| 87 | 493.185 | 321.358 | 152.225 | 116.503 | 37.26 | 11.601 |
| 88 | 500.711 | 326.915 | 155.686 | 119.475 | 38.713 | 12.213 |
| 89 | 508.261 | 332.571 | 159.384 | 122.509 | 40.22 | 12.859 |
| 90 | 517.084 | 339.105 | 163.123 | 125.602 | 41.781 | 13.54 |
| 91 | 525.67 | 347.349 | 166.891 | 128.827 | 43.407 | 14.254 |
| 92 | 534.513 | 355.023 | 170.833 | 132.054 | 45.052 | 15.002 |
| 93 | 541.105 | 362.731 | 174.763 | 135.368 | 46.741 | 15.771 |
| 94 | 546.747 | 370.212 | 178.711 | 138.726 | 48.452 | 16.568 |
| 95 | 549.705 | 378.754 | 182.78 | 142.053 | 50.19 | 17.395 |
| 96 | 546.882 | 386.238 | 186.803 | 145.391 | 51.941 | 18.244 |
| 97 | 550.922 | 393.502 | 190.772 | 148.815 | 53.71 | 19.102 |
| 98 | 554.868 | 400.464 | 194.792 | 152.187 | 55.484 | 19.99 |
| 99 | 558.279 | 405.721 | 198.847 | 155.505 | 57.275 | 20.88 |
| 100 | 559.594 | 406.091 | 202.831 | 158.929 | 59.068 | 21.795 |
| 101 | 554.976 | 400.734 | 206.743 | 162.294 | 60.828 | 22.717 |
| 102 | 560.828 | 405.707 | 210.729 | 165.594 | 62.632 | 23.643 |

| | | | | | | |
|-----|---------|---------|---------|---------|---------|--------|
| 103 | 566.425 | 410.569 | 214.671 | 168.929 | 64.404 | 24.596 |
| 104 | 573.536 | 415.302 | 218.531 | 172.248 | 66.163 | 25.533 |
| 105 | 575.794 | 419.983 | 222.308 | 175.496 | 67.936 | 26.493 |
| 106 | 580.382 | 424.5 | 226.163 | 178.716 | 69.671 | 27.441 |
| 107 | 584.404 | 428.983 | 229.932 | 181.983 | 71.411 | 28.404 |
| 108 | 588.721 | 433.345 | 233.613 | 185.174 | 73.136 | 29.356 |
| 109 | 592.641 | 437.53 | 237.211 | 188.29 | 74.82 | 30.316 |
| 110 | 591.565 | 441.631 | 240.876 | 191.331 | 76.53 | 31.266 |
| 111 | 595.482 | 445.259 | 244.451 | 194.386 | 78.205 | 32.222 |
| 112 | 599.25 | 448.747 | 247.936 | 197.435 | 79.839 | 33.171 |
| 113 | 602.076 | 451.349 | 251.332 | 200.406 | 81.439 | 34.096 |
| 114 | 605.907 | 454.985 | 254.639 | 203.299 | 83.064 | 35.037 |
| 115 | 609.289 | 458.151 | 257.9 | 206.114 | 84.645 | 35.96 |
| 116 | 612.694 | 461.343 | 261.168 | 208.92 | 86.183 | 36.858 |
| 117 | 615.477 | 463.918 | 264.346 | 211.712 | 87.686 | 37.772 |
| 118 | 618.537 | 466.777 | 267.432 | 214.424 | 89.204 | 38.662 |
| 119 | 622.049 | 470.092 | 270.429 | 217.057 | 90.677 | 39.525 |
| 120 | 625.348 | 473.222 | 273.335 | 219.611 | 92.107 | 40.399 |
| 121 | 628.562 | 476.299 | 276.152 | 222.087 | 93.492 | 41.247 |
| 122 | 631.522 | 479.126 | 278.962 | 224.578 | 94.879 | 42.068 |
| 123 | 634.25 | 481.725 | 281.699 | 226.998 | 96.232 | 42.895 |
| 124 | 636.913 | 484.264 | 284.345 | 229.338 | 97.54 | 43.699 |
| 125 | 639.038 | 486.255 | 286.901 | 231.597 | 98.803 | 44.476 |
| 126 | 632.736 | 479.818 | 284.681 | 233.775 | 100.022 | 45.225 |
| 127 | 622.399 | 469.352 | 273.644 | 226.383 | 101.25 | 45.959 |
| 128 | 617.264 | 464.093 | 267.872 | 220.31 | 102.432 | 46.688 |
| 129 | 613.562 | 460.274 | 263.594 | 215.706 | 103.567 | 47.389 |
| 130 | 612.497 | 459.126 | 261.977 | 213.833 | 104.657 | 48.06 |
| 131 | 612.439 | 458.988 | 261.39 | 213.025 | 105.7 | 48.704 |
| 132 | 612.667 | 459.14 | 261.113 | 212.535 | 105.411 | 49.324 |
| 133 | 612.641 | 459.041 | 260.605 | 211.826 | 103.957 | 49.938 |
| 134 | 612.867 | 459.197 | 260.372 | 211.399 | 102.827 | 50.523 |
| 135 | 613.295 | 459.56 | 260.364 | 211.209 | 101.967 | 51.078 |
| 136 | 613.825 | 460.028 | 260.481 | 211.152 | 101.277 | 51.604 |
| 137 | 613.969 | 460.113 | 260.268 | 210.743 | 100.269 | 52.1 |
| 138 | 614.56 | 460.648 | 260.539 | 210.812 | 99.774 | 52.568 |
| 139 | 615.047 | 461.084 | 260.727 | 210.81 | 99.244 | 53.019 |
| 140 | 615.591 | 461.579 | 260.99 | 210.897 | 98.836 | 53.446 |
| 141 | 615.886 | 461.829 | 261.025 | 210.767 | 98.247 | 53.844 |
| 142 | 616.418 | 462.319 | 261.316 | 210.939 | 97.961 | 54.211 |
| 143 | 630.324 | 462.613 | 261.427 | 210.95 | 97.542 | 54.549 |
| 144 | 623 | 463.321 | 261.968 | 211.399 | 97.599 | 54.856 |
| 145 | 619.593 | 463.689 | 262.184 | 211.533 | 97.387 | 55.135 |
| 146 | 620.474 | 464.178 | 262.539 | 211.814 | 97.369 | 55.383 |
| 147 | 619.805 | 463.944 | 262.186 | 211.395 | 96.688 | 55.058 |
| 148 | 618.682 | 463.966 | 262.105 | 211.258 | 96.323 | 54.885 |
| 149 | 617.098 | 464.245 | 262.296 | 211.402 | 96.274 | 54.76 |
| 150 | 617.708 | 464.812 | 262.678 | 211.681 | 96.142 | 54.463 |
| 151 | 619.473 | 467.683 | 263.942 | 212.757 | 96.454 | 54.468 |
| 152 | 619.578 | 469.241 | 265.674 | 214.279 | 97.133 | 54.809 |
| 153 | 621.035 | 470.333 | 266.599 | 215.045 | 97.26 | 54.686 |
| 154 | 620.011 | 470.904 | 267.008 | 215.396 | 97.374 | 54.712 |
| 155 | 618.851 | 469.768 | 265.969 | 214.416 | 96.628 | 54.053 |
| 156 | 617.039 | 468.022 | 264.459 | 213.063 | 95.911 | 53.585 |
| 157 | 614.029 | 465.099 | 261.849 | 210.662 | 94.35 | 52.361 |

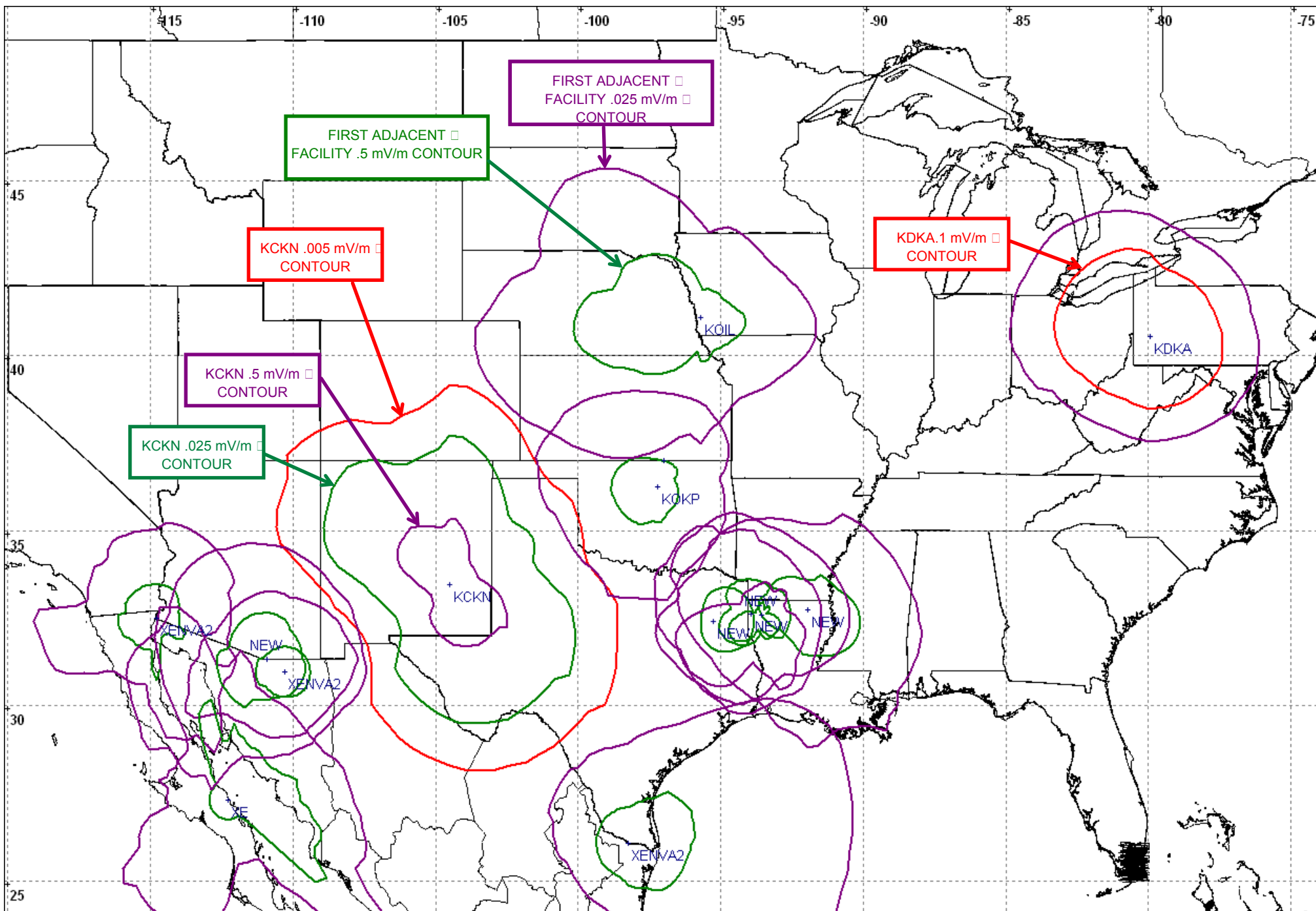
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|-----|---------|---------|---------|---------|--------|--------|
| 158 | 611.892 | 463.04 | 260.068 | 209.069 | 93.516 | 51.832 |
| 159 | 609.78 | 460.656 | 258.699 | 207.8 | 92.654 | 51.132 |
| 160 | 610.541 | 460.073 | 258.201 | 207.348 | 92.388 | 50.94 |
| 161 | 610.431 | 459.404 | 257.631 | 206.833 | 92.092 | 50.733 |
| 162 | 609.035 | 458.354 | 256.695 | 205.96 | 91.473 | 50.215 |
| 163 | 608.022 | 457.512 | 255.983 | 205.319 | 91.118 | 49.976 |
| 164 | 607.91 | 456.598 | 255.213 | 204.628 | 90.756 | 49.733 |
| 165 | 607.659 | 455.303 | 254.078 | 203.581 | 90.083 | 49.18 |
| 166 | 606.282 | 454.211 | 253.16 | 202.759 | 89.67 | 48.898 |
| 167 | 604.624 | 453.036 | 252.175 | 201.877 | 89.233 | 48.607 |
| 168 | 602.474 | 451.779 | 251.122 | 200.976 | 88.77 | 48.308 |
| 169 | 601.012 | 450.151 | 249.712 | 199.734 | 87.993 | 47.707 |
| 170 | 600.058 | 448.929 | 248.691 | 198.865 | 87.553 | 47.428 |
| 171 | 598.268 | 447.347 | 247.269 | 197.565 | 86.594 | 46.598 |
| 172 | 596.56 | 446.433 | 246.503 | 196.913 | 86.259 | 46.383 |
| 173 | 595.232 | 445.353 | 245.601 | 196.147 | 85.872 | 46.139 |
| 174 | 593.104 | 443.923 | 244.441 | 195.145 | 85.387 | 45.849 |
| 175 | 591.483 | 441.976 | 242.879 | 193.773 | 84.712 | 45.437 |
| 176 | 588.884 | 439.304 | 240.685 | 191.815 | 83.617 | 44.668 |
| 177 | 585.799 | 436.625 | 238.54 | 189.933 | 82.7 | 44.135 |
| 178 | 582.642 | 433.961 | 236.41 | 188.067 | 81.848 | 43.621 |
| 179 | 579.623 | 431.579 | 234.504 | 186.395 | 81.082 | 43.154 |
| 180 | 576.513 | 429.15 | 232.44 | 184.581 | 80.073 | 42.422 |
| 181 | 574.211 | 426.987 | 230.624 | 183.07 | 79.35 | 41.986 |
| 182 | 570.566 | 423.486 | 228.778 | 181.503 | 78.599 | 41.536 |
| 183 | 567.05 | 420.119 | 226.917 | 179.896 | 77.833 | 41.099 |
| 184 | 563.566 | 416.789 | 224.707 | 177.946 | 76.785 | 40.357 |
| 185 | 560.05 | 413.43 | 222.72 | 176.228 | 76.004 | 39.883 |
| 186 | 557.142 | 410.685 | 220.696 | 174.48 | 75.22 | 39.414 |
| 187 | 554.321 | 406.976 | 218.621 | 172.747 | 74.419 | 38.937 |
| 188 | 552.336 | 403.599 | 216.498 | 171.005 | 73.602 | 38.469 |
| 189 | 548.72 | 400.482 | 214.043 | 168.926 | 72.474 | 37.704 |
| 190 | 546.965 | 397.64 | 211.915 | 167.102 | 71.67 | 37.225 |
| 191 | 544.438 | 394.601 | 209.699 | 165.198 | 70.809 | 36.698 |
| 192 | 540.696 | 391.587 | 207.478 | 163.295 | 69.971 | 36.22 |
| 193 | 537.954 | 388.298 | 204.939 | 161.152 | 68.846 | 35.466 |
| 194 | 534.938 | 385.012 | 202.295 | 158.951 | 67.644 | 34.643 |
| 195 | 531.543 | 381.969 | 199.946 | 157.053 | 66.803 | 34.153 |
| 196 | 527.71 | 378.55 | 197.582 | 155.064 | 65.904 | 33.62 |
| 197 | 524.209 | 375.508 | 195.281 | 153.107 | 65.056 | 33.144 |
| 198 | 520.697 | 372.385 | 192.951 | 151.129 | 64.204 | 32.67 |
| 199 | 516.646 | 368.845 | 190.239 | 148.901 | 62.993 | 31.856 |
| 200 | 512.749 | 365.679 | 187.831 | 146.984 | 62.139 | 31.389 |
| 201 | 507.394 | 362.137 | 185.394 | 145.045 | 61.295 | 30.92 |
| 202 | 503.186 | 358.297 | 182.924 | 143.002 | 60.362 | 30.365 |
| 203 | 497.353 | 354.9 | 180.572 | 141.033 | 59.515 | 29.911 |
| 204 | 494.673 | 352.524 | 178.198 | 139.11 | 58.699 | 29.134 |
| 205 | 491.229 | 349.399 | 175.428 | 136.857 | 57.51 | 28.361 |
| 206 | 489.163 | 347.722 | 173.02 | 134.956 | 56.681 | 27.586 |
| 207 | 486.372 | 345.324 | 170.6 | 132.938 | 55.748 | 26.839 |
| 208 | 483.198 | 342.546 | 168.028 | 130.811 | 54.713 | 26.087 |
| 209 | 479.803 | 339.548 | 165.579 | 128.885 | 53.811 | 25.35 |
| 210 | 476.316 | 336.427 | 163.228 | 127.059 | 53.013 | 24.632 |
| 211 | 472.886 | 333.374 | 160.969 | 125.251 | 52.243 | 23.912 |
| 212 | 469.542 | 330.478 | 158.635 | 123.314 | 51.379 | 23.218 |

| | | | | | | |
|-----|---------|---------|---------|---------|--------|--------|
| 213 | 466.312 | 326.955 | 156.436 | 121.627 | 50.649 | 22.534 |
| 214 | 463.441 | 323.066 | 153.993 | 119.696 | 49.673 | 21.87 |
| 215 | 460.649 | 319.426 | 151.672 | 117.885 | 48.817 | 21.223 |
| 216 | 457.907 | 315.893 | 149.623 | 116.231 | 48.149 | 20.588 |
| 217 | 447.776 | 305.418 | 141.009 | 108.03 | 45.853 | 19.983 |
| 218 | 433.941 | 291.206 | 128.497 | 95.994 | 43.636 | 19.384 |
| 219 | 420.485 | 277.789 | 116.738 | 86.783 | 40.974 | 18.819 |
| 220 | 405.711 | 262.578 | 107.737 | 83.613 | 38.789 | 18.27 |
| 221 | 396.224 | 252.281 | 105.375 | 81.641 | 37.497 | 17.734 |
| 222 | 385.974 | 241.781 | 103.524 | 80.137 | 36.642 | 17.235 |
| 223 | 376.307 | 232.562 | 101.945 | 78.897 | 36.035 | 16.749 |
| 224 | 371.694 | 227.928 | 100.585 | 77.866 | 35.618 | 16.298 |
| 225 | 366.945 | 225.544 | 99.369 | 76.97 | 35.313 | 15.865 |
| 226 | 360.083 | 223.163 | 98.16 | 76.081 | 34.937 | 15.29 |
| 227 | 356.256 | 220.371 | 96.517 | 74.715 | 34.072 | 14.867 |
| 228 | 352.942 | 218.421 | 95.652 | 74.112 | 33.944 | 14.542 |
| 229 | 349.414 | 216.484 | 94.663 | 73.371 | 33.649 | 14.022 |
| 230 | 346.562 | 214.657 | 93.721 | 72.659 | 33.355 | 13.728 |
| 231 | 343.605 | 212.806 | 92.687 | 71.839 | 32.93 | 13.351 |
| 232 | 340.209 | 211.271 | 91.917 | 71.287 | 32.696 | 13.169 |
| 233 | 338.282 | 210.324 | 91.688 | 71.221 | 32.76 | 13.005 |
| 234 | 335.962 | 208.921 | 90.916 | 70.592 | 32.472 | 12.862 |
| 235 | 333.22 | 207.966 | 90.502 | 70.302 | 32.003 | 12.516 |
| 236 | 331.918 | 207.156 | 90.139 | 70.04 | 31.799 | 12.414 |
| 237 | 331.003 | 206.399 | 89.734 | 69.714 | 31.5 | 12.195 |
| 238 | 330.146 | 205.657 | 89.244 | 69.281 | 31.291 | 12.045 |
| 239 | 329.786 | 205.365 | 89.104 | 69.177 | 31.222 | 12.012 |
| 240 | 330.08 | 205.682 | 89.472 | 69.556 | 31.061 | 11.863 |
| 241 | 330.276 | 205.855 | 89.594 | 69.666 | 31.084 | 11.874 |
| 242 | 330.636 | 206.147 | 89.734 | 69.771 | 31.153 | 11.907 |
| 243 | 331.274 | 206.67 | 90.004 | 69.985 | 31.192 | 11.887 |
| 244 | 332.105 | 207.343 | 90.326 | 70.227 | 31.352 | 11.967 |
| 245 | 333.669 | 208.704 | 91.24 | 71.039 | 31.556 | 12.069 |
| 246 | 334.807 | 209.597 | 91.592 | 71.268 | 31.803 | 12.192 |
| 247 | 336.515 | 211.02 | 92.383 | 71.916 | 32.018 | 12.263 |
| 248 | 338.505 | 212.685 | 93.331 | 72.7 | 32.217 | 12.298 |
| 249 | 340.402 | 214.219 | 94.1 | 73.252 | 32.588 | 12.481 |
| 250 | 343.022 | 216.441 | 95.506 | 74.443 | 33.007 | 12.691 |
| 251 | 345.165 | 218.154 | 96.333 | 75.04 | 33.462 | 12.92 |
| 252 | 347.471 | 219.998 | 97.228 | 75.688 | 33.949 | 13.165 |
| 253 | 350.276 | 222.388 | 98.535 | 76.733 | 34.42 | 13.385 |
| 254 | 353.392 | 225.074 | 100.071 | 77.993 | 34.965 | 13.673 |
| 255 | 356.232 | 227.458 | 101.282 | 78.884 | 35.562 | 13.975 |
| 256 | 359.724 | 230.419 | 103.076 | 80.357 | 36.186 | 14.299 |
| 257 | 363.973 | 233.239 | 104.689 | 81.641 | 36.832 | 14.642 |
| 258 | 368.511 | 236.061 | 106.266 | 82.88 | 37.498 | 14.996 |
| 259 | 373.225 | 239.359 | 108.21 | 84.476 | 38.205 | 15.366 |
| 260 | 382.613 | 242.228 | 109.752 | 85.627 | 38.936 | 15.758 |
| 261 | 377.534 | 245.604 | 111.792 | 87.292 | 39.652 | 16.128 |
| 262 | 380.972 | 248.527 | 113.359 | 88.477 | 40.414 | 16.545 |
| 263 | 384.979 | 252.006 | 115.464 | 90.195 | 41.214 | 16.977 |
| 264 | 388.602 | 255.121 | 117.214 | 91.516 | 42.022 | 17.413 |
| 265 | 393.031 | 259.064 | 119.765 | 93.655 | 42.837 | 17.874 |
| 266 | 397.195 | 262.739 | 122.04 | 95.516 | 43.692 | 18.337 |
| 267 | 401.662 | 266.715 | 124.611 | 97.671 | 44.554 | 18.817 |

| | | | | | | |
|-----|---------|---------|---------|---------|--------|--------|
| 268 | 405.778 | 270.339 | 126.856 | 99.482 | 45.291 | 19.18 |
| 269 | 409.463 | 273.532 | 128.764 | 100.956 | 46.155 | 19.67 |
| 270 | 419.853 | 277.065 | 130.954 | 102.713 | 47.056 | 20.175 |
| 271 | 424.754 | 281.106 | 133.609 | 104.935 | 47.962 | 20.689 |
| 272 | 429.257 | 284.956 | 136.078 | 106.974 | 48.864 | 21.202 |
| 273 | 434.198 | 289.707 | 138.564 | 109.022 | 49.762 | 21.729 |
| 274 | 449.14 | 305.355 | 141.323 | 111.342 | 50.695 | 22.26 |
| 275 | 457.926 | 315.285 | 143.612 | 113.195 | 51.624 | 22.787 |
| 276 | 470.2 | 327.729 | 146.506 | 115.658 | 52.545 | 23.331 |
| 277 | 481.059 | 339.609 | 149.097 | 117.829 | 53.477 | 23.886 |
| 278 | 489.543 | 348.938 | 151.598 | 119.894 | 54.422 | 24.425 |
| 279 | 497.656 | 357.128 | 157.036 | 122.065 | 55.355 | 24.98 |
| 280 | 505.849 | 365.564 | 166.465 | 124.109 | 56.277 | 25.528 |
| 281 | 515.726 | 375.088 | 176.062 | 126.989 | 57.204 | 26.068 |
| 282 | 523.922 | 382.95 | 183.403 | 132.574 | 58.148 | 26.615 |
| 283 | 538.796 | 390.832 | 190.982 | 139.796 | 59.078 | 27.166 |
| 284 | 555.537 | 396.442 | 196.263 | 144.725 | 59.993 | 27.708 |
| 285 | 561.938 | 403.072 | 202.859 | 150.885 | 60.924 | 28.274 |
| 286 | 570.051 | 408.312 | 207.888 | 155.552 | 61.82 | 28.82 |
| 287 | 572.807 | 411.811 | 211.179 | 158.506 | 62.737 | 29.357 |
| 288 | 578.116 | 417.417 | 216.659 | 163.656 | 63.635 | 29.885 |
| 289 | 583.236 | 422.614 | 221.656 | 168.33 | 64.516 | 30.405 |
| 290 | 587.83 | 426.583 | 225.316 | 171.674 | 65.377 | 30.932 |
| 291 | 591.996 | 430.453 | 228.672 | 174.721 | 66.218 | 31.448 |
| 292 | 596.088 | 434.631 | 232.444 | 178.203 | 67.084 | 31.951 |
| 293 | 604.656 | 437.435 | 234.657 | 180.124 | 67.993 | 32.512 |
| 294 | 599.217 | 440.408 | 237.109 | 182.291 | 68.818 | 33.013 |
| 295 | 602.426 | 443.225 | 239.482 | 184.388 | 69.622 | 33.501 |
| 296 | 603.318 | 445.815 | 241.631 | 186.267 | 70.403 | 33.975 |
| 297 | 604.283 | 448.147 | 243.579 | 187.954 | 71.169 | 34.436 |
| 298 | 605.951 | 450.971 | 246.123 | 190.244 | 71.945 | 34.882 |
| 299 | 606.264 | 453.095 | 248.008 | 191.915 | 72.696 | 35.332 |
| 300 | 608.944 | 455.664 | 249.818 | 193.569 | 73.502 | 35.851 |
| 301 | 611.688 | 458.33 | 251.74 | 195.291 | 74.204 | 36.276 |
| 302 | 614.037 | 460.603 | 253.321 | 196.666 | 74.88 | 36.685 |
| 303 | 616.358 | 462.852 | 254.918 | 198.065 | 75.419 | 36.967 |
| 304 | 618.676 | 465.1 | 256.659 | 199.616 | 76.066 | 37.345 |
| 305 | 620.808 | 467.166 | 258.448 | 201.222 | 76.701 | 37.713 |
| 306 | 623.148 | 469.442 | 259.752 | 202.352 | 77.207 | 37.974 |
| 307 | 626.61 | 472.843 | 261.207 | 203.641 | 77.787 | 38.32 |
| 308 | 635.611 | 481.786 | 262.572 | 204.848 | 78.338 | 38.649 |
| 309 | 642.57 | 485.684 | 263.666 | 205.792 | 78.861 | 38.962 |
| 310 | 661.922 | 484.945 | 264.439 | 206.423 | 79.355 | 39.257 |
| 311 | 650.559 | 486.212 | 265.501 | 207.351 | 79.821 | 39.535 |
| 312 | 652.171 | 487.796 | 266.892 | 208.63 | 80.257 | 39.795 |
| 313 | 652.623 | 488.223 | 267.149 | 208.803 | 80.664 | 40.038 |
| 314 | 653.719 | 489.293 | 268.084 | 209.639 | 81.042 | 40.27 |
| 315 | 654.704 | 490.252 | 268.918 | 210.381 | 81.497 | 40.594 |
| 316 | 655.538 | 491.061 | 269.612 | 210.993 | 81.815 | 40.792 |
| 317 | 659.159 | 491.804 | 270.223 | 211.506 | 82.202 | 41.023 |
| 318 | 656.646 | 492.868 | 271.112 | 212.268 | 82.721 | 41.327 |
| 319 | 645.761 | 494.386 | 272.426 | 213.432 | 83.33 | 41.682 |
| 320 | 643.069 | 496.495 | 273.733 | 214.579 | 84.099 | 42.18 |
| 321 | 641.608 | 494.955 | 275.169 | 215.856 | 84.745 | 42.558 |
| 322 | 635.075 | 488.35 | 276.44 | 216.981 | 85.341 | 42.906 |

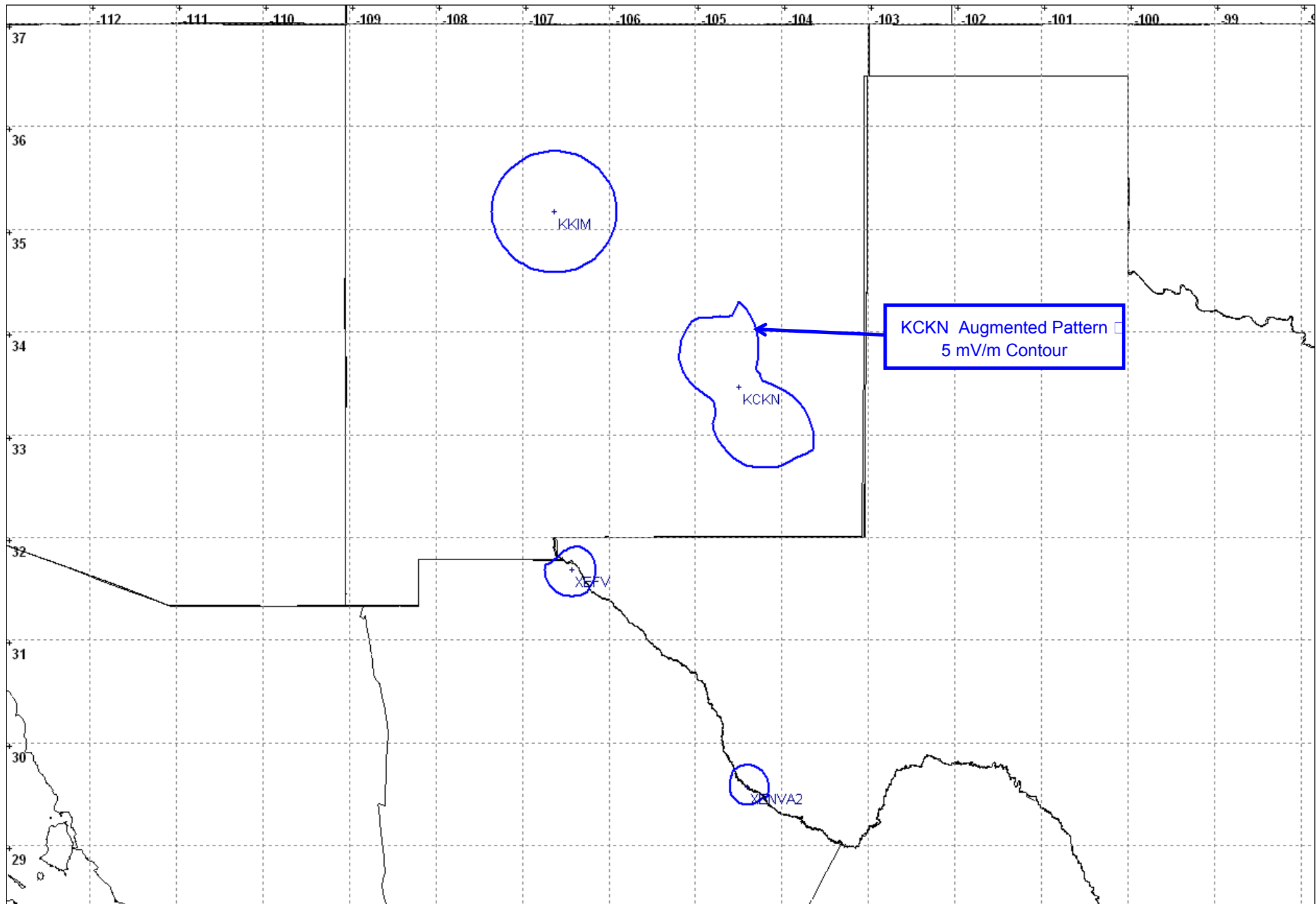
| | | | | | | |
|-----|---------|---------|---------|---------|--------|--------|
| 323 | 631.952 | 485.166 | 277.263 | 217.68 | 85.846 | 43.211 |
| 324 | 630.126 | 483.293 | 278.116 | 218.439 | 86.229 | 43.446 |
| 325 | 627.831 | 480.969 | 278.178 | 218.442 | 86.467 | 43.592 |
| 326 | 627.149 | 480.278 | 277.656 | 217.901 | 86.68 | 43.773 |
| 327 | 622.813 | 475.952 | 277.02 | 217.285 | 86.598 | 43.723 |
| 328 | 618.732 | 471.9 | 276.092 | 216.416 | 86.505 | 43.723 |
| 329 | 616.784 | 468.06 | 274.765 | 215.184 | 86.119 | 43.487 |
| 330 | 609.108 | 463.137 | 272.688 | 213.231 | 85.61 | 43.179 |
| 331 | 601.338 | 456.81 | 270.296 | 210.987 | 85.01 | 42.829 |
| 332 | 593.794 | 450.961 | 268.555 | 209.2 | 84.517 | 42.607 |
| 333 | 584.922 | 442.109 | 261.567 | 207.195 | 83.857 | 42.222 |
| 334 | 575.729 | 432.897 | 254.725 | 204.927 | 83.168 | 41.79 |
| 335 | 568.479 | 426.419 | 250.227 | 202.748 | 82.637 | 41.48 |
| 336 | 561.654 | 422.096 | 247.493 | 200.933 | 82.241 | 41.241 |
| 337 | 557.506 | 418.021 | 245.718 | 199.942 | 81.908 | 41.033 |
| 338 | 554.483 | 415.079 | 244.385 | 198.247 | 81.542 | 40.805 |
| 339 | 548.164 | 408.849 | 243.408 | 196.508 | 81.322 | 40.742 |
| 340 | 543.987 | 404.768 | 242.993 | 194.905 | 80.892 | 40.485 |
| 341 | 546.936 | 405.208 | 243.839 | 193.532 | 80.611 | 40.391 |
| 342 | 550.37 | 405.678 | 244.741 | 191.81 | 80.306 | 40.285 |
| 343 | 552.422 | 406.373 | 245.898 | 190.455 | 79.981 | 40.173 |
| 344 | 554.462 | 408.44 | 246.033 | 189.296 | 79.421 | 39.838 |
| 345 | 556.18 | 410.289 | 244.302 | 188.227 | 78.986 | 39.642 |
| 346 | 557.572 | 412.021 | 242.689 | 186.932 | 78.359 | 39.268 |
| 347 | 558.877 | 413.694 | 241.044 | 185.568 | 77.7 | 38.88 |
| 348 | 565.231 | 416.188 | 239.892 | 184.135 | 77.011 | 38.485 |
| 349 | 567.381 | 418.445 | 239.416 | 182.845 | 76.538 | 38.281 |
| 350 | 565.533 | 419.939 | 238.571 | 181.734 | 76.282 | 38.308 |
| 351 | 571.36 | 423.933 | 238.126 | 181.861 | 76.007 | 38.328 |
| 352 | 574.273 | 426.416 | 237.917 | 181.821 | 75.724 | 38.353 |
| 353 | 577.673 | 427.684 | 237.751 | 181.886 | 75.68 | 38.635 |
| 354 | 582.909 | 429.036 | 237.864 | 182.274 | 75.925 | 39.238 |
| 355 | 588.994 | 432.411 | 241.014 | 185.71 | 78.592 | 42.232 |
| 356 | 599.189 | 440.505 | 250.811 | 195.804 | 86.169 | 43.699 |
| 357 | 610.541 | 447.225 | 255.105 | 200.404 | 89.77 | 42.895 |
| 358 | 617.517 | 454.295 | 254.971 | 200.588 | 90.335 | 42.068 |
| 359 | 635.583 | 472.463 | 258.157 | 204.092 | 92.743 | 41.247 |

KCKN AUGMENTED PATTERN DAY CO-CHANNEL ALLOCATION GROUND WAVE CONTOURS



AZIMUTHS TOWARD KTNZ
ARE IDENTICAL TO □
CONSTRUCTION PERMIT

KCKN Augmented Pattern Second Adjacent Allocation
Contour Study



KCKN AUGMENTED PATTERN THIRD ADJACENT ALLOCATION □
CONTOUR STUDY

