

Engineering Statement
In Support of an
Application for a Construction Permit
KWIC, Topeka, Kansas

KWIC Protected/KKBZ Interfering FM Overlap Study

KWIC
Channel = 257C3
Max ERP = 6 kW
RCAMSL = 472.3 M
N. Lat = 39 03 50
W. Lng = 95 45 49

KKBZ
Channel = 257C2
Max ERP = 50 kW
RCAMSL = 468 M
N. Lat = 40 33 12
W. Lng = 95 07 18

Protected
60 dBu

Interfering
40 dBu

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|----------------------|-------------|-------------|--------------|----------------------|-------------|-------------|--------------|-----------------|
| 000.0 | 006.0000 | 0178.5 | 037.1 | 203.3 | 050.0000 | 0143.7 | 139.5 | 39.5 |
| 010.0 | 006.0000 | 0167.2 | 036.0 | 200.6 | 050.0000 | 0143.9 | 138.7 | 39.6 |
| 020.0 | 006.0000 | 0179.7 | 037.2 | 198.0 | 050.0000 | 0143.6 | 137.1 | 40.0 |
| 030.0 | 006.0000 | 0180.6 | 037.3 | 195.3 | 050.0000 | 0146.7 | 138.0 | 39.9 |
| 040.0 | 006.0000 | 0184.5 | 037.6 | 192.7 | 050.0000 | 0149.9 | 140.0 | 39.6 |
| 050.0 | 006.0000 | 0187.6 | 037.8 | 190.5 | 050.0000 | 0154.6 | 143.4 | 39.0 |
| 060.0 | 006.0000 | 0191.1 | 038.1 | 188.6 | 050.0000 | 0157.9 | 147.9 | 38.3 |
| 070.0 | 006.0000 | 0197.8 | 038.7 | 187.0 | 050.0000 | 0158.5 | 153.3 | 37.5 |
| 080.0 | 006.0000 | 0207.7 | 039.4 | 185.8 | 050.0000 | 0160.0 | 159.3 | 36.5 |
| 090.0 | 006.0000 | 0204.2 | 039.2 | 185.5 | 050.0000 | 0161.1 | 166.1 | 35.3 |
| 100.0 | 006.0000 | 0191.7 | 038.2 | 185.8 | 050.0000 | 0160.1 | 172.9 | 34.1 |
| 110.0 | 006.0000 | 0181.7 | 037.3 | 186.4 | 050.0000 | 0158.8 | 179.3 | 32.9 |
| 120.0 | 006.0000 | 0175.4 | 036.8 | 187.2 | 050.0000 | 0158.8 | 185.2 | 31.8 |
| 130.0 | 006.0000 | 0168.8 | 036.1 | 188.3 | 050.0000 | 0158.4 | 190.6 | 30.8 |
| 140.0 | 006.0000 | 0167.5 | 036.0 | 189.5 | 050.0000 | 0156.6 | 195.6 | 29.9 |
| 150.0 | 006.0000 | 0168.3 | 036.1 | 190.8 | 050.0000 | 0153.8 | 200.1 | 29.0 |
| 160.0 | 006.0000 | 0159.2 | 035.1 | 192.4 | 050.0000 | 0150.2 | 203.0 | 28.4 |
| 170.0 | 006.0000 | 0148.5 | 033.9 | 194.0 | 050.0000 | 0147.6 | 204.8 | 28.1 |
| 180.0 | 006.0000 | 0145.1 | 033.5 | 195.6 | 050.0000 | 0146.2 | 206.4 | 27.8 |
| 190.0 | 006.0000 | 0147.9 | 033.8 | 197.2 | 050.0000 | 0144.9 | 207.8 | 27.5 |
| 200.0 | 006.0000 | 0143.8 | 033.4 | 198.9 | 050.0000 | 0142.4 | 207.7 | 27.5 |
| 210.0 | 006.0000 | 0138.5 | 032.8 | 200.4 | 050.0000 | 0143.5 | 206.5 | 27.7 |
| 220.0 | 006.0000 | 0128.7 | 031.7 | 201.9 | 050.0000 | 0144.3 | 204.1 | 28.1 |
| 230.0 | 006.0000 | 0139.2 | 032.9 | 203.5 | 050.0000 | 0143.6 | 203.0 | 28.3 |
| 240.0 | 006.0000 | 0168.2 | 036.1 | 205.4 | 050.0000 | 0139.8 | 202.7 | 28.3 |
| 250.0 | 006.0000 | 0158.9 | 035.1 | 206.6 | 050.0000 | 0138.5 | 198.0 | 29.0 |
| 260.0 | 006.0000 | 0169.7 | 036.2 | 208.1 | 050.0000 | 0137.1 | 194.1 | 29.6 |
| 270.0 | 006.0000 | 0182.4 | 037.4 | 209.4 | 050.0000 | 0134.8 | 189.4 | 30.4 |
| 280.0 | 006.0000 | 0191.4 | 038.1 | 210.5 | 050.0000 | 0132.3 | 183.7 | 31.4 |
| 290.0 | 006.0000 | 0195.8 | 038.5 | 211.1 | 050.0000 | 0131.0 | 177.4 | 32.5 |
| 300.0 | 006.0000 | 0191.4 | 038.1 | 211.2 | 050.0000 | 0130.9 | 170.7 | 33.7 |
| 310.0 | 006.0000 | 0177.0 | 036.9 | 210.6 | 050.0000 | 0131.9 | 164.2 | 34.9 |
| 320.0 | 006.0000 | 0175.4 | 036.8 | 210.0 | 050.0000 | 0133.7 | 158.1 | 36.0 |
| 330.0 | 006.0000 | 0181.3 | 037.3 | 209.1 | 050.0000 | 0135.2 | 152.0 | 37.0 |
| 340.0 | 006.0000 | 0184.0 | 037.5 | 207.6 | 050.0000 | 0137.8 | 146.7 | 38.0 |
| 350.0 | 006.0000 | 0183.7 | 037.5 | 205.7 | 050.0000 | 0139.6 | 142.3 | 38.8 |