

Non-Interference Compliance Study
Stu-Comm, Inc.
W257DV (Facility ID: 54972)

This exhibit demonstrates compliance with all contour overlap and interference protection requirements and demonstrates full compliance with 47 C.F.R. §74.1204.

Applicant certifies that should any actual interference occur it will promptly cease operation in accordance with 47 C.F.R. §74.1203.

This study uses the NED 3 second terrain dataset.

Below is a listing of area stations whose contours are less than 25 km clear of the proposed translator.

| Callsign | State | City | Channel | ERP (kW) | Class | Status | Distance (km) | Clr (km) |
|----------------|-----------|-----------------|------------|-----------|-----------|------------|---------------|---------------|
| WCVE-FM | VA | Richmond | 205 | 10 | B | LIC | 0.02 | -52.97 |
| WRIH | VA | Richmond | 201 | 5 | B1 | LIC | 30.65 | -1.9 |

The only stations that are of concern are WCVE-FM and WRIH. WCVE-FM is a second adjacent Class B that requires that a minimum of 40 dB separation exist between its service contour and W257DV's interference contour. WRIH is a second adjacent Class B1 that requires that a minimum of 40 dB separation exist between its service contour and W257DV's interference contour. The following pages demonstrate that both facilities are in compliance with these requirements.

Compliance with 47 C.F.R. §74.1204(d)

All Authorized second and third adjacent stations with which the proposed translator's interference contour overlaps their service contour are listed below. The table lists the minimum signal level of the primary station's service contour that reaches the proposed tower site for W257DV.

| Facility ID | Call Sign | Contour at Tower F(50,50) |
|-------------|-----------|---------------------------|
| 10016 | WCVE-FM | 149 dBu |
| 87808 | WRIH | 60.06 dBu |

Minimum protected contour signal level at W257DV's proposed tower site: **60.06 dBu**

This study will use the minimum contour of 60.06 dBu to represent a worst-case potential interference level. At 40 dB above 60.06 dBu, the translator interference contour is 100.06 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

The following table uses the free space formula to calculate the worst-case height above ground level. At 100.06 dBu and 7.5 watts, the worst-case height is 31.3 meters. Therefore, no interference is predicted to reach the ground.

§74.1204(d) Contour Protection Study W265AL vs. WRIH

Antenna: Nicom BKG 77 - Single Bay ERP (watts): 7.5
Protected Contour at tower - F(50,50): 60.06 dBu RC-AGL (m): 116
Interference Ratio: 40 dB Relative field at Azimuth: 1.000
Interference Contour - F(50,10): 100.06 dBu ERP (watts) at Azimuth: 7.5

| DEPRESSION ANGLE | RELATIVE FIELD | ERP (WATTS) | dBk | DISTANCE (m) | | |
|----------------------------------|-------------------|----------------|--------|--------------|------------|-------------|
| | | | | Contour | Horizontal | AGL |
| 0 | 1.000 | 7.5 | -21.25 | 190.8 | 190.8 | 116.0 |
| 5 | 0.999 | 7.5 | -21.26 | 190.6 | 189.9 | 99.4 |
| 10 | 0.982 | 7.2 | -21.41 | 187.3 | 184.5 | 83.5 |
| 15 | 0.954 | 6.8 | -21.66 | 182.0 | 175.8 | 68.9 |
| 20 | 0.918 | 6.3 | -21.99 | 175.1 | 164.6 | 56.1 |
| 25 | 0.872 | 5.7 | -22.44 | 166.4 | 150.8 | 45.7 |
| 30 | 0.818 | 5.0 | -22.99 | 156.1 | 135.1 | 38.0 |
| 35 | 0.758 | 4.3 | -23.66 | 144.6 | 118.5 | 33.1 |
| 40 | 0.691 | 3.6 | -24.46 | 131.8 | 101.0 | 31.3 |
| 45 | 0.616 | 2.8 | -25.46 | 117.5 | 83.1 | 32.9 |
| 50 | 0.538 | 2.2 | -26.63 | 102.6 | 66.0 | 37.4 |
| 55 | 0.465 | 1.6 | -27.90 | 88.7 | 50.9 | 43.3 |
| 60 | 0.391 | 1.1 | -29.41 | 74.6 | 37.3 | 51.4 |
| 65 | 0.313 | 0.7 | -31.34 | 59.7 | 25.2 | 61.9 |
| 70 | 0.239 | 0.4 | -33.68 | 45.6 | 15.6 | 73.2 |
| 75 | 0.176 | 0.2 | -36.34 | 33.6 | 8.7 | 83.6 |
| 80 | 0.129 | 0.1 | -39.04 | 24.6 | 4.3 | 91.8 |
| 85 | 0.103 | 0.1 | -40.99 | 19.7 | 1.7 | 96.4 |
| 90 | 0.105 | 0.1 | -40.83 | 20.0 | 0.0 | 96.0 |
| WORST CASE HEIGHT AGL (m) | | | | | | 31.3 |



