

AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70240**
 Date **20-Feb-17**
 Call Letters **WFTS 17**
 Frequency **491 MHz**
 Antenna Type **TFU-22GTH/VP 6T140**

Gain **1.38 (1.41dB)**
Calculated

Directional

| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| 0 | 0.986 | 36 | 0.739 | 72 | 0.765 | 108 | 0.997 | 144 | 0.826 | 180 | 0.701 | 216 | 0.947 | 252 | 0.921 | 288 | 0.691 |
| 1 | 0.983 | 37 | 0.733 | 73 | 0.772 | 109 | 0.998 | 145 | 0.818 | 181 | 0.704 | 217 | 0.954 | 253 | 0.914 | 289 | 0.689 |
| 2 | 0.979 | 38 | 0.727 | 74 | 0.779 | 110 | 0.999 | 146 | 0.810 | 182 | 0.708 | 218 | 0.959 | 254 | 0.906 | 290 | 0.688 |
| 3 | 0.974 | 39 | 0.722 | 75 | 0.787 | 111 | 1.000 | 147 | 0.802 | 183 | 0.712 | 219 | 0.965 | 255 | 0.899 | 291 | 0.688 |
| 4 | 0.970 | 40 | 0.717 | 76 | 0.794 | 112 | 1.000 | 148 | 0.794 | 184 | 0.717 | 220 | 0.970 | 256 | 0.891 | 292 | 0.688 |
| 5 | 0.965 | 41 | 0.712 | 77 | 0.802 | 113 | 1.000 | 149 | 0.787 | 185 | 0.722 | 221 | 0.974 | 257 | 0.883 | 293 | 0.688 |
| 6 | 0.959 | 42 | 0.708 | 78 | 0.810 | 114 | 0.999 | 150 | 0.779 | 186 | 0.727 | 222 | 0.979 | 258 | 0.875 | 294 | 0.688 |
| 7 | 0.954 | 43 | 0.704 | 79 | 0.818 | 115 | 0.998 | 151 | 0.772 | 187 | 0.733 | 223 | 0.983 | 259 | 0.867 | 295 | 0.689 |
| 8 | 0.947 | 44 | 0.701 | 80 | 0.826 | 116 | 0.997 | 152 | 0.765 | 188 | 0.739 | 224 | 0.986 | 260 | 0.859 | 296 | 0.691 |
| 9 | 0.941 | 45 | 0.698 | 81 | 0.834 | 117 | 0.995 | 153 | 0.758 | 189 | 0.745 | 225 | 0.990 | 261 | 0.851 | 297 | 0.693 |
| 10 | 0.935 | 46 | 0.695 | 82 | 0.842 | 118 | 0.992 | 154 | 0.751 | 190 | 0.751 | 226 | 0.992 | 262 | 0.842 | 298 | 0.695 |
| 11 | 0.928 | 47 | 0.693 | 83 | 0.851 | 119 | 0.990 | 155 | 0.745 | 191 | 0.758 | 227 | 0.995 | 263 | 0.834 | 299 | 0.698 |
| 12 | 0.921 | 48 | 0.691 | 84 | 0.859 | 120 | 0.986 | 156 | 0.739 | 192 | 0.765 | 228 | 0.997 | 264 | 0.826 | 300 | 0.701 |
| 13 | 0.914 | 49 | 0.689 | 85 | 0.867 | 121 | 0.983 | 157 | 0.733 | 193 | 0.772 | 229 | 0.998 | 265 | 0.818 | 301 | 0.704 |
| 14 | 0.906 | 50 | 0.688 | 86 | 0.875 | 122 | 0.979 | 158 | 0.727 | 194 | 0.779 | 230 | 0.999 | 266 | 0.810 | 302 | 0.708 |
| 15 | 0.899 | 51 | 0.688 | 87 | 0.883 | 123 | 0.974 | 159 | 0.722 | 195 | 0.787 | 231 | 1.000 | 267 | 0.802 | 303 | 0.712 |
| 16 | 0.891 | 52 | 0.688 | 88 | 0.891 | 124 | 0.970 | 160 | 0.717 | 196 | 0.794 | 232 | 1.000 | 268 | 0.794 | 304 | 0.717 |
| 17 | 0.883 | 53 | 0.688 | 89 | 0.899 | 125 | 0.965 | 161 | 0.712 | 197 | 0.802 | 233 | 1.000 | 269 | 0.787 | 305 | 0.722 |
| 18 | 0.875 | 54 | 0.688 | 90 | 0.906 | 126 | 0.959 | 162 | 0.708 | 198 | 0.810 | 234 | 0.999 | 270 | 0.779 | 306 | 0.727 |
| 19 | 0.867 | 55 | 0.689 | 91 | 0.914 | 127 | 0.954 | 163 | 0.704 | 199 | 0.818 | 235 | 0.998 | 271 | 0.772 | 307 | 0.733 |
| 20 | 0.859 | 56 | 0.691 | 92 | 0.921 | 128 | 0.947 | 164 | 0.701 | 200 | 0.826 | 236 | 0.997 | 272 | 0.765 | 308 | 0.739 |
| 21 | 0.851 | 57 | 0.693 | 93 | 0.928 | 129 | 0.941 | 165 | 0.698 | 201 | 0.834 | 237 | 0.995 | 273 | 0.758 | 309 | 0.745 |
| 22 | 0.842 | 58 | 0.695 | 94 | 0.935 | 130 | 0.935 | 166 | 0.695 | 202 | 0.842 | 238 | 0.992 | 274 | 0.751 | 310 | 0.751 |
| 23 | 0.834 | 59 | 0.698 | 95 | 0.941 | 131 | 0.928 | 167 | 0.693 | 203 | 0.851 | 239 | 0.990 | 275 | 0.745 | 311 | 0.758 |
| 24 | 0.826 | 60 | 0.701 | 96 | 0.947 | 132 | 0.921 | 168 | 0.691 | 204 | 0.859 | 240 | 0.986 | 276 | 0.739 | 312 | 0.765 |
| 25 | 0.818 | 61 | 0.704 | 97 | 0.954 | 133 | 0.914 | 169 | 0.689 | 205 | 0.867 | 241 | 0.983 | 277 | 0.733 | 313 | 0.772 |
| 26 | 0.810 | 62 | 0.708 | 98 | 0.959 | 134 | 0.906 | 170 | 0.688 | 206 | 0.875 | 242 | 0.979 | 278 | 0.727 | 314 | 0.779 |
| 27 | 0.802 | 63 | 0.712 | 99 | 0.965 | 135 | 0.899 | 171 | 0.688 | 207 | 0.883 | 243 | 0.974 | 279 | 0.722 | 315 | 0.787 |
| 28 | 0.794 | 64 | 0.717 | 100 | 0.970 | 136 | 0.891 | 172 | 0.688 | 208 | 0.891 | 244 | 0.970 | 280 | 0.717 | 316 | 0.794 |
| 29 | 0.787 | 65 | 0.722 | 101 | 0.974 | 137 | 0.883 | 173 | 0.688 | 209 | 0.899 | 245 | 0.965 | 281 | 0.712 | 317 | 0.802 |
| 30 | 0.779 | 66 | 0.727 | 102 | 0.979 | 138 | 0.875 | 174 | 0.688 | 210 | 0.906 | 246 | 0.959 | 282 | 0.708 | 318 | 0.810 |
| 31 | 0.772 | 67 | 0.733 | 103 | 0.983 | 139 | 0.867 | 175 | 0.689 | 211 | 0.914 | 247 | 0.954 | 283 | 0.704 | 319 | 0.818 |
| 32 | 0.765 | 68 | 0.739 | 104 | 0.986 | 140 | 0.859 | 176 | 0.691 | 212 | 0.921 | 248 | 0.947 | 284 | 0.701 | 320 | 0.826 |
| 33 | 0.758 | 69 | 0.745 | 105 | 0.990 | 141 | 0.851 | 177 | 0.693 | 213 | 0.928 | 249 | 0.941 | 285 | 0.698 | 321 | 0.834 |
| 34 | 0.751 | 70 | 0.751 | 106 | 0.992 | 142 | 0.842 | 178 | 0.695 | 214 | 0.935 | 250 | 0.935 | 286 | 0.695 | 322 | 0.842 |
| 35 | 0.745 | 71 | 0.758 | 107 | 0.995 | 143 | 0.834 | 179 | 0.698 | 215 | 0.941 | 251 | 0.928 | 287 | 0.693 | 323 | 0.851 |

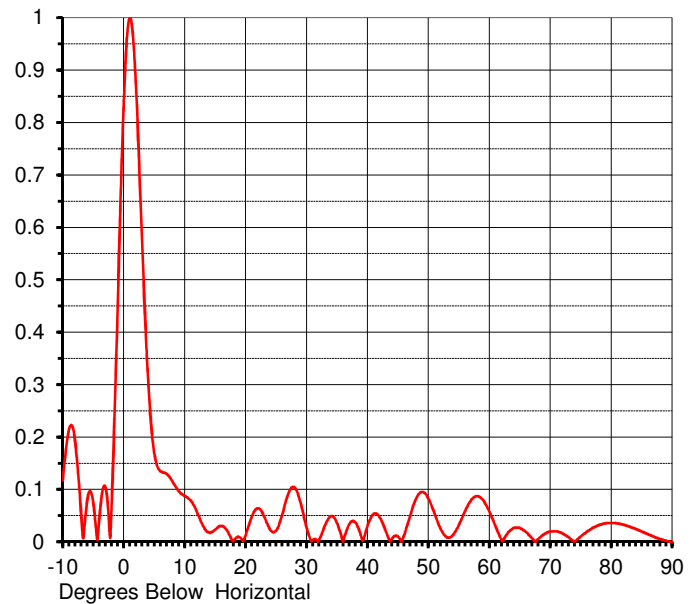
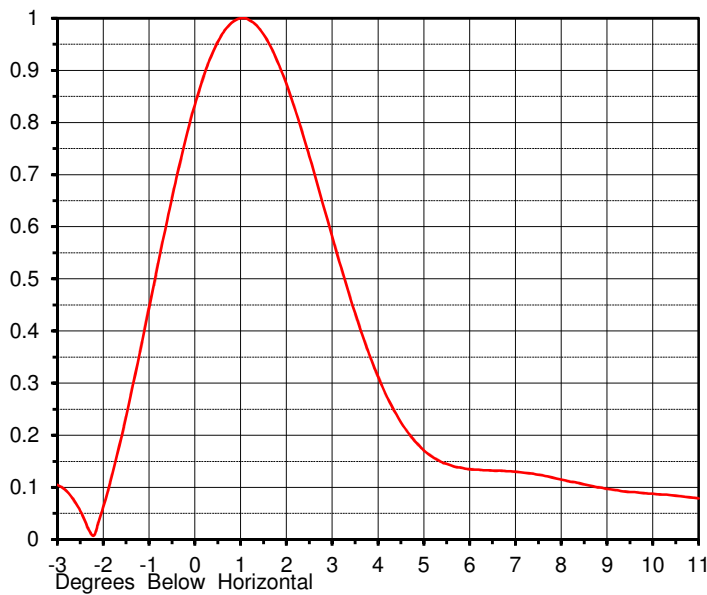
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ELEVATION PATTERN

Proposal No. **C-70240**
 Date **20-Feb-17**
 Call Letters **WFTS 17**
 Frequency **491 MHz**
 Antenna Type **TFU-22GTH/VP 6T140**

RMS Directivity at Main Lobe **18.50 (12.67 dB)**
 RMS Directivity at Horizontal **12.90 (11.11 dB)**
Calculated

Beam Tilt **1.00 deg**
 Drawing Number **22G185100**



| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.117 | 10.0 | 0.088 | 30.0 | 0.028 | 50.0 | 0.083 | 70.0 | 0.020 |
| -9.0 | 0.212 | 11.0 | 0.079 | 31.0 | 0.003 | 51.0 | 0.055 | 71.0 | 0.020 |
| -8.0 | 0.195 | 12.0 | 0.058 | 32.0 | 0.002 | 52.0 | 0.025 | 72.0 | 0.016 |
| -7.0 | 0.057 | 13.0 | 0.031 | 33.0 | 0.030 | 53.0 | 0.009 | 73.0 | 0.009 |
| -6.0 | 0.077 | 14.0 | 0.018 | 34.0 | 0.049 | 54.0 | 0.012 | 74.0 | 0.000 |
| -5.0 | 0.075 | 15.0 | 0.023 | 35.0 | 0.036 | 55.0 | 0.032 | 75.0 | 0.010 |
| -4.0 | 0.044 | 16.0 | 0.030 | 36.0 | 0.000 | 56.0 | 0.058 | 76.0 | 0.019 |
| -3.0 | 0.105 | 17.0 | 0.021 | 37.0 | 0.033 | 57.0 | 0.079 | 77.0 | 0.027 |
| -2.0 | 0.062 | 18.0 | 0.001 | 38.0 | 0.037 | 58.0 | 0.087 | 78.0 | 0.032 |
| -1.0 | 0.444 | 19.0 | 0.009 | 39.0 | 0.010 | 59.0 | 0.079 | 79.0 | 0.035 |
| 0.0 | 0.834 | 20.0 | 0.012 | 40.0 | 0.029 | 60.0 | 0.058 | 80.0 | 0.036 |
| 1.0 | 1.000 | 21.0 | 0.047 | 41.0 | 0.053 | 61.0 | 0.031 | 81.0 | 0.035 |
| 2.0 | 0.874 | 22.0 | 0.064 | 42.0 | 0.047 | 62.0 | 0.004 | 82.0 | 0.033 |
| 3.0 | 0.581 | 23.0 | 0.050 | 43.0 | 0.021 | 63.0 | 0.016 | 83.0 | 0.029 |
| 4.0 | 0.313 | 24.0 | 0.024 | 44.0 | 0.005 | 64.0 | 0.026 | 84.0 | 0.025 |
| 5.0 | 0.171 | 25.0 | 0.021 | 45.0 | 0.010 | 65.0 | 0.026 | 85.0 | 0.020 |
| 6.0 | 0.135 | 26.0 | 0.051 | 46.0 | 0.012 | 66.0 | 0.019 | 86.0 | 0.015 |
| 7.0 | 0.130 | 27.0 | 0.091 | 47.0 | 0.049 | 67.0 | 0.007 | 87.0 | 0.010 |
| 8.0 | 0.115 | 28.0 | 0.104 | 48.0 | 0.082 | 68.0 | 0.005 | 88.0 | 0.005 |
| 9.0 | 0.097 | 29.0 | 0.076 | 49.0 | 0.095 | 69.0 | 0.014 | 89.0 | 0.002 |
| | | | | | | | | 90.0 | 0.000 |

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WFTS (Tampa, FL) Proposed Ch. 17 Facility

| | | | |
|--------------------|-----------|-----------------------|----------|
| Parameters: | | <u>Maxima:</u> | |
| ERP: | 1000.0 kW | N112E | 30 dBk |
| RCAMSL: | 489.0 m | N232E | 30 dBk |
| HAAT: | 469.0 m | N352E | 30 dBk |
| | | <u>Minima:</u> | |
| | | N170E | 26.8 dBk |

| Directional Antenna dBk Table | | | | |
|-------------------------------|-----------------|----------------|-----------|--|
| Bearing | Pattern Azimuth | Relative Field | ERP (dBk) | Distance to Noise-Limited Contour (km) |
| N000E | 0 | 0.986 | 29.88 | 116.4 |
| | 10 | 0.935 | 29.42 | |
| | 20 | 0.859 | 28.68 | |
| | 30 | 0.779 | 27.83 | |
| | 40 | 0.717 | 27.11 | |
| N045E | 45 | 0.698 | 26.88 | 110.1 |
| | 50 | 0.688 | 26.75 | |
| | 60 | 0.701 | 26.91 | |
| | 70 | 0.751 | 27.51 | |
| | 80 | 0.826 | 28.34 | |
| N090E | 90 | 0.906 | 29.14 | 114.2 |
| | 100 | 0.970 | 29.74 | |
| | 110 | 0.999 | 29.99 | |
| | 112 | 1.000 | 30.00 | |
| | 120 | 0.986 | 29.88 | |
| N135E | 130 | 0.935 | 29.42 | 113.7 |
| | 135 | 0.899 | 29.08 | |
| | 140 | 0.859 | 28.68 | |
| | 150 | 0.779 | 27.83 | |
| | 160 | 0.717 | 27.11 | |
| N180E | 170 | 0.688 | 26.75 | 108.7 |
| | 180 | 0.701 | 26.91 | |
| | 190 | 0.751 | 27.51 | |
| | 200 | 0.826 | 28.34 | |
| | 210 | 0.906 | 29.14 | |
| N225E | 220 | 0.970 | 29.74 | 116.5 |
| | 225 | 0.990 | 29.91 | |
| | 230 | 0.999 | 29.99 | |
| | 232 | 1.000 | 30.00 | |
| | 240 | 0.986 | 29.88 | |
| N270E | 250 | 0.935 | 29.42 | 112.6 |
| | 260 | 0.859 | 28.68 | |
| | 270 | 0.779 | 27.83 | |
| | 280 | 0.717 | 27.11 | |
| | 290 | 0.688 | 26.75 | |
| N315E | 300 | 0.701 | 26.91 | 112.9 |
| | 310 | 0.751 | 27.51 | |
| | 315 | 0.787 | 27.92 | |
| | 320 | 0.826 | 28.34 | |
| | 330 | 0.906 | 29.14 | |
| | 340 | 0.970 | 29.74 | |
| | 350 | 0.999 | 29.99 | |
| | 352 | 1.000 | 30.00 | |