# Antenna Model Exhibit

prepared 1/22/2020 for

**UniMas Tampa, LLC**

WVEA-DT Tampa, FL

Channel 20 1000 kW-DA 421 m

UniMas Tampa, LLC ("WVEA") has completed construction of its post auction facility pursuant to construction permit file number 0000034006 with a revised antenna model number from that shown on the original construction permit. The As-Built antenna model is an ERI ATW27H4-ESC170-20H with identical azimuth pattern and electrical down tilt as specified in the construction permit. The following exhibit includes the manufacturers specified azimuth pattern data sheet and the calculated rotated pattern showing the equivalence of the As-Filed and As-Built antenna. The constructed facility complies with all the technical specifications and conditions of the station's construction permit.

# Tabulated Data for Azimuth Pattern

**Type:** ATW-C170

| Angle | Field | dB |
|---|---|---|
| 0 | 0.940 | -0.54 |
| 2 | 0.925 | -0.68 |
| 4 | 0.910 | -0.82 |
| 6 | 0.893 | -0.98 |
| 8 | 0.874 | -1.17 |
| 10 | 0.854 | -1.37 |
| 12 | 0.832 | -1.60 |
| 14 | 0.809 | -1.84 |
| 16 | 0.785 | -2.10 |
| 18 | 0.760 | -2.38 |
| 20 | 0.733 | -2.70 |
| 22 | 0.706 | -3.02 |
| 24 | 0.677 | -3.39 |
| 26 | 0.648 | -3.77 |
| 28 | 0.619 | -4.17 |
| 30 | 0.588 | -4.61 |
| 32 | 0.558 | -5.07 |
| 34 | 0.527 | -5.56 |
| 36 | 0.497 | -6.07 |
| 38 | 0.466 | -6.63 |
| 40 | 0.437 | -7.19 |
| 42 | 0.407 | -7.81 |
| 44 | 0.379 | -8.43 |
| 46 | 0.352 | -9.07 |
| 48 | 0.326 | -9.74 |
| 50 | 0.302 | -10.40 |
| 52 | 0.280 | -11.06 |
| 54 | 0.260 | -11.70 |
| 56 | 0.243 | -12.29 |
| 58 | 0.229 | -12.80 |
| 60 | 0.218 | -13.23 |
| 62 | 0.210 | -13.56 |
| 64 | 0.206 | -13.72 |
| 66 | 0.204 | -13.81 |
| 68 | 0.205 | -13.76 |
| 70 | 0.207 | -13.68 |
| 72 | 0.211 | -13.51 |
| 74 | 0.216 | -13.31 |
| 76 | 0.222 | -13.07 |
| 78 | 0.227 | -12.88 |
| 80 | 0.232 | -12.69 |
| 82 | 0.236 | -12.54 |
| 84 | 0.240 | -12.40 |
| 86 | 0.242 | -12.32 |
| 88 | 0.244 | -12.25 |
| 90 | 0.245 | -12.22 |
| 92 | 0.244 | -12.25 |
| 94 | 0.242 | -12.32 |
| 96 | 0.240 | -12.40 |
| 98 | 0.236 | -12.54 |

| Angle | Field | dB |
|---|---|---|
| 100 | 0.232 | -12.69 |
| 102 | 0.227 | -12.88 |
| 104 | 0.222 | -13.07 |
| 106 | 0.216 | -13.31 |
| 108 | 0.211 | -13.51 |
| 110 | 0.207 | -13.68 |
| 112 | 0.205 | -13.76 |
| 114 | 0.204 | -13.81 |
| 116 | 0.206 | -13.72 |
| 118 | 0.210 | -13.56 |
| 120 | 0.218 | -13.23 |
| 122 | 0.229 | -12.80 |
| 124 | 0.243 | -12.29 |
| 126 | 0.260 | -11.70 |
| 128 | 0.280 | -11.06 |
| 130 | 0.302 | -10.40 |
| 132 | 0.326 | -9.74 |
| 134 | 0.352 | -9.07 |
| 136 | 0.379 | -8.43 |
| 138 | 0.407 | -7.81 |
| 140 | 0.437 | -7.19 |
| 142 | 0.466 | -6.63 |
| 144 | 0.497 | -6.07 |
| 146 | 0.527 | -5.56 |
| 148 | 0.558 | -5.07 |
| 150 | 0.588 | -4.61 |
| 152 | 0.619 | -4.17 |
| 154 | 0.648 | -3.77 |
| 156 | 0.677 | -3.39 |
| 158 | 0.706 | -3.02 |
| 160 | 0.733 | -2.70 |
| 162 | 0.760 | -2.38 |
| 164 | 0.785 | -2.10 |
| 166 | 0.809 | -1.84 |
| 168 | 0.832 | -1.60 |
| 170 | 0.854 | -1.37 |
| 172 | 0.874 | -1.17 |
| 174 | 0.893 | -0.98 |
| 176 | 0.910 | -0.82 |
| 178 | 0.925 | -0.68 |
| 180 | 0.940 | -0.54 |
| 182 | 0.952 | -0.43 |
| 184 | 0.963 | -0.33 |
| 186 | 0.973 | -0.24 |
| 188 | 0.981 | -0.17 |
| 190 | 0.987 | -0.11 |
| 192 | 0.992 | -0.07 |
| 194 | 0.996 | -0.03 |
| 196 | 0.998 | -0.02 |
| 198 | 1.000 | 0.00 |

| Angle | Field | dB |
|---|---|---|
| 200 | 1.000 | 0.00 |
| 202 | 0.999 | -0.01 |
| 204 | 0.997 | -0.03 |
| 206 | 0.995 | -0.04 |
| 208 | 0.992 | -0.07 |
| 210 | 0.988 | -0.10 |
| 212 | 0.983 | -0.15 |
| 214 | 0.978 | -0.19 |
| 216 | 0.973 | -0.24 |
| 218 | 0.968 | -0.28 |
| 220 | 0.963 | -0.33 |
| 222 | 0.957 | -0.38 |
| 224 | 0.952 | -0.43 |
| 226 | 0.946 | -0.48 |
| 228 | 0.941 | -0.53 |
| 230 | 0.936 | -0.57 |
| 232 | 0.932 | -0.61 |
| 234 | 0.928 | -0.65 |
| 236 | 0.924 | -0.69 |
| 238 | 0.920 | -0.72 |
| 240 | 0.917 | -0.75 |
| 242 | 0.914 | -0.78 |
| 244 | 0.911 | -0.81 |
| 246 | 0.909 | -0.83 |
| 248 | 0.907 | -0.85 |
| 250 | 0.905 | -0.87 |
| 252 | 0.904 | -0.88 |
| 254 | 0.903 | -0.89 |
| 256 | 0.902 | -0.90 |
| 258 | 0.901 | -0.91 |
| 260 | 0.900 | -0.92 |
| 262 | 0.900 | -0.92 |
| 264 | 0.900 | -0.92 |
| 266 | 0.899 | -0.92 |
| 268 | 0.899 | -0.92 |
| 270 | 0.899 | -0.92 |
| 272 | 0.899 | -0.92 |
| 274 | 0.899 | -0.92 |
| 276 | 0.900 | -0.92 |
| 278 | 0.900 | -0.92 |
| 280 | 0.900 | -0.92 |
| 282 | 0.901 | -0.91 |
| 284 | 0.902 | -0.90 |
| 286 | 0.903 | -0.89 |
| 288 | 0.904 | -0.88 |
| 290 | 0.905 | -0.87 |
| 292 | 0.907 | -0.85 |
| 294 | 0.909 | -0.83 |
| 296 | 0.911 | -0.81 |
| 298 | 0.914 | -0.78 |

| Angle | Field | dB |
|---|---|---|
| 300 | 0.917 | -0.75 |
| 302 | 0.920 | -0.72 |
| 304 | 0.924 | -0.69 |
| 306 | 0.928 | -0.65 |
| 308 | 0.932 | -0.61 |
| 310 | 0.936 | -0.57 |
| 312 | 0.941 | -0.53 |
| 314 | 0.946 | -0.48 |
| 316 | 0.952 | -0.43 |
| 318 | 0.957 | -0.38 |
| 320 | 0.963 | -0.33 |
| 322 | 0.968 | -0.28 |
| 324 | 0.973 | -0.24 |
| 326 | 0.978 | -0.19 |
| 328 | 0.983 | -0.15 |
| 330 | 0.988 | -0.10 |
| 332 | 0.992 | -0.07 |
| 334 | 0.995 | -0.04 |
| 336 | 0.997 | -0.03 |
| 338 | 0.999 | -0.01 |
| 340 | 1.000 | 0.00 |
| 342 | 1.000 | 0.00 |
| 344 | 0.998 | -0.02 |
| 346 | 0.996 | -0.03 |
| 348 | 0.992 | -0.07 |
| 350 | 0.987 | -0.11 |
| 352 | 0.981 | -0.17 |
| 354 | 0.973 | -0.24 |
| 356 | 0.963 | -0.33 |
| 358 | 0.952 | -0.43 |
| 360 | 0.940 | -0.54 |

| Dielectric As-filed | |
|---|---|
| Azimuth | Relative Field |
| 0 | 0.899 |
| 10 | 0.9 |
| 20 | 0.905 |
| 30 | 0.917 |
| 40 | 0.936 |
| 50 | 0.963 |
| 60 | 0.988 |
| 70 | 1 |
| 80 | 0.987 |
| 90 | 0.94 |
| 100 | 0.854 |
| 110 | 0.733 |
| 120 | 0.588 |
| 130 | 0.437 |
| 140 | 0.302 |
| 150 | 0.218 |
| 160 | 0.207 |
| 170 | 0.232 |
| 180 | 0.245 |
| 190 | 0.232 |
| 200 | 0.207 |
| 210 | 0.218 |
| 220 | 0.302 |
| 230 | 0.437 |
| 240 | 0.588 |
| 250 | 0.733 |
| 260 | 0.854 |
| 270 | 0.94 |
| 280 | 0.987 |
| 290 | 1 |
| 300 | 0.988 |
| 310 | 0.963 |
| 320 | 0.936 |
| 330 | 0.917 |
| 340 | 0.905 |
| 350 | 0.9 |

| ERI As-Built | | | |
|---|---|---|---|
| Pre-Rotated Azimuth | Azimuth | Relative Field | **Delta** |
| 270 | 0 | 0.899 | 0 |
| 280 | 10 | 0.9 | 0 |
| 290 | 20 | 0.905 | 0 |
| 300 | 30 | 0.917 | 0 |
| 310 | 40 | 0.936 | 0 |
| 320 | 50 | 0.963 | 0 |
| 330 | 60 | 0.988 | 0 |
| 340 | 70 | 1 | 0 |
| 350 | 80 | 0.987 | 0 |
| 0 | 90 | 0.94 | 0 |
| 10 | 100 | 0.854 | 0 |
| 20 | 110 | 0.733 | 0 |
| 30 | 120 | 0.588 | 0 |
| 40 | 130 | 0.437 | 0 |
| 50 | 140 | 0.302 | 0 |
| 60 | 150 | 0.218 | 0 |
| 70 | 160 | 0.207 | 0 |
| 80 | 170 | 0.232 | 0 |
| 90 | 180 | 0.245 | 0 |
| 100 | 190 | 0.232 | 0 |
| 110 | 200 | 0.207 | 0 |
| 120 | 210 | 0.218 | 0 |
| 130 | 220 | 0.302 | 0 |
| 140 | 230 | 0.437 | 0 |
| 150 | 240 | 0.588 | 0 |
| 160 | 250 | 0.733 | 0 |
| 170 | 260 | 0.854 | 0 |
| 180 | 270 | 0.94 | 0 |
| 190 | 280 | 0.987 | 0 |
| 200 | 290 | 1 | 0 |
| 210 | 300 | 0.988 | 0 |
| 220 | 310 | 0.963 | 0 |
| 230 | 320 | 0.936 | 0 |
| 240 | 330 | 0.917 | 0 |
| 250 | 340 | 0.905 | 0 |
| 260 | 350 | 0.9 | 0 |

| Additional Azimuths | |
|---|---|
| 71 | 1 |
| 289 | 1 |
| 204 | 0.204 |
| 156 | 0.204 |

| Additional Azimuths | | | |
|---|---|---|---|
| 341 | 71 | 1 | 0 |
| 199 | 289 | 1 | 0 |
| 114 | 204 | 0.204 | 0 |
| 66 | 156 | 0.204 | 0 |