# Application for Modification
Post – Repack Construction Permit
Engineering Exhibit

**WYPX-TV – Amsterdam, NY**

Facility ID: 13933

Licensee “ION MEDIA ALBANY LICENSE, INC” is currently authorized to operate on Post-Repack DTV channel 19. The Antenna Structure Registration Number is 1028659 with a Latitude of 42° 59’ 04.3” N+ and a Longitude of 074° 10’ 54.1” W-.

The purpose of this application is to request authority to modify the construction permit (0000034884) to operate from Antenna Structure Registration Number 1004679 with a Latitude of 42° 38’ 13.0” N+ and a Longitude of 074° 0.0’ 3.0” W-. The HAAT is 294.5m (AGL 71.07m) with an AMSL of 534.4m. An ERP of 600 kW will be utilized.

## Antenna System

A directional top-mounted antenna will be utilized. It will be affixed to an existing guyed tower structure and will not increase the overall height of the structure. Any vertical component will not exceed the horizontal pattern in any direction. Elevation and Azimuth patterns are attached.

## RF Hazard (Environmental)

Human Exposure measurements were calculated using the OET- 65 equation and the outcome is compliant with FCC 1.1310. Furthermore, the calculation is under 5% of the limit categorically excluding the application from further environmental evaluations.

| Calculated Maximum | Calculated Exposure | Percent of Limit |
|---|---|---|
| mW/cm² | mW/cm² | |
| 0.335 | 0.006075 | 1.81% |

The station will coordinate with other(s) to comply with access, antenna and/or tower issues related to RF Exposure

## Broadcast Facility

### §73.616 Interference Caused

A calculation using *TVStudy* version 2.2.5 using an LMS database dated 2019-02-20 indicates that there is no excessive new interference created. This study used cell spacing of 2 km and a profile spacing of .2 km. Baseline record excluded if station has a CP.

### §73.622 Maximum ERP and Antenna Height

The application does not exceed the maximum ERP for the specified HAAT.

### §73.623 DTV Allotments

The application does not change the DTV Table of Allotments.

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## §73.625 Coverage of Principal Community

The application's ERP will sufficiently cover Amsterdam, New York. RF coverage analysis attached.

## §73.1030 Radio, Research and Receiving Locations

A calculation using *TVStudy* version 2.2.5 using an LMS database dated 2019-02-20 indicates that no excessive interference to any "protected" locations. Although there is a short space notice to land mobile operations no interference is expected due to the distance and directional nature of the antenna pattern.

## §73.1650 International Agreements

The application's transmit location is 246.5 km from Canada. A calculation using *TVStudy* version 2.2.5 using an LMS database dated 2019-01-30 indicates that this application causes no new interference to any Canadian stations in Canada.

The application's transmit location is 2786.6 km from Mexico. As such, no coordination or notification is required.

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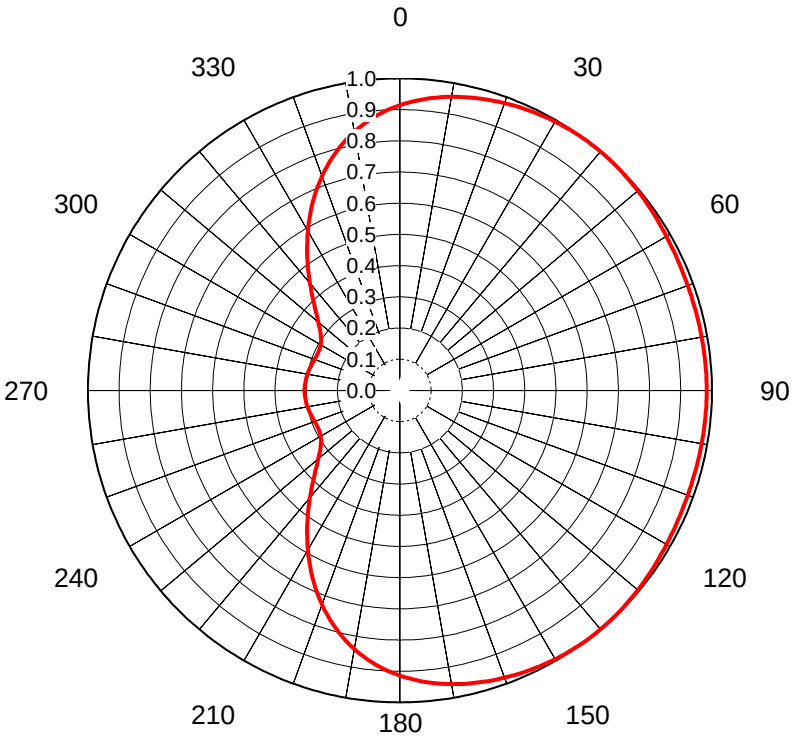



# AZIMUTH PATTERN
## Horizontal Polarization

| | |
|---|---|
| Proposal No. | **C-70346-7** |
| Date | **24-Aug-18** |
| Call Letters | **WYPX** |
| Channel | **19** |
| Frequency | **503 MHz** |
| Antenna Type | **TFU-31ETT/VP-R C170** |
| Gain | **1.59 (2.03dB)** |
| | Calculated |

TFU-C170-19H

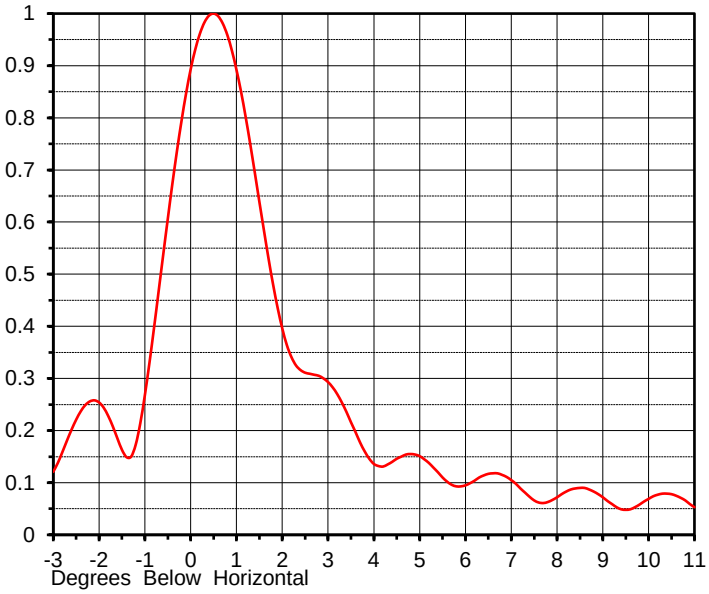
| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.914 | 36 | 0.999 | 72 | 0.982 | 108 | 0.982 | 144 | 0.999 | 180 | 0.914 | 216 | 0.503 | 252 | 0.293 | 288 | 0.293 | 324 | 0.503 |
| 1 | 0.920 | 37 | 1.000 | 73 | 0.982 | 109 | 0.982 | 145 | 0.999 | 181 | 0.909 | 217 | 0.489 | 253 | 0.294 | 289 | 0.292 | 325 | 0.517 |
| 2 | 0.925 | 38 | 1.000 | 74 | 0.982 | 110 | 0.982 | 146 | 0.998 | 182 | 0.903 | 218 | 0.475 | 254 | 0.295 | 290 | 0.291 | 326 | 0.531 |
| 3 | 0.929 | 39 | 1.000 | 75 | 0.982 | 111 | 0.982 | 147 | 0.998 | 183 | 0.896 | 219 | 0.461 | 255 | 0.296 | 291 | 0.290 | 327 | 0.546 |
| 4 | 0.934 | 40 | 1.000 | 76 | 0.982 | 112 | 0.983 | 148 | 0.997 | 184 | 0.890 | 220 | 0.448 | 256 | 0.297 | 292 | 0.289 | 328 | 0.561 |
| 5 | 0.938 | 41 | 1.000 | 77 | 0.982 | 113 | 0.983 | 149 | 0.996 | 185 | 0.883 | 221 | 0.435 | 257 | 0.298 | 293 | 0.289 | 329 | 0.575 |
| 6 | 0.942 | 42 | 1.000 | 78 | 0.982 | 114 | 0.983 | 150 | 0.995 | 186 | 0.875 | 222 | 0.423 | 258 | 0.299 | 294 | 0.289 | 330 | 0.590 |
| 7 | 0.946 | 43 | 0.999 | 79 | 0.982 | 115 | 0.984 | 151 | 0.994 | 187 | 0.867 | 223 | 0.411 | 259 | 0.300 | 295 | 0.289 | 331 | 0.605 |
| 8 | 0.949 | 44 | 0.999 | 80 | 0.982 | 116 | 0.984 | 152 | 0.993 | 188 | 0.859 | 224 | 0.399 | 260 | 0.301 | 296 | 0.289 | 332 | 0.619 |
| 9 | 0.952 | 45 | 0.999 | 81 | 0.983 | 117 | 0.985 | 153 | 0.991 | 189 | 0.851 | 225 | 0.388 | 261 | 0.302 | 297 | 0.289 | 333 | 0.634 |
| 10 | 0.956 | 46 | 0.998 | 82 | 0.983 | 118 | 0.985 | 154 | 0.990 | 190 | 0.842 | 226 | 0.377 | 262 | 0.302 | 298 | 0.290 | 334 | 0.648 |
| 11 | 0.959 | 47 | 0.998 | 83 | 0.983 | 119 | 0.986 | 155 | 0.988 | 191 | 0.832 | 227 | 0.367 | 263 | 0.303 | 299 | 0.292 | 335 | 0.662 |
| 12 | 0.961 | 48 | 0.997 | 84 | 0.983 | 120 | 0.987 | 156 | 0.987 | 192 | 0.822 | 228 | 0.358 | 264 | 0.304 | 300 | 0.293 | 336 | 0.677 |
| 13 | 0.964 | 49 | 0.996 | 85 | 0.983 | 121 | 0.988 | 157 | 0.985 | 193 | 0.812 | 229 | 0.349 | 265 | 0.304 | 301 | 0.296 | 337 | 0.690 |
| 14 | 0.967 | 50 | 0.995 | 86 | 0.983 | 122 | 0.988 | 158 | 0.984 | 194 | 0.802 | 230 | 0.341 | 266 | 0.305 | 302 | 0.298 | 338 | 0.704 |
| 15 | 0.969 | 51 | 0.995 | 87 | 0.983 | 123 | 0.989 | 159 | 0.982 | 195 | 0.791 | 231 | 0.334 | 267 | 0.305 | 303 | 0.301 | 339 | 0.717 |
| 16 | 0.972 | 52 | 0.994 | 88 | 0.983 | 124 | 0.990 | 160 | 0.980 | 196 | 0.779 | 232 | 0.327 | 268 | 0.305 | 304 | 0.305 | 340 | 0.730 |
| 17 | 0.974 | 53 | 0.993 | 89 | 0.983 | 125 | 0.991 | 161 | 0.978 | 197 | 0.768 | 233 | 0.320 | 269 | 0.306 | 305 | 0.310 | 341 | 0.743 |
| 18 | 0.976 | 54 | 0.992 | 90 | 0.983 | 126 | 0.992 | 162 | 0.976 | 198 | 0.756 | 234 | 0.315 | 270 | 0.306 | 306 | 0.315 | 342 | 0.756 |
| 19 | 0.978 | 55 | 0.991 | 91 | 0.983 | 127 | 0.993 | 163 | 0.974 | 199 | 0.743 | 235 | 0.310 | 271 | 0.306 | 307 | 0.320 | 343 | 0.768 |
| 20 | 0.980 | 56 | 0.990 | 92 | 0.983 | 128 | 0.994 | 164 | 0.972 | 200 | 0.730 | 236 | 0.305 | 272 | 0.305 | 308 | 0.327 | 344 | 0.779 |
| 21 | 0.982 | 57 | 0.989 | 93 | 0.983 | 129 | 0.995 | 165 | 0.969 | 201 | 0.717 | 237 | 0.301 | 273 | 0.305 | 309 | 0.334 | 345 | 0.791 |
| 22 | 0.984 | 58 | 0.988 | 94 | 0.983 | 130 | 0.995 | 166 | 0.967 | 202 | 0.704 | 238 | 0.298 | 274 | 0.305 | 310 | 0.341 | 346 | 0.802 |
| 23 | 0.985 | 59 | 0.988 | 95 | 0.983 | 131 | 0.996 | 167 | 0.964 | 203 | 0.690 | 239 | 0.296 | 275 | 0.304 | 311 | 0.349 | 347 | 0.812 |
| 24 | 0.987 | 60 | 0.987 | 96 | 0.983 | 132 | 0.997 | 168 | 0.962 | 204 | 0.677 | 240 | 0.293 | 276 | 0.304 | 312 | 0.358 | 348 | 0.822 |
| 25 | 0.988 | 61 | 0.986 | 97 | 0.983 | 133 | 0.998 | 169 | 0.959 | 205 | 0.662 | 241 | 0.292 | 277 | 0.303 | 313 | 0.367 | 349 | 0.832 |
| 26 | 0.990 | 62 | 0.985 | 98 | 0.983 | 134 | 0.998 | 170 | 0.956 | 206 | 0.648 | 242 | 0.290 | 278 | 0.302 | 314 | 0.377 | 350 | 0.842 |
| 27 | 0.991 | 63 | 0.985 | 99 | 0.983 | 135 | 0.999 | 171 | 0.953 | 207 | 0.634 | 243 | 0.289 | 279 | 0.302 | 315 | 0.388 | 351 | 0.851 |
| 28 | 0.993 | 64 | 0.984 | 100 | 0.982 | 136 | 0.999 | 172 | 0.949 | 208 | 0.619 | 244 | 0.289 | 280 | 0.301 | 316 | 0.399 | 352 | 0.859 |
| 29 | 0.994 | 65 | 0.984 | 101 | 0.982 | 137 | 0.999 | 173 | 0.946 | 209 | 0.605 | 245 | 0.289 | 281 | 0.300 | 317 | 0.411 | 353 | 0.867 |
| 30 | 0.995 | 66 | 0.983 | 102 | 0.982 | 138 | 1.000 | 174 | 0.942 | 210 | 0.590 | 246 | 0.289 | 282 | 0.299 | 318 | 0.423 | 354 | 0.875 |
| 31 | 0.996 | 67 | 0.983 | 103 | 0.982 | 139 | 1.000 | 175 | 0.938 | 211 | 0.575 | 247 | 0.289 | 283 | 0.298 | 319 | 0.435 | 355 | 0.883 |
| 32 | 0.997 | 68 | 0.983 | 104 | 0.982 | 140 | 1.000 | 176 | 0.934 | 212 | 0.561 | 248 | 0.289 | 284 | 0.297 | 320 | 0.448 | 356 | 0.890 |
| 33 | 0.997 | 69 | 0.982 | 105 | 0.982 | 141 | 1.000 | 177 | 0.929 | 213 | 0.546 | 249 | 0.290 | 285 | 0.296 | 321 | 0.461 | 357 | 0.896 |
| 34 | 0.998 | 70 | 0.982 | 106 | 0.982 | 142 | 1.000 | 178 | 0.925 | 214 | 0.531 | 250 | 0.291 | 286 | 0.295 | 322 | 0.475 | 358 | 0.903 |
| 35 | 0.999 | 71 | 0.982 | 107 | 0.982 | 143 | 1.000 | 179 | 0.920 | 215 | 0.517 | 251 | 0.292 | 287 | 0.294 | 323 | 0.489 | 359 | 0.909 |

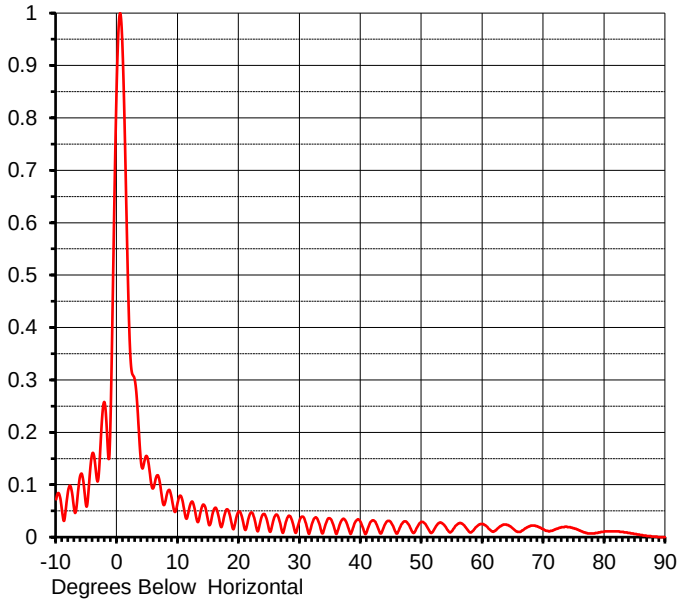
# ELEVATION PATTERN

| | |
|---|---|
| Proposal No. | **C-70346-7** |
| Date | **24-Aug-18** |
| Call Letters | **WYPX** |
| Channel | **19** |
| Frequency | **503 MHz** |
| Antenna Type | **TFU-31ETT/VP-R C170** |

| | | | |
|---|---|---|---|
| RMS Directivity at Main Lobe | **29.7 ( 14.72 dB )** | Beam Tilt | **0.50 deg** |
| RMS Directivity at Horizontal | **23.7 ( 13.75 dB )** | Pattern Number | **31E297050** |

**Calculated**




| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|
| -10.0 | 0.072 | 10.0 | 0.069 | 30.0 | 0.034 | 50.0 | 0.029 | 70.0 | 0.015 |
| -9.0 | 0.047 | 11.0 | 0.053 | 31.0 | 0.026 | 51.0 | 0.017 | 71.0 | 0.011 |
| -8.0 | 0.091 | 12.0 | 0.062 | 32.0 | 0.026 | 52.0 | 0.014 | 72.0 | 0.015 |
| -7.0 | 0.050 | 13.0 | 0.037 | 33.0 | 0.031 | 53.0 | 0.028 | 73.0 | 0.019 |
| -6.0 | 0.119 | 14.0 | 0.060 | 34.0 | 0.016 | 54.0 | 0.018 | 74.0 | 0.019 |
| -5.0 | 0.058 | 15.0 | 0.027 | 35.0 | 0.035 | 55.0 | 0.012 | 75.0 | 0.017 |
| -4.0 | 0.161 | 16.0 | 0.055 | 36.0 | 0.006 | 56.0 | 0.026 | 76.0 | 0.012 |
| -3.0 | 0.121 | 17.0 | 0.021 | 37.0 | 0.034 | 57.0 | 0.022 | 77.0 | 0.008 |
| -2.0 | 0.254 | 18.0 | 0.053 | 38.0 | 0.016 | 58.0 | 0.009 | 78.0 | 0.007 |
| -1.0 | 0.268 | 19.0 | 0.016 | 39.0 | 0.027 | 59.0 | 0.020 | 79.0 | 0.009 |
| 0.0 | 0.893 | 20.0 | 0.049 | 40.0 | 0.028 | 60.0 | 0.025 | 80.0 | 0.011 |
| 1.0 | 0.892 | 21.0 | 0.014 | 41.0 | 0.011 | 61.0 | 0.016 | 81.0 | 0.011 |
| 2.0 | 0.396 | 22.0 | 0.047 | 42.0 | 0.032 | 62.0 | 0.012 | 82.0 | 0.011 |
| 3.0 | 0.293 | 23.0 | 0.012 | 43.0 | 0.012 | 63.0 | 0.021 | 83.0 | 0.010 |
| 4.0 | 0.136 | 24.0 | 0.044 | 44.0 | 0.025 | 64.0 | 0.023 | 84.0 | 0.008 |
| 5.0 | 0.151 | 25.0 | 0.012 | 45.0 | 0.027 | 65.0 | 0.016 | 85.0 | 0.006 |
| 6.0 | 0.095 | 26.0 | 0.042 | 46.0 | 0.007 | 66.0 | 0.010 | 86.0 | 0.004 |
| 7.0 | 0.105 | 27.0 | 0.014 | 47.0 | 0.029 | 67.0 | 0.017 | 87.0 | 0.002 |
| 8.0 | 0.072 | 28.0 | 0.038 | 48.0 | 0.021 | 68.0 | 0.022 | 88.0 | 0.001 |
| 9.0 | 0.072 | 29.0 | 0.019 | 49.0 | 0.013 | 69.0 | 0.020 | 89.0 | 0.000 |
| | | | | | | | | 90.0 | 0.000 |

**WYPX-Application**
Latitude: 42-38-13 N
Longitude: 074-00-03 W
ERP: 600.00 kW
Channel: 19
Frequency: 503.0 MHz
AGL: 71.86 m
HAAT: 295.24 m
AMSL: 535.16 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.5

Watertown
Lewis
Oswego
Oneida
Rome
Utica
Syracuse
Cayuga
Auburn
Madison
Cortland
Tompkins
Ithaca
Chenango
Tioga
Broome
Binghamton
Delaware
Otsego
Herkimer
Hamilton
Essex
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Washington
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Schoharie
Greene
Columbia
Ulster
Sullivan
Wayne
Dutchess
Poughkeepsie
Addison
Washington
Orange
Grafton
Rutland
Windsor
Sullivan
Bennington
Windham
Cheshire
Franklin
Berkshire
Pittsfield
Hampshire
Northampton
Holyoke
Springfield
Tolland
Windham
Torrington
Hartford
New Britain

Contour Legend
Dipole Adjusted Noise Limited (0000034884)
Dipole Adjusted Noise Limited (App)
48 dBu Service (App)

Calculation by S. Clark