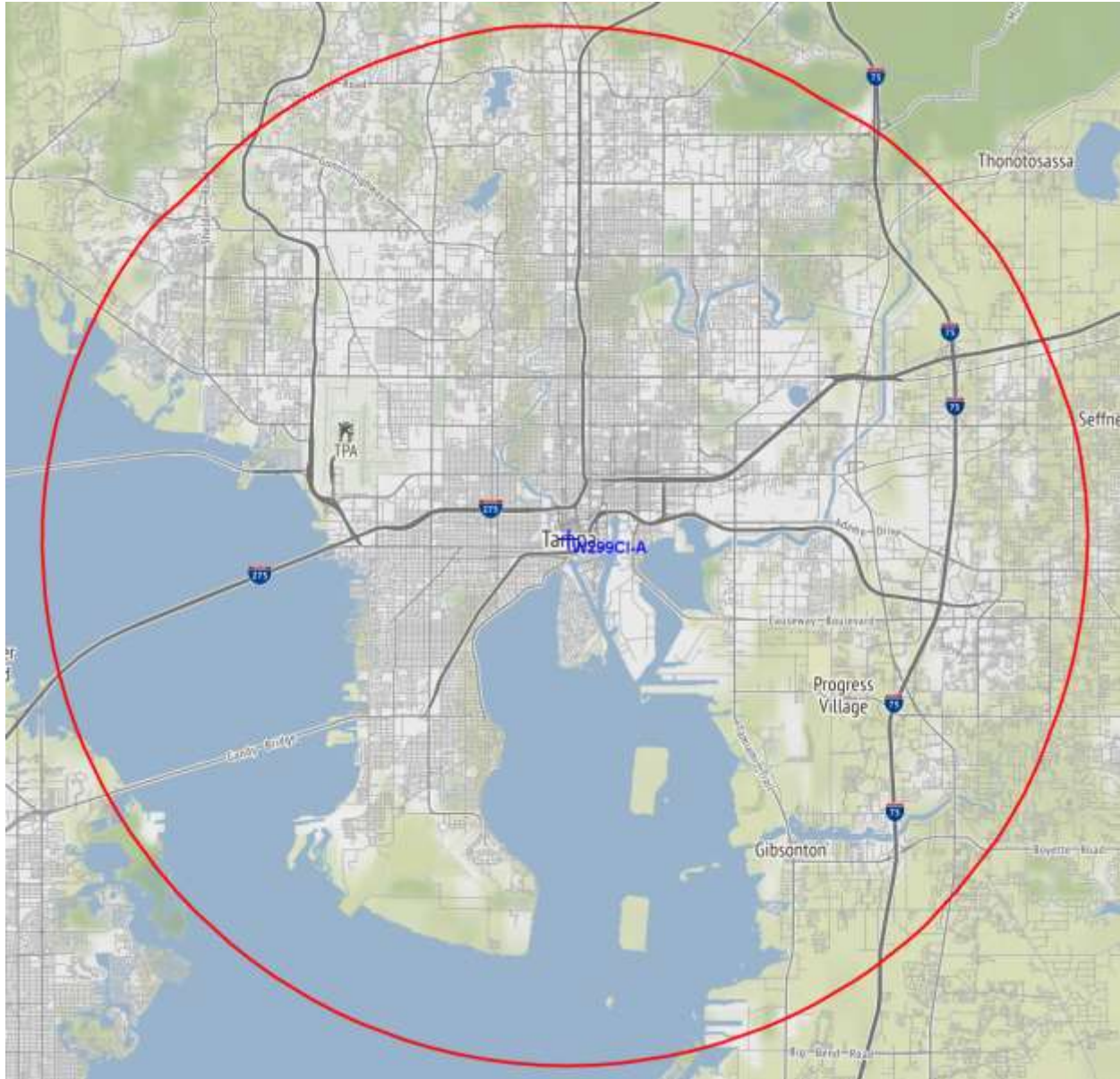




REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

Minor modification for **W299CI**
TAMPA, FL
MANUEL E. ARROYO
BLFT-20161117ABT

PROPOSED 60dBu F(50,50) SERVICE CONTOUR



TAMPA, FL – Channel 299D (107.7 MHz) ~ ERP 0.250 kW
Elev: 4 meters ~ RCAGL: 177.4 meters ~ RCAMSL: 181.4 meters
Overall tower height: 180 meters – ASR: None (20 foot rule)
NAD83 Latitude: 27° 56' 49.5" NL – Longitude: 82° 27' 32.5" WL
NAD27 Latitude: 27° 56' 48.4" NL – Longitude: 82° 27' 33.2" WL

Site: W299CI-APP
 Coordinates: 27-56-48.4 N, 82-27-33.2 W
 Freq: 107.70000 MHz
 ERP: 250.00 W

| Bearing | ERP W | HAAT | DH | Distance | Lat | Lon |
|---------|--------|------|----|----------|-----------|------------|
| 0 | 250.00 | 173 | 10 | 17.27 | 28.102129 | -82.459222 |
| 5 | 250.00 | 173 | 10 | 17.27 | 28.101537 | -82.443873 |
| 10 | 250.00 | 173 | 10 | 17.27 | 28.099766 | -82.428641 |
| 15 | 250.00 | 173 | 10 | 17.27 | 28.096828 | -82.413643 |
| 20 | 250.00 | 170 | 20 | 17.11 | 28.091387 | -82.399555 |
| 25 | 250.00 | 170 | 30 | 17.11 | 28.086242 | -82.385498 |
| 30 | 250.00 | 169 | 30 | 17.05 | 28.079599 | -82.372290 |
| 35 | 250.00 | 171 | 30 | 17.17 | 28.073232 | -82.358843 |
| 40 | 250.00 | 172 | 10 | 17.22 | 28.065387 | -82.346391 |
| 45 | 250.00 | 171 | 10 | 17.17 | 28.055911 | -82.335494 |
| 50 | 250.00 | 172 | 10 | 17.22 | 28.046276 | -82.324779 |
| 55 | 250.00 | 174 | 30 | 17.32 | 28.036077 | -82.314613 |
| 60 | 250.00 | 175 | 20 | 17.38 | 28.024832 | -82.305904 |
| 65 | 250.00 | 175 | 30 | 17.38 | 28.012731 | -82.298790 |
| 70 | 250.00 | 174 | 30 | 17.32 | 27.999972 | -82.293389 |
| 75 | 250.00 | 176 | 30 | 17.43 | 27.987240 | -82.287766 |
| 80 | 250.00 | 177 | 30 | 17.48 | 27.973965 | -82.283924 |
| 85 | 250.00 | 177 | 30 | 17.48 | 27.960365 | -82.281920 |
| 90 | 250.00 | 177 | 20 | 17.48 | 27.946663 | -82.281265 |
| 95 | 250.00 | 178 | 30 | 17.53 | 27.932922 | -82.281437 |
| 100 | 250.00 | 178 | 30 | 17.53 | 27.919287 | -82.283492 |
| 105 | 250.00 | 178 | 30 | 17.53 | 27.905862 | -82.286882 |
| 110 | 250.00 | 178 | 30 | 17.53 | 27.892749 | -82.291583 |
| 115 | 250.00 | 179 | 30 | 17.58 | 27.879854 | -82.297088 |
| 120 | 250.00 | 179 | 40 | 17.58 | 27.867626 | -82.304312 |
| 125 | 250.00 | 180 | 40 | 17.63 | 27.855757 | -82.312321 |
| 130 | 250.00 | 180 | 30 | 17.63 | 27.844793 | -82.321859 |
| 135 | 250.00 | 180 | 40 | 17.63 | 27.834605 | -82.332439 |
| 140 | 250.00 | 181 | 40 | 17.67 | 27.824960 | -82.343687 |
| 145 | 250.00 | 181 | 40 | 17.67 | 27.816528 | -82.356135 |
| 150 | 250.00 | 181 | 30 | 17.67 | 27.809087 | -82.369365 |
| 155 | 250.00 | 181 | 30 | 17.67 | 27.802692 | -82.383276 |
| 160 | 250.00 | 181 | 20 | 17.67 | 27.797392 | -82.397763 |
| 165 | 250.00 | 181 | 20 | 17.67 | 27.793228 | -82.412716 |
| 170 | 250.00 | 181 | 10 | 17.67 | 27.790231 | -82.428021 |
| 175 | 250.00 | 181 | 10 | 17.67 | 27.788423 | -82.443562 |
| 180 | 250.00 | 181 | 10 | 17.67 | 27.787819 | -82.459222 |
| 185 | 250.00 | 181 | 10 | 17.67 | 27.788423 | -82.474882 |
| 190 | 250.00 | 181 | 10 | 17.67 | 27.790231 | -82.490424 |
| 195 | 250.00 | 181 | 0 | 17.67 | 27.793228 | -82.505729 |
| 200 | 250.00 | 181 | 0 | 17.67 | 27.797392 | -82.520681 |
| 205 | 250.00 | 181 | 0 | 17.67 | 27.802692 | -82.535168 |
| 210 | 250.00 | 181 | 0 | 17.67 | 27.809087 | -82.549079 |
| 215 | 250.00 | 181 | 0 | 17.67 | 27.816528 | -82.562309 |
| 220 | 250.00 | 181 | 0 | 17.67 | 27.824960 | -82.574757 |
| 225 | 250.00 | 181 | 10 | 17.67 | 27.834319 | -82.586329 |
| 230 | 250.00 | 181 | 10 | 17.67 | 27.844533 | -82.596936 |
| 235 | 250.00 | 181 | 10 | 17.67 | 27.855525 | -82.606498 |
| 240 | 250.00 | 181 | 10 | 17.67 | 27.867211 | -82.614943 |
| 245 | 250.00 | 181 | 0 | 17.67 | 27.879503 | -82.622204 |
| 250 | 250.00 | 181 | 0 | 17.67 | 27.892308 | -82.628228 |
| 255 | 250.00 | 181 | 10 | 17.67 | 27.905527 | -82.632967 |
| 260 | 250.00 | 181 | 10 | 17.67 | 27.919062 | -82.636386 |
| 265 | 250.00 | 180 | 10 | 17.63 | 27.932843 | -82.638001 |
| 270 | 250.00 | 180 | 10 | 17.63 | 27.946661 | -82.638707 |
| 275 | 250.00 | 180 | 10 | 17.63 | 27.960481 | -82.638047 |
| 280 | 250.00 | 180 | 20 | 17.63 | 27.974197 | -82.636025 |
| 285 | 250.00 | 180 | 20 | 17.63 | 27.987706 | -82.632657 |
| 290 | 250.00 | 179 | 10 | 17.58 | 28.000759 | -82.627517 |
| 295 | 250.00 | 179 | 10 | 17.58 | 28.013512 | -82.621557 |
| 300 | 250.00 | 178 | 10 | 17.53 | 28.025527 | -82.613909 |
| 305 | 250.00 | 178 | 10 | 17.53 | 28.037138 | -82.605553 |
| 310 | 250.00 | 176 | 10 | 17.43 | 28.047465 | -82.595275 |
| 315 | 250.00 | 175 | 10 | 17.38 | 28.057226 | -82.584444 |
| 320 | 250.00 | 175 | 10 | 17.38 | 28.066447 | -82.573063 |
| 325 | 250.00 | 175 | 10 | 17.38 | 28.074756 | -82.560813 |
| 330 | 250.00 | 175 | 10 | 17.38 | 28.082090 | -82.547788 |
| 335 | 250.00 | 175 | 0 | 17.38 | 28.088394 | -82.534085 |
| 340 | 250.00 | 174 | 0 | 17.32 | 28.093187 | -82.519633 |
| 345 | 250.00 | 175 | 0 | 17.38 | 28.097723 | -82.505074 |
| 350 | 250.00 | 174 | 10 | 17.32 | 28.100227 | -82.489896 |
| 355 | 250.00 | 174 | 10 | 17.32 | 28.102003 | -82.474618 |

ComStudy 2.2 search of channel 299 (107.7 MHz Class D) at 27-56-48.4 N, 82-27-33.2 W.

| CALL | CITY | ST | CHN | CL | DIST | SEP | BRNG | CLEARANCE |
|--|----------------|----|-----|----|--------|------|-------|-----------|
| W246CY | BRADENTON | FL | 246 | D | 39.99 | 0.00 | 189.2 | 40.0 |
| W246CY | BRADENTON | FL | 246 | D | 31.82 | 0.00 | 215.5 | 31.8 |
| WSUN-FM3 | ST. PETERSBURG | FL | 246 | D | 19.49 | 0.00 | 245.4 | 19.5 |
| WSUN-FM4 | PINELLAS PARK | FL | 246 | D | 25.21 | 0.00 | 256.3 | 25.2 |
| W296CS | LAKELAND | FL | 296 | D | 53.83 | 0.00 | 90.3 | 21.90 dB |
| WAOA-FM | MELBOURNE | FL | 296 | C1 | 173.92 | 0.00 | 82.6 | 33.92 dB |
| WXGL | ST. PETERSBURG | FL | 297 | C1 | 21.68 | 0.00 | 298.4 | -23.57 dB |
| (second adjacent channel waiver requested) | | | | | | | | |
| W298BO | WINTER HAVEN | FL | 298 | D | 69.37 | 0.00 | 84.7 | 16.38 dB |
| W298BU | AVON PARK | FL | 298 | D | 104.41 | 0.00 | 114.1 | 25.77 dB |
| W298AV | ENGLEWOOD | FL | 298 | D | 108.97 | 0.00 | 172.9 | 28.11 dB |
| W299CI | TAMPA | FL | 299 | D | 22.17 | 0.00 | 119.9 | -46.39 dB |
| (currently authorized facility) | | | | | | | | |
| WAJP | PERRY | FL | 299 | C3 | 266.23 | 0.00 | 335.5 | 39.73 dB |
| WMGF | MOUNT DORA | FL | 299 | C | 155.25 | 0.00 | 45.6 | 5.27 dB |
| W300CL | LAKELAND | FL | 300 | D | 50.34 | 0.00 | 78.9 | 9.20 dB |
| W300CY | LAKE WALES | FL | 300 | D | 84.88 | 0.00 | 85.1 | 20.72 dB |
| WNDN | CHIEFLAND | FL | 300 | A | 178.73 | 0.00 | 346.7 | 38.72 dB |
| WSRZ-FM | CORAL COVE | FL | 300 | C2 | 88.20 | 0.00 | 180.3 | 4.74 dB |

WAIVER OF §74.1204(a) REQUEST
OVERLAPPING SECOND ADJACENT CHANNEL

W299CI(APP)
Tampa, Florida
Channel 299D (107.7 MHz)

The proposed facility is inside the 60 dBu protected service contour of second-adjacent channel facility WXGL, St. Petersburg, Florida.

WXGL operates on Channel 297C1 with 100 kW into a non-directional antenna at 182 meters above average terrain and is located 21.7 kilometers from the proposed translator. WXGL places an 82.6 dBu service contour at the proposed translator site.

Using the U/D method¹, the proposed translator station is predicted to produce an undesired interference overlap in respect to WXGL to the proposed translator station's 122.6 dBu interfering contour ("overlap zone"). At 250 watts ERP, the overlap zone extends to 82 meters from the radiation center.

The proposed translator will be on the top of the Bank of America Building ("BofA"), the second tallest building in downtown Tampa. The roof line of the building is at 170 meters above ground level (AGL). Below the roof line is a tall floor of equipment including elevators and additional mechanical support for the building. This area is unoccupied. The highest occupied level of the building is at 163 meters AGL at floor level. Taking the height of persons and the placement of radios on shelves into consideration, we will raise that level to 165 meters. Therefore, the highest occupied level on this building is 165 meters AGL. The farthest distance between the tower base and the edge of the roof is 28.4 meters. The radiation center of the proposed antenna is at 177.4 meters AGL.

To address the 82 meter overlap zone reaching occupied areas of the building, the applicant is proposing to specify operation using a 4-bay Shively 6812b circularly polarized antenna at half-wavelength spacing. Based on the manufacturer's specifications, the 122.6 dBu interfering contour remains above the highest occupied point of 165 meters above ground level on all depression angles with the exception of the -15 degree angle. The -15 degree angle reaches points below 165 meters no closer than 46.3 meters from the base of the tower and no further than 48.6 meters from the tower base. Because the furthest point from the tower base to the edge of the roof is 29 meters, the area where the 122.6 dBu interfering contour reaches a point lower than 165 meters is outside of the building. There are no adjacent taller buildings within 82 meters.

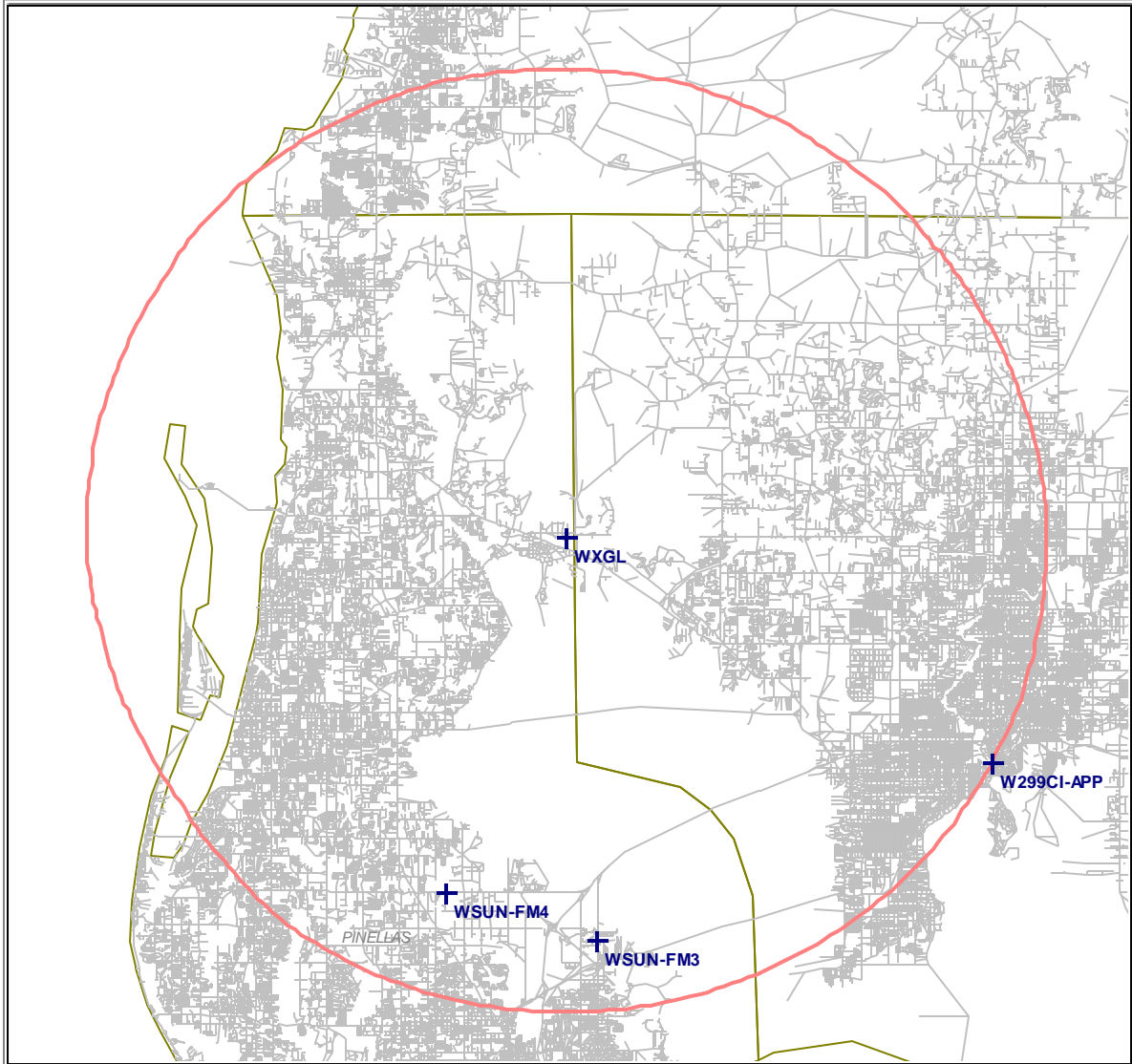
¹ - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

Based on these findings, the proposed modified FM translator will not create any interference to listeners or potential listeners of WXGL. The applicant is requesting a waiver of §74.1204(a) in respect to second-adjacent channel facility WXGL, St. Petersburg, Florida.

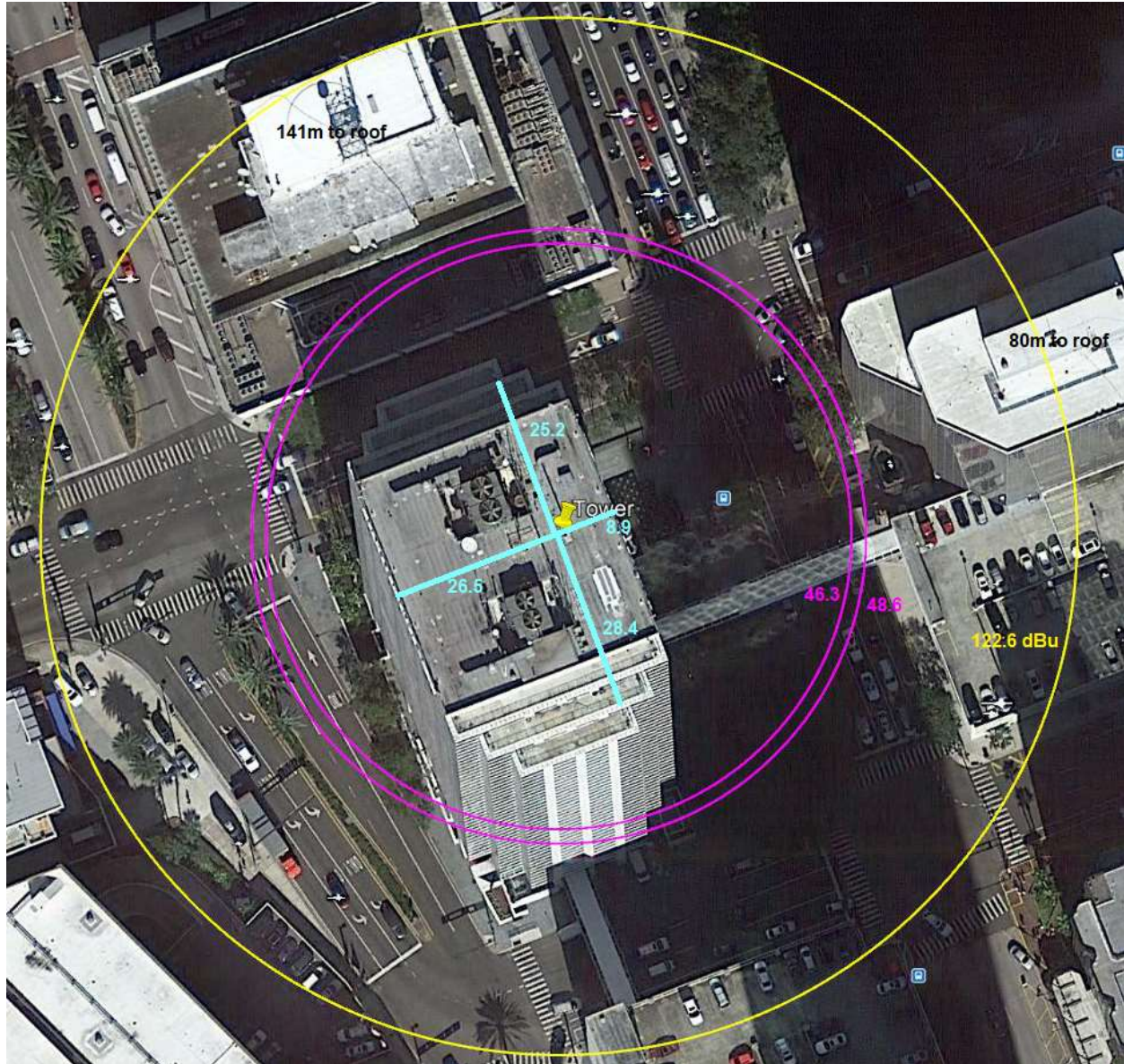
Prepared by
Michelle Bradley
REC Networks
November 9, 2017

Staff questions regarding this waiver request can be directed to 202 621-2040.

WXGL 82.6 dBu contour



AREA AROUND THE BUILDING



Cyan lines are distances in meters from the tower base to the edge of the roof at the highest occupied height.

Purple circles are the area where the 122.6 dBu interfering contour will reach points below the highest occupied height of the building. (As shown, the interference does not reach inside the building or any adjacent buildings.)

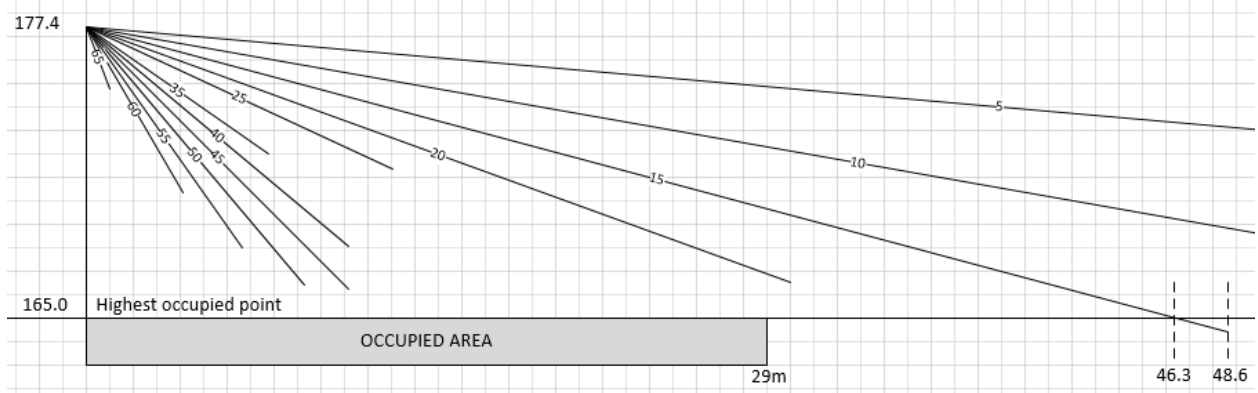
The yellow circle is the 122.6 dBu overlap zone. All other structures within the overlap zone are at a lower height.

| Proposed Power: | | | | 0.25 kW | | | | |
|-------------------------------|------------------------|-----------|------------|--|---------------------------------------|--|-----------------------------------|--------------------------------------|
| Antenna Height AGL: | | | | 177.4 m | | | | |
| Interference Contour: | | | | 122.6 dBu | | | | |
| Artificial RX Antenna Height: | | | | 165 m | | | | |
| Antenna Type: | | | | Shively Labs 6812b 6812c - 4 bay Half-wave spacing | | | | |
| Angle Below Horizon | Antenna Relative Field | ERP in kW | ERP in dBk | Distance from Ant to Interference Contour | Distance from Ant to Artificial Plane | Field Strength in dBu @ Artificial Plane | Distance from Ant to Ground Level | Field Strength in dBu @ Ground Level |
| 5 | 0.950 | 0.226 | -6.47 | 78.11 | 142.27 | 117.39 | 2035.44 | 94.28 |
| 10 | 0.812 | 0.165 | -7.83 | 66.76 | 71.41 | 122.02 | 1021.61 | 98.90 |
| 15 | 0.612 | 0.094 | -10.29 | 50.32 | 47.91 | 123.03 | 685.42 | 99.92 |
| 20 | 0.388 | 0.038 | -14.24 | 31.90 | 36.26 | 121.49 | 518.68 | 98.38 |
| 25 | 0.175 | 0.008 | -21.16 | 14.39 | 29.34 | 116.41 | 419.76 | 93.30 |
| 30 | 0.003 | 0.000 | -56.48 | 0.25 | 24.80 | 82.55 | 354.80 | 59.44 |
| 35 | 0.115 | 0.003 | -24.81 | 9.46 | 21.62 | 115.42 | 309.29 | 92.31 |
| 40 | 0.177 | 0.008 | -21.06 | 14.55 | 19.29 | 120.15 | 275.99 | 97.04 |
| 45 | 0.192 | 0.009 | -20.35 | 15.79 | 17.54 | 121.69 | 250.88 | 98.58 |
| 50 | 0.175 | 0.008 | -21.16 | 14.39 | 16.19 | 121.58 | 231.58 | 98.47 |
| 55 | 0.140 | 0.005 | -23.10 | 11.51 | 15.14 | 120.22 | 216.57 | 97.11 |
| 60 | 0.099 | 0.002 | -26.11 | 8.14 | 14.32 | 117.69 | 204.84 | 94.58 |
| 65 | 0.063 | 0.001 | -30.03 | 5.18 | 13.68 | 114.16 | 195.74 | 91.05 |
| 70 | 0.034 | 0.000 | -35.39 | 2.80 | 13.20 | 109.12 | 188.79 | 86.01 |
| 75 | 0.016 | 0.000 | -41.94 | 1.32 | 12.84 | 102.81 | 183.66 | 79.70 |
| 80 | 0.005 | 0.000 | -52.04 | 0.41 | 12.59 | 92.88 | 180.14 | 69.77 |
| 85 | 0.001 | 0.000 | -66.02 | 0.08 | 12.45 | 79.00 | 178.08 | 55.89 |
| 90 | 0.001 | 0.000 | -66.02 | 0.08 | 12.40 | 79.03 | 177.40 | 55.92 |

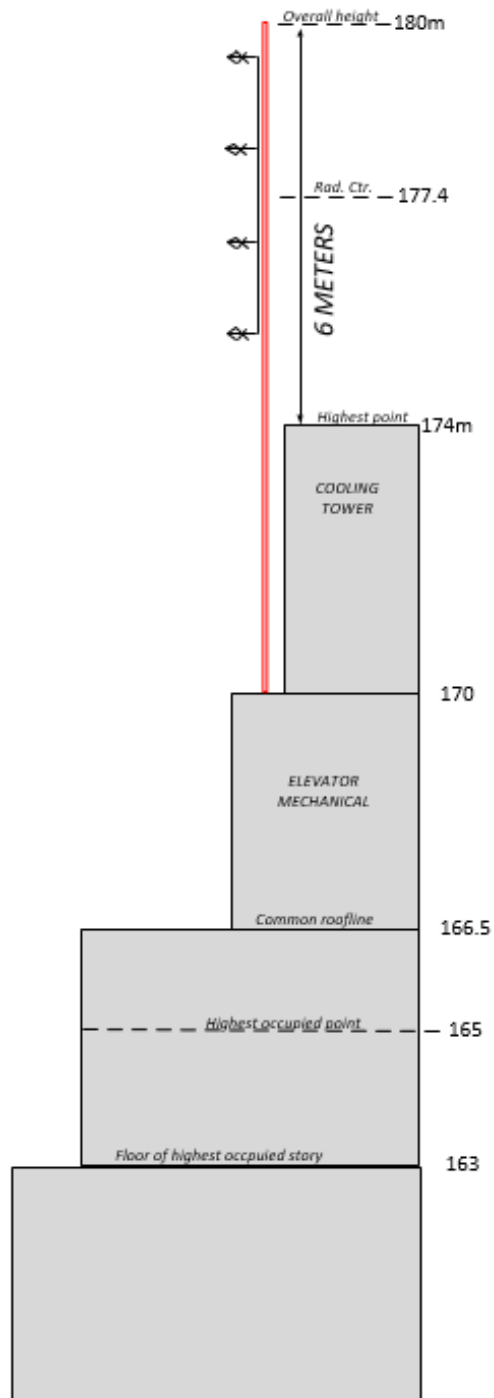
As shown on the previous photo, below 165 meters above ground level, the 122.6 dBu interfering contour does not reach inside of any occupied structure. Only in a small area outside of any occupied structures.

DOWNWARD RADIATION PATTERN

As shown below, the downward radiation pattern along all depression angles with the exception of the -15 degree angle remain above 165 meters above ground level (the highest occupied level). Along the -15 degree depression angle, the only point where the overlap zone reaches below 165 meters above ground level (the highest occupied point



DEMONSTRATION OF COMPLIANCE WITH 20 FOOT RULE
AND DEMONSTRATION OF HIGHEST OCCUPIED POINT OF BUILDING



This building consists of a multi-tiered roof line.

The tower structure is set on the highest roof surface at the 170-meter level. This level contains elevator and other mechanical equipment and is unoccupied.

On the roof of the building, there are two cooling towers that are 4 meters tall.

This brings the highest point of the structure to 174 meters.

The antenna structure proposed will bring the overall height to 180 meters.

This overall height is 6 meters above the highest point of the building.

§17.7(e)(3) of the Commission's Rules states that any antenna structure of less than 6.1 meters (20 feet).

Since the highest point on the building is 174 meters, the overall height is only 6.0 meters above the highest point of the building and therefore qualifies under the so-called "20 foot rule".

The Commission recently granted BPFT-20170428AAW for W266CW on this same building for this same overall height.