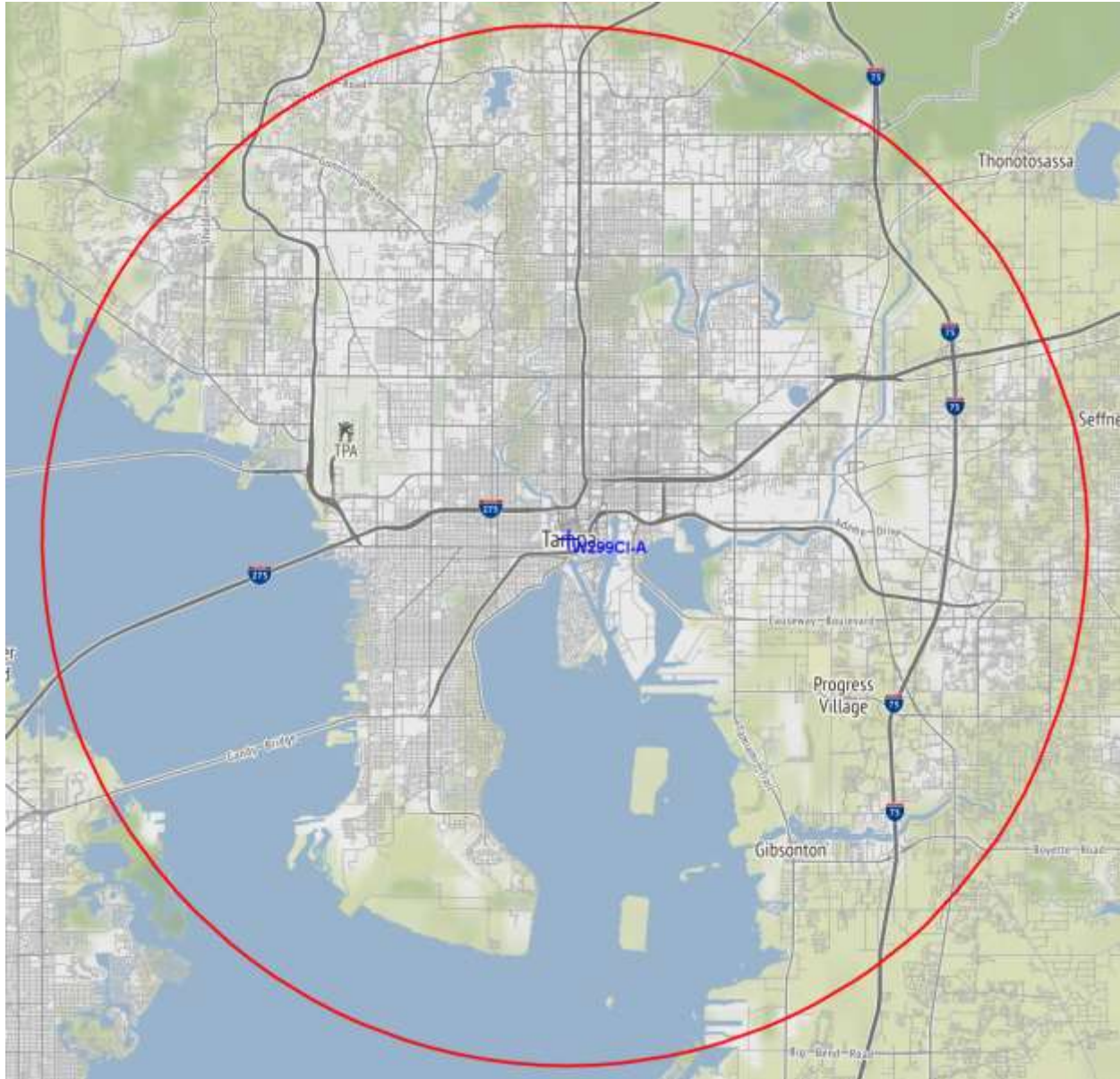




REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

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.

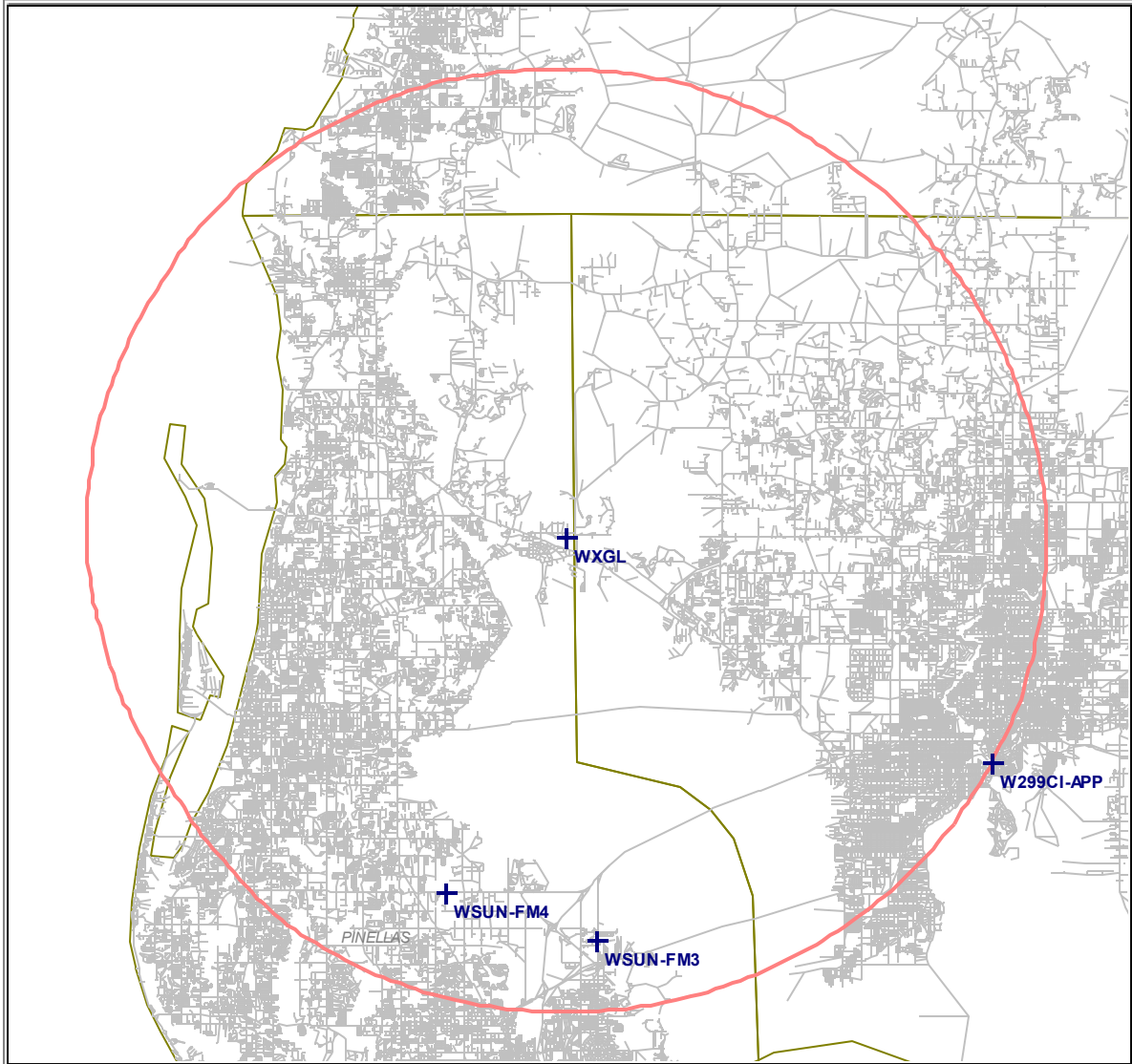
¹ - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).

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.

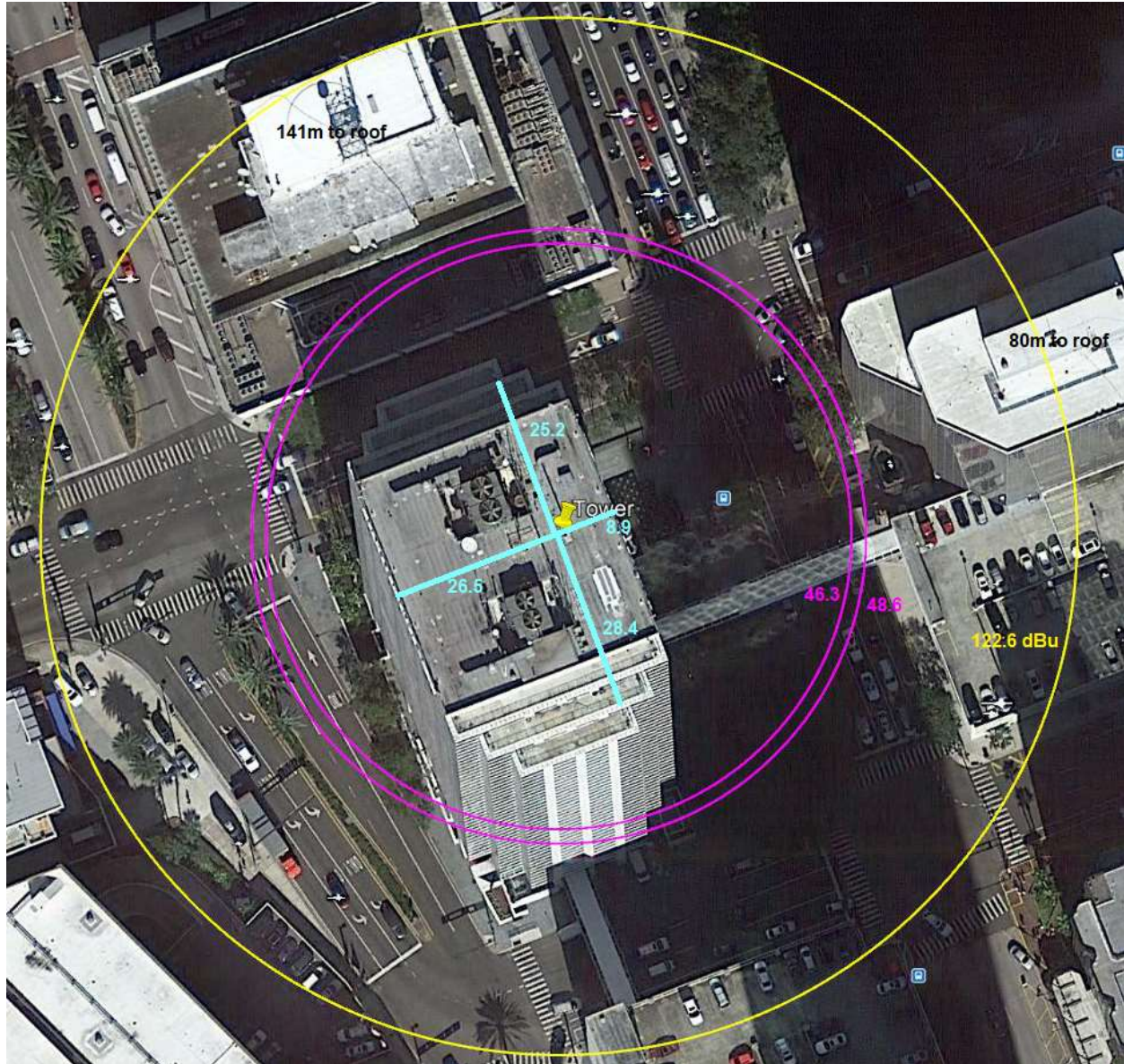
Prepared by
Michelle Bradley
REC Networks

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

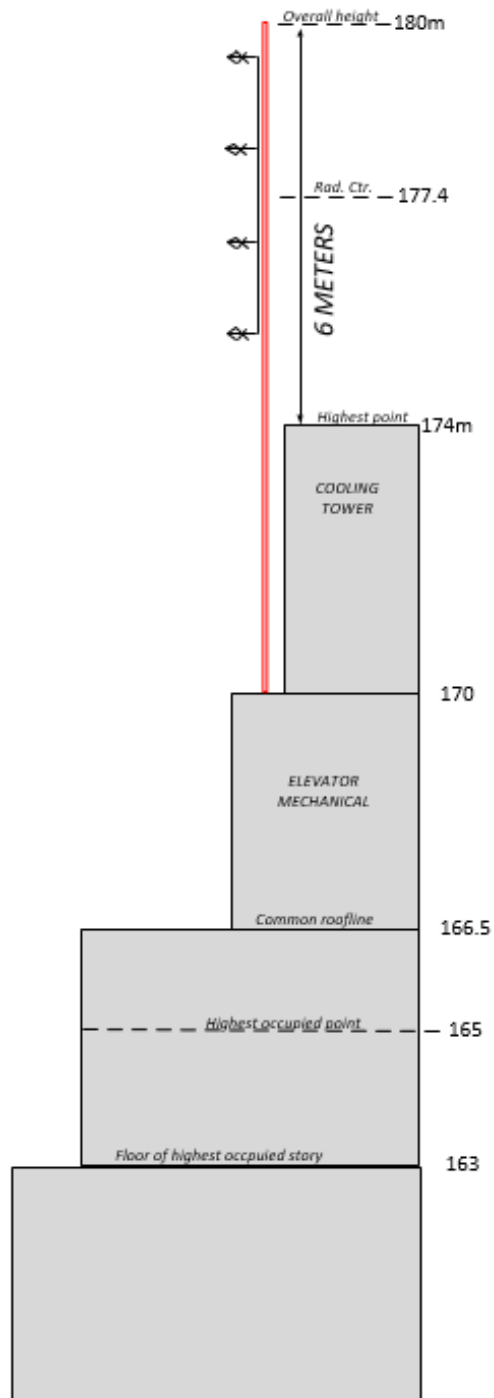
As shown on the previous photo, below 165 meters above ground level, the 122.6 dBu interfering contour does not reach inside of any occupied structure. Only in a small area outside of any occupied structures.

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.