

**Compliance with 47 C.F.R. 73.525**

There are several considerations outlined in 47 C.F.R. 73.525 for TV Channel 6 protection. Outlined below are the various factors as they apply to the proposed operation and WLNS-TV.

**1) Distance between proposed operation and WLNS-TV**

47 C.F.R. 73.525(a)(1) requires a minimum separation of 211 km for a channel 206 operation. The distance between the proposed station and WLNS-TV is 102.19 km.

**2) Population Limitation**

When a proposed non-commercial station is not co-located with the channel 6 station question, the applicant is required to show that the interference area (as predicted by the procedures outlined in 47 C.F.R. 73.525(e)(1)) contains no more than 3,000 persons.

Per 47 C.F.R. 73.525(e)(4), if an applicant chooses to use mixed polarity, the permissible ERP is determined by the formula:  $[H + (V/A)]$  is not greater than P

Where: H = the horizontally polarized ERP in kilowatts for mixed polarity

V = the vertically polarized ERP in kilowatts for mixed polarity

A = 40 (if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more), or 10 (if it does not)

P = the maximum permitted horizontally polarized-only power in kilowatts.

Since the predicted interference area lies within the limits of a city of 50,000 persons or more, the value of 10 was used for A, giving the result:

$$[25.0 + (25.0/10)] = 27.5 \text{ kilowatts}$$

All population limits were calculated using the maximum permitted horizontally polarized-only power of 27.5 kilowatts. The actual population figures are contained in Exhibit 18-B, and a map of the interference area is shown in Exhibit 18-C.

For the reasons outlined above, the proposed operation fully complies with the provisions of 47 C.F.R. 73.525.

**73.525 Compliance**

Population in the predicted interference area was determined using the centroid method and the 2000 census. The predicted interference contour (of the theoretical horizontal component of 27.5 kilowatts) crosses the WLNS channel 6 grade B (47 dBu F(50,50)) contour (see Exhibit 18-C).

The predicted interference contour is determined from 47 C.F.R. 73.599 Figure 1 for channel 206 to be 63.5 dBu (see Exhibit 18-D for a tabulation of the WLNS protected contour values and the corresponding channel 206 interfering contours).

In accordance with 73.525(e)(1)(iii), an additional 6 dB adjustment has been made for receiving antenna directivity for the area outside the WLNS grade A contour, but within the grade B contour. Since the azimuth between the proposed facility and WLNS is 198.4°, the adjusted value of 69.5 dBu is used between 88.4° and 308.4°, clockwise and the standard value of 63.5 dBu is used between 88.3° and 308.5°, counterclockwise.

Since the only network affiliation for WLNS is CBS, then per 47 C.F.R. §73.525(e)(3)(iii), the persons that meet the following criteria shall be subtracted: 1) located outside of WLNS's Area of Dominant Influence (ADI)<sup>1</sup>, 2) outside WLNS's Grade A (68 dBu F(50,50)) field strength contour, and 3) within the predicted city grade (74 dBu F(50,50)) field strength contour for WNEM-TV (whose only network affiliation is also CBS).

Exhibit 18-C shows the 47 dBu F(50,50) contour for WLNS, the corresponding F(50,10) interfering contour for the proposed channel 206 facility, and the WNEM 74 dBu F(50,50) contour. The entire predicted interference area is within the WNEM city grade contour; thus, there is no applicable population within the interference area.

Therefore, the proposed operation is within the limitations of 47 CFR 73.525(c).

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<sup>1</sup> Nielsen's current Designated Market Area (DMA) was used in place of the outdated ADI information.

# Exhibit 18-C

## WTRK.P

BPED20040331AVG  
 Latitude: 43-33-42 N  
 Longitude: 083-58-52 W  
 ERP: 27.50 kW  
 Channel: 206  
 Frequency: 89.1 MHz  
 AMSL Height: 296.0 m  
 Elevation: 183.0 m  
 Horiz. Pattern: Directional  
 Vert. Pattern: No

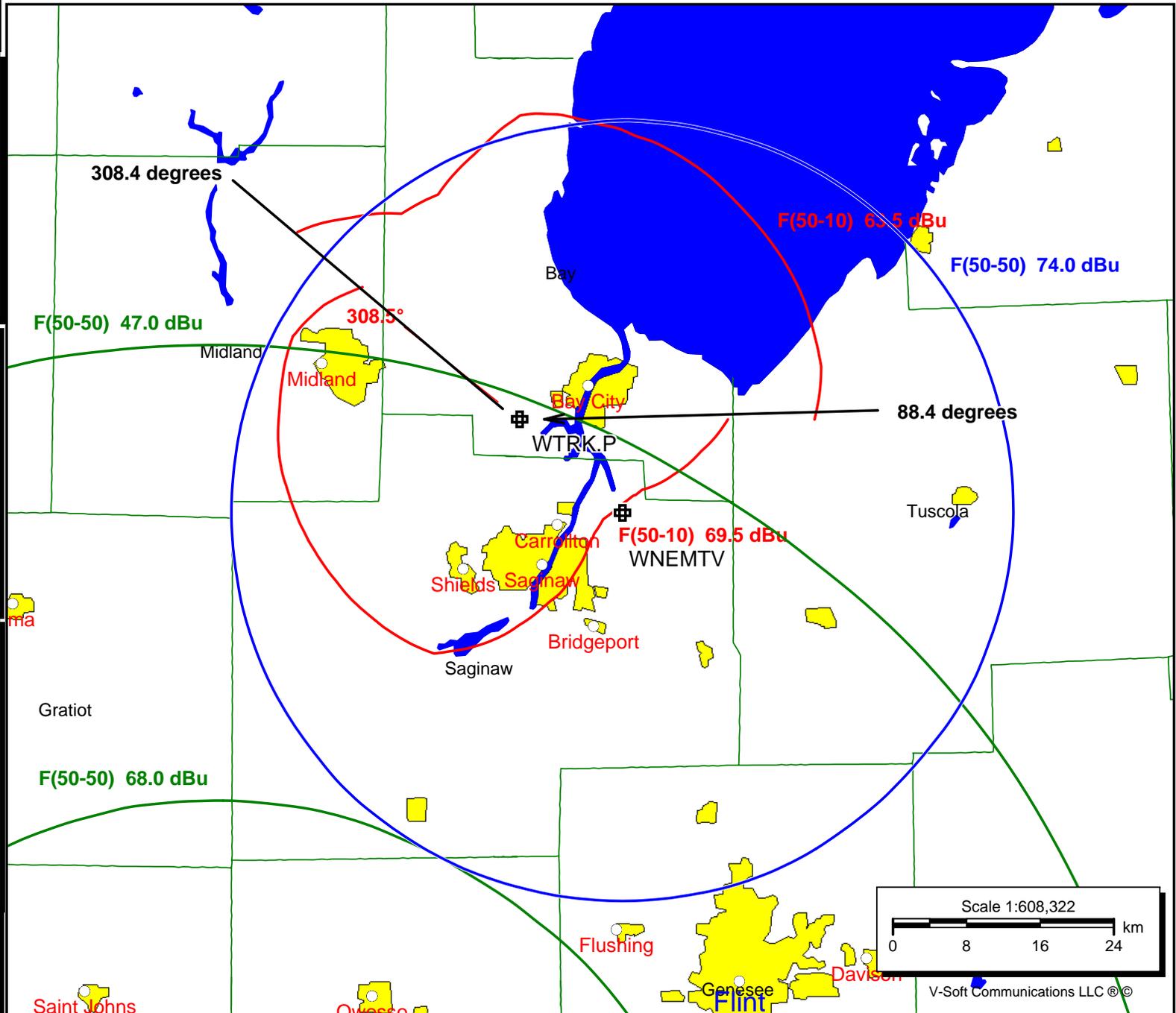
## WLNSTV

BLCT20020103AAA  
 Latitude: 42-41-19 N  
 Longitude: 084-22-35 W  
 ERP: 100.00 kW  
 Channel: 06-  
 Frequency: 84.5 MHz  
 AMSL Height: 577.0 m  
 Elevation: 272.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: Yes  
 Elec Tilt: 0.0

## WNEMTV

BLCT1961  
 Latitude: 43-28-13 N  
 Longitude: 083-50-35 W  
 ERP: 100.00 kW  
 Channel: 05-  
 Frequency: 78.5 MHz  
 AMSL Height: 488.0 m  
 Elevation: 177.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: Yes  
 Elec Tilt: 0.0

- WTRK.P
- WLNSTV
- WNEMTV



## Channel 6 vs. Channel 206

Channel 6 Contour	Value from 73.599	Channel 206 Contour	Adjusted 6 dB
47 (grade B)	16.5	63.5	69.5
48	15.3	63.3	69.3
49	14.2	63.2	69.2
50	13.1	63.1	69.1
51	12.2	63.2	69.2
52	11.3	63.3	69.3
53	10.5	63.5	69.5
54	9.7	63.7	69.7
55	9.0	64.0	70.0
56	8.3	64.3	70.3
57	7.7	64.7	70.7
58	7.1	65.1	71.1
59	6.5	65.5	71.5
60	6.0	66.0	72.0
61	5.5	66.5	72.5
62	5.0	67.0	73.0
63	4.5	67.5	73.5
64	4.0	68.0	74.0
65	3.7	68.7	74.7
66	3.3	69.3	75.3
67	2.8	69.8	75.8

Channel 6 Contour	Value from 73.599	Channel 206 Contour	Adjusted 6 dB
68 (grade A)	2.5	70.5	76.5
69	2.3	71.3	77.3
70	2.0	72.0	78.0
71	1.7	72.7	78.7
72	1.4	73.4	79.4
73	1.3	74.3	80.3
74	0.9	74.9	80.9
75	0.7	75.7	81.7
76	0.5	76.5	82.5
77	0.4	77.4	83.4
78	0.1	78.1	84.1
79	-0.1	78.9	84.9
80	-0.2	79.8	85.8
81	-0.4	80.6	86.6
82	-0.6	81.4	87.4
83	-0.7	82.3	88.3
84	-0.9	83.1	89.1
85	-1.1	83.9	89.9
86	-1.2	84.8	90.8
87	-1.4	85.6	91.6
88	-1.6	86.4	92.4
89	-1.7	87.3	93.3
90	-1.8	88.2	94.2