

EXHIBIT 13  
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OVERLAP REQUIREMENTS  
Kent State University  
Ashland, OH

Figure 13.0 is an allocation study showing the interfering contours for the proposed facilities in relation to the protected contours for all FM broadcast and FM translator stations operating on channels 222 through 228 which require protection consideration. As shown in this figure, these proposed operating facilities fail to provide the contour protection required by Section 74.1204(a) of the FCC Rules to second adjacent channel application BNPFT-20030317AHY - Ashland, Ohio, which proposes operation on Channel 227. As is documented below in more detail, however, the proposed facilities are not likely to result in any actual interference to the facilities proposed in the Channel 227 application. Thus, based on this lack of interference, Section 74.1204(d) of the FCC Rules permits the attached application to be granted in spite of this prohibited contour overlap.

Section 74.1204(a) of the FCC Rules prohibits any overlap between the proposed 100 dBu contour and the 60 dBu protected contour for the proposed channel 227 translator. Compliance with this requirement, however, is obviously not possible from this site, since the proposed site is located within the 60 dBu protected contour for the proposed channel 227 translator facilities.

Figure 13.1 is a map exhibit depicting the predicted 100 dBu contour for the proposed facilities. As shown in this figure, the proposed 100dBu contour extends 600 meters from the proposed site. This figure also shows, however, that there are buildings and public highways located within this distance from the proposed site. For this reason,

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it was necessary to undertake a more detailed analysis to document that there is no population that is predicted to receive interference within this area of prohibited overlap.

As part of this detailed analysis, it was determined that the predicted signal strength for the facilities proposed in the Channel 227 application at the proposed site is 64.1 dBu.<sup>1</sup> Based on the 40 dB undesired to desired (“U/D”) signal ratio specified for third adjacent stations in Section 74.1204(a)(3) of the FCC Rules, a signal level exceeding 104.1 dBu would be required to cause predicted interference to the proposed channel 227. The vertical radiation pattern data for the proposed circularly polarized antenna was utilized in conjunction with free space propagation prediction techniques to calculate the distance to the 104.1 dBu contour for the proposed facilities at depression angles ranging from 0° down through 90°. The result of these calculations are tabulated in Table 13.2 and depicted in Figure 13.2, which shows a side view of the predicted 104.1 dBu contour for this proposed antenna system. As shown in this figure, the predicted 104.1 dBu contour for these proposed operating facilities never reaches ground level, with its closest approach being 14.8 meters (49 feet) at a depression angle of 35°. Since, as shown in Figure 13.1, there are no tall buildings or other publicly accessible tall structures located near the proposed site, it is obvious that there is no population within the area where this overlap would result interference being predicted to the proposed in the Channel 227 application. Thus, pursuant to Section 74.1204(d) of the FCC Rules, the attached application can be granted in spite of this prohibited contour overlap, due to the total lack of population within the area of predicted interference. If it is

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<sup>1</sup>These signal strength calculations were made using the F(50,50) curves from Section 73.333 of the FCC Rules and terrain data extracted from the NGDC 30 second terrain database.

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deemed to be necessary, a waiver of Section 74.1204(a) of the FCC Rules is respectfully requested with regard to this situation.

It should be noted that the proposed facilities will operate with an effective radiated power of 80 watts. As a result, pursuant to Section 73.1204(g) of the FCC Rules, it is not necessary to demonstrate compliance with the intermediate frequency separation requirements outlined in Section 73.207 of the FCC Rules.

The proposed transmitter site lies within 320 kilometers of the common border between the United States and Canada. At its farthest point, the proposed 34 dBu contour will extend 37.8 kilometers from the proposed site, and at no point does it cross the Canadian border. Since this distance is less than 60 kilometers and the proposed facilities will operate at a power level that is less than 250 watts, the proposed facilities will fully comply with Section 4.3 of the Working Arrangement for Allotment and Assignment of FM Broadcasting Channels 201-300 Under the Canadian-U.S.A FM Broadcasting Agreement of 1947.



**PROPOSED SITE**  
**CH 225**  
**PROPOSED 100 dBu**  
**PROPOSED 94 dBu**

**PROPOSED**  
**54 dBu**

**WZAK**  
**CH 226B**

**BNPFT-20030317AHY**  
**60 dBu**

**PROPOSED**  
**48 dBu**

**PROPOSED**  
**40 dBu**

**BNPFT-20030317AHY**  
**CH 227**

**83°**

**41°**

**WQEL**  
**60 dBu**

**82°**

**41°**

**PROPOSED**  
**34 dBu**

**WQEL**  
**CH 224A**

**WZAK**  
**54 dBu**

**WDJQ**  
**CH 223B**

**BNPFT-20030317MQE**  
**60 dBu**

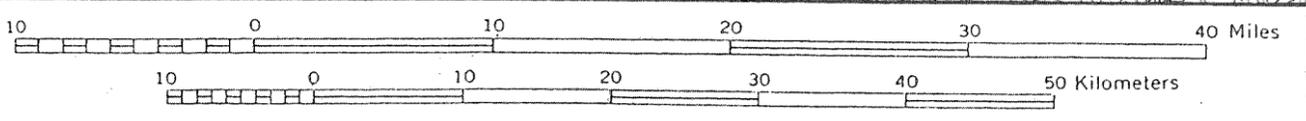
**BNPFT-20030310ASB**  
**CH 225**

**WDJQ**  
**54 dBu**

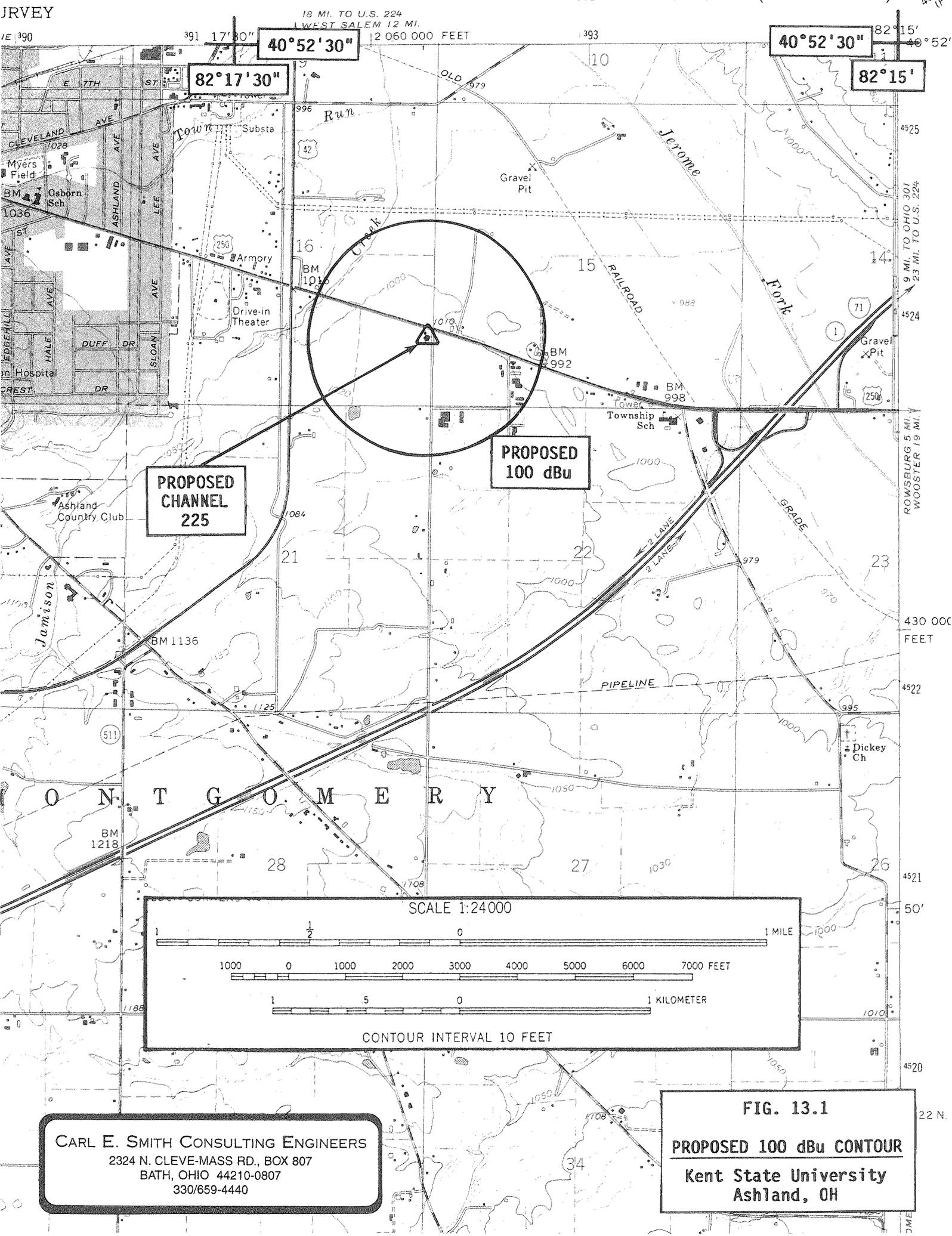
**BNPFT-20030317MQE**  
**CH 225**

**BNPFT-20030310ASB**  
**60 dBu**

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**FIG. 13.0**  
**ALLOCATION STUDY**  
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**Ashland, OH**



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FIG. 13.1  
PROPOSED 100 dBu CONTOUR  
Kent State University  
Ashland, OH

TABLE 13.2

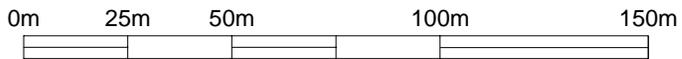
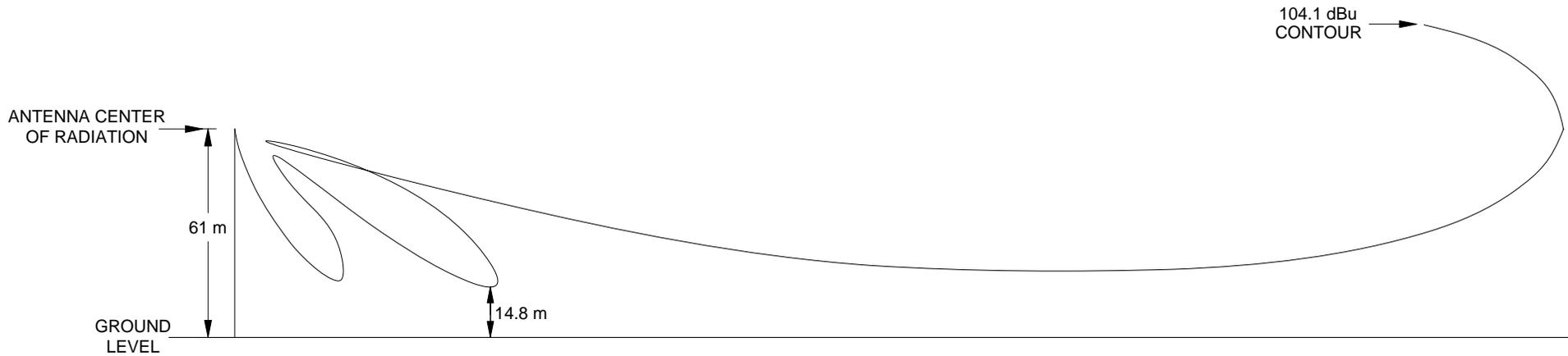
PROPOSED 104.1 DBU CONTOUR

Kent State University  
Ashland, OH

<u>Depression Angle (Degrees)</u>	<u>Relative Field</u>	<u>ERP (dBk)</u>	<u>104.1 dBu Contour* (Meters)</u>
0	1.000	-10.97	389.6
5	0.892	-11.96	349.1
10	0.611	-15.25	239.1
15	0.265	-22.50	103.8
20	0.026	-42.67	10.2
25	0.195	-25.17	76.3
30	0.227	-23.85	88.8
35	0.152	-27.33	59.5
40	0.040	-38.93	15.6
45	0.061	-35.26	23.9
50	0.124	-29.10	48.5
55	0.138	-28.17	54.0
60	0.120	-29.39	46.9
65	0.087	-32.18	34.0
70	0.054	-36.32	21.1
75	0.026	-42.67	10.2
80	0.009	-51.88	3.5
85	0.002	-64.95	0.8
90	0.000	0	0.0

Horizontal ERP = 80 Watts = -10.97dBk

\* - Contour distance calculated using free space calculation techniques.



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FIG. 13.2  
 PROPOSED 104.1 dBu CONTOUR  
 KENT STATE UNIVERSITY  
 ASHLAND, OH