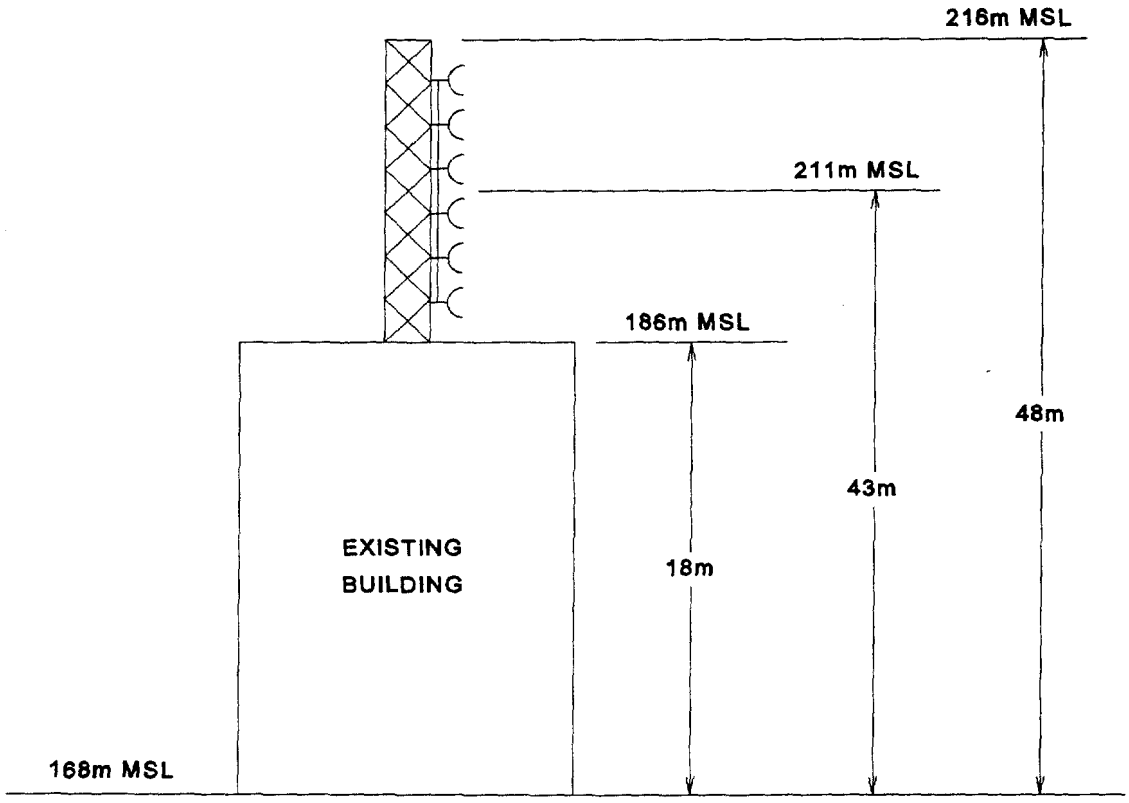
WVBTVP1 7/15/97

REGISTRATION IS NOT
REQUIRED FOR THIS
ANTENNA STRUCTURE.



NOT TO SCALE

NL - 38° 25' 26"

WL - 82° 25' 39"

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BATH, OHIO 44210-0807
(216) 659-4440

FIG. 3.0

VERTICAL PLAN VIEW

WEST VIRGINIA BOARD OF TRUSTEES
HUNTINGTON, WV

TABLE 3.1

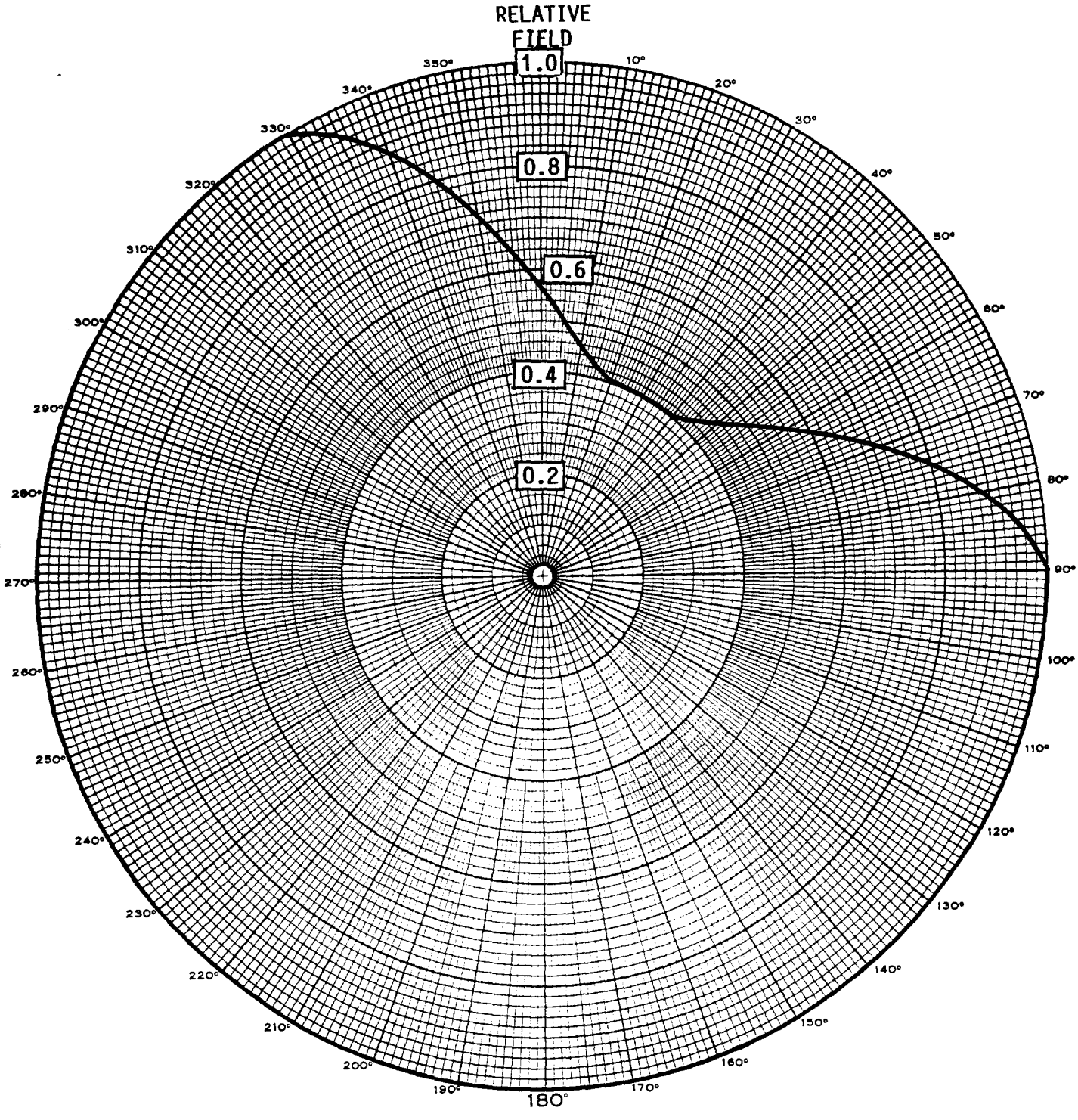
WMUL PROPOSED
DIRECTIONAL PATTERN
West Virginia Board of Trustees
Huntington, WV

Azimuth (Degrees)	Relative Field	ERP (dBk)	ERP (kW)
0	0.565	4.58	2.87
10	0.450	2.60	1.82
20	0.400	1.58	1.44
30	0.400	1.58	1.44
40	0.400	1.58	1.44
45	0.425	2.11	1.62
50	0.450	2.60	1.82
60	0.565	4.58	2.87
70	0.710	6.57	4.53
80	0.890	8.53	7.12
90	1.000	9.54	9.00
100	1.000	9.54	9.00
110	1.000	9.54	9.00
120	1.000	9.54	9.00
130	1.000	9.54	9.00
135	1.000	9.54	9.00
140	1.000	9.54	9.00
150	1.000	9.54	9.00
160	1.000	9.54	9.00
170	1.000	9.54	9.00
180	1.000	9.54	9.00
190	1.000	9.54	9.00
200	1.000	9.54	9.00

TABLE 3.1 (cont'd)

Azimuth (Degrees)	Relative Field	ERP (dBk)	ERP (kW)
210	1.000	9.54	9.00
220	1.000	9.54	9.00
225	1.000	9.54	9.00
230	1.000	9.54	9.00
240	1.000	9.54	9.00
250	1.000	9.54	9.00
260	1.000	9.54	9.00
270	1.000	9.54	9.00
280	1.000	9.54	9.00
290	1.000	9.54	9.00
300	1.000	9.54	9.00
310	1.000	9.54	9.00
315	1.000	9.54	9.00
320	1.000	9.54	9.00
330	1.000	9.54	9.00
340	0.890	8.53	7.12
350	0.710	6.57	4.53

Maximum ERP=9.00 kilowatts=9.54 dBk



MAXIMUM ERP = 9 kW

FIG. 3.1

WMUL PROPOSED
DIRECTIONAL PATTERN

West Virginia Board of Trustees
Huntington, WV

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BATH, OHIO 44210-0317
216/659-4440

K+E 10 X 10 TO THE INCH • 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

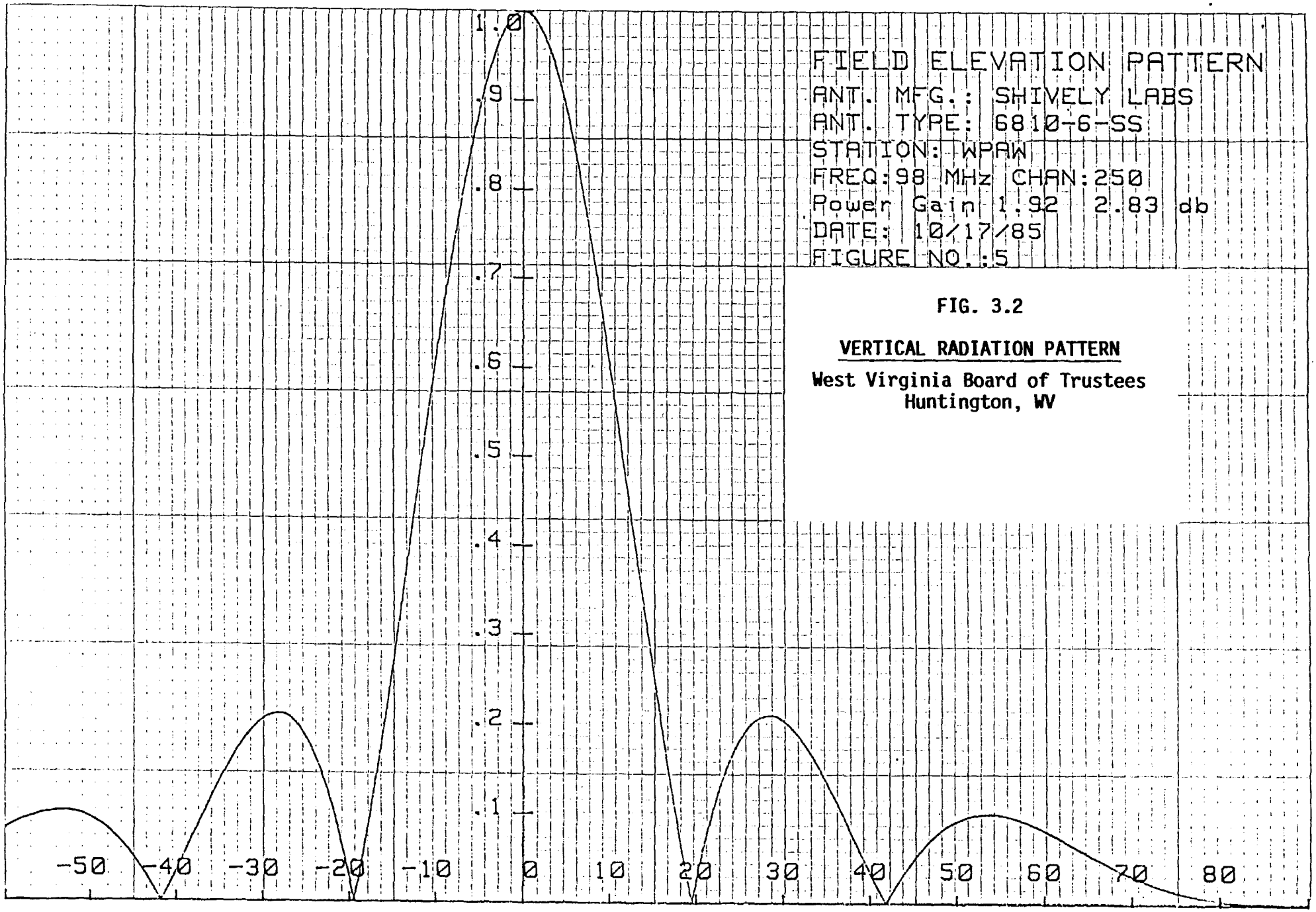


FIG. 3.2

VERTICAL RADIATION PATTERN

West Virginia Board of Trustees
Huntington, WV

4.0 PROPOSED 1 mV/m CONTOUR

The WMUL proposed 1 mV/m contour is listed in Table 4.0. Because a directional antenna is involved, this contour was projected at azimuth intervals of no more than ten degrees to insure sufficient detail. Only the eight cardinal radials, however, were used in calculating the overall height above average terrain. Using these average elevations and the proposed value of effective radiated power for each bearing, the contour was computed as specified by Section 73.313 of the FCC Rules. Figure 4.0 depicts this contour on an appropriate map base in relation to the 1 mV/m contour for the licensed WMUL facilities, the 1 mV/m contour for the facilities originally proposed in this application, and the Huntington city limits.

The population within the proposed 1 mV/m contour was determined from the 1990 U.S. Census and West Virginia, Kentucky, and Ohio minor civil division maps using proportional parts of the civil divisions covered. The land area within the proposed 1 mV/m was measured with a polar planimeter. These values are listed in Paragraph 15 of FCC Form 340, Section V-B.

WMUL PROPOSED CH201B1
60.0 dBu CONTOUR
(F(50,50) Curves Utilized)

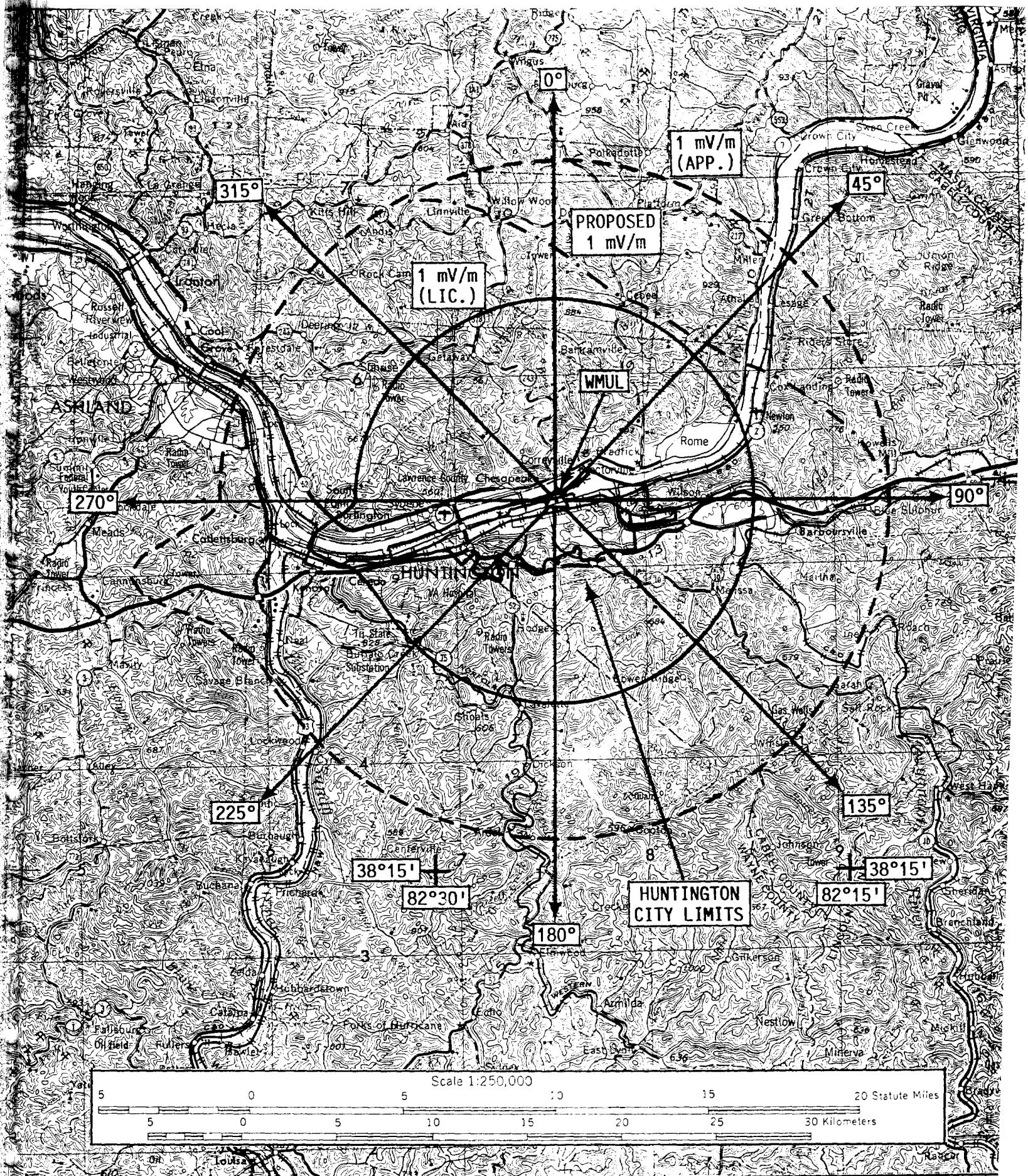
BEARING (Degrees)	AVERAGE TERRAIN ELEVATION (meters)	ANTENNA HAAT (meters)	HORIZONTAL RELATIVE FIELD	HORIZONTAL ERP (dBk)	HORIZONTAL ERP (kW)	DISTANCE TO CONTOUR (km)
0.0 *	241.9	-30.9	0.565	4.58	2.873	13.1
10.0	218.6	-7.6	0.450	2.61	1.822	11.7
20.0	202.9	8.1	0.400	1.58	1.440	11.1
30.0	221.0	-10.0	0.400	1.58	1.440	11.1
40.0	234.4	-23.4	0.400	1.58	1.440	11.1
45.0 *	219.1	-8.1	0.425	2.11	1.626	11.4
50.0	211.2	-0.2	0.450	2.61	1.822	11.7
60.0	194.1	16.9	0.565	4.58	2.873	13.1
70.0	184.8	26.2	0.710	6.57	4.537	14.6
80.0	203.9	7.1	0.890	8.53	7.129	16.5
90.0 *	190.8	20.2	1.000	9.54	9.000	17.6
100.0	193.3	17.7	1.000	9.54	9.000	17.6
110.0	190.4	20.6	1.000	9.54	9.000	17.6
120.0	211.0	0.0	1.000	9.54	9.000	17.6
130.0	236.0	-25.0	1.000	9.54	9.000	17.6
135.0 *	242.5	-31.5	1.000	9.54	9.000	17.6
140.0	243.7	-32.7	1.000	9.54	9.000	17.6
150.0	228.9	-17.9	1.000	9.54	9.000	17.6
160.0	233.9	-22.9	1.000	9.54	9.000	17.6
170.0	239.3	-28.3	1.000	9.54	9.000	17.6
180.0 *	234.0	-23.0	1.000	9.54	9.000	17.6
190.0	219.3	-8.3	1.000	9.54	9.000	17.6
200.0	233.9	-22.9	1.000	9.54	9.000	17.6
210.0	225.9	-14.9	1.000	9.54	9.000	17.6
220.0	222.3	-11.3	1.000	9.54	9.000	17.6
225.0 *	213.3	-2.3	1.000	9.54	9.000	17.6
230.0	214.4	-3.4	1.000	9.54	9.000	17.6
240.0	206.1	4.9	1.000	9.54	9.000	17.6
250.0	175.7	35.3	1.000	9.54	9.000	19.0
260.0	160.7	50.3	1.000	9.54	9.000	22.7
270.0 *	197.5	13.5	1.000	9.54	9.000	17.6
280.0	210.6	0.4	1.000	9.54	9.000	17.6
290.0	224.4	-13.4	1.000	9.54	9.000	17.6
300.0	234.9	-23.9	1.000	9.54	9.000	17.6
310.0	238.3	-27.3	1.000	9.54	9.000	17.6
315.0 *	241.6	-30.6	1.000	9.54	9.000	17.6
320.0	227.1	-16.1	1.000	9.54	9.000	17.6
330.0	220.5	-9.5	1.000	9.54	9.000	17.6
340.0	202.6	8.4	0.890	8.53	7.129	16.5
350.0	227.2	-16.2	0.710	6.57	4.537	14.6

AVERAGE(*) = 222.6 meters

TABLE 4.0

WMUL PROPOSED
1 mV/m CONTOUR

West Virginia Board of Trustees
Huntington, WV



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216/659-4440

FIG. 4.0

WMUL LICENSED, APPLIED FOR, AND PROPOSED 1 mV/m CONTOURS

West Virginia Board of Trustees
Huntington, WV

5.0 PROPOSED SITE

The proposed site is located atop the Science Hall on the Marshall University Campus, in Huntington, Cabell County, West Virginia. Figures 5.0 and 5.1 are topographic map exhibits showing the location of this site.

There are no AM broadcast stations located within 3 kilometers of this site. Nor are there any FM, TV, or nonbroadcast radio facilities located within the immediate vicinity of this site which would be impacted by the construction and operation of the facilities proposed in the attached amendment.

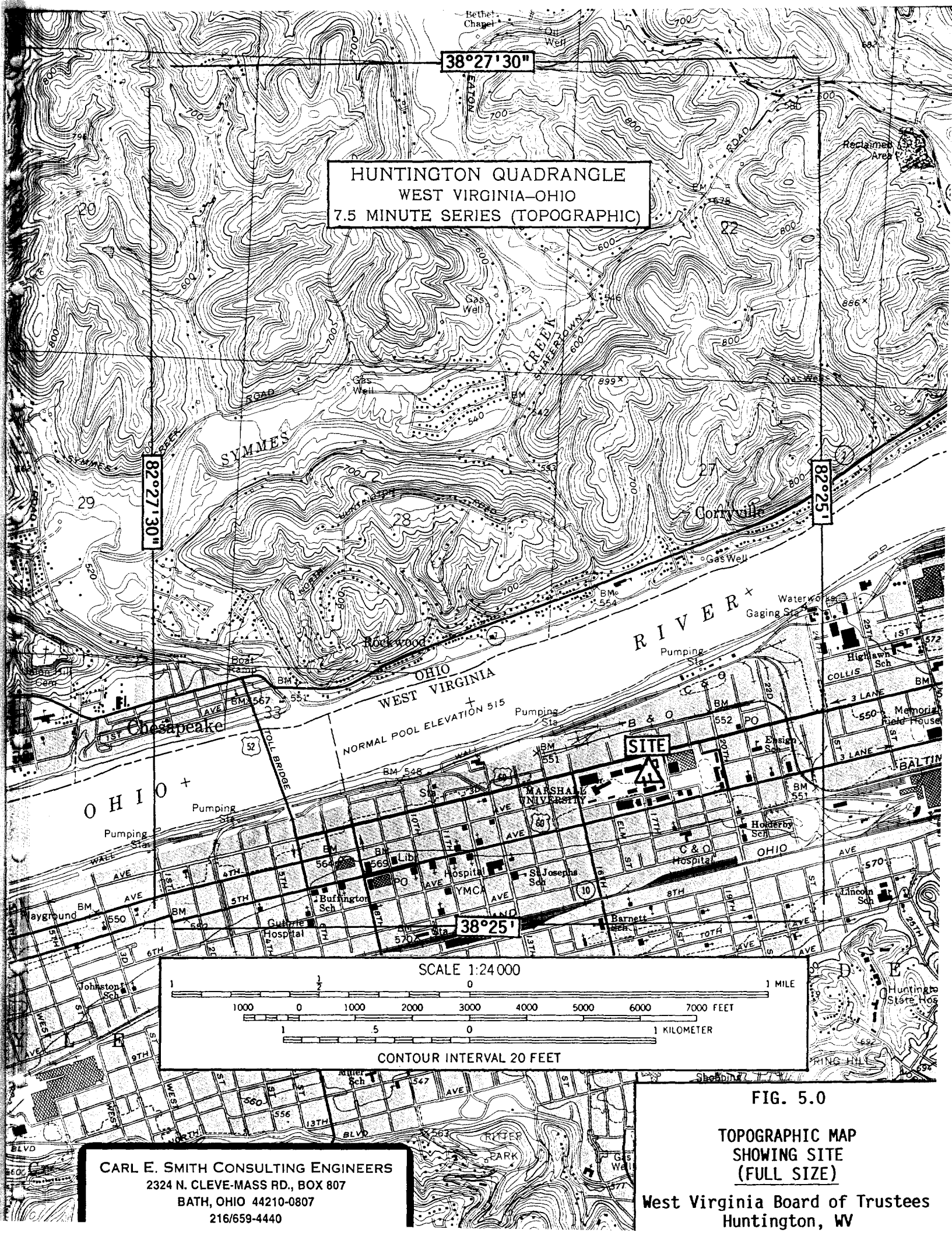


FIG. 5.0

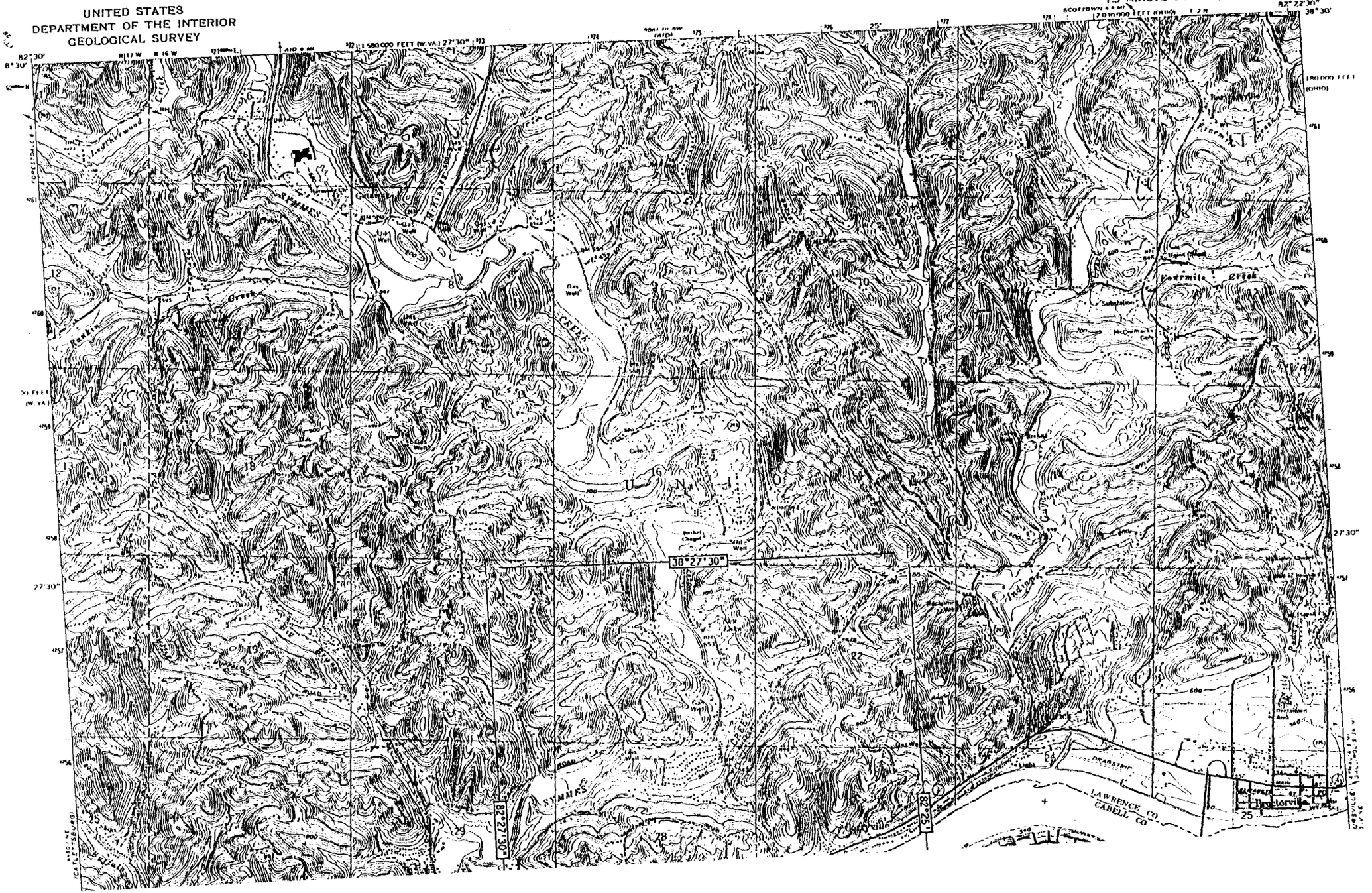
TOPOGRAPHIC MAP
SHOWING SITE
(FULL SIZE)

West Virginia Board of Trustees
Huntington, WV

CARL E. SMITH CONSULTING ENGINEERS
2324 N. CLEVE-MASS RD., BOX 807
BATH, OHIO 44210-0807
216/659-4440

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HUNTINGTON QUADRANGLE
WEST VIRGINIA-OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)



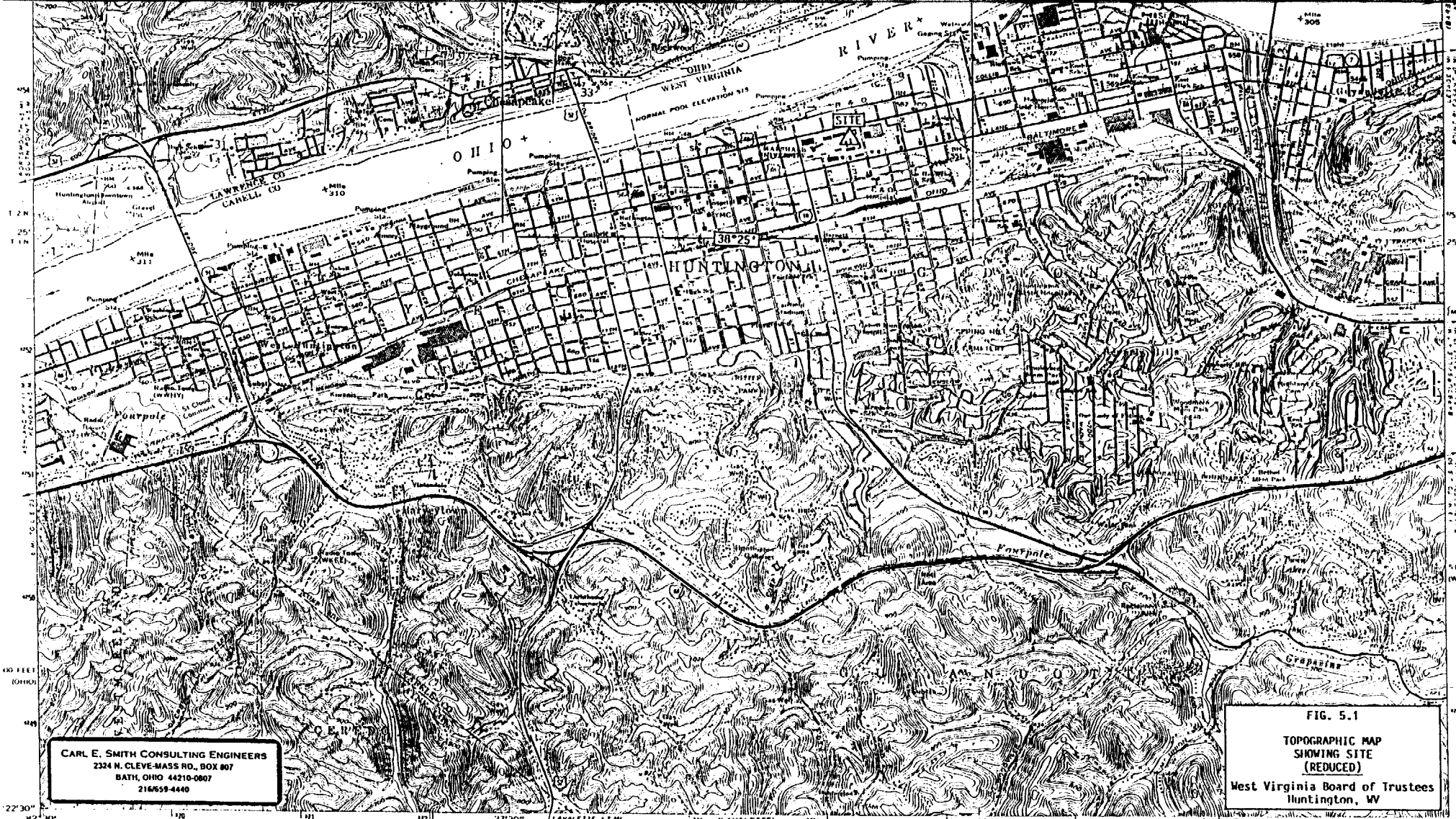


FIG. 5.1

TOPOGRAPHIC MAP
SHOWING SITE
(REDUCED)

West Virginia Board of Trustees
Huntington, WV

CARL E. SMITH CONSULTING ENGINEERS
2324 N. CLEVE-MASS RD., BOX 807
BATH, OHIO 44210-0807
216/659-4440

Mapped, edited, and published by the Geological Survey
Revised in cooperation with State of Ohio agencies

Control by USGS, USC&GS, and USCE

Topography by photogrammetric methods from aerial photographs taken 1955. Field checked 1957. Revised from aerial photographs taken 1967. Field checked 1968

Polyconic projection. 1927 North American datum
10,000-foot grids based on Ohio coordinate system, south zone, and West Virginia coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

The state boundary as shown represents the approximate position of the low water line as determined from U. S. Corps of Engineers Ohio River charts, surveyed 1914, and supplementary information

Red tint indicates areas in which only landmark buildings are shown

Ohio area lies within Congress Lands east of the Scioto River
Land lines based on the Ohio River base

MN
GN
4°
71 MILS
0°34'
6 MILS

UTM GRID AND 1985 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

To place on the predicted North American Datum 1983, move the projection lines 6 meters south and 11 meters west as shown by dashed corner ticks

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

OHIO

QUADRANGLE LOCATION

Revisions shown in purple compiled in cooperation with States of Ohio and West Virginia agencies from aerial photographs taken 1983. This information not field checked
Map edited 1985

ROAD CLASSIFICATION

Primary highway, all weather, hard surface
Light duty road, all weather, improved surface
Secondary highway, all weather, hard surface
Unimproved road, fair or dry weather

Interstate Route
U. S. Route
State Route

HUNTINGTON, W. VA.—OHIO
38082-D4-TF-024

1968
PHOTOREVISED 1985
DMA 4560 IV NW—SERIES V832