



**ENGINEERING EXHIBIT IN SUPPORT OF AN
APPLICATION FOR CONSTRUCTION PERMIT**

**WOSU FM CH 209B COLUMBUS, OHIO
89.7 MHZ – 40 kW ERP – DIRECTIONAL**

Facility ID: 66191
Applicant: THE OHIO STATE UNIVERSITY
December 2008

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FCC Form 340 – Section VII

Statement of Carl E. Gluck

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I am an engineering consultant employed by Carl T. Jones Corporation in Springfield, VA. I am a Certified Professional Broadcast Engineer (#50261) with the Society of Broadcast Engineers. I have been authorized by the Ohio State University to prepare this engineering statement, FCC Form 340 (Section VII), and the attached exhibits in support of an application for Construction Permit.

In this application the applicant proposes relocating its main transmitter site and utilizing a new directional antenna at the location presently authorized as WOSU's auxiliary transmitter site.

WOSU (FM) is licensed to serve Columbus, Ohio on 89.7 MHz with 13.5 kW and a non-directional antenna (FCC File No. BLED-19931020KC). With this application WOSU (FM) proposes to use a directional, 8-bay, half-wave spaced antenna with a center of radiation 417.8 meters AMSL at an ERP of 40 kW. The proposal is considered to be a minor change under 47 CFR 73.3571(b) of the FCC Rules.

The proposed antenna site is at a tower presently used by WOSU (FM) for an auxiliary antenna (FCC File No. BXMLED-19960122KG). The Tower is registered in the FCC's Antenna Structure Registration database as ASR No. 1029036.

TRANSMITTER SITE

The proposed transmitter site is located at NAD 27 geographical coordinates:

40° 01' 02" North Latitude
083° 01' 11" West Longitude

ANTENNA SYSTEM

The proposed antenna system will consist of a new directional, 8- bay, half-wave spaced, antenna with a horizontal plane envelope pattern as shown in Exhibit 1.

FCC TOWER REGISTRATION

The proposed antenna structure registration number is 1029036. The tower is registered with an overall height of 426.7 meters above mean sea level. The site elevation is 221.9 meters above mean sea level.

BLANKETING INTERFERENCE AND STATION INTERACTION

In response to all complaints of blanketing interference the applicant will work to mitigate the interference in accordance with 47 CFR 73.508 and 73.318 of the Rules.

There is an FM broadcast translator station located at the proposed tower location: W294AH 294D 106.7 FM Columbus, OH, licensee: Sandyworld, Inc. In addition there are two licensed Low Power TV stations, WCSN-LP 32- Columbus, OH; and, WCPX-LP 48+ Columbus, OH. There are no AM Broadcast radio stations in the FCC's AM database located within 3.22 km of the proposed antenna location.

The applicant will work with the other facilities as necessary to resolve detrimental interaction of these facilities by the proposed facility, if any should occur.

COVERAGE CONTOURS

Exhibit 2 is a coverage plot showing the proposed F(50,50) 54 dBu (0.5 mV/m) and 60 dBu (1.0 mV/m) contours of the instant operation. The plot also shows the community of license, Columbus, Ohio. This exhibit demonstrates compliance with 47 CFR 73.515 and 73.1125.

COMPLETE ALLOCATION STUDY

Exhibit 3 is an allocation channel study of the proposed facility showing there is no prohibited contour overlap between WOSU (FM) as proposed and other broadcast stations. The Exhibit was created using a 30 arc-second data set from the USGS National Elevation Dataset USGS 30 meter data and based upon 360 radials.

Each station with less than 10 kilometers of protection spacing is plotted in Exhibits 3A through 3F to demonstrate the absence of contour overlap. In every case the requirements of 47 CFR 73.509 are satisfied.

TV CHANNEL 6 PROTECTION

The licensee of WSYX TV 6 (Analog) has provided a Consent to Application (a copy of which is provided as a separate exhibit to the instant application form).

INTERNATIONAL BORDERS

The proposed tower site is 196 km from the Canadian Border. This application satisfies all provisions of the US Canadian International Agreement.

ENVIRONMENTAL PROTECTION ACT

The proposed site is at an existing tower and is excluded from environmental processing under 47 CFR 1.1306.

Based on Worst Case considerations, the proposed facility is predicted to produce a power density of 0.00640 mV/cm^2 (Exhibit 4 shows a Radiation Study Summary of RF Radiation) at 2 meters above ground level. This represents only 3.20% of the FCC Guideline value for uncontrolled RFR environments.

Based on Worst Case considerations, WCSN-LP TV 32 is predicted to produce a power density of 0.00754 mV/cm^2 (Exhibit 4 shows a Radiation Study Summary of RF Radiation) at 2 meters above ground level. This represents only 1.95% of the FCC Guideline value for uncontrolled RFR environments.

Based on Worst Case considerations, WCPX-LP is predicted to produce a power density of 0.00939 mV/cm^2 (Exhibit 4 shows a Radiation Study Summary of RF Radiation) at 2 meters above ground level. This represents only 2.08% of the FCC Guideline value for uncontrolled RFR environments.

Based on Worst Case considerations, FM Translator W294AH is predicted to produce a power density of 0.00000 mV/cm^2 (Exhibit 4 shows a Radiation Study Summary of RF Radiation) at 2 meters above ground level. This represents 0.00% of the FCC Guideline value for uncontrolled RFR environments.

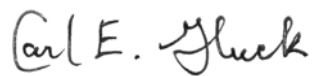
Therefore the proposed Total Percentage of the ANSI Value for Uncontrolled environments is only 7.22% of the limit.

Further, the applicant is committed to reducing power or ceasing operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic fields in excess of the FCC's Occupational Guidelines.

SUMMARY

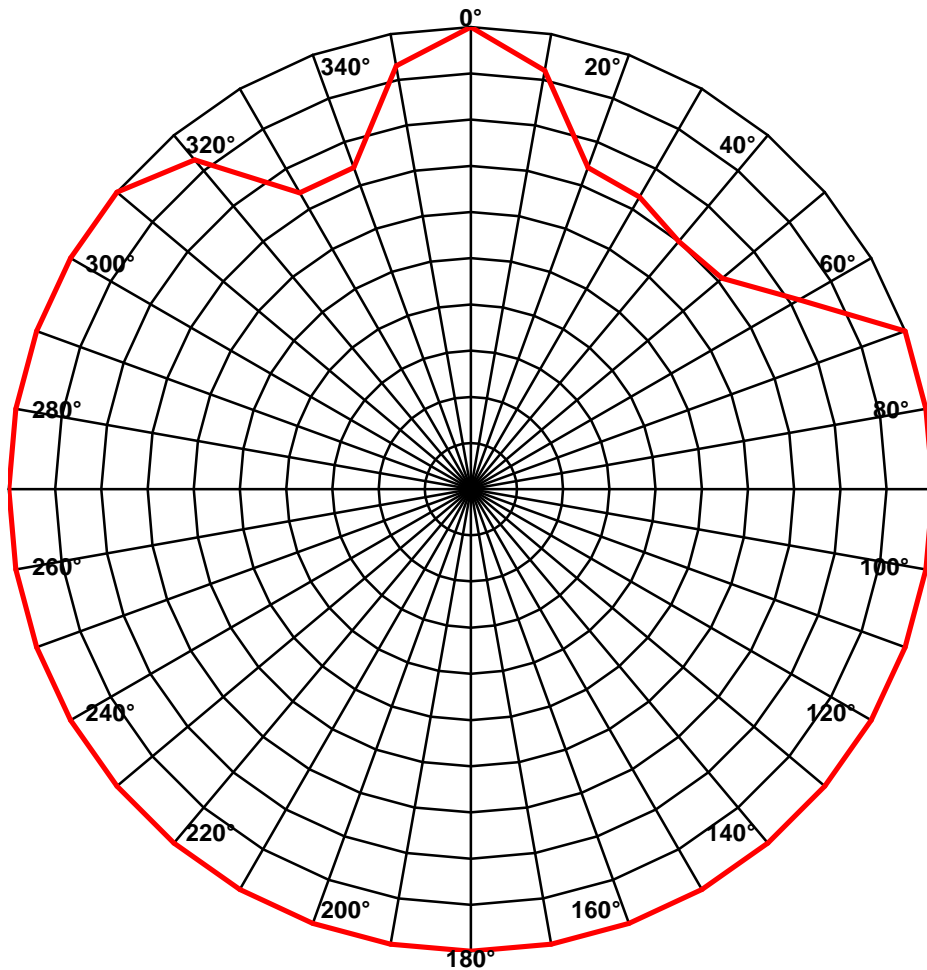
It is submitted that the proposal described herein complies fully with the rules and regulations of the Federal Communications Commission. This statement, FCC Form 340 Section VII, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

Dated December 12, 2008

A handwritten signature in black ink that reads "Carl E. Gluck". The signature is written in a cursive style with a large, stylized "C" and "G".

Carl E. Gluck

Exhibit 1



Azimuth (deg T.)	Relative Field	ERP (kilowatts)	ERP (dBk)
0	1.000	40.000	16.021
10	0.920	33.856	15.296
20	0.740	21.904	13.405
30	0.730	21.316	13.287
40	0.700	19.600	12.923
50	0.710	20.164	13.046
60	0.820	26.896	14.297
70	1.000	40.000	16.021
80	1.000	40.000	16.021
90	1.000	40.000	16.021
100	1.000	40.000	16.021
110	1.000	40.000	16.021
120	1.000	40.000	16.021
130	1.000	40.000	16.021
140	1.000	40.000	16.021
150	1.000	40.000	16.021
160	1.000	40.000	16.021
170	1.000	40.000	16.021
180	1.000	40.000	16.021
190	1.000	40.000	16.021
200	1.000	40.000	16.021
210	1.000	40.000	16.021
220	1.000	40.000	16.021
230	1.000	40.000	16.021
240	1.000	40.000	16.021
250	1.000	40.000	16.021
260	1.000	40.000	16.021
270	1.000	40.000	16.021
280	1.000	40.000	16.021
290	1.000	40.000	16.021
300	1.000	40.000	16.021
310	1.000	40.000	16.021
320	0.930	34.596	15.390
330	0.740	21.904	13.405
340	0.740	21.904	13.405
350	0.930	34.596	15.390

**DIRECTIONAL ANTENNA HORIZONTAL PLANE
ENVELOPE PATTERN IN RELATIVE FIELD
WOSU-FM, COLUMBUS, OHIO
CH 209B (89.7 MHz), 40.0 KW (DA-MAX), 168 m HAAT
SEPTEMBER, 2008**

Exhibit 2 - Proposed Coverage, WOSU 89.7 FM Columbus, OH CH209B

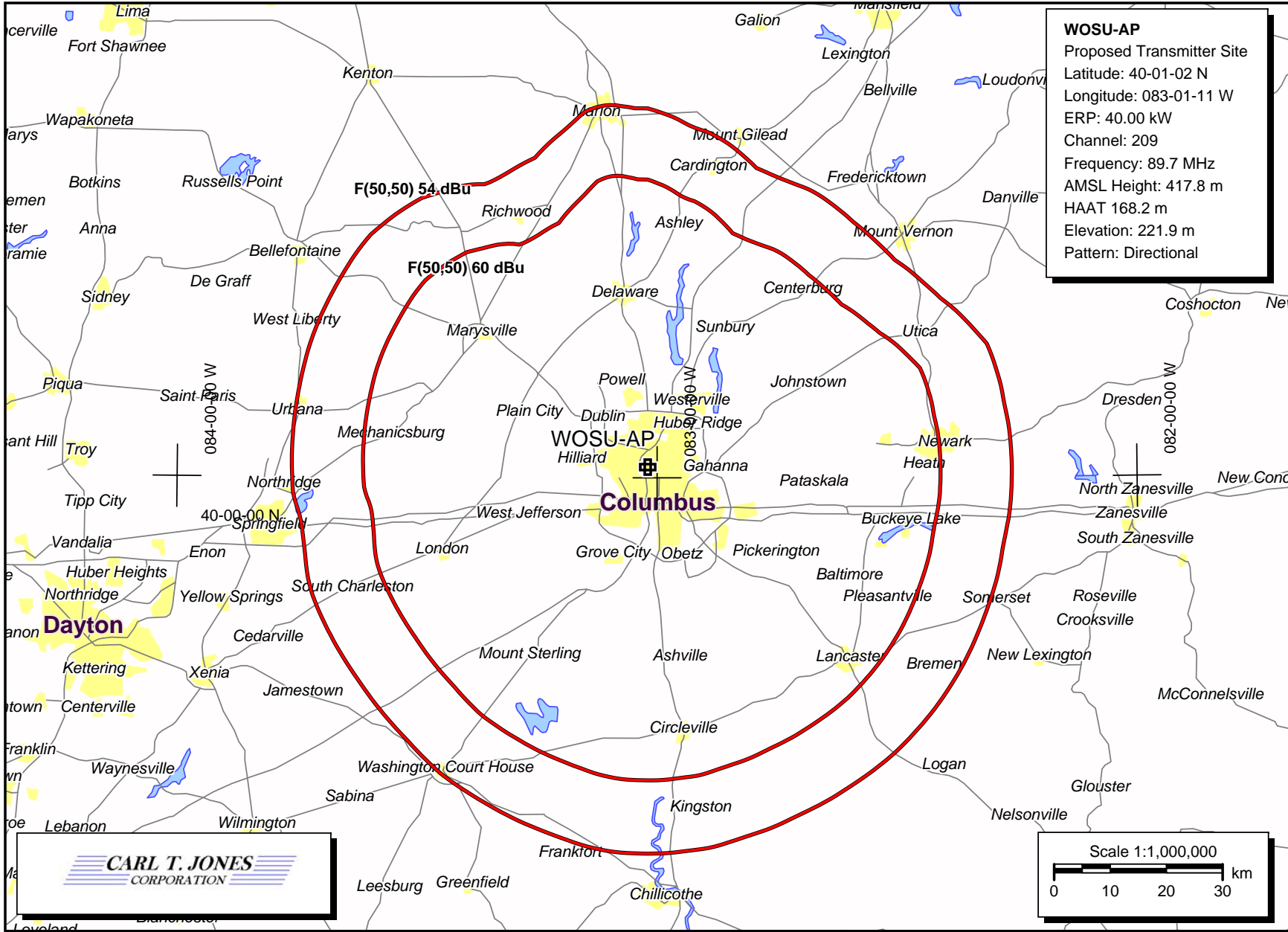


Exhibit 3 – Channel Study

The Ohio State University
WOSU FM 209B Columbus, Ohio

REFERENCE	CH# 209B - 89.7 MHz, Pwr= 40 kW, HAAT= 168.2 M, COR= 417.8 M	DISPLAY DATES
40 01 02.0 N.	Average Protected F(50-50)= 52.4 km	DATA 11-26-08
83 01 11.0 W.	Standard Directional	SEARCH 12-01-08

CH CITY	CALL	TYPE ANT		AZI. <--	DIST FILE #	LAT. LNG.			Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
209B Columbus	WOSU-FM	LIC OH	CY	180.8 0.8	8.8 BLED19931020KC	39 56 16.0 83 01 16.0	13.500 286	125.5 523	52.1 The Ohio State University	-172.4*<	-182.9*<		
06+1C Columbus	WSYX	LI OH	DCY	180.8 0.8	8.8 BLCT19931022KE	39 56 16.0 83 01 16.0	100.000 286	45.2 523	100.6 Wsyx Licensee, Inc.	195.5R	-136.9M		
209A Findlay	WTKC	LIC OH	CX	335.2 154.8	126.1 BLED20070614ABM	41 02 43.0 83 39 02.0	0.125 9	19.8 249	6.0 Church Of The Living God M	60.6	0.0<		
206A Delaware	WJJE	LIC OH	VX	25.6 205.7	47.3 BMLED20051017AAY	40 24 02.0 82 46 43.0	6.000 100	3.0 450	30.7 American Family Associatio	0.1	11.8		
209B Kent	WKSU-FM	CP OH	CX	44.2 225.1	166.7 BPED20070906AEI	41 04 58.0 81 38 02.0	12.000 277	119.1 596	48.6 Kent State University	2.8	0.4		
208B1 Dayton	WQRP	LIC OH	DCN	254.3 73.6	104.4 BLED19890112KC	39 45 28.0 84 11 36.0	6.000 64	36.7 336	24.1 Educational Media Foundati	17.2	5.0		
Share time operation with WDPS, Dayton, OH													
208A Dayton	WDPS	LIC OH	DEN	254.3 73.6	104.4 BLED19931213KA	39 45 28.0 84 11 36.0	6.000 64	36.7 336	24.1 Dayton City Schools	17.2	5.0		
Share time operation with WQRP, Dayton, OH													
208A Lexington	WFOT	CP OH	VX	23.3 203.5	85.9 BMPED20061122AGH	40 43 36.0 82 36 59.0	0.360 93	17.2 480	11.8 St. Gabriel Radio, Inc.	24.5	8.1		
209C3 Highland Heights	WNKU	LIC KY	DEN	229.2 48.3	165.1 BLED19850422KK	39 02 21.0 84 27 57.0	12.000 97	65.7 302	21.1 Northern Kentucky Universi	47.9	9.7		

Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference Zone = 1, Co to 3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.
 « = Station meets FCC minimum distance spacing for its class.
 "<" = Contour Overlap

Exhibit 3A - Protection to WJJE 206A Delaware, OH

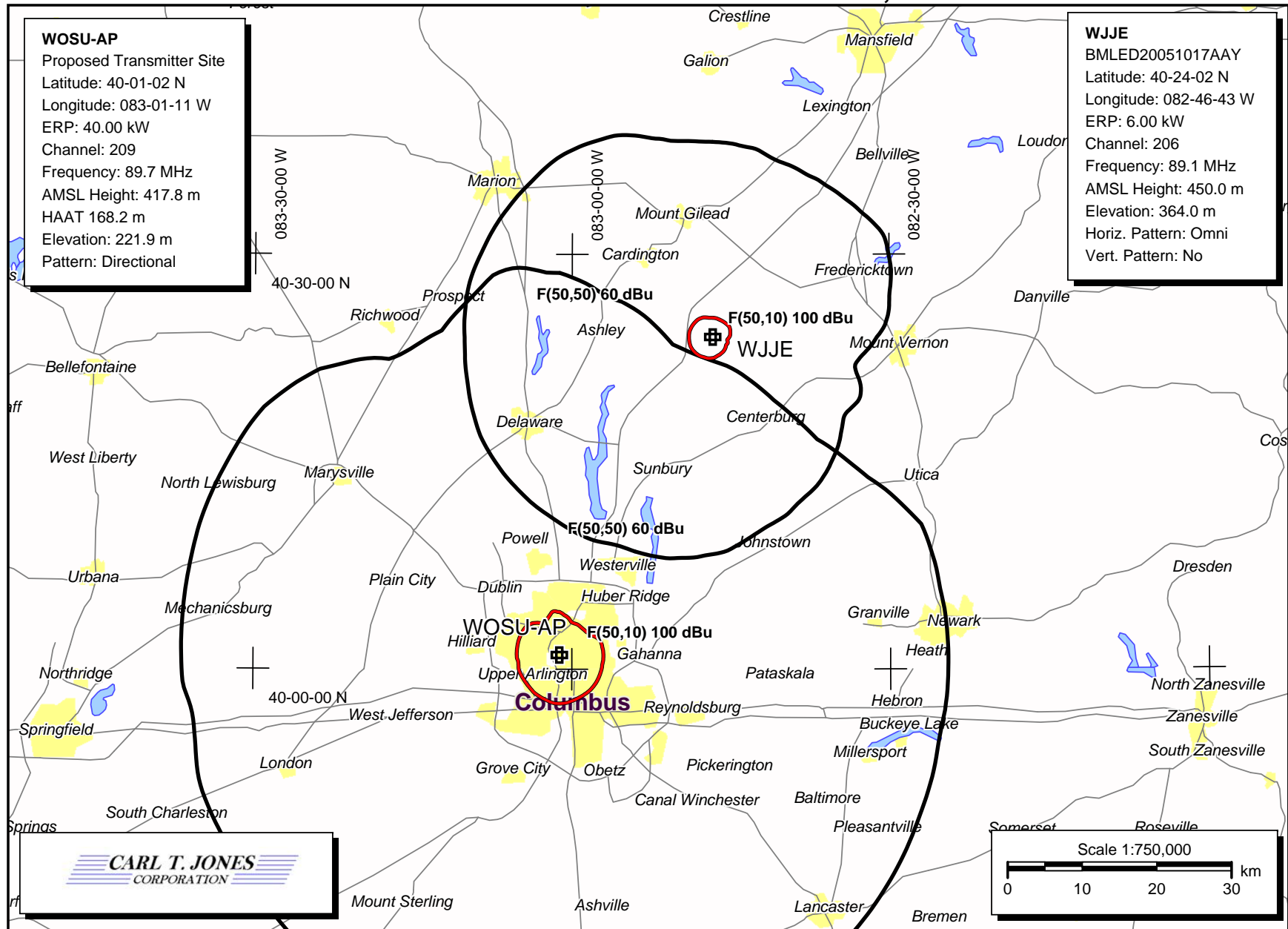


Exhibit 3B - Protection to WKSU CP 209B Kent, OH

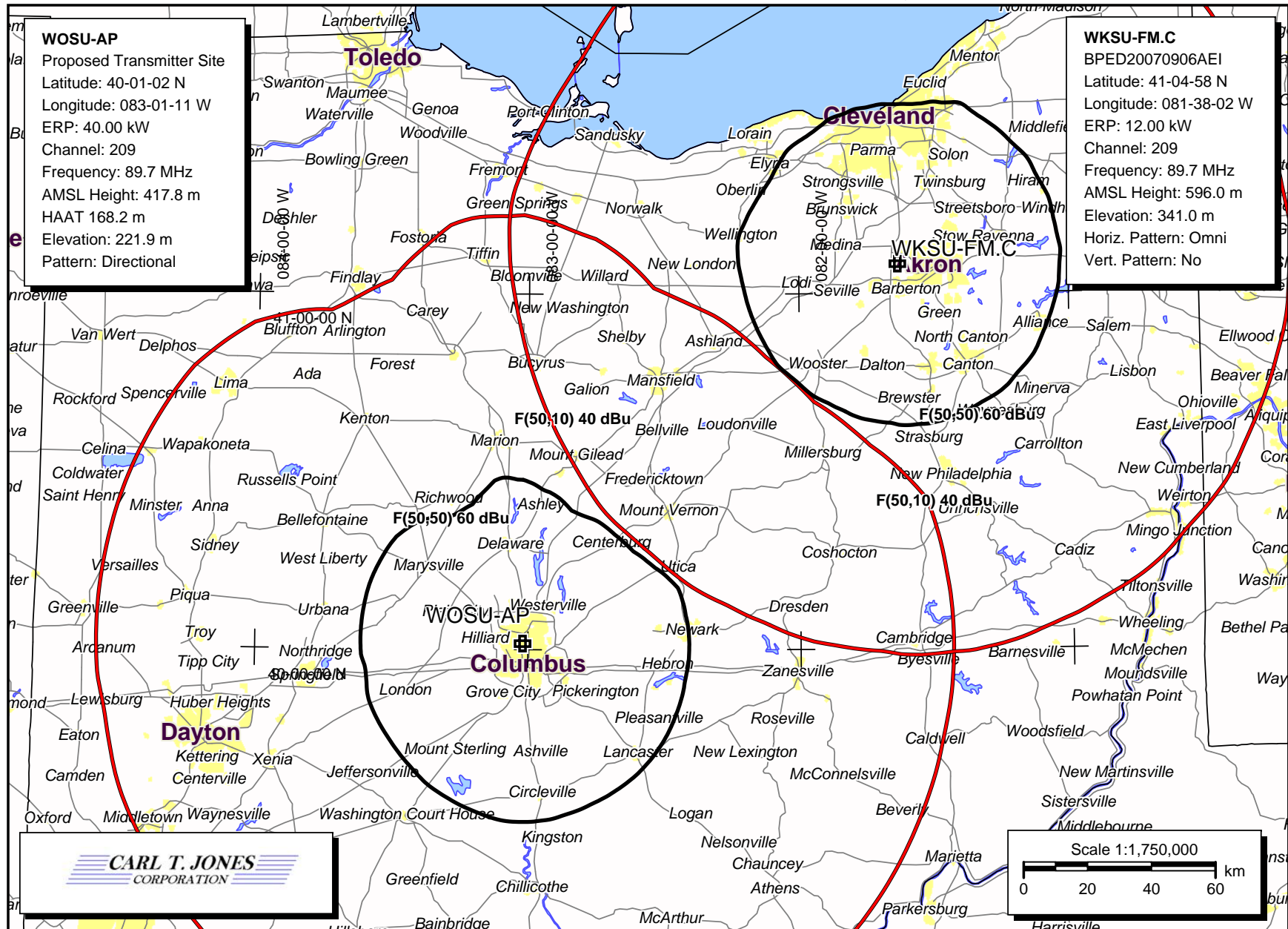


Exhibit 3C - Protection to WTKC 209A Findlay, OH

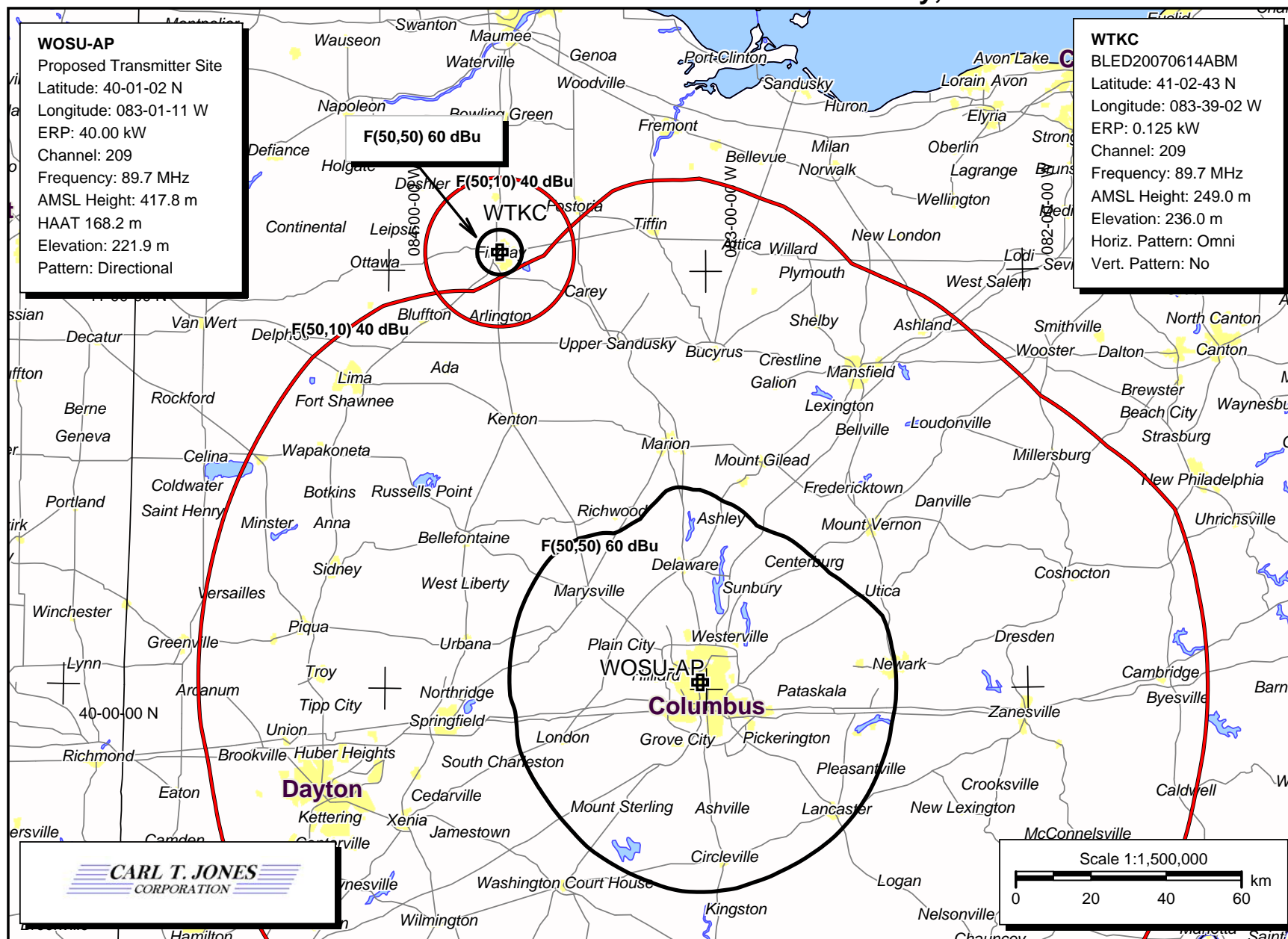


Exhibit 3D - Protection to WQRP 208A Dayton, OH

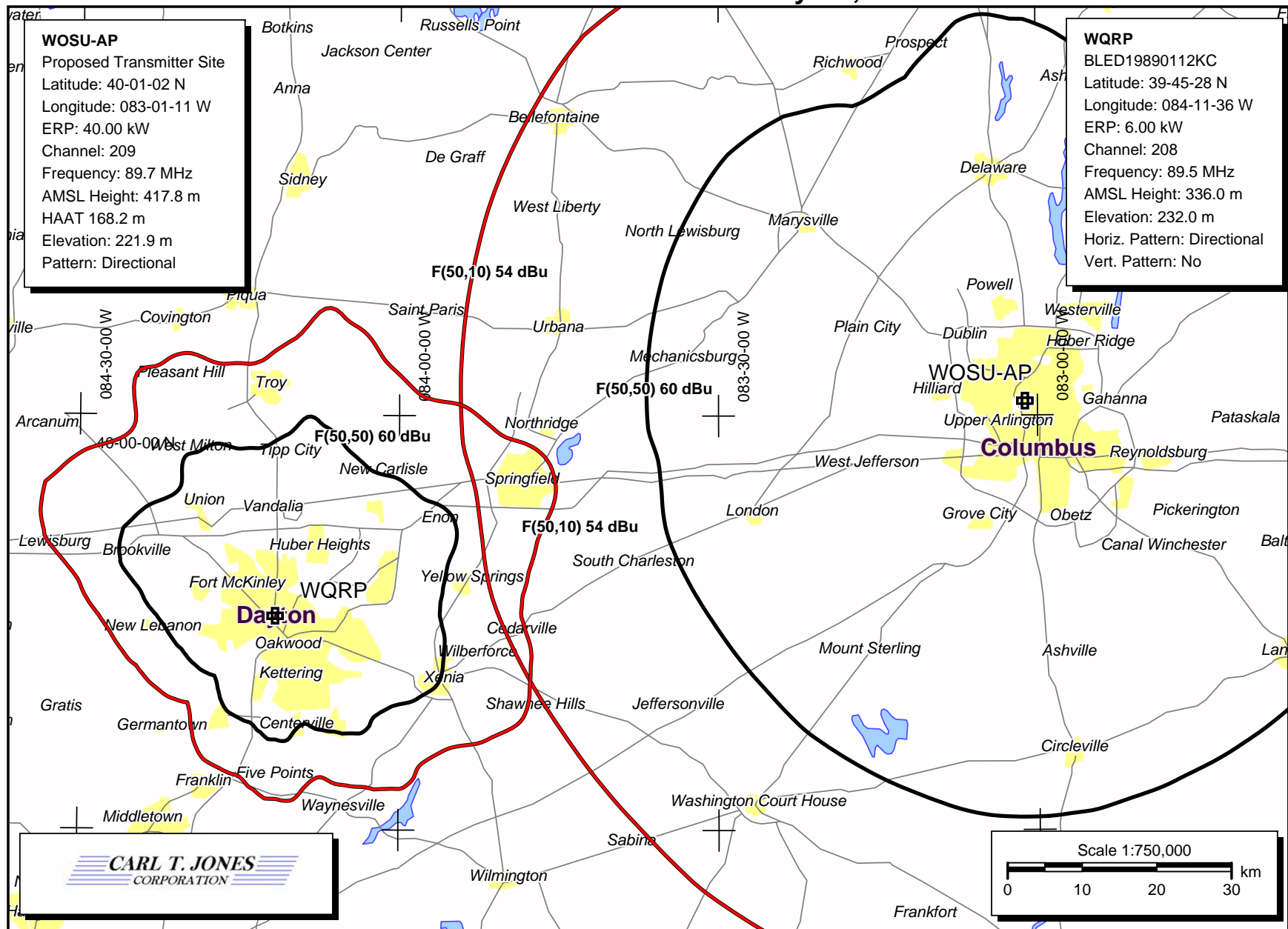


Exhibit 3E - Protection to WDPS 208A Dayton, OH

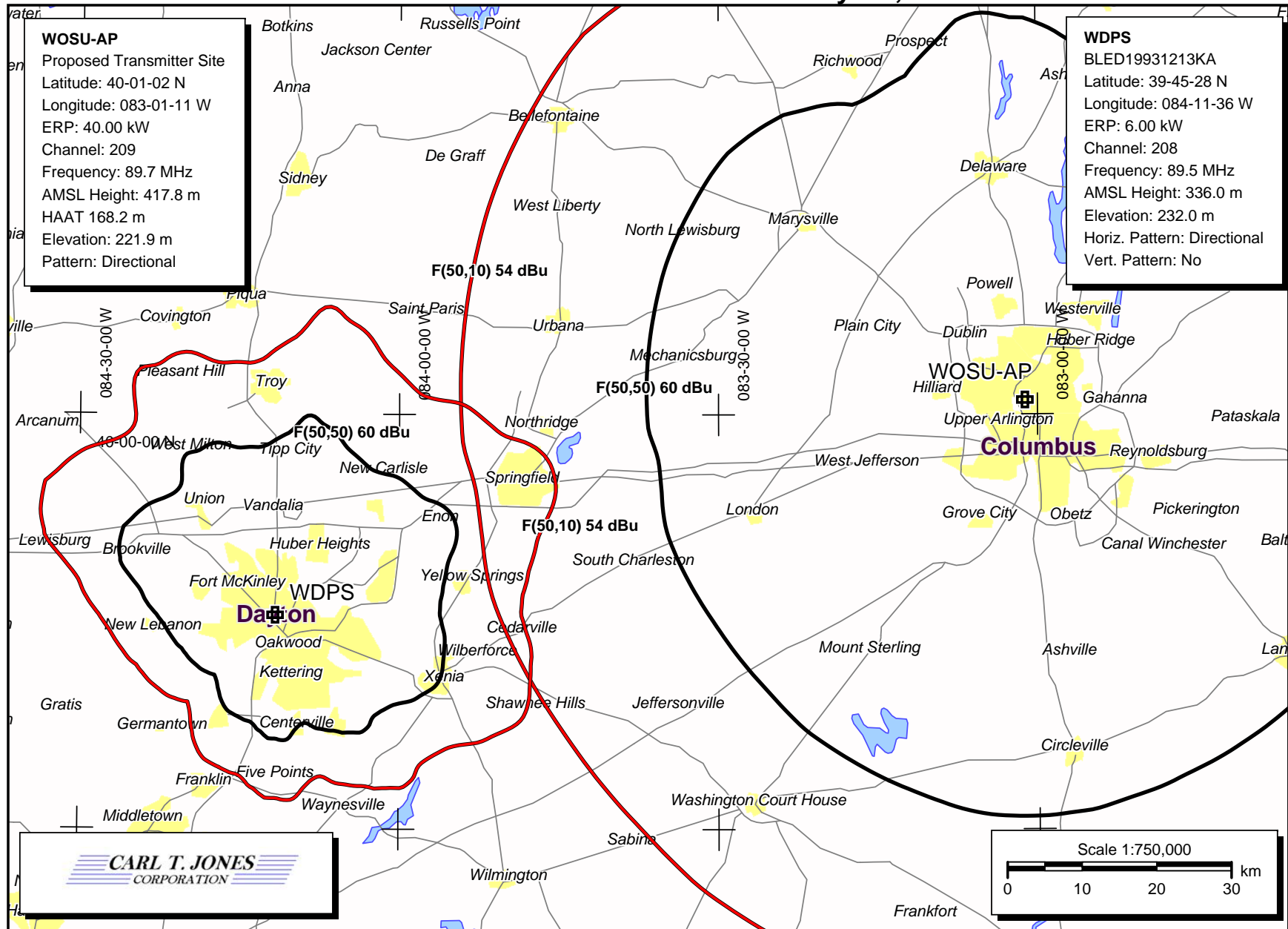


Exhibit 3F - Protection to WFOT 208A CP Lexington, OH

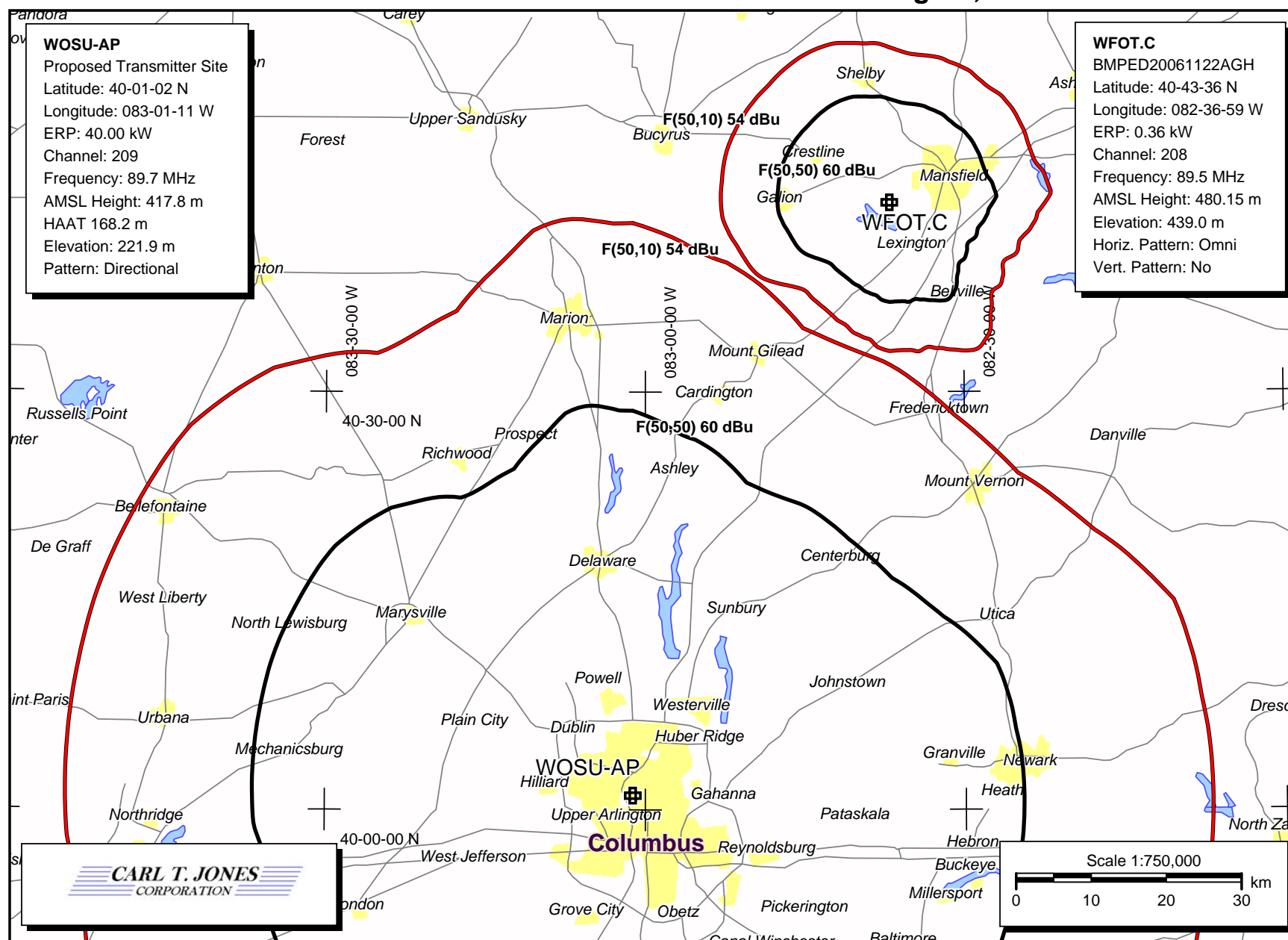


EXHIBIT 4

SUMMARY OF RADIOFREQUENCY RADIATION STUDY WOSU (FM) APPLICATION, COLUMBUS, OHIO FM CHANNEL 209B 40 KW ERP 195.4 M AGL Nov-08

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm²)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WOSU (FM)	FM	209	89.7	H & V	193.9	40.000	0.300	0.00640	0.200	3.20%
WCSN-LP	TV	32	581	H	173	150.000	0.300	0.00754	0.387	1.95%
WCPX-LP	TV	48	677	H	155	150.000	0.300	0.00939	0.451	2.08%
W294AH	FM	294	106.7	H	132	0.008	0.300	0.00000	0.200	0.00%

TOTAL PERCENTAGE OF ANSI VALUE= 7.22%

*** The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.
This evaluation includes facilities collocated at the site, and facilities located within 315 meters.*

**CARL T. JONES
CORPORATION**