EXHIBIT E

ENGINEERING REPORT
RE APPLICATION TO MODIFY CONSTRUCTION PERMIT
FCC FILE NO. BPED-20030402AEN
WHUR-FM, WASHINGTON, D.C.
CH.242B (96.3 MHZ) 16.5 KW (MAX H&V) 244 METERS HAAT

DECEMBER 2003

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

Introduction

This engineering report has been prepared on behalf of The Howard University ("WHUR-FM") and is to serve as a modification to construction permit (FCC File Number BPED-20030402AEN) to correct the radiation center height above ground on the master antenna for WHUR-FM, Washington, D.C. The FM station will remain on Channel 242B (96.3 MHz) and proposes to operate with 16.5 kW[1] (H&V) non-directional effective radiated power ("ERP") and 242 meters height above average terrain ("HAAT").

Since there is no change in site, WHUR-FM requests processing of its application under Section 73.213(a) of the Commission's Rules, and therefore, no change in the allocation situation to the existing short-spaced stations WSOX-FM (Exhibit E-4), Channel 241, Red Lion, Pennsylvania (FCC File No. BLH7749) and WWIN-FM, Channel 240, Glen Burnie, Maryland (FCC File No. BMLH19920325KC).

Exhibits requested by the FCC Form 340 are included in this engineering report. The sole purpose of this application is to correct the center of radiation as specified in the current construction permit. The new center of radiation height above mean sea level has been increased from 314.8 meters to 317.7 meters on the existing tower[2]. The ERP has been reduced to 16.5 kW to accommodate the 2.9 meter increase in height of the center of radiation.

Antenna Site

[1]Effective radiated power is in accordance with Section 73.211 of the FCC Rules.

[2]Thereby increase the HAAT from 242 meters to 244 meters.

It is proposed to operate from a 2-bay FM antenna that will move WHUR-FM from the current position on the existing tower and will be top-mounted (Exhibit E-1) between the NTSC and DTV antennas. The WHUR-FM antenna site remains unchanged and is located at 4010 Chesapeake Street, NW, Washington, DC. The antenna structure registration number is 1051670 from which WHUR-FM will operate.

The geographic coordinates of the existing tower site are as follows:

(unchanged)

North Latitude: 38° 57' 01"

West Longitude: 77° 04' 47"

NAD-27

The following tabulation shows the pertinent data for the proposed installation.

Equipment Data

Transmitter:	Type-approved
Transmission Line:	Dielectric, Type EIA, 204.2 meters of 50 ohm coaxial cable having an outer diameter of 6-1/8" or equivalent
Antenna:	Dielectric, DCBR-03-2FM/6U-1, 2-bay, circularly polarized, non-directional antenna

Power Data

Transmitter output power	23.88 kW	13.78 dBk
Combiner Loss		0.3 dB
Transmission line efficiency	95.2%	0.34 dB
Power input to antenna	20.6 kW	13.14 dBk
Antenna power gain (H&V)	0.8	-0.97 dB
Effective Radiated Power (H&V)	16.5 kW	12.17 dBk

Elevation Data

Elevation of the site above mean sea level	124.9 meters (409.8 feet)
Elevation of the top of supporting structure above ground including lighting	210.9 meters (691.9 feet)
Elevation of the top of supporting structure above mean sea level including lighting	335.8 meters (1101.7 feet)
Height of radiation center above ground (H&V)	192.9 meters (633 feet)
Height of radiation center above mean sea level (H&V)	317.7 meters (1042.2 feet)
Height of radiation center above average terrain (H&V)	244 meters (801.8 feet)

NOTE: Rounding difference can result from conversion from feet to meters.

Allocation Situation

The attached Table II shows the distances to the pertinent co-channel and adjacent channel stations and allotments from the proposed antenna site. As indicated, all distances comply with the minimum separation requirements listed under Section 73.207 of the Commission's Rules with the exception of that to first-adjacent channel station WSOX-FM, Channel 241, Red Lion, Pennsylvania (FCC File No. BLH7749) and the second-adjacent station WWIN-FM, Channel 240, Glen Burnie, Maryland (FCC File No. BMLH19920325KC).

Topographic Data

The average elevation data between 3 to 16 km used for the prediction of coverage and interfering contours are based on 7.5 minute quadrangle maps referenced in WHUR-FM construction permit, FCC File No. BPH-8182.

Main Studio Location

The main studio will be located inside the predicted 3.16 mV/m contour.

Other Radio Stations

The proposed FM antenna will be top-mounted between the NTSC and DTV antennas on the existing self-supporting tower. There are 2 FM stations, 6 TV and 7 DTV broadcast stations located within 1 km of the proposed FM site. There are no AM broadcast stations located within 3.22 km of the proposed site.

In case of problem to any authorized non-broadcast facilities of radio receivers, the licensee will take the necessary remedial steps to resolve the intermodulation interference, however, none are anticipated since WHUR-FM has operated from this site for many years.

Blanketing Contour

The blanketing contour (115 dBu) based on an ERP of 16.5 kW will extend 1.6 km from the proposed site. The licensee will comply with all the pertinent requirements of Section 73.318 of the Commission's Rules although no problems are anticipated since WHUR-FM has operated from this site for many years.

Environmental Statement

According to the licensee, the antenna site is not located near any known wilderness area, wildlife preserve, historic place, or Indian religious site. The facilities are not located in a flood plain area. The facilities do not affect or jeopardize the threatened or endangered species or their critical habitats.

The self-supporting tower is lighted and painted as required by the FAA.

The facilities do not affect any districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to radiofrequency field ("RFF") level as set forth in the OET Bulletin 65 (Edition 97-01). For a combined effective radiated power of 33.0 (16.5 kW H&V), a radiation center of 192.9 meters above ground, and a relative downward field of 0.3, the proposed FM operation would have a maximum of 2.7 microwatts per square centimeter ($\mu W/cm^2$) RF radiation level at 2 meters above the base of the tower. The FCC standard for the FM band is 200 $\mu W/cm^2$ for an uncontrolled environment and 1000 $\mu W/cm^2$ for a controlled environment. The total RFF level (Table III) calculated from all broadcast stations operating from the tower is 48.6 $\mu W/cm^2$, which is approximately 21.6% of the limit for an uncontrolled environment.

Therefore, members of the public and personnel working around the proposed FM facility would not be exposed to RFF levels exceeding the FCC standards. The licensee indicates a fence with a locked gate around the tower to prevent unauthorized access. With respect to work performed on the tower, the licensee will coordinate with the tower owner to ensure that workers are not exposed to RFF levels above those prescribed by FCC, by reducing or turning off the power, as appropriate.

For the reasons stated above, the proposal does not involve any action specified in Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.

H:\wp80\Ryan Felmlee\WHUR\16_5\WHUR FM CP MOD_16-5_kw.wpd

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED FM OPERATION OF
WHUR-FM, WASHINGTON, DC
CHANNEL 242 16.5 KW 244 METERS
DECEMBER 2003

Radial Bearing N ° E, T	Average* Elevation 3.2 to 16.1 km meters	Effective Height meters	Depression Angle	ERP at Radio Horizon kW	Distance to Contour F(50,50) 70 dBu 3.16 mV/m km	60 dBu 1 mV/m km
0	97.5	220.2	0.412	16.5	30.4	49.2
45	93.9	223.8	0.422	16.5	31.3	50.2
90	39.3	278.4	0.461	16.5	33.9	53.3
135	37.5	280.2	0.466	16.5	34.3	53.7
180	47.9	269.8	0.456	16.5	33.6	52.9
225	89.9	227.8	0.418	16.5	30.9	49.8
270	85.6	232.1	0.424	16.5	31.3	50.3
315	94.8	222.9	0.415	16.5	30.7	49.6
Average	73.3	244.4				

*Based on data from 7.5 minute topographic maps referenced in WHUR-FM construction permit (FCC File No. BPH-8182).

FM Channel 242 (96.3 MHz)
Average Elevation 3.2 to 16.1 km 73.3 meters AMSL
Center of Radiation 317.7 meters AMSL
Antenna Height Above Average Terrain 244 meters
Effective Radiated Power 16.5 kW (12.17 dBk) Max.

North Latitude: 38° 57' 01"
West Longitude: 77° 04' 47"

NAD-27

H:\wp80\Ryan Felmlee\WHUR\16_5\WHUR FM Coverage_16-5_kW DEC.wpd

TABLE II
ALLOCATION TABLE
FOR THE EXISTING AND PROPOSED FM OPERATION OF
WHUR-FM, WASHINGTON, DC
CHANNEL 242 16.5 KW 244 METERS HAAT
DECEMBER 2003

No Change in Site Requested

Station	Channel	Frequency MHz	Coordinates	City/State	Distance km	Bearing N °, E T	Distance/ Required km
Proposed WHUR-FM	242B	96.3	38° 57' 01" 77° 04' 47"	Washington, DC	----	----	0
Existing WHUR-FM	242B	96.3	38° 57' 01" 77° 04' 47"	Washington, DC	----	----	0
WPTP-FM	243B	96.5	40° 02' 21" 75° 14' 13"	Philadelphia, PA	199.4	52.0	169
WKLR-FM	243B	96.5	37° 20' 22" 77° 24' 31"	Fort Lee, VA	181.1	189.2	169
WSOX-FM	241B	96.1	39° 54' 17" 76° 34' 51"	Red Lion, PA	114.3	21.8	169
WBHB-FM	241B1	96.1	38° 33' 50" 78° 57' 00"	Broadway, VA	168.1	255.8	145
WWIN-FM	240A	95.9	39° 12' 16" 76° 34' 07"	Glen Burnie, MD	52.5	57.2	69
WGRQ-FM	240A	95.9	38° 13' 45" 77° 07' 10"	Colonial Beach, VA	80.1	182.5	69

H:\wp80\Ryan Felmlee\WHUR\16_5\WHUR_Allocation_Table_II_16-5_kW.wpd

TABLE III
RADIOFREQUENCY FIELD LEVEL CALCULATIONS
FOR THE PROPOSED FM OPERATION OF
WHUR-FM, WASHINGTON, DC
CHANNEL 242 16.5 KW 244 METERS
DECEMBER 2003

Station	Channel	ERP (kW)	Field	RCAGL* (meters)	S-Calculated ($\mu W/cm^2$)	S-Limit ($\mu W/cm^2$)	% of Limit
WASH-FM (existing)	246	17.5	0.3	187.9	2.98	200	1.5
WUSA-DT (existing)	34	646	0.1	200.1	5.4	395	1.4
WUSA-TV (existing)	9	316	0.22	181.1	7.8	200	3.9
WJLA-DT (existing)	39	646	0.1	200.1	5.4	415	1.3
WJLA-TV (existing)	7	316	0.22	181.1	7.8	200	3.9
WRQX-FM (existing)	297	34	0.35	130	16.5	200	8.2
WHUR-FM (proposed)	242	16.5	0.3	192.9	2.7	200	1.4

*Minus 2 meters

H:\wp80\Ryan Felmlee\WHUR\16_5\WHUR_RFR_16-5_kw.wpd

ABOVE MEAN SEA LEVEL **ABOVE GROUND**

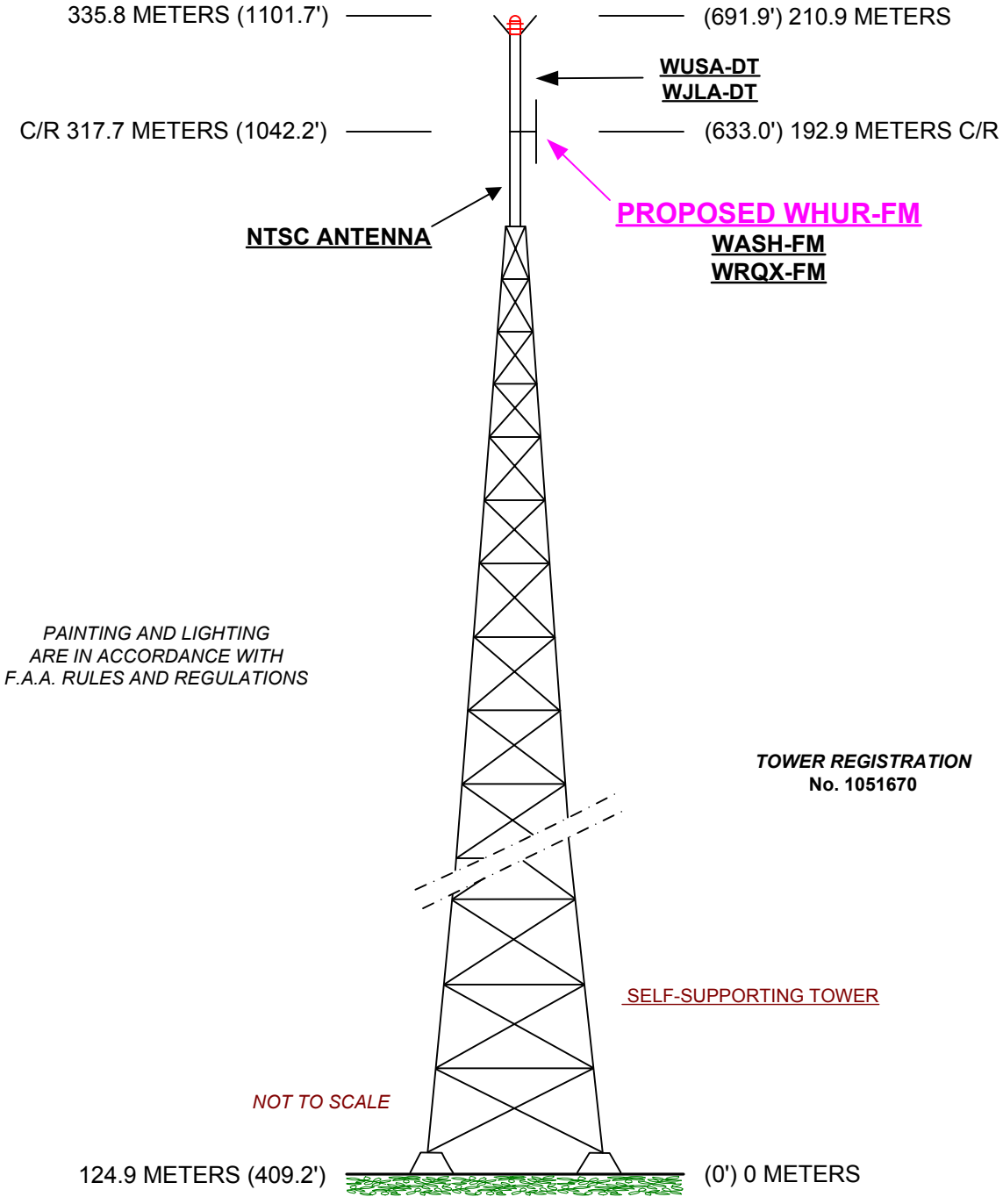


EXHIBIT E-1

VERTICAL SKETCH

FOR THE PROPOSED FM OPERATION OF

WHUR-FM, WASHINGTON, D.C.

DECEMBER 2003

COHEN, DIPPELL AND EVERIST, P.C. Consulting Engineers Washington, D.C.

Exhibit E-2a

Proposal #: **DCA-9511-1** Antenna Type: **DCBR-O3-2FM/6U-1** Channel: **96.3 FM**

Call Letters: **WHUR** Location: **WASHINGTON, DC**

Electrical Specifications		**Value** Ratio	dB	**Remarks**
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	0.8	-0.97	
	Vpol	0.8	-0.97	
RMS Gain at Horizontal over Halfwave Dipole	Hpol	0.8	-0.97	
	Vpol	0.8	-0.97	
Peak Directional Gain over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Circularity		+/- 2.0 dB		
Axial Ratio		dB		
Beam Tilt		0.00 deg		
FM Power				
Antenna Input: T/L		6 1/8 in	50.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel	1.10 : 1	
Patterns	Azimuth	DCBR-O3-96H	DCBR-O3-97V	
	Elevation	02C008000-S096000	02C008000-S096000-90	

Mechanical Specifications		**Metric**	**English**	**Preliminary**
Height with Lightning Protector	H4	See specifications sheet for FM Freq 97.1 for machanical loads		
Height Less Lightning Protector	H2			
Height of Center of Radiation	H3			
Basic Wind Speed	V			
Force Coeff. x Projected Area	CaAc			
Shear	S1			
Weight	W			

Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.

NOTE:

Prepared By : SRR Approved By : RN

Original Date : 1-Aug-01 **Revision: 1** **Rev. Date: 2-Oct-01**

Exhibit E-2b

Proposal Number	**DCA-9511**	Revision:	**1**
Date	**APRIL 2003**		
Call Letters	**WHUR**		
Location	**WASHINGTON, DC**		
Customer			
Antenna Type	**DCBR-O3-2FM/6U-1**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**0.80**	**-(0.97 dB)**	Beam Tilt **0.00 deg**
RMS Gain at Horizontal	**0.80**	**-(0.97 dB)**	Frequency **96.3 MHz**
Calculated / Measured	**Calculated**		Drawing # **02C008000-S096000-90**

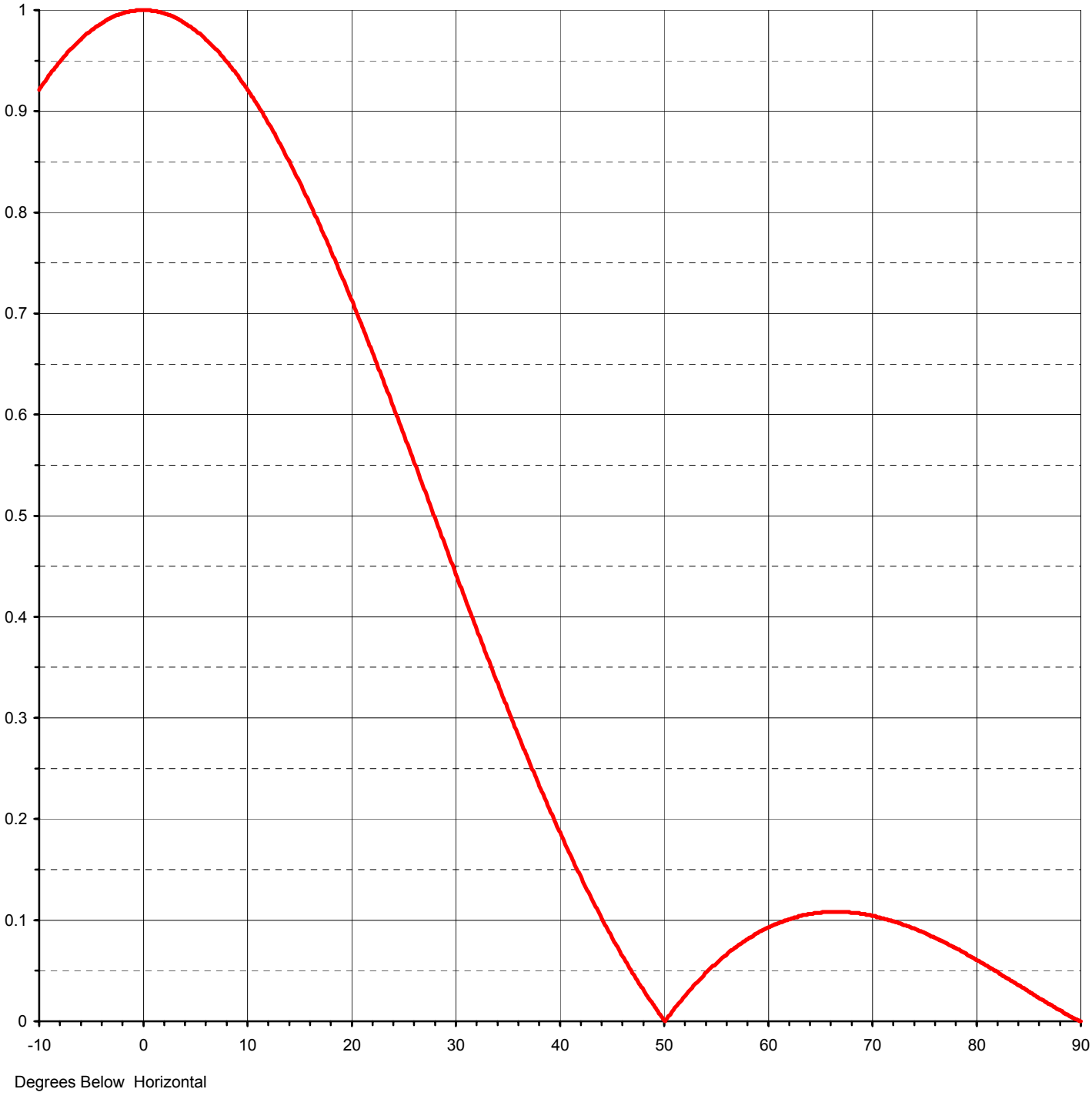


Exhibit E-2c

Proposal Number	**DCA-9511**	Revision:	**1**
Date	**APRIL 2003**		
Call Letters	**WHUR**		
Location	**WASHINGTON, DC**		
Customer			
Antenna Type	**DCBR-O3-2FM/6U-1**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**0.80**	**-(0.97 dB)**	Beam Tilt	**0.00 deg**
RMS Gain at Horizontal	**0.80**	**-(0.97 dB)**	Frequency	**96.3 MHz**
Calculated / Measured	**Calculated**		Drawing #	**02C008000-S096000**

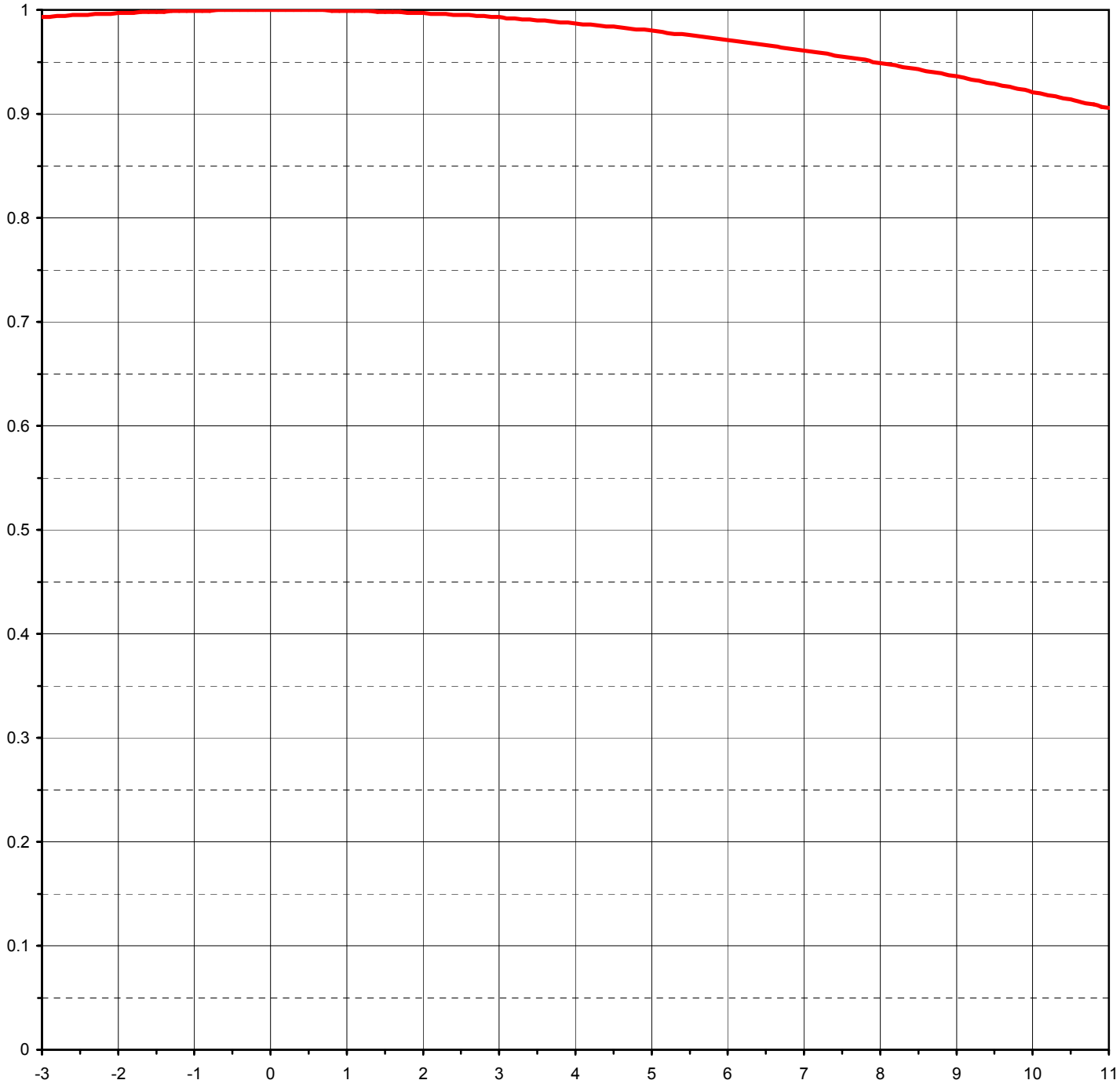


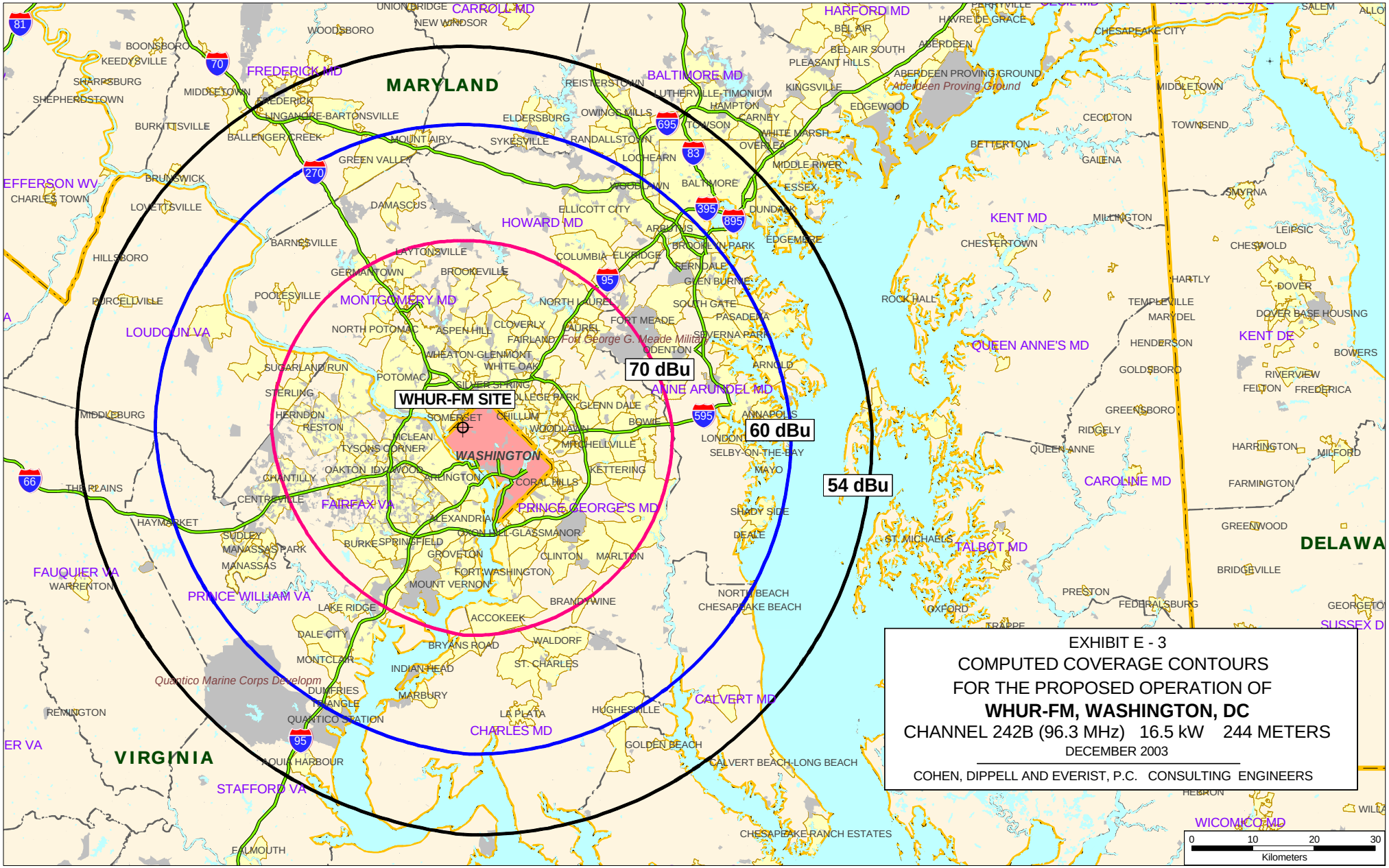
Exhibit E-2d

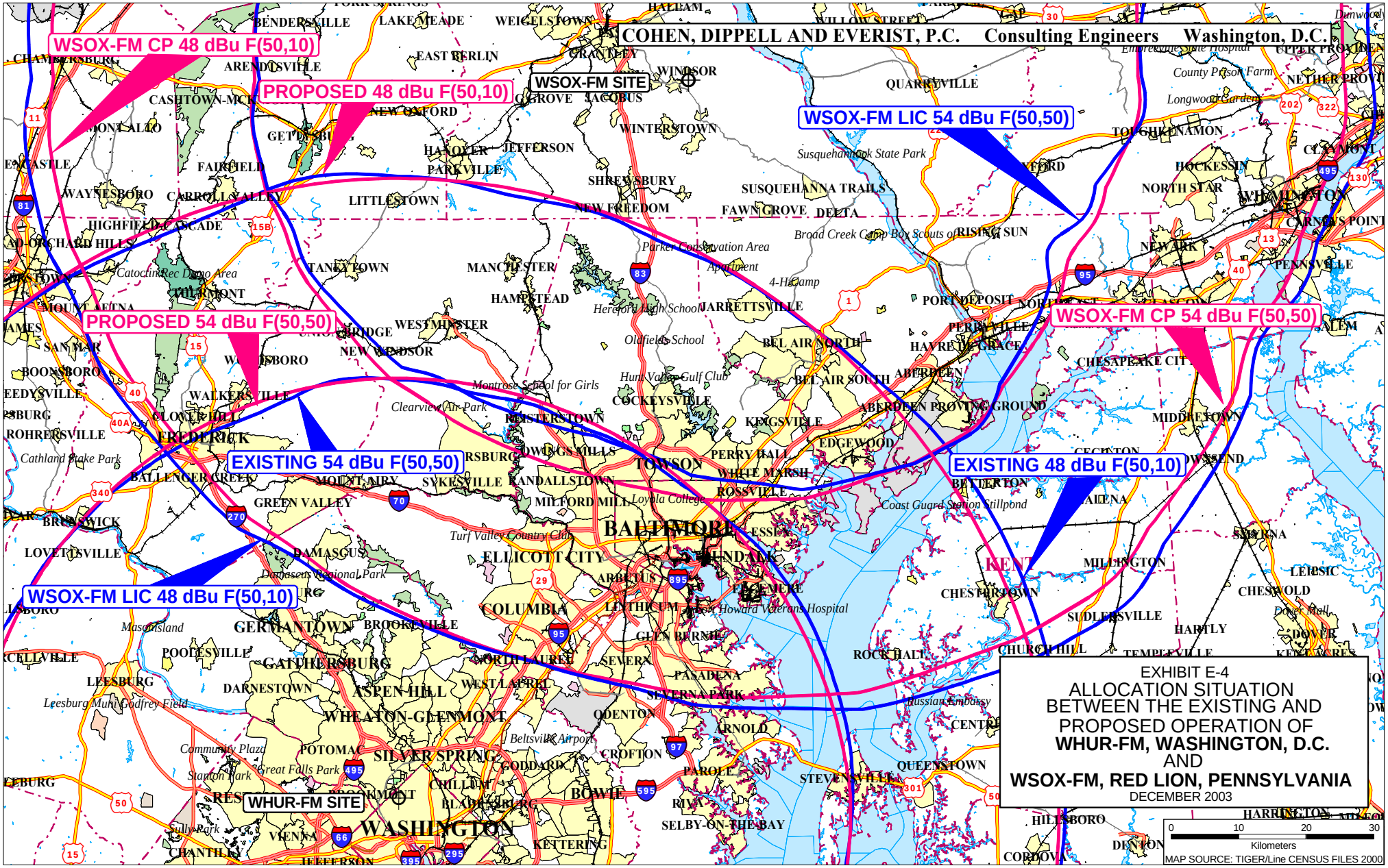
Proposal Number **DCA-9511** Revision: **2**
Date **APRIL 2003**
Call Letters **WHUR**
Location **WASHINGTON, DC**
Customer
Antenna Type **DCBR-O3-2FM/6U-1**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **02C017000-S097-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.920	2.4	0.995	10.6	0.912	30.5	0.425	51.0	0.020	71.5	0.105
-9.5	0.928	2.6	0.994	10.8	0.909	31.0	0.411	51.5	0.026	72.0	0.103
-9.0	0.935	2.8	0.994	11.0	0.906	31.5	0.397	52.0	0.033	72.5	0.102
-8.5	0.942	3.0	0.993	11.5	0.897	32.0	0.383	52.5	0.038	73.0	0.100
-8.0	0.948	3.2	0.992	12.0	0.889	32.5	0.370	53.0	0.044	73.5	0.098
-7.5	0.955	3.4	0.991	12.5	0.880	33.0	0.356	53.5	0.050	74.0	0.095
-7.0	0.960	3.6	0.989	13.0	0.870	33.5	0.343	54.0	0.055	74.5	0.093
-6.5	0.966	3.8	0.988	13.5	0.860	34.0	0.329	54.5	0.060	75.0	0.091
-6.0	0.971	4.0	0.987	14.0	0.850	34.5	0.316	55.0	0.065	75.5	0.088
-5.5	0.975	4.2	0.986	14.5	0.840	35.0	0.303	55.5	0.069	76.0	0.086
-5.0	0.980	4.4	0.984	15.0	0.830	35.5	0.290	56.0	0.073	76.5	0.083
-4.5	0.983	4.6	0.983	15.5	0.819	36.0	0.277	56.5	0.078	77.0	0.081
-4.0	0.987	4.8	0.981	16.0	0.808	36.5	0.265	57.0	0.081	77.5	0.078
-3.5	0.990	5.0	0.980	16.5	0.797	37.0	0.252	57.5	0.085	78.0	0.075
-3.0	0.993	5.2	0.978	17.0	0.785	37.5	0.240	58.0	0.088	78.5	0.072
-2.8	0.994	5.4	0.976	17.5	0.773	38.0	0.227	58.5	0.092	79.0	0.069
-2.6	0.994	5.6	0.974	18.0	0.761	38.5	0.215	59.0	0.094	79.5	0.066
-2.4	0.995	5.8	0.973	18.5	0.749	39.0	0.203	59.5	0.097	80.0	0.063
-2.2	0.996	6.0	0.971	19.0	0.737	39.5	0.192	60.0	0.100	80.5	0.060
-2.0	0.997	6.2	0.969	19.5	0.724	40.0	0.180	60.5	0.102	81.0	0.057
-1.8	0.997	6.4	0.967	20.0	0.712	40.5	0.169	61.0	0.104	81.5	0.054
-1.6	0.998	6.6	0.965	20.5	0.699	41.0	0.158	61.5	0.106	82.0	0.050
-1.4	0.998	6.8	0.963	21.0	0.686	41.5	0.147	62.0	0.108	82.5	0.047
-1.2	0.999	7.0	0.960	21.5	0.673	42.0	0.136	62.5	0.109	83.0	0.044
-1.0	0.999	7.2	0.958	22.0	0.659	42.5	0.125	63.0	0.110	83.5	0.040
-0.8	0.999	7.4	0.956	22.5	0.646	43.0	0.115	63.5	0.111	84.0	0.037
-0.6	1.000	7.6	0.953	23.0	0.633	43.5	0.105	64.0	0.112	84.5	0.034
-0.4	1.000	7.8	0.951	23.5	0.619	44.0	0.095	64.5	0.113	85.0	0.031
-0.2	1.000	8.0	0.948	24.0	0.605	44.5	0.085	65.0	0.114	85.5	0.027
0.0	1.000	8.2	0.946	24.5	0.592	45.0	0.076	65.5	0.114	86.0	0.024
0.2	1.000	8.4	0.943	25.0	0.578	45.5	0.066	66.0	0.114	86.5	0.021
0.4	1.000	8.6	0.941	25.5	0.564	46.0	0.057	66.5	0.114	87.0	0.017
0.6	1.000	8.8	0.938	26.0	0.550	46.5	0.049	67.0	0.114	87.5	0.014
0.8	0.999	9.0	0.935	26.5	0.536	47.0	0.040	67.5	0.113	88.0	0.011
1.0	0.999	9.2	0.932	27.0	0.522	47.5	0.032	68.0	0.113	88.5	0.008
1.2	0.999	9.4	0.929	27.5	0.508	48.0	0.024	68.5	0.112	89.0	0.005
1.4	0.998	9.6	0.926	28.0	0.494	48.5	0.016	69.0	0.111	89.5	0.002
1.6	0.998	9.8	0.925	28.5	0.480	49.0	0.008	69.5	0.110	90.0	0.000
1.8	0.997	10.0	0.922	29.0	0.466	49.5	0.001	70.0	0.109		
2.0	0.997	10.2	0.919	29.5	0.452	50.0	0.006	70.5	0.108		
2.2	0.996	10.4	0.916	30.0	0.438	50.5	0.013	71.0	0.107		


WHUR-FM SITE
70 dBu
60 dBu
54 dBu
MARYLAND
VIRGINIA
WASHINGTON
BALTIMORE MD
HOWARD MD
MONTGOMERY MD
PRINCE GEORGE'S MD
ANNE ARUNDEL MD
FREDERICK MD
CARROLL MD
HARFORD MD
KENT MD
QUEEN ANNE'S MD
KENT DE
CAROLINE MD
TALBOT MD
CALVERT MD
CHARLES MD
PRINCE WILLIAM VA
FAIRFAX VA
LOUDOUN VA
FAUQUIER VA
STAFFORD VA
JEFFERSON WV
DELAWA
SUSSEX D
WICOMICO MD
Fort George G. Meade Military
Aberdeen Proving Ground
Quantico Marine Corps Developm
EXHIBIT E - 3
COMPUTED COVERAGE CONTOURS
FOR THE PROPOSED OPERATION OF
WHUR-FM, WASHINGTON, DC
CHANNEL 242B (96.3 MHz) 16.5 kW 244 METERS
DECEMBER 2003
COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS
0 10 20 30
Kilometers


COHEN, DIPPELL AND EVERIST, P.C. Consulting Engineers Washington, D.C.
WSOX-FM CP 48 dBu F(50,10)
PROPOSED 48 dBu F(50,10)
WSOX-FM SITE
WSOX-FM LIC 54 dBu F(50,50)
PROPOSED 54 dBu F(50,50)
WSOX-FM CP 54 dBu F(50,50)
EXISTING 54 dBu F(50,50)
EXISTING 48 dBu F(50,10)
WSOX-FM LIC 48 dBu F(50,10)
WHUR-FM SITE
BALTIMORE
WASHINGTON
EXHIBIT E-4
ALLOCATION SITUATION
BETWEEN THE EXISTING AND
PROPOSED OPERATION OF
WHUR-FM, WASHINGTON, D.C.
AND
WSOX-FM, RED LION, PENNSYLVANIA
DECEMBER 2003
0 10 20 30
Kilometers
MAP SOURCE: TIGER/Line CENSUS FILES 2000