

**NCE TECHNICAL CERTIFICATIONS  
BROADCAST FACILITIES**

**IN SUPPORT OF A MINOR CHANGE APPLICATION  
WDDE, DOVER, DELAWARE  
APRIL 2022**

The attached technical exhibits have been prepared on behalf of Delaware First Media Corporation, licensee of NCE Class A FM station WDDE, Dover, DE., (Facility ID, 175387). They are in support of a minor change application to increase their effective radiated power utilizing a directional antenna and change FM Class to B1. WDDE will continue operation on channel 216 (91.1 MHz) at the current license antenna site.

#### SECTION 73.203 - AVAILABILITY OF CHANNELS

This application is for a minor change application of the existing licensed NCE-FM station WDDE, Dover, DE. Therefore, the provisions of this section of the FCC Rules are not considered applicable to this filing.

#### SECTION 73.207 – MINIMUM DISTANCE SEPARATION BETWEEN CHANNELS

The attached FM Allocation Study shows the distances to pertinent FM stations and NCE application on Channel 216 and +/- 3 and +53 and 54 channels from the existing NCE (FM) WDDE antenna site location. The allocation study indicates that the “fully-spaced” WDDE transmitter site of the proposed Channel 216B1 operation complies with the minimum distance separation requirements of Section 73.207 of the Commission’s Rules to all existing and/or proposed FM stations and authorizations operating on Channels 269 and 270 (see attached FM Allocation Study).

SECTION 73.213 – GRANDFATHERED SHORT SPACED STATIONS

This application is for a minor change application of the existing licensed NCE-FM station WDDE, Dover, DE. Therefore, the provisions of this section of the FCC Rules are not considered applicable to this filing.

SECTION 73.315 – FM TRANSMITTER LOCATION

The requirements of paragraph (a) of this section do not apply to noncommercial educational FM broadcast stations operating on channels 200 – 220. This application is for a minor change application of the existing licensed NCE-FM station WDDE, Dover, DE, for operation on channel 216B1. Therefore, the provisions of this section of the FCC Rules are not considered applicable to this filing.

SECTION 73.509 – PROHIBITED OVERLAP

The proposed WDDE NCE (FM) facility for Dover, DE does not involve prohibitive contour overlap of pertinent computed FCC signal strength contours of any licensed, authorized or pending NCE-FM stations or proposals operating on Channels 213 through 219 as set forth in this section. The attached FM Allocation Study and contour maps show there is no prohibitive contour overlap associated with the WDDE NCE-FM proposal (see FM Allocation Study and Figures 1-7 attached).

#### SECTION 73.515 – TRANSMITTER LOCATION

The proposed NCE (FM) facility for WDDE, Dover, DE will provide a minimum field strength of 60 dB above one  $\mu\text{V}/\text{m}$  (dBu), or 1.0 mV/m to 96% of the population and 92% of the area of the principal community of Dover, DE (see attached Figures 8 and 8A). Also shown on Figure 8 is the proposed population based on the 2010 US census reports and land area of the proposed 60 dBu contour and the existing 60 dBu contour of the present licensed operation of WDDE.

#### SECTION 73.525 – TV CHANNEL 6 PROTECTION

The proposed NCE (FM) facility for WDDE, Dover, DE is within the affected area of TV channel 6 station WPVI-TV, Philadelphia, PA as specified in Section 73.525(a)(1) of the Rules. However, the WDDE proposal fully complies with Section 73.525(e) since there is no predicted channel 6 interference to the 47 dBu Grade B contour of the licensed facility of WPVI-TV or to the WPVI-TV special temporary authorized operation as shown in the attached Figure 9. Additionally, in accordance with Section 73.525 (b)(4), WPVI-TV has been given notice of the WDDE proposal.

WDDE PROPOSED 15 kW DA CLASS B CHANNEL STUDY

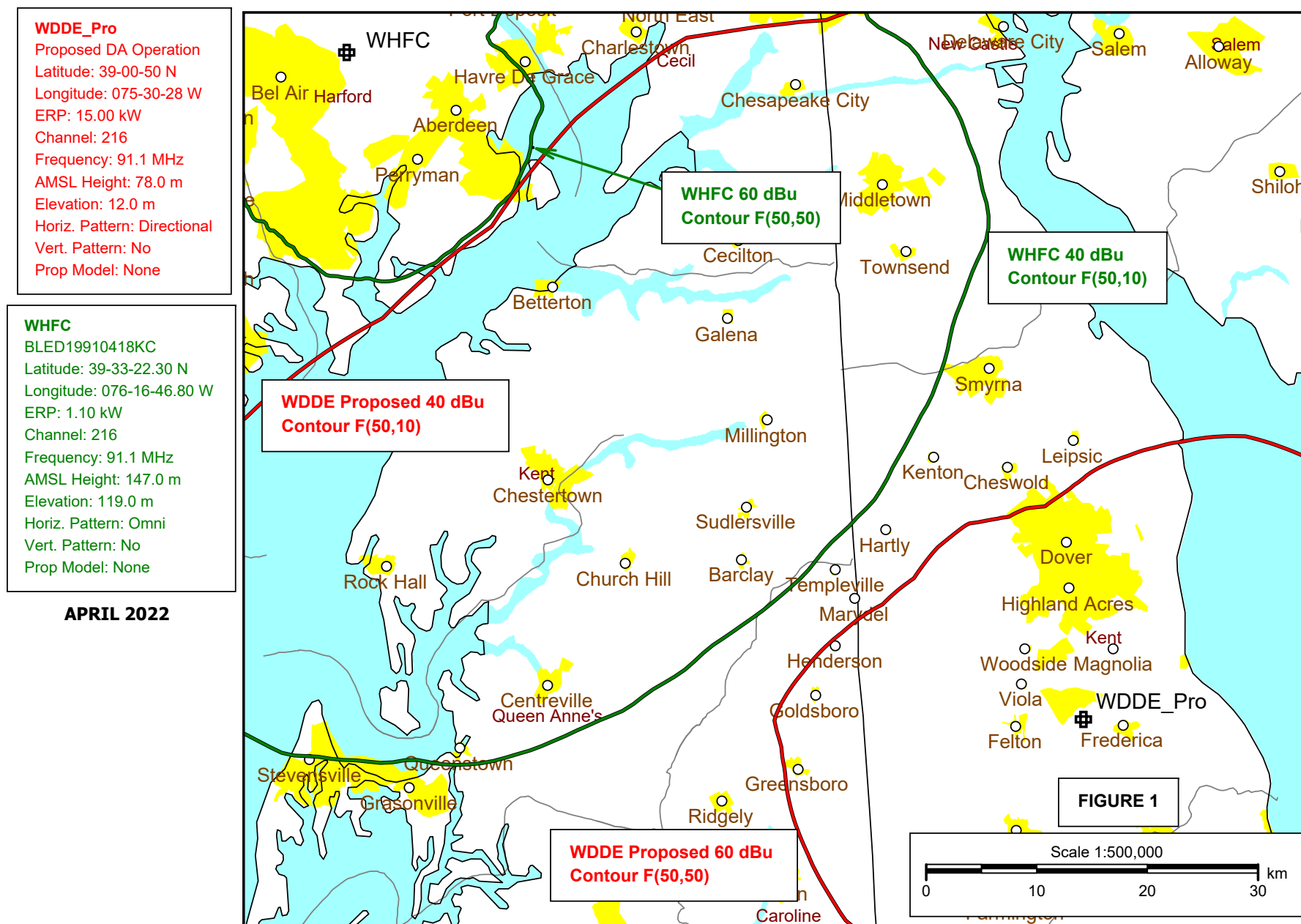
Delaware First Media Corporation

REFERENCE CH# 216B1 - 91.1 MHz, Pwr= 15 kW DA, HAAT= 69.1 M, COR= 78 M  
39 00 50.00 N. DATA 04-01-22  
75 30 28.00 W. SEARCH 04-01-22  
Average Protected F(50-50)= 29.31 km  
Standard Directional

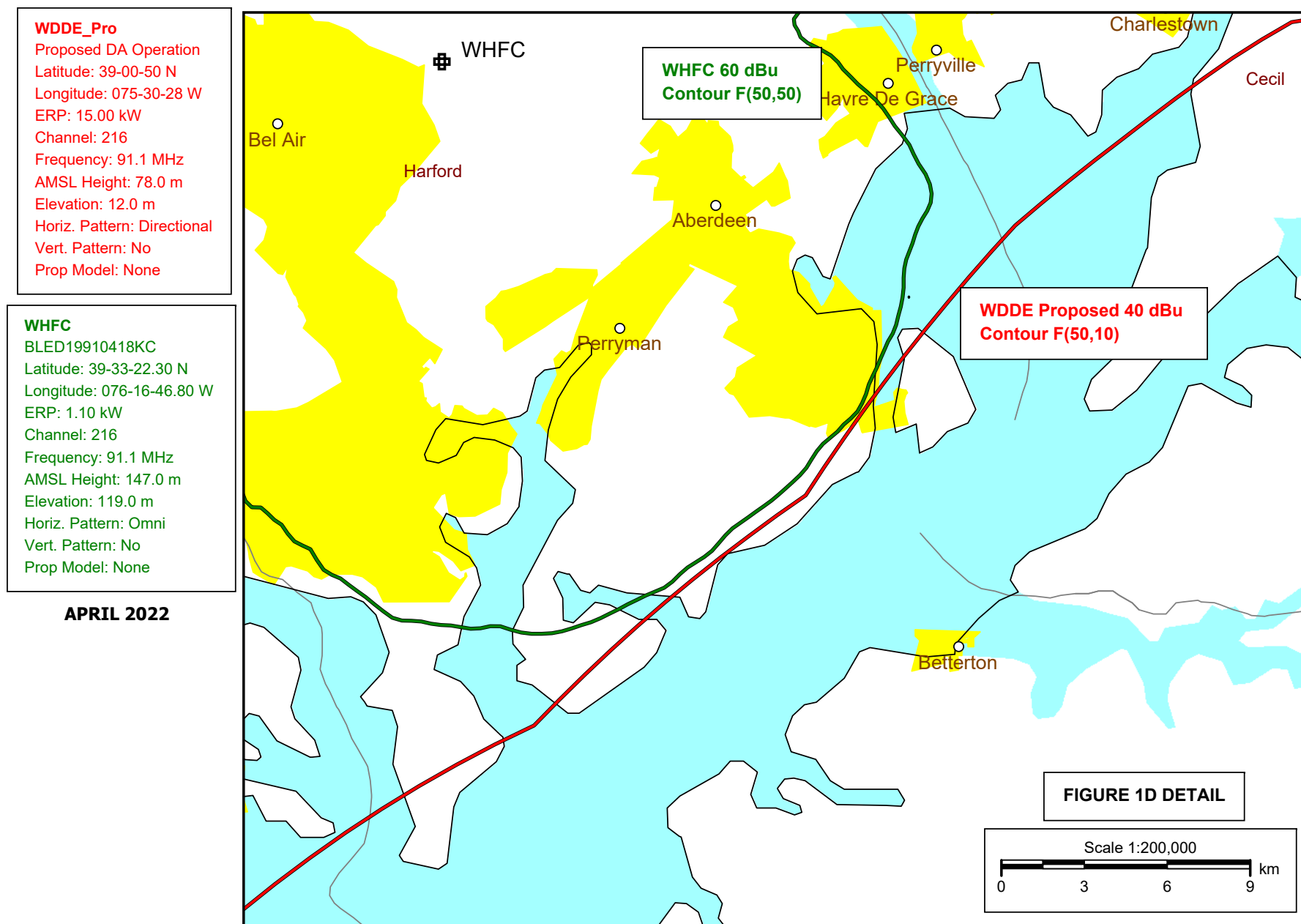
DISPLAY DATES  
DATA 04-01-22  
SEARCH 04-01-22

CH CITY	CALL	TYPE STATE	ANT AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
216A Dover	WDDE	LIC_CN DE	0.0 0.0	0.00 BLED20110812ACN	39 00 50.00 75 30 28.00	2.100 72	78	---Reference---		Delaware First Media Corpo
216A Bel Air	WHFC	LIC_CN MD	312.5 132.0	89.70 BLED19910418KC	39 33 22.30 76 16 46.80	1.100 69	62.8 147	19.6	6.1	0.1 Harford Community College
219A Dover	WRTX	LIC_VN DE	346.7 166.6	21.37 BLED19950418KB	39 12 03.40 75 33 53.70	0.580	1.6 104	15.6	0.1	3.7 Temple University Of The C
215D Cape May	<del>W215CE</del>	LIC_VN NJ	85.8 266.2	56.64 BLFT20101124AAC	39 02 58.40 74 51 12.60	0.038 78	10.2 79	7.1	15.5	0.3 CSN International
217B Princess Anne	WESM	LIC_CN MD	189.7 9.6	90.60 BLED19870303KC	38 12 37.40 75 40 54.70	45.000 91	66.3 97	42.2	0.3	11.9 University Of Maryland, Ea
217B1 Ocean City	WRTQ	LIC DEN NJ	61.5 242.0	72.06 BLED20071009AIT	39 19 14.40 74 46 16.60	13.500 120	40.0 129	23.6	4.4	0.9 Temple University Of The C
06 1C Philadelphia	WPVI-TV«	APP_HN PA	11.2 191.4	116.82 0000035671	40 02 39.00 75 14 25.01	56.000 332	10.4 404	101.2	111.6R	5.2M
06 1C Philadelphia	WPVI-TV«	STA_HN PA	11.2 191.4	116.82 0000034890	40 02 39.00 75 14 25.01	56.000 332	10.4 404	101.2	111.6R	5.2M
06 1C Philadelphia	WPVI-TV«	LI_CY PA	11.2 191.3	116.60 BLCDT-20111019ACJ	40 02 33.00 75 14 32.01	34.000 330	10.4 395	95.4	105.8R	10.8M
6 -- Philadelphia	WPVI-TV-A«	CHA_D_Y PA	11.2 191.3	116.61 DTVBL8616	40 02 33.40 75 14 31.66	34.000 330	10.4 395	95.4	105.8R	10.9M
215B Philadelphia	WHYY-FM	LIC_CN PA	11.3 191.5	116.57 BMLED20040817AAX	40 02 30.40 75 14 22.60	13.500 280	78.0 347	53.1	11.1	23.1 Whyy, Inc.
219A Lewes	762133	APP_CN DE	138.7 318.9	42.71 0000167306	38 43 30.00 75 10 57.00	0.420 34	1.4 38	8.8	11.6	30.9 Bible Broadcasting Network
219D Lewes	<del>W219BZ</del>	LIC_CN DE	138.6 318.8	42.70 BLFT19990517UB	38 43 30.40 75 10 56.70	0.170 34	0.9 38	6.9	12.2	32.8 Bible Broadcasting Network
218A Lewes	763589	APP DCN DE	134.1 314.3	46.61 0000166370	38 43 17.40 75 07 18.60	3.000 77	1.3 80	12.5	15.6	31.1 Delaware First Media Corpo
218A Cape May	768596	APP NCN NJ	100.5 280.8	47.99 0000167759	38 56 02.42 74 57 43.69	0.500 10	1.6 14	8.5	15.7	36.4 Maranatha Ministries/Joy C
219A Seaford	763917	APP DCN DE	188.7 8.7	45.08 0000166369	38 36 47.00 75 35 11.00	5.000 91	1.2 100	12.6	19.9	29.9 Delaware First Media Corpo
06N-- Fairfax	WDCN-LP/W«	APP_HN VA	265.2 84.2	141.31 0000071752	38 53 45.00 77 08 06.80	3.000	13.7 199	28.1	41.8R	99.6M
06 -- Fairfax	WDCN-LD«	LI DCY VA	264.6 83.5	149.14 0000166142	38 52 28.20 77 13 23.59	3.000	11.8 280	5.2	17.0R	132.2M

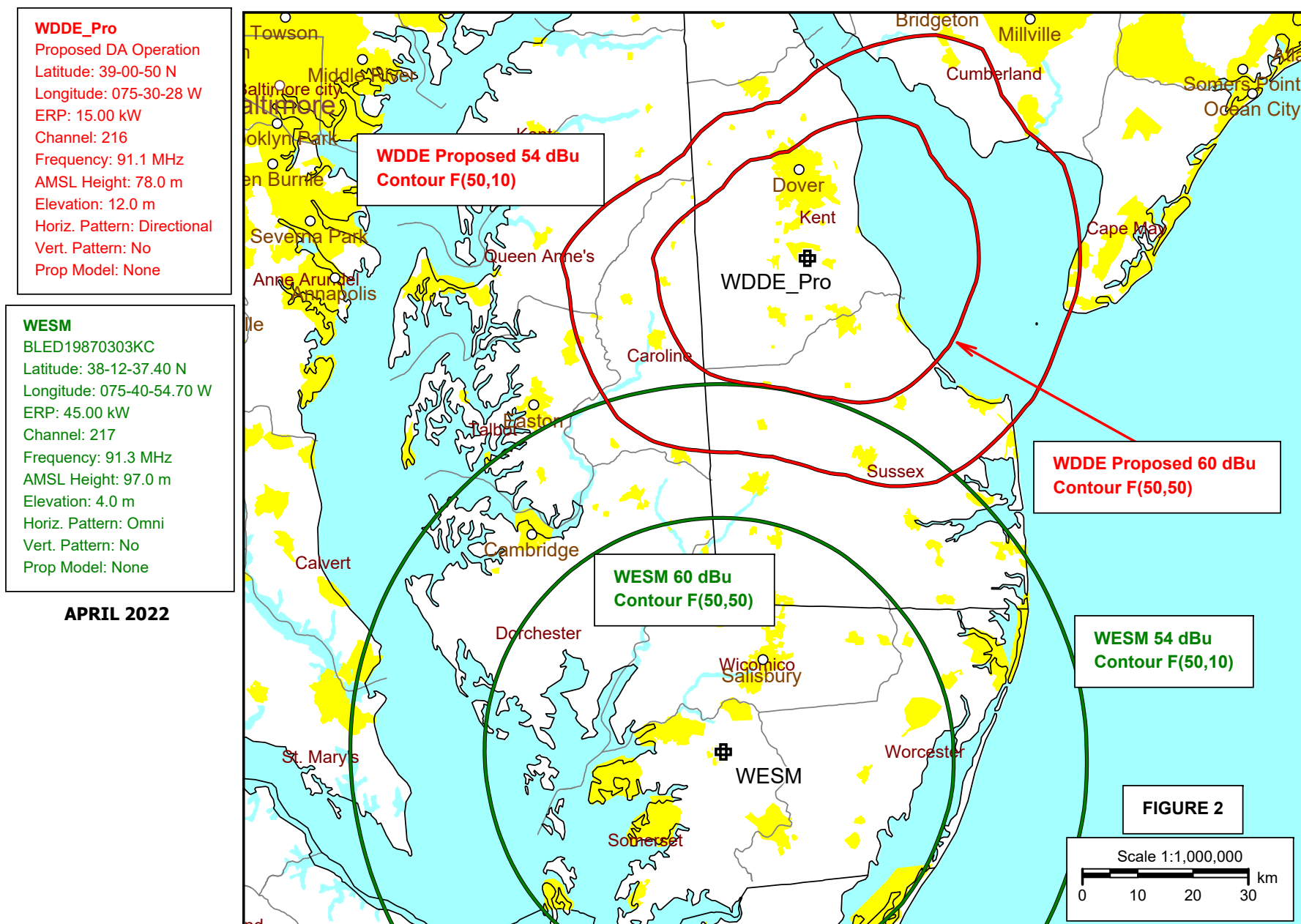
Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= - Zone 1, Co to 3rd adjacent.  
All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.  
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 restricted contour.  
« = Station meets FCC minimum distance spacing for its class.



60 dBu (1 mV/m) Protected And 40 dBu (0.1 mV/m interfering) FCC Contours For WDDE, Dover, DE And WHFC, Bel Air, MD



60 dBu (1 mV/m) Protected And 40 dBu (0.1 mV/m interfering) FCC Contours For WDDE, Dover, DE And WHFC, Bel Air, MD



60 dBu (1 mV/m) Protected And 54 dBu (0.5 mV/m interfering) FCC Contours For WDDE, Dover, DE And WESM, Princess Anne, MD



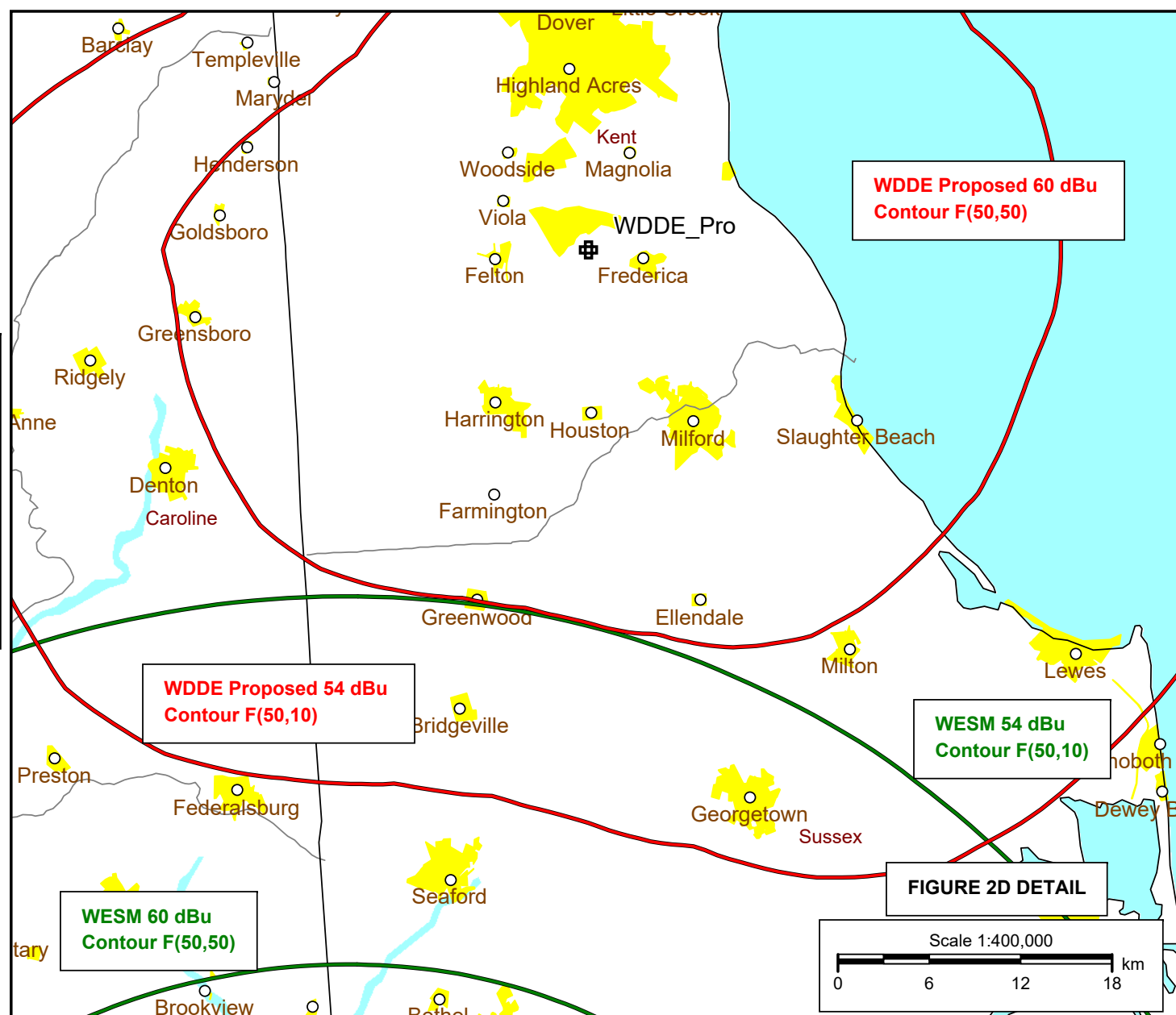
### WDDE\_Pro

Proposed DA Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

### WESM

BLED19870303KC  
Latitude: 38-12-37.40 N  
Longitude: 075-40-54.70 W  
ERP: 45.00 kW  
Channel: 217  
Frequency: 91.3 MHz  
AMSL Height: 97.0 m  
Elevation: 4.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

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60 dBu (1 mV/m) Protected And 54 dBu (0.5 mV/m interfering) FCC Contours For WDDE, Dover, DE And WESM, Princess Anne, MD

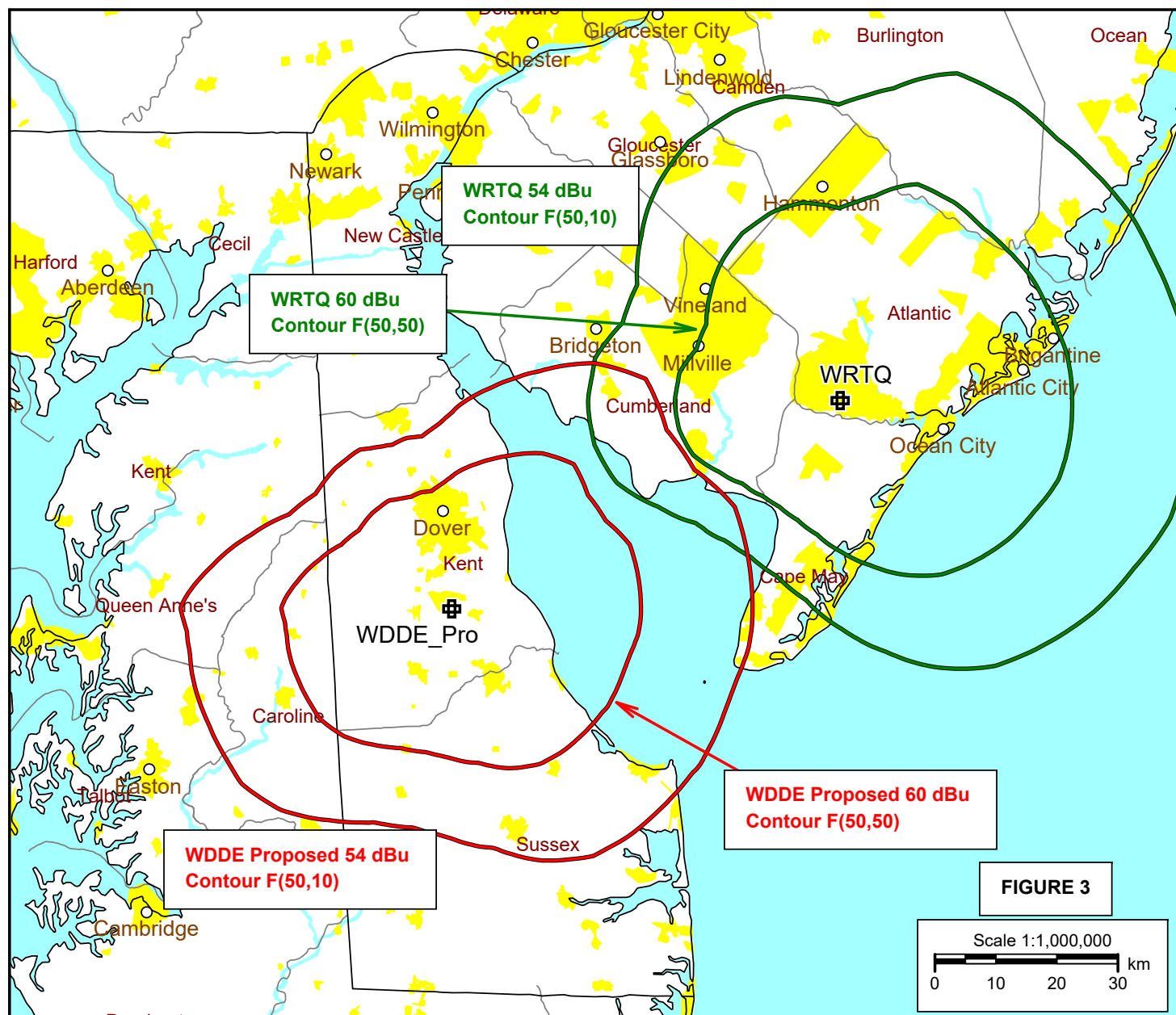
### WDDE\_Pro

Proposed DA Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

### WRTQ

BLED20071009AIT  
Latitude: 39-19-14.40 N  
Longitude: 074-46-16.60 W  
ERP: 13.50 kW  
Channel: 217  
Frequency: 91.3 MHz  
AMSL Height: 129.0 m  
Elevation: 7.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

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60 dBu (1 mV/m) Protected And 54 dBu (0.5 mV/m interfering) FCC Contours For WDDE, Dover, DE And WRTQ, Ocean City, NJ

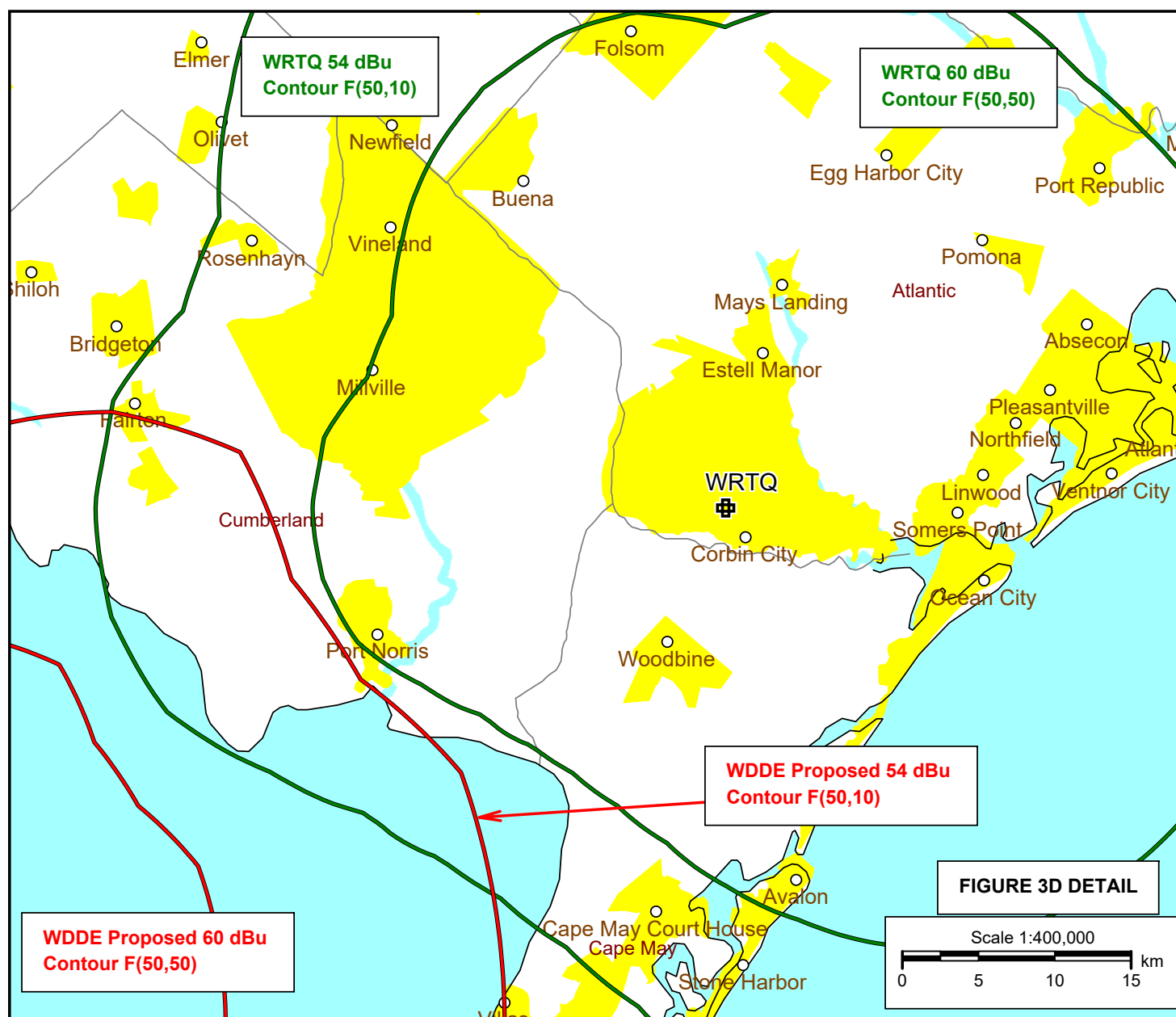
### WDDE\_Pro

Proposed DA Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

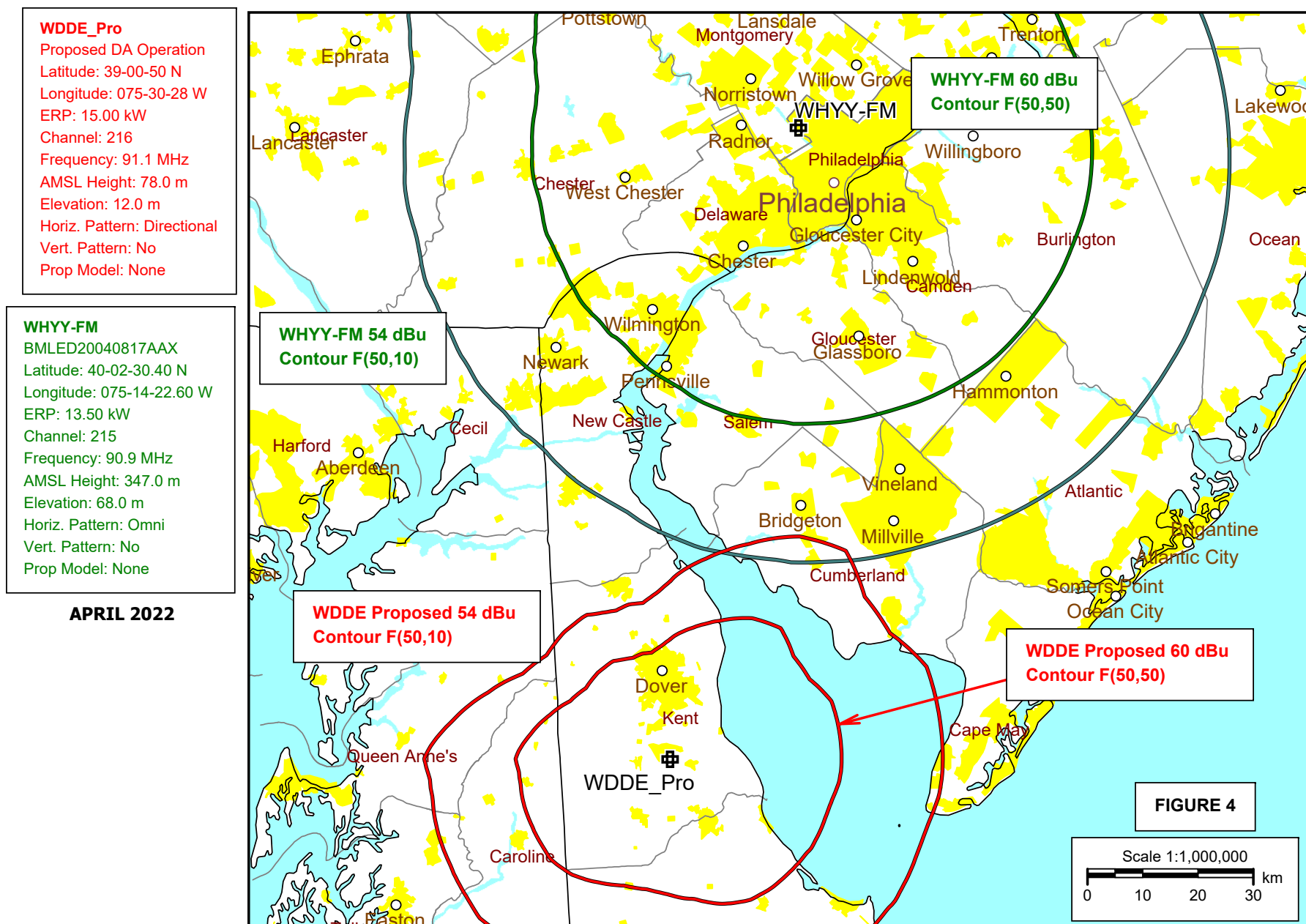
### WRTQ

BLED20071009AIT  
Latitude: 39-19-14.40 N  
Longitude: 074-46-16.60 W  
ERP: 13.50 kW  
Channel: 217  
Frequency: 91.3 MHz  
AMSL Height: 129.0 m  
Elevation: 7.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

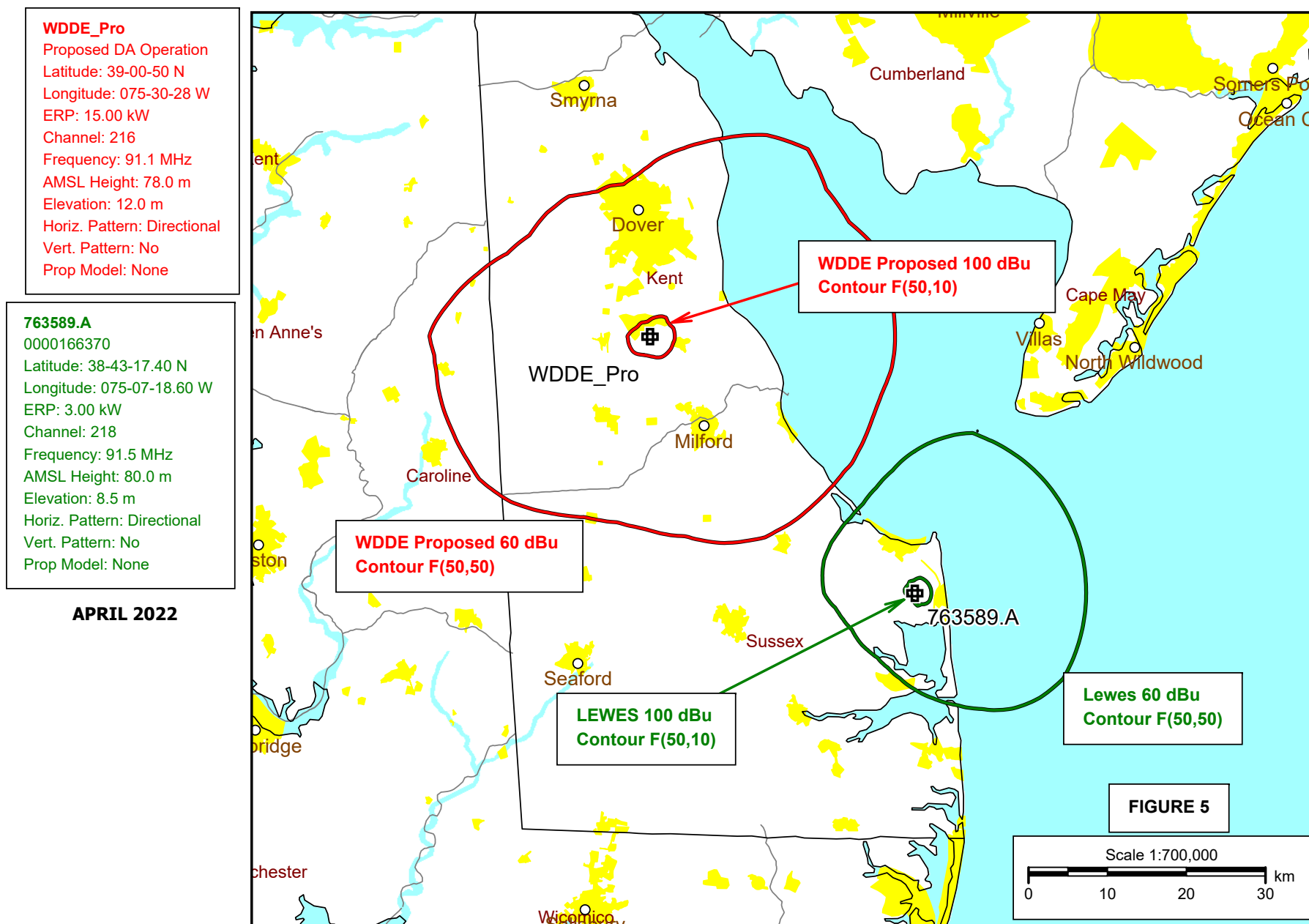
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60 dBu (1 mV/m) Protected And 54 dBu (0.5 mV/m interfering) FCC Contours For WDDE, Dover, DE And WRTQ, Ocean City, NJ



60 dBu (1 mV/m) Protected And 54 dBu (0.5 mV/m interfering) FCC Contours For WDDE, Dover, DE And WHYY-FM, Philadelphia, PA



60 dBu (1 mV/m) Protected And 100 dBu (100 mV/m interfering) FCC Contours For WDDE, Dover, DE And Proposed Lewes, DE

### WDDE\_Pro

Proposed DA Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

### WRTX

BLED19950418KB  
Latitude: 39-12-03.40 N  
Longitude: 075-33-53.70 W  
ERP: 0.58 kW  
Channel: 219  
Frequency: 91.7 MHz  
AMSL Height: 104.0 m  
Elevation: 13.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

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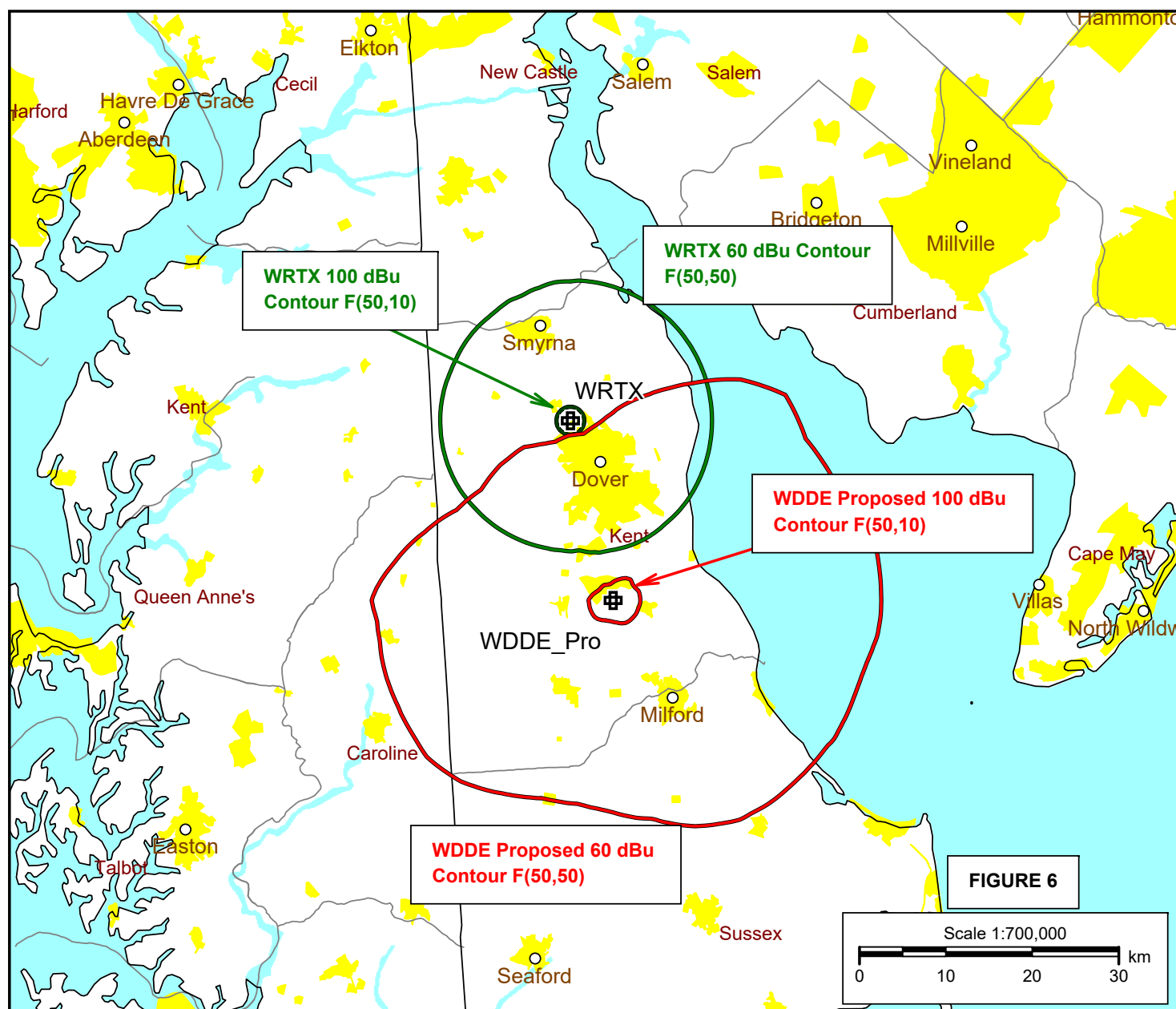
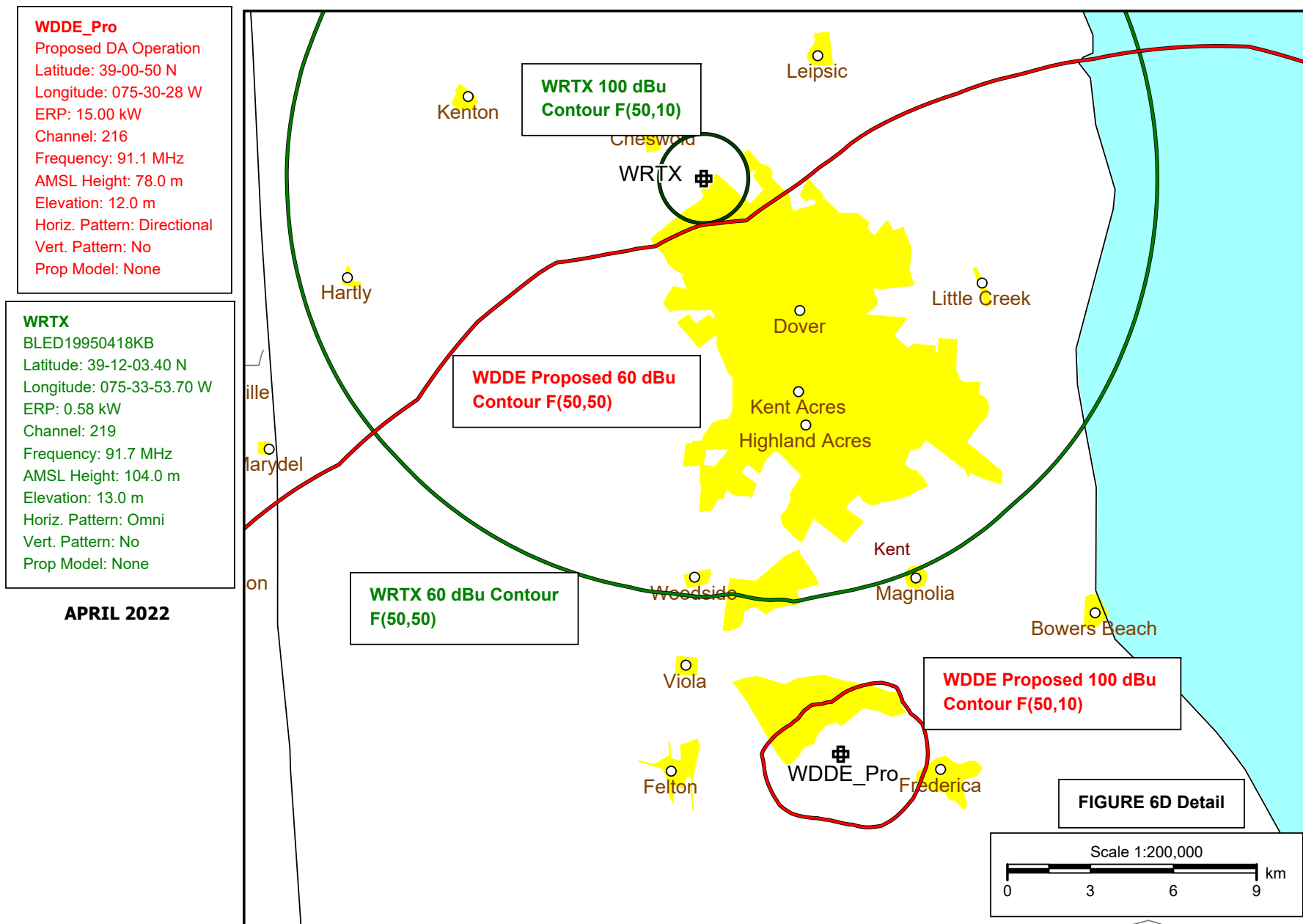


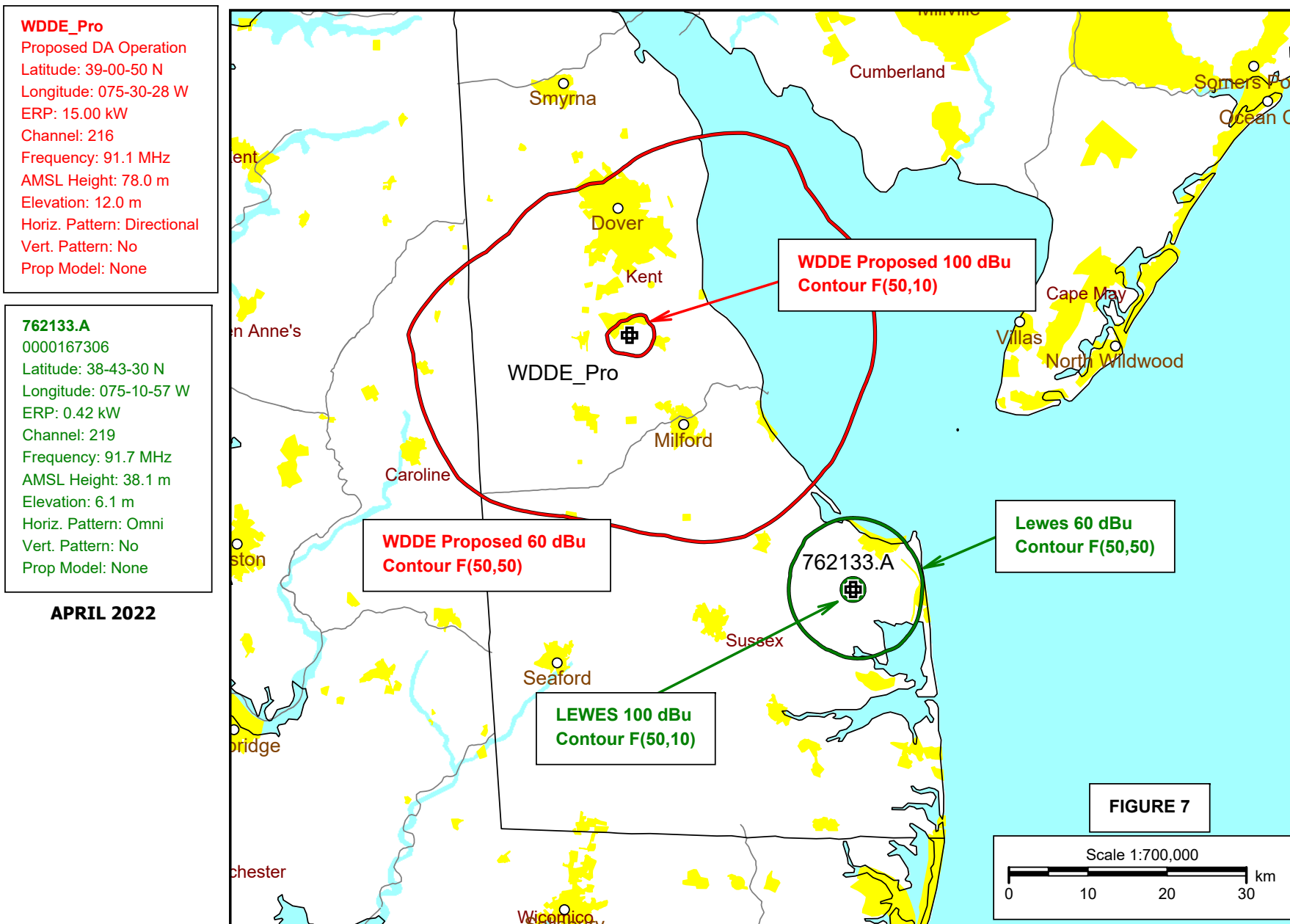
FIGURE 6

60 dBu (1 mV/m) Protected And 100 dBu (100 mV/m interfering) FCC Contours For WDDE, Dover, DE And WRTX, Dover, DE





60 dBu (1 mV/m) Protected And 100 dBu (100 mV/m interfering) FCC Contours For WDDE, Dover, DE And WRTX, Dover, DE



60 dBu (1 mV/m) Protected And 100 dBu (100 mV/m interfering) FCC Contours For WDDE, Dover, DE And Proposed Lewes, DE



### WDDE\_Pro

Proposed DA Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

### WDDE

BLED20110812ACN  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 2.10 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

60 dBu Contour Population:  
149,919 People  
1,612 Sq. km (Land Area Only)  
2010 US Census

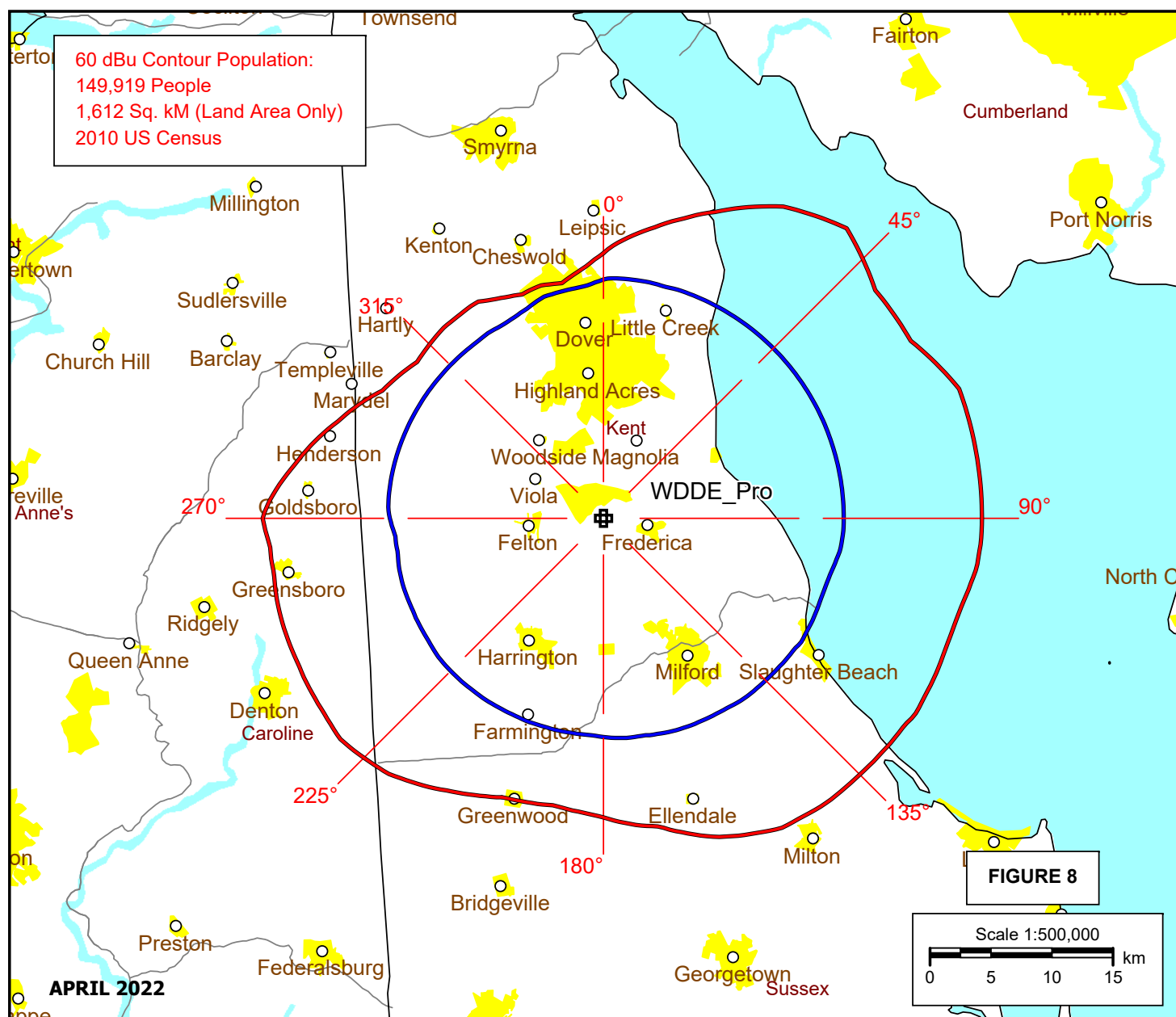
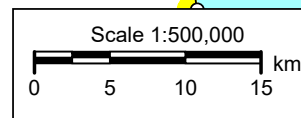


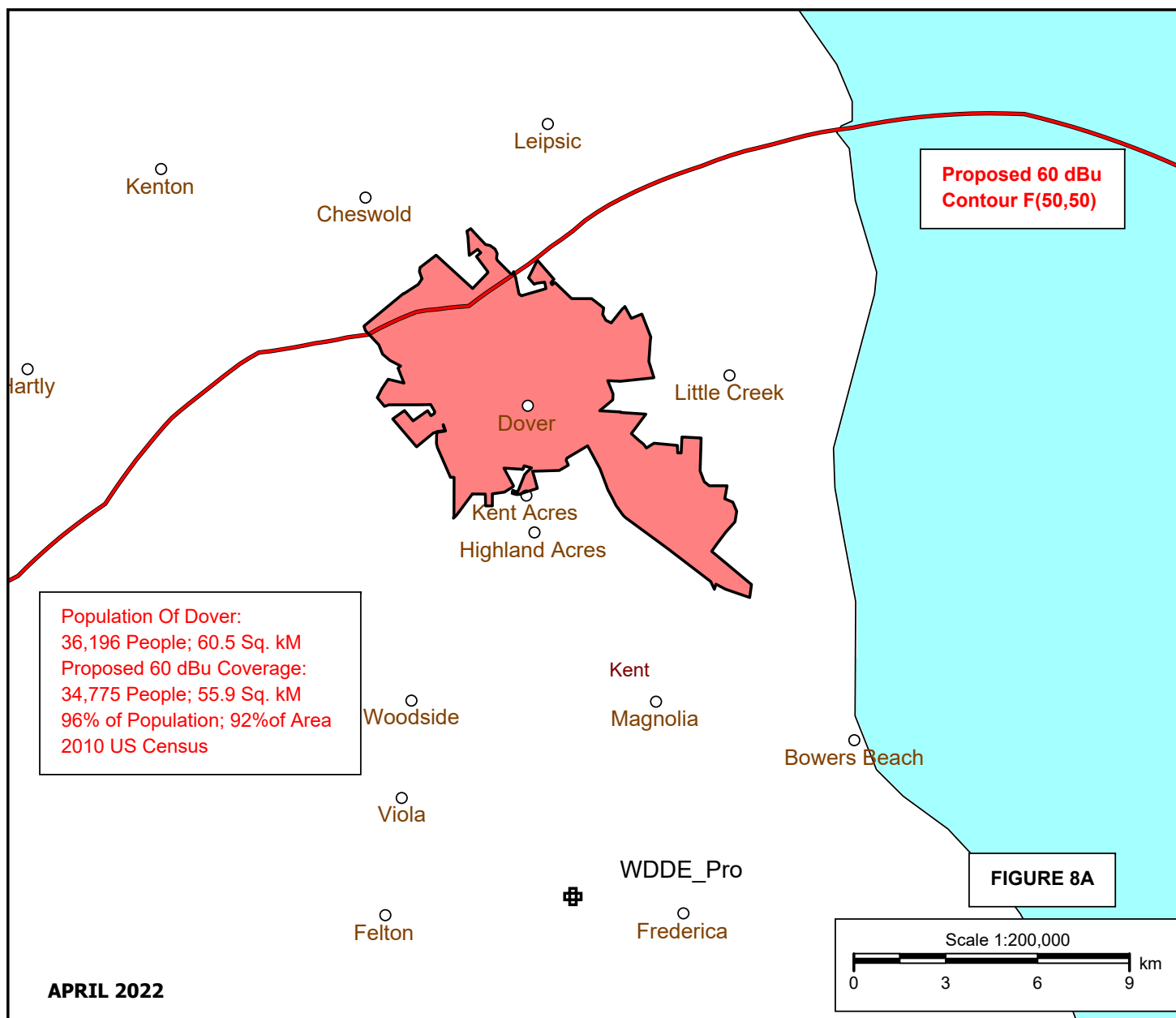
FIGURE 8



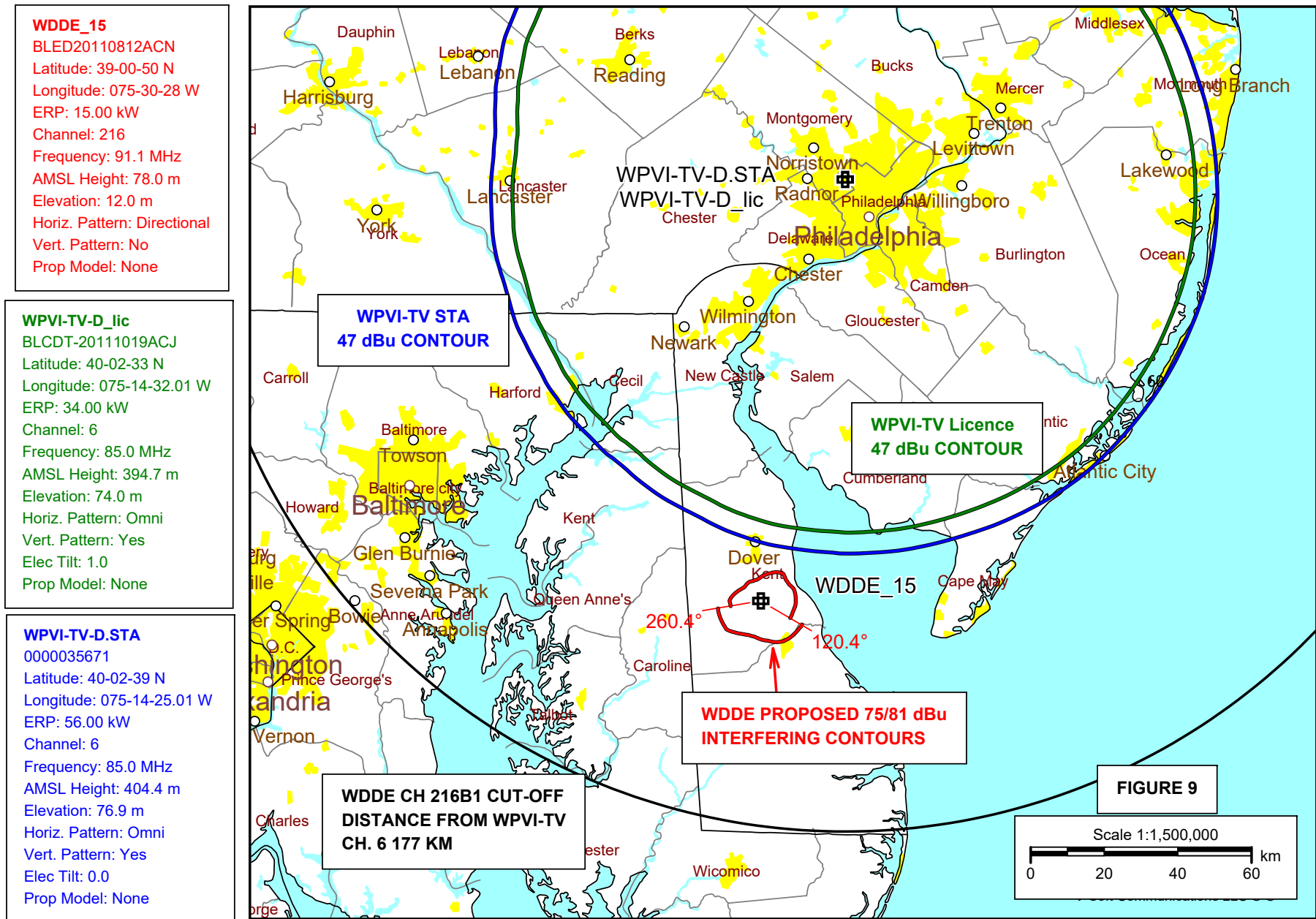
60 dBu (1 mV/m) Protected FCC Contour For The Present And Proposed Operation Of WDDE, Dover, DE

**WDDE\_Pro**

Proposed Operation  
Latitude: 39-00-50 N  
Longitude: 075-30-28 W  
ERP: 15.00 kW  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 78.0 m  
Elevation: 12.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None



**60 dBu (1 mV/m) Protected FCC Service Contour To Dover From The Proposed Operation Of WDDE, Dover, DE**



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WPVI-TV CH. 6 Protected Grade B Contours And Interfering Contours Of The Proposed Operation Of WDDE, Dover, DE