

ENGINEERING EXHIBIT

Request for Special Temporary Authorization prepared for

**Greater Washington Educational
Telecommunications Association, Inc.**
W205BL Frederick, MD
Facility ID 90076

Greater Washington Educational Telecommunications Association, Inc. (“GWETA”), licensee of FM translator station W205BL (Ch. 205, Facility ID 90076, Frederick MD) requests Special Temporary Authority (“STA”) to operate with parameters at variance. As described in W205BL Silent STA submissions (file# BLSTA-20211130AAF and 0000194907), the tower structure supporting the W205BL antenna was dismantled by the tower owner and W205BL is presently silent. Pending final development, authorization, and installation of a suitable equipment configuration at an alternate site, *GWETA* herein requests an STA to operate W205BL with a reduced facility at a location immediately adjacent to the licensed site.

W205BL is licensed to operate with 0.2 kW effective radiated power (“ERP”) with a two-bay nondirectional antenna centered 37.0 meters above ground level (“AGL”). *GWETA* proposes to install a single antenna bay near the top of an existing wooden pole structure that is located 0.03 km from W205BL’s former tower location. The proposed STA facility will operate at 0.09 kW ERP with a nondirectional antenna 8.8 meters AGL.

The proposed antenna supporting structure is not registered as the overall structure height does not exceed 61 meters above ground and passes the FCC’s TOWAIR program for the location. The proposed antenna will side-mount to the pole and no change to the overall structure height will occur.

The proposed STA facility’s 60 dBμ contour does not extend beyond that of the licensed W205BL facility, as depicted in the attached Figure 1. A summary of the proposal’s compliance

with the interference protection requirements of §74.1204(a) and (g) is supplied in Table 1. The proposed STA facility complies with the prohibited contour overlap requirements of 74.1204(a) regarding all other FM full power, low power, and translator stations

Regarding RF exposure, the proposed STA operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. The proposed transmitting antenna is an ERI model 100A-1M consisting of a single element (EPA Type 2). According to the FCC's "FMModel" software analysis,¹ the maximum calculated RF electromagnetic field attributable to the STA facility at locations near the tower at a height of two meters above ground level is 71.8 $\mu\text{W}/\text{cm}^2$, which is 35.9 percent of the general population / uncontrolled maximum permitted exposure limit. No other known emitters are near enough to the site to be a significant contributor to RF exposure.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will be posted. With respect to worker safety, the applicant will coordinate exposure procedures and will reduce power or cease operation as necessary to protect persons having access to the site, support structure, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field.

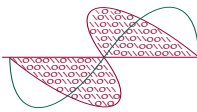
List of Attachments

Figure 1	Proposed STA Coverage Contour
Table 1	Channel Allocation Study Summary

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	September 26, 2022	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

¹ "Office of Engineering and Technology Announces Updates to FMModel Software," Public Notice, DA 16-340, March 31, 2016. FMModel is available at <https://www.fcc.gov/oet/software/fmmodel>.



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Proposed STA Coverage Contour
W205BL Frederick, MD
Facility ID 90076

prepared for
Greater Washington Educational
Telecommunications Association, Inc.

September, 2022

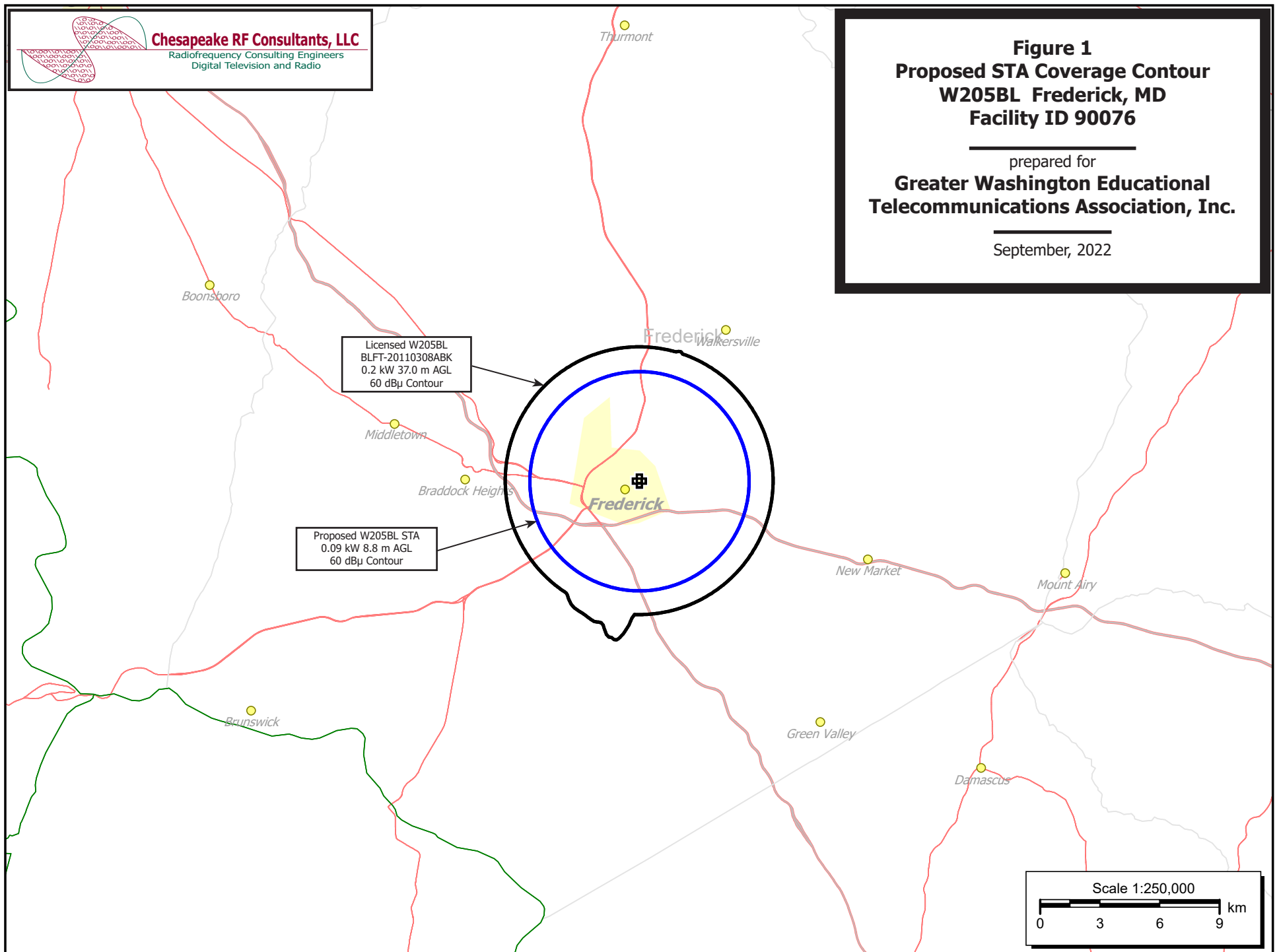
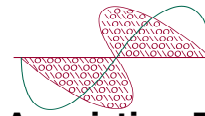


Table 1

Channel Allocation Study Summary**Greater Washington Educational Telecommunications Association, Inc.**

W205BL Frederick, MD

**Chesapeake RF Consultants, LLC**Radiofrequency Consulting Engineers
Digital Television and Radio

w205BL Proposed STA

REFERENCE		CH# 205D - 88.9 MHz, Pwr= 0.09 kw, HAAT= -43.4 M, COR= 96.6 M						DISPLAY DATES		
39 25 04.5 N.		Average Protected F(50-50)= 5.5 km						DATA 09-26-22		
77 24 09.2 W.		Omni-directional						SEARCH 09-26-22		
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kw)	INT(km)	PRO(km)	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)
206B1	WGMS	LIC	DCN	342.9	32.36	39 41 47.30	0.900	25.8	15.5	6.1
Hagerstown			MD	162.9	BLED19930608KA	77 30 49.00	408	709	Greater Washington Educati	
203B	WAMU	LIC	CN	153.4	59.82	38 56 10.40	47.000	5.6	49.4	9.6
Washington			DC	333.6	0000106853	77 05 31.90	156	226	Board Of Trustees Of Ameri	
207B	WPFW	LIC	CN	153.4	59.82	38 56 10.40	34.000	5.1	46.5	12.5
Washington			DC	333.6	0000113140	77 05 31.90	156	226	Pacifica Foundation, Inc.	
205B	WVEP	LIC	CN	251.4	94.17	39 08 38.30	3.600	134.2	56.6	19.4
Martinsburg			WV	70.8	BMLED20120907AAB	78 26 08.00	495	900	West Virginia Educational	
205D	WVEP-FM1	LIC	DVN	259.5	41.02	39 20 59.30	0.210	5.8	1.9	20.7
Charles Town			WV	79.2	BLFTB20070611ABN	77 52 13.90		216	West Virginia Educational	
205B1	WEAA	LIC	CN	96.6	70.80	39 20 31.30	12.500	85.1	19.2	33.0
Baltimore			MD	277.1	BLED1622	76 35 11.80	67	142	Morgan State University	
202A	WZXQ	LIC	DCN	354.1	60.64	39 57 40.30	0.110	0.7	18.8	41.2
Chambersburg			PA	174.1	BLED20050830ADO	77 28 31.00	352	725	Four Rivers Community Broa	
204B	WXPH	LIC	DEN	44.0	95.82	40 02 07.40	7.000	59.2	40.1	47.9
Middletown			PA	224.5	BLED20070705AEB	76 37 17.90	216	354	The Trustees Of The Univer	
204A	WWCF	LIC	CN	320.2	73.75	39 55 33.30	0.007	18.3	11.7	54.2
Mcconnellsburg			PA	139.8	BMLED20170814ABF	77 57 23.00	433	734	Cove Mountain Educational	
208B	WITF-FM	LIC	CN	23.7	112.68	40 20 44.30	5.900	4.6	56.2	55.8
Harrisburg			PA	204.0	BMLED20040130ADW	76 52 05.90	415	599	Witf, Inc.	
204A	WSYC-FM	LIC	CN	352.2	73.66	40 04 30.30	0.130	8.6	6.0	59.9
Shippensburg			PA	172.1	BMLED20080812ACT	77 31 13.90	-47	212	Shippensburg University Of	
202A	WDCV-FM	LIC	HN	11.4	88.90	40 12 09.30	0.450	1.5	8.3	80.0
Carlisle			PA	191.5	BMLED20121120AHI	77 11 44.90	-13	169	Trustees Of Dickinson Coll	
206A	WRSM	LIC	DEN	72.1	112.38	39 43 17.40	1.000	29.6	19.9	83.9
Rising Sun			MD	252.9	BLED20130328AQA	76 09 17.80	96	196	Hope Christian Church Of M	
207B1	762512	APP	DEN	323.3	121.74	40 17 33.20	1.500	2.4	31.1	87.9
Saxton			PA	142.7	0000165610	78 15 38.00	292	697	Central Pennsylvania Chris	
202B1	WLTV	LIC	DCN	278.5	130.12	39 34 48.30	0.490	1.0	32.4	92.8
Midland			MD	97.5	BLED20181116ACV	78 54 03.00	430	911	Educational Media Foundati	
204A	WPME	CP	DEN	302.8	116.63	39 58 47.10	0.600	17.0	11.7	97.1
Bedford			PA	122.1	0000165612	78 33 05.90	44	498	Central Pennsylvania Chris	
202A	WWEC	LIC	CN	40.2	106.65	40 08 53.30	0.100	0.7	7.1	98.3
Elizabethtown			PA	220.7	BLED19900830KB	76 35 36.80	35	174	Elizabethtown College	
206A	WFNM	LIC	CN	52.6	116.02	40 02 43.30	0.100	11.9	8.4	99.7
Lancaster			PA	233.3	BMLED20110107ACA	76 19 12.80	46	161	Franklin And Marshall Coll	

Terrain database is FCC NGDC 30 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= East Zone, Co to 3rd adjacent.
Call signs with exclamation marks 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)

Incoming contour overlap is ignored.

"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.