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# MINOR MODIFICATION TO A CONSTRUCTION PERMITTED BROADCAST TELEVISION STATION

**CALL SIGN: WPBS-DT**  
**FACILITY ID: 62136**  
**FCC FILE NO.: 0000034513**  
**LOCATION: WATERTOWN, NY**

## **Prepared For:**

St. Lawrence Valley  
Educational TV Council, Inc.  
1056 Arsenal Street  
Watertown, NY 13601

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June 6, 2019

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## **1.0 MINOR MODIFICATION**

St. Lawrence Valley Educational TV Council, Inc., is the licensee of a television broadcast station having call sign WPBS-DT<sup>1</sup> which has a Construction Permit<sup>2</sup> (“CP”) to operate at FCC ASRN 1016461 with a center of radiation of 282.2m AGL using a top mount directional broadcast antenna. It is herein proposed to use a Dielectric TUF-04-10/40H-1-T omni directional top mount antenna instead of the permitted directional antenna. Appendix A shows the proposed tower elevation diagram accommodating the proposed antenna. Pursuant to 47 CFR Section 73.3572(a)(1) the instant application is considered a “minor” change since there is no change in frequency or community of license.

## **2.0 CONTINGENT REQUEST FOR WAIVER OF SERVICE AREA EXPANSION FREEZE**

As described below, this application would expand predicted coverage to an area not covered by the outstanding construction permit. However, that expansion would be entirely over water and Canadian territory with no gain area in U.S. territory. On April 5, 2013, the Media Bureau issued a Public Notice (April 2013 Freeze Public Notice) imposing limitations on the filing and processing of certain applications by full power and Class A television stations in light of the then forthcoming broadcast incentive auction<sup>3</sup>. As of the filing date of the instant application, the Media Bureau will not accept for filing modification applications by television broadcast licensees and permittees for changes to existing television service areas that would increase a station’s protected contour in one or more directions beyond the area resulting from the station’s present parameters as represented in its authorizations (license and/or CP). The April 2013 Freeze Public Notice indicates that the Bureau will consider, on a case-by-

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<sup>1</sup> FCC Facility ID No.: 62136

<sup>2</sup> FCC File No.: 0000034513

<sup>3</sup> *Media Bureau Announces Limitations on the Filing and Processing of Full Power and Class A Television Station Modification Applications, Effective Immediately, and Reminds Stations of Spectrum Act Preservation Mandate*, Public Notice, 28 FCC Rcd 4364 (MB 2013)

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case basis, requests for waiver of the filing limitation imposed by the Public Notice when a modification application is necessary or otherwise in the public interest for technical or other reasons to maintain quality service to the public.

The WPBS-DT CP facility specifies a Dielectric TFU-18JSC-R C170 broadcast antenna which is highly directional coupled with a high-powered transmitter to produce an ERP of 972kW. At the time of filing the maximization application it was understood that the proposed antenna and a portion of the transmitter costs were going to be out of pocket expenses above and beyond FCC reimbursement; however, due to the short duration of the FCC maximization window, there was not enough time to acquire quotations to present to the licensee's board of directors. Since the closing of the maximization window and grant of the CP, quotations have been gathered and presented to the board. Given the current finances of this public television station the board was not able to fund a budget for the maximization plan as proposed. The herein proposed antenna and transmitter drastically reduces the buildout costs and is within the budget approved by the board.

The CP antenna is highly directional and the herein proposed antenna is omnidirectional. Appendix C illustrates that the herein proposed facility shall have a noise limited contour which exceeds the CP facility. Since the expansion area is located over water and Canadian territory, it is believed that an expansion waiver request is not necessary; however, if necessary then it is respectfully requested to waive the expanded coverage restriction imposed in the April 2013 Freeze Public Notice. The licensee submits that granting the waiver request will serve the public interest by providing a stronger field strength over the entire WPBS-DT community of license while providing a reasonable path forward to build the facility.

### **3.0 ALLOCATION ANALYSIS**

Appendix B are the summarized results from TVStudy V2.2.5 which illustrates that there are no interference failures.

### **4.0 RADIO FREQUENCY RADIATION COMPLIANCE**

A theoretical analysis has been conducted of the human exposure to radio frequency radiation (“RFR”) using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain<sup>4</sup> extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360-degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

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<sup>4</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

The resulting RFR study in Appendix D demonstrates that the peak exposure is 0.07% of the most restrictive permissible exposure threshold. Pursuant to OET Bulletin 65 concerning multiple-user transmitter sites only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is within 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility were not taken into account. The instant application is compliant with the FCC limits for human exposure to RF radiation and is excluded from further environmental processing since no changes are proposed to the tower structure in order to accommodate the proposed antenna.

A chain link fence encloses the support structure and the applicant will cooperate with any other users of the tower by reducing the power to the antenna or if necessary, completely cutting it off to protect maintenance workers on the tower.

## **5.0 CERTIFICATION**

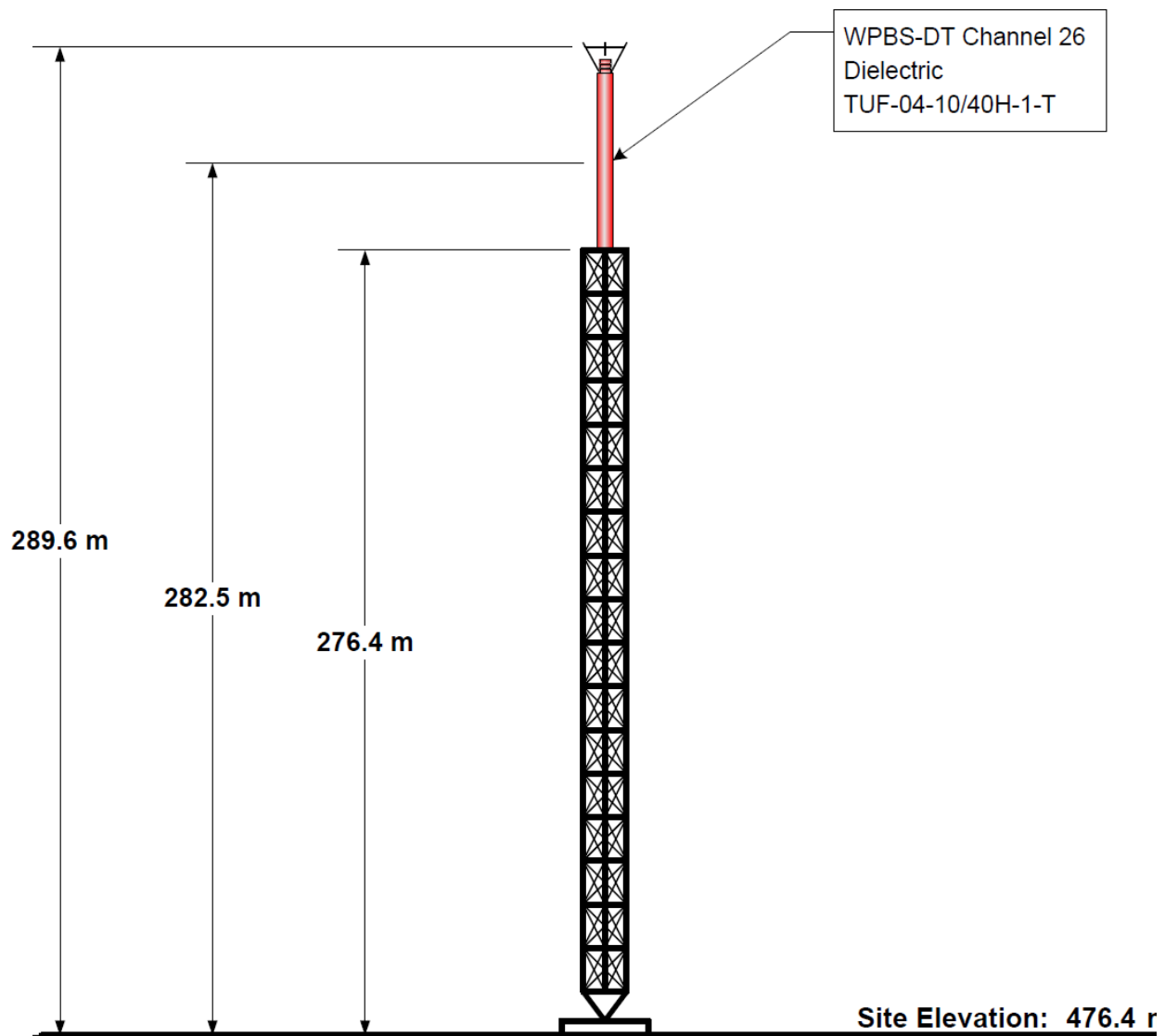
The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on June 6, 2019

Ryan Wilhour



Consulting Engineer

**APPENDIX A – Tower Elevation Profile**



<b>Overall Height AGL:</b>	<b>289.6 m</b>
<b>Overall Height AMSL:</b>	<b>766.0 m</b>
<b>Radiation Center AGL</b>	<b>282.5 m</b>
<b>Radiation Center AMSL:</b>	<b>758.9 m</b>
<b>Radiation Center HAAT:</b>	<b>373.3 m</b>

**COORDINATES (NAD 83):**

**N. LATITUDE** 43° 51' 46.0"  
**W. Longitude:** 75° 43' 38.0"

**NOTE: NOT TO SCALE**

**FCC Tower Registration Number: 10164**

# WPBS-DT – Minor Modification to a Construction Permitted Broadcast Television Station

Watertown, NY

## APPENDIX B – TVStudy V2.2.5 Allocation Analysis

Study created: 2019.06.06 12:19:20

Study build station data: LMS TV 2019-06-06

Proposal: WPBS-DT D26 DT CP WATERTOWN, NY  
File number: WPBS Minor Modification  
Facility ID: 62136  
Station data: User record  
Record ID: 3824  
Country: U.S.  
Zone: II

Search options:

Non-U.S. records included

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WSKA	D25	DT	CP	CORNING, NY	BLANK0000034484	220.5 km
No	WMHT	D25	DT	CP	SCHENECTADY, NY	BLANK0000035673	195.6
No	WTVU-CD	D25	DC	CP	SYRACUSE, NY	BLANK0000034939	96.2
Yes	WGGB-TV	D26	DT	CP	SPRINGFIELD, MA	BLANK0000024834	308.2
No	WFUT-DT	D26	DT	CP	NEWARK, NJ	BLANK0000034667	374.6
Yes	WGCE-CD	D26	DC	CP	ROCHESTER, NY	BLANK0000033855	170.2
No	WFXP	D26	DT	CP	ERIE, PA	BLANK0000028342	407.1
No	WYLN-LP	D26+	DC	CP	HAZLETON, PA	BLANK0000034698	322.1
No	WIVT	D27	DT	CP	BINGHAMTON, NY	BLANK0000028447	201.1
No	WIXT-CD	D27	DC	CP	DEWITT, NY	BLANK0000034942	99.6
No	CBOT-DT	D25	DT	LIC	OTTAWA, ON	BLANKCANADA203	182.6
Yes	CJMT-DT	D26	DT	LIC	TORONTO, ON	BLANKCANADA236	294.8
Yes	CIVM-DT	D26	DT	LIC	MONTRAL, QC	BLANKCANADA277	255.1
No	CFMT-DT-2	D27	DT	LIC	OTTAWA, ON	BLANKCANADA204	151.1
No	CIII-DT-27D27		DT	LIC	PETERBOROUGH, ON	BLANKCANADA213	194.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D26  
Latitude: 43 51 46.00 N (NAD83)  
Longitude: 75 43 38.00 W  
Height AMSL: 758.9 m  
HAAT: 373.3 m  
Peak ERP: 98.0 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.50

40.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	98.0 kW	443.7 m	91.1 km
45.0	98.0	453.9	91.7
90.0	98.0	388.8	88.1
135.0	98.0	259.0	76.1
180.0	98.0	262.9	76.4
225.0	98.0	315.6	81.4
270.0	98.0	417.4	89.7
315.0	98.0	445.1	91.2

\*\*Proposal is within coordination distance of Canadian border

Distance to Canadian border: 54.5 km

Distance to Mexican border: 2747.4 km

Conditions at FCC monitoring station: Canandaigua NY

Bearing: 230.2 degrees Distance: 163.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 270.6 degrees Distance: 2457.4 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

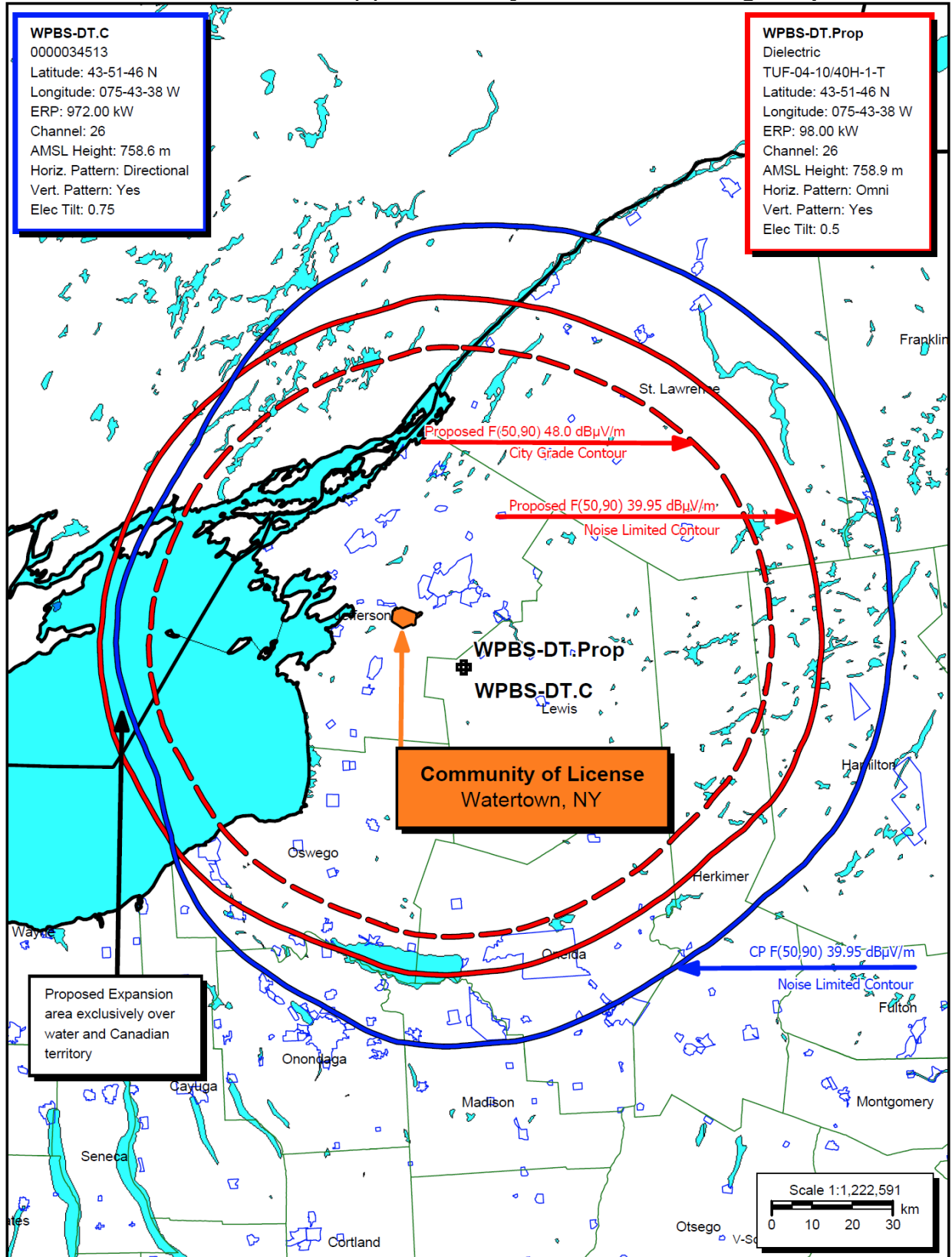
---- Below is IX received by proposal WPBS Minor Modification ----

Proposal receives 1.24% interference from scenario 1

No IX check failures found.



APPENDIX C – Section 73.625(a) Community of License Coverage Map



## APPENDIX D – Far Field Exposure to RF Emissions

