TECHNICAL SUMMARY
SPECIAL DISPLACEMENT WINDOW
APPLICATION FOR CONSTRUCTION PERMIT
DIGITAL REPLACEMENT TRANSLATOR STATION WUVG-DT
ATHENS, GEORGIA
CHANNEL 35 13.5 KW (DA)

1. Application Purpose: The instant application is a special displacement window application for digital replacement translator (DRT) station WUVG-DT currently on channel 17 at Athens, Georgia (FCC File No. BLCDT-20091210ABP).[1] As detailed below, WUVG-DT is eligible for displacement due to impermissible interference caused to the authorized operations of full power stations WPXA-TV on repacked channel 16 at Rome, Georgia (LMS File No. 0000034338) and WHNS on repacked channel 17 at Greenville, South Carolina (LMS File No. 0000024830). Therefore, it is proposed to operate WUVG-DT on "in core" channel 35 with a directional antenna maximum effective radiated power (ERP) of 13.5 kW using an ERI model AL8-35-PL elliptically polarized directional antenna with a main lobe orientation of 190 degrees true and 1.75 degree of electrical beam tilt. The antenna radiation center height will be 334.9 m AMSL. There will be no change in the overall structure height (ASRN 1022700).

2. Eligibility to File in Special Displacement Window: Station WUVG-DT is eligible to file in the special displacement window as it was operating with its currently licensed facilities (FCC File No. BLCDT-20091210ABP) prior to April 13, 2017 – the release date of the *Closing and Channel Reassignment Public Notice*.[2] In addition, WUVG-DT is considered to be displaced due to impermissible interference caused to the authorized operation of full power stations WPXA-TV on repacked channel 16 at Rome, Georgia (LMS File No. 0000034338) and WHNS on repacked channel 17 at Greenville, South Carolina (LMS File No. 0000024830). Specifically, as indicated by the attached *TVStudy* analysis summary report, WUVG-DT's licensed channel 17 operation is predicted to cause up to

[1] See FCC Public Notice dated February 9, 2018 entitled "*Incentive Auction Task Force and Media Bureau Announce Post-Incentive Auction Special Displacement Window April 10, 2018 through May 15, 2018 and Make Location and Channel Data Available*" (DA 18-124, MB Docket No. 16-306, GN Docket No. 12-268) ("FCC Special Displacement Window PN").
[2] See *Media Bureau Announces Date by Which LPTV and TV Translator Stations Must Be "Operating" In Order to Participate In Post-Incentive Auction Special Displacement Window, Public Notice,* 31 FCC Rcd 5383 (MB 2016).

3.07% new interference to WPXA-TV and up to 1.24% new interference to WHNS (up to 0.5% new interference is permitted).

3. Interference Compliance: As indicated in the attached *TVStudy* analysis, WUVG-DT's proposed channel 35 displacement operation meets the FCC's interference protection requirements with respect to all protected facilities based on both a pre-transition and post-transition environment. A cell size of 1.0 km and a profile resolution of 0.1 points/km were utilized for the *TVStudy* analysis. As indicated on the attached *TVStudy* analysis, although interference is caused to a pending application for a new digital translator station at Athens, Georgia (BNPDTL-20090825AJB), protection of such applications is not required by displaced stations.

4. DRT Fill-In Compliance: DRT station WUVG-DT was designed to provide replacement service within the 64 dBu, F(50,50) contour of WUVG-DT's former analog operation on channel 34 at Athens (BLCT-19960614KH). Attached as Figure 1 is a map depicting the 64 dBu, F(50,50) contour for WUVG-DT's former analog operation along with the 51 dBu, F(50,90) contour for WUVG-DT's proposed DRT operation on channel 35. As indicated, the 51 dBu contour for the proposed WUVG-DT DRT operation is entirely within WUVG-DT's former analog 64 dBu contour as required by the FCC.

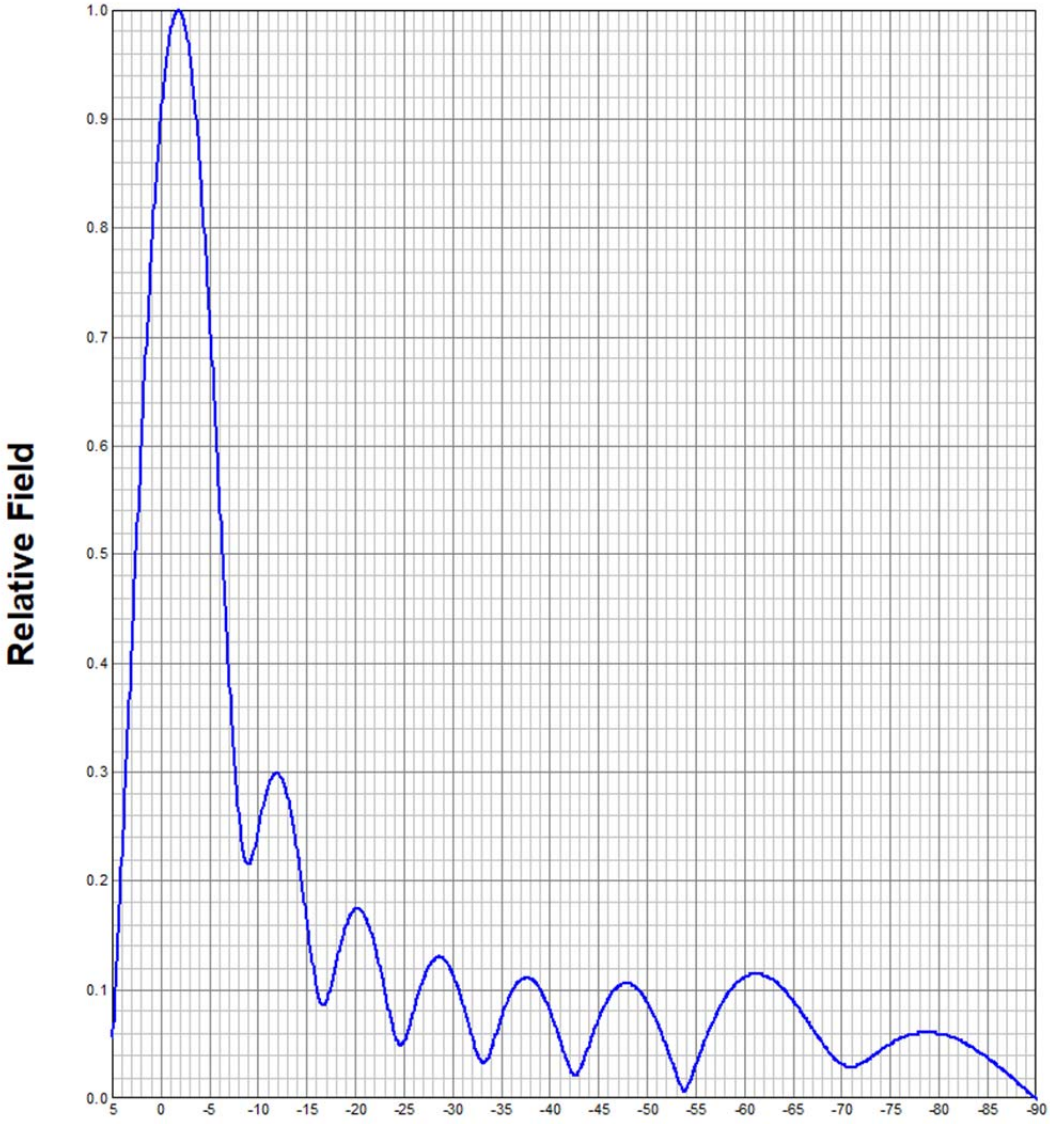
5. Compliance with Section 74.787(a)(4): The 51 dBu, F(50,90) contour for WUVG-DT's currently licensed operation (BLCDT-20091210ABP) has also been shown on Figure 1 and, as indicated, the distance between the licensed and proposed WUVG-DT transmitter sites is 27.0 miles (43.48 km) which complies with the 30 mile limit on site relocations for displaced digital translator stations. It is also noted that the licensed and proposed 51 dBu contours overlap.

6. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna will be located 103.6 meters above ground level. The total DTV ERP is 17.55 (13.5 kW horizontal polarization, 4.05 kW vertical polarization). A greater than expected vertical plane relative field value of 0.12 is presumed for the antenna's downward radiation (-60° to -90° elevation, see attached vertical plane relative field pattern). The calculated power density at a point 2 meters above ground level is 0.82 uW/cm^2 which is 0.2% of the FCC's recommended limit of 399.3 uW/cm^2 for channel 35 for an uncontrolled environment. Thus, as this is less than the 5% threshold value, it is believed that the WUVG-DT facility is in full compliance with the FCC's requirements with regard to radio frequency radiation exposure.

Access to the transmitting site will be restricted and appropriately markets with RFR warning signs. Furthermore, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.

ELEVATION PATTERN

Type:	AL8		Channel:	35
Directivity:	Numeric	dBd	Location:	
Main Lobe:	8.50	9.29	Beam Tilt:	-1.75
Horizontal:	7.01	8.46	Polarization:	Horizontal



Preliminary, subject to final design and review.