



## **Engineering Statement**

### **Amendment to Minor Modification of Construction Permit** **Application File # 0000129325**

**W02CY-D (Displacement of W28ES-D)**  
**New York, NY**  
**FCC Facility ID # 130477**  
**RF Channel 2**

**February 7, 2021**

This Engineering Statement has been prepared on behalf of HC2 Station Group, Inc. (HC2), permittee of Digital Low Power Television Station W02CY-D at New York, NY. The statement was prepared in support of an Amendment to a pending application for Minor Modification of facilities. Application File # 0000129325 to change the make and model of the antenna as described below.

This amendment specifically requests processing of the application with respect to TVStudy analysis to utilize a 0.5KM cell size instead of the default cell size. The attached TVStudy output report shows that this resolves any interference issues with the Minor Modification proposal.

The station holds a construction permit for displacement to CH2 and is proposing to change its antenna make and model number. The antenna pattern will remain the same as well as the transmitter location and antenna height. Therefore, HC2 is filing a application to modify its issued construction permit to specify a new antenna manufacturer and model number and intends to build the facility utilizing the parameters as listed below.

The parameters of the proposed facility are as follows:

#### **Proposed Parameters:**

Transmitter Location:	40-45-08.1 N 073-58-02.1 W (NAD 83)
Channel:	2
ERP:	0.5 KW
Emission Mask:	Full Service
Antenna Pattern:	Custom Directional
Antenna Manufacturer:	Kathrein
Antenna Model:	2xCL-24/HRM/HV (Array)
Antenna RCAGL:	265.5 Meters
Overall Structure AGL:	275.2 Meters
RCAMSL	274.9 Meters



### **Interference Study:**

An interference study was undertaken utilizing the FCC's TVStudy program to analyze the co-channel and adjacent channel interference scenarios for the proposed facility parameters.

It is requested that processing of the application utilize the following parameters for processing and TVStudy analysis:

Study Cell Size: 0.5 KM  
Profile Point Spacing: 0.10 KM

The results of the study predict mutually exclusive interference to station WKOB-LD (FAC ID # 51441) which is also owned by the applicant's affiliated company HC2 LPTV Holdings, Inc. Attached to this application is an Acknowledgement and Waiver of the interference which is predicted between these two commonly owned stations. Consequently, the Applicant requests a waiver of the interference rules between these two facilities to the extent necessary. Please see the attached waiver request document.

### **RF Exposure Study:**

Furthermore, a study was conducted to determine compliance with the RF Radiation Maximum Permissible Exposure (MPE) limits of the proposed operation. The study was conducted using the methodology outlined in the FCC's OET Bulletin 65 regarding RF Radiation Compliance.

The study utilized the proposed antenna height of 265.5meters AGL and a reference height of 2 meters AGL for the reference location. This yields a distance from the antenna of 263.5 meters.

The proposed antenna elevation pattern indicates that the downward radiation from the antenna from 45° to 90° below horizontal has a maximum relative field value of 0.5. This value was used in conjunction with the distance from the antenna and the prescribed formula from OET Bulletin 65 to determine a maximum predicted power density of 0.12 $\mu$ W/cm<sup>2</sup> at 2 meters above ground level near the base of the tower. The Maximum Permissible Exposure Level (MPE) for the Uncontrolled/General Population environment for Channel 2 is approximately 33.3 $\mu$ W/cm<sup>2</sup>. Thus, the proposal is approximately 0.36% of the General Population MPE level and within the allowable limit.



Based upon the forgoing it is believed that the proposed facility is in compliance with the required RF exposure limits.

The licensee and all station personnel and contractors are required to follow appropriate safety procedures before the commencement of any work on the tower or in close proximity to the antenna. These procedures including reducing power or turning off the transmitter before any work is undertaken at the site. The licensee in coordination with any other users of the site must reduce power or cease operations as necessary to ensure workers having access to the site, tower, and antenna locations are not exposed to RF Radiation levels in excess of those prescribed by FCC Guidelines.

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