

ENGINEERING STATEMENT  
IN SUPPORT OF AN APPLICATION  
FOR CONSTRUCTION PERMIT  
WOCK-CD, CHICAGO, ILLINOIS  
CHANNEL 4 3 KW MAX DA 570.8 M AMSL

DECEMBER 2017

This engineering statement has been prepared on behalf of KM LPTV of Chicago-13, L.L.C., licensee of Class A TV station WOCK-CD, Chicago, Illinois and is in support of its application for construction permit to increase station's effective radiated power (ERP).

At present station WOCK-CD, Facility ID Number 35092, (BLDVA-20100107AAN) operates on Channel 4 (66-72 MHz) with 0.3 kW ERP, 570.8 meters antenna height above mean sea level and a directional TV antenna. WOCK-CD also holds a construction permit (BPDVA-20120907AAT) to operate on Channel 4 with 1 kW ERP and a directional TV antenna. It is proposed to operate on Channel 4 with a maximum of 3 kW ERP using a directional TV antenna. No changes in the current antenna site and its height above mean sea level are proposed.

The following information provides pertinent data for the proposed WOCK-CD operation.

Name of the licensee:	KM LPTV of Chicago-13, L.L.C.	
Station Location:	IL-Chicago	
Channel:	4 (66-72 MHz)	
Hours of Operation:	Unlimited	
Transmitter:	Type Accepted	
Antenna Type:	SCA, TVOCUSWOCK	
Antenna Coordinates (NAD83):	North Latitude:	41 deg 53 min 56.10 sec
	West Longitude:	87 deg 37 min 23.20 sec

Maximum effective radiated power (Average):	3 kW 4.77 dBk
Elevation of the site above mean sea level:	180.7 meters
Overall height of the tower above ground:	425.2 meters
Height of radiation center above ground (meters):	390.1 meters
Height of radiation center above mean sea level (meters):	570.8 meters

The proposed WOCK-CD facility complies with Section 73.1030 of the Commission's rules; therefore, notification to radio astronomy installations, radio receiving installations and FCC monitoring stations is not required.

### **INTERFERENCE**

An interference study has been conducted according to the TV Study computer software for the proposed WOCK-CD operation on TV Channel 4. The TV Study indicates the proposed Channel 4 TV operation with 3 kW maximum ERP using a directional TV antenna would not cause interference to any TV, Class A TV or LPTV station. The ERP radiated by the proposed WOCK-CD operation in the direction of WHBF-TV, Channel 4, Rock Island, IL will be maintained at the authorized WOCK-CD operation with 1 kW ERP (see attached map, Figure 1).

## **ENVIRONMENTAL PROTECTION ACT**

Since WOCK-CD will be located on top of an existing building with no change in its current height for its proposed Class A digital TV operation on Channel 4 the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 3 kW and a radiation center of 390.1 meters above ground level, the proposed Channel 4 TV operation would have less than 1 microwatt per square centimeter ( $\mu\text{W}/\text{cm}^2$ ) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.5 in the downward direction.

The Commission's guidelines for Channel 4 are  $1,000 \mu\text{W}/\text{cm}^2$  for the occupational/controlled, and  $200 \mu\text{W}/\text{cm}^2$  for the general population/uncontrolled environment.

The roof-top of the building is kept locked and no unauthorized access is available where WOCK-CD antenna and other transmitting antennas are located. With respect to work performed on the roof-top, WOCK-CD will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

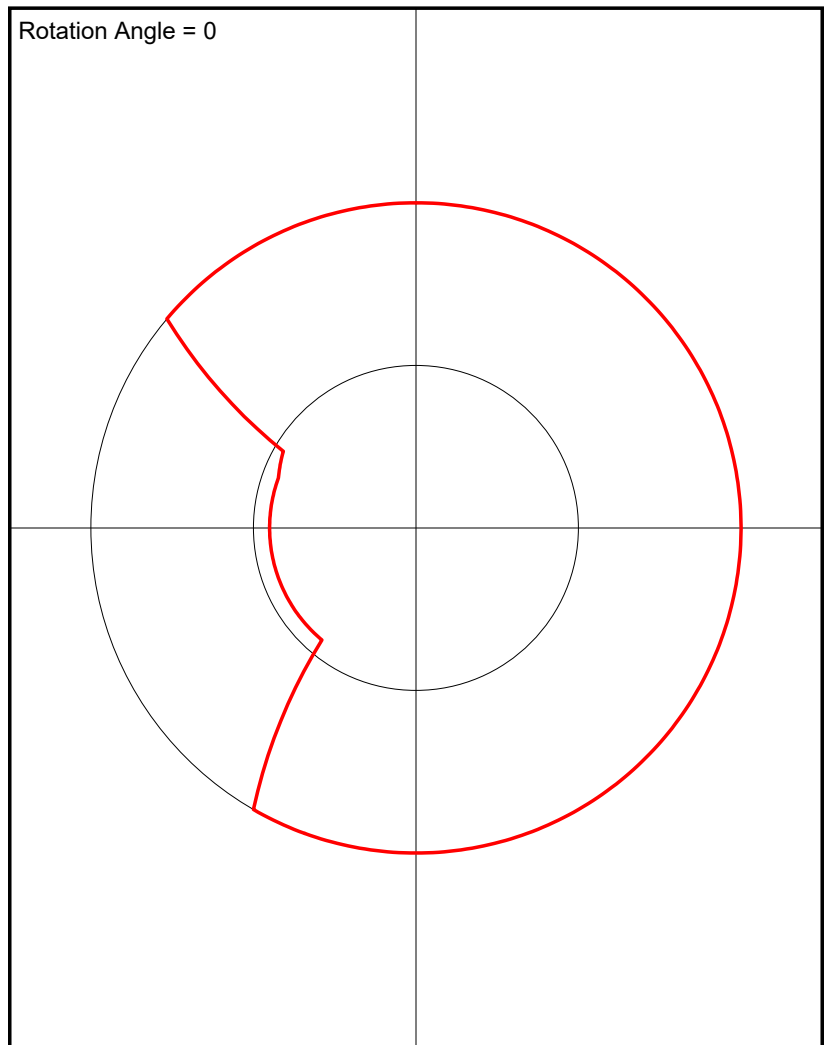
For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.

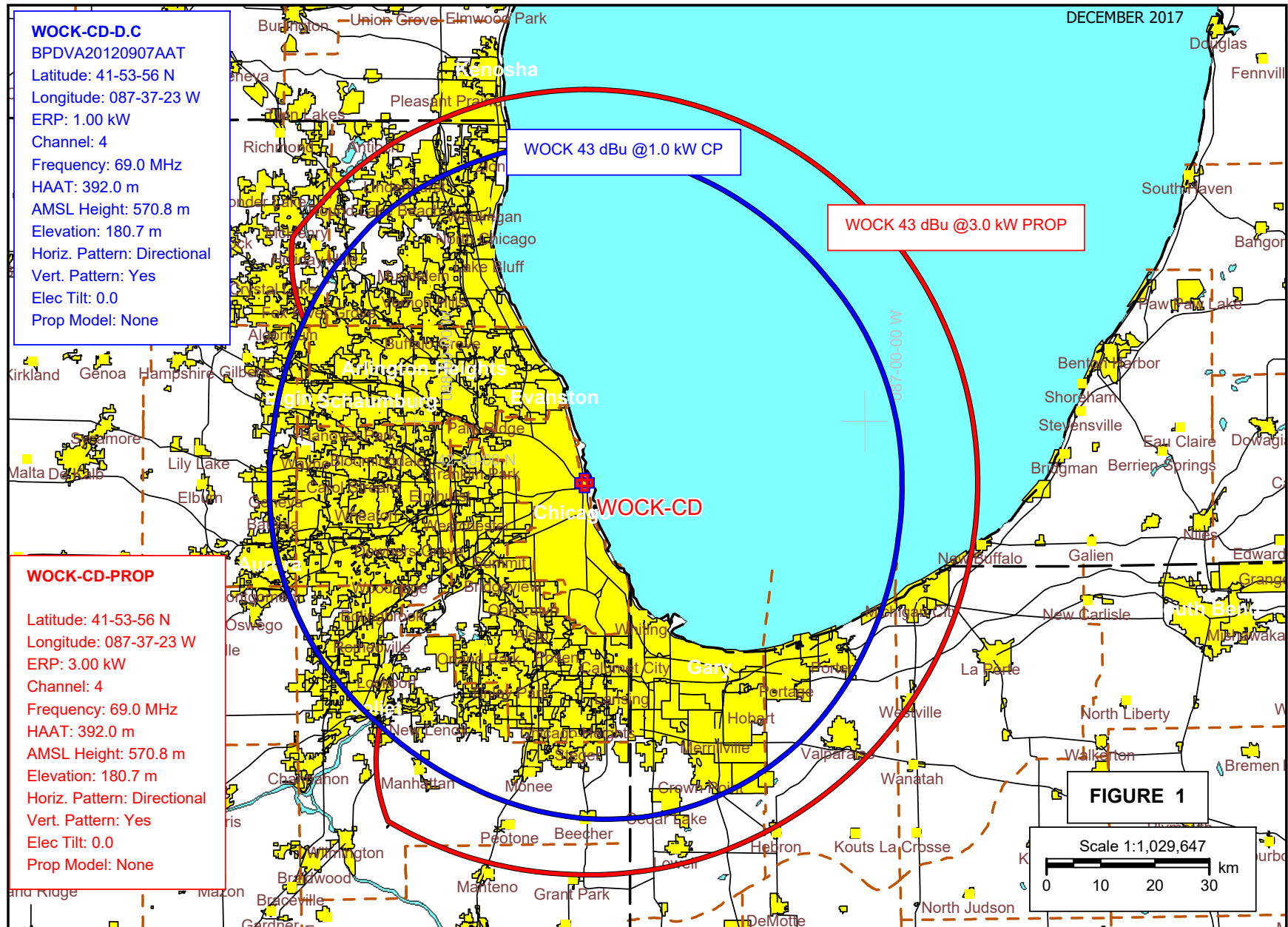
# WOCK-CP 3 kW Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
10.0	1.0
20.0	1.0
30.0	1.0
40.0	1.0
50.0	1.0
60.0	1.0
70.0	1.0
80.0	1.0
90.0	1.0
100.0	1.0
110.0	1.0
120.0	1.0
130.0	1.0
140.0	1.0
150.0	1.0
160.0	1.0
170.0	1.0
180.0	1.0
190.0	1.0
200.0	1.0
210.0	1.0
220.0	0.45
230.0	0.45
240.0	0.45
250.0	0.45
260.0	0.45
270.0	0.45
280.0	0.45
290.0	0.45
300.0	0.471
310.0	1.0
320.0	1.0
330.0	1.0
340.0	1.0
350.0	1.0

Rotation Angle = 0





COMPUTED NOISE LIMITED CONTOURS FOR THE AUTHORIZED AND PROPOSED OPERATIONS OF WOCK-CD, CHICAGO, ILLINOIS