



## **ENGINEERING STATEMENT**

**IN SUPPORT OF**

**APPLICATION FOR MINOR CHANGE TO CONSTRUCTION PERMIT**

**KSHB-TV**

**KANSAS CITY, MO**

### **Background**

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of KSHB which has been authorized to operate its post-incentive auction facility on Ch.36 (0000026810) at Kansas City, MO with an ERP of 647 kW at an HAAT of 325.0m. The tower is located at the following coordinates:

38° 58' 42.0'' N (NAD 83)  
94° 32' 01.8'' W

Scripps now wishes to “maximize” the KSHB post-incentive auction facility ERP from 647 kW to 1000 kW; all other facility parameters will remain the same.

#### **PROVIDING COMMUNICATION SYSTEMS ENGINEERING**

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### **Antenna System and Tower**

KSHB intends to replace the existing top-mounted omni-directional KSHB Ch. 42 antenna (Dielectric TFU-30GTH/VP-R 06 DC) with a new omni-directional coaxial slot antenna for Ch. 36 (Dielectric TFU-28GTH/VP-R 06).

The replacement of the top-mounted antenna will result in a 0.8m reduction in the overall height of the structure. Scripps plans to notify the FAA of the reduction in structure height and update the ASR (#1234587) after construction of the new Ch. 36 facility is complete.

The new Ch. 36 antenna will be elliptically polarized. The vertically polarized radiation will not exceed the horizontally polarized component in any azimuth.

### **Coverage**

The entire principal community of Kansas City, MO is well within the predicted F(50,90) 48 dBu contour based on the proposed omni-directional 1000 kW ERP.

### **Interference**

An interference check study was run using the FCC TVStudy software (Version 2.2.3) for the proposed KSHB post-repack maximized facility parameters. The summary results of the study show that the proposed facility is not predicted to cause more than 0.5% new interference to any other surrounding co-channel or adjacent channel post-repack facilities (see attached study results).

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## **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed post-incentive auction facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be  $0.006476 \text{ mW/cm}^2$ , which is less than 5% of the MPE for public exposure ( $0.404000 \text{ mW/cm}^2$ ) at Ch. 36 (603-609 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Scripps agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

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### **Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "B. Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.  
October 26, 2017

Attached:  
KSHB TVStudy Interference Results

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## KSHB Maximization TVStudy Summary Results

Study created: 2017.10.12 09:07:50

Study build station data: LMS TV 2017-10-11 (8)

Proposal: KSHB-TV D36 DT CP KANSAS CITY, MO  
File number: KSHB-CP-1000k  
Facility ID: 59444  
Station data: User record  
Record ID: 378  
Country: U.S.  
Zone: II

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KFPX-TV	D36	DT	CP	NEWTON, IA	BLANK0000026973	334.9 km
KFPX-TV	D36	DT	BL	NEWTON, IA	DTVBL81509	334.9
WMEC	D36	DT	CP	MACOMB, IL	BLANK0000026298	361.4
WMEC	D36	DT	BL	MACOMB, IL	DTVBL70537	361.4
KBNS-CD	D36	DC	LIC	BRANSON, MO	BLDTL20100315ADB	277.1
KDOR-TV	D36	DT	CP	BARTLESVILLE, OK	BLANK0000026636	294.5
KDOR-TV	D36	DT	BL	BARTLESVILLE, OK	DTVBL1005	294.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36  
Latitude: 38 58 42.00 N (NAD83)  
Longitude: 94 32 1.80 W  
Height AMSL: 612.4 m  
HAAT: 325.0 m  
Peak ERP: 1000 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.75

40.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	346.1 m	101.7 km
45.0	1000	318.0	99.1
90.0	1000	330.5	100.3
135.0	1000	319.3	99.2
180.0	1000	309.9	98.3
225.0	1000	329.9	100.2
270.0	1000	310.4	98.3
315.0	1000	338.0	101.0

\*\*Proposal service area extends beyond baseline plus 1.0%  
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 1019.5 km

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Distance to Mexican border: 1200.8 km

Conditions at FCC monitoring station: Grand Island NE  
Bearing: 304.3 degrees Distance: 396.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 281.3 degrees Distance: 924.5 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%

No IX check failures found.

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