

ENGINEERING STATEMENT  
IN SUPPORT OF APPLICATION FOR CONSTRUCTION PERMIT  
FM TRANSLATOR  
**K223AS, MACON, MISSOURI**  
OCTOBER 2011

This engineering statement and attached exhibits have been prepared on behalf of Best Broadcasting, Inc., licensee of FM translator station, K223AS, Macon, Missouri and are in support of an application for construction permit to change station's antenna site.

K223AS is currently licensed to operate on Channel 223D (92.5 MHz) with 0.25 kW (H&V) effective radiated power (ERP) and 278 meters antenna height above mean sea level using a non-directional antenna. It is proposed to change K223AS antenna site and operate with 0.25 kW ERP and 306.7 meters antenna radiation center above mean sea level. The proposed K223AS FM antenna would be mounted on a 20 foot pole on top of 125 foot high water tower.

The attached map (Figure 1) shows that the computed 1.0 mV/m (60 dBu) contour of the proposed K223AS operation would overlap with the similar licensed contour of the FM Translator station.

K223AS would re-broadcast KLTI(AM) signals as a fill-in FM translator for the AM station. KLTI, licensed to Macon, Missouri, currently operates on 1560 kHz with 1 kW daytime and 0.041 kW nighttime power. The attached map (Figure 2) shows the computed 1.0 mV/m (60 dBu) contour of the proposed K223AS operation in relation to the 2.0 mV/m contour of KLTI(AM). Figure 2 indicates the proposed K223AS 1.0 mV/m (60 dBu) contour would be entirely inside the 2.0 mV/m contour of KLTI(AM). In addition, the proposed K223AS 1.0 mV/m contour would be within 25 miles (40 km) distance from KLTI.

The following data provides detail information concerning the proposed FM translator K223AS operation:

Name of the licensee:	Best Broadcasting, Inc	
Principal community to be served:	MO-Macon	
Primary Station:	KLTl(AM)	
Via:	Direct off-the-air	
Channel:	223D (92.5 MHz)	
Hours of operation:	Unlimited	
Antenna Coordinates:	North latitude:	39 deg 31 min 01 sec
	West Longitude:	92 deg 26 min 33 sec
Transmitter:	Type Accepted	
Antenna type:	Non-Directional	
	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the horizontal plane (kW):	0.25	0.25
Height of radiation center above ground (meters):	42.7	42.7
Ground elevation above mean sea level:	264.0	264.0
Height of radiation center above means sea level (meters)	306.7	306.7

**Interference**

The proposed FM translator operation of K223AS on Channel 223D will comply with Section 74.1204 of the Commission’s rules with respect to interference caused to any existing or proposed FM stations and translators.

The attached map (Figure 3) shows the proposed K223AS operation would not cause prohibited contour overlap with any other FM station operating on  $\pm 3$  channels of

Channel. Therefore, the proposed operation of K223AS is in compliance of Section 74.1204.

Since K223AS will not be operating on Channels 201-220, Section 74.1205 is not pertinent.

### **Unattended Operation**

It is proposed to operate K223AS unattended in accordance with Section 74.124 of the Commission's rules.

### **Multiple Translators**

The applicant does not have any interest in an FM translator or application which serves the same area and re-broadcast the same signals as K223AS.

### **Environmental Protection Act**

As stated above, the proposed K223AS antenna would be mounted 42.7 meters above ground level. Since the FM antenna supporting pole above the existing water tower would be less than 200 feet above ground and the proposed site is not located within 8 km of any airport, an antenna structure registration is not required.

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 FCC OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 0.5 kW and a radiation center of 42.7 meters above ground level, the proposed K223AS operation would have a less than 3 microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ) RF field at 2 meters above the base of the supporting structure assuming 0.5 antenna relative field in the downward direction. The Commission's guidelines for the FM band 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.

Therefore, members of the public and personnel working around the proposed K223AS facility would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the water tower near the FM antenna, station K223AS 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.

**TABLE I**  
**COMPUTED 1.0 mV/m CONTOUR**  
**FOR THE PROPOSED FM TRANSLATOR OPERATION OF**  
**K223AS, MACON, MISSOURI**  
**OCTOBER 2011**

Call Letters: K223AS

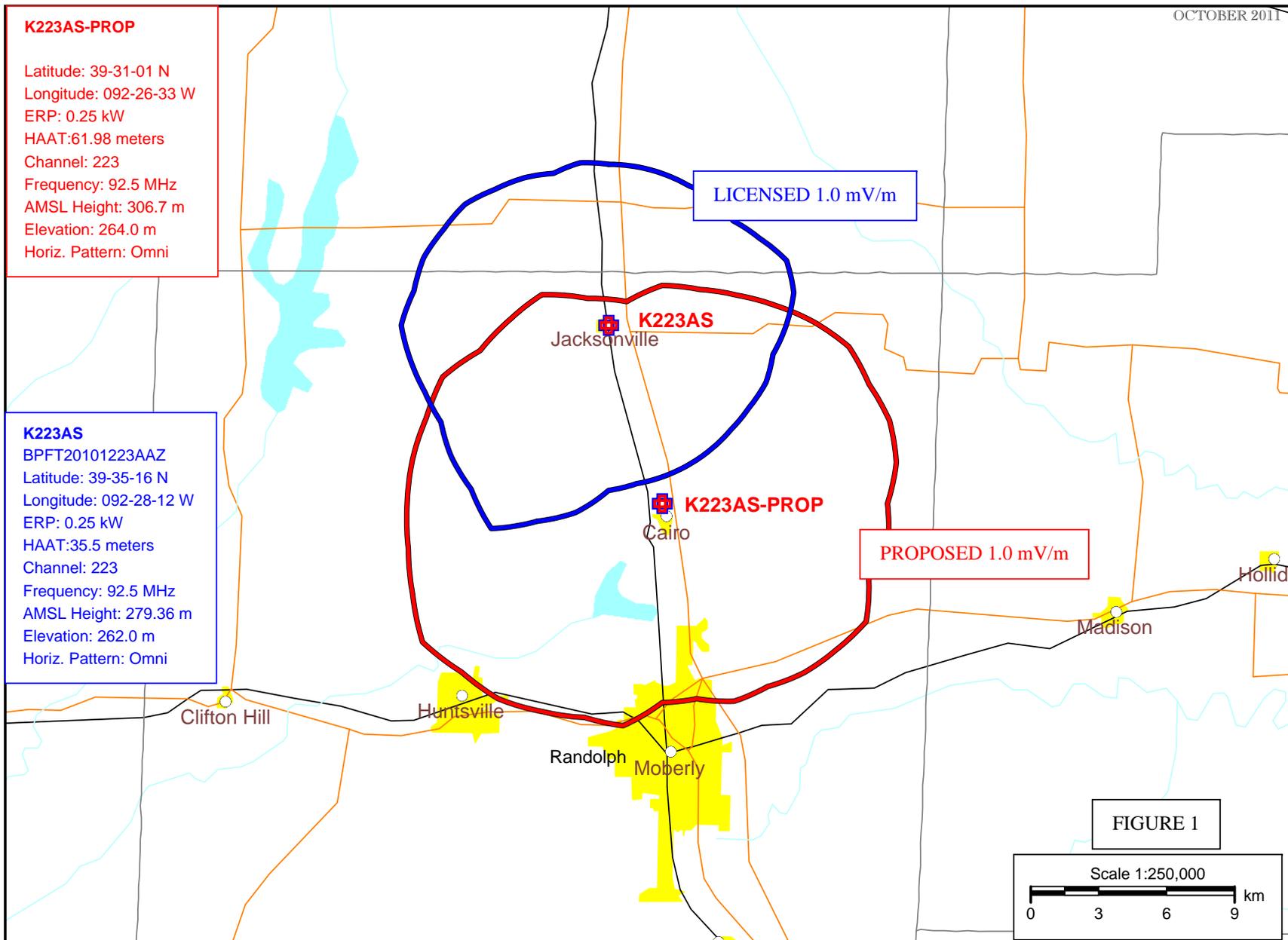
Latitude: 39-31-01 N  
 Longitude: 092-26-33 W  
 ERP: 0.25 kW  
 Channel: 223 D  
 Frequency: 92.5 MHz  
 AMSL Height: 306.7 m  
 Elevation: 264.0 m  
 Antenna Pattern: Non-Directional

Type of contour: FCC  
 Location Variability: 50.0 %  
 Time Variability: 50.0 %  
 Field Strength: 1.0 mV/m (60.00 dBuV/m)

Primary Terrain: V-Soft 3 Second US Terrain

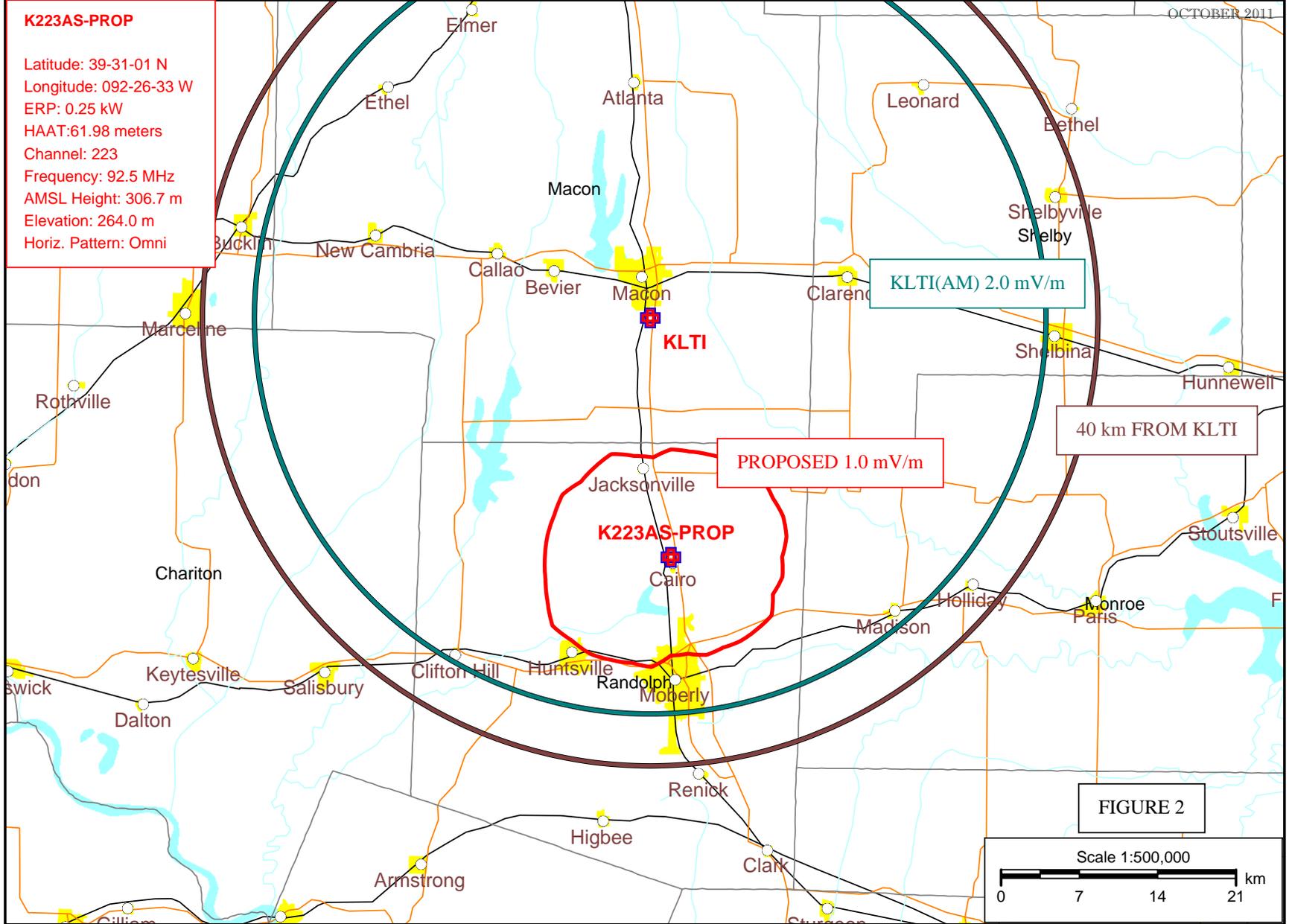
<u>Bearing (deg)</u>	<u>Distance (km)</u>	<u>HAAT (m)</u>
0.0	9.6	53.5
30.0	10.1	58.6
60.0	10.5	64.8
90.0	9.9	57.0
120.0	10.4	62.9
150.0	9.3	50.4
180.0	8.8	45.4
210.0	10.6	65.6
240.0	12.2	89.7
270.0	11.3	75.2
300.0	11.2	74.2
330.0	10.6	66.3

Average HAAT for radials shown: 63.6 m



COMPUTED 1.0 mV/m CONTOURS FOR THE LICENSED AND PROPOSED OPERATIONS OF K223AS

**K223AS-PROP**  
Latitude: 39-31-01 N  
Longitude: 092-26-33 W  
ERP: 0.25 kW  
HAAT: 61.98 meters  
Channel: 223  
Frequency: 92.5 MHz  
AMSL Height: 306.7 m  
Elevation: 264.0 m  
Horiz. Pattern: Omni



COMPUTED 1.0 mV/m CONTOUR OF PROPOSED K223AS IN RELATION TO 2.0 mV/m CONTOUR OF KLTl(AM)

