

ENGINEERING STATEMENT
IN SUPPORT OF A CONSTRUCTION PERMIT
TO CHANGE FREQUENCY AND ANTENNA SITE
K223AS, MACON, MISSOURI
DECEMBER 2010

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 its application for a construction permit to change station's operating frequency and antenna site.

K223AS is currently authorized to operate on Channel 223D (92.5 MHz) with 0.25 kW (H&V) effective radiated power (ERP) and 287 meters antenna height above mean sea level using a non-directional antenna. A new full-service FM station has been auctioned off on Channel 223A at Moberly, Missouri. There is a potential that the current operation of K223AS would result in interference to the new full-service co-channel FM station at Moberly, Missouri. Therefore, it is proposed to modify the K223AS operation by relocating its antenna site and operate on Channel 274D (102.7 MHz). The proposed K223AS operation would be with 0.25 kW (H&V) maximum ERP and a directional FM antenna. The proposed K223AS FM antenna would be side-mounted on KZZT(FM) auxiliary tower at 61 meters (200 feet) above ground level. 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 1) shows the computed 1.0 mV/m contour of the proposed K223AS operation in relation to the 2.0 mV/m contour of KLTI(AM). Figure 1 indicates the proposed K223AS 1.0 mV/m contour would be entirely inside the 2.0 mV/m contour of KLTI(AM).

The proposed K223AS operation is located west of the Mississippi river; therefore the K223AS FM translator is limited to a maximum ERP of 0.25 kW at 107

meters HAAT on any radial from the site, spaced evenly every 30 degrees. The attached Table I shows the proposed K223AS operation would comply with Section 74.1235 of the Commission’s rules with respect to power and antenna height limitations.

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

Name of the Permittee:	Best Broadcasting, Inc	
Principal community to be served:	MO-Macon	
Primary Station:	KLTJ(AM)	
Via:	Direct off-the-air	
Channel:	274D (102.7 MHz)	
Hours of operation:	Unlimited	
Antenna Coordinates:	North latitude:	39 deg 27 min 10 sec
	West Longitude:	92 deg 21 min 58 sec
Transmitter:	Type Accepted	
Antenna type:	Directional	
Major lobe directions:	North, Northeast & Northwest	
	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):	61.0	61.0
Ground elevation above mean sea level:	253.0	253.0
Height of radiation center above means sea level (meters)	314.0	314.0
Antenna structure registration number:	1251042	

Interference

The proposed FM translator operation of K223AS on Channel 274D 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 2) shows the proposed K223AS operation would not cause prohibited contour overlap with any other FM station operating on ± 3 channels of Channel 274.

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 site would be side-mounted 61 METERS (200 feet) above ground on the existing KZZT(FM) auxiliary tower with ASR number 1251042. Consequently, 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 FCC OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 0.5 kW and a radiation center of 61 meters above ground level, the proposed K223AS operation would

have a less than 2 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 tower, station K223AS, in coordination with KZZT(FM), 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
DECEMBER 2010

Call Letters: K223AS

Latitude: 39-27-10 N
 Longitude: 092-21-58 W
 ERP: 0.25 kW
 Channel: 274D
 Frequency: 102.7 MHz
 AMSL Height: 314 m
 Elevation: 253 m
 Antenna Pattern: 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

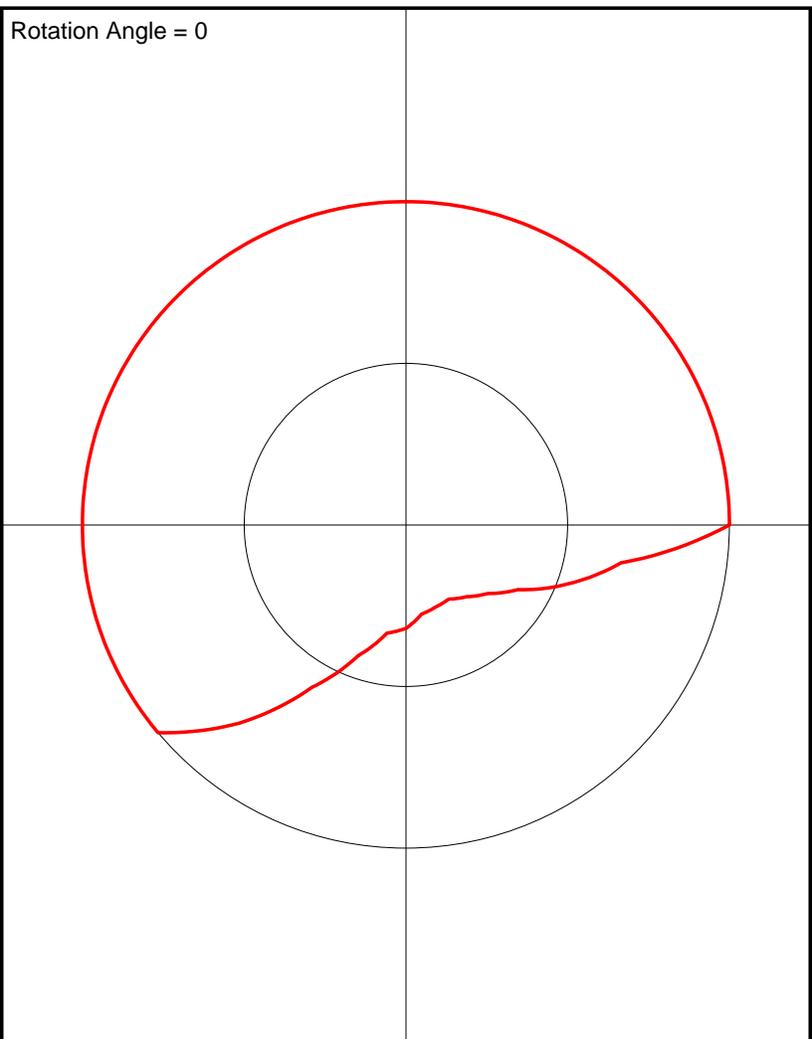
<u>Bearing (deg)</u>	<u>Distance (km)</u>	<u>HAAT (m)</u>
0.0	10.5	64.6
30.0	11.4	77.2
60.0	11.3	75.9
90.0	11.7	81.3
120.0	11.1	74.1
150.0	7.0	68.1
180.0	5.5	57.6
210.0	5.6	51.9
240.0	7.1	60.0
270.0	11.2	74.4
300.0	10.8	68.1
330.0	10.0	57.5

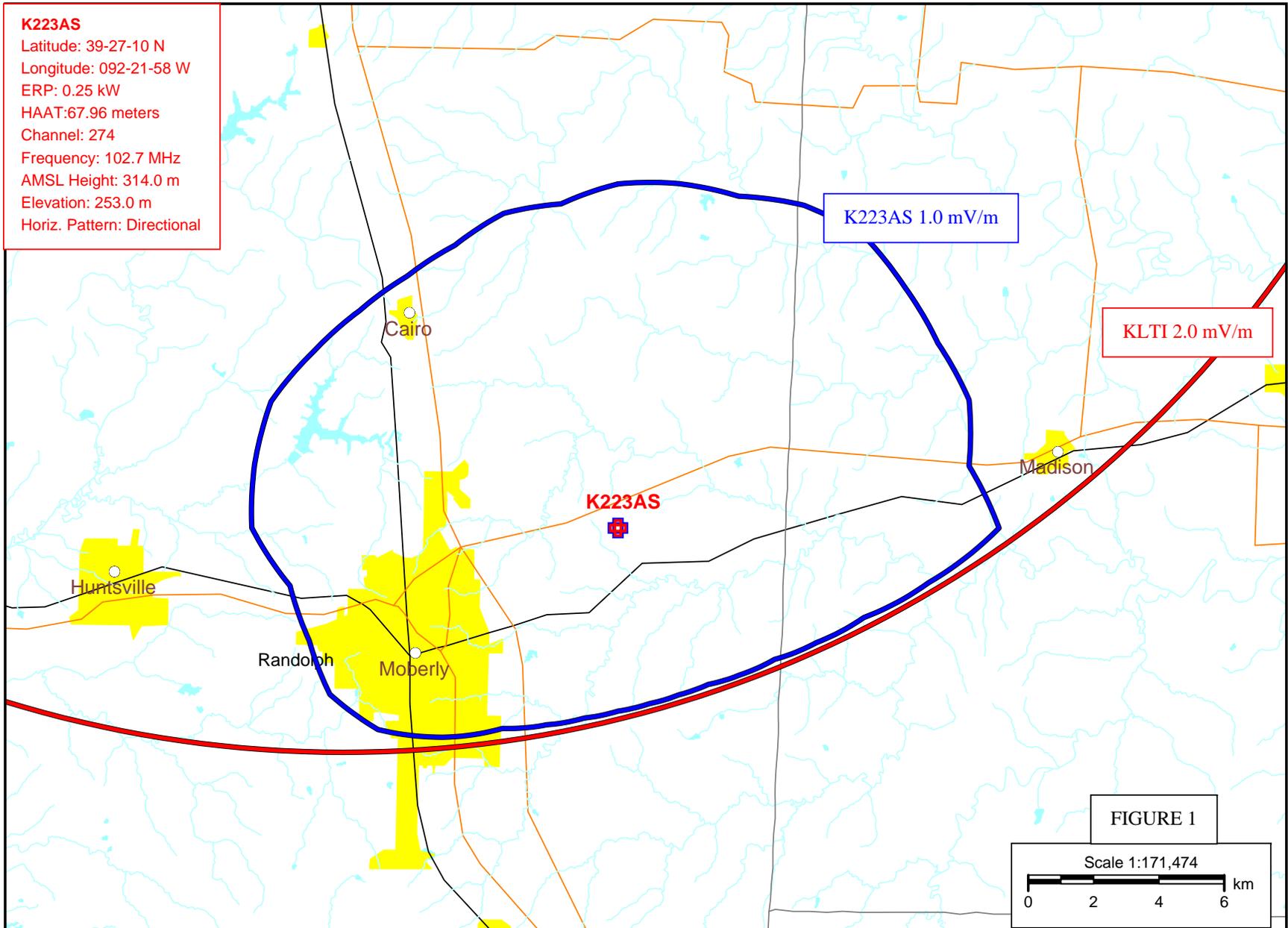
Average HAAT for radials shown: 67.6 m

K223AS Antenna Pattern

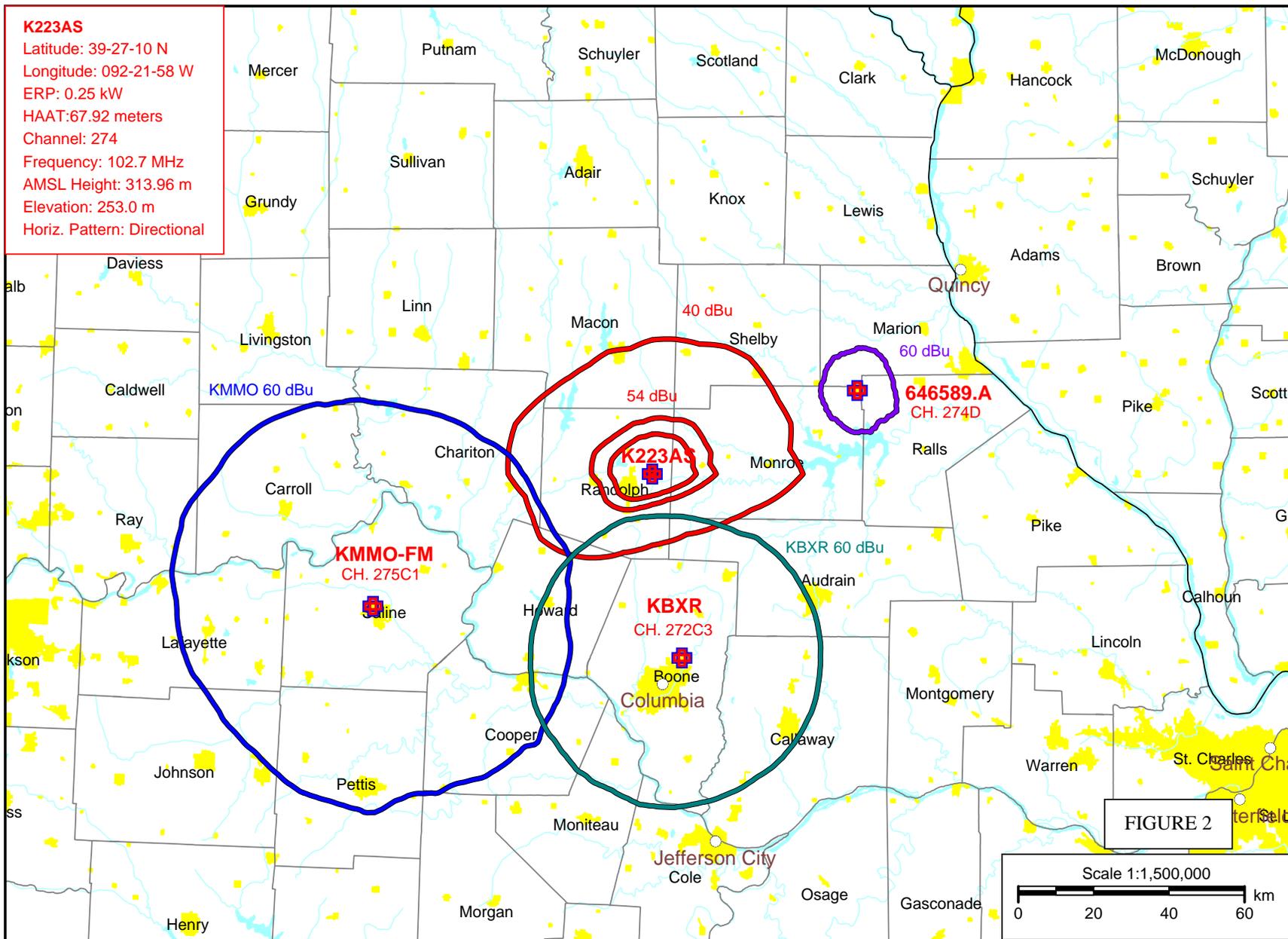
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.000
10.0	1.000
20.0	1.000
30.0	1.000
40.0	1.000
50.0	1.000
60.0	1.000
70.0	1.000
80.0	1.000
90.0	1.000
100.0	0.675
110.0	0.533
120.0	0.400
130.0	0.330
140.0	0.290
150.0	0.265
160.0	0.270
170.0	0.280
180.0	0.320
190.0	0.340
200.0	0.430
210.0	0.580
220.0	0.800
230.0	1.000
240.0	1.000
250.0	1.000
260.0	1.000
270.0	1.000
280.0	1.000
290.0	1.000
300.0	1.000
310.0	1.000
320.0	1.000
330.0	1.000
340.0	1.000
350.0	1.000





COMPUTED CONTOURS FOR THE PROPOSED OPERATION OF FM TRANSLATOR K223AS AND KLTI(AM)



COMPUTED PROTECTED AND INTERFERING CONTOURS FOR THE PROPOSED OPERATION OF K223AS