

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

Saga Communications, Inc.

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

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Station License

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Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
WNAX	N/A	570 kHz	Unlimited	Night 5.0 kW	Day 5.0 kW

2. Station location

State South Dakota	City or Town Yankton
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3. Transmitter location

State South Dakota	County Yankton	City or Town Yankton	Street address (or other identification) NE of the intersection of 444th Ave and County Road 366.
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4. Main studio location

State South Dakota	County Yankton	City or Town Yankton	Street address (or other identification) 1609 East Highway 50
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5. Remote control point location (specify only if authorized directional antenna)

State South Dakota	County Yankton	City or Town Yankton	Street address (or other identification) 1609 East Highway 50
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6. Has type-approved stereo generating equipment been installed?

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Yes

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No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68?

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Yes

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No

☐

Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed.

Exhibit No.
See Attached
8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system 10.39 amperes	RF common point or antenna current (in amperes) without modulation for day system 7.07 amperes
Measured antenna or common point resistance (in ohms) at operating frequency Night 50 ohms Day 100 ohms	Measured antenna or common point reactance (in ohms) at operating frequency Night +j 0 ohms Day - j 419 ohms

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1 (Center)	0.0°		1.000		N/A	
2 (South)	- 153.0°		1.080		N/A	
3 (North)	- 41.0°		1.240		N/A	

Manufacturer and type of antenna monitor:

Potomac Instruments AM-19

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9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
three guyed, uniform, cross-section, steel towers of unequal height mounted on base piers and insulators	T1: 277.6 m T2: 131.5 m T3: 95.0 m	T1: 282.4 m T2: 134.0 m T3: 96.2 m	T1: 283.0 m T2: 134.6 m T3: 97.0 m	Exhibit No.

Excitation



Series



Shunt

ASR T1 = 1035330 ASR T3 = 1035332
ASR T2 = 1035331

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	42 °	54 '	47 "	West Longitude	97 °	18 '	58 "
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If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits.

Exhibit No.
See Attached

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system.

Exhibit No.
unchanged

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

No changes to the AM radiating tower or AM array have been implemented other than the addition of the FM translator antenna as authorized under K260BO Construction Permit BPFT-20090925AAN. Antenna Monitor readings remain within 3 degrees phase & 5 percent field from license BZ-960726AD values as noted on the Form 302-AM. In addition, the field Monitor Points remain within tolerances of BZ-960726AD values as well: 94.5°T at 48.0 mV/m (max 66.5 mV/m) 119.5°T at 64.0 mV/m (max 69.9 mV/m) 179.5°T at 17.0 mV/m (max 26.4 mV/m) 263.5°T at 106.0mV/m (max 123.3 mV/m)

11. Give reasons for the change in antenna or common point resistance.

This Form 302-AM is being filed to reflect a new daytime antenna resistance measurement and nighttime common point measurement taken after the recent tower modifications associated with and as a §73.1692(a) condition of licensing for FM translator K260BO – Yankton, SD Construction Permit BPFT-20090925AAN.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type) Justin W. Asher	Signature (check appropriate box below) 
Address (include ZIP Code) P.O. Box 220 385 Airport Drive Coldwater, MI 49036	Date October 17, 2011 Telephone No. (Include Area Code) 1(517)278-7339



Technical Director



Registered Professional Engineer



Chief Operator



Technical Consultant



Other (specify)

WNAX(AM) – Yankton, SD

Vertical Plan of Antenna System

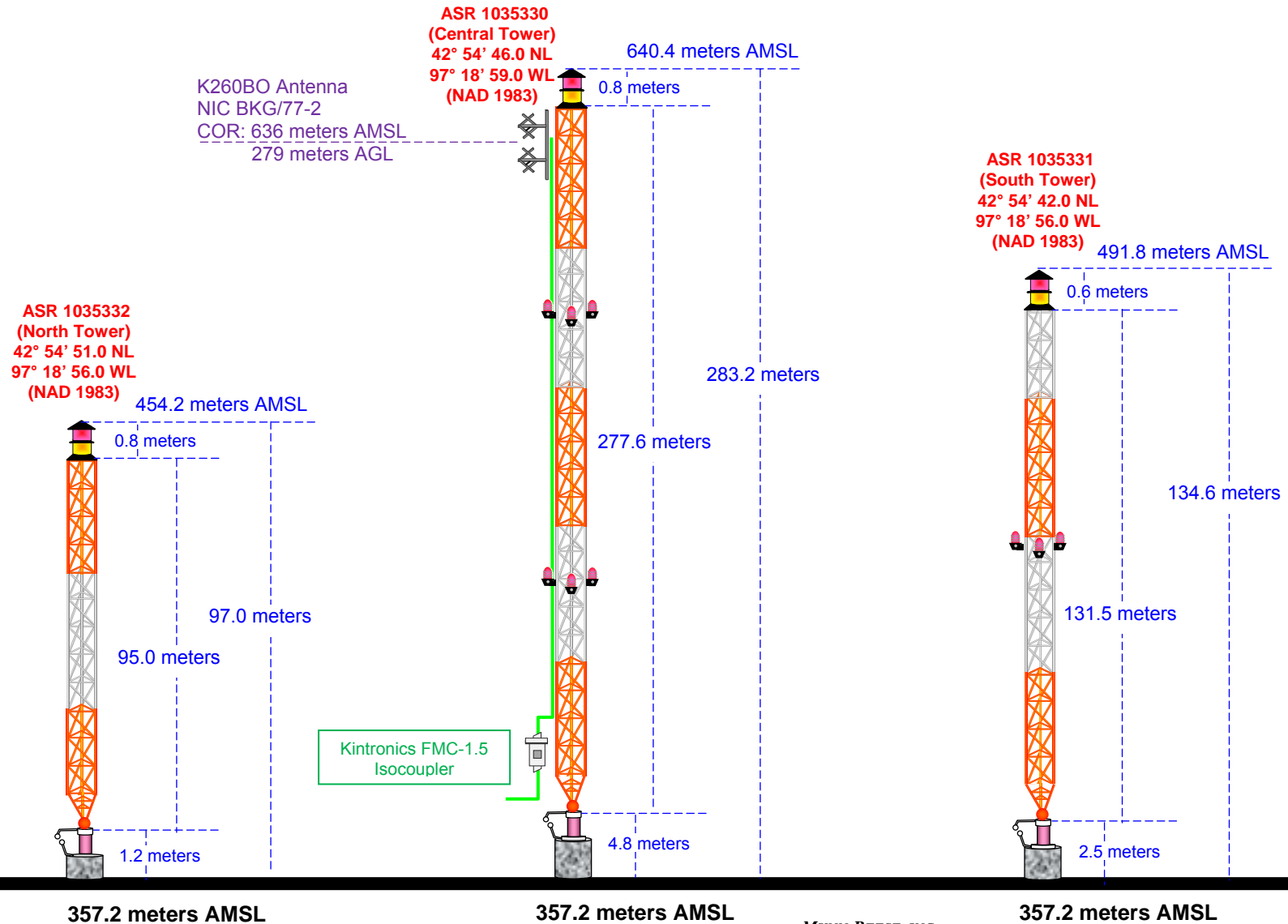
The site is located 0.45 km north of the “JL” intersection of 309th Street and 44th Avenue, the city of Yankton, Yankton County, South Dakota.

Site Location (NAD 27)

NL: 42° 54' 47"

WL: 97° 18' 58"

(42-54-47.0 NL / 97-18-59.2 WL NAD 1983)



Guy Wires Not Shown
Drawing is not to Scale

MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339

