

Anderson Associates

Broadcast Engineering Consultants

**WMXB
Tuscaloosa, AL
1280 kHz
#68420**

BESTA-20230626AAA

APPLICATION FOR ENGINEERING STA EXTENSION AND MODIFICATION

Applicant:

**Lawson of Tuscaloosa, Inc.
P. O. Box 70427
jwlawson@bellsouth.net
205-345-4787**

**WMXB 1280 kHz
Facility #68420
FRN 0009937590**

Purpose:

The applicant continues to actively explore a new permanent site. Continued operation through an STA is proposed at a different site using a commercially available AM antenna.

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Technical data and exhibits for requested STA:

WMXB

1280 kHz

Facility #68420

0.1 kW Day/ 0.030 kW Night

Efficiency - 305.8 mV/m/km/kW worst case assuming 90° tower and 90° 120 radial ground system.

Site: N 33-11-28.3 W 87-31-40.5 (NAD 83)

Antenna type: Isotron ISO-AMB-400 antenna which uses a 9 meter radiator and coil loading. Detailed information on the antenna is available at:

<http://isotronantennas.com/>



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The following exhibits are provided:

- E1 Vertical sketch
- E2 STA 0.5 mV/m Day contour is contained within the WMXB 0.5 mV/m Day
- E3 Night interference study

The 1000 mV/m population determined using AMPRO2 is 0 and the contour is -.1 km. Clearly, it is less than 300.

RF determination:

The 0.1 kW facility's RF exposure will not exceed FCC requirements since the closest person in the adjacent two story building will be at least 5 meters from the antenna and anyone at the base of the tower will be 9 meters below the antenna based on the FCC requirements that would only require a 1 meter fence for a 1,000 Watt facility.

TABLE 2. Predicted Distances for Compliance with FCC Limits: 0.21-0.4 Wavelength

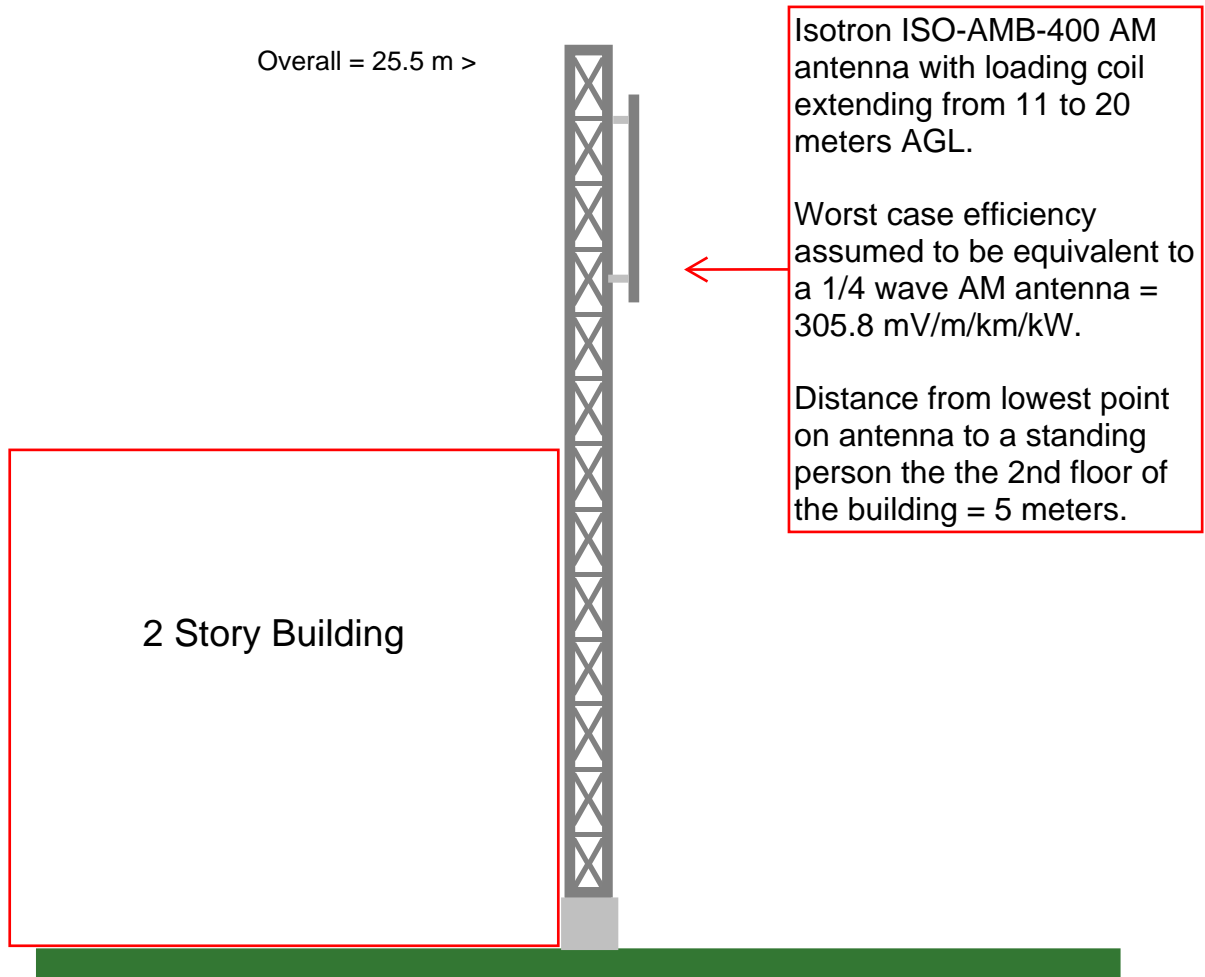
Frequency (kHz)	Transmitter Power (kW)			
	50	10	5	1
Predicted Distance for Compliance with FCC Limits (meters)				
535-740	4	2	2	1
750-940	4	2	2	1
950-1140	4	2	2	1
1150-1340	4	2	2	1
1350-1540	4	2	2	1
1550-1705	5	2	2	1

If any additional technical information is required please contact the undersigned.



Charles M. Anderson 2-09-2024
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E-1 VERTICAL SKETCH



NOT TO SCALE

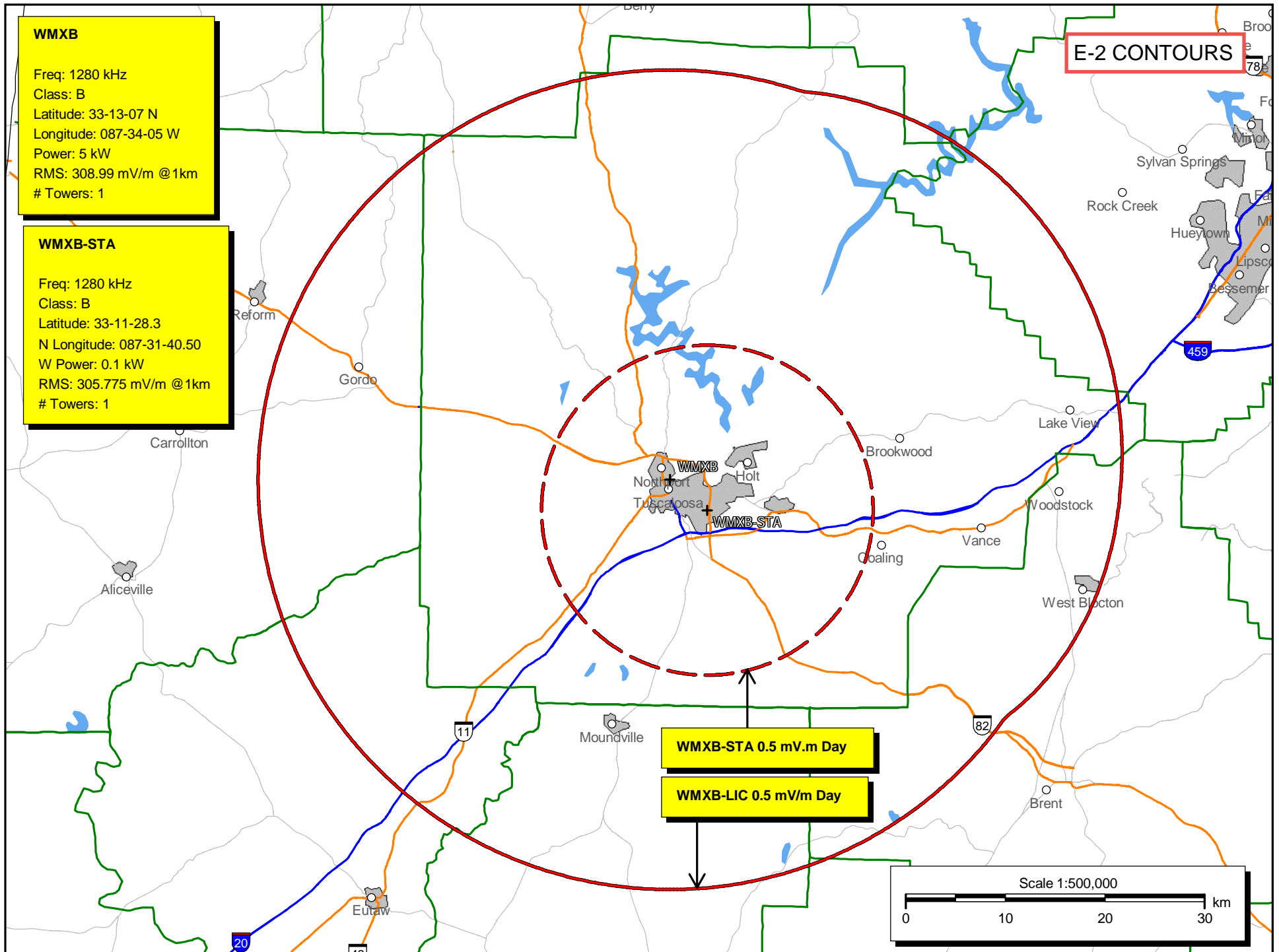
WMXB

Freq: 1280 kHz
Class: B
Latitude: 33-13-07 N
Longitude: 087-34-05 W
Power: 5 kW
RMS: 308.99 mV/m @1km
Towers: 1

WMXB-STA

Freq: 1280 kHz
Class: B
Latitude: 33-11-28.3
N Longitude: 087-31-40.50
W Power: 0.1 kW
RMS: 305.775 mV/m @1km
Towers: 1

E-2 CONTOURS



E-3 Night Allocation Protection Report

Call: WMXB-STA
Freq: 1280 kHz
TUSCALOOSA, AL, US
Hours: N
Lat: 33-11-28.3 N [NAD27]
Lng: 087-31-40.50 W
Power: 0.03 kW
Theo RMS: 305.77 mV/m @ 1km @ 1kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
WODT	US	LA	NEW ORLEANS	144.08	1.492	51.77	49.53	2.24
50% = 4.132, 25% = 5.942; ZYJ-455-A=2.63 WALI=2.27 XETIZ/A=2.24 WADO=1.94 HJSO-A=1.70 HRAM-A=1.60 XECAM/A=1.57 YVQS-A=1.50 WMXB=1.49 XESQ/A=1.45								
WGBF	US	IN	EVANSVILLE	109.50	1.955	89.26	50.72	38.54
50% = 5.531, 25% = 7.909; WALI=5.53 WHIO=2.36 WONW=2.27 WANS=2.19 WMCP=2.16 ZYJ-455-A=2.00 WWTC=1.99 WJAY=1.95								
WMCP	US	TN	COLUMBIA	232.58	4.156	89.34	44.96	44.38
50% = 16.622, 25% = 16.622; WGBF=14.64 WALI=7.88								
WWTC	US	MN	MINNEAPOLIS	22.53	1.016	225.50	52.86	172.63
50% = 3.114, 25% = 4.065; KOIL=2.70 KNWC=1.55 ZYJ-455-A=1.42 WIRL=1.36 WODT=1.35 WBIG=1.07								
WANS	US	SC	ANDERSON	130.21	7.025	269.77	50.05	219.72
50% = 13.33, 25% = 18.554; WGBF=8.66 WALI=7.30 WMXB=7.03 WODT=6.59 WUZZ=6.06 WJAY=5.91 WADO=5.58 WMCP=4.51								
WUZZ	US	PA	NEW CASTLE	36.96	2.059	278.63	52.64	225.99
50% = 5.386, 25% = 8.398; WSUX=3.29 WADO=3.16 WONW=2.87 WHTK=2.66 WGBF=2.38 WXYT=2.26 WALI=2.22 WJAY=2.22 WHVR=2.19 CFMB/ =2.18 1280CFBN/ =2.06								

E-4 TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7993.68 MTRS (7.99369 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-13-27.00N	087-36-15.00W	TUSCALOOSA NTL	TUSCALOOSA, TUSCALOOSA, AL	46.6	1980.5999999999999

Your Specifications

NAD83 Coordinates

Latitude	33-11-28.3 north
Longitude	087-31-40.5 west

Measurements (Meters)

Overall Structure Height (AGL)	25.5
Support Structure Height (AGL)	0
Site Elevation (AMSL)	63

Structure Type

LTOWER - Lattice Tower