

COMPREHENSIVE TECHNICAL EXHIBIT

Discussion

Applicant seeks an LPFM Construction Permit for:

LaGrange, GA

Channel 262 (100.3 Mhz), See **Figure 3** Channel Study

ERP = .092 kW (See **Figure 2**)

Ground Elevation = 231 meters

RCAGL = 28.3 meters

RCAMSL = 259.3 meters

HAAT = 31 meters (Globe terrain data) (See **Figure 1**)

Overall Tower Height = 28.4 meters

FAA (TOWAIR study), See **Figure 4**

NAD83 Latitude: 33 03 42.65N; Longitude: 84 58 07.68W

No AM station notifications required (Closest AM Facility is WGST, HOGANSVILLE, GA, L, NDD at 73.1° at a distance of 1.2 km) **SEE: PROTECTION TO AM BROADCAST TOWERS**

Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 91.6 km= Powder Springs, GA

Facility is okay toward West Virginia Quiet Zone. Distance to center = 769.7 km

Facility is okay toward Table Mountain. Distance to Center = 1976.4 km, Azimuth = 299.4 Degrees True

HAAT CALCULATION (FCC HAAT Calculator)

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude **33° 3' 42.65"** North

Longitude **84° 58' 7.68"** West (NAD 83)

Height of antenna radiation center above mean sea level: **259.3** meters AMSL

Number of Evenly Spaced Radials = **360** 0° is referenced to True North

Results

Calculated HAAT = **31 meters**

Antenna Height Above Average Terrain calculated
using 1 km [GLOBE terrain data](#)

FIGURE 1

ERP CALCULATION (FCC FMPower Calculator)

Choose a U.S. State or Possession:

GA - Georgia

Station Class:

100 watt LPFM

31

meters Antenna Height Above Average Terrain (HAAT)

Results:

Calculated ERP (rounded per Section 73.212) = **0.092 kW**

Unrounded ERP = 0.092154 kW

FIGURE 2

CHANNEL STUDY

Channel 262 Study

REFERENCE
 33 03 42.65 N.
 84 58 07.68 W.
 CLASS = L1
 Current Spacings to 2nd Adj.
 Channel 262 - 100.3 MHz
 DISPLAY DATES
 DATA 09-15-23
 SEARCH 09-16-23

Call	Channel	Location	Azi	Dist	FCC	Margin
WAUE	LIC-N 262A	Waverly	AL 231.3	69.79	66.5	3.3
WGSY	LIC 261A	Phenix City	AL 183.7	61.12	55.5	5.6
WNNX	LIC-Z 263C2	College Park	GA 34.6	94.34	79.5	14.8
WRHP	LIC-Z 261C3	Anniston	AL 311.5	104.57	66.5	38.1
WQMJ	LIC 261A	Forsyth	GA 95.1	103.39	55.5	47.9
W261DL	LIC-D 261D	East Point	GA 31.3	81.59	27.5	54.1
WEAM-FM	RSV-A 264A	Buena Vista	GA 159.7	85.01	28.5	56.5
WEAM-FM	LIC 264A	Buena Vista	GA 159.7	85.01	28.5	56.5
WCKF	LIC-N 264A	Ashland	AL 289.4	87.99	28.5	59.5
WQNR	LIC 260A	Tallassee	AL 228.4	103.23	28.5	74.7
W262DI	LIC-D 262D	Sylacauga	AL 273.9	123.32	38.5	84.8
WOBB	LIC 262C0	Tifton	GA 147.4	214.09	121.5	92.6
W262CD	LIC-D 262D	Cartersville	GA 6.9	125.62	31.5	94.1
W263CA	LIC 263D	Macon	GA 100.4	125.21	27.5	97.7
W261EA	LIC-D 261D	Atlanta	GA 36.6	118.67	20.5	98.2

 RSV-R = reserved - needs protection, RSV-A = allocation.
 All separation margins include rounding

FIGURE 3

LaGRANGE, GA FM TRANSLATORS/BOOSTERS WITHIN 10 KM OF PROPOSED CHANNEL 262

There are three (3) FM translator authorizations within 10 km of the proposed LPFM transmitter site (see **Figure 4**), however, the proposed frequency (channel 262) does not occupy the 3rd adjacent channel to the primary station off-air input of any of the nearby translators. Thus the Application complies with the provisions of 73.827(a).

FCC ID	DISTANCE (km)	Translator INPUT	Primary CHANNEL
W212BL	4.3	Satellite	203
W245AW	6.88	Off-Air	AM
W255DP	3.57	Off-Air	AM

FIGURE 4

TOWAIR study

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	33-03-42.7 north
Longitude	084-58-07.7 west

Measurements (Meters)

Overall Structure Height (AGL)	28.3
Support Structure Height (AGL)	0
Site Elevation (AMSL)	231

Structure Type

GTOWER - Guyed Structure Used for Communication Purposes

Figure 4

PROTECTION TO AM BROADCAST TOWERS

Proposed antenna will be mounted on an existing guyed tower (see **Figure 5**) and will not result in a “significant” change.

Closest AM Facility is WGST, HOGANSVILLE, GA, L, NDD at a distance of 1.2 km

Frequency = 720 kHz

Required Distance = 416.7 meters

Actual Distance = 1200 meters

Required Electrical Degrees = 60 degrees

Actual Electrical Degrees = 24.5 degrees



**Existing Tower
FIGURE 5**

RF EXPOSURE

The proposed single bay Type 2 antenna will be mounted 28.3 meters above ground level. FMModel predicts a maximum ground level exposure of 2.45 uW/cm^2 at 27 meters from the base of the tower, well within limits for uncontrolled access.