

COMPREHENSIVE TECHNICAL EXHIBIT

Discussion

Applicant seeks an LPFM Construction Permit for:

- Cornelia, GA
- Channel 262 (100.3 Mhz), See **Figure 3** Channel Study
- ERP = .006 kW (See **Figure 2**)
- Ground Elevation = 483 meters
- RCAGL = 9.2 meters
- RCAMSL = 492.2 meters
- HAAT = 121 meters (Globe terrain data) (See **Figure 1**)
- Overall Tower Height = 9.3 meters
- FAA (TOWAIR study), See **Figure 4**
- NAD83 Latitude: 34 30 19.7N; Longitude: 83 31 32.4W
- No AM station notifications required: Closest AM Facility is WCON, CORNELIA, GA, L, ND1 at 313.6° at a distance of 1.7 km
- Facility is okay with respect to FCC monitoring stations.
- Closest FCC Monitoring Station is 131.5 km= Powder Springs, GA
- Facility is okay toward West Virginia Quiet Zone. Distance to center = 560.9 km
- Facility is okay toward Table Mountain. Distance to Center = 2023.6 km, Azimuth = 294.5 Degrees True

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HAAT CALCULATION (FCC HAAT Calculator)

Antenna Height Above Average Terrain Calculations -- Results

Input Data

Latitude 34° 30' 19.7" North

Longitude 83° 31' 32.4" West (NAD 83)

Height of antenna radiation center above mean sea level: 492.2 meters AMSL

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

Results

Calculated HAAT = 121 meters

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

FIGURE 1

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**ERP CALCULATION** (FCC FM Power Calculator)

Choose a U.S. State or Possession:

GA - Georgia

Station Class:

100 watt LPFM

121

meters Antenna Height Above Average Terrain (HAAT)

Results:

Calculated ERP (rounded per Section 73.212) = 0.006 kW

Unrounded ERP = 0.005804 kW

**FIGURE 2**

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**CHANNEL STUDY**

Channel 262 Study

REFERENCE

34 30 19.70 N.

83 31 32.40 W.

CLASS = L1

Current Spacings to 2nd Adj.

DISPLAY DATES

DATA 09-30-23

SEARCH 09-30-23

----- Channel 262 - 100.3 MHz -----

Call	Channel	Location	Azi	Dist	FCC	Margin
W262AL	LIC 262D	Gainesville	GA 228.3	32.12	31.5	0.6
W262CE	LIC-D 262D	Clayton	GA 12.7	45.64	38.5	7.1
WPUP	LIC-N 261A	Watkinsville	GA 169.4	63.67	55.5	8.2
W262DB	LIC 262D	Royston	GA 123.7	44.94	31.5	13.4
AL7871	RSV-A 261A	Watkinsville	GA 160.5	74.55	55.5	19.1
WSSL-FM	LIC-N 263C0	Gray Court	SC 86.3	129.97	110.5	19.5
WNSY	LIC 261C3	Talking Rock	GA 279.2	89.69	66.5	23.2
WKSF	LIC 260C	Old Fort	NC 34.2	123.90	92.5	31.4
WNNX	LIC-Z 263C2	College Park	GA 224.0	114.80	79.5	35.3
WCYQ	LIC 262C	Oak Ridge	TN 341.4	198.46	129.5	69.0
W261EA	LIC-D 261D	Atlanta	GA 223.7	90.21	20.5	69.7
W262CD	LIC-D 262D	Cartersville	GA 253.5	122.80	31.5	91.3
WUSY	LIC 264C0	Cleveland	TN 296.4	178.82	83.5	95.3

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RSV-R = reserved - needs protection, RSV-A = allocation.

All separation margins include rounding

**FIGURE 3**

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**Input protection of any relevant FM Translators or Boosters**

There are two (2) 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).

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

FCC		Translator	Primary
ID	DISTANCE (km)	INPUT	CHANNEL
W299AT	1.3	Off-air	AM
W232DU	1.29	Off-air	AM

**FIGURE 4**

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**TOWAIR study**

DETERMINATION Results	
Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.	
Your Specifications	
NAD83 Coordinates	
Latitude	34-30-19.7 north
Longitude	083-31-32.4 west
Measurements (Meters)	
Overall Structure Height (AGL)	9.3
Support Structure Height (AGL)	6.1
Site Elevation (AMSL)	483
Structure Type	
BMAST - Building with Mast	

**Figure 5**

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**RF EXPOSURE**

The proposed single bay Type 2 antenna will be mounted 9.2 meters above ground level radiating 6 (six) watts H & V. FMModel predicts a maximum ground level exposure of 2.13 uW/cm<sup>2</sup> at 7.4 meters from the base of the tower, well within limits for uncontrolled access. All occupied structures in the immediate surrounding area are single story.