

Technical Report WZNX(FM) HD1 Auxiliary Application

This technical report is submitted for an auxiliary HD1 application for WZNX(FM) 294B1 at Sullivan, IL, FCC file no. BLH-20020520AAG.

WZNX(FM) HD1 Auxiliary Analysis:

The WZNX(FM) HD1 auxiliary facility will be co-located on the existing WZNX(FM) tower, ASR 1057132, at coordinates:

39 36 39N 88 41 32W NAD 27.

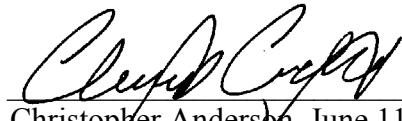
A PSI FML four bay, full wavelength-spaced, nondirectional antenna will be mounted separately from the primary WZNX(FM) antenna at a COR AGL of 143 meters, 343 meters AMSL and operate at 95 Watts ERP. The FCC 30 second terrain HAAT is 145 meters (exhibit E-1), which is greater than 70% of the primary WZNX(FM) HAAT of 161 meters. The auxiliary HD1 facility 60 dBu contour is contained within the primary WZNX(FM) 60 dBu contour (exhibit E-2).

RF Exposure Calculation:

The RF contribution was calculated using FMModel, and is calculated to be 0.028 $\mu\text{W}/\text{cm}^2$ at a distance of 58 meters from the base of the tower, which is well below 5% of the 200 $\mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure allowing exclusion from consideration.

Conclusion:

It is concluded that the WZNX(FM) HD1 auxiliary application complies with all Commission rules and policies.



Christopher Anderson June 11, 2015
andersoe@bham.rr.com
© 2015 Anderson Associates

The map displays the coverage area for WZN radio station, centered on Decatur, Georgia. The station's location is marked with a crosshair and labeled "WZN(FM) HD1 Aux." and "WZN(FM)". The map shows the 60 dBu F(50-50) contour for both the HD1 and 294B1 channels, represented by concentric circles. The HD1 contour is the larger, outer circle, and the 294B1 contour is the smaller, inner circle. The map includes various towns and cities, such as Decatur, Macon, Dalton City, and Marietta. Major roads like I-75, I-85, and I-95 are shown. A scale bar at the bottom right indicates a scale of 1:500,000, with distances in kilometers (0, 7, 14, 21 km). A copyright notice for Anderson Associates is visible in the top right corner.

WZN(FM) HD1 Aux.
 BLH20020520AAG
 Latitude: 39-36-39 N
 Longitude: 088-41-32 W
 ERP: 0.095 kW
 Channel: 294
 Frequency: 106.7 MHz
 AMSL Height: 343.0 m
 Elevation: 200.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

WZN(FM) 294B1
 60 dBu F(50-50) Contour

WZN(FM) 294B1 HD1
 60 dBu F(50-50) Contour

Scale 1:500,000
 0 7 14 21 km

©2015 Anderson Associates

E-2 WZNX(FM) 294B1 HD1 Auxiliary HAAT Calculation

N. Lat. = 393639.0 W. Lng. = 884132.0
HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

WZNX, Wshy, Inc., BLH20020520AAG

Azi.	AV EL	HAAT	ERP kW	60-F50-50
000	199.4	143.6	0.0950	12.12
045	202.2	140.8	0.0950	12.00
090	197.3	145.7	0.0950	12.22
135	189.3	153.7	0.0950	12.58
180	189.5	153.5	0.0950	12.57
225	198.2	144.8	0.0950	12.18
270	203.3	139.7	0.0950	11.95
315	201.5	141.5	0.0950	12.03

Ave El= 197.58 M HAAT= 145.42 M AMSL= 343 M

The primary WZNX(FM) 294B1 co-located antenna HAAT = 161 meters = 90%.

E-3 WZNX(FM) 294B1/Auxiliary Tower ASR

ASR Registration Search

Registration 1057132

 [Map Registration](#)

Registration Detail

Reg Number	1057132	Status	Constructed
File Number	A0067145	Constructed	11/01/1994
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	39-36-39.0 N 088-41-32.0 W	Address	2.7 MILES S.E.
City, State	KIRKSVILLE , IL		
Zip	61951	County	MOULTRIE
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
199.6	169.8
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
369.4	169.2

Painting and Lighting Specifications

FAA Chapters 3, 4, 6, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1H

FAA Notification

FAA Study	98-AGL-3159-OE	FAA Issue Date	07/23/1998
-----------	----------------	----------------	------------

Owner & Contact Information

FRN	0001769447	Owner Entity Type
-----	------------	----------------------

Owner

WSHY, INC.	P: (615)361-7560
Attention To: BAYARD H. WALTERS	F:
P.O. Box 150846	E:
NASHVILLE , TN 37215	

Contact

P:
F:
E:

Last Action Status

Status	Constructed	Received	10/08/1998
Purpose	New	Entered	10/08/1998