

# Federal Communications Commission

## FM BROADCAST STATION CONSTRUCTION PERMIT

**Permittee**

WESTERN NORTH CAROLINA PUBLIC RADIO,  
INC.  
73 BROADWAY  
ASHEVILLE, NC, 28801

Call Sign	Facility ID
WZQS	71766

<b>File Number</b> 0000143941	<b>This Permit Modifies License File No.</b> BLED-20040819AAB	
<b>Filing Date</b> 04/23/2021	<b>Grant Date</b> 06/11/2021	<b>Expiration Date</b> 36 months after the grant date

<b>Community of License</b> City: CULLOWHEE State: NC	<b>Frequency (MHz)</b> 90.5	<b>Station Channel</b> 213	<b>Station Class</b> A
<b>Hours of Operation:</b> Unlimited			
<b>Facility Type:</b> Noncommercial Educational			

<b>Transmitter</b> Certified for Compliance. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.	<b>Transmitter Output Power</b> As required to achieve authorized ERP.
<b>Antenna Type</b> Directional	<b>Antenna Coordinates (NAD 83)</b>  <b>Latitude</b> 35-18-50.2 N <b>Longitude</b> 83-12-4.1 W
<b>Major Lobe Directions</b> Not Applicable	

	<b>Horizontally Polarized Antenna</b>	<b>Vertically Polarized Antenna</b>
<b>Effective Radiated Power in the Horizontal Plane (kW)</b>	.5	.5

<b>Height of Radiation Center Above Ground (meters)</b>	23	23
<b>Height of Radiation Center Above Mean Sea Level (meters)</b>	883	883
<b>Height of Radiation Center Above Average Terrain (meters)</b>	-24	-24

<b>Antenna Structure Registration Number</b> 1298566	<b>Overall Height of Antenna Structure Above Ground (meters)</b> See the registration for this antenna structure.
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#### **Obstruction Marking and Lighting Specifications for Antenna Structure**

See the registration for this antenna structure.

#### **Special Operating Conditions or Restrictions**

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

- BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components. This proof-of-performance may be accomplished using the complete full size antenna, or individual bays therefrom, mounted on a supporting structure of identical dimensions and configuration as the proposed structure, including all braces, ladders, conduits, coaxial lines, and other appurtenances; or using a carefully manufactured scale model of the entire antenna, or individual bays therefrom, mounted on an equally scaled model of the proposed supporting structure, including all appurtenances. Engineering exhibits should include a description of the antenna testing facilities and equipment employed, including appropriate photographs or sketches and a description of the testing procedures, including scale factor, measurements frequency, and equipment calibration.
- BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee must submit a certification executed by a licensed surveyor showing that the FM directional antenna system has been oriented at the azimuth(s) specified in the directional antenna proof of performance. This certification must include a description of the method used by the surveyor to determine the azimuth(s) of the installed directional antenna system and the accuracy of that determination.
- BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee/licensee shall submit an affidavit that the installation of the directional antenna system was overseen by a qualified engineer. This affidavit shall include a certification by the engineer that the antenna was installed pursuant to the manufacturer's instructions and list the qualifications of the certifying engineer.
- BEFORE PROGRAM TESTS ARE AUTHORIZED, the permittee must submit an exhibit demonstrating that the measured directional antenna pattern complies with the appropriate community coverage provisions of 47 C.F.R. Sections 73.315 or 73.515 (See 47 C.F.R. Section 73.316(c)(2)(ix)(B)).
- The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by this construction permit. A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power: 0.5 kilowatts. Principal minima and their associated field strength limits: 120 - 130 degrees True: 0.32 kilowatts ; 250 degrees True: 0.14 kilowatts ; 310 degrees True: 0.125 kilowatts

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules(See Section 83.875).

Pursuant to Section 73.3598, this Construction Permit will be subject to automatic forfeiture unless construction is complete and application for license is filed prior to expiration.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

