



United States of America
FEDERAL COMMUNICATIONS COMMISSION
FM BROADCAST STATION CONSTRUCTION PERMIT
AUXILIARY ANTENNA

Authorizing Official:

Official Mailing Address:

EDUCATIONAL MEDIA FOUNDATION
5700 WEST OAKS BLVD
ROCKLIN CA 95765

James D. Bradshaw
Deputy Chief
Audio Division
Media Bureau

Facility ID: 93355

Call Sign: KAER

Permit File Number: BXPED-20171115AAF

Grant Date: January 05, 2018

This permit expires 3:00 a.m.
local time, 36 months after the
grant date specified above.

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.

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

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

Name of Permittee: EDUCATIONAL MEDIA FOUNDATION

Station Location: NV-MESQUITE

Frequency (MHz): 89.3

Channel: 207

Class: C

Hours of Operation: Unlimited -- For auxiliary purposes only

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: As required to achieve authorized ERP.

Antenna type: Directional

Antenna Coordinates: North Latitude: 36 deg 00 min 34 sec
West Longitude: 115 deg 00 min 20 sec

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the Horizontal Plane (kW):	11.0	11.0
Height of radiation center above ground (Meters):	22	22
Height of radiation center above mean sea level (Meters):	1013	1013
Height of radiation center above average terrain (Meters):	314	314

Antenna structure registration number: Not Required

Overall height of antenna structure above ground: 55 Meters

Obstruction marking and lighting specifications for antenna structure:

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

None Required

Special operating conditions or restrictions:

- 1 THE AUTOMATIC PROGRAM TEST PROVISIONS OF 47 C.F.R. SECTION 73.1620 DO NOT APPLY IN THIS CASE. A FORMAL REQUEST FOR PROGRAM TEST AUTHORITY MUST BE FILED IN CONJUNCTION WITH FCC 302-FM, APPLICATION FOR LICENSE, BEFORE PROGRAM TESTS WILL BE AUTHORIZED. This request must contain documentation which demonstrates compliance with the following special operating condition(s):
- 2 The permittee/licensee shall, upon completion of construction and during the equipment test period, make proper radiofrequency electromagnetic (RF) field strength measurements throughout the transmitter site area to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. If necessary, a fence must be erected at such distances and in such a manner as to prevent the exposure of humans to RF fields in excess of the FCC Guidelines (OET Bulletin No. 65, Edition 97-01, August 1997). The fence must be a type which will preclude casual or inadvertent access, and must include warning signs at appropriate intervals which describe the nature of the hazard. Any areas within the fence found to exceed the recommended guidelines must be clearly marked with appropriate visual warning signs.

Special operating conditions or restrictions:

- 3 Documentation demonstrating compliance with the special operating condition(s) shall be submitted at the time of the filing of FCC 302-FM, Application for License.
- 4 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.
- 5 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.
- 6 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.
- 7 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:

11.0 kilowatts.

Principal minima and their associated field strength limits:

160 degrees True through 190 degrees True: 11.0 watts.

- 8 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.

*** END OF AUTHORIZATION ***