

5/21/75

ENGINEER'S COPY

MINOR change educational

5/21/75

OK accept
[Signature]



WORT 89.7 FM
Back Porch Radio
Box 466
Madison, Wisconsin 53701

Martin I. Levy, Chief
Broadcast Facilities Division
Broadcast Bureau
Federal Communications Commission
Washington, D.C. 20554

Dear Mr. Levy,

Enclosed are FCC Form 340 Sections 1, V-8, III and V-G amending our construction permit BPED 1816 for an Educational FM station on channel 209 in Madison, Wisconsin.

This amendment covers a change in location for transmitter, as well as changes in type of transmitter, antenna, tower and transmission line. In addition this amendment specifies the studio location of the station. In a conversation with a member of the Broadcast Bureau staff earlier this week it became my understanding that Fcc Rules specify that any change in facility which does not change the primary coverage area served by more than 50% is considered a minor modification of construction permit which can be effected without repeating the entire filing process. We have completed a geometric study of the two primary contours - old and new - and have come to the conclusion that this amendment is in fact a minor modification of our construction permit.

It is our hope that the amendment be acted on with as much speed as possible so that we can be on the air around July 4th.

Best regards,

[Signature]
Michael O'Connor
Station coordinator

RECEIVED

MAY 21 1975

F. C. C. May 13, 1975
OFFICE OF THE SECRETARY

File No. **BMPED-1282**

Section I UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

APPLICATION FOR AUTHORITY TO CONSTRUCT OR MAKE CHANGES IN A
NONCOMMERCIAL EDUCATIONAL TV, FM, OR STANDARD
BROADCAST STATION

INSTRUCTIONS

A. This form is to be used only in applying for authority to construct a new noncommercial educational TV, FM, or Standard broadcast station or to make changes in an existing station. This form consists of this part, Section I, and the following sections:

- Section II, Legal Qualifications of Broadcast Applicant
- Section III, Financial Qualification of Broadcast Applicant
- Section IV, Statement of Program Service of Broadcast Applicant
- Section V-A, Standard Broadcast Engineering Data
- Section V-B, FM Broadcast Engineering Data
- Section V-C, Television Broadcast Engineering Data
- Section V-G, Antenna and Site Information

B. PREPARE THREE COPIES of this form and all exhibits. Sign one copy of Section I. Prepare one additional copy (a total of four) of Section V-G and associated exhibits. File all the above with the Federal Communications Commission, Washington, D. C. 20554.

C. Number exhibits serially in the space provided in the body of the form and list each exhibit in the space provided on page 2 of this Section. Show date of preparation of each exhibit, antenna pattern, and map, and show date when each photograph was taken.

D. The name of the applicant stated herein shall be the exact corporate name, if a corporation; if an unincorporated association, the exact name of the association; if a governmental or public educational agency, the exact name of such agency. The applicant must notify the Commission of any change of address.

E. Information called for by this application which is already on file with the Commission need not be refiled in this application provided (1) the information is now on file in another application or FCC form filed by or on behalf of this applicant; (2) the information is identified fully by reference to the file number (if any), the FCC form number and the filing date of the application or other form containing the information and the page or paragraph referred to, and (3) after making the reference, the applicant states: "No change since date of filing." Any such reference will be considered to incorporate into this application the application or other form referred to in its entirety. Do not incorporate by reference any material which is not to be open to the public.

F. This application shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; by a member who is an officer, if the applicant is an unincorporated association; by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction, if the applicant is an eligible government entity; or by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall, in the event he signs for the applicant, separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

G. Before filling out this application, the applicant should familiarize himself with the Communications Act of 1934, as amended, Parts 1,2,17, and 73 of the Commission's Rules and Regulations.

H. BE SURE ALL NECESSARY INFORMATION IS FURNISHED AND ALL PARAGRAPHS ARE FULLY ANSWERED. IF ANY PORTIONS OF THE APPLICATION ARE NOT APPLICABLE, SPECIFICALLY SO STATE. DEFECTIVE OR INCOMPLETE APPLICATIONS MAY BE RETURNED WITHOUT CONSIDERATION.

RECEIVED
MAY 21 1975
F. C. C.
OFFICE OF THE SECRETARY

1. Name of applicant (See Instruction D)
Back Porch Radio Broadcasting, Inc.

Street Address
Box 466

City Madison	State Wisconsin	ZIP CODE 53701
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2. Name of person to whom communications should be sent, if different from item 1
**Send carbon of all correspondence to;
Robert J. Stein**

Street Address
1712 N. St. N.W.

City Washington, D.C.	State	ZIP CODE 20036
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3. Purpose of application (check one)
Amend Construction Permit BPED-1816
 New Station Change existing station facilities

4. (a) Requested facilities
Type of station (as Standard, FM, Television)
Educational FM

Frequency 89.7	Channel No. 209	Call sign WORT
Effective radiated power in kilowatts, or power for standard broadcast stations 3.975	Antenna height above average terrain in feet (FM and TV only) 104	

Location of main studio
State **Wisconsin** City **Madison**

Location of transmitter

State Wisconsin	County Dane	City Madison
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Number and street (or other indication of location)
2047 Winnebago

b. If this application is for changes in an existing authorization, complete Section I and any other sections necessary to show all substantial changes in information filed with the Commission in prior applications or reports. In the spaces below check Sections submitted herewith and as to Sections not submitted herewith refer to the prior application or report containing the requested information in accordance with Instruction E.

Section No.	Para. No.	Reference (file or Form No. and Date)
<input checked="" type="checkbox"/> Section II		BPED-1816
<input checked="" type="checkbox"/> Section III		
<input checked="" type="checkbox"/> Section IV		BPED-1816
<input checked="" type="checkbox"/> Section V-G		

Have there been any substantial changes in the information incorporated in this application by reference in this paragraph? Yes No

If "Yes," submit as Exhibit No. full particulars.
Is this application filed for the purpose of impeding, obstructing or delaying determination on any other application with which it may be in conflict? Yes No

If "Yes," detail full particulars:

THE APPLICANT hereby waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934).

THE APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

THE APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all the exhibits are a material part hereof and are incorporated herein as if set out in full in the application.

CERTIFICATION

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 13th day of May, 1975.

(This Section should not be dated and signed until all Sections and Exhibits have been prepared and attached)

Back Porch Radio Broadcasting, Inc.
(NAME OF APPLICANT)

By *Michael O'Connor*
(SIGNATURE)

WILLFUL FALSE STATEMENTS MADE ON THIS FORM
ARE PUNISHABLE BY FINE AND IMPRISONMENT.
U.S. CODE, TITLE 18, SECTION 1001.

Title President

If applicant is represented by legal Legal Council is Robert J. Stein
or engineering counsel, state name 1712 N. St. N.W., Washington, D.C. 20036
and post office address:

EXHIBITS furnished as required by this form:

Exhibit No.	Section and Para. No. of Form	Name of officer or employee (1) by whom or (2) under whose direction exhibit was prepared (show which)	Official title
one	Section III para 1a	<p>NOTE: All exhibits listed as "on file" refer to Fcc File number BPH 1430 - this is the file of the previous occupant of the site radio station WMFM. Additional cross references can be found in BPH 1490, BPH 1682 and BPH 4682</p> <p>Michael O'Connor</p>	President

FM ENGINEERING DATA

Name of applicant

Back Porch Radio Broadcasting, Inc

FOR COMMISSION USE ONLY

File No.

1. Purpose of authorization applied for:

Construct a new station

Make changes in authorized radio station (amend construction permit BPED-1816)

If this is not for a new station, summarize briefly the nature of the changes proposed.
 Amendment to change transmitter location; transmitter, transmission line and antenna type are changed as well. Amend to specify studio location.

2. Facilities requested

Frequency

89.7 Mhz

Transmitter power output

1 kw

7a. Antenna structure

Is the proposed construction in the immediate vicinity or does it serve to modify the construction of any standard broadcast station, FM broadcast station, television broadcast station, or other class of radio station?
 If "Yes", attach as Exhibit No. complete engineering data thereon. Yes No

3. Proposed transmitter location

State

Wisconsin

County

Dane

City

Madison

Submit as Exhibit No. a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. on file

Street Address (or other identification)

2047 Winnebago

Overall height in feet above ground. (Without obstruction lighting)

163 feet

Overall height in feet above mean sea level. (Without obstruction lighting)

1028

Remote control point location

State

Wisconsin

City or town

Madison

Overall height in feet above ground. (With obstruction lighting)

166 feet

Overall height in feet above mean sea level. (With obstruction lighting)

1031

Street Address (or other identification)

2047 Winnebago

Height of antenna radiation center in feet above mean sea level.

1013

4. Proposed location of main studio

State

Wisconsin

County

Dane

Geographical Coordinates of Antenna (To nearest second)

North Latitude ° 43°05'35"

West Longitude ° 89°21'12"

City or town

Madison

Street Address

2047 Winnebago

b. Antenna data

Make

Collins

Type No. or description

37-M-8

No. of sections

four

Effective free space field intensity at one mile in mv/m for one kilowatt antenna input power

280.2

Antenna field gain

2.03

Antenna power gain

4.15

Is horizontal polarization proposed? If "No", attach as Exhibit No. complete engineering data on the antenna and the effective radiated power proposed.

Yes No

or studios proposed

To be determined

Is directional antenna proposed? If "Yes", attach as Exhibit No. complete engineering data thereon.

Yes No

5. Transmitter

Make Collins

Type No.

732-A

Rated Power

1 kw

(If the above transmitter has not been accepted for licensing by the F.C.C., attach as Exhibit No. a complete showing of transmitter details. Showing should include schematic diagram and full details of frequency control. If changes are to be made in licensed transmitter include schematic diagram and give full details of change.)

6. Transmission line proposed to supply power to the antenna from the transmitter

Make

Andrews

Type No.

451

Description

coax

Size (nominal transverse dimension) in inches

1 5/8

Length in feet

215

Rated efficiency in percent for this length

95.8

8. Attach as Exhibit No. on file a map(s) (topographic where obtainable, such as U.S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and shown drawn thereon the transmitter and main studio locations accurately plotted.

9. Attach as Exhibit No. on file a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown. Give date photographs were taken.

NOTE: The information requested below in paragraphs 10, 11, 12, 13 and 14, need only be completed by those stations proposing to use transmitters with power ratings in excess of 10 watts.

10. Proposed operation

Transmitter power output in kilowatts 1.00 kw	Power dissipation within transmission line in kilowatts .042
Antenna input power in kilowatts .958	Effective radiated power in kilowatts 3.975

13a. On the topographic map required by Paragraph 8, show drawn thereon the following data: **ON FILE**

- (1) Transmitter location and call letters of all known radio stations (except amateur) and the location of established commercial and government receiving stations within 2 miles of the proposed transmitter location;
- (2) Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
- (3) At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location.

11. Modulation monitor

Make Hewlett Packard	Type No. 335B
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b. Attach as Exhibit No. **ON FILE** profile graphs for the radials in

- (a) (3) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction true north shall be zero azimuth and angles measured clockwise. Show source of topographical data on each. Show scale of miles.

12. Frequency monitor

Make DNA	Type No.
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14. From the profile graphs in 13(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the FM Technical Standards, supply the following tabulation of data: (If proposed location is adjacent to the sea coast or the Great Lakes omit from this tabulation all radials which lie over water substantially the entire distance between two miles from the proposed transmitter location and the predicted 50 microvolt per meter contour.)

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10-mi.)	Free space field intensity in millivolts per meter at one mile	Predicted distance in miles to the 1 mv/m contour	Predicted distance in miles to the 50 uv/m contour
0	883	130	268.4316	10.0	
45	953	60		9.0	
90	932	81		9.0	
135	836	127		9.7	
180	891	122		9.6	
225	935	78		9.0	
270	886	127		9.7	
315	906	107		9.2	

Antenna height above average terrain (Average of above listed heights) 104 feet

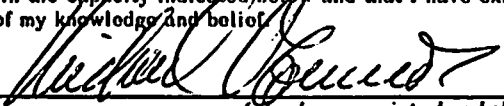
NOTE: all radials below 100 feet HAAT are the same contour since the predictive chart does not go down and lower.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date 5/13/75

Signature *Michael Bennett*
(check appropriate box below)

- Technical Director
- Registered Professional Engineer
- Consulting Engineer
- Chief Operator.

ANTENNA AND SITE INFORMATION (see instruction B. Section 1)		Name of applicant Back Porch Radio Broadcasting, Inc				
Legal Counsel Robert J. Stein		Purpose of application (Check appropriate box) a. New antenna construction <input type="checkbox"/> b. Alteration of existing antenna structures <input type="checkbox"/> c. Change in location <input checked="" type="checkbox"/>				
Address 1712 N. St. N.W., Washington D.C. 20036		2. Features of surrounding terrain List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.				
Consulting Engineer none		on file (see BPH 1430, BPH 1490, BPH 1682 and BPH 4682)				
Address						
Class of station Educational FM	Facilities requested change location	Submit as Exhibit No. a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above. ON FILE The chart used shall be an Instrument Approach Chart (or the landing chart on reverse side thereof), or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. 1/ In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. 1/ These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington, D. C. 20852 1/ Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.				
1. Location of antenna						
State Wisconsin	County Dane			City or Town Madison		
Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town) 2047 Winnebago St. (formerly antenna for station WMFM)						
Geographic coordinates (to be determined to nearest second. For directional antenna give coordinates of center of array.) For single vertical radiator give tower location.						
North latitude 43° 05' 35"	West longitude 89° 21' 12"					
3. Designation, distance, and bearing to center line of nearest established airway within 5 miles:		on file				
4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.						
<u>Landing Area</u>		<u>Distance</u>	<u>Direction</u>			
(a) ON FILE						
(b)						
(c)						
5. Description of antenna system (If directional, give spacing and orientation of towers). Collins 37-M-8 four bays						
Type Description of tower(s) Blaw Knox						
Self-supporting <input checked="" type="checkbox"/>	Guyed		Tubular (Pole)			
Tower (height figures should include obstruction lighting)	#1	#2	#3	#4	#5	#6
Height of radiating elements	163'					
Overall height above ground	166'					
Overall height above mean sea level	1031'					
If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation, and spacing in feet. Clearly indicate if any towers are existing.						
Submit as Exhibit No. FILE a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting.						
Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
6. Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
If the answer is "Yes", give: CALL LETTERS formerly WMFM FILE NUMBER see above						
I certify that I represent the applicant in the capacity indicated here and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.						
5/13/75 (date)	Signature 					
(check appropriate box below)						
<input checked="" type="checkbox"/> Technical Director <input type="checkbox"/> Chief Operator <input type="checkbox"/> Registered Professional Engineer <input type="checkbox"/> Consulting Engineer						

Application to Amend BPED 1816

Exhibit One

Prepared by Michael O'Connor

May 13, 1975

E. W. FESSLER
R E N T A L S

RESIDENTIAL & COMMERCIAL

244-2847 - 2047 WINNEBAGO STREET - MADISON, WIS. 53704

May 12, 1975

Back Porch Radio Broadcasting, Inc.
Post Office Box 466
Madison WI 53701

Attn: Michael O'Connor, President

Gentlemen:

This letter will serve to confirm our intention to lease a portion of the premises located at 2047 Winnebago Street, Madison Wisconsin to Back Porch Radio Broadcasting, Inc.

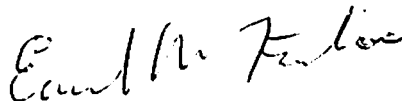
The lease will cover the following:

- Studios and Office space
- Transmitter room
- Storage space
- Collins 732-A Transmitter
- Hewlett-Packard 335-B F.M. Monitor
- Collins 37-M Antenna
- Space on Blau-Know tower

The lease will be for an initial term of three years, at the rate of \$175.00 per month plus utilities.

These premises were formerly occupied by Radio Station WMFM.

Very truly yours,



Earl W. Fessler,
Owner

EWf:ls