

FEDERAL COMMUNICATIONS COMMISSION

CLASS OF STATION FM

RITA1

The following application is submitted for action by the Chief, Broadcast Bureau.

<u>ST</u>	<u>FILE NUMBER</u>	<u>CALL</u>	<u>APPLICANT AND LOCATION</u>	<u>NATURE OF APPLICATION</u>
OH	BPED -890530MA N/M	NEW 89.3MHZ	PRESIDENT & BD TRUST OF MIAMI UNIV. READING OH	CP FOR A NEW FM EDUCATIONAL ON FREQUENCY: 89.3 MHZ; ERP: 1.50 KW (H&V); HAAT: 72 METERS (H&V);

LICENSE EXPIRATION DATE _____

CHIEF, LICENSE DIVISION

RECOMMENDATION: GRANT() CONSTRUCTION DATES, START _____ END _____
CONTESTED () UNCONTESTED ()

APPROVED _____

FOR CHIEF, BROADCAST BUREAU

F.C.C.-WASHINGTON, D.C.

ORIGINAL

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MAY 31 2 49 PM '89

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RECEIVED

MAY 31 1989

May 30, 1989

FM EXAMINERS

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: New NCE-FM
Reading, OH

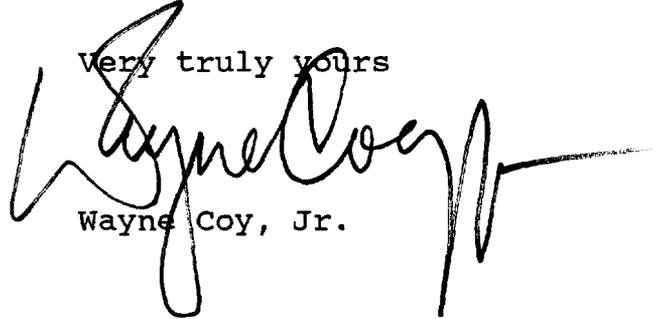
Dear Ms. Searcy

Transmitted herewith, on behalf of The President and The Board of Trustees of The Miami University, are the original and two (2) copies of its application for a new noncommercial FM broadcast station on 89.3 MHz, Channel 207, at Reading, Ohio. By this letter the applicant is seeking a waiver of Section 73.1125(c) of the Rules of the Commission, since, at least until a sufficient financial base can be established in Reading, the new station will rebroadcast the signal of WMUB(FM), Oxford, Ohio, also licensed to the University. Such a waiver is in the public interest since it will enable the station to get on the air economically while providing a localized service since Oxford and Reading (approximately 25 mile separate the two communities) share many of the same local issues and responsive programming will serve both communities. In addition the University will establish an advisory board in Reading, will (or already does) subscribe to newspapers which cover Reading issues, and will make use of "stringers" to alert WMUB management when local Reading issues are not otherwise being covered. It is envisioned that development of a local studio should not take very long and that origination of programs from Reading will soon be a reality.

Since the applicant is an agency of the State of Ohio, no filing fee is required.

Should you have any questions regarding this filing, please contact the undersigned.

Very truly yours

A handwritten signature in black ink, appearing to read "Wayne Coy, Jr.", with a long horizontal flourish extending to the right.

Wayne Coy, Jr.

Enclosures

ORIGINAL

Code 30 FN: 6/8/89

**APPLICATION FOR CONSTRUCTION PERMIT FOR
NONCOMMERCIAL EDUCATIONAL BROADCAST STATION**
(Carefully read instructions before filling out Form—RETURN ONLY FORM TO FCC)

For Commission Use Only
File No. **BPED-890530MA**

MAY 31 2 49 PM '89

AUDIO SERVICES
DIVISION

Section I

General Information

1. Name of Applicant

Street Address

The President and Board of
Trustees of The Miami University

2 0 1 R O U D E B U S H

City

State

ZIP Code

Telephone No.

O X F O R D

O H

4 5 0 5 6 -

(Include Area Code)
(513) 529-1908

Send notices and communications to the following named person at the address below:

Name

John D. Bortel
Director of Broadcasting
and General Manager, WMUB

Street Address

2 3 0 W I L L I A M S H A L L

City

State

ZIP Code

Telephone No.

O X F O R D

O H

4 5 0 5 6 -

(Include Area Code)
(513) 529-5885

2. This application is for: AM FM TV

(a) Channel No. or Frequency: CH 207 (89.3 mHz)

(b) Community of license:

City

State

R E A D I N G

O H

(c) Check one of the following boxes:

- Application for new station
- Major Change in Existing station; call sign: _____
- Minor Change in Existing station; call sign: _____
- Modification of Construction Permit; File No. of CP: _____
- Amendment to Pending Application; Reference Number (ARN): _____

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

YES NO

89.3 MHz
BPED -890530MA NEW
READING OH
PRESIDENT & BD TRUST OF MIAMI UNI'

If Yes, State:

Call letters:

Community of license:

City

State

-

Name of Applicant

President and Board of Trustees of the Miami University

1. (a) Applicant is: (Check one box below)

- a general partnership operating on a nonprofit basis
- a nonprofit corporation
- a limited partnership operating on a nonprofit basis
- Other (specify)
- a governmental or public educational agency or institution

If the applicant is an unincorporated association or a legal entity other than a partnership, nonprofit corporation, or a governmental or public educational agency or institution, describe in Exhibit No. ___ the nature of the applicant.

(b) Is there any provision contained in any by-laws, articles of incorporation, partnership agreement, charter, statute or any other document which would restrict the applicant in advancing an educational program or complying with any Commission rule, policy or provision of the Communications Act of 1934, as amended. YES NO

If Yes, provide particulars as Exhibit No. N/A

(c) Does the applicant certify that copies of all pertinent documents set out in (b) are in the public inspection file? YES NO

Describe in Exhibit No. 1 how the proposed station will be used for the advancement of an educational program. This does not apply if applicant is applying for change in facilities.

Citizenship And Other Statutory Requirements

2. (a) Is the applicant in compliance with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and Foreign governments? YES NO

(b) Will any funds, credits, etc., for the construction, purchase or operation of the station be provided by aliens, foreign entities, domestic entities controlled by aliens, or their agents? YES NO

If yes, provide particulars as Exhibit No. N/A

3. (a) Has an adverse finding been made, adverse final action taken or consent decree approved by any court or administrative body as to the applicant or any party to the application in any civil or criminal proceeding brought under the provisions of any law related to the following subjects: Any felony, antitrust, unfair competition, fraud, unfair labor practices or discrimination? YES NO

(b) Is there now pending in any court or administrative body any proceeding involving any of the matters referred to in (a)? YES NO

If the answer to (a) or (b) above is Yes, attach as Exhibit No. N/A a full disclosure concerning the persons and matters involved, identifying the court or administrative body and the proceeding (by dates and file numbers), stating the facts upon which the proceeding was based or the nature of the offense committed, and disposition or current status of the matter.

Applicants are reminded that questions 4 through 5 of this Section must be completed as to all "parties to this application" as that term is defined in the instructions to Section II of this form.

Table I Parties To Application

4. Complete Table I with respect to all parties to this application.

(Note: If the applicant considers that to furnish complete information would pose an unreasonable burden, it may request that the Commission waive the strict terms of this requirement with appropriate justification)

INSTRUCTIONS: If applicant is partnership, fill out columns (a), (b), and (d), stating as to each general or limited partner (including silent partners): (a) name and residence, (b) nature of partnership interest (i.e., general or limited), and (d) percent of ownership interest. If applicant is a corporation or an unincorporated association with 50 or fewer stockholders, stock subscribers, holders of membership certificate or other ownership interest, fill out all columns, giving the information requested as to all officers, directors and members of governing board. In addition, give the information as to all persons or entities who are the beneficial or record owners of or have the right to vote capital stock, membership or ownership interests or are subscribers to such interests. If the applicant has more than 50 stockholders, stock subscribers or holders of membership certificates or other ownership interests, furnish the information as to officers, directors, members of governing board, and all persons or entities who are the beneficial or record owners of or have the right to vote 1% or more of the capital stock, membership or ownership interest. If applicant is governmental or public educational agency or institution, fill out columns (a) and (c) as to all members of the governing board and chief executive.

Name and Residence Address(es) (a)	Nature of Partnership Interest or Office Held (b)	Director or Member of Governing Board		% of: Ownership (O) or Partnership (P) or Voting Stock (VS) or Membership (M) (d)
		YES	NO	
		(c)		
Paul G. Pearson 201 Roudebush, Oxford, OH 45056		C.E.		
Wayne R. Embry Cleveland Cavaliers P.O. Box 355 Richfield, OH 44286		Memb.		
Kay w. Giardini 2122 W. 36 Street Lorain, OH 44053	Vice Chairman			
David A. Lehman Eastman Kodak 343 State St. Rochester, N.Y. 14650		Memb.		
William N. Liggett Star Bank Center P.O. Box 1038 Cincinnati, OH 45201	Chairman			
Joseph L. Marcum The Ohio Casualty Ins. Co. 136 N. Third St., Hamilton, OH 45025		Memb.		
Harold H. Paul Central Reserve Life of N.Amer. Ins. Co. 343 W. Bagley Rd., Berea, OH 44017	Secretary			
Robert F. Tenhover The Midland Co., 537 E. Pete Rose Way, Cincinnati, OH 45201	Treasurer			
Lesley Brooks Wells Justice Center, 1200 Ontario St., Cleveland, OH 44113		Memb.		

5. Has the applicant or any party to this application had any interest in:
- (a) a broadcast application which has been dismissed with prejudice by the Commission? YES NO
- (b) a broadcast application which has been denied by the Commission? YES NO
- (c) a broadcast station, the license of which has been revoked? YES NO
- (d) a broadcast application in any Commission proceeding which left unresolved character issues against that applicant? YES NO
- (e) If the answer to any of the questions above is Yes, attach Exhibit No. N/A, stating the following information:
- (1) Name of party having such interest;
 - (2) Nature of interest or connection, giving dates;
 - (3) Call letters of stations or file number of application, or docket number;
 - (4) Location.

Ownership and Control

6. Are there any documents, instruments, contracts, or understandings relating to ownership or future ownership rights (including, but not limited to, non-voting stock interests, beneficial stock ownership interest) or control? YES NO
- If Yes, provide particulars as Exhibit No. N/A
7. Do documents, instruments, agreements or understandings for the pledge of stock of a corporate applicant, as security for loans or contractual performance, provide that (a) voting rights will remain with the applicant, even in the event of default on the obligation; (b) in the event of default, there will be either a private or public sale of the stock; and (c) prior to the exercise of stockholder rights by the purchaser at such sale, the prior consent of the Commission [pursuant to 47 U.S.C. 310(d)] will be obtained? YES NO ^{N/A}
- If No, attach as Exhibit No. N/A a full explanation.

WMUB is a non-commercial,
educational station

Note: If this application is for a change in an operating facility, **DO NOT** fill out this section.

- 1. Is this application contingent upon receipt of a grant from the National Telecommunications and Information Administration? YES NO
- 2. Is this application contingent upon receipt of a grant from a charitable organization, the approval of the budget of a school or university, or an appropriation from a state, county, municipality or other political subdivision? YES NO

NOTE: If either 1 or 2 is answered "Yes", your application cannot be granted until all of the necessary funds are committed or appropriated. In the case of grants from the National Telecommunications and Information Administration no further action on your part is required. If you rely on funds from a source specified in Question 2, *you must advise the F.C.C. when the funds are committed or appropriated.* This should be accomplished by letter amendment to your application, in triplicate, signed in the same manner as the original application, and clearly identifying the application to be amended.

- 3. Except as indicated in Questions Numbered 1 and 2 above, the applicant certifies that:
 - (a) It has a reasonable assurance of present commitments from each donor, from each party agreeing to furnish capital, from each bank, financial institution or others agreeing to lend funds, and from each equipment supplier agreeing to extend credit: YES NO
 - (b) It can and will meet all contractual requirements as to collateral, guarantees, and capital investments or donations: YES NO
 - (c) It has determined that a reasonable assurance exists that all such sources (excluding banks, financial institutions, and equipment manufacturers) have sufficient net liquid assets to meet these commitments. YES NO
- 4. The applicant certifies, except as noted above, that sufficient net liquid assets are on hand or available from committed sources to construct and operate the requested facilities for three months without additional funds. YES NO

Section IV

Program Service Statement

For AM, FM and TV Applications

Attach as Exhibit No. 2 , the applicant's purpose and objective in establishing the proposed station and a statement of proposed program policies. If applicant already has such information on file, indicate file number and detail changes, if any.

USE OF STATION

It is the intention of the Miami University to provide educational broadcasting with a broad range of news and public affairs programming, with a strong emphasis on local and regional news and issues.

Music programming will be generally in the category of Big Bands and conservative Jazz, a music format not at this time readily available in Reading. Students work with professional host/producers to broadcast this programming and thus gain operating and production skills.

PURPOSE AND OBJECTIVE

It is the purpose and objective of the Miami University to provide educational public programming to the city of Reading, Ohio and its surrounding area.

Miami University at this time operates WMUB in Oxford, Ohio, a CPB qualified public radio station affiliated with National Public Radio and American Public Radio, receiving daily statehouse news. Associated Press wire and audio services provide additional state, national, and international news. WMUB serves a large portion of southwestern Ohio and parts of southeastern Indiana. Communities served in this area include Dayton, Middletown, Hamilton, Fairfield and Eaton, Ohio; Richmond, Indiana, and many smaller communities in the area.

Since there is a strong community of interest, both economic and cultural, throughout the "Miami Valley" from Dayton to Cincinnati, we propose to simultaneously broadcast the programming of WMUB on the proposed new station in Reading. The University will initially use its existing staff and resources to provide programming that addresses determined needs. As circumstances and funding permit, the University will consider adding staff and resources to make live broadcasts from Reading when events warrant.

Section VI

Equal Employment Opportunity Program

1. Does the applicant propose to employ five or more fulltime employees? YES NO

If the answer is Yes, the applicant must include an EEO program called for in the separate 5 Point Model EEO Program [FCC Form 396 (A)].

Section VII

Certification

1. Has or will the applicant comply with the public notice requirement of Section 73.3580 of the Commission's Rules? YES NO

The APPLICANT hereby waives any claim to the use of any particular frequency 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, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and are incorporated herein.

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.

In accordance with Section 1.65 of the Commission's Rules, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

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

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 18th day of May, 1989.

President and Board of Trustees of the Miami University
Name of Applicant

Paul Pearson
Signature

President
Title

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, accountants, engineers, and application examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information requested is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested Permit.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Name of Applicant The President and Board of Trustees of The Miami University

1. Purpose of authorization applied for:

- Construct a new station
- Install Auxiliary system

- Change:
- Effective radiated power
 - Frequency
 - Antenna height above average terrain
 - Transmitter location
 - Studio location outside community of license
 - Other (Summarize briefly the nature of the changes proposed.)

2. Community of license: State Ohio City or Town Reading

3. Facilities requested: Frequency 89.3 MHz Channel No. 207 Class (Check one below)

A B B1 C C1 C2 D

4. Geographic coordinates of antenna (to nearest second)

North Latitude 39° 13' 23" West Longitude 84° 25' 57"

Effective radiated power:

<u>Polarization</u>	<u>Horizontal Plane</u>	<u>Maximum (Beam tilt only)</u>
Horizontal	<u>1.50</u> kW	<u>No beam tilt</u> kW
Vertical	<u>1.50</u> kW	<u>No beam tilt</u> kW

6. Height in meters of antenna radiation center:

	<u>Above Average terrain (HAAT)</u>	<u>Above Mean Sea Level</u>	<u>Above Ground</u>
Horizontal	<u>72</u> meters	<u>287.9</u> meters	<u>57.77</u> meters
Vertical	<u>72</u> meters	<u>287.9</u> meters	<u>57.77</u> meters

7. Is a directional antenna being proposed? YES NO

If Yes, attach as Exhibit No. ENG an engineering statement with all data specified in Section 73.316(d) of the Commission's Rules.

8. Transmitter location: State Ohio County Hamilton
 City or Town _____ Street Address (or other identification) _____
Reading 601 Columbia Avenue

9. Overall height of complete structure above ground, including all appurtenances and lighting (if any, see Part 17). 60.06 meters

10. Attach as Exhibit No. ENG map(s) (Sectional Aeronautical charts or equivalent) of the area proposed to be served and shown thereon:
- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
 - (b) The 1mV/m predicted contour;
 - (c) Area (sq. mi.) and population (latest census) within 1 mV/m contour;
 - (d) Scale of miles or kilometers (kilometers if available).

11. Attach as Exhibit No. ENG a map (Sectional Aeronautical charts where obtainable) showing the present and proposed 1 mV/m (60 dbu) contours.

Enter the following from Exhibit above: Gain Area 175.2 sq. mi.
 Loss Area 0.0 sq. mi.

Percent change (gain area plus loss area as percentage of present area) DNA %.
 If 50% or more this constitutes a major change. Indicate in question 2(e), Section I, accordingly.

12. If the main studio will not be within the boundaries of the principal community to be served, attach as Exhibit No. ENG a justification pursuant to Section 73.1125(f) of the Commission's Rules.
 Proposed station will simultaneously broadcast the programming of WMUB, Oxford, Ohio

13. Attach as Exhibit No. ENG map(s) (7.5 minute U.S. Geographic Survey topographic quadrangles if available) of the proposed antenna location showing the following information:

- (a) Proposed transmitter location accurately plotted with the latitude, the longitude lines clearly marked and showing a scale of statute kilometers.
- (b) Transmitter location and call letters of all AM broadcast stations within 2 miles of the proposed antenna location.
 No AM broadcast within 2 miles.

14. If there are any FM or TV stations within 200 feet of proposed antenna or non-broadcast radio stations (except amateur and citizens band), or established commercial and government receiving stations in the general vicinity which may be adversely affected by the proposed operation, attach as Exhibit No. ENG the expected effect, a description of remedial steps that may be pursued if necessary, and a statement from the applicant accepting full responsibility for the elimination of any objectionable effect on existing stations.
 No FM, TV, or non-broadcast radio stations within 200 feet.

15. Tabulation of Terrain Data. (Calculated in accordance with the procedure prescribed in Section 73.313 of the Commission's Rules utilizing 7.5 minute topographic maps, if available.)

Radial bearing (degrees true)	Height of antenna, radiation center above average elevation of radial (3-16 kilometers) Meters	Predicted Distance
		To the 1 mV/m contour Kilometers
0°	90.9	9.01
45°	30.5	6.22
90°	68.2	12.62
135°	62.4	13.32
180°	102.6	15.49
225°	113.5	12.71
270°	43.4	11.57
315°	64.8	8.79
AVG.	72.0	

Allocation Studies

(See Subpart C of Part 73 of the Commission's Rules and Regulations)

16. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?
 Proposed site is 1863 km from the US/Mexican border. Yes No
 If Yes, attach as Exhibit No. DNA a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

17. With regard to stations within 320 kilometers (199 miles) of the common border between the United States and Mexico, attach as Exhibit No. DNA information required in 1/.

18. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), then with regard to stations more than 320 kilometers (199 miles) from the common border between the United States and Mexico or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as Exhibit No. ENG a complete allocation study to establish the lack of prohibited overlap of contours involving these stations. The allocation study should include the following:

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- (g) A scale of miles and properly labeled longitude and latitude lines, shown across the entire (Exhibit(s)). Sufficient lines should be shown so that the location of the sites may be verified.
- (h) The name of the map(s) used in the exhibit(s).

1/ A showing that the proposed operation meets the minimum distance separation requirements. If any separations are proposed that are less than the applicable minimum separation requirements plus 15 kilometers, include these stations. Also include existing stations, proposed stations, and cities which appear in the Table of Assignments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

19. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada? Yes No
 If Yes, attach as Exhibit No. ENG a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.
 Proposed site is 310 km from the US/Canadian border. No Canadian-US channel relationships.

20. With regard to station separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as Exhibit No. ENG information required in 1/(separation requirements involving intermediate frequency [i.f.] interference).

21. Is the proposed operation on Channel 218, 219 or 220? Yes No
 If Yes, attach as Exhibit No. DNA information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222, and 223.

22. Is the proposed station for a channel in the range from Channel 201 to 221 (88.1-91.9 MHz) and the proposed antenna location within the Grade B contour of a channel 6 television station or sufficiently near the Grade B contour that a question of interference to channel 6 may be raised? Yes No
 If Yes, attach as Exhibit No. ENG a map showing the Grade B contour of the television station and the proposed antenna location. Also include discussion of the possibility of interference to the Channel 6 station and the steps proposed to remedy any interference which may occur.
 See Exhibit ENG. No interference created by proposed station.

23. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)? Yes No
 If Yes, attach as Exhibit No. DNA information required in 1/ (Except for class D [secondary] proposals.)

24. If the proposed antenna location is in or near a populated area, attach Exhibit No. ENG a discussion of blanketing and the steps proposed to remedy any interference which may occur.

25. Environmental Statement, See Part I, Subpart 1 of the Commission's Rules.

Would a Commission grant of this application be a major action as defined by Section 1.1305 of the Commission's Rules? Yes No

If Yes, attach as Exhibit No. DNA a narrative statement in accordance with Section 1.1311 of the Commission's Rules.
 See Exhibit ENG. Compliance with Guidelines for Human Exposure to Radiofrequency Radiation is included as part of Exhibit ENG.
 If No, explain briefly.

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.

April 6, 1989
 Date

Louis A. Williams, Jr.
 Name
Louis A. Williams Jr.
 Signature (check appropriate box below)

2092 Arrowood Place
 Address (include ZIP Code)

Cincinnati, OH 45231

513-851-4964
 Telephone No. (include Area Code)

- Technical Director
- Registered Professional Engineer
- Chief Operator
- Technical Consultant
- Other (Specify)

Section V-G

Antenna and Site Information

Name of Applicant The President and Board of Trustees of The Miami University Call Sign _____ Station Location Reading, Ohio

Purpose of Application (Put "X" in appropriate box) Facilities Requested
 New antenna construction Channel 207 1.50 kW Horiz., 1.50 kW Vert.
 Alteration of existing antenna structure (Directional)
 Change in location On 173' self-supporting tower with 24' pole (total height 197')

1. Location of Antenna:
 State Ohio County Hamilton City or Town Reading

Exact antenna location (street address). If outside city limits, give name of nearest town and distance and direction of antenna from town.

601 Columbia Avenue

Geographical coordinates (to nearest second). For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude 39° 13' 23" West Longitude 84° 25' 57"

2. Is the proposed site the same transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? YES NO

If Yes, give call sign:

3. Has the FAA been notified of proposed construction? YES NO

If Yes, give date and office where notice was filed.
Notification to Great Lakes Regional Office concurrent with this application.

4. List all landing areas within 5 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.

Landing Area	Distance	Direction
(a) <u>Cincinnati-Blue Ash</u>	<u>4.05 km (2.52 mi.)</u>	<u>N55.3°E</u>
(b) <u>Keeler (Heliport)</u>	<u>6.42 km (3.99 mi.)</u>	<u>1.5</u>
(c) <u>Valley Asphalt (Heliport)</u>	<u>6.97 km (4.33 mi.)</u>	<u>1.6</u>
(d) <u>Mays (Heliport)</u>	<u>7.16 km (4.45 mi.)</u>	<u>95.7</u>
(e) <u>Arma-Burnes (Heliport)</u>	<u>7.96 km (4.95 mi.)</u>	<u>44.4</u>

5. Attach as Exhibit NO. ENG a description of the antenna system, including whether tower(s) are self-supporting or guyed. If a directional antenna, give spacing and orientation of towers. Tapered, self-supported steel tower 52.74 m (173') in height with 7.32 m (24') pole on top.

Tower	#1	XXX	XXX	XXX	XXX	XXX
Overall height above ground (include obstruction lighting)	meters	60.06				
	feet	197				
Overall height above mean sea level (include obstruction lighting)	meters	290.2				
	feet	952				

- 6. Attach as Exhibit No. ENG a vertical plan sketch for the proposed total structure (including supporting building, if any) giving heights above ground in feet and meters for all significant features. Clearly indicate existing portions, noting lighting, and distinguish between the skeletal or other main supporting structure and the antenna elements.

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.

Louis A. Williams, Jr.

Name

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ENGINEERING EXHIBIT SUPPORTING THE APPLICATION
OF THE PRESIDENT AND BOARD OF TRUSTEES OF
THE MIAMI UNIVERSITY, OXFORD, OHIO
FOR A NEW NONCOMMERCIAL FM BROADCAST
IN READING, OHIO

MARCH 1989

CHANNEL 207

1.50 KW ERP

72 METERS HAAT

Table of Contents

I.	General.....	1
II.	Location and Structure.....	2
	A. Transmitter.....	2
	B. Main Studio.....	3
III.	Antenna Input Power.....	4
IV.	Directional Antenna Characteristics.....	5
V.	Terrain Data.....	6
VI.	Height Above Average Terrain.....	7
VII.	Proposed Contour.....	7
VIII.	Population and Area Data.....	8
IX.	Blanketing Interference.....	8
X.	Potential Interference to Other Stations.....	8
XI.	Allocation Study Including I.F. Interference.....	9
XII.	TV Channel 6 Predicted Interference.....	16
XIII.	Environmental Impact.....	18
	A. RFR Compliance.....	18
XIV.	Certification.....	19
	Figures	
	Tables	

FIGURES

- Figure 1: Proposed Reading Transmitter Location
- Figure 2: Vertical Plan Sketch of Antenna System
- Figure 3: Maximum Allowed ERP toward WLHS
- Figure 4: Maximum Allowed ERP toward WOBO
- Figure 5: Maximum Allowed ERP toward WNKU
- Figure 6: Maximum Allowed ERP toward WFPL
- Figure 7: Proposed Reading Azimuth Pattern
- Figure 8: Jampro JSCP-2 Elevation Pattern
- Figure 9: Composite Sectional Aeronautical Chart
- Figure 10: WOBO Antenna Pattern
- Figure 11: WNKU Antenna Pattern

TABLES

- Table 1: Proposed Antenna Pattern Horizontal Polarization
- Table 2: Jampro JSCP-2 Elevation Pattern
- Table 3: Ground Elevation Data for Proposed Reading
- Table 4: Height Above Average Terrain for Proposed Reading
- Table 5: Proposed Reading Coverage Contour
- Table 6: Population Count (Corr. 1980 Census), Proposed Reading
- Table 7: Blanketing Interference Contour
- Table 8: Site Survey
- Table 9: FM Spacing Study, Proposed Reading
- Table 10: WOBO Effective Antenna Heights
- Table 11: EAH, Proposed Reading toward WOBO
- Table 12: WOBO/Proposed Reading Contours
- Table 13: WFPL Effective Antenna Heights
- Table 14: EAH, Proposed Reading toward WFPL
- Table 15: WFPL/Proposed Reading Contours
- Table 16: WNKU Effective Antenna Heights
- Table 17: EAH, Proposed Reading toward WNKU
- Table 18: WNKU/Proposed Reading Contours
- Table 19: WLHS Effective Antenna Heights
- Table 20: EAH, Proposed Reading toward WLHS

TABLES (CONTINUED)

Table 21:	WLHS/Proposed Reading Contours
Table 22:	Remaining Bearing and Height Parameters
Table 23:	WCNE Effective Antenna Heights
Table 24:	WLMH Effective Antenna Heights
Table 25:	WVXR/CP Effective Antenna Heights
Table 26:	WFPL Effective Antenna Heights
Table 27:	WHSS Effective Antenna Heights
Table 28:	WDPS/WDPR Effective Antenna Heights
Table 29:	WDPR/CP Effective Antenna Heights
Table 30:	WVXM/CP Effective Antenna Heights
Table 31:	WLHS Effective Antenna Heights
Table 32:	Remaining Undesired Limits
Table 33:	Remaining 1 mV/m Limits
Table 34:	WSYX/APP Effective Antenna Heights
Table 35:	EAH, Proposed Reading toward Channel 6 TV
Table 36:	WSYX/APP /Proposed Reading Contours
Table 37:	WRTV Effective Antenna Heights
Table 38:	WRTV/Proposed Reading Contours

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I. General

This engineering exhibit supports the application of the President and Board of Trustees of The Miami University, Oxford, Ohio for a new Noncommercial Educational FM Broadcast Station in Reading, Ohio on Channel 207 (89.3 MHz) with a height of 72 m above average terrain and an effective radiated power (ERP) of 1.50 kW directional. The proposed tower location is 39°13'23" North latitude, 84°25'57" West longitude.

This exhibit demonstrates that the proposed Reading station meets all the current requirements for antenna directionality, lack of interference to other stations, lack of interference to the proposed station, lack of interference to TV Channel 6, and lack of environmental impact. The proposed station complies with current guidelines for human exposure to radio frequency radiation.

The proposed station directional antenna pattern provides protection to WOBO in Batavia, Ohio, to WFPL in Louisville, Kentucky, to WNKU in Highland Heights, Kentucky, and to WLHS in West Chester, Ohio. By virtue of these protection limits, protection is also provided to WCNE in Batavia, Ohio, to WLMH in Morrow, Ohio, to WVXR in Richmond, Indiana, to WHSS in Hamilton, Ohio, to WDPR in Dayton, Ohio, to WDPS in Dayton, Ohio, to a construction permit for WDPR in Dayton, Ohio, and to a construction permit for WVXM in West Union, Ohio.

The protection limitations for the proposed Reading station are complex and this engineering exhibit devotes more than average attention to a thorough development of these limitations.

The complexity of the proposed protection limitations stems in part from the fact that two of the protected stations are also directional stations. Additional complexity is introduced because of the hilly terrain in the Cincinnati area. The lowest allowable power limit does not necessarily coincide with the bearing to a protected station, nor does the lowest allowable power limit necessarily coincide with the shortest distance to the relevant contour.

In order to minimize the likelihood of disagreement, all contours are computed using a common database (the NGDC 30-second database) and the FCC computer code TVFMFS is used to compute the contours. To obtain the maximum accuracy from the TVFMFS code while avoiding contour overlaps, the program is run iteratively in the field strength versus distance mode to arrive at distances to the nearest 0.01 kilometer where such resolution is appropriate.

II. Location and Structure

A. Transmitter

The proposed tower location is 39°13'23" North latitude, 84°25'57" West longitude, at 601 Columbia Avenue in Reading, Ohio. The tower will be owned by The Miami University and will be on land leased from the City of Reading. A 7.5 minute U.S. Geological Survey (USGS) topographic quadrangle is given in Figure 1 showing the proposed transmitter location.

The proposed tower is a self supporting, tapered steel structure with an height above ground of 52.74 m (173'). On top of the tower is a 7.32 m (24') mast 27.3 cm (10.75") in diameter. The overall height is 60.06 m (197') and no obstruction lighting is proposed. A vertical plan sketch for the proposed structure is shown in Figure 2.

The FAA Great Lakes Region Office is being notified concurrently of the proposed construction on FAA Form 7460-1. If painting and obstruction lighting should be required by the FAA it

will be in accordance with FAA regulations. The nearest edge of the nearest airport landing area is the Cincinnati - Blue Ash Airport at a distance of 4.05 km (2.52 miles) and a bearing of N55.3°E. Several heliports are also within 5 miles of the antenna site.

B. Main Studio

The Miami University requests permission to locate the main studio for the proposed Reading station outside the proposed station's principal community contour. The proposed station's principal community contour is taken as 1 mV/m in accordance with FCC §73.315(a) note and (c). The Miami University proposes to simultaneously broadcast the programming of its presently owned station, WMUB, Oxford, Ohio. The Miami University believes that the proposed Reading station's studio location of Oxford, Ohio will be consistent with operating the proposed station in the public interest. This request is in accordance with FCC §73.1125(a)(4).

By simultaneously broadcasting the same programming on both WMUB and the proposed Reading station, The Miami University will be able to provide 24 hour quality public interest, news, and music programming to the city of Reading. By including Reading area news in its local newscasts and public affairs programming, The Miami University can serve Reading on a broader scale than by attempting at this time to establish a separate studio within the city of Reading.

It is The Miami University's intent to maintain a close relationship with the City of Reading's administration. Contingent upon the proposed Reading construction permit being granted by the FCC, the City of Reading has agreed to enter into a long term lease of the proposed tower site, and further agreed to house the proposed transmitter in the adjacent fire station. Maintaining this relationship will require the university to serve the needs of the City of Reading.

It is also the intent of the university to ascertain the community problems and needs of Reading and to address these with appropriate programming. The Reading telephone directory and the combined Reading and WMUB monthly program guide will indicate a number to call collect to contact the studio at Oxford, Ohio.

The university will initially use its existing staff and resources to provide programming that addresses the above determined needs. As circumstances and funding permit, the university will consider adding staff and resources to make live broadcasts from Reading when events warrant. The WMUB Oxford, Ohio studios and the City of Reading are separated by not more than 45 minutes under normal automobile driving conditions, so facilities for program production for the proposed Reading station are also readily available.

III. Antenna Input Power

Approximately 60 m (196.9') of 1-5/8 inch pressurized transmission line such as Andrew HJ7-50A Heliac is needed for the proposed facility. Andrew HJ7-50A has a loss at 89.3 MHz of 0.640 dB per 100 m, so the total transmission line loss is 0.384 dB and the transmission line efficiency is 91.5 percent.

For the purposes of these calculations a circularly polarized two bay antenna such as a Jampro JSCP-2R(DA) is used. While the final horizontal pattern gain cannot be determined until final antenna range measurements are made, an approximate pattern gain of 1.8 can be used for transmitter sizing purposes.

Based on this approximate pattern gain, a transmitter rated at one kilowatt output power should be adequate. In accordance with FCC §73.212(a) the power levels are specified as follows:

	<u>Nominal</u>	<u>Specified</u>
Transmitter Output Power	0.913 kW	0.91 kW
Transmission Line Efficiency	0.915	0.915
Antenna Input Power	0.836 kW	
Antenna Gain	1.8	
Effective Radiated Power	1.504 kW	1.50 kW

IV. Directional Antenna Characteristics

The proposed Reading antenna directional pattern will be adjusted to eliminate harmful interference to or from co- and adjacent channel stations. The final antenna pattern will be measured by the manufacturer; for example, the measurements can be made by duplicating a section of tower with one bay of the antenna full scale on a flat 7000 foot antenna range and profiling the antenna in the receive mode by rotating the antenna to produce the measured pattern.

A vertical or elevation pattern plot will be measured in order to show the absence of undesirable lobes at angles off the horizontal plane. The azimuth direction will be specified by the manufacturer and the antenna will be aligned in azimuth with respect to true north during installation using the services of a licensed surveyor. Final measured pattern data from the antenna range will be used to show compliance with FCC requirements.

As shown later in this exhibit, the critical bearings and powers are as follows:

<u>Bearing</u>	<u>ERP</u>	<u>Limitation</u>
308.3°-65.0°	Figure 3	WLHS 1 mV/m contour
85.0°-126.7°	Figure 4	WOBO 1 mV/m contour
173.2°-180.3°	Figure 5	WNKU 10 mV/m contour
200.3°-238.2°	Figure 6	WFPL 0.1 mV/m contour

The antenna will be circularly polarized and the vertically polarized component will not exceed the horizontally