

**FCC Form 340
Application for a Construction Permit for
a Noncommercial Educational FM Station
in Fergus Falls, Minnesota**

Minnesota Public Radio

EXHIBIT 4, Page 1

Refers to Section IV

Attached, please find a copy of a program schedule which closely resembles the program schedule that would be broadcast by the proposed station. This schedule is for the MPR Regional Network news and information service—currently broadcast over KNCM (FM) in Appleton, MN, KNBJ (FM) in Bemidji, MN, KLNI (FM) in Decorah, IA, WSCN (FM) in Cloquet, MN, KXLC (FM) in La Crescent, MN, KNOW (FM) in Minneapolis/Saint Paul, MN, KCCD (FM) in Moorhead/Fargo, MN, KZSE (FM) in Rochester, MN, KNSR (FM) in Collegeville, MN, KNGA (FM) in Saint Peter/Mankato, MN, WIRN (FM) in Virginia, MN, KSNW (FM) in Worthington, MN and KNTN (MN) in Thief River Falls, MN — for the month of November, 1998. This schedule appears in the program guide contained in *MINNESOTA MONTHLY* magazine, which is sent to listener members of Minnesota Public Radio and appears on the MPR website at www.mpr.org.

The schedule contains a stunning array of programming, representing the best radio being produced in the world—by National Public Radio, by the producers of Public Radio International, by the British Broadcasting Corporation on their World Service, by the Canadian Broadcasting Corporation, by independent producers, and by the MPR network staff.

A schedule of sources for each program is also attached.

PROGRAMMING POLICIES AND OBJECTIVES

1. To provide the best possible information services suitable for a public educational broadcasting station, including a strong schedule of national and international news and local information.
2. To provide in-depth analysis and context for national and international news, while providing the context necessary for local understanding of those stories..
3. To reflect the variety and richness of the region, including its political, economic and cultural life, its ethnic diversity, history and its educational accomplishments, by using a full range of radio techniques.
4. To develop strong identification with the region, through feedback techniques, research, outreach programs, remote broadcasts, call-in programs. etc.
5. To make the most efficient use of available network and syndication material.

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Refers to Section IV

6. To provide regular information at set times in network programs as part of the service for the audience.
7. To create a forum of ideas, opinion and talent from across the region and nation.
8. To open up access to radio as a medium of communication for ideas among people of the region, leading to more informed decision making.
9. To discuss the many aspects of the daily lives of residents in the region that are not newsworthy in the strictest of journalistic terms, but nevertheless are relevant to the understanding and appreciation of life itself.
10. To present established and new artists, performers, musicians and writers and their works.
11. To serve the general interests of the audience with basic regional and national consumer information; local, regional, national and international news; and interregional exchange items; all well integrated into the body of the program service.
12. To reflect social and political trends in the region.
13. To provide relevant, thought-provoking and balanced news and information that listeners trust and value.
14. To enhance listeners' understanding of the world.
15. To deal with significant issues that have a long-term impact on people's lives.

Prepared by
Mitzi T Gramling

Schedule of Program Sources

National Public Radio

The following programs are produced and distributed by NPR in Washington, DC

Morning Edition and All Things Considered with regional segments from Minnesota Public Radio's News and Information Station staff.

Talk of the Nation, Weekend Edition, Weekend All Things Considered,

The following programs are distributed by National Public Radio and produced by the stations listed

Fresh Air and Fresh Air Weekend from WHYY, Philadelphia
Car Talk from WBUR, Boston
Only a Game from WBUR, Boston
Selected Shorts from WNYC, New York

Public Radio International

The following programs are distributed by Public Radio International and produced by the stations listed

Marketplace from KUSC, Los Angeles
The World from WGBH, Boston and the British Broadcasting Corporation, London
As it Happens from the Canadian Broadcasting Corporation, Toronto, Ontario
The BBC World Service from the British Broadcasting Corporation, London
The Savvy Traveler from KUSC, Los Angeles
On Your Health from WHA/Wisconsin Public Radio, Madison, WI
This American Life from WBEZ, Chicago
Whad'Ya Know from WHA/Wisconsin Public Radio, Madison, WI
This Morning from the Canadian Broadcasting Corporation, Toronto, Ontario

The following programs are produced by Minnesota Public Radio and distributed by Public Radio International

Sound Money from MPR
The Splendid Table from MPR and Tom Voegeli Productions
A Prairie Home Companion from MPR
Future Tense from MPR

The following programs are produced by Minnesota Public Radio and only carried on the stations of MPR

Midmorning from MPR

Midday from MPR

News & Information Schedule)))

KNOW 91.1 fm Minneapolis/St. Paul

KNCM 88.5 fm Appleton • KNBJ 91.3 fm Bemidji/Grand Rapids • KLN1 88.7 fm Decorah, IA • WSCN 100.5 fm Duluth/Superior
 KCCD 90.3 fm Fargo/Moorhead • KXLC 91.1 fm La Crescent/La Crosse • KZSE 90.7 fm Rochester • KNSR 88.9 fm St. Cloud/Collegeville
 KNGA 91.5 fm St. Peter/Mankato • KNTN 182.7 fm Thief River Falls • WIRN 92.5 fm Virginia/Hibbing
 KNSW 91.7 fm Worthington/Marshall

	Weekdays	Saturday	Sunday	
5 AM				5 AM
6 AM	Morning Edition* with Bob Potter in St. Paul and Bob Edwards in Washington, D.C.	BBC World Service	BBC World Service	6 AM
7 AM				7 AM
8 AM		Weekend Edition* with Maryann Sullivan in St. Paul and Scott Simon in Washington, D.C.	Weekend Edition* with Maryann Sullivan in St. Paul and Liane Hansen in Washington, D.C.	8 AM
9 AM				9 AM
10 AM	Midmorning with Katherine Lanpher	Sound Money* with Bob Potter	Fresh Air Weekend with Terry Gross	10 AM
11 AM		Car Talk with Tom and Ray Magliozzi	Car Talk with Tom and Ray Magliozzi	11 AM
NOON	Midday with Gary Eichten Noon Speeches, Features, Call-ins	The Savvy Traveler with Rudy Maza	A Prairie Home Companion* with Garrison Keillor	NOON
1 PM		On Your Health with Zorba Pastor		1 PM
2 PM	Talk of the Nation with Ray Suarez	The Splendid Table with Lynne Rossetto Kasper		2 PM
3 PM		Only a Game with Bill Littlefield	Whad'Ya Know? with Michael Feldman	3 PM
4 PM	All Things Considered* with Lorna Benson in St. Paul, and Linda Wertheimer, Noah Adams and Robert Siegel in Washington, D.C.	All Things Considered	All Things Considered*	4 PM
5 PM				5 PM
6 PM		A Prairie Home Companion* with Garrison Keillor	Sound Money* with Bob Potter	6 PM
7 PM	Marketplace with David Brancaccio		The Savvy Traveler with Rudy Maza	7 PM
8 PM	The World	This American Life with Ira Glass	The Splendid Table with Lynne Rossetto Kasper	8 PM
9 PM	Fresh Air with Terry Gross	Fresh Air Weekend with Terry Gross	Wait, Wait...Don't Tell Me! with Peter Sagal	9 PM
10 PM	Midday	Selected Shorts	This American Life with Ira Glass	10 PM
11 PM	As It Happens with Mary Lou Fialy and Barbara Budd			11 PM
12 AM	BBC Outlook			12 AM
1 AM				1 AM
2 AM	BBC World Service	BBC World Service	BBC World Service	2 AM
3 AM				3 AM
4 AM				4 AM
5 AM				5 AM

KNOW 91.1 fm Minneapolis/St. Paul is a service of programs selected from both the classically oriented and news schedule.
 If a program is heard on a particular date, it is selected for the MPB Member Local Services P.O. Box 228, 1125 for a copy of WOOD's schedule.

Schedule subject to change. Local station schedules may vary.

inside mpr)))

SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

Does the applicant propose to employ five or more full-time employees?

Yes No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC Form 396-A). (See also 47 C.F.R. Section 73.2080.)

SECTION VII - CERTIFICATIONS

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580?

Yes No
 Not applicable (minor change)

2. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

Yes No

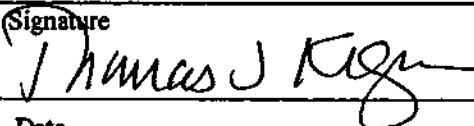
The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications 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 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 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

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.

Name Minnesota Public Radio	Signature 
Title Executive Vice President	
Typed or Printed Name of Person Signing Thomas J Kigin	Date 98-11-19

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. _____
 SSB Referral Date _____
 Referred By _____

Name of Applicant **Minnesota Public Radio**

Call Letters (if issued)

TBA

Is this application being filed in response to an application Yes No
 filing window?
 If Yes, specify closing date: _____

Purpose of Application: (check appropriate boxes)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Construct a new (main) facility
See Ex #E1, Engineering Statement | <input type="checkbox"/> Construct a new auxiliary backup facility |
| <input type="checkbox"/> Modify existing construction permit for main facility | <input type="checkbox"/> Modify existing construction permit for auxiliary backup facility |
| <input type="checkbox"/> Modify licensed main facility | <input type="checkbox"/> Modify licensed auxiliary backup facility |

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- | | |
|---|--|
| <input type="checkbox"/> Antenna supporting structure height | <input type="checkbox"/> Effective radiated power |
| <input type="checkbox"/> Antenna height above average terrain | <input type="checkbox"/> Frequency |
| <input type="checkbox"/> Antenna location | <input type="checkbox"/> Class |
| <input type="checkbox"/> Main Studio location per 47 C.F.R. Section 73.1125(b)(2) | <input type="checkbox"/> One-Step processing |
| <input type="checkbox"/> Directional Antenna | <input type="checkbox"/> Other (summarize briefly) |

File Number(s) _____

1. Allocation:

Channel No.	Principal community to be served:		
	County	City or Town	State
218	Otter Tail	Fergus Falls	MN

Class (check only one box below)
 A B1 B C3
 C2 C1 C

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

2 miles N of Fergus Falls, MN. Approx. intersection of I-94 and US Hwy 59

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. (The Commission requires coordinates based on NAD 27.)

Latitude	46 °	19 ' 16 "	Longitude	96 °	05 ' 36 "
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Section V-B - FM BROADCAST ENGINEERING DATA (Page 2)

3. Will the antenna be mounted on an antenna structure which has been registered with the Commission? Yes No

If Yes, provide the seven digit registration number and proceed to item 8.

1024698

4. Has the owner of the antenna structure filed an application for registration with the Commission? Yes No

If yes, provide the date FCC Form 854 was filed and proceed to item 8.

5. Applicant certifies that antenna structure meets 6.10 meter (20 feet) exception rule and therefore does not require registration. In other words, the overall height of the entire structure is not more than 6.10 meters (20 feet) above the ground or the antenna does not extend more than 6.10 meters (20 feet) above a man-made structure (structure built for a purpose other than mounting an antenna, i.e., building, water tank, silo, fire tower, etc.). Yes No

If yes, skip items 6 and 7.

6. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation. Yes No

If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 8.

Exhibit No.

7. Antenna structure does not meet FAA notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration. Yes No

8. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? Yes No

If Yes, give call letter(s) or file number(s) or both. MPR Channel 209 to be filed.

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

9. Does the application propose to correct previous site coordinates? Yes No

If Yes, list old coordinates.

Latitude ° ' "	Longitude ° ' "
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10. Has the FAA been notified of the proposed construction? Yes No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No.

Date _____ Office where filed _____

11. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

	Landing Area	Distance (km)	Bearing (degrees True)
(a)	<u>Fergus Falls Municipal</u>	<u>6.3</u>	<u>229.9</u>
(b)	_____	_____	_____

Section V-B - FM BROADCAST ENGINEERING DATA (Page 3)

12. (a) Elevation: (to the nearest meter)

- (1) Of the site above mean sea level; _____ 384 _____ meters
- (2) Of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and _____ 107 _____ meters
- (3) Of the top of supporting structure above mean sea level [(a)(1) + (a)(2)]. _____ 491 _____ meters

(b) Height of radiation center: (to the nearest meter) H = Horizontal; V = Vertical

- (1) Above ground; _____ 61 _____ meters (H)
- _____ 61 _____ meters (V)
- (2) Above mean sea level [(a)(1) + (b)(1)]; and _____ 445 _____ meters (H)
- _____ 445 _____ meters (V)
- (3) Above average terrain. _____ 69 _____ meters (H)
- _____ 69 _____ meters (V)

13. Attach as an Exhibit sketch(es) of the supporting structure, labeling all elevations required in Question 12 above, except item 12(b)(3). If mounted on an AM directional array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No.
E2

14. Effective Radiated Power:

(a) ERP in the horizontal plane _____ .1 _____ kw (H*) _____ .1 _____ kw (V*)

Is beam tilt proposed?

Yes No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevation plot of radiated field.

Exhibit No.
N/A

_____ kw (H*) _____ kw (V*)

*Polarization

15. Is a directional antenna proposed?

Yes No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s), and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No.
N/A

16. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

Yes No

If No, attach as justification an Exhibit pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.
E3

17. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (*except citizens band or amateur*) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any protected or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference? Yes No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Section 73.315(b), 73.316(d) and 73.318.)

Exhibit No.
E4

18. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
E5

19. Attach as an Exhibit (name the source) a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
E6

- (a) The proposed transmitter location, and the radials along with profile graphs have been prepared;
- (b) The 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mv/m contour; and
- (c) The legal boundaries of the principal community to which the station is or will be licensed.

20. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mv/m contour.

Area 227 sq. km. Population 14,562

21. Attach as an Exhibit 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	<u>N/A</u>	sq. km.
Loss Area	<u> </u>	sq. km.
Present Area	<u> </u>	sq. km.

Percent change (gain area plus loss area as divided by present area times 100%) 100% New station

If 50% or more, this constitutes a major change. Indicate in question 2(c), Section 1, accordingly. See 47 C.F.R. Section 73.3573(a)(1).

Section V-B - FM BROADCAST ENGINEERING DATA (Page 5)

Exhibit No.
N/A

22. For an application involving an auxiliary backup facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) which shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

- (a) the proposed auxiliary 1 mv/m contour; and
- (b) the 1 mv/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675.

File No. _____

23. Terrain and coverage data (*to be calculated in accordance with 47 C.F.R. Section 73.313*)

Source of terrain data: (*check only one box below*)

- Linearly interpolated 30-second database
- 7.5 minute topographic map

(Source: _____)

- Linearly interpolated 3-second database
V-Soft ROM
- Other (summarize)

Are more than eight radials being used to calculate HAAT?

Yes No

If Yes, specify how many radials are being used. Please note the radials must be evenly spaced and start with the 0 degree radial.

36

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)	If operating on Commercial Channel 3.16 mv/m contour (kilometers)
0	*	*	*
45	*See Ex #E1, Pg #4	*	*
90	*	*	*
135			
180			
225			
270			
315			

Allocation Studies

(See Subpart C of 47 C.F.R. Part 73)

24. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?

Yes No

If Yes, attach as an Exhibit 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.

Exhibit No.
N/A

Section V-B - FM BROADCAST ENGINEERING DATA (Page 6)

25. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada? Yes No

If Yes, attach as an Exhibit 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.
* See E7

Exhibit No.
N/A *

26. If the proposed operation is for a full service or Class D facility for a channel in the range from Channel 201 through 220 (88.1 through 91.9 MHz), 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 an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.
E7

- (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 kilometers 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; and
- (h) The name of the map(s) used in the Exhibit(s).

27. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz), attach as an Exhibit information required in 1/ (separation requirements involving intermediate frequency (i.f.) interference).

Exhibit No.
E7

28. (a) Is the proposed operation on Channel 218, 219 or 220? Yes No

(b) If the answer to (a) is Yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207? Yes No

(c) If the answer to (b) is Yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.
E7

(d) If the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.
N/A

A showing that the proposed operation meets the minimum distance separation requirements of 47 C.F.R. Section 73.507. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna

Section V-B - FM BROADCAST ENGINEERING DATA (Page 7)

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360 degrees), for the proposed operation;
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location;
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur;
- (4) A scale of kilometers 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.); and
- (5) The official title(s) of the map(s) used in the Exhibit(s).

29. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

Yes No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.
E8

30. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1 through 107.9 MHz)?

Yes No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.
N/A

31. Environmental Statement. (See 47 C.F.R. Section 1.1301 et seq.)

(a) Would a Commission grant of this application come within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact?

Yes No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1.1311.

Exhibit No.

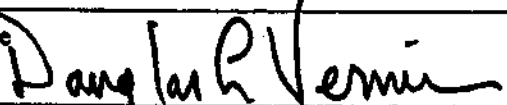
(b) If No, explain briefly why not.

Existing authorized tower.

(c) Pursuant to OST/OET Bulletin No. 65, the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radiofrequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all stations. See Ex #E9 for RF Hazard Statement.

CERTIFICATION

I certify that I have prepared this Section of this application on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name (Typed or Printed) Douglas L. Vernier	Relationship to Applicant (e.g., Consulting Engineer) Technical Consultant
Signature 	Address (include ZIP Code) 1600 Picturesque Dr. Cedar Falls, IA 50613
Date November 16, 1998	Telephone No. (include Area Code) 319 266-8402

FCC Form 340

**Application for Authority to Construct a
Noncommercial Educational FM Station
for Fergus Falls, MN**

Minnesota Public Radio

CERTIFICATION OF SITE AVAILABILITY

The applicant certified that it has reasonable assurance in good faith that the site of structure proposed in Section V-B, Item 2, FCC Form 340, as the location of its transmitting antenna, will be available to the applicant's intended purpose. Applicant will be leasing the site.

Yes _____ No _____

Thomas J Kagan
Applicant's Signature

98.11.19
Date

EXHIBIT #E1
ENGINEERING STATEMENT

Concerning the Application of
Minnesota Public Radio
To Construct a New Non-Commercial Educational Radio Station
To Serve Fergus Falls, Minnesota

November 1998

Channel 218 A

.1 kW H & V

This engineering statement supports the application filed by Minnesota Public Radio to build a new non-commercial educational FM radio station to serve Fergus Falls, Minnesota and the surrounding area.

Under this proposal, a type approved, FM transmitter generates an output power of .0573 kilowatts. The power is fed through a T-combiner assembly having an approximate efficiency of 97.2 percent. The Andrew HJ7-50A, 50-ohm air Helix transmission line, has an efficiency for its 73.15 meter length of 89.7 percent. Therefore, the proposed 4-bay, circularly polarized antenna has at its input .05 kilowatts of power. The proposed antenna has a maximum power gain of 2.0 resulting in a maximum effective radiated power of .1 kW.

Tower Vertical Sketch:

Exhibit #E2 is a vertical sketch of the existing authorized tower showing the authorized 106.7 meter tower and the proposed side mounted 4-bay circularly polarized antenna.

Studio Exhibit:

Exhibit #E3 is a studio exhibit which requests waiver of the main studio rule, (Sec 73.1125.)

Inter-modulation and blanketing:

Exhibit #E4 is an exhibit describing the possible effects of inter-modulation and blanketing.

Site Map:

Exhibit #E5 is full scale section of a 1:24,000 scale U.S. Geological Survey topographic quadrangle map (Fergus Falls Quadrangle) showing the exact transmitter location. Page # 2 of this exhibit is a photo-reduction of the corner of the map bearing coordinate identification.

Coverage Map

Exhibit #E6 is a map of the proposed 1 mV/m (60 dBu) signal contour. Fergus Falls, Minnesota, the city of licensee, is shown to be fully encompassed by the proposed 60 dBu city service contour. The coverage map was computer generated using U.S. Geological Survey Digital Line Graph data, which was originally digitized from 1:2,000,000 scale maps. Three hundred and sixty evenly spaced radials were used to plot the 60 dBu contour. The area within the proposed one mV/m contour amount 227 square kilometers. This figure was determined using numerical calculus. The distance to the one mV/m signal contour along each of 360 evenly spaced radial azimuths was squared and then the average of the sum of these distances was calculated. The resulting average radius squared was then multiplied by π to determine the area within the contour. The population within the 60 dBu service contour was determined to be 14,562 people through the use of a computer program which extracts a population count based on population centroids defined by U.S. Census 1990 (PL-94-171) digital census data. This program draws data from the following summary level: State-County-Voting District/Remainder-County Subdivision, Place/Remainder-Census Tract/Block Numbering Area-Block Group.

Thirty-six evenly spaced radials were used to determine the antenna height above average terrain. The N.G.D.C. 03 arc-second terrain database was used to determine the radial elevations at .1 kilometer increments from 3 to 16 kilometers. The elevation points were averaged using the required four-point interpolation method and then the average was employed to project antenna heights above average terrain and the consequent distances to signal contours along the pertinent radials. (See a tabular listing of these contour distances on page #4 of this exhibit.)

Allocation Study:

Exhibit #E7, is a single channel, contour to contour, allocation study showing that interference is neither caused nor received by an FM radio station or construction permit. Page # 2 of this exhibit is a narrative explaining the procedures and conventions used in the study. Page # 3-6 are allocation study maps and FMOVER tabulations showing the relationship between the applicant's proposal and critical stations KCCM, Morehead, KRSU, Appleton, Minnesota. There are no pertinent I.F. relationships. The proposal is within 320 kilometers of the U.S. border with Canada.

Channel-Six Television Protection:

Exhibit #E8 is a map of the 47 dBu, Grade B, protected signal contours of WDAYTV, Fargo, North Dakota. The map also contains a plot of the proposed facility's, worst case, section 73.599, Figure #1, 73.3 dBu F(50-10) interference signal contour (6 dB receiving antenna directivity credit used) using the mixed polarization study power of .1025 kW (.1+40/.1). It can be observed that there is no overlap of the pertinent signal contours and therefore no interference is caused to the channel-six TV station. Therefore, this proposal meets the Commission's rules and regulations regarding protection to channel-six TV. Pages #2 - 3 are tabular printouts of the predicted distances to the relevant contours used in the study.

R.F. Hazard compliance:

Exhibit #E9 shows compliance with the Commission's R.F. emission's standards.

Page #5 of this exhibit (Ex. # E1) is a declaration made by the preparer, Doug Vernier, attesting to his qualifications.

Doug Vernier, Telecommunications Consultants
 Minnesota Public Radio - Fergus Falls - CH 218

ERP = .1 kW
 Channel = 218

Azimuth Deg.T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 60 dBu Contour km
0	389.2	55.8	-10.000	7.69
10	399.2	45.8	-10.000	6.91
20	397.8	47.2	-10.000	7.02
30	409.7	35.3	-10.000	6.07
40	408.4	36.6	-10.000	6.17
50	409.3	35.7	-10.000	6.10
60	408.5	36.5	-10.000	6.17
70	402.1	42.9	-10.000	6.68
80	404.7	40.3	-10.000	6.47
90	403.5	41.5	-10.000	6.57
100	400.5	44.5	-10.000	6.81
110	391.5	53.5	-10.000	7.51
120	386.4	58.6	-10.000	7.89
130	395.2	49.8	-10.000	7.23
140	387.7	57.3	-10.000	7.80
150	366.7	78.3	-10.000	9.15
160	371.3	73.7	-10.000	8.87
170	367.3	77.7	-10.000	9.11
180	357.8	87.2	-10.000	9.65
190	352.6	92.4	-10.000	9.93
200	345.7	99.3	-10.000	10.28
210	342.7	102.3	-10.000	10.43
220	342.6	102.4	-10.000	10.43
230	343.2	101.8	-10.000	10.40
240	341.9	103.1	-10.000	10.47
250	342.4	102.6	-10.000	10.44
260	344.6	100.4	-10.000	10.34
270	346.8	98.2	-10.000	10.23
280	351.7	93.3	-10.000	9.98
290	353.4	91.6	-10.000	9.89
300	358.7	86.3	-10.000	9.60
310	376.7	68.3	-10.000	8.53
320	390.9	54.1	-10.000	7.56
330	394.7	50.3	-10.000	7.27
340	386.1	58.9	-10.000	7.91
350	384.1	60.9	-10.000	8.04
Ave. =	376.5 M	68.5 M		

Antenna Radiation Center AMSL =445
 NGDC 03 Arc Sec.

Geographic Coordinates:

N. Lat. 46 19 16
 W. Lng. 96 05 36

Declaration:

I, Doug Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 25 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

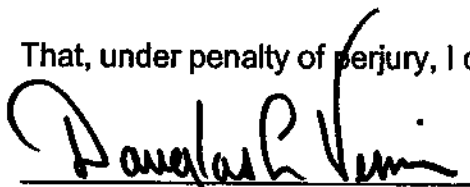
That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 11/95.)

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by Minnesota Public Radio of Saint Paul, Minnesota and as such have prepared the engineering showings appended hereto;

That, I have prepared these engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

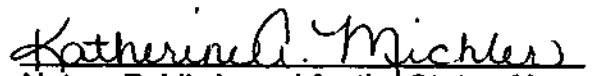
That, under penalty of perjury, I declare that the foregoing is correct.



Douglas L. Vernier

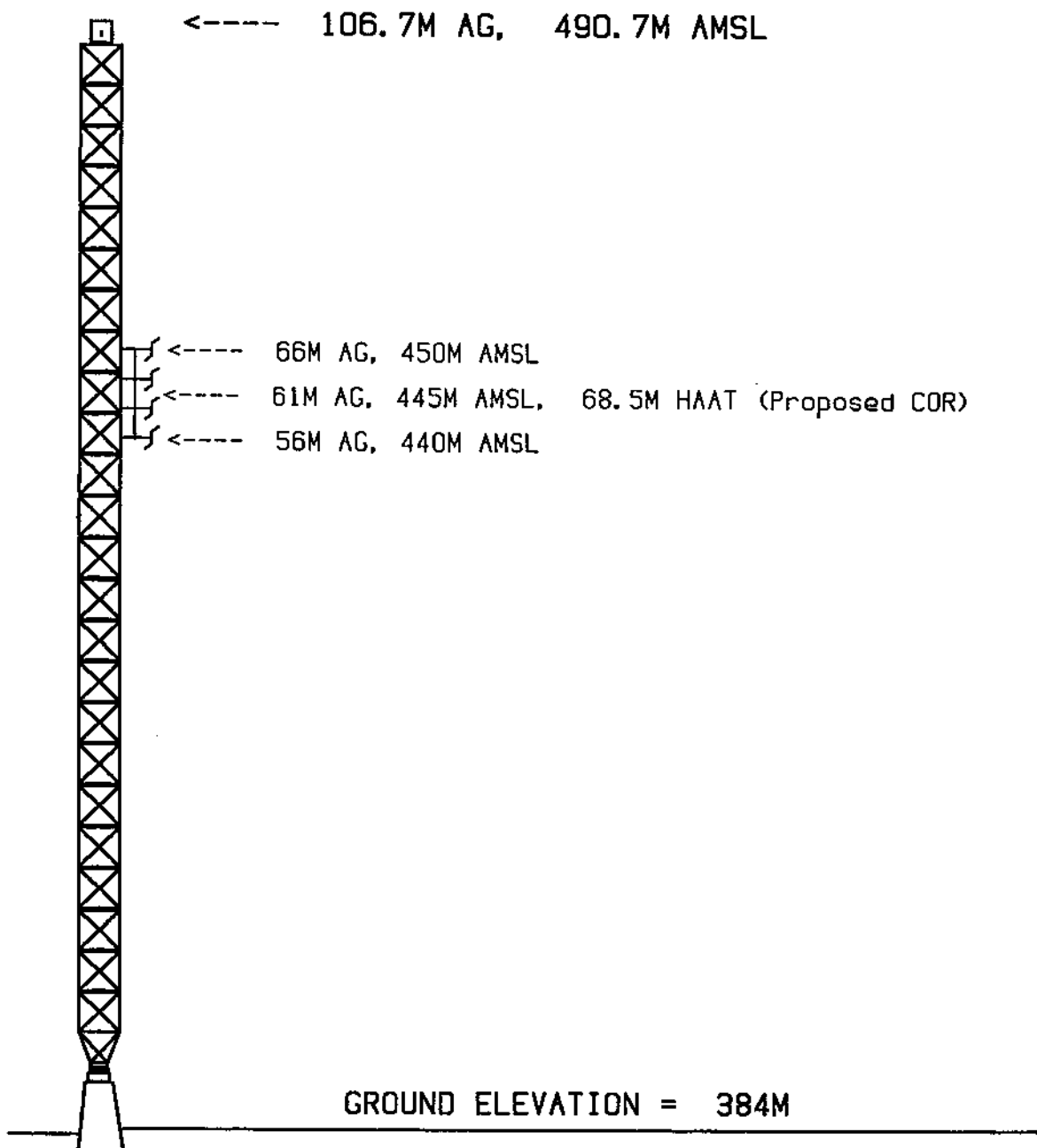
Executed on November 16, 1998

Subscribed and sworn before me this 16th day of November, 1998.



Notary Public in and for the State of Iowa

My Commission Expires August 10, 2001



VERTICAL SKETCH

N. Lat. 46 19 16
 W. Lng. 96 05 36

 Existing Authorized Tower
 (Not to Scale)

FIGURE #E2

Minnesota Public Radio
 CH 218 - 68.5 M HAAT
 .1 kW H & V
 Fergus Falls, Minnesota
 November '98

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 CEDAR FALLS, IA 50613
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