



**United States of America**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**AM BROADCAST STATION CONSTRUCTION PERMIT**

Authorizing Official:

Official Mailing Address:

UNIVERSITY OF NORTHWESTERN-ST. PAUL  
3003 SNELLING AVE N  
SAINT PAUL MN 55113

Son Nguyen  
Supervisory Engineer  
Audio Division  
Media Bureau

Facility Id: 49770

Call Sign: KTIS

Permit File Number: BP-20050617ABK

Grant Date: June 16, 2006

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

Permit to increase power, correct coordinates, and change patterns.

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

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

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

Hours of Operation: Unlimited

Average hours of sunrise and sunset:  
Local Standard Time (Non-Advanced)

Jan.	7:45 AM	5:00 PM	Jul.	4:45 AM	8:00 PM
Feb.	7:15 AM	5:45 PM	Aug.	5:15 AM	7:15 PM
Mar.	6:30 AM	6:15 PM	Sep.	5:45 AM	6:30 PM
Apr.	5:30 AM	7:00 PM	Oct.	6:30 AM	5:30 PM
May	4:45 AM	7:30 PM	Nov.	7:15 AM	4:45 PM
Jun.	4:30 AM	8:00 PM	Dec.	7:45 AM	4:30 PM

Callsign: KTIS

Permit No.: BP-20050617ABK

Name of Permittee: UNIVERSITY OF NORTHWESTERN-ST. PAUL

Station Location: MINNEAPOLIS, MN

Frequency (kHz): 900

Station Class: B

Antenna Coordinates:

Day

Latitude: N 44 Deg 59 Min 24 Sec

Longitude: W 92 Deg 58 Min 52 Sec

Night

Latitude: N 44 Deg 59 Min 24 Sec

Longitude: W 92 Deg 58 Min 52 Sec

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

Nominal Power (kW): Day: 50.0 Night: 0.50

Antenna Mode: Day: DA Night: DA

(DA=Directional Antenna, ND=Non-directional Antenna; CH=Critical Hours)

Antenna Registration Number(s):

Day:

Tower No.	ASRN	Overall Height (m)
1	1023286	
2	1023287	
3	1023288	
4	1023289	

Night:

Tower No.	ASRN	Overall Height (m)
1	1023286	
2	1023287	
3	1023288	
4	1023289	

DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

Theoretical RMS (mV/m/km): Day: 2021.31 Night: 221.556

Standard RMS (mV/m/km): Day: 2123.68 Night: 232.871

Augmented RMS (mV/m/km):

Q Factor: Day: Night:

Theoretical Parameters:

Day Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	1.2050	-7.100	0.0000	0.000	0	90.0
2	1.0000	0.000	180.0000	35.000	0	90.0
3	1.0000	87.500	90.0000	125.000	0	90.0
4	0.8300	94.600	180.0000	35.000	1	90.0

\* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

Theoretical Parameters:

Night Directional Antenna:

Tower No.	Field Ratio	Phasing (Deg.)	Spacing (Deg.)	Orientation (Deg.)	Tower Ref Switch *	Height (Deg.)
1	0.5510	-114.000	0.0000	0.000	0	90.0
2	1.0000	0.000	180.0000	35.000	0	90.0
3	0.4570	5.200	90.0000	125.000	0	90.0
4	0.2290	171.600	180.0000	35.000	1	90.0

\* Tower Reference Switch

0 = Spacing and orientation from reference tower

1 = Spacing and orientation from previous tower

## Inverse Distance Field Strength:

The inverse distance field strength at a distance of one kilometer from the above antenna in the directions specified shall not exceed the following values:

## Day:

Azimuth:	Radiation:
20.5	390.38 mV/m
54	242.5 mV/m
99	380.86 mV/m
149	417.54 mV/m
208	371.54 mV/m

## Night:

Azimuth:	Radiation:
51.5	137.33 mV/m
118	164.31 mV/m
204.5	151.38 mV/m
327.5	19.52 mV/m

## Special operating conditions or restrictions:

- 1 The permittee must submit a proof of performance as set forth in either Section 73.151(a) or 73.151(c) of the rules before program tests are authorized.  
A proof of performance based on field strength measurements, per Section 73.151(a), shall include a complete nondirectional proof of performance, in addition to a complete proof on the (day) and (night) directional antenna system. The nondirectional and directional field strength measurements must be made under similar environmental conditions. The proof(s) of performance submitted to the Commission must contain all of the data specified in Section 73.186 of the rules.  
Permittees who elect to submit a moment method proof of performance, as set forth in Section 73.151(c), must use series-fed radiators. In addition, the sampling system must be constructed as described in Section 73.151(c) (2) (i).
- 2 Permittee shall install a type accepted transmitter, or submit application (FCC Form 301) along with data prescribed in Section 73.1660(b) should non-type accepted transmitter be proposed.
- 3 A license application (FCC Form 302) to cover this construction permit must be filed with the Commission pursuant to Section 73.3536 of the Rules before the permit expires.

Special operating conditions or restrictions:

- 4 Licensee shall be responsible for satisfying all reasonable complaints of blanketing interference within the 1 V/m contour as required by Section 73.88 of the Commission's rules.

\*\*\* END OF AUTHORIZATION \*\*\*