Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FILED/ACCEPTED
JUN 20 2008
Federal Communications Commission
Office of the Secretary

In the Matter of	)	
	)	
Amendment of Section 73.622(b)	)	Docket No. _____
DTV Table of Television Allotments	)	
(St. Paul, Minnesota)	)	

FILED/ACCEPTED
JUN 27 2008
Federal Communications Commission
Office of the Secretary

To: Chief, Media Bureau

PETITION FOR RULE MAKING

Twin Cities Public Television, Inc. ("tpt"), licensee of noncommercial educational Station KTCI-TV, St. Paul, Minnesota, through its attorneys, hereby petitions pursuant to Section 73.622(a) of the Commission's rules, for amendment of Section 73.622(b), the DTV Table of Television Allotments, to substitute DTV Channel *38 for DTV Channel *26 at St. Paul, Minnesota as the paired channel for tpt's station on analog Channel *17. In support thereof, the following is shown:

1. Tpt operates public television Station KTCI-TV on analog Channel *17 at St. Paul, Minnesota. In the Digital Television Table of Allotments at Section 73.622(b) of the rules, Station KTCI-TV is paired with a DTV channel allotment on Channel *16. In the *Seventh Further Notice of Proposed Rule Making* in MB Docket No. 87-268, the Commission proposed at Appendix B the assignment of Channel *26 as the final post-transition DTV channel for the station, with a maximum effective radiated power (ERP) of 63.1 kW using a directional antenna and an antenna height above average terrain (HAAT) of 396 meters. Tpt proposes that substitution of Channel *38 for Channel *26,

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with a maximum ERP of 700 kW using a different directional antenna at HAAT of 412.9 meters at the same geographical coordinates as the Channel *26 allotment, with a one-second correction in latitude.

1. Attached hereto is an Engineering Exhibit prepared by tpt's consulting engineers. As shown in that exhibit, the proposed Channel *38 allotment meets the applicable post-transition interference limits. The proposal is within the Canadian border area, but is over 350 km from the border with significant terrain shielding and no co-channel or first-adjacent channel short spacing. The Commission may note that there are also analog stations operating on Channel 38 (until the transition is complete) between the proposed transmitter site and the border, making it unlikely that there will be interference from a new St. Paul digital station on the channel to any Canadian station.

2. As shown in the Engineering Exhibit, Channel *26, even if maximized, could operate only with very low power compared with other area stations and could not be expected to provide adequate public service. The allotment of Channel *38 with the parameters proposed herein will result in a substantial improvement in predicted coverage.

3. The proposed substitution of DTV Channel *38 for DTV Channel *26 at St. Paul, Minnesota fully complies with applicable FCC rules and requirements. Grant of the requested substitution will afford improved interference-free DTV service for Station KTCI-DT. Tpt urges the FCC to issue forthwith a Notice of Proposed Rulemaking to

substitute DTV Channel *38 for Appendix B DTV Channel *26 at St. Paul, Minnesota, as follows:

Facility ID	State	City	Call Sign	DTV Chan	DTV ERP (kW)	DTV HAAT (m)	DTV Antenna ID	DTV Latitude (DDMMSS)	DTV Longitude (DDDMMSS)
Final DTV Table of Allotments (Appendix B) Parameters:									
68597	MN	ST. PAUL	KTCI	26	63.1	396.0	74396	450329	930727
Proposed Channel 38 Parameters:									
68597	MN	ST. PAUL	KTCI	38	700	412.9	29226	450330	930727

Expeditious processing of this rulemaking proposal will permit vastly improved post-transition public television service to this major market.

Respectfully submitted,

TWIN CITIES PUBLIC TELEVISION, INC.

By: Lawrence M. Miller

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Its Attorneys

Date: June 20, 2008

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES (KGA), TELECOMMUNICATIONS CONSULTING ENGINEERS IN SUPPORT OF A PETITION FOR RULE MAKING (PFRM) TO AMEND THE DTV TABLE OF ALLOTMENTS (APPENDIX B) BY SUBSTITUTING CHANNEL 38 IN PLACE OF CHANNEL 26 FOR THE KTCI-DT DIGITAL TELEVISION BROADCAST FACILITY LICENSED TO TWIN CITIES PUBLIC TELEVISION (TPT).

The firm Kessler and Gehman Associates, Inc. (KGA) has been retained by Twin Cities Public Television, Inc., St. Paul, MN to prepare engineering studies and the engineering portion of a Petition for Rule Making (PFRM) to amend the DTV Table of Allotments (Appendix B) to substitute the proposed post-transition digital Channel 38 in lieu of allotted post-transition digital Channel 26 which is assigned to the KTCI-DT digital television broadcast facility.

Discussion

Twin Cities Public Television (tpt) is licensed to operate the KTCI-TV analog facility on Channel 17 with an ERP of 331.0 kW at an antenna height Radiation Center (R/C) of 393.0 meters Above Average Terrain (AAT) using a directional antenna. According to the initial allotment plan set forth in Appendix B of the *Sixth Report and Order* in MM Docket 87-268, FCC 97-115, adopted April 3, 1997, KTCI was allotted pre-transition digital Channel 16 at an antenna height R/C of 392.9 meters AAT and an ERP of 50.0 kW. In its Pre-Election Certification application (FCC Form 381), tpt certified that it would operate its post-transition DTV station based on its allotted replication facilities and in its First Round Channel Election application (FCC Form 382), tpt entered into a negotiated channel election arrangement with Fox Television Stations, Inc. (Fox) to release Channel 16 and lock-in Channel 26 for its final post-transition DTV operation. Fox currently operates its pre-transition DTV facility on Channel 26 and will be moving to Channel 9 for its post-transition operation. Fox agreed to allow tpt to use the existing Channel 26 panel antenna after the transition and tpt agreed to remove its existing Channel 16 antenna from the tower.

In its Seventh Further Notice of proposed Rule Making (MB Docket No. 87-268), the FCC proposed a new DTV Table of Allotments which assigned Channel 26 as the final post-transition DTV channel for KTCI-DT with an ERP of 63.1 kW and an antenna HAAT of 396.0 m; however, the antenna azimuth pattern was not changed from the licensed Channel 16 pattern (Antenna ID: 74396) to the Fox KMSP-DT Channel 26 antenna azimuth pattern (Antenna ID: 29226). This turned out to be a big problem due to the fact that the directional azimuth patterns are so different. Since the KMSP-DT Channel 26 pre-transition DTV facility, licensed to Fox, operates with an ERP of 691 kW, tpt planned all along to file a maximization application to increase the ERP for its final post-transition DTV facility on Channel 26 using the KMSP-DT antenna. However, unknowingly when the channel election process took place, the filing freeze, prohibiting coverage expansions, was not lifted in time for tpt to file a maximization application utilizing masking from KMSP-DT Channel 26 pre-transition facility. This essentially eliminated any significant maximization opportunities. While most other UHF stations in the St. Paul market will be operating their post-transition digital facilities in the neighborhood of 1,000 kW (ERP), KTCI-DT would be limited to something less than 50 kW (ERP). Obstacles such as building penetration and multipath are well documented with respect to hindering digital signals and tpt realizes that it must move to a serviceable channel that will allow it to provide a strong signal to the population that currently enjoys watching KTCI public television. Accordingly, tpt respectfully requests authorization to substitute Channel 38 in lieu of Channel 26 for its final post-transition channel.

Post-Transition Interference Protection

Initial spacing studies, which considered post-transition DTV allotments, post-transition DTV licenses, post-transition DTV construction permits, post-transition DTV applications and Class A/Class A-eligible low power television (LPTV) stations in the applicable areas surrounding St. Paul, MN, revealed that Channel 38 was a possible option for the KTCI-DT post-transition DTV facility. After the spacing studies were completed additional studies were conducted to verify that the proposed station met the principal community coverage requirements

of §73.625(a) of the FCC Rules. Exhibit 10 depicts the proposed KTCI-DT CH 38 F(50,90) 48.0 dBuV/m principal community contour and demonstrates that it would completely encompass the principal community of St. Paul, MN. After determining principal community coverage compliance, a detailed interference study was conducted, which included all applicable surrounding post-transition stations, using the terrain dependent Longley-Rice, point-to-point propagation algorithm detailed in the FCC's Office of Engineering and Technology Bulletin Number 69 (OET 69).

The following table depicts the allotted (Appendix B) and proposed parameters respectively for the KTCI-DT post-transition DTV facility (see enclosed "Tech Box" extract from FCC Form 340-DTV form):

Facility ID	State	City	Call Sign	DTV Chan	DTV ERP (kW)	DTV HAAT (m)	DTV Antenna ID	DTV Latitude (DDMMSS)	DTV Longitude (DDDMMSS)

Final DTV Table of Allotments (Appendix B) Parameters:

68597	MN	ST. PAUL	KTCI	26	63.1	396.0	74396	450329	930727

Proposed Channel 38 Parameters:

68597	MN	ST. PAUL	KTCI	38	700	412.9	29226	450330	930727

Accordingly, tpt proposes to amend the DTV Table of Allotments (Appendix B) for its KTCI-DT post-transition DTV facility by making the following changes:

1) Change from allotted Channel 26 to the proposed Channel 38.
2) Change from allotted 63.1 kW ERP to proposed to 700.0 kW ERP.
3) Change from allotted 396.0 m antenna HAAT to proposed 412.9 m antenna HAAT.
4) Change from allotted Antenna ID: 74396 (Andrew model ATW30H4-DSC3-17S elliptically polarized directional antenna) to proposed Antenna ID: 29226 (Dielectric model TUP-SP4-12-1 horizontally polarized directional antenna).

5) Change (correct) from allotted 45°-03'-29" north latitude to correct 45°-03'-30" north latitude.

The proposed Channel 38, 700 kW ERP facility satisfies the post-transition interference protection provisions of §73.616 of the FCC Rules. Exhibit 12 is a Longley-Rice interference study that was computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The interference percentages are exactly the same as the FCC calculations since the study was performed using the same type computer and the same interference analysis software. Referring to Exhibit 12, it can be seen that the only station within the prescribed culling distance is the WXJB-DT Channel 38 Valley City, ND post-transition DTV facility which is 407.7 km from the KTCI transmitter. The proposed KTCI-DT Channel 38 facility is predicted to cause no interference (0.0%) to the WXJB-DT Channel 38 post-transition DTV facility and is predicted to receive no interference (0.0%) as well. The interference study demonstrates that the proposed facility is predicted to cause 0.0% interference to post-transition DTV stations which is well below the 0.5% new interference standard. Accordingly, the 0.5% new interference standard, pursuant to §V.F. (¶155) of the Third Periodic Review Report and Order, has been satisfied.

Canadian Coordination

Canadian coordination is required when a U.S. transmitter site is within 400 km of the Canadian border. The KTCI transmitter site is 353.7 km from the Canadian border which should be favorable for expedited coordination processing. Also, there is significant terrain shielding between the KTCI transmitter site and the Canadian border and no co-channel or first-adjacent channel short-spacings between the proposed KTCI-DT Channel 38 facility and Canada stations.

Exhibits

Exhibits 1 and 2 represent KTCI's administration data as well as the antenna and antenna structure specifications for the proposed post-transition digital Channel 38.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 (11 deg) and 5 (90 deg) display the elevation pattern and Exhibit 6 displays the elevation pattern tabulation.

Exhibit 7 depicts the proposed antenna azimuth pattern and Exhibit 8 depicts the proposed antenna azimuth pattern tabulation.

Exhibit 9 depicts the location of the KTCI-DT transmitter site using the White Bear Lake West, MN Topographic map.

Exhibit 10 is a principal community contour map demonstrating that the proposed KTCI-DT Channel 38 post-transition DTV facility's F(50,90) 48.0 dBuV/m Principal Community contour would completely encompass the principal community of St. Paul, MN.

Exhibit 11 is a contour map comparing the allotted KTCI-DT Channel 26 F(50,90) 40.0 dBuV/m contour (green) and the proposed KTCI-DT Channel 38 F(50,90) 41.0 dBuV/m contour (red).

Exhibit 12 is a Longley-Rice interference study computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The exhibit demonstrates compliance with the 0.5% new interference standard.

Environmental Impact

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, 6-1/8 inch transmission line and horizontally polarized antenna system shall produce an ERP of 700.0 kW. It was determined that the

maximum lobe of radiation from the base of the tower would occur at approximately 1.21 miles from the base of the tower (1.24-mile radial distance from the antenna center). At approximately 1.21 miles from the base of the tower, the depression angle of the main lobe will be approximately 12° below the horizontal. At that point, the relative field is 0.184 and the power density six feet above the ground will be approximately 0.0002 mW/cm^2. This equates to only 0.01% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 0.05% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI). Since operation of the proposed KTCI-DT Channel 38 post-transition DTV facility will not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed KTCI-DT Channel 38 facility is not considered a "significant contributor" to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the licensee will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna. It is also understood that additional antennas on the support structure could increase the overall RF exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He

graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

KESSLER AND GEHMAN ASSOCIATES, INC.

WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

18 June, 2008

EXHIBIT

SECTION VII - DTV Engineering

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel Number:

   DTV 38 Analog TV, if any 17

2. Zone:

   ○ I ◉ II ○ III

3. Antenna Location Coordinates: (NAD 27)

   Latitude:
   Degrees 45 Minutes 03 Seconds 30 ◉ North ○ South

   Longitude:
   Degrees 93 Minutes 07 Seconds 27 ◉ West ○ East

4. Antenna Structure Registration Number: 1022899

   ☐ Not Applicable ☐ Notification filed with FAA

5. Antenna Location Site Elevation Above Mean Sea Level: 277.0 meters

6. Overall Tower Height Above Ground Level: 446.8 meters

7. Height of Radiation Center Above Ground Level: 416.0 meters

8. Height of Radiation Center Above Average Terrain (HAAT): 412.9 meters

9. Maximum Effective Radiated Power (average power): 700.0 kW

10. Antenna Specifications:

    a. Manufacturer DIE Model TUP-SP4-12S-1

    b. Electrical Beam Tilt:
    0.75 degrees ☐ Not Applicable

    c. Mechanical Beam Tilt:
    _____ degrees toward azimuth
    _____ degrees True ☑ Not Applicable

    Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). Exhibit 33

    d. Polarization:
    ◉ Horizontal ○ Circular ○ Elliptical

    e. Directional Antenna Relative Field Values: ☐ Not applicable (Nondirectional)

    [For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]

EXHIBIT

	Relative Field Values If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. **Exhibit required.**	Exhibit 34
11.	Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616? If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.	◉ Yes ○ No Exhibit 35
12.	If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if **Certification Checklist** item 3 is answered "No.")	Exhibit 36
13.	**Environmental Protection Act. Submit in an Exhibit** the following: a. If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site. By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines. If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.	Exhibit 37

PREPARERS CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.

Validate | Save | Clear | Menu

EXHIBIT

10e. Directional Antenna Relative Field Values

[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]

e. Directional Antenna Relative Field Values:

Rotation (Degrees): ☑ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	0.68	10	0.67	20	0.67	30	0.67	40	0.67	50	0.67
60	0.695	70	0.715	80	0.774	90	0.845	100	0.93	110	0.972
120	0.995	130	0.882	140	0.691	150	0.72	160	0.905	170	0.885
180	0.697	190	0.694	200	0.871	210	0.985	220	0.882	230	0.691
240	0.72	250	0.905	260	0.885	270	0.697	280	0.694	290	0.871
300	0.976	310	0.998	320	0.943	330	0.845	340	0.765	350	0.715
Additional Azimuths		305	1								

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PROPOSED KTCI-DT CHANNEL 38

PETITION FOR RULE MAKING

ST. PAUL, MINNESOTA

ENGINEERING SPECIFICATIONS

A. ***Transmitter Site:***

Geographic coordinates (NAD27):

North Latitude:	**45° 03' 30"**
West Longitude:	**93° 07' 27"**

Transmitter Site Address: **540 Gramsie Road**
Shoreview, MN 55126-7021

B. ***Main Studio Address:*** **Twin Cities Public Television**
172 East Fourth Street
Saint Paul, MN 55101

Post-Transition Facility:

DTV Channel:	Number:	**38**
	Frequency:	**614-620 MHz**
	Offset:	**N/A**

C. ***Antenna Height:***

Height of Site Above Mean Sea Level (AMSL):	**277.0 M**
Overall Height of Structure Above Ground: (including all appurtenances)	**446.8 M**
Overall Height of Structure Above Mean Sea Level: (including all appurtenances)	**723.8 M**
Height of Site Above Average Terrain:	**-3.1 M**
Antenna Height Radiation Center (R/C) Above Ground:	**416.0 M**
Antenna Height R/C Above Mean Sea Level:	**693.0 M**
Average of All Non-Odd Radials:	**280.1 M**
Antenna Height R/C Above Average Terrain:	**412.9 M**

D. ***System Parameters – Horizontal Polarization:***

Transmitter Power Required:	**27.6 kW**
Maximum Power Input to Antenna:	**18.5 kW**
Transmission Line Loss:	**1.75 dB**
Transmission Line Efficiency:	**66.8%**
Maximum Antenna Gain in Beam Maximum:	**15.79 dB**
Maximum Antenna Gain in Horizontal Plane:	**14.38 dB**
Maximum Effective Radiated Power:	**28.45 dBk**
In Beam Maximum:	**700.0 kW**
Maximum Effective Radiated Power:	**27.04 dBk**
In Horizontal Plane:	**505.9 kW**

PROPOSED KTCI-DT CHANNEL 38

PETITION FOR RULE MAKING

ST. PAUL, MINNESOTA

DATA FOR PROPOSED DIRECTIONAL TRANSMITTING ANTENNA

A. ***Antenna:*** Dielectric Model TUP-SP4-12S-1, Horizontally Polarized, Directional, Broadband, Panel Antenna.

B. ***Electrical Beam Tilt:*** 0.75 degrees

C. ***Mechanical Beam Tilt:*** None

D.

Maximum Power Gain	**Horizontal Polarization**
Maximum:	37.9 (15.79 dB)
Horizontal:	27.4 (14.38 dB)

E. ***Length:*** 45.3 feet (13.8 meters) not including appurtenances.

F. ***TPO:*** 27.6 kW

G. ***Null Fill:*** 20.0%

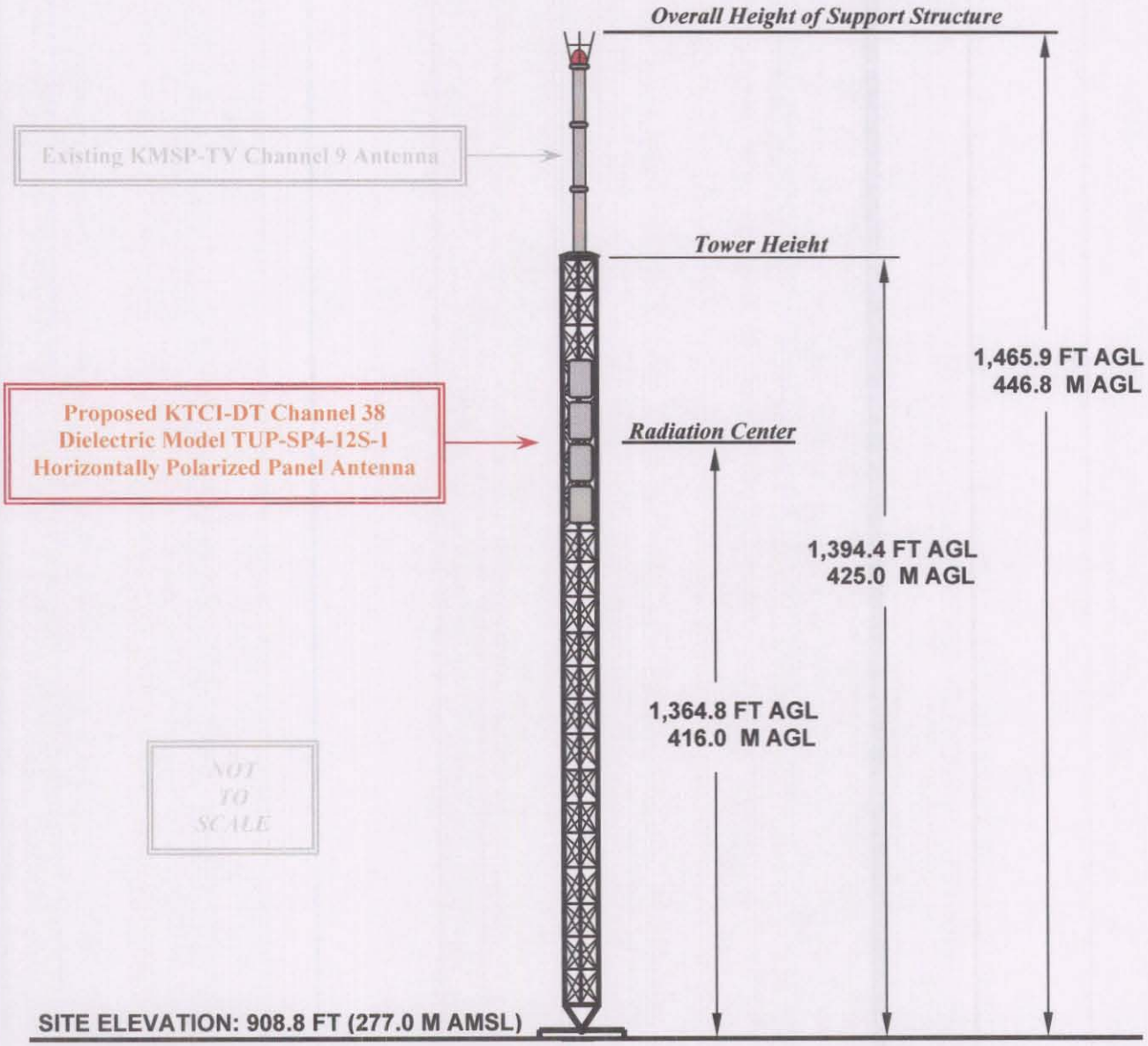
H. ***Transmission Line:*** 6-1/8" 50 ohm EHT digiTLine

I. ***Transmission Line Attenuation:*** 0.121 dB/100-feet

J. ***Transmission Line Length:*** 1,450 feet

K. ***Transmission Line Loss:*** 1.75 dB

KTCI-DT CHANNEL 38 TOWER ELEVATION VIEW



OVERALL HEIGHT AGL:	446.8 M
OVERALL HEIGHT AMSL:	723.8 M
RADIATION CENTER AGL:	416.0 M
RADIATION CENTER AMSL:	693.0 M
RADIATION CENTER HAAT:	412.9 M
AVG OF ALL NON-ODD RADIALS:	280.1 M
SITE HAAT:	-3.1 M

COORDINATES (NAD 27):

N. LATITUDE 45° 03' 30"

W. LONGITUDE 93° 07' 27"

Antenna Structure Registration Number: 1022899

NOTE: NOT TO SCALE

KESSLER AND GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTCI-DT CHANNEL 38

ST. PAUL, MINNESOTA

20080617

EXHIBIT 3

Proposal Number			
Date			
Call Letters	KTCI-DT	Channel	
Location	Minneapolis, MN		
Customer			
Antenna Type	TUP-SP4-12S-1		

ELEVATION PATTERN: 6 Panels

RMS Gain at Main Lobe	12.70	(11.04 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.70	(10.68 dB)	Frequency	545.00 MHz
Calculated / Measured	Calculated		Drawing #	06U127075

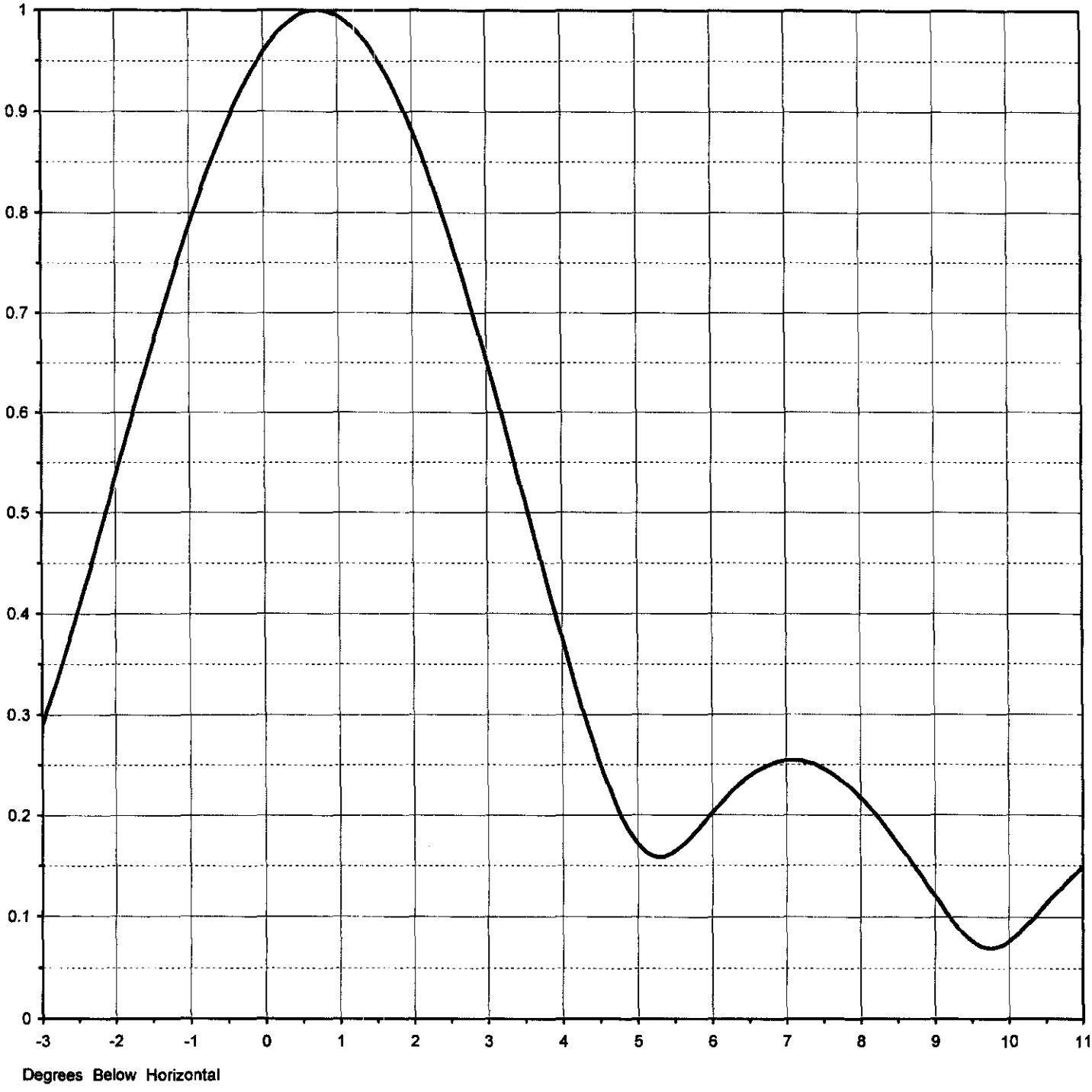


EXHIBIT 4

Proposal Number			
Date			
Call Letters	KTCI-DT	Channel	
Location	Minneapolis, MN		
Customer			
Antenna Type	TUP-SP4-12S-1		

ELEVATION PATTERN: 6 Panels

RMS Gain at Main Lobe	12.70 (11.04 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.70 (10.68 dB)	Frequency	545.00 MHz
Calculated / Measured	Calculated	Drawing #	06U127075-90

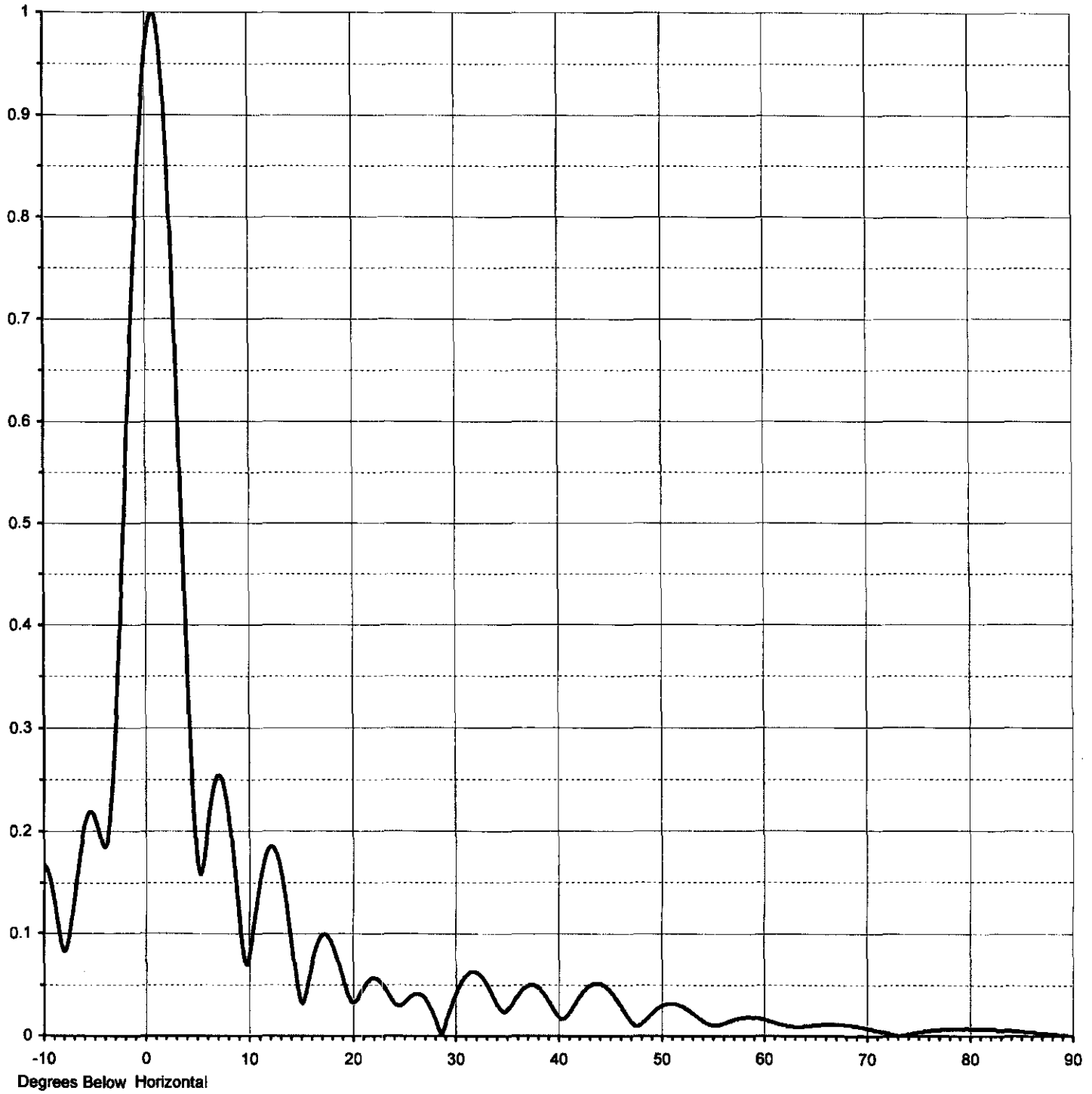


EXHIBIT 5

Proposal Number
Date
Call Letters KTCI-DT Channel
Location **Minneapolis, MN**
Customer
Antenna Type **TUP-SP4-12S-1**

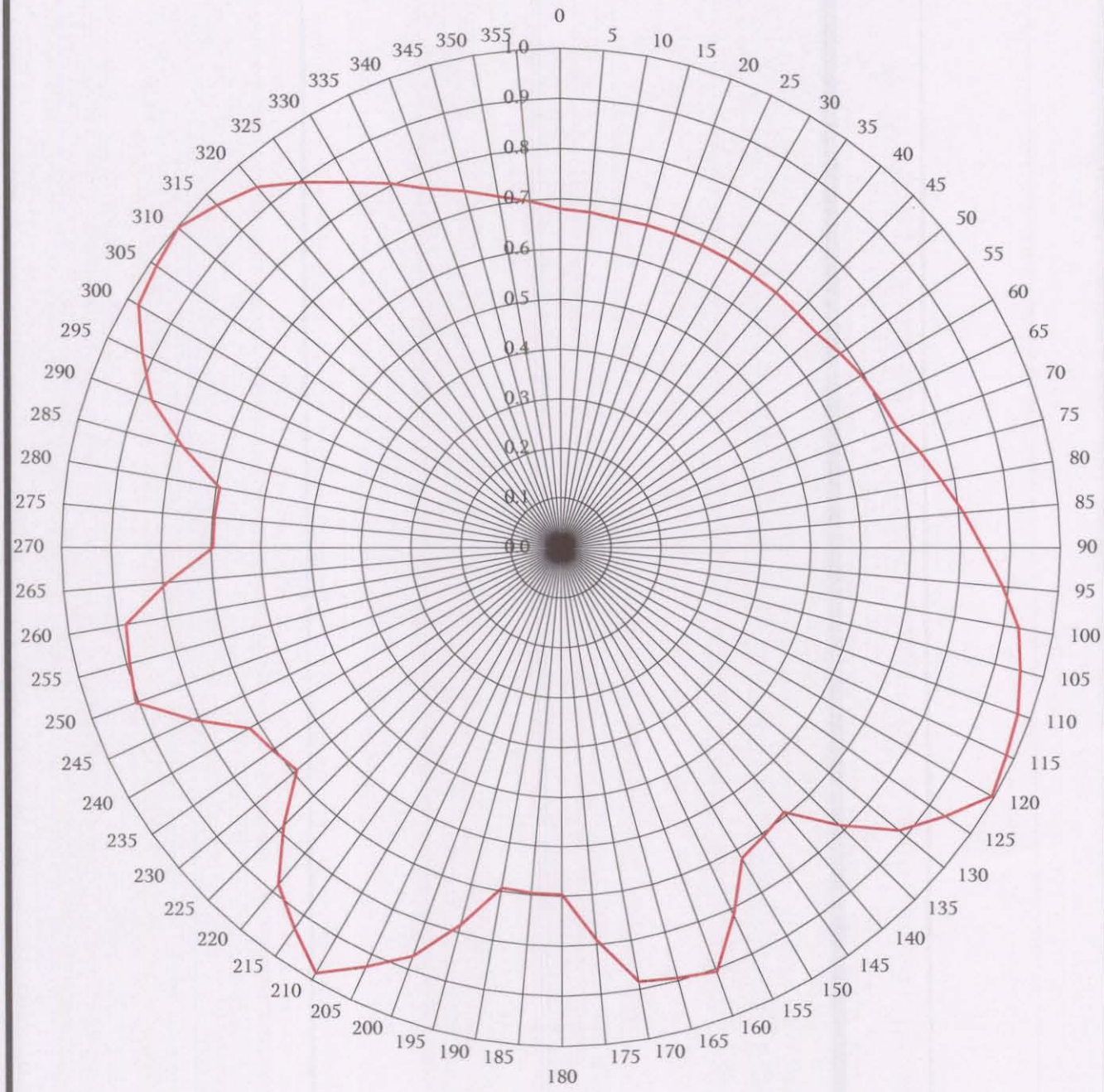
TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **06U127075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.167	2.4	0.801	10.6	0.112	30.5	0.050	51.0	0.032	71.5	0.004
-9.5	0.157	2.6	0.755	10.8	0.127	31.0	0.058	51.5	0.031	72.0	0.003
-9.0	0.133	2.8	0.705	11.0	0.142	31.5	0.063	52.0	0.030	72.5	0.002
-8.5	0.103	3.0	0.653	11.5	0.170	32.0	0.063	52.5	0.027	73.0	0.000
-8.0	0.083	3.2	0.598	12.0	0.184	32.5	0.059	53.0	0.023	73.5	0.001
-7.5	0.096	3.4	0.542	12.5	0.182	33.0	0.052	53.5	0.020	74.0	0.002
-7.0	0.134	3.6	0.486	13.0	0.166	33.5	0.043	54.0	0.016	74.5	0.003
-6.5	0.174	3.8	0.430	13.5	0.138	34.0	0.033	54.5	0.013	75.0	0.004
-6.0	0.205	4.0	0.376	14.0	0.102	34.5	0.026	55.0	0.011	75.5	0.005
-5.5	0.219	4.2	0.323	14.5	0.064	35.0	0.025	55.5	0.011	76.0	0.005
-5.0	0.214	4.4	0.275	15.0	0.035	35.5	0.030	56.0	0.012	76.5	0.006
-4.5	0.197	4.6	0.232	15.5	0.041	36.0	0.038	56.5	0.014	77.0	0.006
-4.0	0.185	4.8	0.196	16.0	0.065	36.5	0.045	57.0	0.016	77.5	0.007
-3.5	0.211	5.0	0.172	16.5	0.085	37.0	0.049	57.5	0.017	78.0	0.007
-3.0	0.290	5.2	0.160	17.0	0.097	37.5	0.050	58.0	0.018	78.5	0.007
-2.8	0.333	5.4	0.160	17.5	0.099	38.0	0.048	58.5	0.019	79.0	0.007
-2.6	0.380	5.6	0.170	18.0	0.092	38.5	0.043	59.0	0.018	79.5	0.007
-2.4	0.430	5.8	0.185	18.5	0.078	39.0	0.036	59.5	0.018	80.0	0.007
-2.2	0.482	6.0	0.202	19.0	0.060	39.5	0.028	60.0	0.017	80.5	0.007
-2.0	0.535	6.2	0.218	19.5	0.043	40.0	0.020	60.5	0.015	81.0	0.007
-1.8	0.588	6.4	0.232	20.0	0.033	40.5	0.017	61.0	0.014	81.5	0.007
-1.6	0.640	6.6	0.243	20.5	0.036	41.0	0.021	61.5	0.012	82.0	0.007
-1.4	0.691	6.8	0.250	21.0	0.045	41.5	0.029	62.0	0.011	82.5	0.007
-1.2	0.740	7.0	0.254	21.5	0.053	42.0	0.037	62.5	0.010	83.0	0.006
-1.0	0.787	7.2	0.254	22.0	0.057	42.5	0.044	63.0	0.009	83.5	0.006
-0.8	0.830	7.4	0.250	22.5	0.055	43.0	0.049	63.5	0.009	84.0	0.006
-0.6	0.869	7.6	0.242	23.0	0.049	43.5	0.051	64.0	0.010	84.5	0.005
-0.4	0.904	7.8	0.231	23.5	0.041	44.0	0.051	64.5	0.010	85.0	0.005
-0.2	0.934	8.0	0.217	24.0	0.033	44.5	0.049	65.0	0.011	85.5	0.004
0.0	0.959	8.2	0.201	24.5	0.030	45.0	0.045	65.5	0.011	86.0	0.004
0.2	0.978	8.4	0.182	25.0	0.032	45.5	0.038	66.0	0.012	86.5	0.003
0.4	0.991	8.6	0.162	25.5	0.037	46.0	0.031	66.5	0.012	87.0	0.003
0.6	0.999	8.8	0.141	26.0	0.041	46.5	0.023	67.0	0.012	87.5	0.002
0.8	1.000	9.0	0.120	26.5	0.041	47.0	0.016	67.5	0.012	88.0	0.002
1.0	0.995	9.2	0.100	27.0	0.038	47.5	0.010	68.0	0.011	88.5	0.001
1.2	0.984	9.4	0.083	27.5	0.030	48.0	0.011	68.5	0.011	89.0	0.001
1.4	0.967	9.6	0.072	28.0	0.019	48.5	0.016	69.0	0.010	89.5	0.000
1.6	0.944	9.8	0.070	28.5	0.006	49.0	0.021	69.5	0.009	90.0	0.000
1.8	0.916	10.0	0.072	29.0	0.009	49.5	0.026	70.0	0.008		
2.0	0.882	10.2	0.082	29.5	0.025	50.0	0.029	70.5	0.007		
2.2	0.844	10.4	0.096	30.0	0.038	50.5	0.031	71.0	0.005		

EXHIBIT 6

RELATIVE FIELD AZIMUTH PATTERN



DIELECTRIC MODEL TUP-SP4-12S-1
BEAM MAXIMA AT 305°
AZIMIUTH GAIN: 3.0 (4.75 dB)
POLARIZATION: HORIZONTAL

KESSLER AND GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTCI-DT CHANNEL 38

ST. PAUL, MINNESOTA

20080617 **EXHIBIT 7**

KTCI-DT CHANNEL 38

ST. PAUL, MINNESOTA

TABULATION OF RELATIVE FIELD FOR DIRECTIONAL ANTENNA

AZIMUTH	RELATIVE FIELD	AZIMUTH	RELATIVE FIELD
N000°E	0.680	N180°E	0.697
N010°E	0.670	N190°E	0.694
N020°E	0.670	N200°E	0.871
N030°E	0.670	N210°E	0.985
N040°E	0.670	N220°E	0.882
N050°E	0.670	N230°E	0.691
N060°E	0.695	N240°E	0.720
N070°E	0.715	N250°E	0.905
N080°E	0.774	N260°E	0.885
N090°E	0.845	N270°E	0.697
N100°E	0.930	N280°E	0.694
N110°E	0.972	N290°E	0.871
N120°E	0.995	N300°E	0.976
N130°E	0.882	N310°E	0.998
N140°E	0.691	N320°E	0.943
N150°E	0.720	N330°E	0.845
N160°E	0.905	N340°E	0.765
N170°E	0.885	N350°E	0.715

MAXIMUM RELATIVE FIELD OF 1.000 AT N305°E
MINIMUM RELATIVE FIELD OF 0.670 AT N010°E - N050°E

KESSLER AND GEHMAN
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20080617 EXHIBIT 8

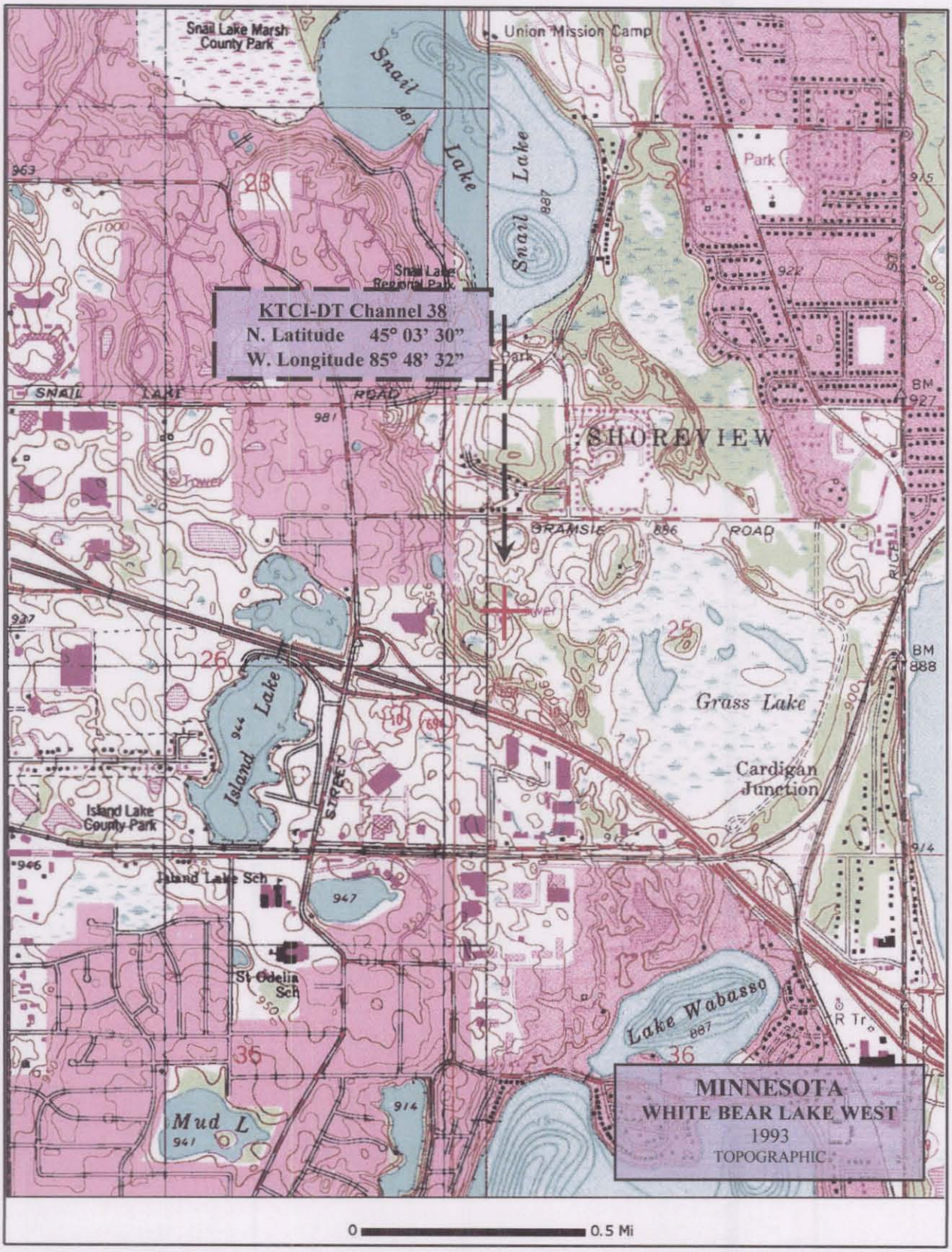

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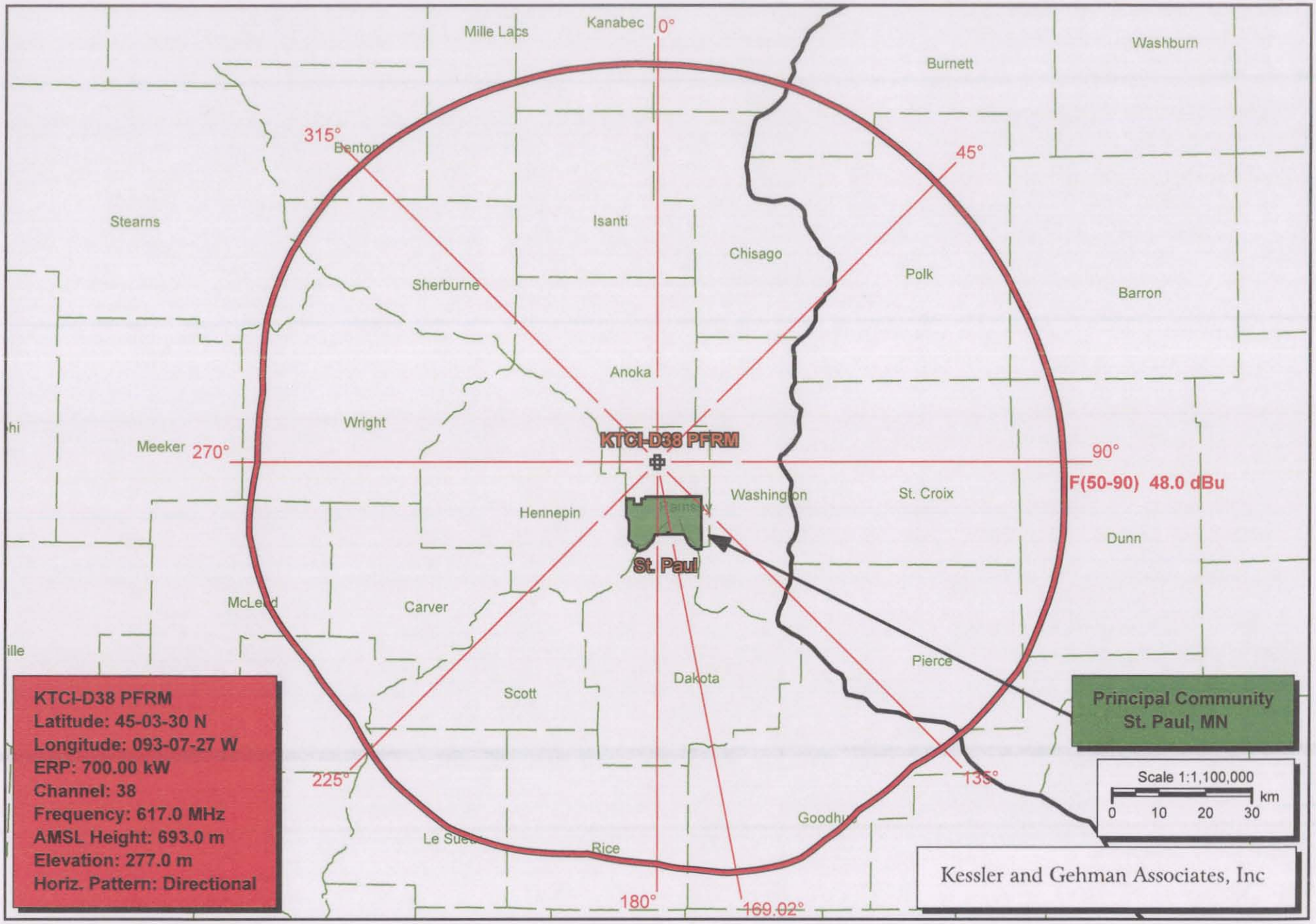
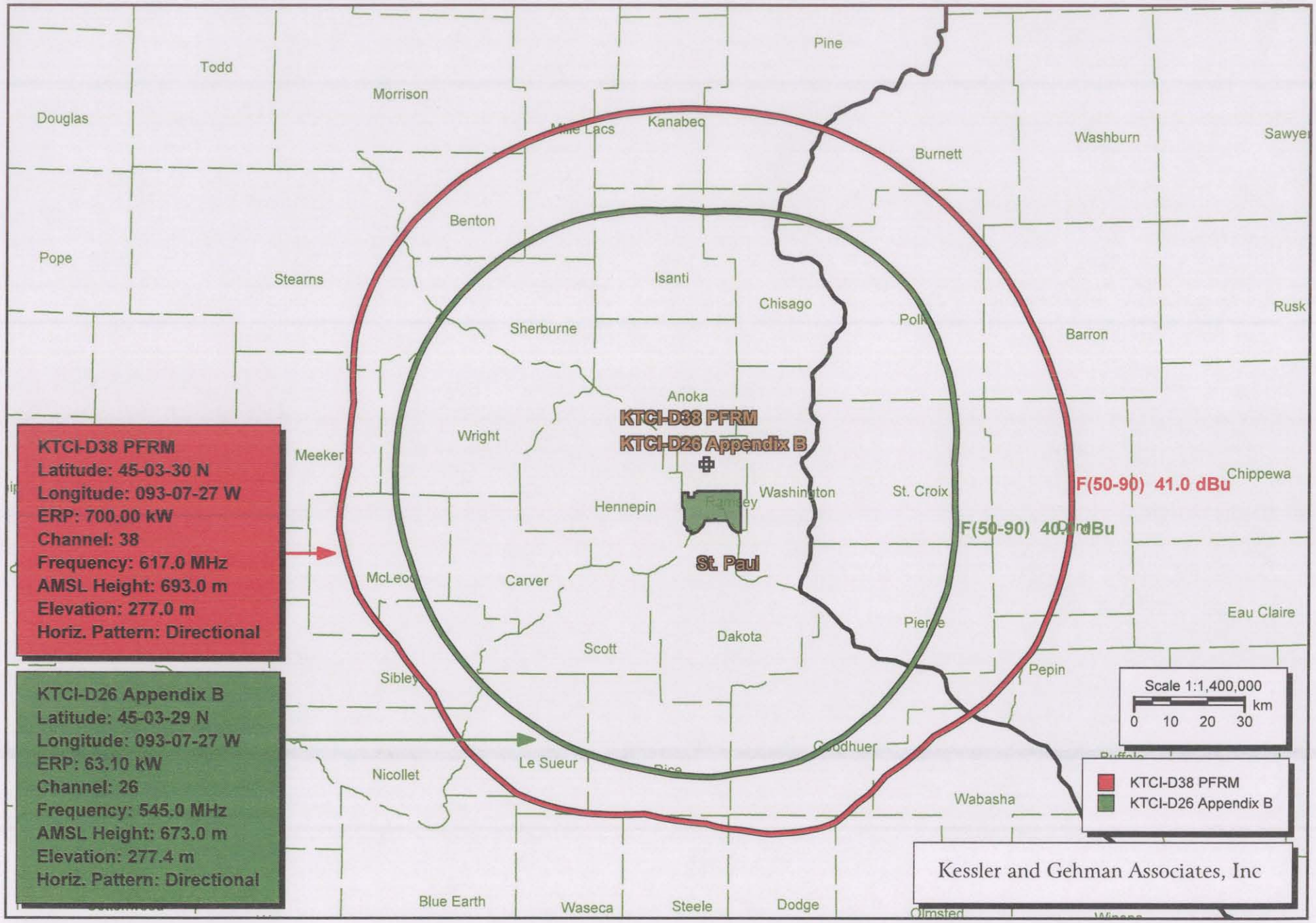
EXHIBIT 9



KTCI-DT Channel 38 F(50,90) 48.0 dBuV/m Principal Community Contour

EXHIBIT 10



KTCI-D26 Appendix B (green) vs. KTCI-D38 PFRM

EXHIBIT 11

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-17-2008 Time: 16:12:40

Record Selected for Analysis

KTCI-D38 USERRECORD-01 ST. PAUL MN US
Channel 38 ERP 700. kW HAAT 413. m RCAMSL 00693 m
Latitude 045-03-30 Longitude 0093-07-27
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	323.680	414.1	96.9
45.0	314.230	406.3	96.2
90.0	499.818	397.8	99.5
135.0	433.008	406.6	98.9
180.0	340.066	426.6	98.2
225.0	433.008	417.7	99.7
270.0	340.066	420.4	97.7
315.0	659.309	412.7	103.2

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

No spacing violations found to other full service stations

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

EXHIBIT 12