



**Exhibit 13-1 Contour Study for channel 253FX**  
(St. Paul, MN Proposal)  
8/30/2013

Channel: 253

Antenna: Non-directional Circularly Polarized

ERP: 0.038 kW (H & V)

RCAMSL: 329 m

North Lat: 45° 2' 54"

West Lon: 93° 2' 25"

HAAT (Max of 12 evenly spaced radials:) 81.3 m

60 dBu F(50,50): 7.2 km; 40 dBu F(50,10): 24.3 km; 54 dBu F(50,10): 10.3 km; 100 dBu F(50,10): 0.43 km

Call	Channel	Class	Service	Frequency	Status	City	State	Country	File Number
Docket	FacilityID	ERP	DA?	HAAT	RCAMSL	RCAGL	Latitude	Longitude	
ASRN	Dist(km)	Dist(mi)	Azimuth	Licensee/Permittee	Req	Dist			
<a href="#">KTIS-FM</a>	253 C0 FM	98.5 MHz	LIC	MINNEAPOLIS	MN	US	BMLED-20030304AAJ		
<a href="#">-</a>	<a href="#">49787</a>	100. kW		315. m	593. m	316. m	N 45 3 30.00	W 93 7 27	
<a href="#">1022899</a>	6.70 km	4.16 mi	279.61°	UNIVERSITY OF NORTHWESTERN ST.					
Dist to 60 dBu F(50,50) contour: 73.5 km									
97.8 km									

[Clear by](#)

**See Ex 1-1 Special Request**