

W43DD-D DISPLACEMENT APPLICATION FOR CH 25 7.5 kW DA  
BARABOO, WISCONSIN  
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS  
JULY 2021

The proposed facility qualifies for displacement as described in FCC PN DA 18-124 released February 9, 2018. W43DD-D is an LPTV facility authorized in file number BNPDTL-20100125ABC. The W43DD-D facility is clearly displaced since it is assigned out of core Channel 43. The proposed site is located 10.23 kilometers from the CP site and there is significant duplication of the CP and proposed 51 dBu F(50,90) contours.

The proposed antenna system is a Kathrein 75010210, two bay, horizontally polarized panel antenna system without beam tilt. The maximum relative field in the elevation pattern across the depression angle range of 25 to 90 degrees is less than 0.32 with a radiation center 61 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.32 has been used to calculate the power density 2 meters above ground. The maximum power density is 7.4 uw/cm squared calculated for an ERP of 7,500 watts H. polarization. This value is 2.07% of the Public Exposure MPE per section 1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.

The proposed tower is at an existing site with, building, access road and power.

Attached is a copy of the TVStudy interference analysis for CH 36 based on the proposed 7.5 kW ERP and DA antenna described above with an orientation of 135 degrees. As can be seen at the conclusion there is no ISIX above FCC tolerances and no received interference in excess of 2%.

It is believed that the proposed facility provides full protection to other television facilities.

## REPORT

Study created: 2021.07.02 15:51:22

Study build station data: LMS TV 2021-07-01

Proposal: W43DD-D D25 LD CP BARABOO, WI  
File number: BNPDTL20100125ABC  
Facility ID: 184166  
Station data: User record  
Record ID: 840  
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KIMT	D24	DT	LIC	MASON CITY, IA	BLANK0000067292	185.6 km
No	K24JA-D	D24	LD	CP	WINONA, MN	BNPDTL20090825BYM	92.2
No	WEAU	D24	LD	APP	EAU CLAIRE, WI	BLANK0000121739	132.2
No	WDMW-LD	D24	LD	CP	JANESVILLE, WI	BLANK0000129490	208.1
No	WZCK-LD	D24	LD	LIC	MADISON, WI	BLANK0000112772	119.2
No	WHRM-TV	D24	DT	CP	WAUSAU, WI	BLANK0000035674	133.5
No	WHRM-TV	D24	DT	LIC	WAUSAU, WI	BLEDT20051014AAW	133.5
No	K28KK-D	D25	LD	LIC	DECORAH, IA	BLANK0000112327	120.3
No	KTIN	D25	DT	LIC	FORT DODGE, IA	BLEDT20070822ACB	339.5
No	KWKB	D25	DT	LIC	IOWA CITY, IA	BLCDT20070130AJQ	247.5
No	WBKM-LP	D25+	LD	CP	CHANA, IL	BLANK0000054706	230.3
No	WEEK-TV	D25	DT	LIC	PEORIA, IL	BLANK0000137499	366.0
No	WMKB-LP	N25z	TX	LIC	Rochelle, IL	BLTTL20070813AFM	230.3
No	WCWW-LD	D25	LD	LIC	SOUTH BEND, IN	BLANK0000100628	428.5
No	WWTW	D25	LD	LIC	CADILLAC, MI	BLANK0000124418	393.1
No	K43JE-D	D25	LD	CP	LAKE CRYSTAL, MN	BLANK0000051902	308.0
No	KJNK-LD	D25	LD	LIC	MINNEAPOLIS, MN	BLDTT20090528ACL	255.8
No	KJNK-LD	D25	LD	LIC	MINNEAPOLIS, MN	BLANK0000129957	255.8
No	K25II-D	D25	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAV	367.3
No	K25NK-D	D25	LD	CP	ROCHESTER, MN	BLANK0000058282	151.9
No	K25NK-D	D25	LD	LIC	ROCHESTER, MN	BLANK0000151246	151.9
No	K25NK-D	D25	LD	LIC	ROCHESTER, MN	BLDTL20120821AAX	151.9
No	K25LC-D	D25	LD	CP	WINONA, MN	BNPDTL20090825BYN	92.2
Yes	WQOW	D25	DT	LIC	EAU CLAIRE, WI	BLANK0000135118	132.2
No	W25EY-D	D25	LD	CP	ELK MOUND, WI	BNPDTL20100513AEV	153.7
Yes	WPNE-TV	D25	DT	LIC	GREEN BAY, WI	BLANK0000117903	205.6
No	KXLT-TV	D26	DT	LIC	ROCHESTER, MN	BLANK0000063320	167.6
No	W26FG-D	D26	LD	CP	EAU CLAIRE, WI	BLANK0000072223	132.7

No	W26FD-D	D26	LD	CP	LA CROSSE, WI	BLANK0000071991	80.6
Yes	WKOW	D26	DT	LIC	MADISON, WI	BLCDT20111006AAO	115.8
No	W26ED-D	D26	LD	CP	TOMAHAWK, WI	BNPDTL20100510AFH	193.1
No	W26EE-D	D26	LD	LIC	WITTENBERG, WI	BLDTL20120620ABV	169.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D25  
Mask: Full Service  
Latitude: 43 51 10.10 N (NAD83)  
Longitude: 90 27 36.50 W  
Height AMSL: 479.3 m  
HAAT: 0.0 m  
Peak ERP: 7.50 kW  
Antenna: KAT 75010210 135.0 deg  
Elev Pattn: Generic

49.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.019 kW	138.5 m	14.1 km
45.0	0.019	152.3	14.9
90.0	1.80	154.7	37.5
135.0	7.50	127.5	43.0
180.0	1.80	84.6	31.5
225.0	0.019	171.6	15.6
270.0	0.019	97.0	11.8
315.0	0.108	107.9	19.5

Database HAAT does not agree with computed HAAT  
Database HAAT: 0 m Computed HAAT: 129 m

Distance to Canadian border: 461.6 km

Distance to Mexican border: 1839.5 km

Conditions at FCC monitoring station: Allegan MI  
Bearing: 109.3 degrees Distance: 390.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 256.4 degrees Distance: 1284.9 km

Study cell size: 1.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

---- Below is IX received by proposal BNPDTL20100125ABC ----

Proposal receives 9.30% interference from scenario 1  
No IX check failures found.

Based on the information supplied herein, and accompanying application for construction permit, it is believed that the proposed facilities meet all applicable FCC requirements for construction permit.

The foregoing was prepared on behalf of Baraboo Broadcasting Corporation by Clarence M. Beverage of Communications Technologies, Inc., Medford, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



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