

ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
KFDY-LD DISPLACEMENT APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
3.65 kW DIRECTIONAL
LINCOLN, NEBRASKA
MAY 2020

This application continues to propose operation on DTV CH 27 as authorized in construction permit 0000054175. The facility proposed herein specifies a change in transmitter site due to failure of the tower structure specified in 0000054175. The facilities proposed herein are currently being utilized by KFDY-LD under STA file number 0000095488. Grant of a construction for the proposed facility will allow an application for license to be promptly filed and DTV transition to be completed.

The antenna system consists of a Belco BAN-4000 Custom panel antenna, horizontally polarized, without beam tilt. The antenna radiation center is 140.8 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 1.0 has been used to calculate the power density 2 meters above ground. The maximum power density is 6.25 uw/cm squared calculated for an ERP OF 3,650 watts H. polarization. This value is 1.7% 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 tower site is existing along with the transmitter building, access road and power.

Below is a copy of the TVStudy interference analysis for CH 27 based on the facilities described above with the antenna orientation of 0 degrees true. As can be seen at the conclusion of the report there is no ISIX caused interference. It is believed that the proposed facility provides full protection to other television facilities.

TVSTUDY v2.2.5 REPORT

Study created: 2020.05.11 17:21:58

Study build station data: LMS TV 2020-05-11

Proposal: KFDY-LD D27 LD STA LINCOLN, NE
File number: BLANK0000076607
Facility ID: 67012
Station data: User record
Record ID: 402
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WROB-LD	D26	LD	LIC	TOPEKA, KS	BLDTL20140908AFA	206.4 km
No	KLNE-TV	D26	DT	CP	LEXINGTON, NE	BLANK0000035902	243.2
No	KLNE-TV	D26	DT	LIC	LEXINGTON, NE	BLEDT20070625ABT	243.2
No	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	50.2
No	KSXC-LD	D26z	LD	LIC	SOUTH SIOUX CITY, NE	BLANK0000058765	197.0
No	KFXA	D27	DT	LIC	CEDAR RAPIDS, IA	BLCDT20050713ABD	406.6
No	K27MI-D	D27	LD	CP	MASON CITY, IA	BNPDTL20100723AQS	373.9
No	K27LD-D	D27	LD	CP	SALIX, IA	BNPDTL20100505AFA	179.7
No	K27MJ-D	D27	LD	CP	SALINA, KS	BNPDTL20100514AHS	230.2
No	KSNT	D27	DT	LIC	TOPEKA, KS	BLCDT20090910ABY	195.0
No	KFVT-LD	D27	LD	LIC	WICHITA, KS	BLANK0000107113	334.7
No	KFVT-LD	D27	LD	CP	WICHITA, KS	BLANK0000026399	334.7
No	K27NF-D	D27	LD	LIC	JACKSON, MN	BLANK0000064446	346.4
No	KRWF	D27	DT	LIC	REDWOOD FALLS, MN	BLCDT20080502ABG	427.5
No	K27ML-D	D27	LD	CP	RUSHMORE, MN	BNPDTL20100510AHZ	330.3
No	K50IO-D	D27	LD	CP	NELIGH, NE	BLANK0000053234	188.0
Yes	K27MP-D	D27	LD	CP	NORFOLK, NE	BDCCDTL20121001BAH	115.4
No	KHGI-CD	D27	DC	CP	NORTH PLATTE, NE	BLANK0000035773	346.3
No	KHGI-CD	D27	DC	LIC	NORTH PLATTE, NE	BLDTL20100120AAQ	346.3
No	KHGI-LD	D27	LD	LIC	O'NEIL, NE	BLDTL20110512ACC	253.7
Yes	KOHA-LD	D27	LD	CP	OMAHA, NE	BLANK0000027874	81.3
No	KCWS-LP	N27	TX	CP	SIOUX FALLS, SD	BLANK0000054526	312.3
No	KSIN-TV	D28	DT	LIC	SIOUX CITY, IA	BLEDT20050726AMC	200.3
No	KHNE-TV	D28	DT	LIC	HASTINGS, NE	BLANK0000074810	124.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27
Mask: Full Service
Latitude: 40 43 39.70 N (NAD83)
Longitude: 96 36 50.90 W
Height AMSL: 566.9 m
HAAT: 0.0 m
Peak ERP: 3.65 kW
Antenna: BELCO-BAN-4000 CUSTOM (ID 1004116) 0.0 deg
Elev Pattn: Generic

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.87 kW	184.1 m	41.5 km
45.0	1.13	172.0	35.9
90.0	0.039	160.9	18.2
135.0	0.036	149.5	17.1
180.0	0.066	158.3	20.7
225.0	0.317	183.4	30.1
270.0	3.31	187.4	42.4
315.0	2.67	202.7	42.2

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 175 m

Distance to Canadian border: 893.8 km

Distance to Mexican border: 1292.2 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 278.7 degrees Distance: 154.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 267.8 degrees Distance: 731.0 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%
No IX check failures found.

TVSTUDY v2.2.5 ISIX

tvstudy v2.2.5 (4uoc83)
Database: 127.0.0.1, Study: BLANK0000076607, Model: Longley-Rice
Start: 2020.05.11 17:21:58

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Conditions at Table Mountain receiving zone:
Bearing: 267.8 degrees Distance: 731.0 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%

Interference to BDCCDTL20121001BAH CP scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
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Desired:	K27MP-D	D27	LD	CP	NORFOLK, NE	BDCCDTL20121001BAH	
Undesireds:	KFDY-LD	D27	LD	STA	LINCOLN, NE	BLANK0000076607	115.4 km
	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	98.9
	K50IO-D	D27	LD	CP	NELIGH, NE	BLANK0000053234	89.4
	KHGI-CD	D27	DC	CP	NORTH PLATTE, NE	BLANK0000035773	308.3
	KOHA-LD	D27	LD	CP	OMAHA, NE	BLANK0000027874	96.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
1856.1	8,406	1853.1	8,406	1846.1	8,386	1846.1	8,386	0.00 0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
KFDY-LD D27 LD STA	1.0	0			0.0	0	
KPTM D26 DT LIC	2.0	14	1.0	14	1.0	14	
K50IO-D D27 LD CP	5.0	6	5.0	6	5.0	6	
KOHA-LD D27 LD CP	1.0	0	0.0	0	0.0	0	

Interference to BLANK0000027874 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KOHA-LD	D27	LD	CP	OMAHA, NE	BLANK0000027874	
Undesireds:	KFDY-LD	D27	LD	STA	LINCOLN, NE	BLANK0000076607	81.3 km
	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	31.3
	K27MP-D	D27	LD	CP	NORFOLK, NE	BDCCDTL20121001BAH	96.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
4561.8	800,672	4429.9	796,427	3667.8	773,328	3659.7	772,952	0.22 0.05

Undesired		Total IX		Unique IX, before		Unique IX, after	
KFDY-LD D27 LD STA	157.5	3,201			8.1	376	
KPTM D26 DT LIC	762.1	23,099	733.8	22,547	610.7	20,120	
K27MP-D D27 LD CP	28.3	552	0.0	0	0.0	0	

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KFDY-LD	D27	LD	STA	LINCOLN, NE	BLANK0000076607	
Undesireds:	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	50.2 km
	KSNT	D27	DT	LIC	TOPEKA, KS	BLCDT20090910ABY	195.0
	K27MP-D	D27	LD	CP	NORFOLK, NE	BDCCDTL20121001BAH	115.4
	KOHA-LD	D27	LD	CP	OMAHA, NE	BLANK0000027874	81.3
	Service area		Terrain-limited			IX-free	Percent IX
	3351.5	304,472	3348.5	304,467	3122.9	302,555	6.74 0.63
Undesired				Total IX		Unique IX	Prcnt Unique IX
KPTM D26 DT LIC		216.7		1,893	148.9	1,642	4.45 0.54
KSNT D27 DT LIC		1.0		0	0.0	0	0.00 0.00
K27MP-D D27 LD CP		4.0		2	0.0	0	0.00 0.00
KOHA-LD D27 LD CP		75.8		268	8.9	19	0.27 0.01

The foregoing was prepared on behalf of FLOOD COMMUNICATIONS OF OMAHA, LLC by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements she believes them to be true and correct.



Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
May 12, 2020