

WJSJ-CD D MINOR CHANGE APPLICATION FOR CP TO LICENSE 0000086502
CH 28 LPTV DTV
6 kW MAX DA INDIANAPOLIS, INDIANA
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
November 9, 2021

The facilities proposed herein are believed to fully qualify as a minor change as the proposed site location is 48.3 kilometers (30.0 miles) from the licensed site and there is substantial contour overlap between the proposed and licensed facilities as seen on Figure 1 attached.

The proposed antenna system consists of an ATC BPC Custom, single stack, C.Pol., panel antenna, with no beam tilt. The maximum relative field in the elevation pattern between 30 and 90 degrees does not exceed 0.35. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.35 has been used to calculate the power density 2 meters above ground. The antenna RC AGL is 70.1 meters. The maximum power density is 10.6 uw/cm squared calculated for an ERP of 6,000 watts H. polarization and 6,000 watts V. polarization. This value is 2.9% 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 structure is an existing tower, FCC registration #1300875

Below is a copy of the TVStudy interference analysis for CH 28 based on the facilities described above with the antenna major lobe orientation of 40 degrees true. As can be seen at the conclusion of the report there is no impermissible ISIX. It is believed that the proposed facility provides full protection to other television facilities.

TVStudy Report

Study created: 2021.11.09 15:58:22

Study build station data: LMS TV 2021-10-29 #276

Proposal: WIWU-CD D28 DC LIC MARION, IN
File number: BLANK0000086502
Facility ID: 29292
Station data: User record
Record ID: 1034
Country: U.S.

Build options:
Protect LPTV records from Class A

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	W27EL-D	D27+	LD	LIC	CHAMPAIGN, IL	BLANK0000120591	188.5 km
No	W27EB-D	D27	DC	LIC	SUGAR GROVE, IL	BLANK0000151822	223.1
Yes	WTTV	D27	DT	LIC	BLOOMINGTON, IN	BLANK0000086972	98.8
No	WSOT-LD	D27	LD	LIC	MARION, IN	BLDTL20111212AGP	52.9
Yes	WNDU-TV	D27	DT	LIC	SOUTH BEND, IN	BLANK0000116736	146.9
No	WDYC-LD	D27	LD	CP	CINCINNATI, OH	BLANK0000159588	181.3
No	WTTE	D27	DT	LIC	COLUMBUS, OH	BLANK0000129745	258.5
No	WPNM-LD	D27z	LD	LIC	LIEPSIC, OH	BLANK0000090626	201.8
No	WEDE-CD	D28	DC	LIC	ARLINGTON HEIGHTS, IL	BLANK0000112254	222.0
No	WYZZ-TV	D28	DT	LIC	BLOOMINGTON, IL	BLCDT20060609ABE	269.4
No	WRBU	D28	DT	LIC	EAST ST. LOUIS, IL	BLANK0000108757	437.8
No	W28EB-D	D28	LD	CP	EFFINGHAM, IL	BMPDTL20111006ACQ	260.6
No	WIFR-LD	D28	LD	LIC	ROCKFORD, IL	BLANK0000137907	344.3
Yes	WIPX-TV	D28	DT	LIC	BLOOMINGTON, IN	BLANK0000106045	99.2
No	WEVV-TV	D28	DT	LIC	EVANSVILLE, IN	BLANK0000087480	297.4
Yes	W28EY-D	D28	LD	CP	FORT WAYNE, IN	BLANK0000071946	115.0
Yes	WMYS-LD	D28	LD	LIC	SOUTH BEND, IN	BLANK0000086895	147.7
No	WLEX-TV	D28	DT	CP	LEXINGTON, KY	BLANK0000157703	287.7
No	WLEX-TV	D28	DT	LIC	LEXINGTON, KY	BLANK0000087372	287.7

No	WSYM-TV	D28	DT	LIC	LANSING, MI	BLANK0000105571	267.7
No	WSYM-TV	D28	DT	CP	LANSING, MI	BLANK0000143341	267.7
No	WBWM-LD	D28	LD	CP	MT PLEASANT, MI	BLANK0000163180	355.7
No	WLPC-LD	D28	LD	LIC	Redford, MI	BLANK0000112211	336.8
No	WLPC-LD	D28	DC	BL	Redford, MI	DTVBL168471	336.8
No	WBQC-LD	D28	LD	LIC	CINCINNATI, OH	BLANK0000088128	184.1
No	WSYX	D28	DT	LIC	COLUMBUS, OH	BLANK0000129744	258.5
No	WISN-TV	D28	DT	LIC	MILWAUKEE, WI	BLANK0000089554	350.9
No	WEDX-LD	D29	LD	CP	FORT WAYNE, IN	BLANK0000036232	117.6
No	W29EL-D	D29	LD	LIC	INDIANAPOLIS, IN	BLANK0000153252	38.8
No	W29EL-D	D29	LD	CP	INDIANAPOLIS, IN	BLANK0000153469	59.0
No	WJYL-CD	D29	DC	LIC	JEFFERSONVILLE, IN	BLANK0000162183	214.4
No	W51DU	D29-	LD	CP	LAFAYETTE, IN	BLANK0000054375	71.8
Yes	WSBT-TV	D29	DT	LIC	SOUTH BEND, IN	BLANK0000087455	148.2
No	W29FI-D	D29	LD	CP	TERRE HAUTE, IN	BLANK0000071923	163.2
No	WAMS-LD	D29z	LD	LIC	MINSTER/NEW BREMEN, OH	BLANK0000106606	141.9
No	WPTO	D29	DT	LIC	OXFORD, OH	BLANK0000113643	182.8
No	WGTE-TV	D29	DT	LIC	TOLEDO, OH	BLEDT20031110AKO	265.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D28
 Mask: Full Service
 Latitude: 40 17 29.20 N (NAD83)
 Longitude: 86 1 37.90 W
 Height AMSL: 334.7 m
 HAAT: 0.0 m
 Peak ERP: 6.00 kW
 Antenna: ATC DUAL C.POL PANELS 0.0 deg
 Elev Pattn: None

50.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.82 kW	71.1 m	29.3 km
45.0	5.76	71.6	35.1
90.0	1.11	70.9	26.8
135.0	0.038	74.1	12.1
180.0	0.038	72.2	12.0
225.0	0.821	64.7	24.4
270.0	1.33	59.6	26.1
315.0	0.126	64.8	15.4

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 69 m

Distance to Canadian border: 303.2 km

Distance to Mexican border: 1818.7 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 1.3 degrees Distance: 257.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 275.7 degrees Distance: 1626.2 km

Study cell size: 0.50 km

Profile point spacing: 0.10 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 BLANK0000086502 ----

Proposal receives 4.64% interference from scenario 1

No IX check failures found.

The foregoing was prepared on behalf of **5GTV** by C l a r e n c e M . B e v e r a g e of Communications Technologies, Inc., Medford, 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 he believes them to be true and correct.

A handwritten signature in black ink, appearing to read "Clarence M. Beverage".

Clarence M. Beverage
for Communications Technologies, Inc.
Medford, New Jersey
November 9, 2021

Communications Technologies, Inc.
Medford, New Jersey 08055 11/9/2021

LICENSED AND PROPOSED WJSJ-CD CHANNEL 28
NOISE LIMITED CONTOURS
INDIANAPOLIS, INDIANA

