

MINOR LICENSE MODIFICATION APPLICATION  
K289BI Davenport, Iowa to 252D

August, 2022

**TECHNICAL STATEMENT**

This technical statement and attached exhibits have been prepared on behalf of Augustana College, licensee of translator K289BI, Facility ID #153553. Ever since operation began, K289BI has received significant incoming cochannel interference from WIXO (FM) (289B). A search of available frequencies indicated that there are no frequencies available that would work +/- 3 Channels or IF related. A more complete evaluation indicated that the best frequency to relocate K289BI is 252D. 252D would result in minimal outgoing or incoming interference to or from other facilities. Further, any cochannel interference from K289BI to WIXO would be eliminated if it changed frequency to 252D. A comparison of interference on the licensed 289D from WIXO with the projected interference on 252D from the combination of three cochannel LPFM stations is shown in Exhibits D and E.

The proposed change is in accordance with the revised 47 C.F.R §74.1233(a)(1) which allows this License Modification (with respect to noncontiguous channel changes):

*that a simple engineering statement of mitigation of interference at the requested frequency is sufficient as a threshold standard to permit the translator applicant to request a channel change as a minor modification.<sup>1</sup>*

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<sup>1</sup> MB Docket No. 18-119, FCC 19-40, Document [Citation 84 FR 27735, para 3].

K289BI on 252D will continue to operate as a fill-in translator for NCE station WVIK (FM) Facility ID #3242. Because the proposed and licensed operation is from the same location, both 60dBu contours overlap and serve some portion of the prior authorized service area.

#### **Facilities Proposed**

Location (NAD83)	41° 28' 29.0" N Latitude, 90° 26' 45.0" W Longitude
Channel	252D (98.3MHz)
Tower Overall AGL Height-	101m
Tower ASR	1007980
Proposed Antenna	NICOM BKG-77-1
Antenna AGL Height-	68.6m
Site AMSL Height-	201.0m
COR AMSL Height	269.6m
ERP	250w NON-Directional

#### **COMPLIANCE, 74.1204(a), 74.1204(d), 74.1201(g)**

Exhibit A demonstrates compliance with 74.1204(a) regarding protection of other stations.

Exhibit B demonstrates compliance with 74.1204(d) demonstrating that there will be no location where the signal from the proposed translator will be more than 20dB above the signal from 3<sup>rd</sup> adjacent WLKU (FM), 255B

Exhibit C demonstrates compliance with 74.1201(g) governing the use of a translator as a fill-in for WVIK (FM). The 60dBu contour of the proposed translator will be completely contained within the 60dBu contour of WVIK.

#### **Environmental Exhibit**

The proposed translator facility will continue to utilize a non-directional antenna located on the same existing tower (ASR 1007980) as that currently authorized. The attachment of the

proposed translator antenna will not alter the existing tower structure for purposes of the Nationwide Programmatic Agreement and the NHPA Section 106.

The proposed 252D facility will continue to operate using an EPA type 2 antenna. The proposed facility will operate at 250 watts and 68.6m AGL. Based upon the FCC website "FM MODEL" the proposed antenna will generate  $1.04\mu\text{W}/\text{cm}^2$  which is 0.5% of the allowable MPE. Because the RF emission will be less than 5% of the allowable MPE facility will be in compliance with FCC guidelines and is excluded from further Environmental Assessment under 47CFR 1.1306 and 1.1307 and may be considered independently of other facilities operating at the tower site.

The proposed modified FM translator along with other users at the site will maintain an occupational safety policy and agrees to reduce power or cease operation during periods of maintenance to avoid potentially harmful exposure of personnel to non-ionizing RF radiation.

Respectfully Submitted

A handwritten signature in cursive script, appearing to read "Bert Goldman", written in black ink.

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## EXHIBIT A- Allocation-252D

ComStudy 2.2 search of channel 252 (98.3 MHz Class D) at 41-28-29.0 N, 90-26-45.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE	
WLKU	ROCK ISLAND	IL 255 B	18.87	0.00	162.9	-31.49 dB	Exhibit B
K250BU	BETTENDORF	IA 250 D	14.35	0.00	3.7	0.31 dB	
KHAK	CEDAR RAPIDS	IA 251 C1	109.37	0.00	297.6	15.26 dB	
KCDM-LP	BURLINGTON	IA 252 LP100	94.82	24.00	218.1	15.50 dB	
WMOI	MONMOUTH	IL 249 A	66.33	0.00	191.9	18.27 dB	
KCRD-LP	DUBUQUE	IA 252 LP100	115.50	24.00	350.4	19.91 dB	
KDME-LP	FORT MADISON	IA 252 LP100	119.65	24.00	219.2	21.04 dB	
K249DO	CLINTON	IA 249 D	45.10	0.00	23.3	22.44 dB	
WZOE-FM	PRINCETON	IL 251 A	88.85	0.00	97.7	23.02 dB	
WXXQ	FREEPORT	IL 253 B1	128.58	0.00	45.4	25.33 dB	
K253BE	IOWA CITY	IA 253 D	91.64	0.00	285.1	26.25 dB	
KHAK	CEDAR RAPIDS	IA 251 C1	109.43	0.00	297.6	28.35 dB	
WCCQ	CREST HILL	IL 252 A	189.09	0.00	90.6	28.61 dB	
WPIA	EUREKA	IL 253 A	117.93	0.00	135.4	29.03 dB	
WMGN	MADISON	WI 251 B	187.26	0.00	27.6	30.19 dB	
WILP	CUBA	IL 251 A	112.88	0.00	166.0	30.38 dB	

LMS 8/3/22

## EXHIBIT B- 74.1204(d) Analysis to WLKU (FM) 255B

K289BI (PROP 252D) Davenport, IA, Showing Protection to WLKU, Channel: 255

Geographic Coordinates: N. 41 28 29.00 W. 90 26 45.00

74.1204(d) Study - Using NED 03 SEC Terrain Database

Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 252

Translator or LPFM Antenna Height AG = 68.6 meters

K289BI Antenna Azimuth Model = NON-D Vertical Model Name = BKG-77-1

Protected Station's Contour = 83.92432 dBu

Translator's or LPFM's full Interference contour 123.92432

Review Azimuth = 0 Degrees True

Horizontal Relative Field at Review Azimuth = 1.000

Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW

Distance between stations = 18.9 km

Protected Station= WLKU, 36 kW, 497 M meters COR AMSL

Depression Angle From Degree (Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	070.5918	070.5918	068.600
05.00	0.993	1.0	0.2465	070.0976	069.8309	062.491
10.00	0.974	1.0	0.2372	068.7564	067.7118	056.661
15.00	0.941	1.0	0.2214	066.4268	064.1634	051.407
20.00	0.897	1.0	0.2012	063.3208	059.5021	046.943
25.00	0.843	1.0	0.1777	059.5089	053.9333	043.450
30.00	0.78	1.0	0.1521	055.0616	047.6847	041.069
35.00	0.709	1.0	0.1257	050.0496	040.9982	039.893
40.00	0.633	1.0	0.1002	044.6846	034.2304	039.877 *
45.00	0.554	1.0	0.0767	039.1078	027.6534	040.947
50.00	0.473	1.0	0.0559	033.3899	021.4626	043.022
55.00	0.394	1.0	0.0388	027.8132	015.9530	045.817
60.00	0.317	1.0	0.0251	022.3776	011.1888	049.220
65.00	0.245	1.0	0.0150	017.2950	007.3092	052.925
70.00	0.181	1.0	0.0082	012.7771	004.3700	056.593
75.00	0.124	1.0	0.0038	008.7534	002.2655	060.145
80.00	0.077	1.0	0.0015	005.4356	000.9439	063.247
85.00	0.041	1.0	0.0004	002.8943	000.2523	065.717
90.00	0.016	1.0	0.0001	001.1295	000.0000	067.471

\*= Lowest point to ground >20dB above WLKU

EXHIBIT C- 74.1201(g) Compliance (Fill-in Translator)

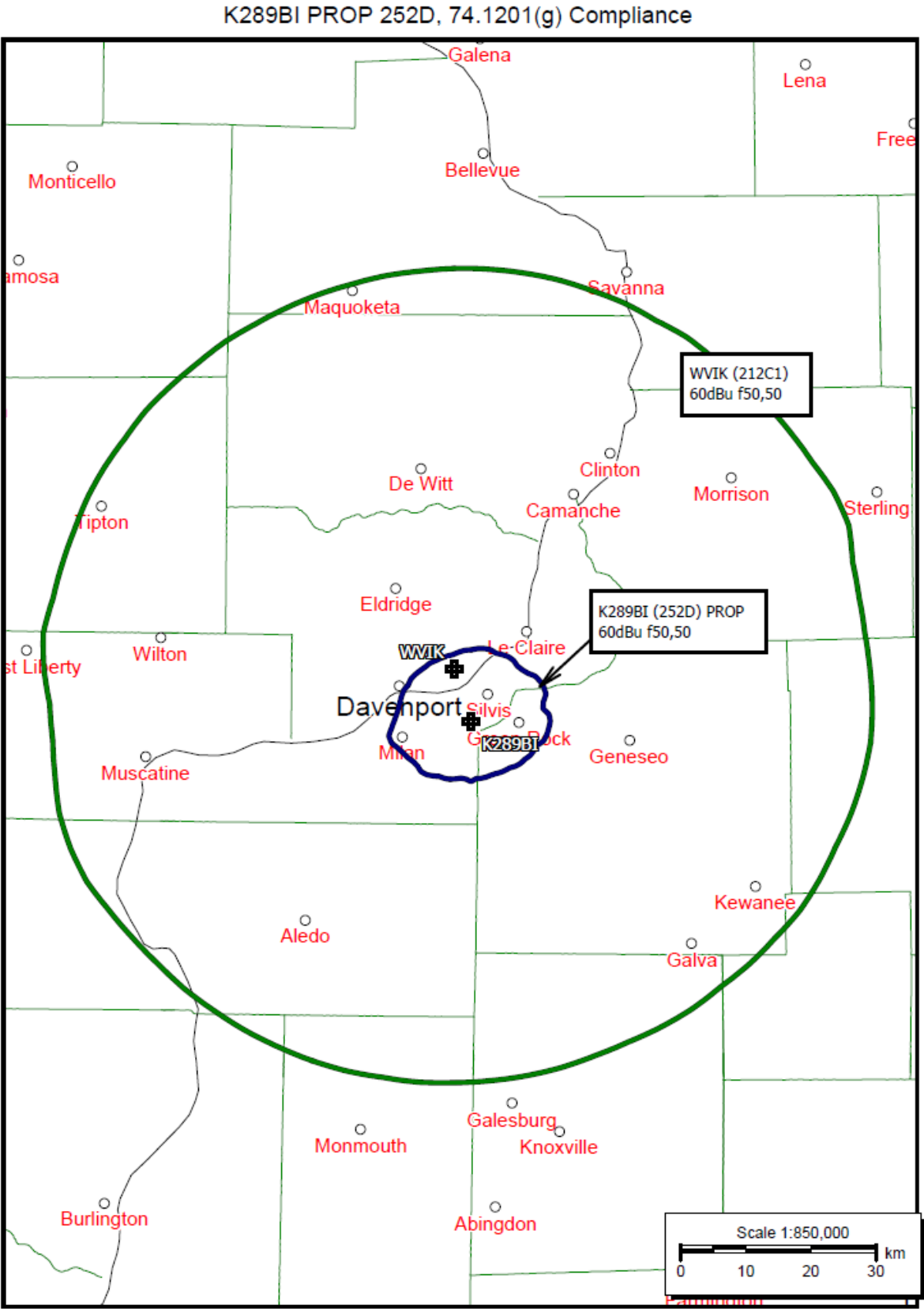


EXHIBIT D- Current Interference to K289BI

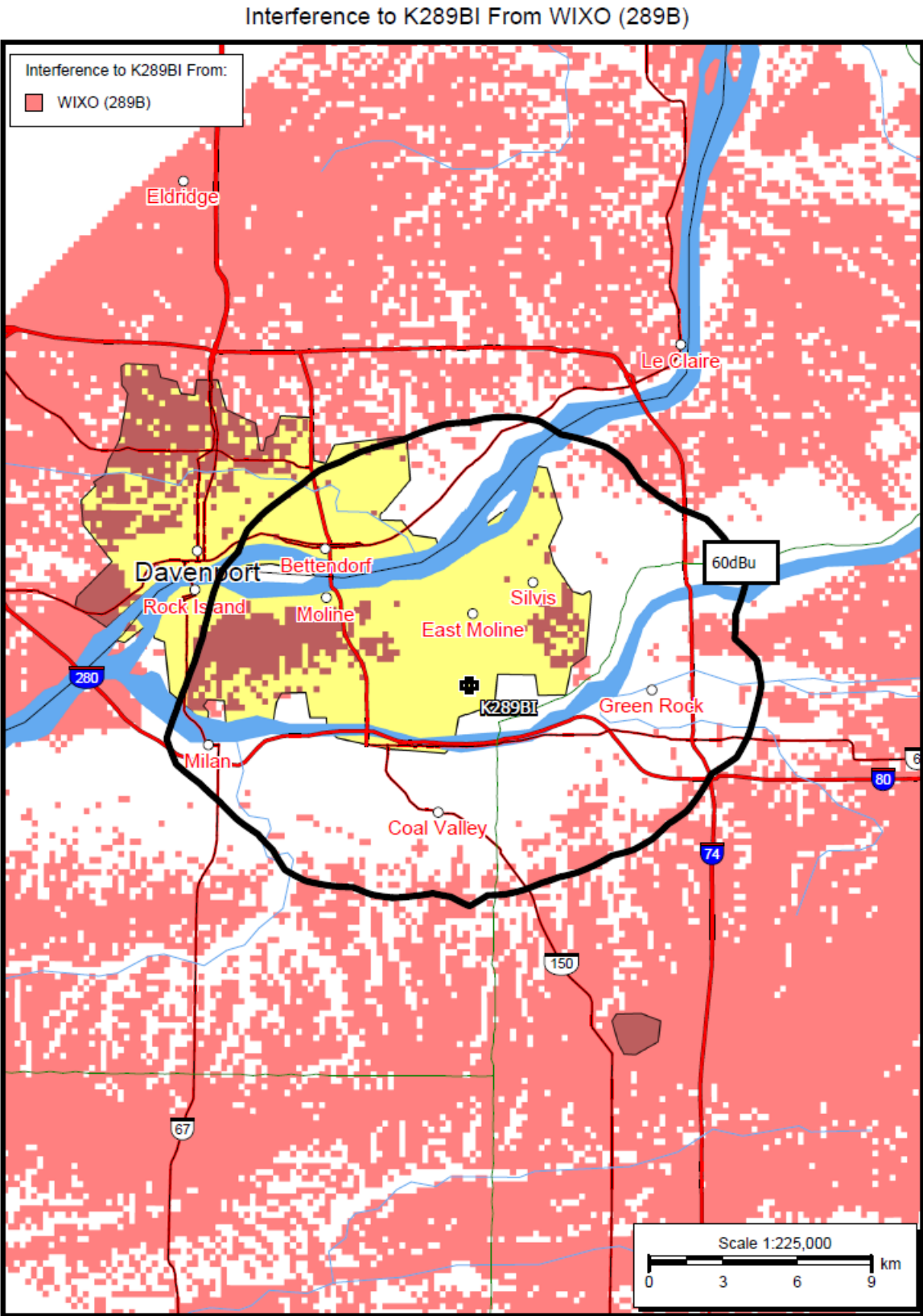


EXHIBIT E- Interference to K289BI on 252D

