

**MINOR MODIFICATION APPLICATION  
W230CI, MILWAUKEE, WI**

July, 2016

**TECHNICAL STATEMENT**

This technical statement and attached exhibits have been prepared on behalf of Bustos Media of Wisconsin, LLC ("Bustos"), Permittee of translator station W230CI, Facility identifier 146071. The applicant proposes to modify the license (BLFT20160705AAV) to modify the host station, the frequency, and the directional pattern of the translator. This translator will rebroadcast Facility ID 53506, WDDW (FM), as a fill-in translator in compliance with 47CFR 74.1201(g). The translator community of license will remain Milwaukee, WI. Because the proposed will be at the same location the proposed operation is MX to the W230CI facility and the 60dBu contour overlaps both the current CP contour. W230CI is co-owned with WDDW (FM).

**Facilities Proposed**

Location (NAD27)	43° 02' 20" N Latitude, 87° 55' 04" W Longitude
Channel	229D (93.7MHz)
Tower Overall AGL Height-	202.1m
Tower ASR (Attached Exhibit D)	1057880 (SEE EXHIBIT E)
Proposed Antenna	Scala 3 element HDCA-5-CP/RM
Antenna AGL Height-	193m
Site AMSL Height-	186m
COR AMSL Height	379m
ERP	250w DIRECTIONAL (SEE EXHIBIT A)

## Interference Study

ComStudy 2.2 search of channel 229 (93.7 MHz Class D) at 43-02-20.0 N, 87-55-04.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
WLDB	MILWAUKEE	WI 227 B	6.45	0.00	9.9	-44.98 dB Exhibit C
NEW	BROOKFIELD	WI 282 LP100	16.60	7.00	293.8	9.6 I.F.-OK
WJJO	WATERTOWN	WI 231 B	93.30	0.00	271.8	11.02 dB
WBGR-FM	MONROE	WI 229 B	154.03	0.00	251.1	11.46 dB
WLIT-FM	CHICAGO	IL 230 B	128.93	0.00	169.1	13.89 dB
WBFM	SHEBOYGAN	WI 229 A	77.12	0.00	11.0	16.10 dB
WBCT	GRAND RAPIDS	MI 229 B	199.76	0.00	102.3	18.70 dB
WXRT	CHICAGO	IL 226 B	128.93	0.00	169.1	22.27 dB
WCCX	WAUKESHA	WI 283 D	25.54	0.00	261.5	25.5
W283CJ	CEDARBURG	WI 283 D	28.87	0.00	348.4	28.9
WVIX	LEMONT	IL 228 A	131.17	0.00	181.3	29.97 dB

CDBS Data as of 7/11/2016

### COMPLIANCE, 74.1201(g), 74.1233(a)(1), and 74.1204(a),(d)

Exhibit B demonstrates compliance with 74.1204(a). There are no impermissible contour overlaps to any other facilities.

As demonstrated in Exhibit C, per 74.1204(d), there will be no ground level location where the signal of W230CI will be in excess of 40dBu above the WLDB second adjacent signals.

Exhibit D demonstrates compliance with 74.1201(g) governing the use of a translator as a fill-in for an FM station. The 60dBu contour of the proposed W230CI will be completely contained within the 1mV/m contour of WDDW (FM).

Exhibit E demonstrates that the proposed facility is compliant with 74.1233(a)(1). The proposed 60dBu contour overlaps the 60dBu contour of the current facility, and the proposed W230CI is MX to the current facility.

## **Environmental Exhibit**

The proposed W230CI facility as proposed on channel 229D will utilize a directional antenna located on an existing tower owned by Milwaukee City Center, LLC (ASR 1057880). The ASR for the tower is attached as Exhibit E. The RF density near the tower was calculated using a worst-case dipole antenna setting at 250 watts and 193m AGL horizontal and vertical.

Using the FCC program "FM Model for Windows", it was calculated that the proposed antenna contributes approximately  $0.28 \mu\text{W}/\text{cm}^2$  or 0.14% of the total allowable  $200 \mu\text{W}/\text{cm}^2$ . The maximum was found to be 52 meters from the base of the tower.

Because the total RF contribution of the W230CI antenna will be less than 5% of the allowable uncontrolled RF level, the proposed W230CI operation is categorically excluded from further environmental review under §1.1306 of the FCC rules and regulations.

Respectfully Submitted

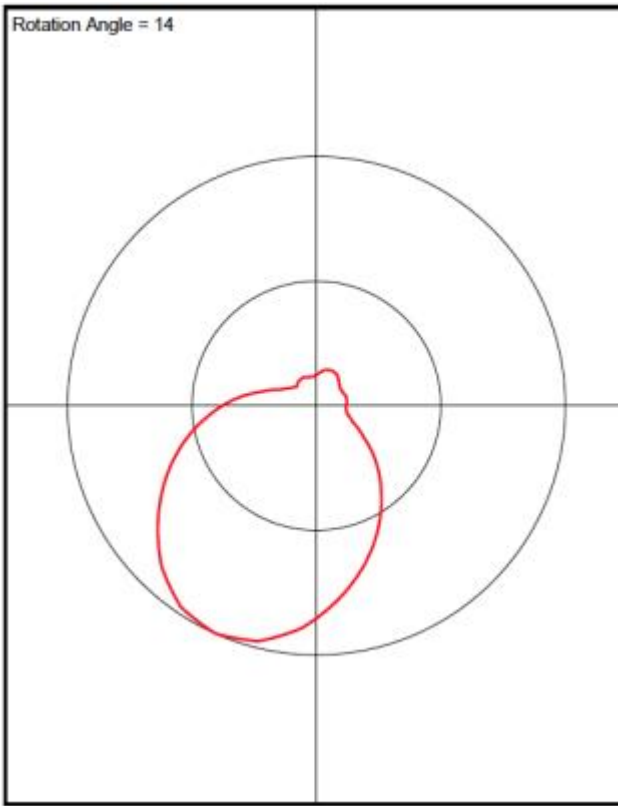


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EXHIBIT A: 3-Element Scala HDCA-5-CP/RM

W230CI (229D) aNTENNA  
Pre-Rotation Antenna Pattern....

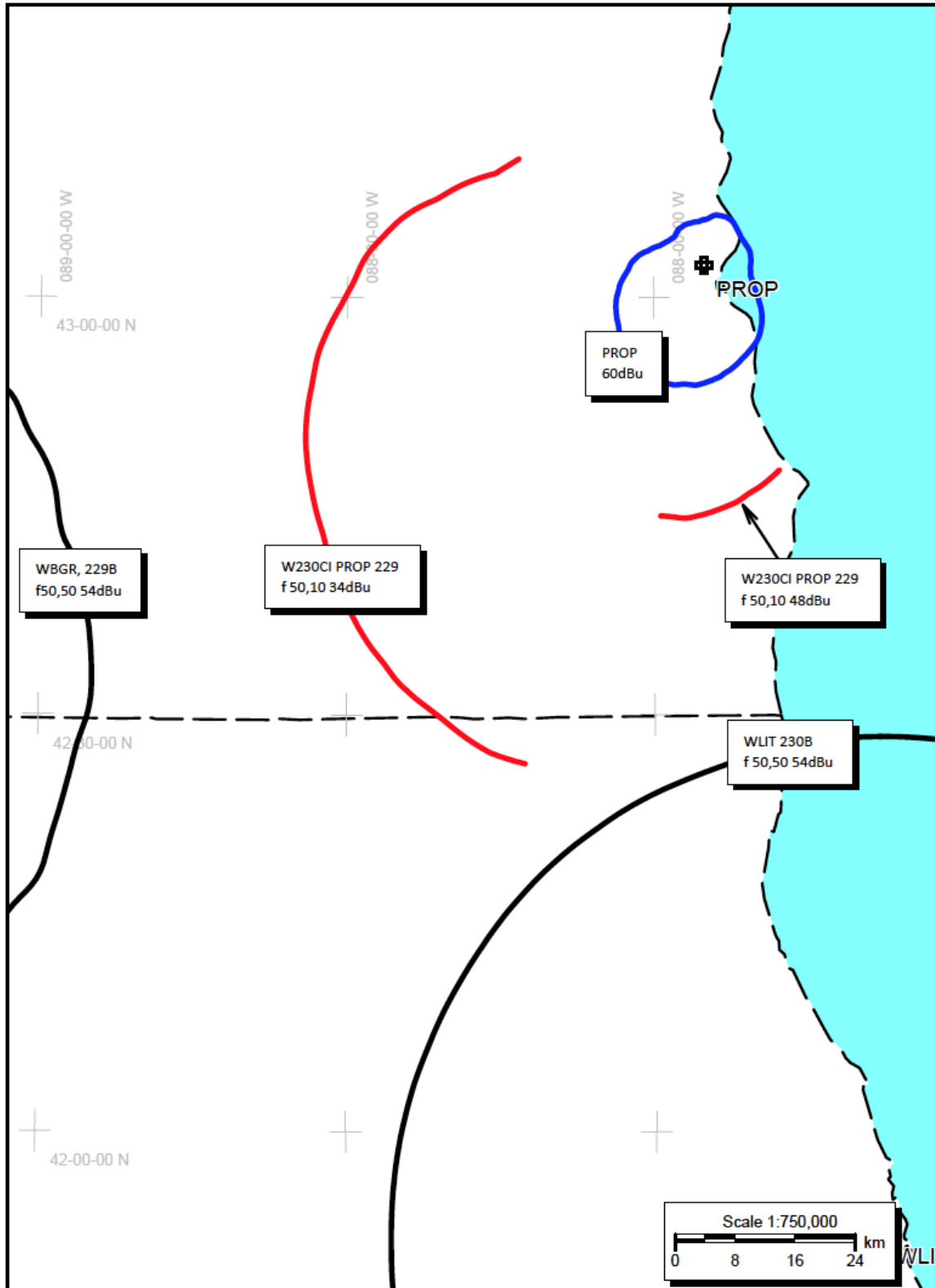
Azimuth (deg)	Relative Field
0.0	0.149
5.0	0.1515
10.0	0.154
15.0	0.1515
20.0	0.149
25.0	0.1395
30.0	0.13
35.0	0.1235
40.0	0.117
45.0	0.118
50.0	0.119
55.0	0.122
60.0	0.125
65.0	0.1235
70.0	0.122
75.0	0.12
80.0	0.118
85.0	0.122
90.0	0.126
95.0	0.142
100.0	0.158
105.0	0.194
110.0	0.23
115.0	0.2825
120.0	0.335
125.0	0.389
130.0	0.443
135.0	0.5015
140.0	0.56
145.0	0.6175
150.0	0.675
155.0	0.731
160.0	0.787
165.0	0.8415
170.0	0.896
175.0	0.935
180.0	0.974
185.0	0.987
190.0	1.0
195.0	0.987
200.0	0.974
205.0	0.935
210.0	0.896
215.0	0.8415
220.0	0.787
225.0	0.731
230.0	0.675
235.0	0.6175
240.0	0.56
245.0	0.5015
250.0	0.443
255.0	0.389
260.0	0.335
265.0	0.2825
270.0	0.23
275.0	0.194
280.0	0.158
285.0	0.142
290.0	0.126
295.0	0.118
300.0	0.11
305.0	0.116
310.0	0.122
315.0	0.1235



320.0	0.125
325.0	0.122
330.0	0.119
335.0	0.118
340.0	0.117
345.0	0.1235
350.0	0.13
355.0	0.1395

# EXHIBIT B- 74.1204(a) Compliance

## Proposed Contour Protection, W230CI



## EXHIBIT C- 74.1204(d) Compliance

WLDB (227B)

W230CI Milwaukee, WI

W230CI Milwaukee, WI

74.1204(d) Showing

Translator or LPFM Maximum Licensed ERP = 0.25

Translator or LPFM Antenna Height AG = 193 Meters

W230CI Antenna Model = SHPX1F (worst case)

Protected Station's Contour = 98.05421 dBu

Translator's or LPFM's full Interference contour 138.05421

Review Azimuth = 0 Degrees True

Relative Field on the horizon at Review Azimuth = 1.000

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

Distance between stations = 6.5 km

Protected Station= WLDB, 16 kW, 468 M Meters COR AMSL

Depression Angle From Horizon(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	013.8758	013.8758	194.000
05.00	0.993	1.0	0.2465	013.7787	013.7263	192.799
10.00	0.974	1.0	0.2372	013.5151	013.3098	191.653
15.00	0.941	1.0	0.2214	013.0572	012.6123	190.621
20.00	0.897	1.0	0.2012	012.4466	011.6960	189.743
25.00	0.843	1.0	0.1777	011.6973	010.6014	189.056
30.00	0.78	1.0	0.1521	010.8232	009.3731	188.588
35.00	0.709	1.0	0.1257	009.8380	008.0588	188.357
40.00	0.633	1.0	0.1002	008.7834	006.7285	188.354
45.00	0.554	1.0	0.0767	007.6872	005.4357	188.564
50.00	0.473	1.0	0.0559	006.5633	004.2188	188.972
55.00	0.394	1.0	0.0388	005.4671	003.1358	189.522
60.00	0.317	1.0	0.0251	004.3986	002.1993	190.191
65.00	0.245	1.0	0.0150	003.3996	001.4367	190.919
70.00	0.181	1.0	0.0082	002.5115	000.8590	191.640
75.00	0.124	1.0	0.0038	001.7206	000.4453	192.338
80.00	0.077	1.0	0.0015	001.0684	000.1855	192.948
85.00	0.041	1.0	0.0004	000.5689	000.0496	193.433
90.00	0.016	1.0	0.0001	000.2220	000.0000	193.778

EXHIBIT D- 74.1201(g) Compliance to WDDW (FM)

Proposed Coverage, W230CI, 229D (93.7MHz), 250 watts

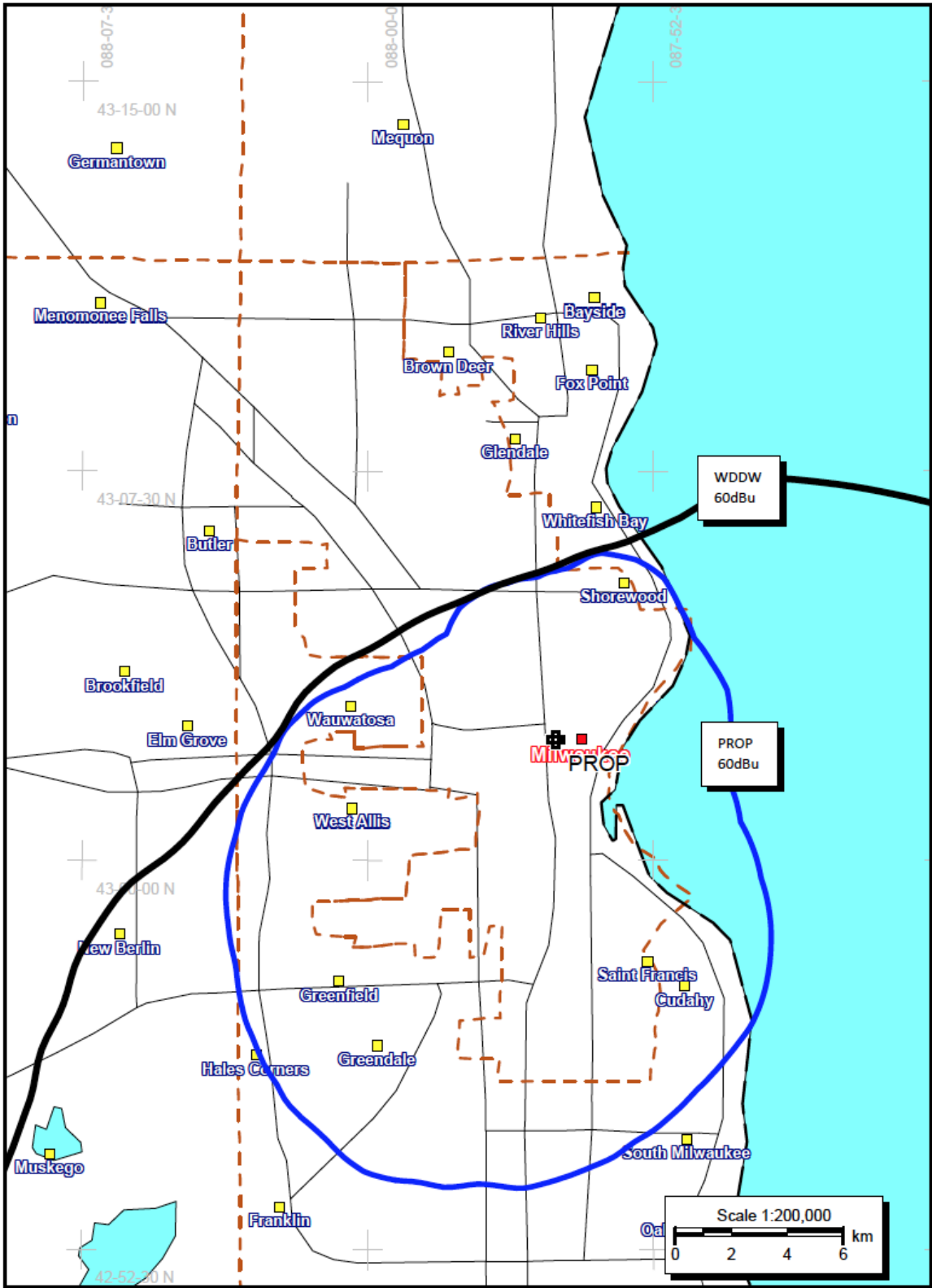
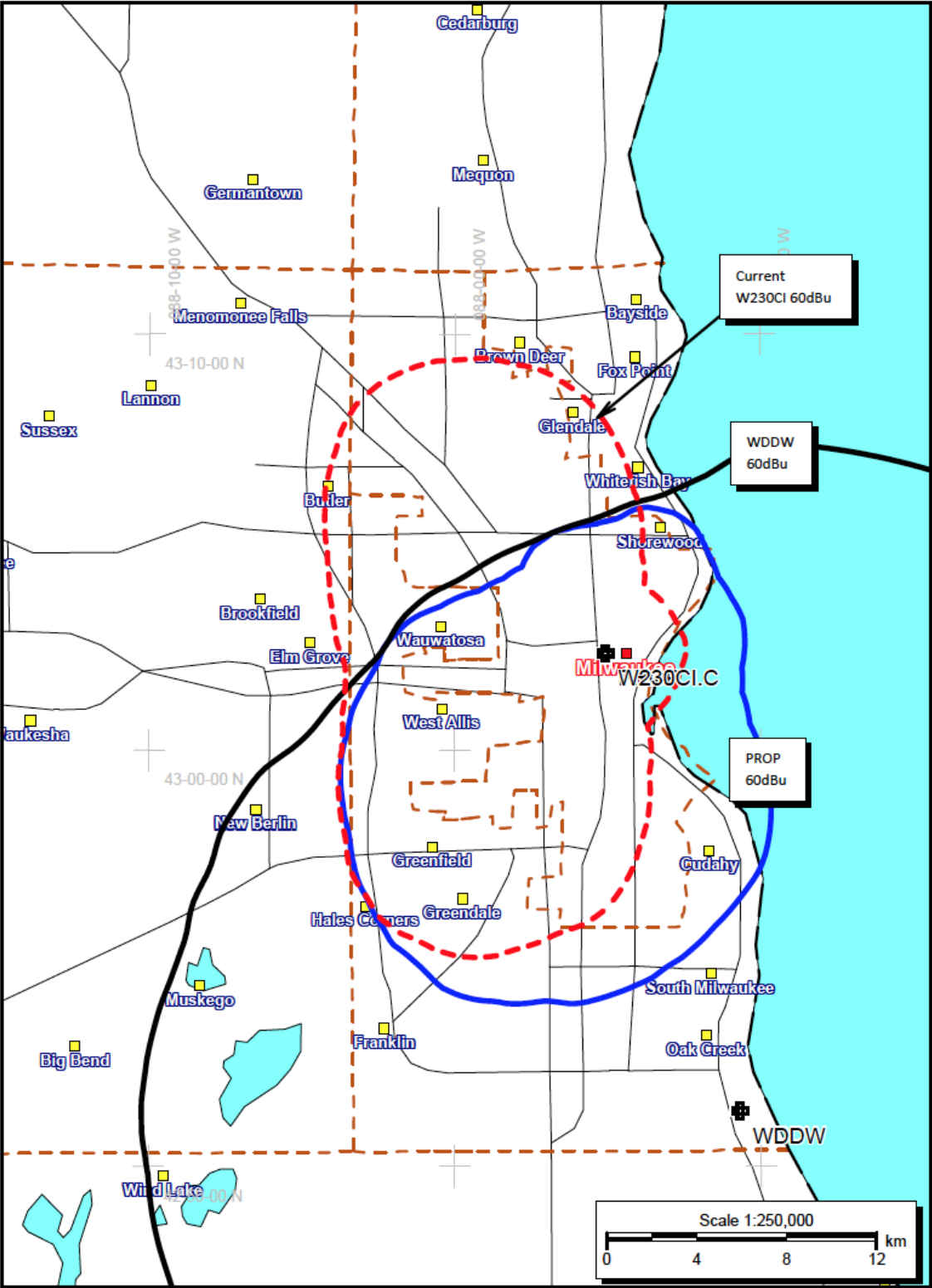


EXHIBIT E- 74.1233(a)(1) Compliance





## EXHIBIT E- ANTENNA STRUCTURE REGISTRATION

ASR Registration Search

### Registration 1057880

 [Map Registration](#)

#### Registration Detail

Reg Number	1057880	Status	Constructed
File Number	A0560405	Constructed	01/01/1950
EMI	No	Dismantled	
NEPA	No		

#### Antenna Structure

Structure Type BTWR - Building with Tower

##### Location (in NAD83 Coordinates)

Lat/Long	43-02-20.0 N 087-55-04.0 W	Address	509 W WISCONSIN AVE
City, State	MILWAUKEE , WI		
Zip	53203	County	MILWAUKEE
Center of AM Array		Position of Tower in Array	

##### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
185.9	202.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
388.0	185.9

##### Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

##### FAA Notification

FAA Study	2007-AGL-5357-OE	FAA Issue Date	08/29/2007
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##### Owner & Contact Information

FRN	0016885733	Owner Entity Type
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##### Owner

Milwaukee City Center, LLC  
Attention To: Caroline S. Spongberg, Esq.  
100 E. Wisconsin Avenue, Suite 1900  
Milwaukee , WI 53202

P: (414)905-1457  
F:  
E: carolinespongberg@marcuscorp.com

##### Contact

Rambo , Craig  
509 W. Wisconsin Avenue  
Milwaukee , WI 53203

P: (414)390-8267  
F:  
E: craigrambo@marcushotels.com

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##### Last Action Status

Status	Constructed	Received	09/05/2007
Purpose	Notification	Entered	09/05/2007
Mode	Interactive		

(ASR 1057880 Cont'd)

#### Related Applications

09/05/2007      A0560372 - Change Owner (OC)

09/05/2007      A0560376 - Modification (MD)

09/05/2007      A0560405 - Notification (NT)

Related applications (4)

▫

#### Comments

##### Comments

None

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#### History

##### Date

##### Event

09/14/2007      FRN Disassociation email sent: Tower email

09/14/2007      FRN association email send: Tower email

09/14/2007      FRN association email send: Tower email

All History (10)

▫

#### Automated Letters

09/06/2007      Ownership Change, Reference 578604

09/06/2007      Authorization, Reference 578651

09/06/2007      Authorization, Reference 578660

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