

**FM Translator Frequency Displacement Statement  
and Section 47 CFR 74.1233(a)(1)(i)(A)(2)  
and Section 74.1204 Interference Analysis  
W230DA to Channel 243D, New Holstein, WI**

FM translator station W230DA Holstein, WI, currently operates on Channel 230D (93.9 MHz) with a directional Effective Radiated Power of 250 watts. The W230DA translator station was licensed in May, 2021, and has discovered since then that WDOR-FM 230C1 Sturgeon Bay, WI is causing substantial interference to the reception of the translator signal.

WDOR-FM 230C1 in Sturgeon Bay, WI is located 116.4 kilometers northwest of the W230DA translator. Nevertheless, its 40 dBu interfering signal wholly encompasses the W230DA 60 dBu coverage area. Accordingly, the Applicant proposes herein to change the frequency of the translator station to mitigate interference from WDOR-FM, and to maintain its expected service to the public.

Initially, the frequency search was limited to the three upper and lower adjacent channels, and the intermediate frequency (I.F.) related channels. Unfortunately, all of these prospective channels are precluded by existing full-service stations as noted below:

FM Channel	Primary Preclusion	Secondary Preclusion
227	WGEE New London, WI (228C2)	WLDB Milwaukee, WI (227B)
228	WGEE New London, WI (228C2)	none
229	WBFM Sheboygan, WI (229A)	WGEE New London, WI (228C2)
231	WYDR Neenah-Menasha, WI (232C3)	none
232	WYDR Neenah-Menasha, WI (232C3)	none
233	WYDR Neenah-Menasha, WI (232C3)	WKTJ Milwaukee, WI (233B)
283 I.F.	WXER Plymouth, WI (283A)	none
284 I.F.	WXER Plymouth, WI (283A)	none

With no adjacent channels available, the frequency search was extended to the entire non-reserved frequency band. The expanded frequency search revealed that Channel 243D (96.5 MHz) was most suitable for the translator station if the translator is moved 10 kilometers north, northwest to an existing tower.

Therefore, the Applicant proposes herein to change frequency to Channel 243D and relocate the translator. In accordance with Section 47 CFR 74.1233(a)(1)(i)(A)(2) this application is for a minor change of W230DA.

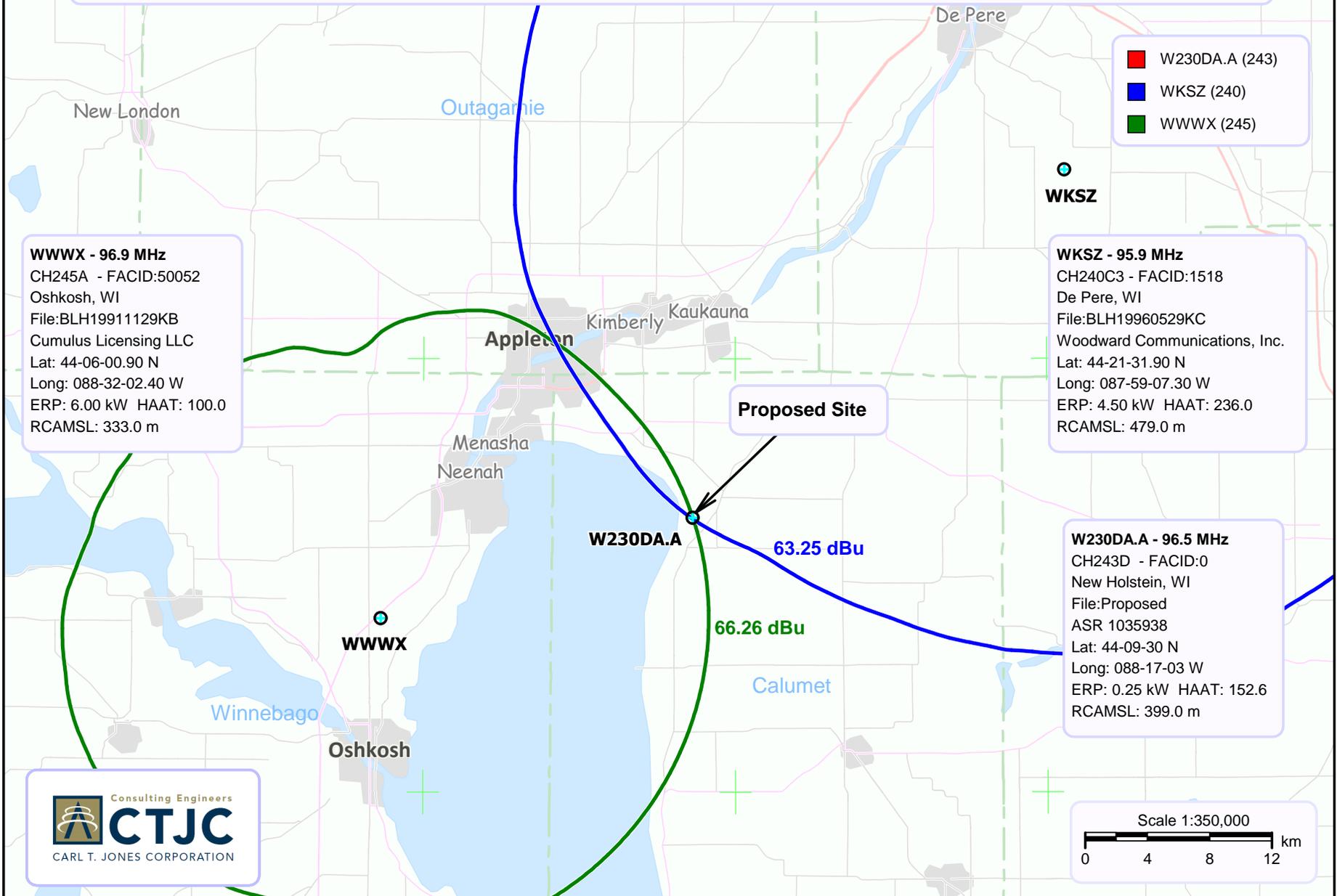
On the new channel, the translator's proposed transmitter site would be located within the protected contour of third-adjacent channel station WKSZ 240C3 De Pere, WI and second-adjacent channel station WWWW 245A Oshkosh, WI. Consequently, the translator's proposed interfering contour is located within the WKSZ and the WWWW protected contours resulting in contour overlap as defined in Section 74.1204 of the FCC Rules. The proposed translator facility would cause no overlap to any other authorized or proposed facility.

As shown on Exhibit 13 A, at the translator's proposed transmitter site WKSZ produces an F(50,50) signal strength of 63.25 dBu and WWWW produces an F(50,50) signal strength of 66.26 dBu. The more stringent protection to WKSZ is used for a desired to undesired signal analysis. Therefore, in the vicinity of the second-adjacent channel translator station, the translator's relevant interfering contour is the 103.25 dBu contour. According to free space calculations the translator's predicted 103.25 dBu contour will reach the ground in an area extending outward 600 meters horizontally on a bearing of 320 degrees True. However, the 2-bay half-wave spaced directional antenna will attenuate the 103.25 dBu signal at ground level as shown in Exhibit 13 B (attached). It shows an aerial view map which depicts the translator's transmitter site and the surrounding vicinity. As shown on the map there are no occupied structures inside of the interference area.

As demonstrated in Exhibit 13A & 13B, the translator station is located on an existing communications tower. There are no high rise building or tall housing units, and no population in the vicinity of the transmitter site or within the 103.25 dBu interfering contour. Therefore, the proposed channel change will cause no interference to any population presently served by WKSZ and WWWW.

Accordingly, the proposed facility satisfies Section 74.1204(d) of the FCC Rules because it has been "demonstrated that no actual interference will occur due to lack of population or such other factors as may be applicable".

# Exhibit 13A - W230DA Application Adjacent Stations Protection from Interference



# 103.5 dBu Interfering Signal within 2 meters of Ground Level

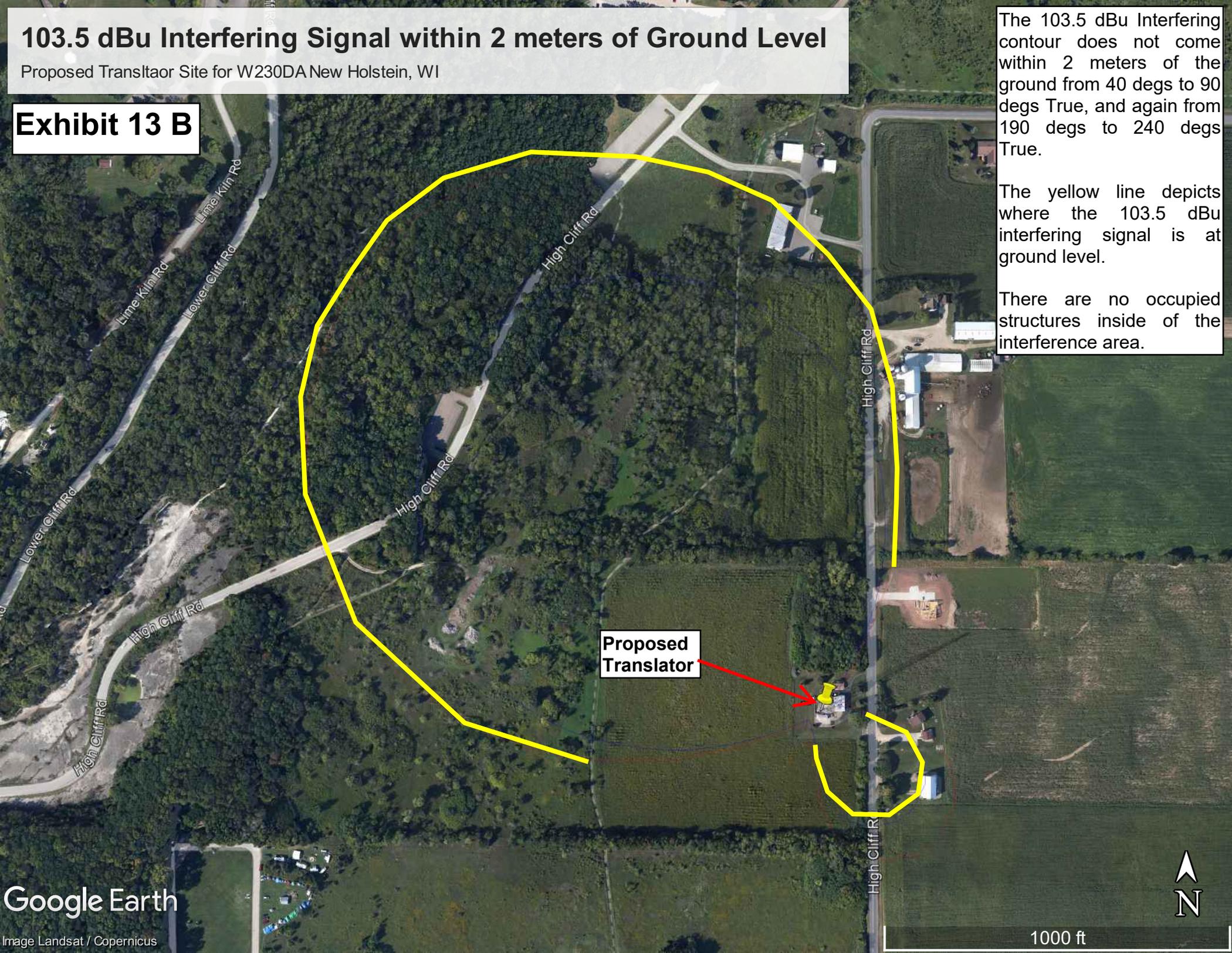
Proposed Translator Site for W230DA New Holstein, WI

## Exhibit 13 B

The 103.5 dBu Interfering contour does not come within 2 meters of the ground from 40 degs to 90 degs True, and again from 190 degs to 240 degs True.

The yellow line depicts where the 103.5 dBu interfering signal is at ground level.

There are no occupied structures inside of the interference area.



Proposed  
Translator

