

**Educational Media Foundation**  
5700 West Oaks Boulevard  
Rocklin, CA 95765

*Ashtabula, OH*  
**WOHK**

## **Application Purpose**

The purpose of this WOHK minor modification is to change the licensed geographical coordinates to match the geographic coordinates of the Antenna Structure Registration. Since the site elevation has also changed, a license modification to correct the coordinates is not an option.

The licensed and corrected service contours are seen below. No new overlaps occur as a result in this change of coordinates.

No physical changes are proposed to the WOHK facility.

# WOHK Licensed and Proposed Service Contours

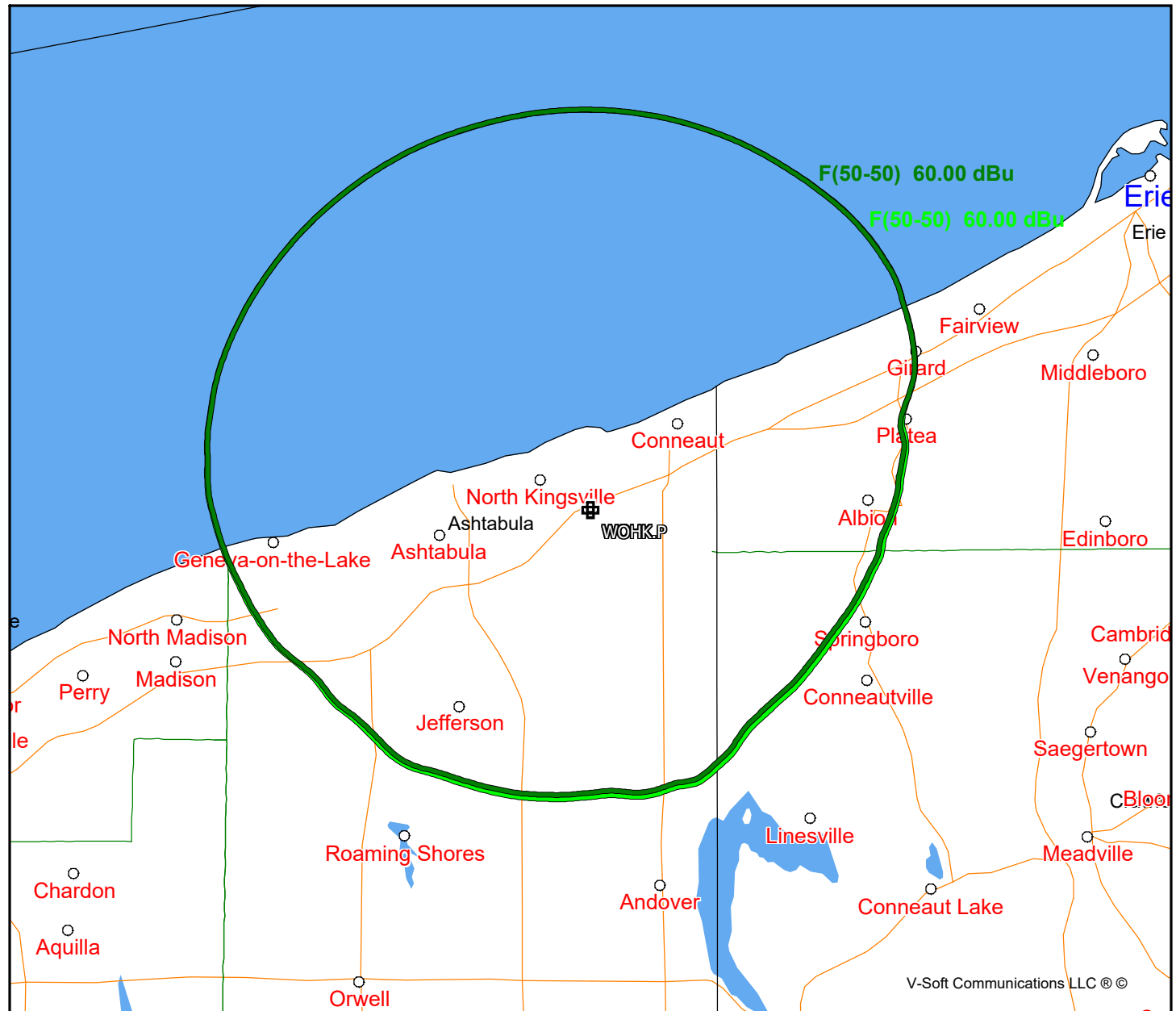
- WOHK (241)
- WOHK.P (241)

## WOHK

BLED20171127ABY  
Latitude: 41-53-04.20 N  
Longitude: 080-38-27.30 W  
ERP: 3.30 kW  
Channel: 241  
Frequency: 96.1 MHz  
AMSL Height: 366.0 m  
Elevation: 240.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

## WOHK.P

BLED20171127ABY  
Latitude: 41-53-02.10 N  
Longitude: 080-38-26.90 W  
ERP: 3.20 kW  
Channel: 241  
Frequency: 96.1 MHz  
AMSL Height: 369.8 m  
Elevation: 243.8 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None



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Scale 1:500,000



**Channel Study**

**Compliance with 47 C.F.R. 73.207**

Exhibit 1-A shows that the proposed WOHA facility meets all minimum distance separation requirements with regard to co-channel, first, second, or third adjacent channel stations, and those separated by 53/54 channels, except the licensed facilities of the following stations:

Station	Channel	City of License	Facility ID	Distance Short-Spaced
WKST	241B	Pittsburgh, Pa	65678	2.8km

This application proposes contour protection (47 C.F.R. 73.215. 47 C.F.R. 73.215(e)) for WKST.

The minimum separation requirement between a class A and a class B facility (WOHA and WKST), which are co-channel, is 143 km. Exhibit 1-A shows that WKST is separated from the proposed facility by 174.69 km.

Therefore, the proposed facility is permitted to use contour protection toward the short-spaced facilities (See Exhibit 2 for compliance with contour protection requirements).

## WOHK Site Spacing

REFERENCE  
41 53 02.10 N. CLASS = A Int = A  
80 38 26.90 W. Current Spacings to 3rd Adj.  
----- Channel 241 - 96.1 MHz -----

DISPLAY DATES  
DATA 05-26-22  
SEARCH 06-07-22

Call	Channel	Location		Azi	Dist	FCC	Margin
WOHK	LIC-N 241A	Ashtabula	OH	351.9	0.06	114.5	-114.4
CFPL-FM+	OPE -? 240C1	London	ON	336.8	129.02	168.0	-39.0
CFPLFM	LIC -D 240C1	London	ON	336.9	129.51	168.0	-38.5
WKST-FM	LIC 241B	Pittsburgh	PA	160.8	174.69	177.5	-2.8
WXNM-LP	LIC 240L1	Erie	PA	65.8	53.80	55.5	-1.7
WAKZ	LIC 240A	Sharpsville	PA	174.9	74.23	71.5	2.7
WMSX	LIC 241B	Buffalo	NY	51.9	183.24	177.5	5.7
WEBG	LIC-Z 240A	Mina	NY	64.3	81.35	71.5	9.9
WFHM-FM	LIC 238B	Cleveland	OH	235.5	86.13	68.5	17.6
W242CU	LIC 242D	Erie	PA	62.4	53.31	35.5	17.8
WUTT-LP	LIC 238L1	Erie	PA	66.3	46.74	28.5	18.2
WLOQ	LIC 242A	Oil City	PA	123.5	97.75	71.5	26.3
WAKS	LIC-N 243B	Akron	OH	230.9	105.79	68.5	37.3
WWUC-LP	LIC 244L1	Union City	PA	88.3	66.02	28.5	37.5
WOVU-LP	LIC 240L1	Cleveland	OH	241.0	93.68	55.5	38.2
R13035	VAC 241B	Walkerton	ON	349.6	249.39	210.0	39.4
WLLF	LIC 244A	Mercer	PA	154.5	70.37	30.5	39.9
WCFI-LP	LIC 241L1	Cuyahoga Falls	OH	221.3	109.11	66.5	42.6
W244DX	APP 244D	Erie	PA	60.5	54.69	7.5	47.2
W244DX	LIC 244D	Erie	PA	60.5	54.69	7.5	47.2

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Reference station has protected zone issue: Canada  
All separation margins include rounding

## Exhibit 2 - Contour Protection towards WKST-FM

Educational Media Foundation

FMCommander Single Allocation Study - 06-07-2022 - GLOBE 30 Sec  
WOHK's Overlaps (In= 0.0 km, Out= 0.0 km)

WOHK CH 241 A 73.215 N  
Lat= 41 53 02.10, Lng= 80 38 26.90  
3.277 kW 139.2 m HAAT, 369.8 m COR  
Prot.= 60 dBu, Intef.= 34 dBu

WKST-FM CH 241 B BLH19920206KC  
Lat= 40 23 49.20, Lng= 79 57 42.20  
44.0 kW 159 m HAAT, 464 m COR  
Prot.= 54 dBu, Intef.= 40 dBu

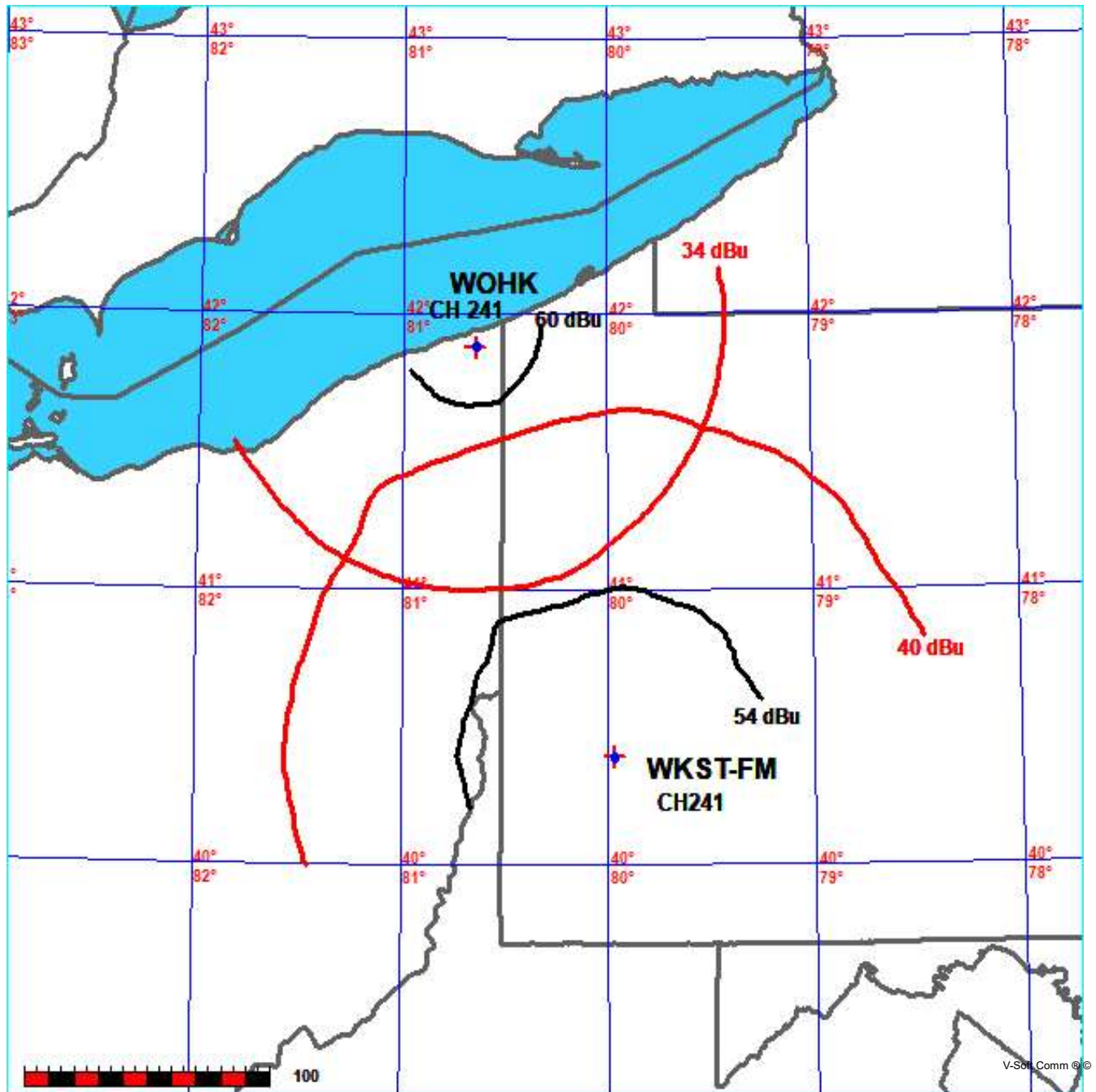


Exhibit 3 - City of License Coverage  
Note: 100% of the Area and Population are  
Inside the 70dbu(F50-50) Contour

**WOHK.P**

BLED20171127ABY

Latitude: 41-53-02.10 N

Longitude: 080-38-26.90 W

ERP: 3.20 kW

Channel: 241

Frequency: 96.1 MHz

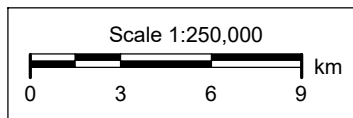
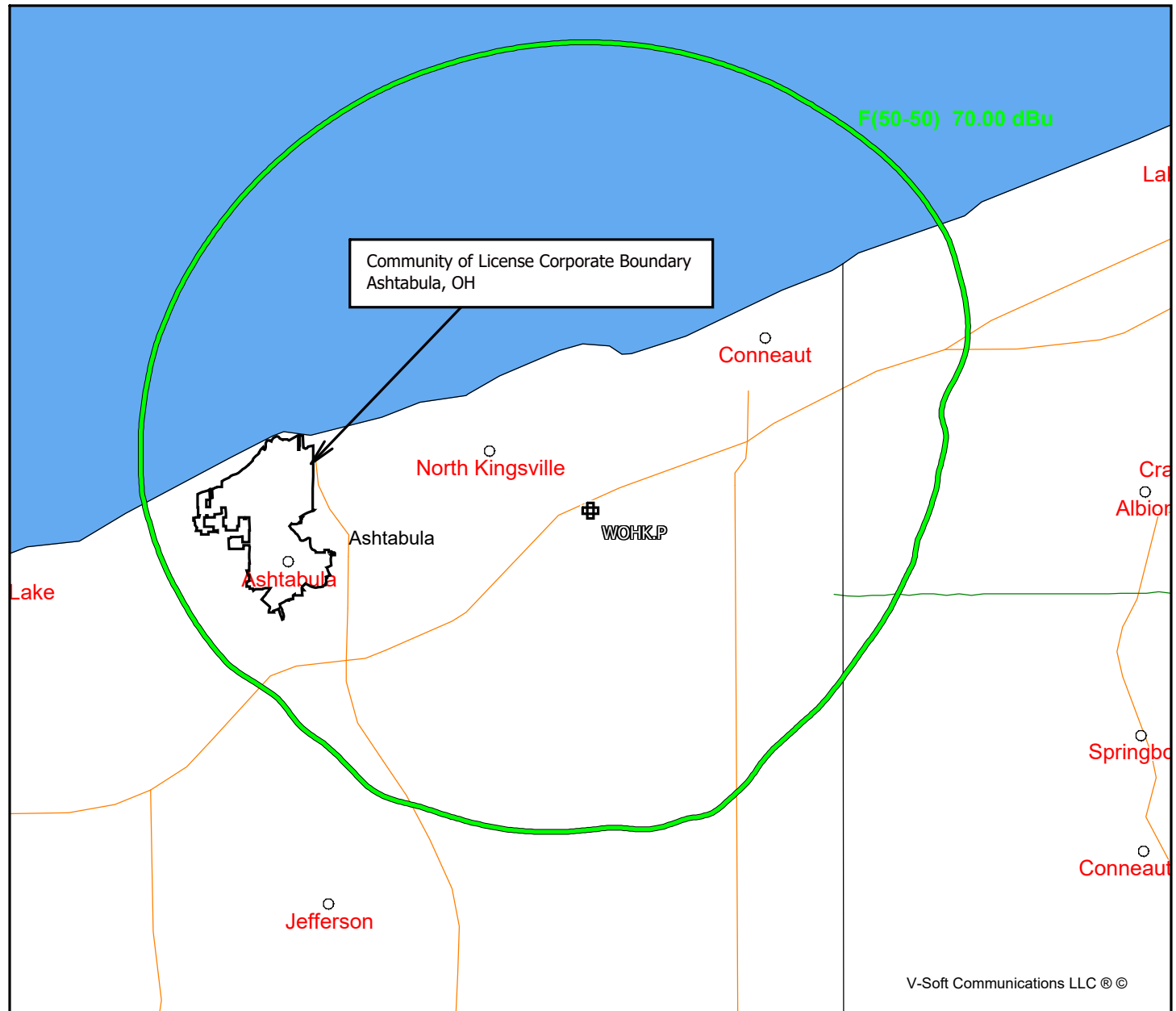
AMSL Height: 369.8 m

Elevation: 243.8 m

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model: None



### **Compliance with Canadian Spacing Requirements**

The facility contemplated herein is located within 320 kilometers of the border between the United States and Canada.

Exhibit 4-A shows the licensed and proposed 34dbu(F50-10) contours.

Exhibit 4-B is a comparison of the licensed and proposed 34dbu(F50-10) distance to contour of the radials that extend over Canadian Soil. Note the proposed distances extend to lesser distances than the licensed. Therefore, no new overlaps will be created towards any existing or proposed Canadian facility.

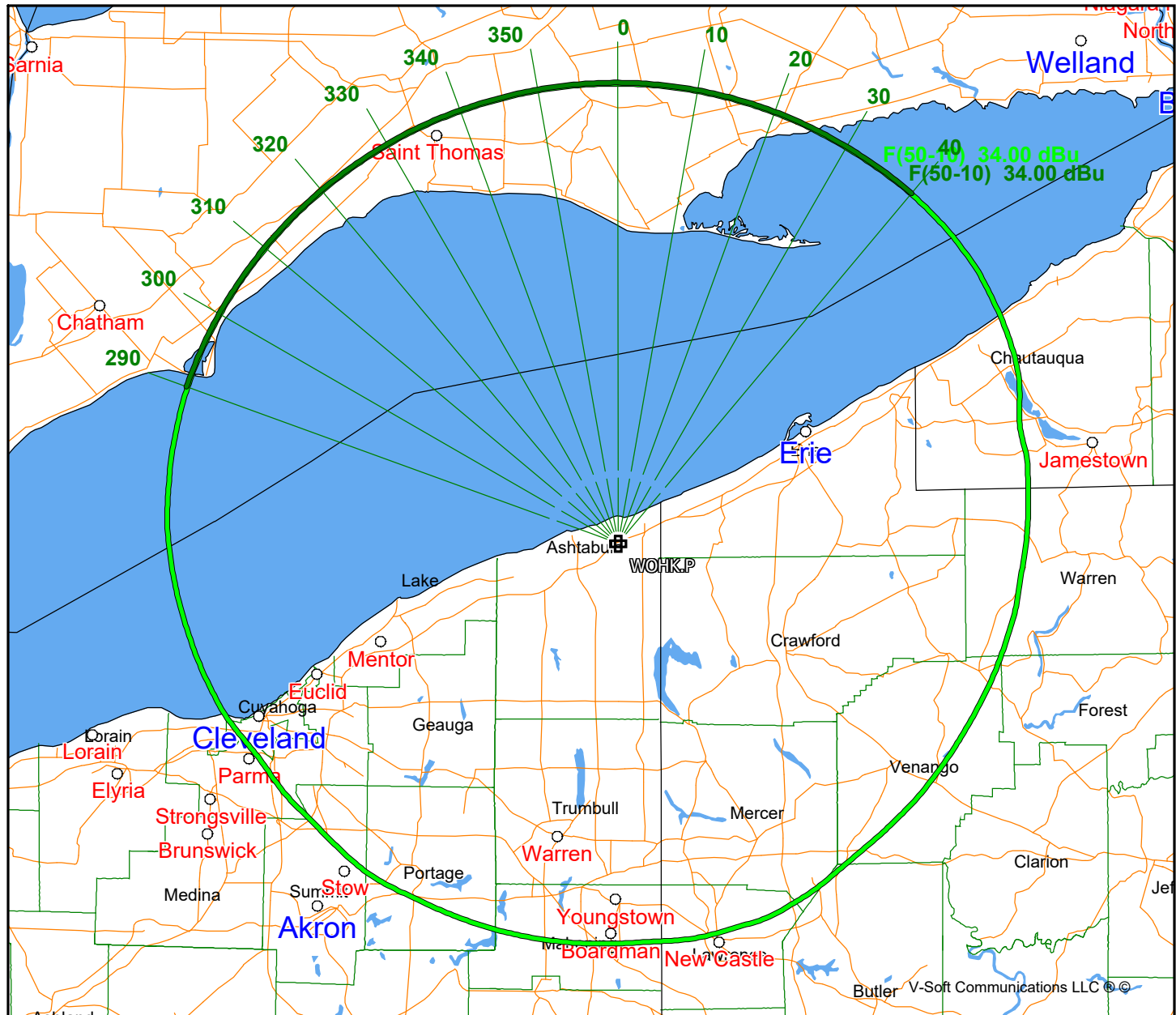
EMF believes WOHK will continue to abide by the US-Canadian working agreement.

# Exhibit 4-A Licensed and Proposed 34dbu(F50-10) Contours

- WOHK (241)
- WOHK.P (241)

**WOHK.P**  
 BLED20171127ABY  
 Latitude: 41-53-02.10 N  
 Longitude: 080-38-26.90 W  
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 Frequency: 96.1 MHz  
 AMSL Height: 369.8 m  
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 Prop Model: None

**WOHK.P**  
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 Latitude: 41-53-02.10 N  
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 ERP: 3.20 kW  
 Channel: 241  
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 AMSL Height: 369.8 m  
 Elevation: 243.8 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: No  
 Prop Model: None





## Distance to Contour Report

### Distance to Contour Report Licensed

Type of contour: FCC  
Location Variability: 50.0 %  
Time Variability: 10.0 %  
# of Radials Calculated: 360  
FCC Matching HAAT Calculation Used  
Field Strength: 34.00 dBuV/m

Primary Terrain: GLOBE 30 Second World Database

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Transmitter Information:

Call Letters: WOHK  
File Number: BLED20171127ABY  
Latitude: 41-53-04.20 N  
Longitude: 080-38-27.30 W  
ERP: 3.30 kW  
Channel: 241  
Frequency: 96.1 MHz  
AMSL Height: 366.0 m  
Elevation: 240.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
-----

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
290.0	112.50	182.2
300.0	112.82	184.8
310.0	112.96	185.8
320.0	113.04	186.4
330.0	113.08	186.8
340.0	112.99	186.1
350.0	112.95	185.7
0.0	112.90	185.4
10.0	112.76	184.3
20.0	112.51	182.3
30.0	112.14	179.5
40.0	111.93	177.9

**Distance to Contour Report Proposed**

Time Variability: 10.0 %  
# of Radials Calculated: 360  
FCC Matching HAAT Calculation Used  
Field Strength: 34.00 dBuV/m

Primary Terrain: GLOBE 30 Second World Database

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Transmitter Information:

Call Letters: WOHK.P  
File Number: BLED20171127ABY  
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Vert. Elevation Pattern: No  
-----

Azimuth (deg)	Distance (km)	HAAT (m)
-----	-----	-----
290.0	112.29	185.7
300.0	112.63	188.3
310.0	112.76	189.4
320.0	112.84	190.0
330.0	112.89	190.4
340.0	112.80	189.7
350.0	112.75	189.3
0.0	112.71	188.9
10.0	112.57	187.8
20.0	112.32	185.9
30.0	111.96	183.1
40.0	111.77	181.6

## **Environmental Protection**

There are two main factors that need to be addressed in order to make sure that the environment around a proposed facility is protected.

### **1) Significant affects to the environment.**

EMF's facility has been constructed on an existing tower (tower ID 1232429) and causes no adverse effects to the surrounding environment at the site.

### **2) Human exposure to excess levels of radiofrequency radiation.**

The WOHK facility has been built utilizing an ERI 2-bay circularly polarized full-wave spaced antenna (EPA Type 3 Rototiller Design).

According to OET 65, "Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% "contour" where the appropriate limits are found to be exceeded."

The facility's maximum RF contribution to the site is  $2.09\mu\text{W}/\text{cm}^2$  at a distance of 84 meters from the tower, which is 1.04% of the uncontrolled (public) exposure limit.

Therefore, because the facility does not cause an RF field that is equal to or greater than 5% of the  $200\text{ uW}/\text{cm}^2$  limit for uncontrolled exposure at any point, the WOHK facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.