

# Exhibit 13.1

## Description of Proposed Antenna System

### DAYTIME/NIGHTTIME ANTENNA SYSTEM

1. This proposed WPON(AM) operation will be diplexed with the proposed operation of WCXI(AM). The WPON daytime portion of the antenna system will consist of four (4) vertical guyed, uniform cross-section steel towers. The WPON nighttime portion of the antenna system will consist of three (3) vertical guyed, uniform cross-section steel towers. All WPON(AM) towers will stand 104.1° or 59.4 meters above a 1.2 meter base pier and insulator for a height of 60.6 meters Above Ground Level (AGL). TOWAIR has been consulted and no obstruction lighting is required. Given the site elevation of 283.5 meters, the overall heights for all towers will be 344.1 meters AMSL. The remaining towers associated with WCXI(AM) remain unchanged as outlined in WCXI(AM) Construction Permit BP-20161108AAJ.
2. The proposed ground system will consist of 120 buried copper radials, extending 64.61 meters (211.98 feet) in length, about the base of the WCXI(AM) towers (common to the WPON(AM) Daytime Tower(s) 1 & 2 and WPON(AM) Nighttime Tower 1) . Radials around the three remaining WPON(AM) towers need only be 51.33 meters (168.42 ft) in length. Radials will run the entire length except where shortened to terminate at property boundaries or at transverse copper straps running midway between the towers. The material used for the radial will be #10 AWG, soft drawn copper wire.
3. The proposed WPON(AM) day antenna system theoretical parameters are as follows:

Call: WPON.P											
Freq: 1460 kHz				WALLED LAKE, MI, US							
Lat: 42-32-39 N				Lng: 083-33-36 W							
Power: 0.67 kW				Theo RMS: 235.83 mV/m @ 1km @ 0.67 kW							
#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	104.1	0	0	0.0	0.0	0.0	0.0
2	0.630	-71.0	113.1	63.1	104.1	0	0	0.0	0.0	0.0	0.0
3	0.530	-6.0	186.0	172.4	104.1	0	0	0.0	0.0	0.0	0.0
4	0.334	-77.0	183.2	136.7	104.1	0	0	0.0	0.0	0.0	0.0
Theoretical RMS: 235.83 mV/m@1km						Erss = 279.13 mV/m@1km					
Standard RMS: 247.84 mV/m@1km						Q = 10.00 mV/m@1km					

4. The Proposed WPON(AM) night antenna system theoretical parameters are as follows:

Call: WPON.P											
Freq: 1460 kHz				WALLED LAKE, MI, US							
Lat: 42-32-39 N				Lng: 083-33-36 W							
Power: 0.58 kW				Theo RMS: 258.09 mV/m @ 1km @ 0.58 kW							
#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.640	-123.0	0.0	0.0	104.1	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	93.4	172.4	104.1	0	0	0.0	0.0	0.0	0.0
3	0.590	159.0	186.2	172.3	104.1	0	0	0.0	0.0	0.0	0.0
Theoretical RMS: 258.09 mV/m@1km						Erss = 358.55 mV/m@1km					
Standard RMS: 271.20 mV/m@1km						Q = 10.00 mV/m@1km					

5. The sampling system for the proposed array will conform to §73.68 of the Commission's Rules regarding approved sampling systems.

## Exhibit 13.2

### Vertical Plan of Antenna System

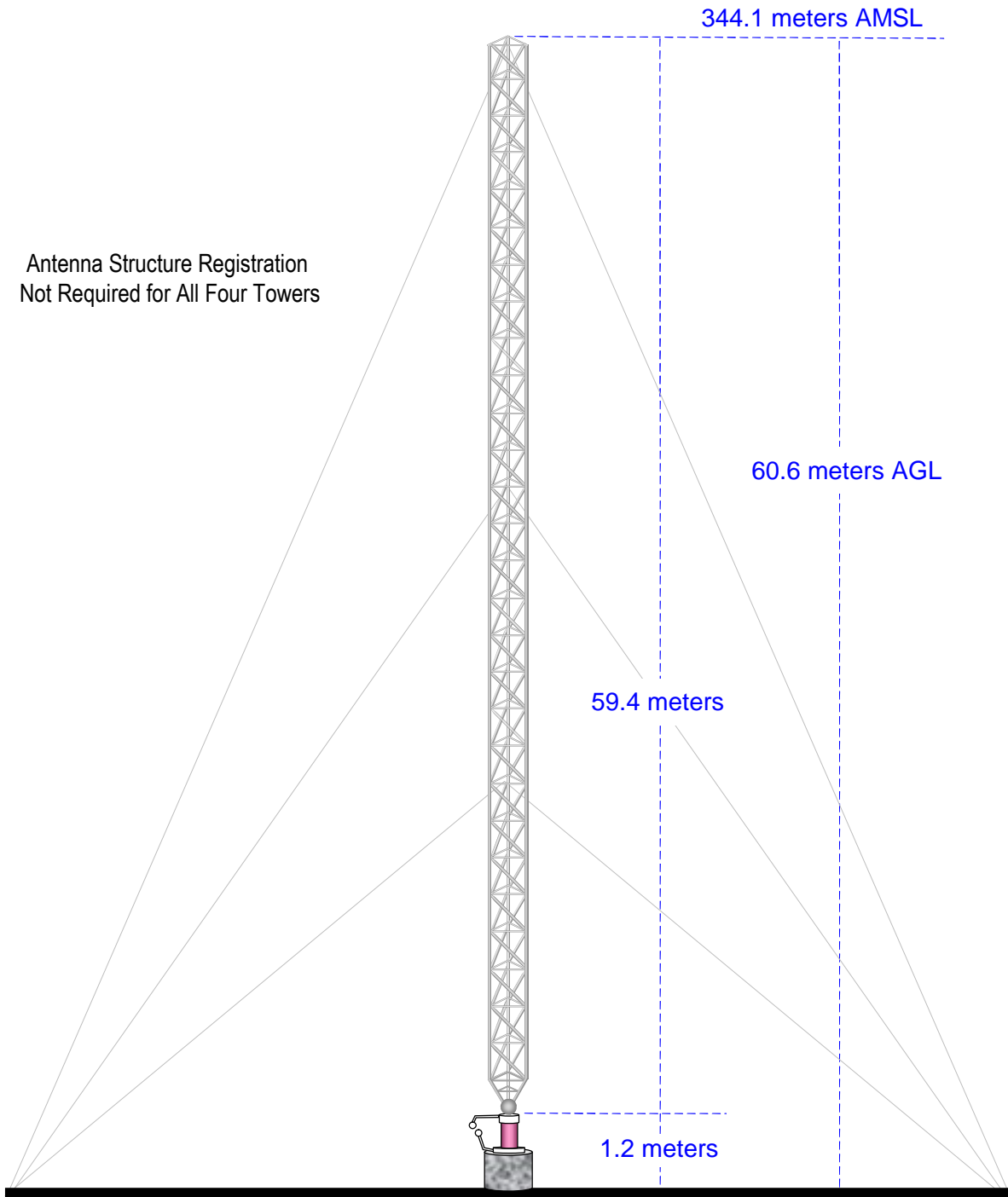
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The site is located 0.9 km northeast of the intersection of E. Maple and Child's Lake Roads, city of Wixom, Oakland, County, Michigan.

#### Site Location

NL: 42° 32' 39"

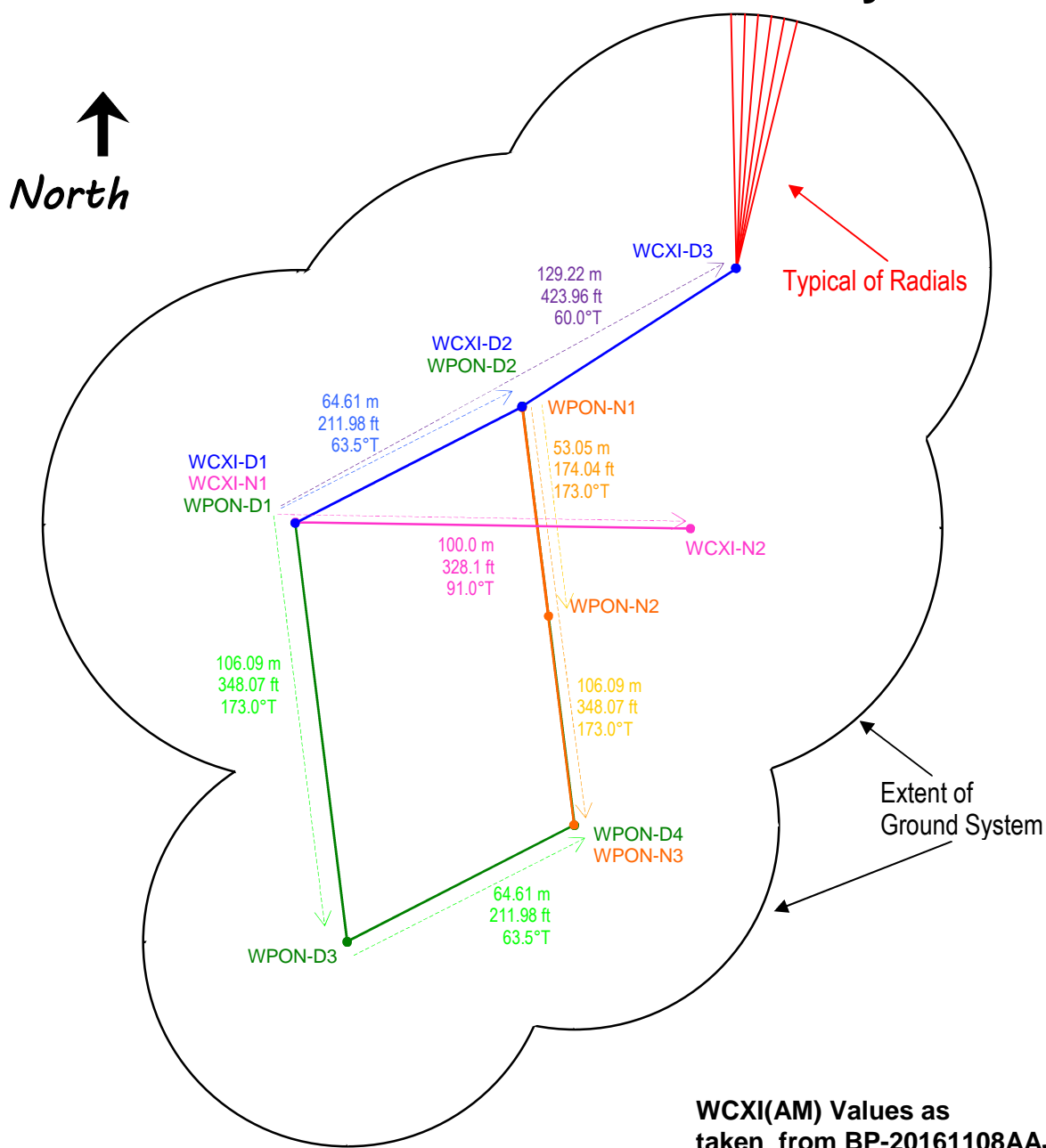
WL: 83° 33' 36"



Ground Elevation = 283.5 m AMSL  
Drawing is not to Scale

**MUNN-REESE**  
Broadcast Engineering Consultants  
Coldwater, MI 49036

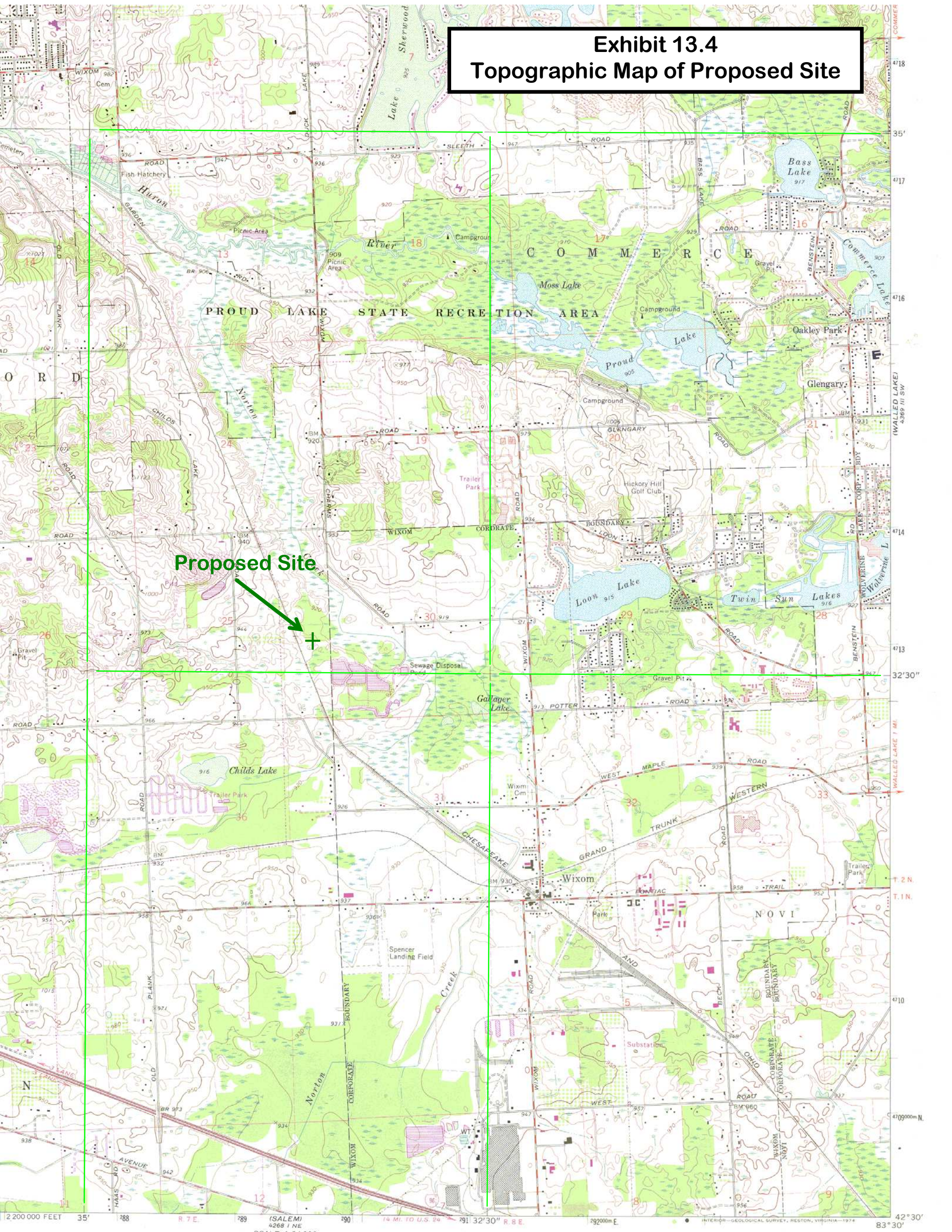
## Exhibit 13.3 Horizontal Plat of Antenna Array



The proposed ground system will consist of 120 buried copper radials, extending 64.61 meters (211.98 feet) in length, about the base of the four WCXI towers. Radials around the three remaining WPON towers need only be 51.33 meters (168.42 ft) in length. Radials will run the entire length except where shortened to terminate at property boundaries or at transverse copper straps running midway between the towers. The material used for the radial will be #10 AWG, soft drawn copper wire.

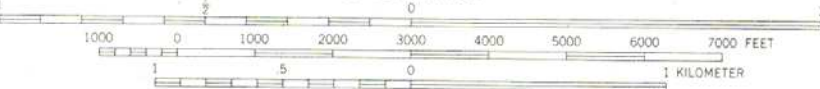


Exhibit 13.4  
Topographic Map of Proposed Site



Proposed Site

SCALE 1:24,000



CONTOUR INTERVAL 10 FEET  
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Primary highway, all weather, hard surface	Light-duty road, all weather, improved surface
Secondary highway, all weather, hard surface	Unimproved road, fair or dry weather
Interstate Route	

MILFORD, MICH.  
N4230-W8330/7.5

1969  
PHOTOREVISED 1973  
AMS 4269 II SE-SERIES V862

MUNN-RESE, INC.  
Broadcast Engineering Consultants  
Coldwater, MI 49036  
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THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



**Exhibit 13.5  
Photograph of  
Proposed Site**

**Proposed Site**



March 27, 1999

USGS

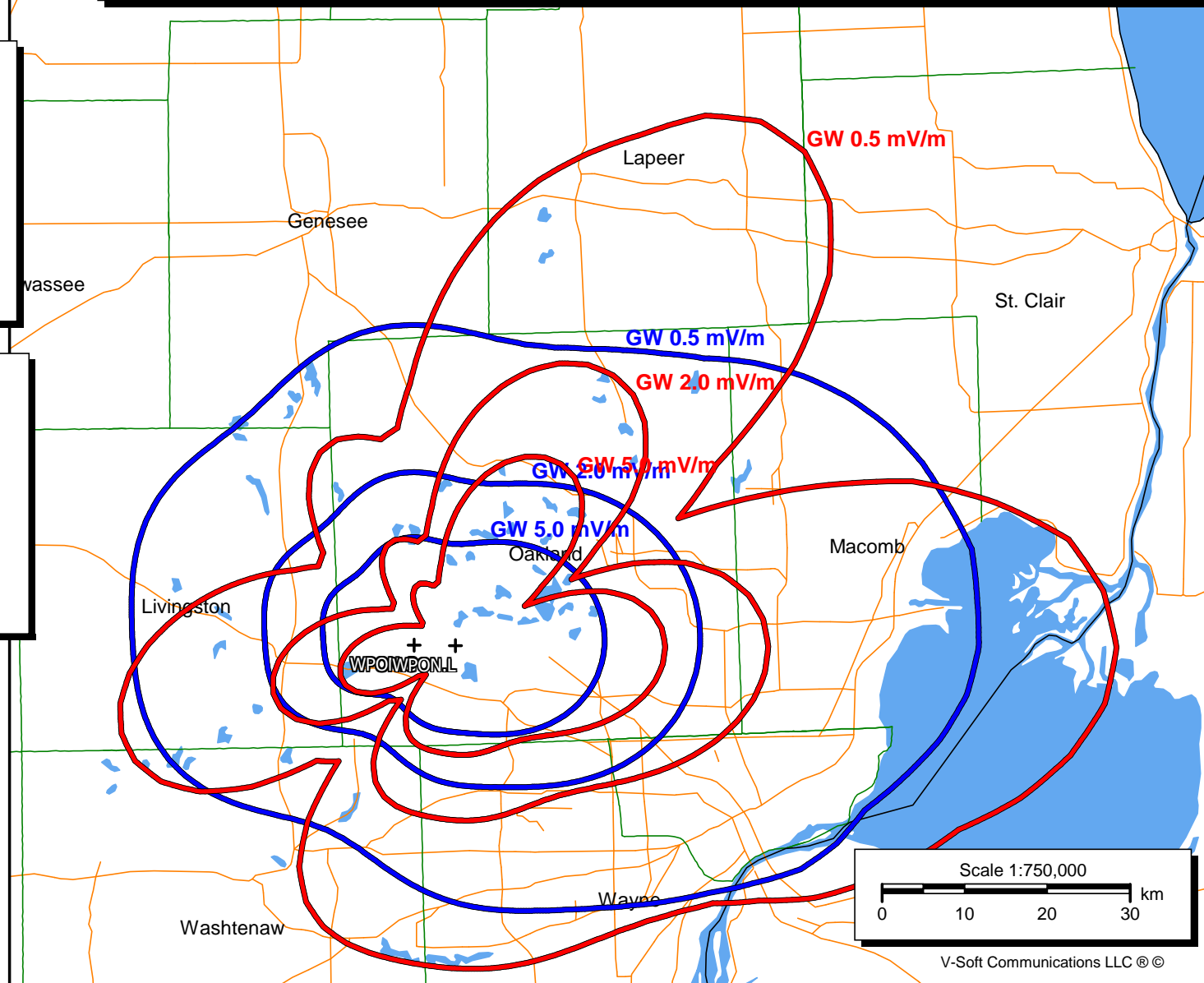
## Exhibit 13.6 - Present & Proposed Daytime Service Contour Study

### WPON.L

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-38 N  
Longitude: 083-29-58 W  
Power: 1 kW  
RMS: 299.07 mV/m @1km  
# Towers: 4  
# Augs: 0

### WPON.C

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-39 N  
Longitude: 083-33-36 W  
Power: 0.67 kW  
RMS: 235.827 mV/m @1km  
# Towers: 4  
# Augs: 0



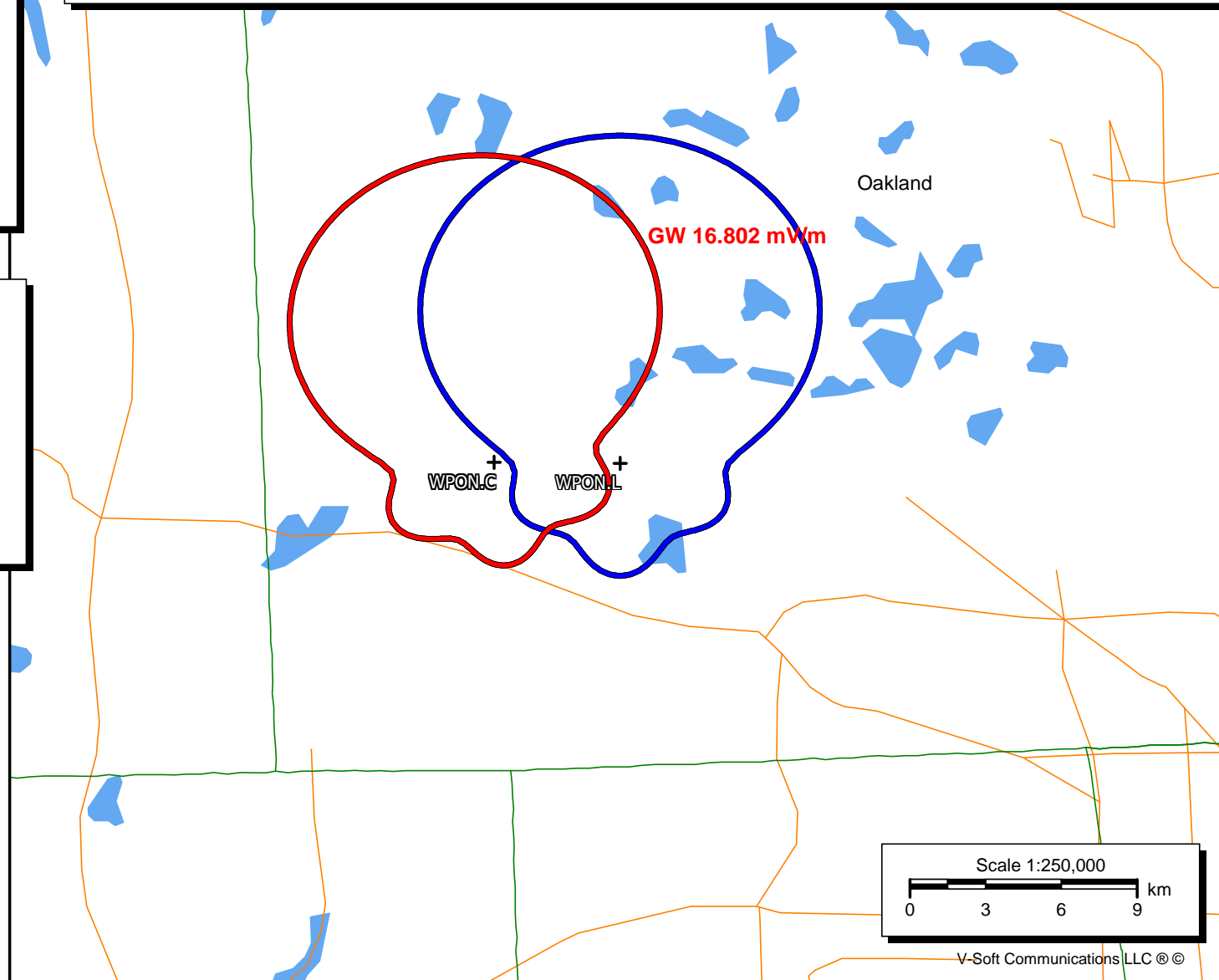
## Exhibit 13.7 - Present & Proposed Nighttime Service Contour Study

### WPON.L

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-38 N  
Longitude: 083-29-58 W  
Power: 0.76 kW  
RMS: 288.31 mV/m @1km  
# Towers: 3  
# Augs: 0

### WPON.C

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-39 N  
Longitude: 083-33-36 W  
Power: 0.58 kW  
RMS: 258.088 mV/m @1km  
# Towers: 3  
# Augs: 0





## Exhibit 13.8 - Proposed Day & Night 1.0 V/m "Blanket" Contour Study

WPON.C

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-39 N  
Longitude: 083-33-36 W  
Power: 0.58 kW  
RMS: 258.088 mV/m @1km  
# Towers: 3  
# Augs: 0

WPON.C

Freq: 1460 kHz  
Class: B  
Latitude: 42-32-39 N  
Longitude: 083-33-36 W  
Power: 0.67 kW  
RMS: 235.827 mV/m @1km  
# Towers: 4  
# Augs: 0

