

Comprehensive Technical Statement

Grundy County Broadcasters, Inc.

Minor Modification FM Translator

W225CY, FCC Facility ID # 201038, Morris, IL to Somonauk, IL

Waiver Requested: §74.1233(a)

Introduction

The following changes are proposed:

- Community
- Frequency / Channel
- Transmitter Location
- Effective radiated power
- Antenna type and model

Data Sources

Distances were calculated using the FCC method defined in 73.208 of the Commission's Rules.

All contours shown in this report were generated using antenna center above mean sea level, NAD-83 coordinates, and the USGS03 terrain dataset

Dates shown on the maps represent the last change date in the LMS downloads in use at the time this statement was prepared.

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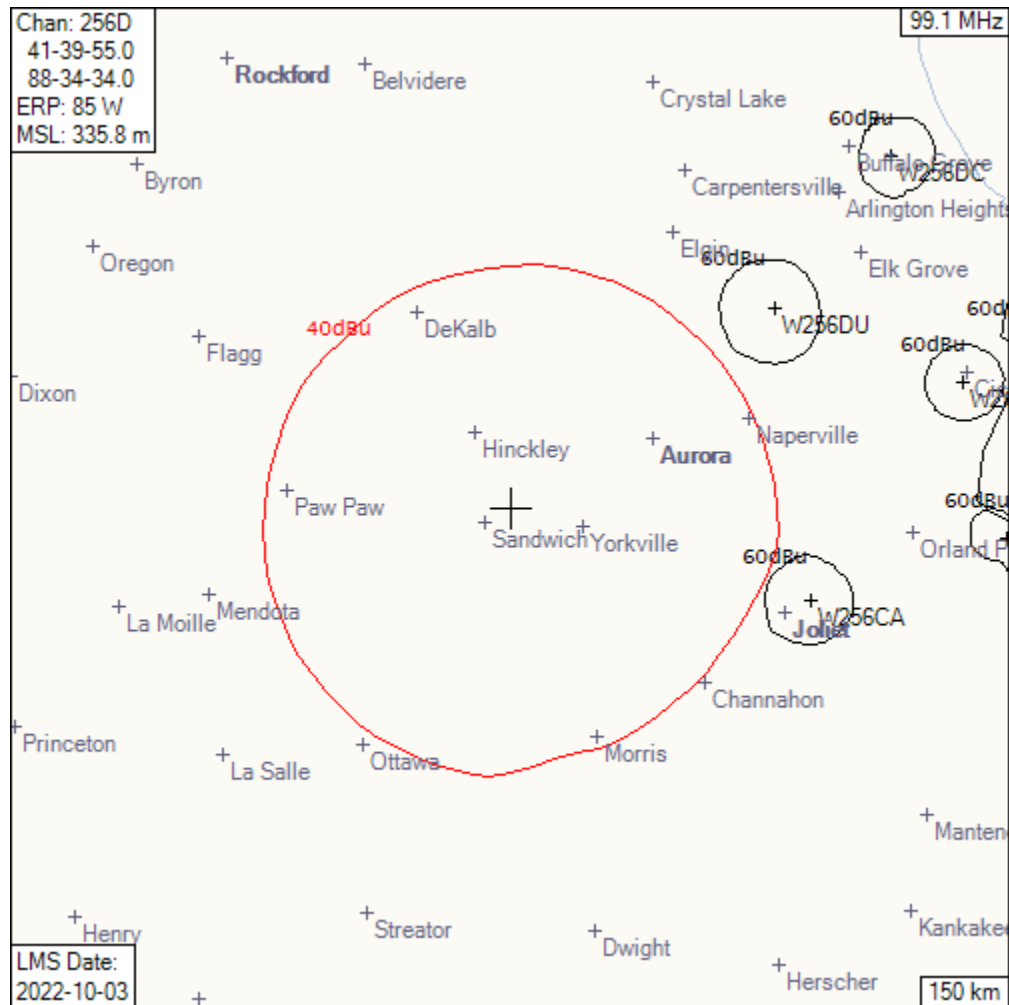
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Detailed Interference Study

The following collection of maps and the narrative accompanying each show that no prohibited overlap will occur between the proposed facility and any potentially conflicting facility or proposal. Interfering f(50,10) contours are shown as red polygons, and protected f(50,50) contours are shown as black polygons.

Map 1 – Co-channel Outbound Interference



There is no overlap of the interfering contour with the protected contour of any co-channel station or proposal.

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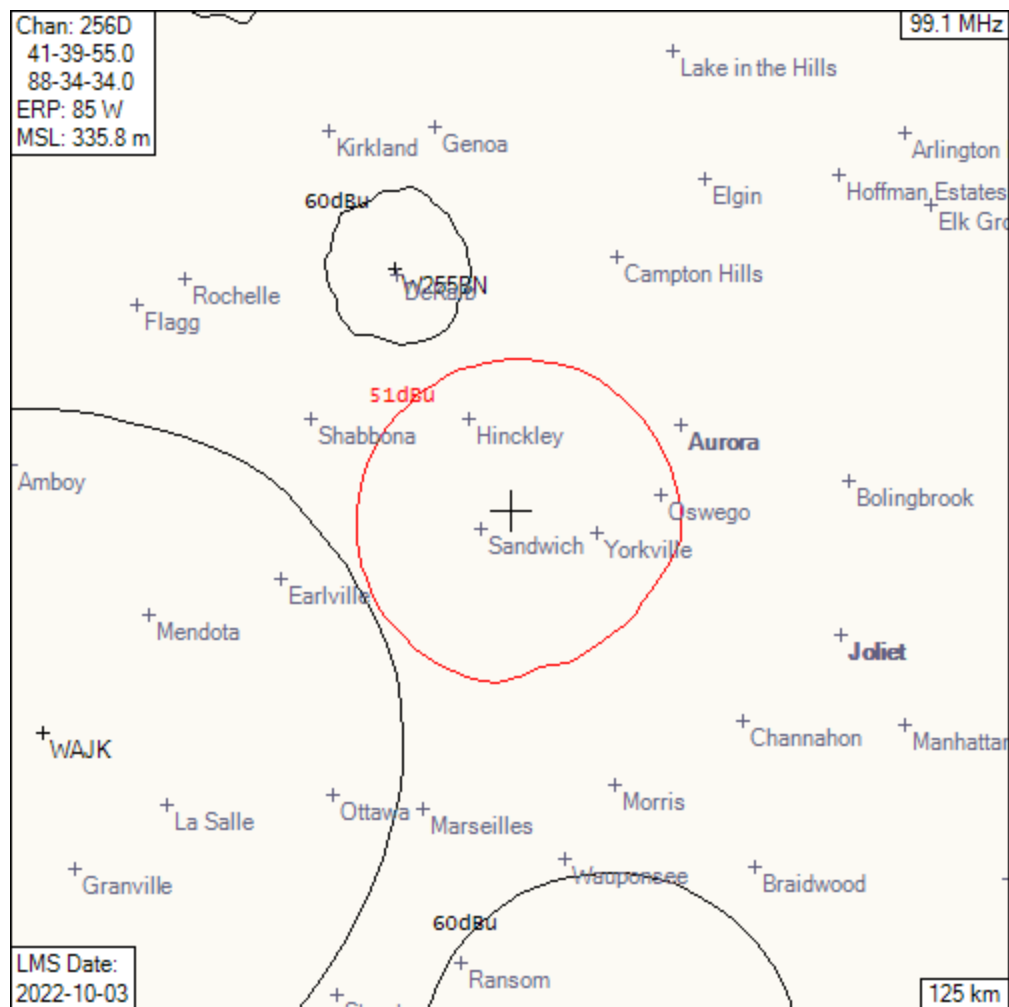
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Map 2 – First Adjacent Outbound Interference



There is no overlap of the interfering contours with the protected contour of any first-adjacent station or proposal.

WJJK is Class B1, protected to 57 dBu, and the interfering signal shown is 51 dBu. There will be no prohibited overlap.

W225BN is Class D and the interfering signal is 54 dBu. Since the 54 dBu contour is smaller than the 51 dBu contour, there will be no prohibited overlap with W225BN.

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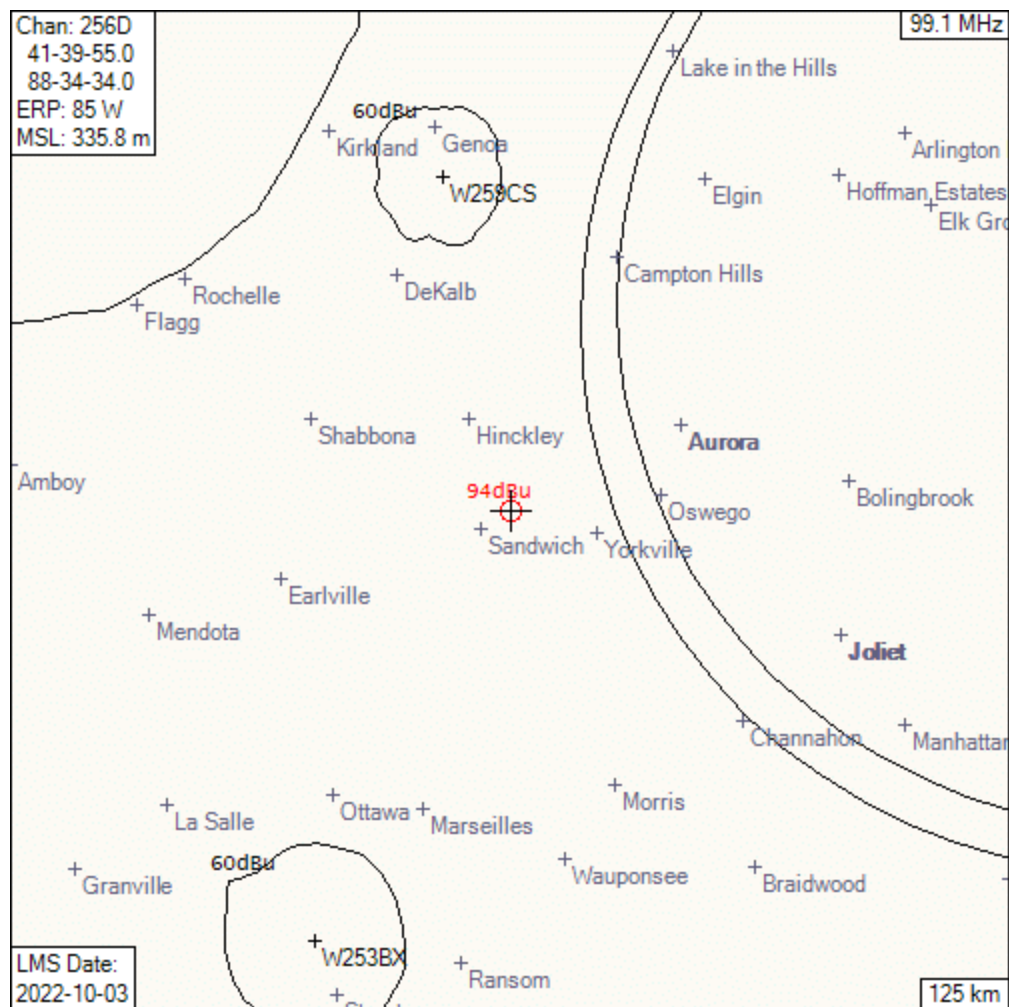
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Map 3 – Second/Third Adjacent Outbound Interference Detail



There is no overlap of the interfering contour with the protected contour of any second- or third-adjacent station or proposal.

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IF Separation requirements

There are no IF separation requirements for translators less than 100 W ERP.

Channel 6 Interference

The proposed facility is not on a channel that is implicated in channel 6 interference.

International

The FM Agreements with Canada and Mexico require evaluation and potential coordination of any proposal within 320 km of the border.

The distance to the nearest point along the US/Canada border is 451 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 1,753 km. Coordination with Mexico is not required.

Quiet Zones

The proposed site is outside the National Radio Quiet Zone (National Radio Astronomy Observatory Notification Area) in West Virginia.

The proposed site is outside the Arecibo Observatory notification area in Puerto Rico.

The proposed site is not within a 100 km extension of the Table Mountain Radio Receiving Zone in Colorado.

Protected Monitoring Stations

The nearest Protected Monitoring Station is 240 km distant, in Allegan, MI. This is well beyond any potential 80 dBu contour.

Minor Change – Waiver of §73.1233(a) Requested

W225CY was granted under the 2017 AM Improvement-New Translator Window. It is associated in perpetuity with the AM primary station bearing Facility ID # 17039. At the time of the application, this AM station was WCSJ, Morris, IL.

WCSJ (now WAUR) was relocated in 2022 to Somonauk, IL. LMS License application 131178 was granted on January 17, 2022.

Relocation of W225CY to Somonauk on the proposed frequency would be a major change under §73.1233(a).

However, since W225CJ is perpetually tied to WAUR, a waiver is requested to treat this application as a minor change. This would allow W225CY to make the same relocation as its primary station.

Further details on this waiver request are contained in a separate document attached to this application.

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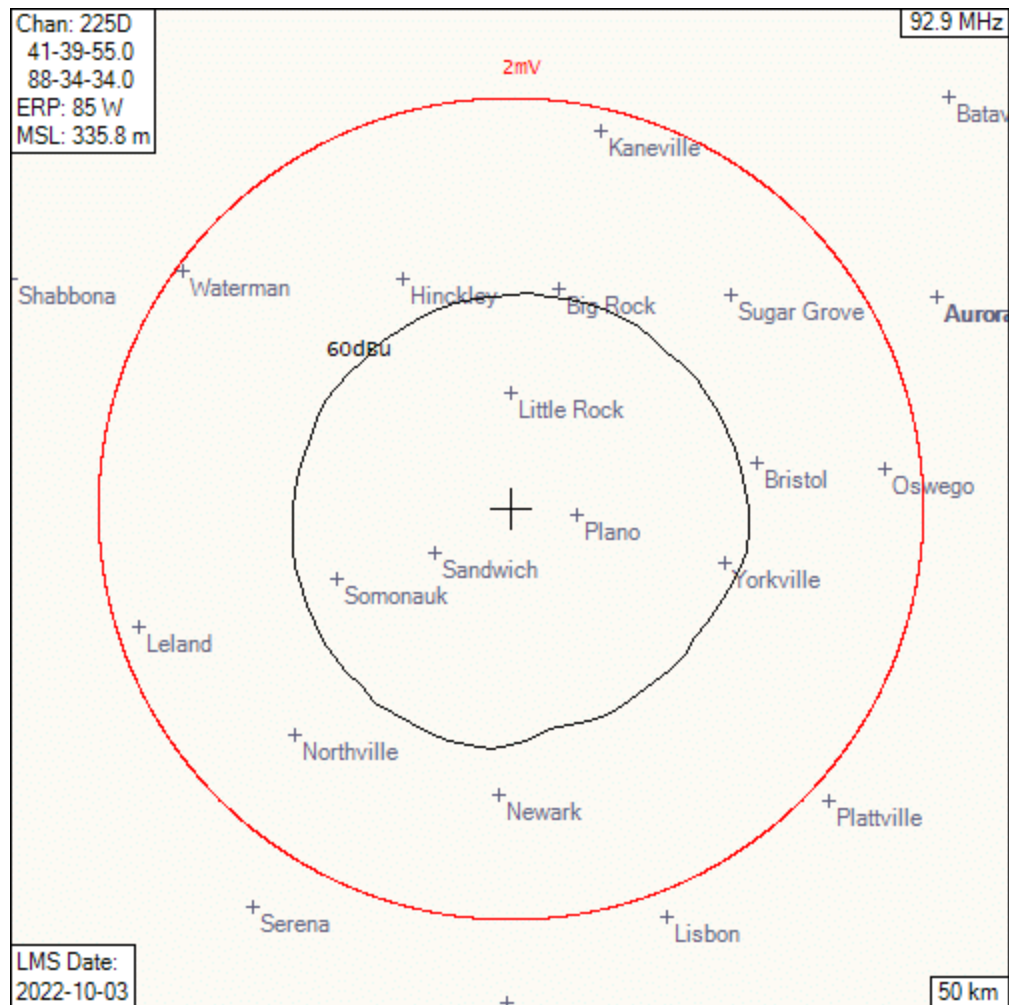
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Fill-In Translator



The proposed primary station is WAUR (AM), Somonauk, IL, FCC Facility ID # 17039.

The proposed 60 dBu f(50,50) contour is shown as a black polygon. The WAUR 2 mV/m contour is shown as a red polygon.

The proposed 60 dBu f(50,50) contour falls entirely within the 2 mV/m contour. The translator is commonly owned with the primary station. The proposal therefore qualifies as fill-in service.

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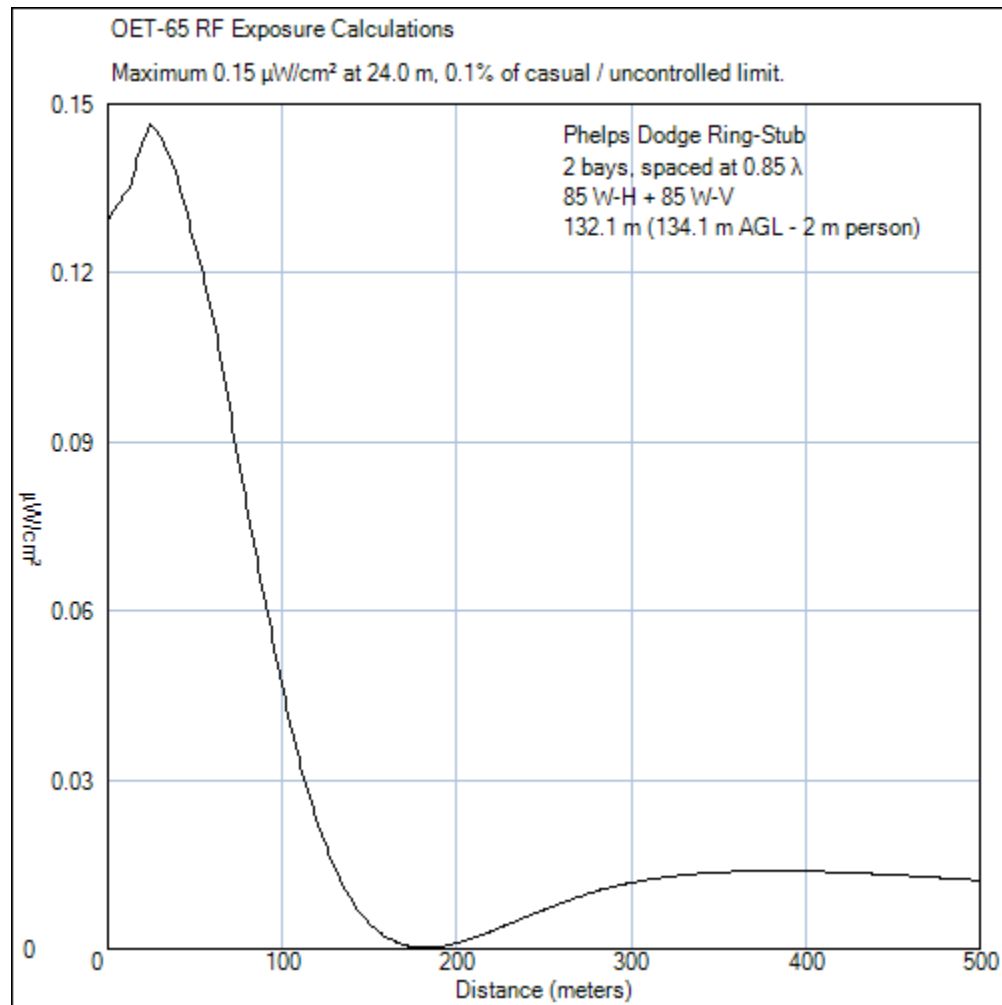
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Environmental

The proposed site is an existing tower, ASR # 1010527. No construction, excavation, or increase to the height of the tower is proposed.

The proposed effective radiated power is 85 W-H + 85 W-V. The two-bay antenna will be mounted 134.1 m above ground level. Assuming the worst-case OET Type 1 antenna model, the OET-65 algorithm returns a maximum exposure of less than 1% of the limit for casual / uncontrolled exposure:



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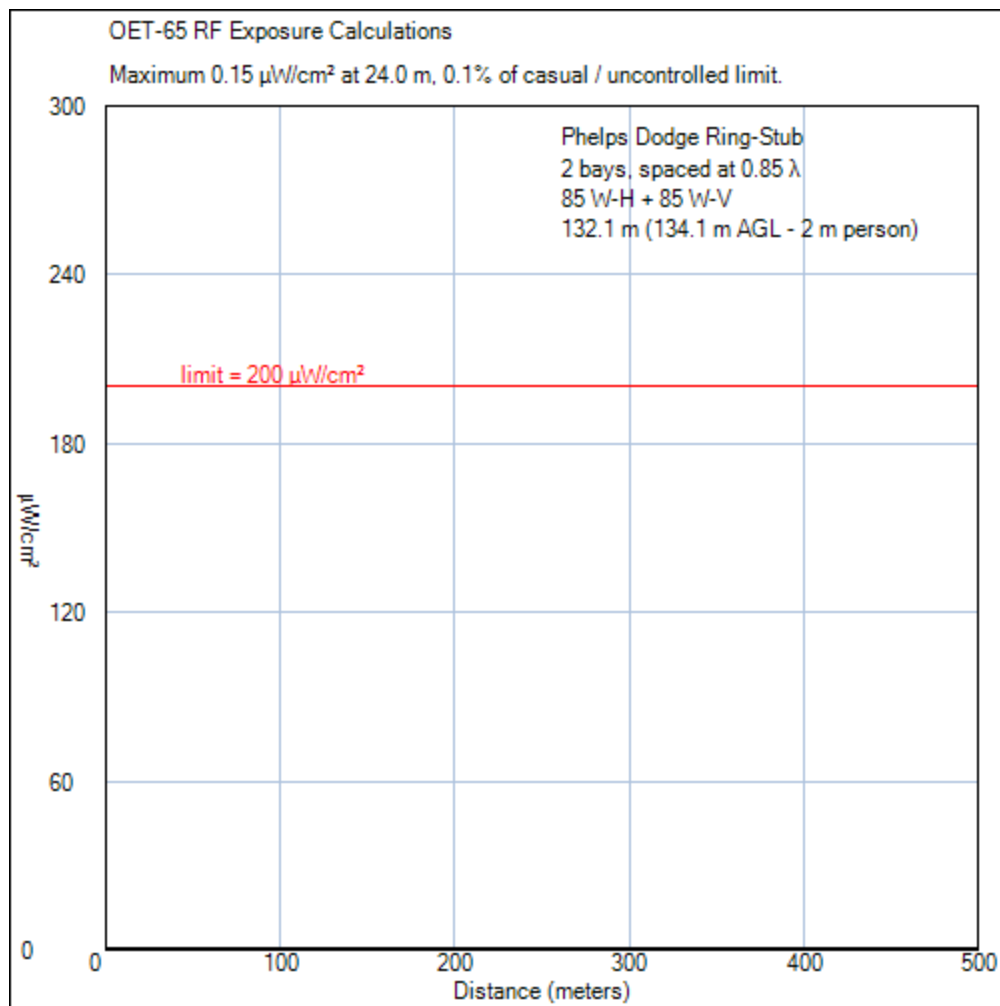
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Appropriate access controls and safety signage are provided. The applicant agrees to coordinate with other users of the site to reduce power or shut down in order to protect workers at the site.

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LMS Engineering Data

Channel	256
Coordinates (NAD-83)	41 39 55.0 N Lat 88 34 34.0 W Lon
ASR	1010527
Overall Tower Height AGL	151.7 m
Site Elevation AMSL	201.7 m
Radiation Center AGL	134.1 m
Effective Radiated Power	85 W-H + 85 W-V
Antenna type	(Non-) Directional
Primary Station	Call Sign WAUR (AM) Facility ID 17039 City, State Somonauk, IL
Delivery Method	Other (Terrestrial) or as appropriate
Antenna	
Manufacturer	Nicom
Model XXXXXX	BKG-77
# Sections	2
Section spacing	0.85λ

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