

Comprehensive Technical Statement

In support of

Faith Sound, Inc.

Application for Minor Change for FM Translator W206BA

99.7 MHz, Channel 259, FCC Facility ID # 93090

Wabasha, MN

Introduction

Faith Sound, Inc. proposes to make the following changes to W206BA in order to rebroadcast WBHA (AM), Wabasha, MN, FCC Facility ID # 54624:

- Frequency / Channel
- Transmitter Location
- Antenna Height
- Effective Radiated Power
- Primary Station

This document provides all technical information required to support the application.

Data Sources

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

Except where otherwise noted, contours shown in this report were generated using antenna center above mean sea level, NAD-27 coordinates, and the FCC online HAAT calculator, which uses 30-second terrain data.

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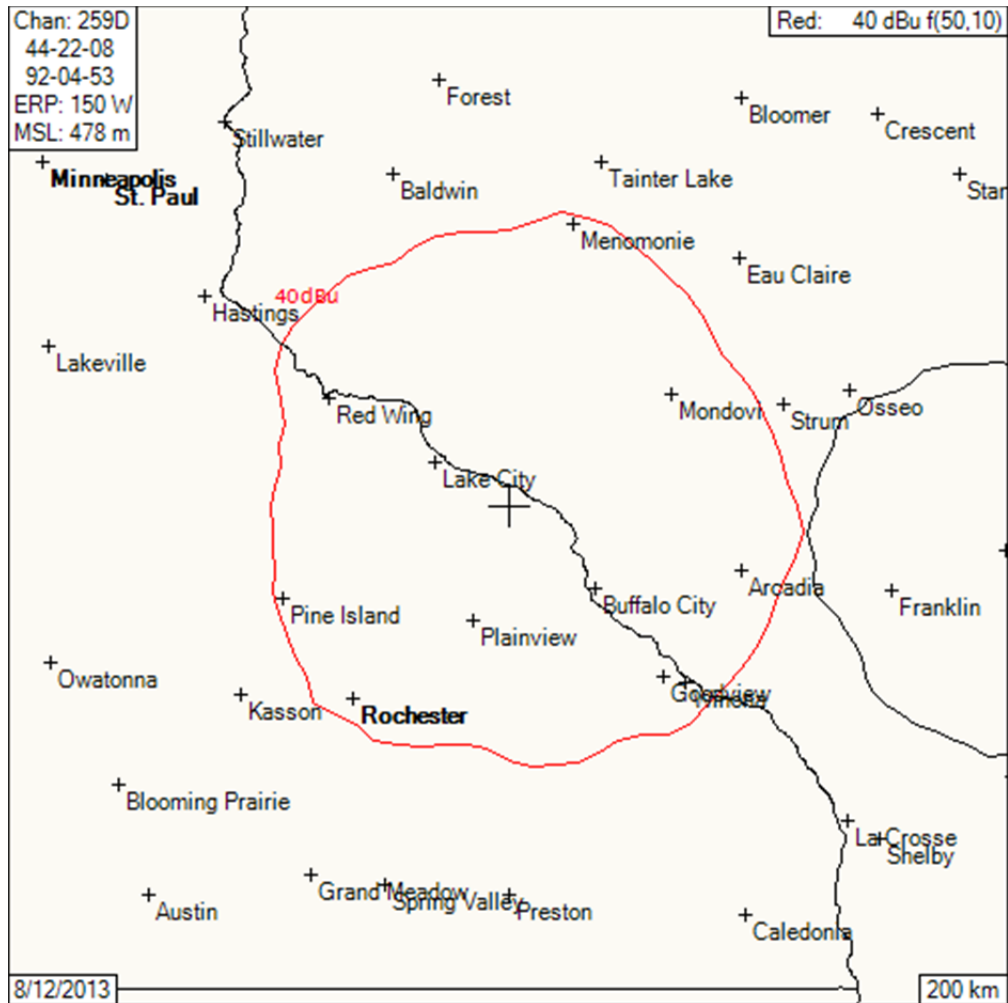
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Detailed Interference Study

The following collection of maps and the narrative accompanying each show conclusively that no prohibited overlap will occur between the proposed facility and the conflicts listed in the allocation study.

Map 1 – Co-channel Outbound Interference



The only nearby conflict is WWIS, a Class C3 station protected to its 60 dBu f(50,50) contour, shown in black.

The proposed 40 dBu f(50,10) contour, shown in red, does not overlap the WWIS 60 dBu f(50,50) contour.

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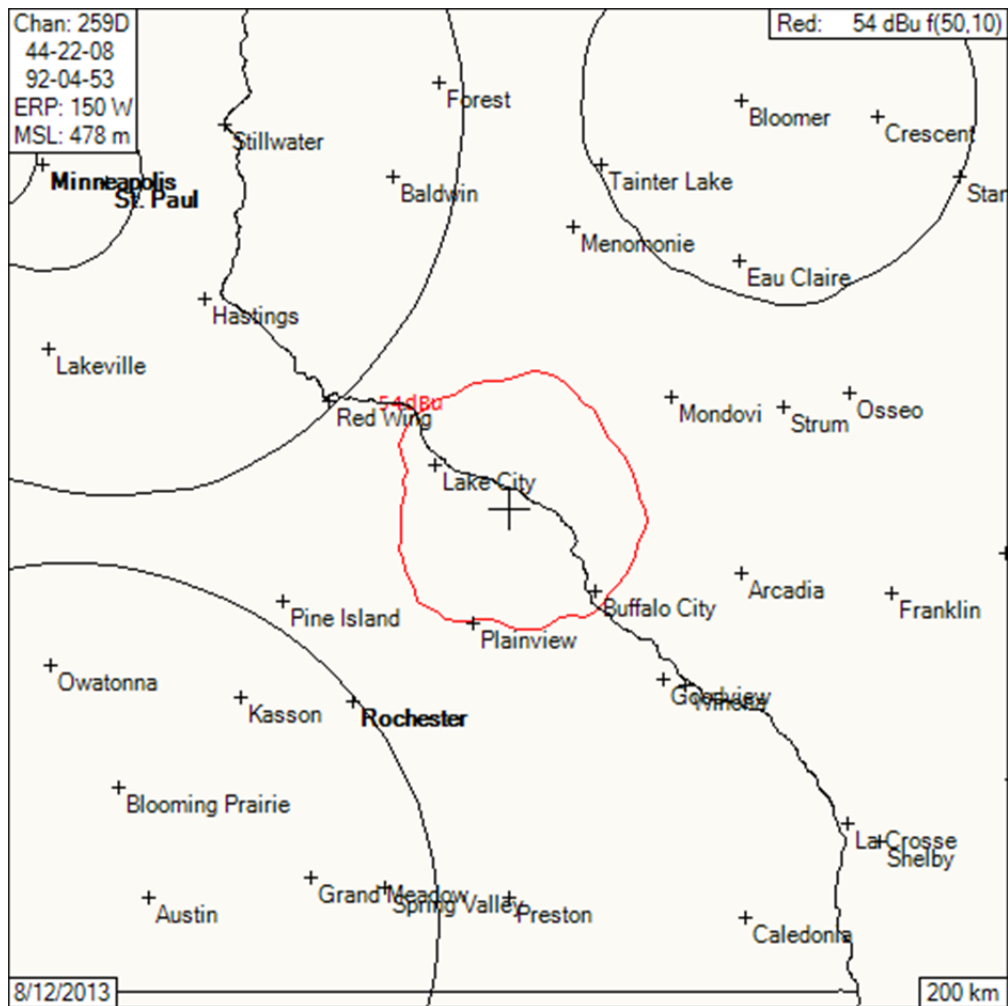
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Map 2 – First Adjacent Outbound Interference



The proposed 54 dBu f(50,10) contour, shown in red, does not overlap the protected 60 dBu f(50,50) contour (shown in black) of any nearby conflict.

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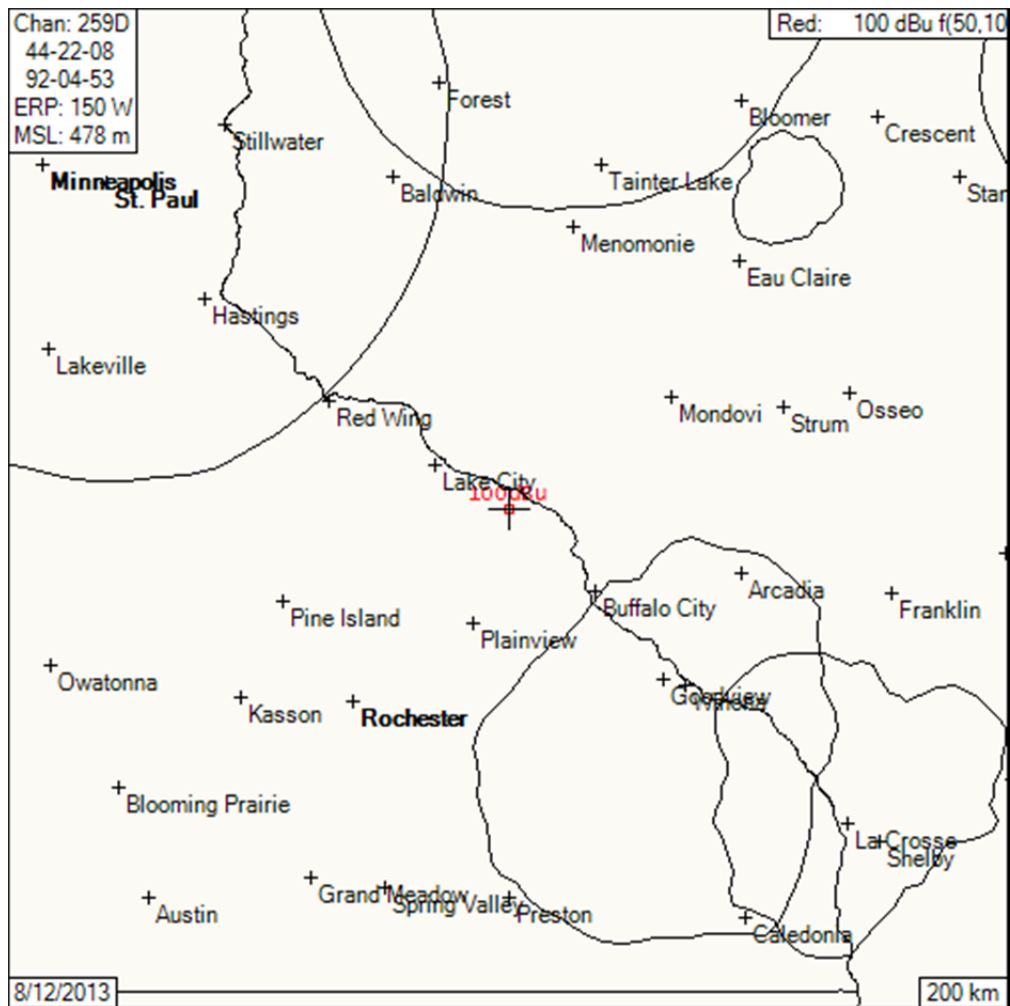
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Map 3 – Second/Third Adjacent Outbound Interference Detail



The proposed 100 dBu f(50,10) contour (shown in red) does not overlap the protected 60 dBu f(50,50) contour (shown in black) of any nearby conflict.

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IF Separation requirements

The nearest IF-separated conflict is more than 70 km from the proposed site. The application is treated as Class A. The maximum required separation (Class A to Class C) is 48 km. Therefore, the proposal meets the IF separation requirements.

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 410 km. Coordination with Canada is not required.

The distance to the nearest point along the US/Mexico border is 1,818 km. Coordination with Mexico is not required.

Quiet Zones and Monitor Stations

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.

The nearest Protected Monitoring Station is 531 km distant, in Allegan, MI.

Transmitter Location

The proposed transmitter location is a developed communications site.

The proposed tower bears ASR # 1057639. Modern surveying techniques have determined that the coordinates of record for this tower are incorrect. The tower owner has committed to correcting the tower data expeditiously. The applicant understands that a grant of its application may be dependent upon correction of the coordinates of the tower.

Form 349 Tech Box Data

Channel	259
Primary Station	Facility ID 54624 WBHA (AM) Wabasha, MN
Delivery Method	Other (direct feed from studio)
Coordinates (NAD-27)	44 22 08 N Lat 92 04 53 W Lon
Coordinates (NAD-83)	42 22 07.9 N Lat 92 04 53.8 W Lon
ASR	1057639
Site Elevation AMSL	361 m
Overall Tower Height AGL	123 m
Radiation Center AGL	117 m
Effective Radiated Power	150 W-H + 150 W-V
Antenna type	Omnidirectional
Manufacturer / Model	SHI 6812B-2-FW

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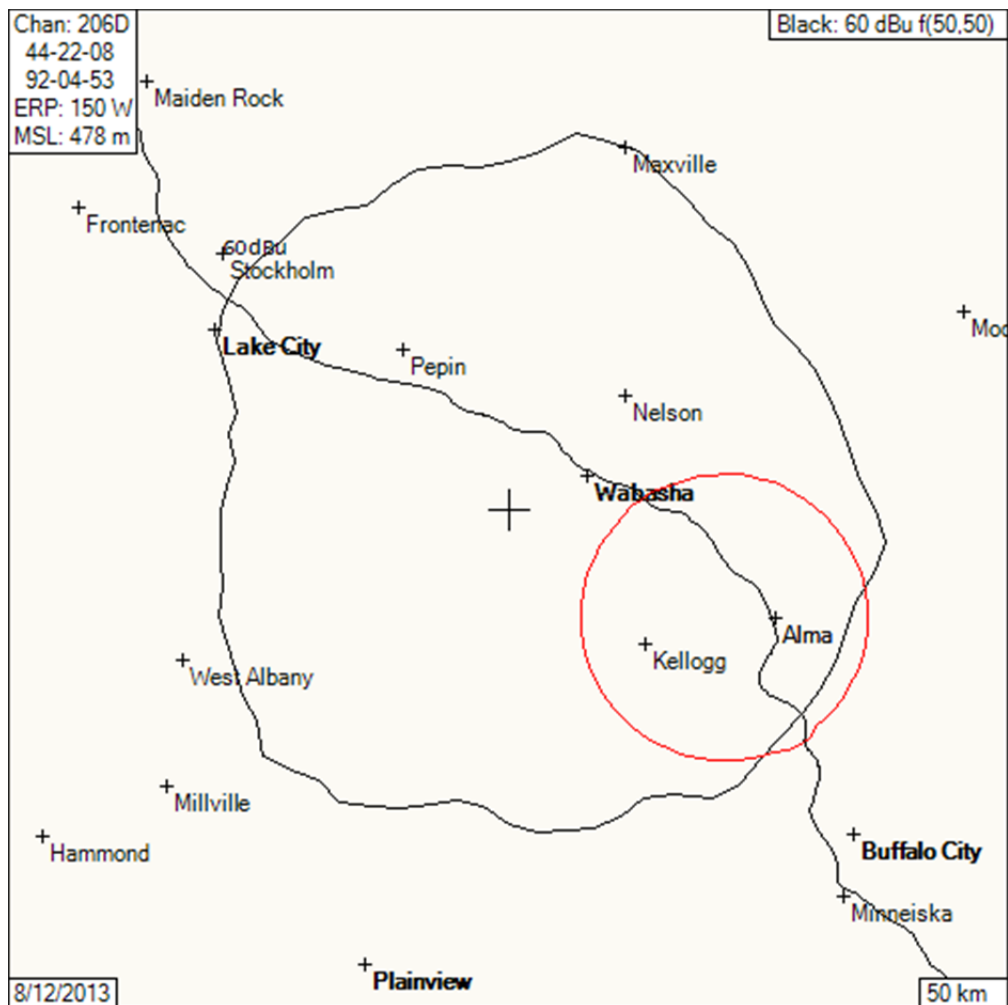
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Minor Change



The proposed 60 dBu f(50,50) contour (shown in black) overlaps the licensed 60 dBu f(50,50) contour (shown in red). The proposed frequency change is from channel 206 to channel 259, an IF change of 53 channels. Therefore, the proposal is for a minor change.

Band-Hopping

The proposed change would move the facility from the reserved band to the non-reserved band. Such changes are only allowed when the facility has been operating on its current band for at least two years.

W206BA operates under license BLFT-20080817ABP, granted on 11/17/2000. It is clear that the subject facility has been authorized for more than two years on its current channel.

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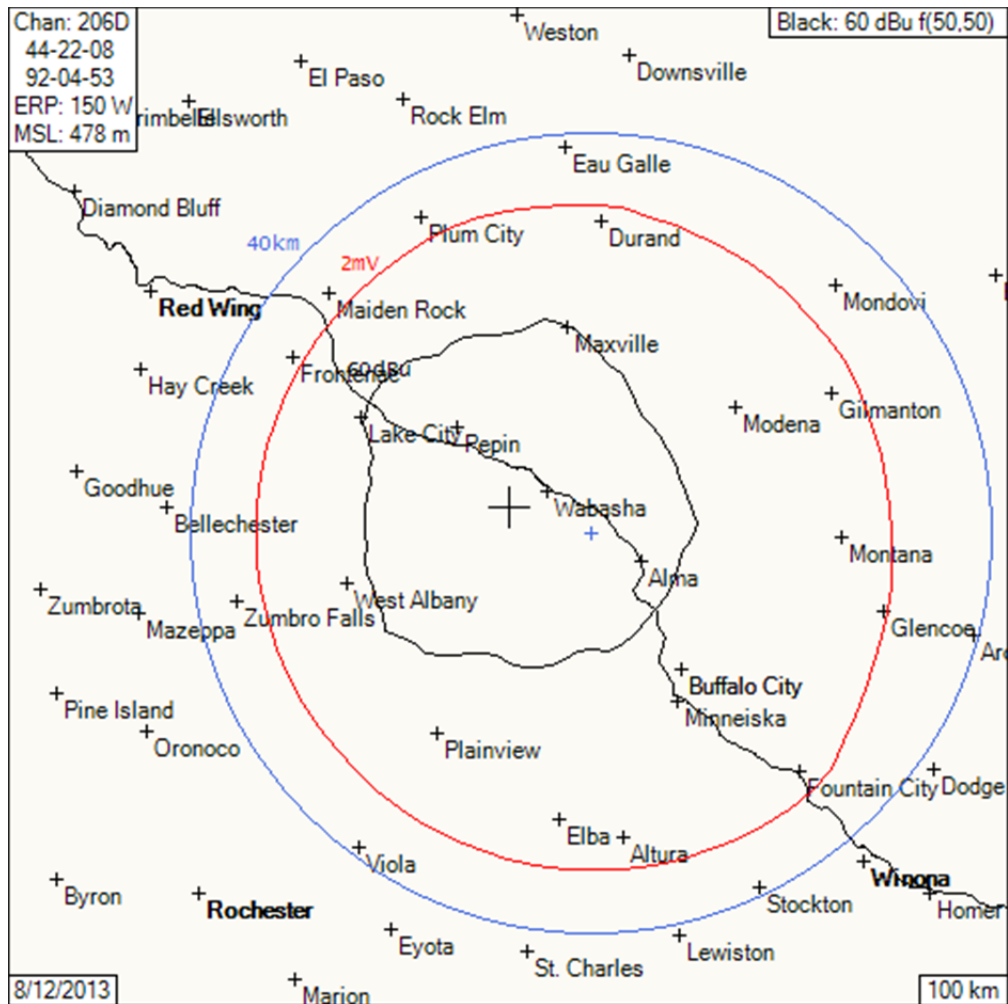
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Fill-In Translator

The proposed primary station is WBHA (AM), FCC Facility ID # 54624:



The proposed 60 dBu f(50,50) contour, shown in black, is entirely contained within the 2 mV/m contour of WBHA, shown in red, and a 40 km circle from the WBHA transmitter, shown in blue.

The proposal is therefore for fill-in service for WBHA (AM).

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RF Exposure

Given the proposed ERP of 150 W-H + 150 W-V and the proposed antenna center of 117 m AGL, the proposed Shively 6812-2-FW antenna will provide a maximum exposure of $0.1 \mu\text{W}/\text{cm}^2$, a very small fraction of the allowable limit of $200 \mu\text{W}/\text{cm}^2$.

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.

LPFM Preclusion

The proposed site is not within any grid extension of any LPFM "Appendix A" market:



An all-channel study of the proposed transmitter site indicates that more than 10 LPFM channels are available at the site.

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