

NCE-FM Engineering Standards and Assignment Compliance

The purpose of this application is to increase the WRTK(FM) antenna height and increase Effective Radiated Power (ERP) using a directional transmitting antenna. No transmitter site change is proposed herein.

- Contour Overlap Requirements 47 C.F.R. Section 73.509

A complete noncommercial educational (NCE-FM) allocation study was performed in accordance with Section 73.509 of the FCC Rules to ensure that the proposed operation would neither cause nor receive prohibited overlap with respect to any licensed noncommercial broadcast facility, outstanding construction permit, or pending application. Exhibit 1, Exhibit 2 and Exhibit 3 illustrate the lack of co-channel and first-adjacent channel and second-adjacent channel station overlap, respectively. All other relevant noncommercial educational FM facilities not represented in the attached Exhibits are well clear of the instant proposal.

- Community of License Coverage Requirements 47 C.F.R. Section 73.515

Attached as Exhibit 4 is a map which depicts the proposed 1.0 mV/m (60 dBu) F(50,50) NCE-FM principal community coverage contour. As illustrated in Exhibit 4, the proposed principal community coverage contour covers the entire community of license. Therefore, the instant proposal is compliant with Section 73.515 of the FCC Rules.

- Spacing Requirements 47 CFR Section 73.207

An intermediate frequency (IF) allocation study was performed considering existing stations, proposed stations and allocations on channels 53 and 54 channels removed from the proposed channel of operation. The study revealed that the instant proposal satisfies the minimum distance separations specified for IF-related stations in Section 73.207 of the FCC Rules.

- Television Channel 6 Protection 47 CFR Section 73.525

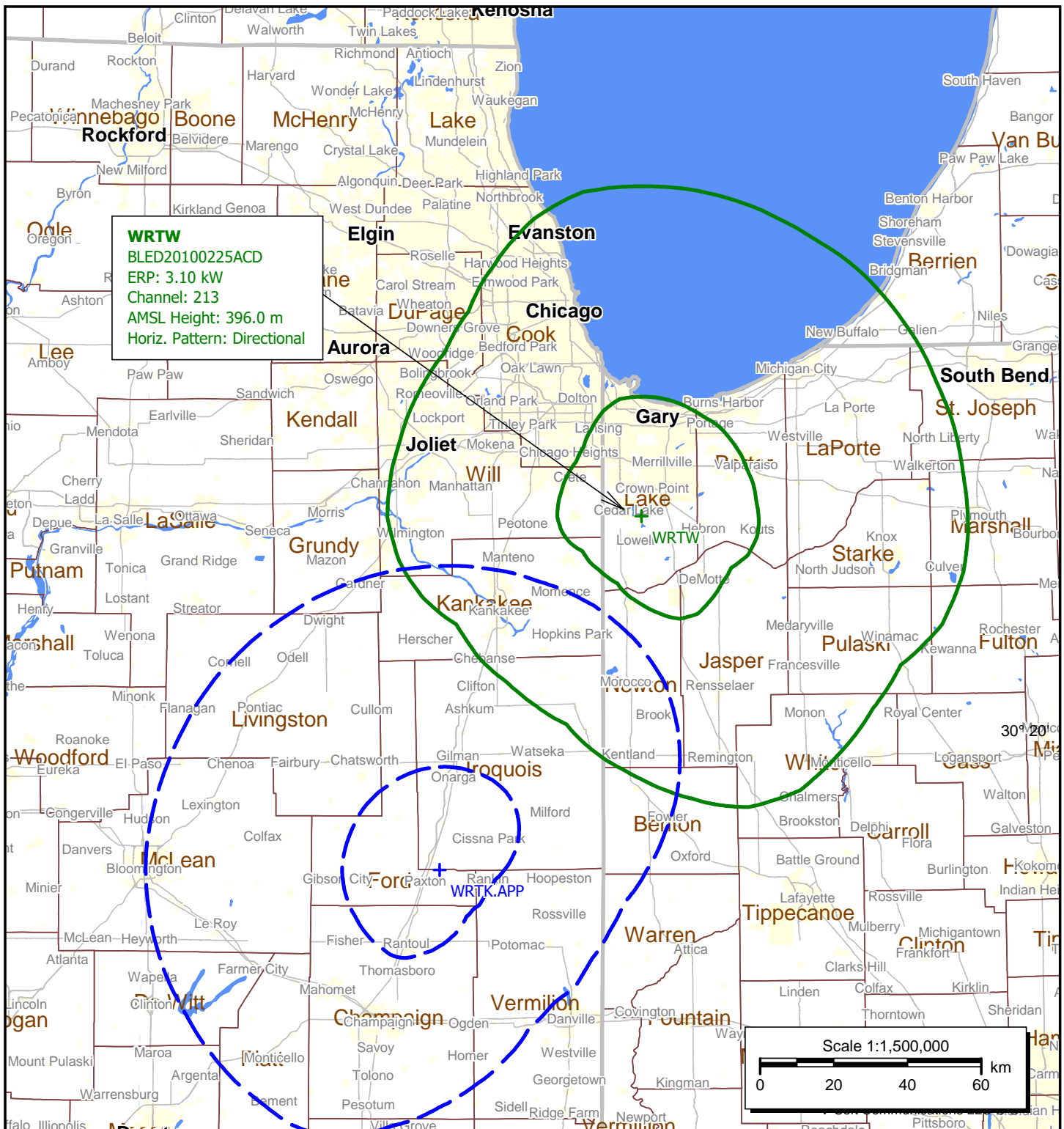
There are no affected television channel six stations within the distances prescribed in Section 73.525(a) of the FCC Rules.

Section 73.509 CoChannel Study Contours

Protected: 60 dBu F(50,50) - Inside Contours

Interfering: 40 dBu F(50,10) - Outside Contours

Exhibit 1



Section 73.509 Cochannel Overlap Study

WRTK(FM), Paxton, IL

LIC: Ch. 213A, 1.7 kW ERP, 52 m HAAT

APP: Ch. 213A, 3.0 kW ERP (DA-MAX), 128 m HAAT

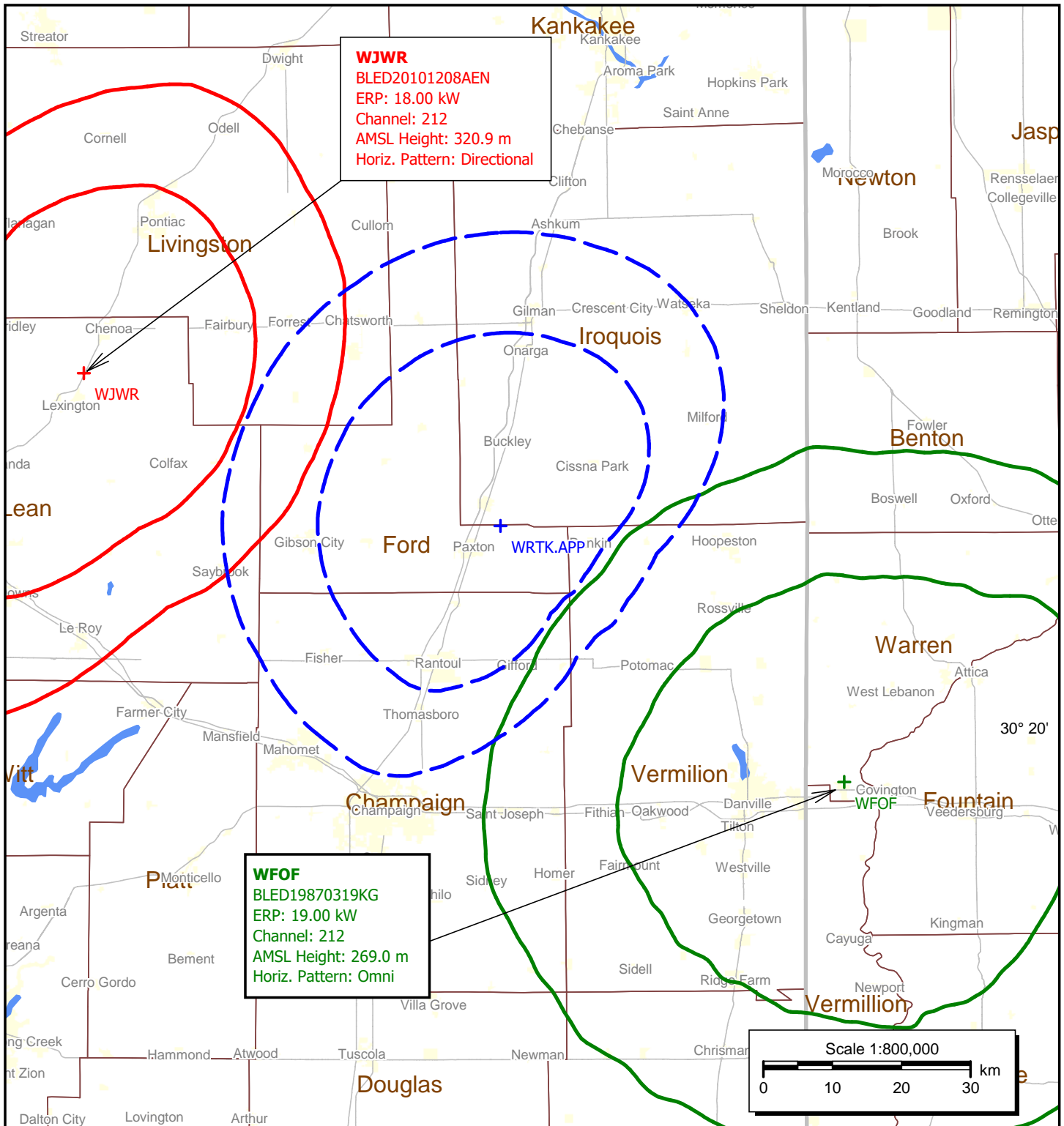
September, 2023

Section 73.509 First-Adjacent Channel Study Contours

Protected: 60 dBu F(50,50) - Outside Contours

Interfering: 54 dBu F(50,10) - Inside Contours

Exhibit 2



Section 73.509 First-Adjacent Channel Overlap Study

WRTK(FM), Paxton, IL

LIC: Ch. 213A, 1.7 kW ERP, 52 m HAAT

APP: Ch. 213A, 3.0 kW ERP (DA-MAX), 128 m HAAT

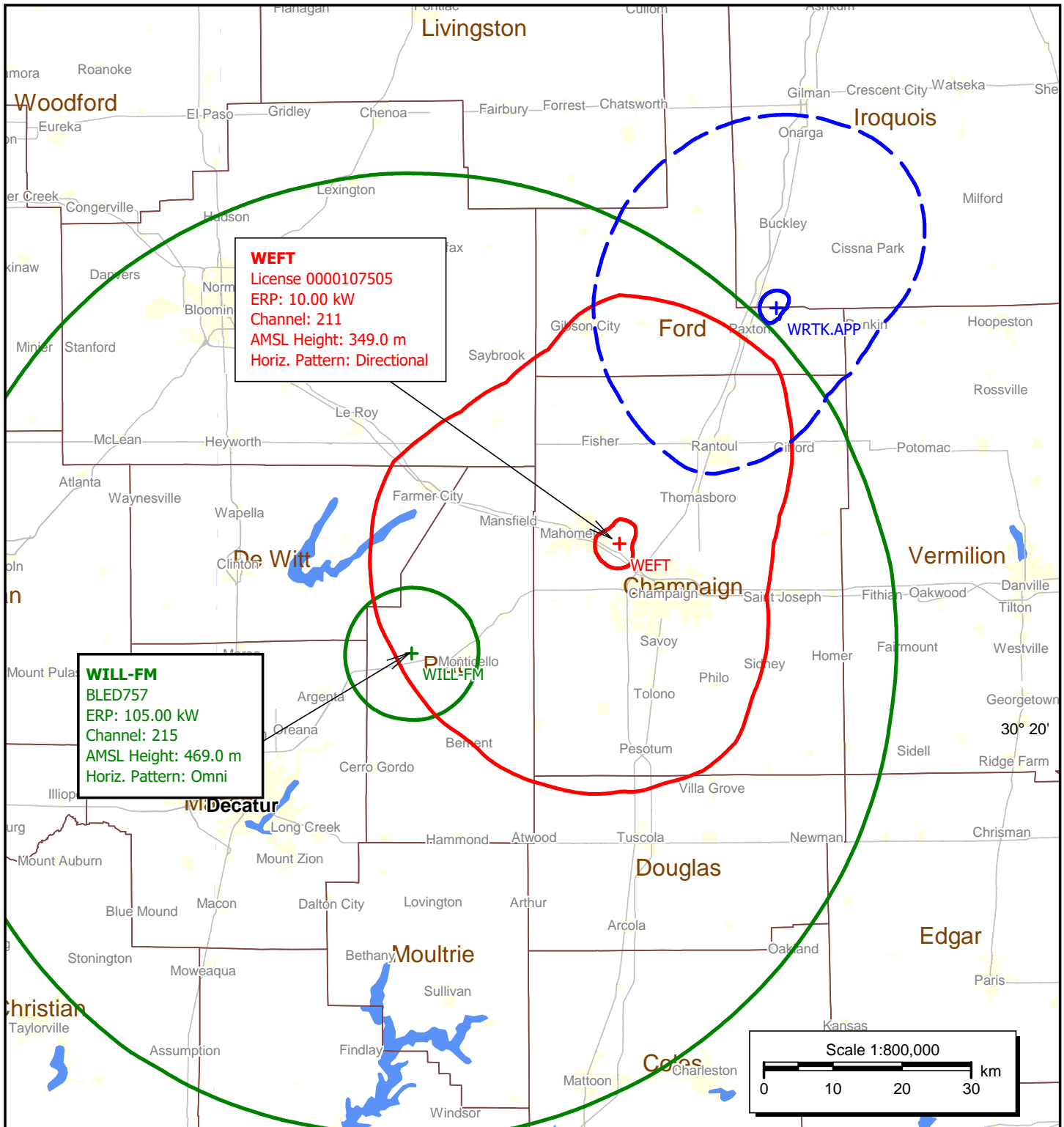
September, 2023

Section 73.509 Second/Third-Adjacent Channel Study Contours

Protected: 60 dBu F(50,50) - Outside Contours

Interfering: 100 dBu F(50,10) - Inside Contours

Exhibit 3



Section 73.509 Second/Third-Adjacent Channel Overlap Study

WRTK(FM), Paxton, IL

LIC: Ch. 213A, 1.7 kW ERP, 52 m HAAT

APP: Ch. 213A, 3.0 kW ERP (DA-MAX), 128 m HAAT

September, 2023

The 60 dBU contour depicted encompasses Paxton, IL, the WRTK community of license, in compliance with §73.515.

Exhibit 4

