Proposed Minor Amendment to CP for W287DJ (W279EK)

at Middletown, CT

File No. 185753 ♦ Facility ID 201173

Technical Statement

Overview

This application proposes a minor modification of the above-captioned construction permit. It proposes an increased ERP and use of a directional antenna, coincident with the cancellation of the unbuilt CP for W261BU (W279EE) at Hartford, CT (Facility ID 92957), also on Channel 279.

Section 74.1204 Study

The following facilities were studied:

Call Sign	C	ST	City	Freq.	ERP	CLS	Status	D
W277DT	1	CT	HARTFORD	103.3	250.0	D	LIC	28.70
WNHH-LP	1	CT	NEW HAVEN	103.5	100.0	LP100	LIC	23.64
WONH-LP	1	CT	NEW HAVEN	103.5	100.0	LP100	LIC	24.24
WSIM-LP	2	CT	SIMSBURY	103.5	100.0	LP100	LIC	43.70
WPWL-LP	1	NY	PAWLING	103.7	2.0	LP100	LIC	75.00
W279EK CP	5	CT	MIDDLETOWN	103.7	4.0	D	CP	0.00
Proposed	6	CT	MIDDLETOWN	103.7	250.0	D	APP	0.00
W279CI	1	CT	DANBURY	103.7	250.0	D	LIC	60.49
WVEI-FM	1	RI	WESTERLY	103.7	37000.0	B	LIC	93.19
WMRQ-FM	1	CT	WATERBURY	104.1	14000.0	B	LIC	9.76
W287DJ	4	CT	MIDDLETOWN	105.3	250.0	D	LIC	11.84
WMRD	1	CT	MIDDLETOWN	1150.0	2500.0	D	LIC	11.65

Figures 1 and 2 illustrate the absence of prohibited overlap between the proposed translator interfering contours and the pertinent service of each of these facilities except for WMRQ-FM. (Key: same colors may not overlap.)

Therefore, the applicant respectfully requests a waiver pursuant to 74.1204(d) as described below.

WMRQ-FM places a 89 dBu service contour over the proposed site (blue in Figures 1 and 2.) The Commission has generally considered overlap from a proposed translator interfering contour to be acceptable where the ratio of undesired to desired signal (U/D) does not exceed 40 dB i.e. where in this case the proposed translator F(50,10) interfering signal does not exceed 129 dBu.

Interference Protection

The proposed translator facility will operate with an ERP of 0.25 kW (H-only). For an ERP of 0.25 kW, the distance to the 129 dBu F(50,10) contour in free space is 39 meters.

As shown in Figure 3, no roads, businesses or residences are within a 39 meter radius of the antenna mounting structure.

The applicant therefore believes its application meets the requirements of Section 74.1204(d) with respect to "other factors" insuring no actual interference to WMRQ-FM. Should any actual interference occur, the applicant will take the required steps to eliminate it.

Environmental Considerations

The antenna will be mounted on an existing pole with no physical changes proposed. RFR compliance was determined through the use of the Commission's online FM Model program (See Figure 4.) The proposed mounting structure is surrounded by a chain link fence topped with barbed wire. The applicant will cease operation or reduce power as necessary, in order to prevent uncontrolled or controlled exposure in excess of the guidelines of OET-65.

Respectfully submitted,

Dennis Jackson
Technical Consultant
February 10, 2023

Figure 1

74.1204 Study and Fill-In Status

No prohibited overlap is created except to WMRQ-FM.

Proposed service contour (green) does not exceed 25 miles (gray circle) from Primary AM site and overlaps the W287DJ licensed and CP (W279EK) service contours (both thin green). (Key: Same colors may not overlap.)

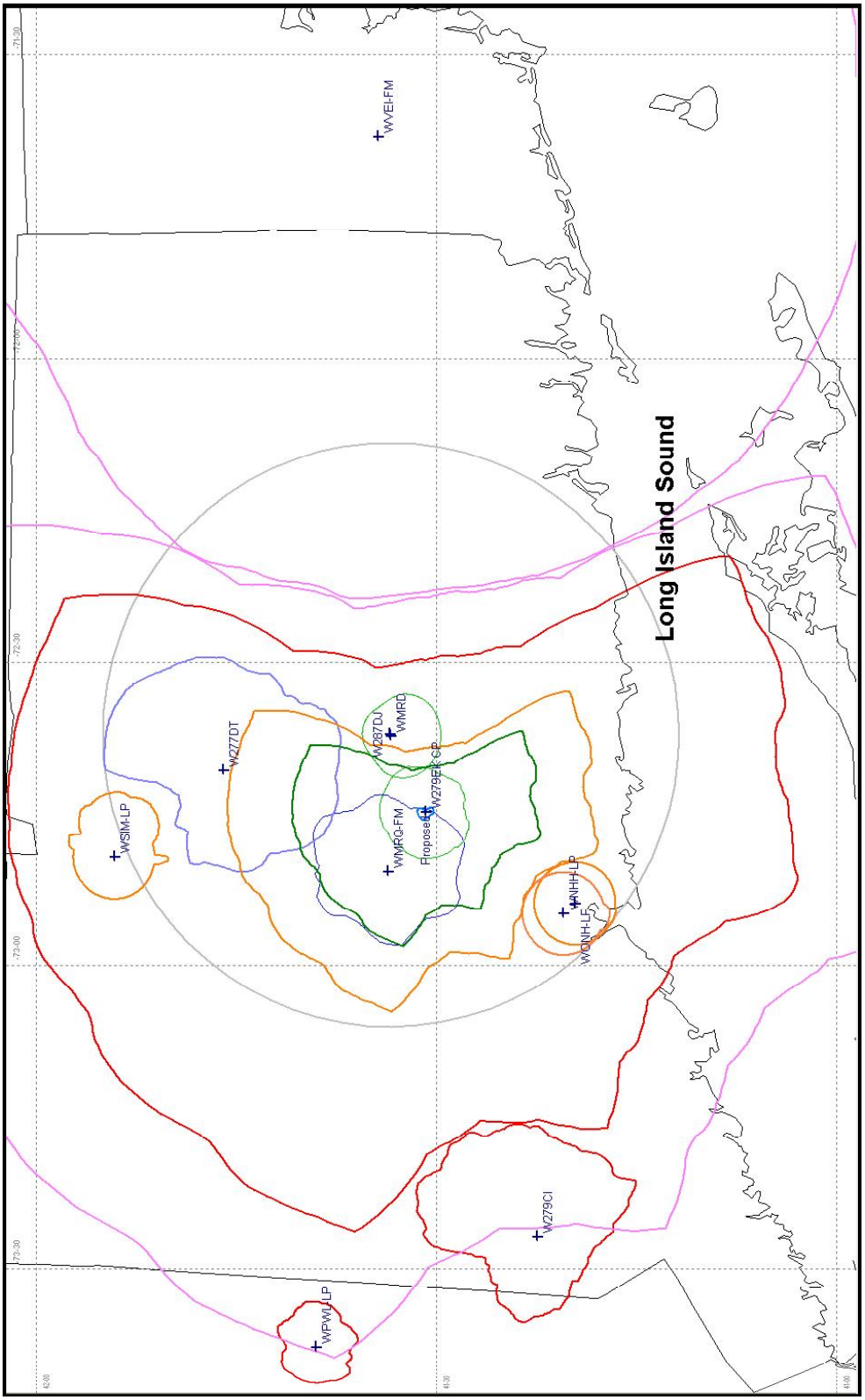

Figure 2

74.1204 Study and Fill-In Status - Closeup

Second adjacent WMRQ places an 89 dBu service contour over site (dark blue.)

No other prohibited overlap is created. (Key: Same colors may not overlap.)

Proposed service contour (green) does not exceed 25 miles (gray circle) from Primary AM site and overlaps the licensed W287DJ service contour. (both green).

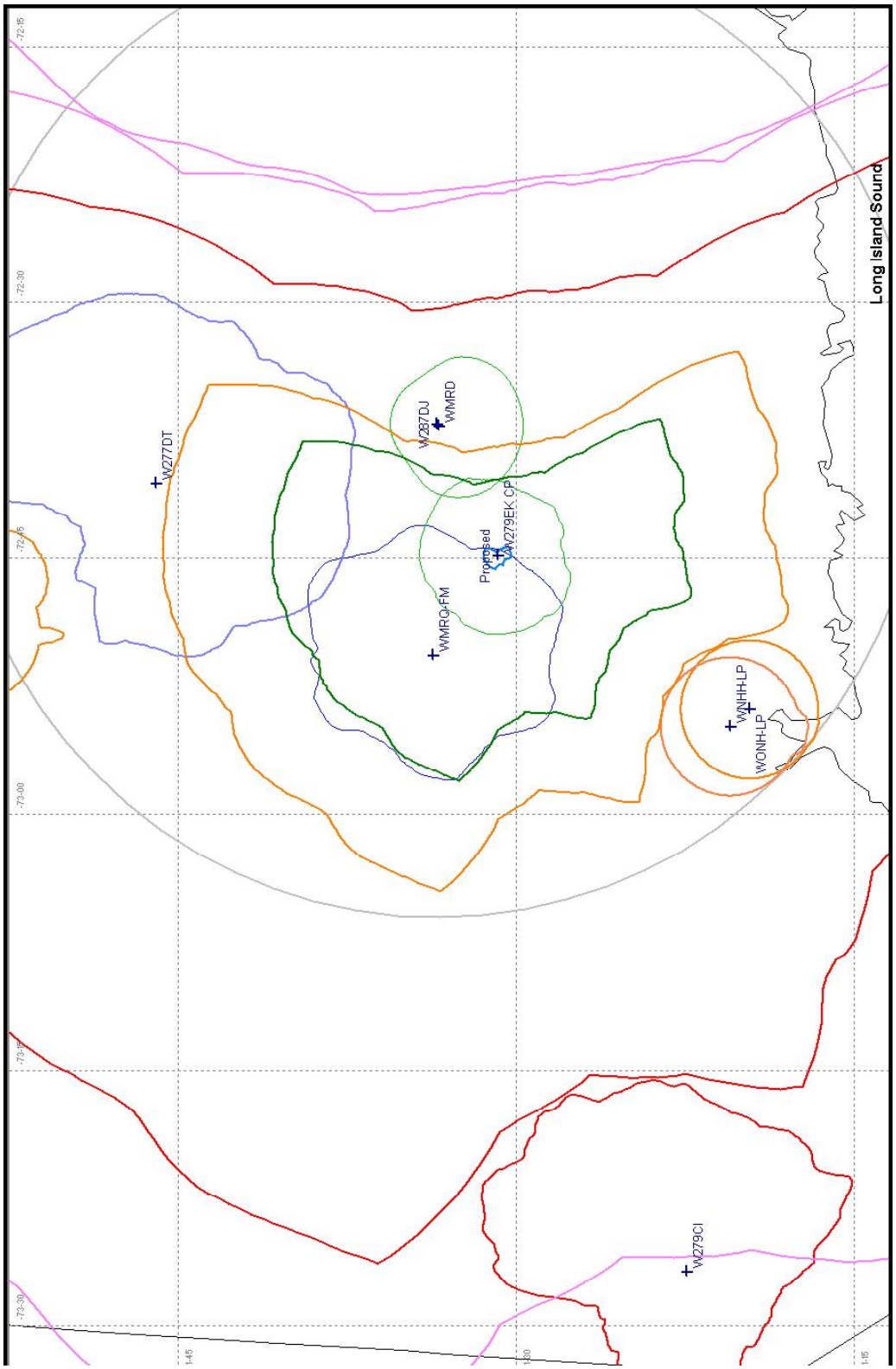

Figure 3 - Antenna Site Vicinity

129 dBu interfering contour extends 39 meters from the antenna

No roads, businesses, or residences are within 39 meters of the proposed site.

Figure 4 – RFR Determination

Maximum exposure was determined to be 64.3 uW/cm2,

or 32.2% of the OET limit for uncontrolled exposure.

The mounting structure is surrounded by a fence topped with barbed wire.