

TECHNICAL EXHIBIT
AMENDMENT OF APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
FM TRANSLATOR STATION W296BT
UNION CITY, NEW JERSEY

Technical Statement

This Technical Exhibit was prepared on behalf of FM translator station W296BT, Brooklyn, New York, in support of an amendment to its pending application for construction permit (See FCC File No. BMPFT-20100812ACG). The instant application proposes a change in channel from Channel 296 to Channel 293 and to change city of license from Brooklyn, New York to Union City, New Jersey. Also proposed are a change in transmitter location and proposed facilities.

Fill-In Translator Compliance

Figure 1 demonstrates that the FM translator's 54 dBu contour does not extend beyond the 54 dBu contour of primary station WLTW(FM) on channel 294B at New York, New York.

Minor Change Application

The proposal continues to be classified as a minor change pursuant to Section 74.1233 of the FCC Rules. See Figure 2 for 60 dBu (1 mV/m) contour comparison.

Predicted Coverage Contours

The predicted coverage contours shown herein were calculated in accordance with Section 73.313 of the FCC Rules. The average terrain elevations from 3 to 16 km from the proposed site were computed using the U.S.G.S. 30-second terrain

database. The distances to the predicted coverage contours were determined using the average elevations of radials spaced every 1-degree of azimuth. The antenna radiation center height above average terrain and the ERP in each radial direction were used in conjunction with the propagation prediction curves of Section 73.333 to determine the distances to the contour.

Allocation Considerations

Figure 3 summarizes the allocation study for the proposed facility. It is noted that the IF related separation requirements are not applicable to the proposal pursuant to Section 73.1204(g) of the FCC Rules. The tabulation at Figure 3 lists the results of a numerical analysis of the potential for contour overlap for all nearby co-channel and first-, second-, and third-adjacent-channel facilities. For the purposes of the numerical study, the maximum HAAT and maximum ERP values were used in determining the maximum distance in any direction to the predicted coverage and interfering contours.

As indicated in Figures 3, there is predicted 97 dBu contour overlap with respect to third-adjacent channel station, WQXR-FM, Newark, NJ (Channel 290B1). A waiver of Section 74.1204 of the FCC Rules is requested to the extent necessary since it is demonstrated that no actual interference will occur to WQXR-FM. A contour analysis with respect to WQXR-FM is shown in Figure 4. From the contour analysis, there will be a signal level of no less than 91.8 dBu from the WQXR-FM facility at the proposed W296BT transmitter site. The corresponding interference contour with respect to WQXR-FM will be no less than $(91.8 \text{ dBu} + 40 \text{ dB}) = 131.8 \text{ dBu}$. The predicted interfering 131.8 dBu contour of the proposed W296BT would extend no more than 1.9 meters from the proposed W296BT antenna in any direction. Since the transmitting antenna is located 2 m above the roof of the supporting building, the interfering contour will not reach roof level, ground level or any other structure other than the tower itself. Therefore, there will be no predicted interference to the WQXR-FM facility.

As indicated in Figure 3, there will be overlap of the predicted 48 dBu interfering contour with the protected 54 dBu contour of first-adjacent channel station WLTW(FM), New York, NY (Channel 294B). However, because the proposed translator is to be a 'fill-in' translator of WLTW(FM), pursuant to Section 74.1204(e) of the FCC Rules, it is exempt from the contour overlap provisions of the FCC Rules, provided that it does not cause interference within the boundaries of the principal community of the primary station. As demonstrated below, the proposed W296BT operation will cause no actual interference within the New York city limits.

Figure 5, Sheet 1, is a map which depicts the protected 54 dBu contour of WLTW(FM), the interfering 48 dBu, F(50,10) contour for the proposed W296BT operation and the New York city limits based on the 2000 Census as well as the land area within the New York city limits. Figure 5, Sheet 2, is an expanded scale map which indicates that the proposed W296BT 48 dBu, F(50,10) contour does not overlap either the New York city 2000 Census limits or New York city land area. Therefore, the proposed W296BT operation will cause no actual interference within the New York city limits.

Based on the foregoing, it is concluded that actual interference would not occur with respect to either of the WQXR-FM or the WLTW(FM) facilities. And as demonstrated in Figure 3, the proposal is otherwise fully compliant with the contour overlap requirements of Section 74.1204 of the FCC Rules.

Antenna Registration

The proposal does not require registration as indicated by the output of the FCC's TOWAIR program attached as Figure 6.

Environmental Considerations

The proposed facilities were evaluated in terms of potential radio frequency (RF) energy exposure to workers and the general public. The proposed transmitting

antenna will be mounted on a mast to be located atop an existing building. Public access to the building roof-top will be restricted. Therefore, the area in the vicinity of the transmitter site is defined as a “controlled” environment. Using a “worst-case” vertical relative field value of 1.0, a maximum effective radiated power of 0.001 kW (1 Watt) and an antenna center of radiation height above the building roof-top of 2 meters, the calculated power density at the at the base of the tower is 0.0084 milliwatt per square centimeter (mW/cm^2), or 0.84 percent of the Commission's recommended limit for a “controlled” environment ($1.00 \text{ mW}/\text{cm}^2$ for FM frequencies).

Access to the transmitting site atop the building roof will be restricted and appropriately marked with warning signs. Furthermore, a protocol will be in place to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing “accepted” RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

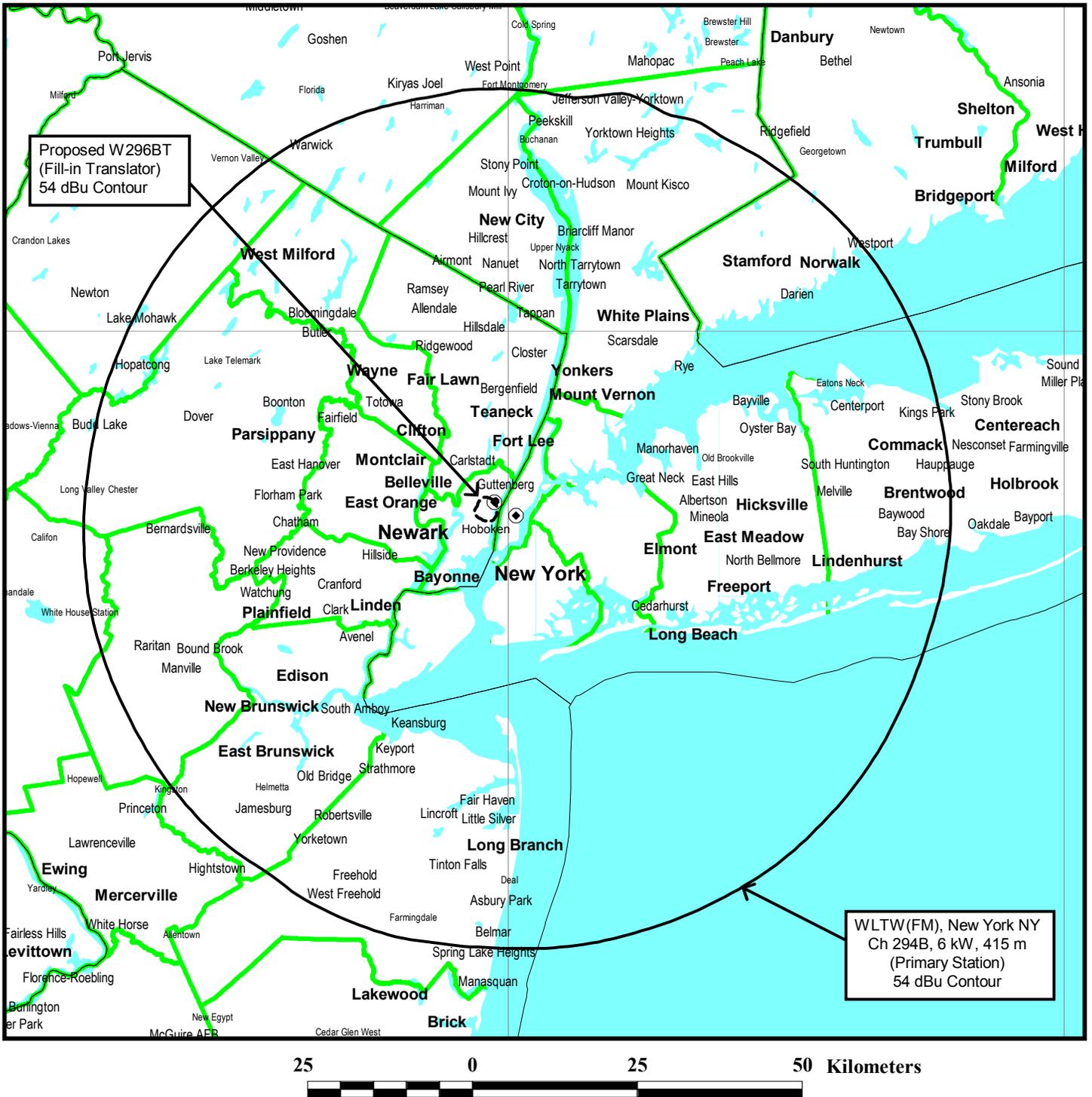


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February 9, 2011

Figure 1

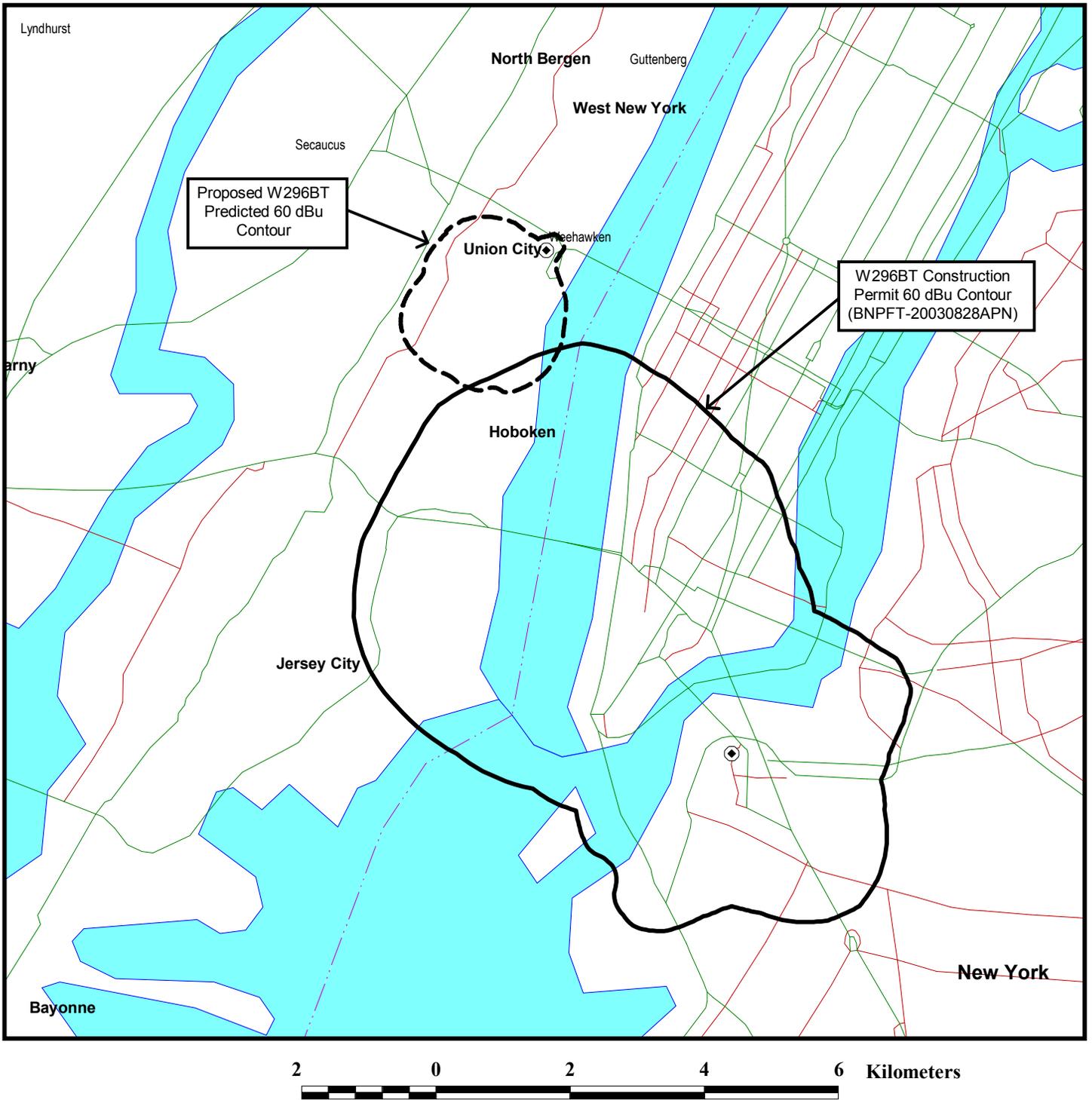


FILL-IN TRANSLATOR COVERAGE COMPLIANCE MAP

FM TRANSLATOR STATION W296BT
UNION CITY, NEW JERSEY
CH 293 0.001 KW (MAX-DA) 63 M AMSL

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Figure 2



FCC PREDICTED 60 DBU COVERAGE COMPARISON

FM TRANSLATOR STATION W296BT
UNION CITY, NEW JERSEY
CH 293 0.001 KW (MAX-DA) 63 M AMSL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

FM Contour Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Channel: 293 Coordinates: 040-46-00 074-01-29 (NAD 27) ERP: 0.001 kW Max. HAAT: 63 m Considering Only Interference Caused

Comment: Proposed W296BT

Callsign	Chan.	Service	Status	Freq.	City	State	Co.	Rec.	Latitude	Dist. (km)	Sep. (km)	Spac. (km)
Facility ID	ARN			Class	DA	73.215	ERP (kW)	HAAT (m)	Longitude	Bear. (deg)	Comment	
NEW 148174	240 BNPFT	FX 20030317AKX	APP	95.9 D	MANHATTAN D N	NY	US	C	40-45-21.9 073-59-12	3.42 110.15	29 SHORT	-25.58 Note 1
NEW 143051	240 BNPFT	FX 20030317EYH	APP	95.9 D	JERSEY CITY N N	NJ	US	C	40-42-57 074-02-04	5.7 188.25	29 SHORT	-23.3 Note 1
NEW 143799	240 BNPFT	FX 20030312BFQ	APP	95.9 D	RIDGEFIELD PARK N N	NJ	US	C	40-50-41.6 074-01-10.5	8.7 2.85	29 SHORT	-20.3 Note 1
NEW 140790	240 BNPFT	FX 20030310BMN	APP	95.9 D	WEST ORANGE N N	NJ	US	C	40-47-17 074-15-19	19.61 277.06	29 SHORT	-9.39 Note 1
NEW 147820	240 BNPFT	FX 20030314BMW	APP	95.9 D	ARDSLEY-ON-HUDSON N N	NY	US	C	41-00-19 073-54-26	28.29 20.38	29 SHORT	-0.71 Note 1
WQXR-FM 46978	290 BMLH	FM 20091009AAI	LIC	105.9 B1	NEWARK N N	NJ	US	C	40-44-54 073-59-10	3.84 122.07	38.34 SHORT	-34.5 Note 2
WQXR-FM 57.0 dBu desired distance: 38.2 km Proposed 97.0 dBu undesired distance: 0.1 km												
W296BT 155888	293 BMPFT	FX 20100812ACG	APP	106.5 D	NEW YORK C N	NY	US	C	40-45-22 073-59-12	3.42 110.1	20.59 SHORT	-17.17 Note 3
W296BT 60.0 dBu desired distance: 12.4 km Proposed 40.0 dBu undesired distance: 8.2 km												
WLTW 56571	294 BLH	FM 19940203KA	LIC	106.7 B	NEW YORK N N	NY	US	C	40-44-54 073-59-10	3.84 122.07	71.84 SHORT	-68 Note 4
WLTW 54.0 dBu desired distance: 66.6 km Proposed 48.0 dBu undesired distance: 5.2 km												
W296BT 155888	296 BNPFT	FX 20030828APN	CP	107.1 D	BROOKLYN D N	NY	US	C	40-41-57 073-59-31	7.99 159.79	7.39 CLOSE	0.6 Note 3
W296BT 60.0 dBu desired distance: 7.3 km Proposed 100.0 dBu undesired distance: 0.1 km												

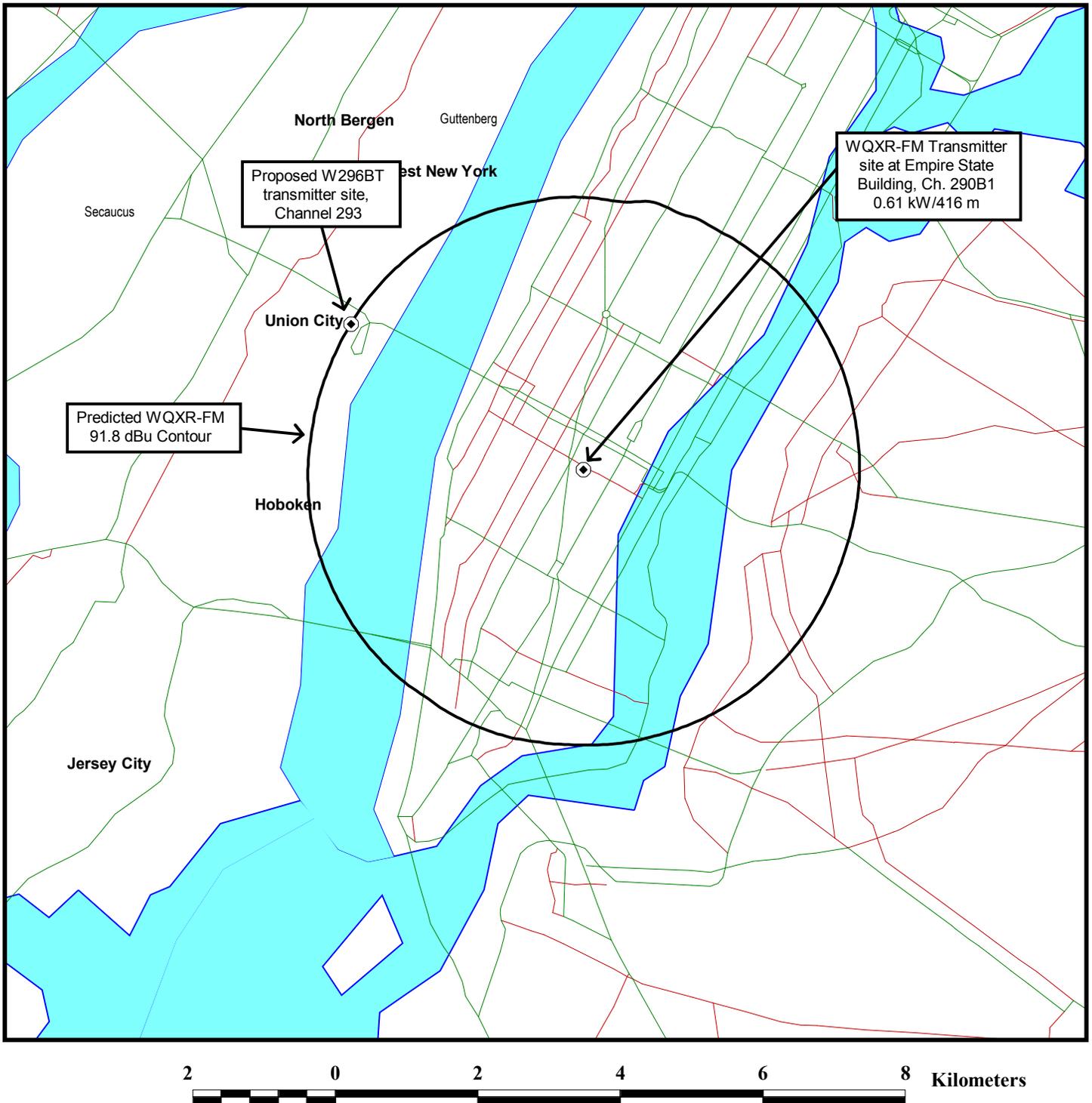
Note 1: Intermediate frequency (IF) separation requirements not applicable.

Note 2: A waiver of the contour overlap requirements is requested. It is demonstrated that no actual interference will occur with respect to WQXR-FM. See Technical Statement and Figure 4.

Note 3: Applicant's current facility records.

Note 4: The instant proposal is for a "fill-in" translator for WLTW. Pursuant to Section 73.1204(e) of the FCC's Rules, the proposal is exempt from the interference requirements provided that it does not cause interference within the boundaries of WLTW's city of license (New York city). It is demonstrated herein that no actual interference will occur within the New York city limits. See Technical Statement and Figure 5.

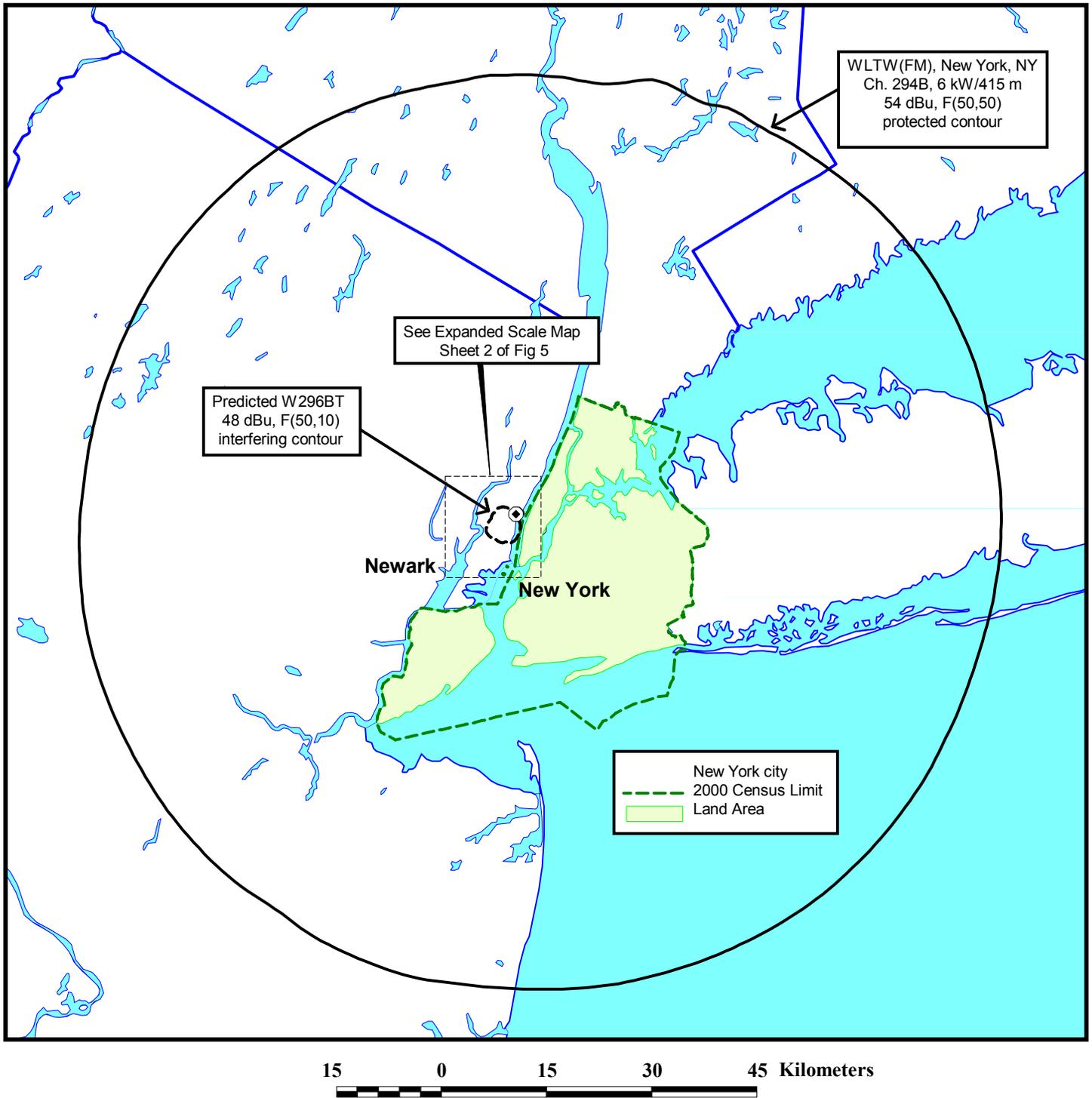
Figure 4



FCC PREDICTED 91.8 DBU CONTOUR OF WQXR-FM

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CH 293 0.001 KW (MAX-DA) 63 M AMSL

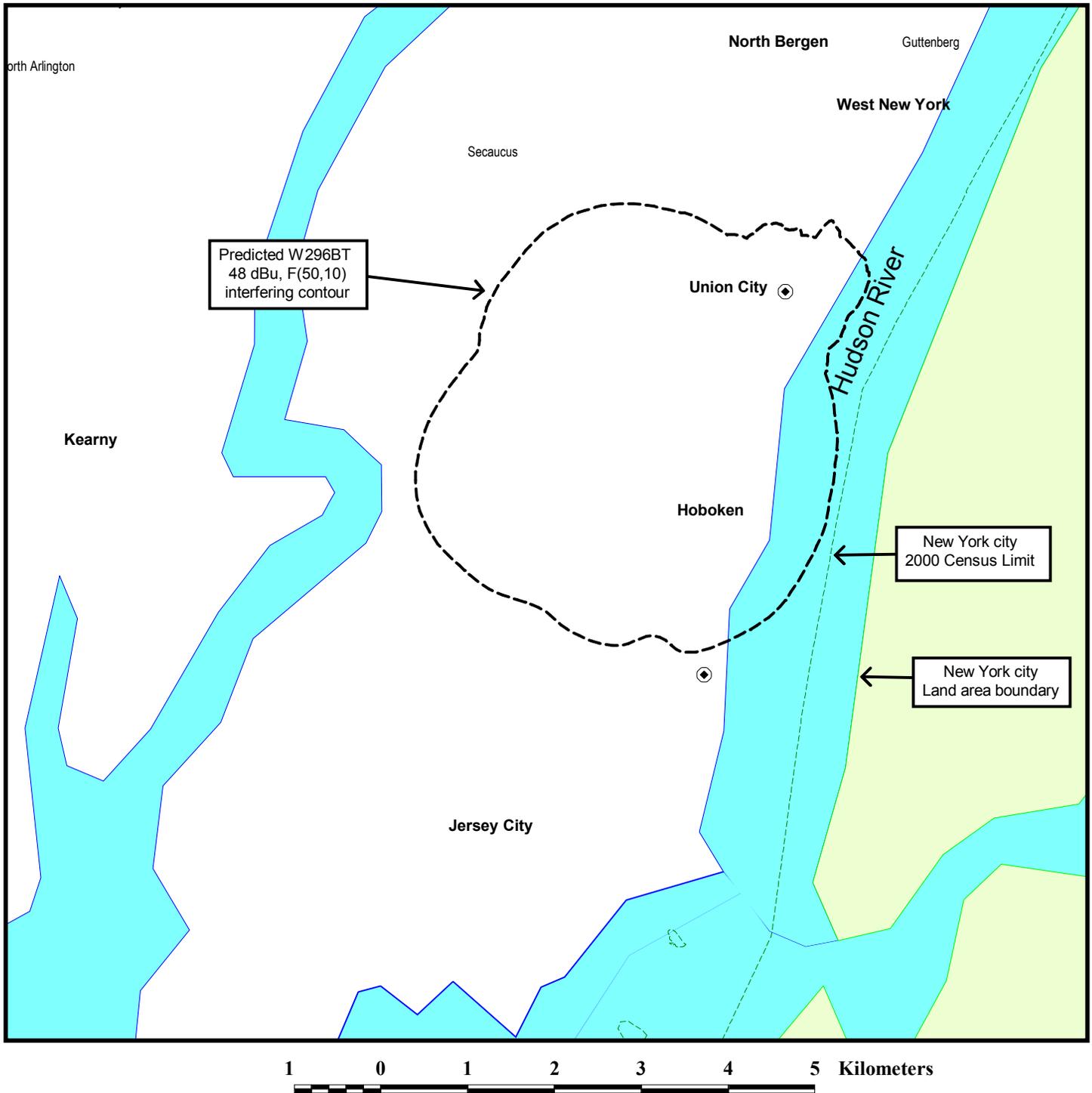
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INTERFERENCE ANALYSIS WITH RESPECT TO WLTW(FM)

FM TRANSLATOR STATION W296BT
UNION CITY, NEW JERSEY
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INTERFERENCE ANALYSIS WITH RESPECT TO WLTW(FM) - EXPANDED SCALE

FM TRANSLATOR STATION W296BT
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.

Your Specifications

NAD83 Coordinates

Latitude	40-45-59.9 north
Longitude	074-01-27.9 west

Measurements (Meters)

Overall Structure Height (AGL)	18
Support Structure Height (AGL)	15
Site Elevation (AMSL)	46

Structure Type

BMAST - Building with Mast

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW