

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WKTU (FM)  
LAKE SUCCESS, NEW YORK

SEPTEMBER 12, 2001

CH 278B    6 KW    415 M

TECHNICAL EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
RADIO STATION WKTU (FM)  
LAKE SUCCESS, NEW YORK  
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RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of radio station WKTU(FM) on Channel 278B assigned to Lake Success, New York. WKTU(FM) is licensed atop the World Trade Center (WTC) with an effective radiated power of 5.4 kilowatts and an antenna height above average terrain of 432 meters. Due to the collapse of WTC, WKTU(FM) is seeking to relocate their main transmitting facility to the Empire State Building (ESB).<sup>1</sup> The ESB is the primary transmitter site location of the New York area stations; where 16 radio stations have authorized main facilities.<sup>2</sup> It is proposed to diplex WKTU(FM) on the Empire FM master antenna system, which is now presently shared among 13 of those stations. The proposed WKTU(FM) facility would remain a maximum equivalent Class B facility with an effective radiated power of 6 kilowatts with an antenna height above average terrain of 415 meters.

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<sup>1</sup> It is noted that the Commission previously authorized a Class B station to relocate from the WTC to the ESB. WQCD(FM) on Channel 270B, now licensed at the ESB, was authorized by BMPH-19911004JO to make such a move. This WQCD(FM) move also involved numerous short-spacings.

<sup>2</sup> The stations with main facility authorizations at ESB are: WXKR(FM), WPLJ(FM), WQXR-FM, WQHT(FM), WSKQ-FM, WRKS-FM, WBAI(FM), WHTZ(FM), WCBS-FM, WQCD(FM), WNEW(FM), WAXQ(FM), WTJM(FM), WCAA(FM), WLTW(FM) and WBSL(FM).

In order to accommodate WKTU(FM) at the ESB with the equivalent facilities as licensed at the WTC,<sup>3</sup> a waiver of Section 73.213(a) and 73.213(c) of the Commission's Rules is requested toward WNNJ-FM at Newton, New Jersey and WBZO(FM) at Bay Shore, New York, respectively. A discussion of these waivers is provided within the Allocation Section of this Narrative. No new separation short-spacing violations would be created to any station or allotment by relocation to the ESB.

#### Proposed Transmitter Location

A map showing the transmitter site location is provided in Figure 1. A sketch showing the proposed antenna and ESB is shown on Figure 2. It is proposed to co-locate WKTU(FM) with 16 other radio stations and 3 television stations.

#### Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 1.6 kilometers from the transmitting site. No interference is expected as many other broadcast facilities have been operating from this site. However, the applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

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<sup>3</sup> The WKTU(FM) licensed (5.4 kilowatts at 432 meters HAAT) 60 dBu average contour extends 52.2 kilometers; the WKTU(FM) proposed ESB (6.0 kilowatts at 415 meters HAAT) 60 dBu average contour extends 52.3 kilometers. The thirteen FM stations licensed on the ESB master FM antenna [WXRK(FM), WQXR-FM, WRKS-FM, WSKQ-FM, WBAI(FM), WQCD(FM), WNEW-FM, WAXQ(FM), WLTW(FM), WBLS(FM), WCAA(FM), WHTZ(FM) and WTJM(FM)] all have an effective radiated power of 6 kilowatts.

Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45-degree intervals were obtained from a past WHTZ-FM construction permit. WKTU(FM) would be co-located with WHTZ-FM, which is also licensed to AMFM Radio Licenses, LLC. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 3 is a map showing the predicted coverage contours. As can be seen, the FCC predicted 70 dBu coverage contour will continue to completely encompass the principal community of Lake Success.

Allocation Study

Sheet 1 of Figure 4 is an allocation study for Channel 278B at the proposed site. The figure contains a tabulation of actual and required separation distances from other pertinent stations and allotments. The ESB site meets the FCC's minimum separation requirements, specified in Section 73.207(b) of the Commission's Rules, to all assignments and stations except to (1) WBZO(FM) on Channel 276A at Bay Shore, New York, (2) WPRB(FM) on Channel 277B at Princeton, New Jersey, (3) WNNJ-FM on Channel 279B1 at Newton, New Jersey, (4) WMGM(FM) on Channel 279B at Atlantic

City, New Jersey and (5) WFAS-FM on Channel 280A at White Plains, New York. Each short-spacing is discussed separately below. It is noted that each of the above short-spacings was also present at the WTC. No short-spacing to any station or allotment would be created by relocating WKTU(FM) to the ESB other than what is already existing.

A waiver of the pertinent Commission Rules is requested toward WBZO(FM) and WNNJ-FM. As summarized on Sheet 12 of Figure 4, authorization of this facility will result in the net decrease in total caused and received interference to existing short-spacing stations by 507 square kilometers containing 105,200 persons. All herein populations are based upon the 2000 Census of Housing and Population.

WBZO(FM) Bay Shore, New York

A waiver of Section 73.213(c) is requested to WBZO(FM) on Channel 276A at Bay Shore, New York. From the ESB to WBZO(FM), the separation distance is 65.2 kilometers. From the WTC to WBZO(FM), the separation distance is 67.7 kilometers. The minimum fully spaced [Section 73.207 and 73.213(c)] separation distance is 69 kilometers. Therefore, WKTU(FM), operating from the ESB, would decrease the present separation distance by 2.5 kilometers.

WBZO(FM) is a Class A station proposed prior to October 1, 1989. Since the already short-spaced separation distance would be further decreased by 2.5 kilometers to WBZO(FM), and the distance not either maintained or increased as required by the Rules, a waiver of Section 73.213(c) is requested.

As shown in Sheets 2 and 3 of Figure 4, no prohibited interference occurs to WBZO(FM) from WKTU(FM). Rather interference is predicted to WKTU(FM) from WBZO(FM). As can be seen from the tabulation provided in Sheet 12 of Figure 4, the interference received to WKTU(FM) would increase from an area of 2 square kilometers containing 4,400 persons to an area of 15 square kilometers containing 26,000 persons. It is noted that this additional interference occurs to persons not now served by WKTU(FM). Also, the interference area is served by more than 5 other FM stations as shown in Sheet 4 of Figure 4.<sup>4</sup>

This interference area and population predicted within the proposed WKTU(FM) protected contour should also be considered as *de minimis*. The predicted interference area of 15 square kilometers containing 26,000 persons is less than 1 percent of the proposed WKTU(FM) service area and population.<sup>5</sup>

Therefore, since the only additional interference would occur to WKTU(FM) and the *de minimis* interference area is well served by other stations, a waiver of Section 73.213(c) is requested to WBZO(FM).

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<sup>4</sup> WBZO(FM) also has a pending application (BPH-20010611AEU) for construction permit to modify their licensed facilities. This proposed facility would have essentially the same interference area and population to WKTU(FM) as the presently licensed facility.

<sup>5</sup> WKTU(FM) at the ESB would have a service area of 6,500 square kilometers (land) containing 15,366,000 persons.

WPRB(FM) Princeton, New Jersey

Section 73.213(a) processing is requested toward WPRB(FM) on Channel 277B at Princeton, New Jersey. Sheet 5 of Figure 4 shows the existing and proposed caused and received interference areas to WPRB(FM). Tabulated on Sheet 12 of Figure 4 are the calculated gain and loss areas and populations for both the existing and proposed facilities. As can be seen from the tabulation, no increase in interference caused occurs to WPRB(FM). A small area receiving new interference within the WKTU(FM) contour is shown on Sheet 6 of Figure 4. As can be seen, this area is served by at least 5 other services. Therefore, the proposed facility satisfies the requirements of Section 73.213(a) of the Commission's Rules to WPRB(FM).

WNNJ-FM Newton, New Jersey

A waiver of the Section 73.213(a) processing is requested toward WNNJ-FM on Channel 279B1 at Newton, New Jersey. Sheet 8 of Figure 4 shows the existing and proposed caused and received interference areas to WNNJ-FM. Tabulated on Sheet 12 of Figure 4 are the calculated gain and loss areas and populations for both the existing and proposed facilities. As can be seen from the tabulation, a slight net increase in caused interference area, 40 square kilometers, with a slight net decrease in affected population, 400 persons, occurs to WNNJ-FM.

The Commission in Section 73.213(a) requires both the net caused interference area and population to be maintained or decreased. Since the increased interference area to WNNJ-FM is less than 1 percent of the total WNNJ-FM service area, 5,540 square kilometers, the new interference

is *de minimis*. The area receiving new interference is well served by other stations as shown on Sheet 9 of Figure 4. Furthermore, as both WNNJ-FM and WKTU(FM) are commonly owned, WNNJ-FM agrees to accept this interference.

Therefore, a waiver of Section 73.213(a) is requested to WNNJ-FM based upon the *de minimis* increase in interference caused.

WMGM(FM) Atlantic City, New Jersey

Section 73.213(a) processing is requested toward WMGM(FM) on Channel 279B at Atlantic City, New Jersey. No existing and proposed caused and received interference is predicted. Therefore, the proposed facility clearly satisfies the requirements of Section 73.213(a) of the Commission's Rules to WPRB(FM).

WFAS-FM White Plains, New York

Section 73.213(a) processing is requested toward WFAS-FM on Channel 280A at White Plains, New York. Since WFAS-FM is on a second-adjacent channel to WKTU(FM) and has been short-spaced since 1964, it is not an allocation concern pursuant to Section 73.213(a)(4) of the Commission's Rules.

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Radiofrequency Electromagnetic Field Exposure

A radiofrequency electromagnetic field measurement survey will be undertaken after construction and operation of WKTU(FM) on the FM master antenna system. This survey will ensure that the electromagnetic emissions from the addition of WKTU(FM) to the FM antenna system are below the Commission's guideline values in both controlled and uncontrolled radiofrequency environments.<sup>6</sup>

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency radiation will not exceed the FCC guidelines. WKTU(FM) will also coordinate with the other co-located users of the towers to reduce or shut down power when workers representing any station ascend the tower.

Charles A. Cooper

September 12, 2001

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
941.329.6000

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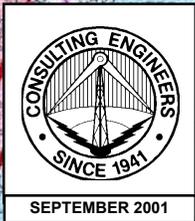
<sup>6</sup> This survey will be included within the application for license.

Figure 1

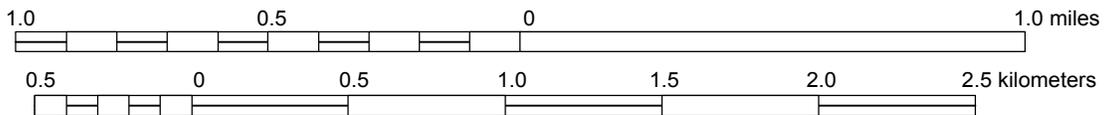


Proposed Site:  
Empire State Bldg.  
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73° 59' 10" W

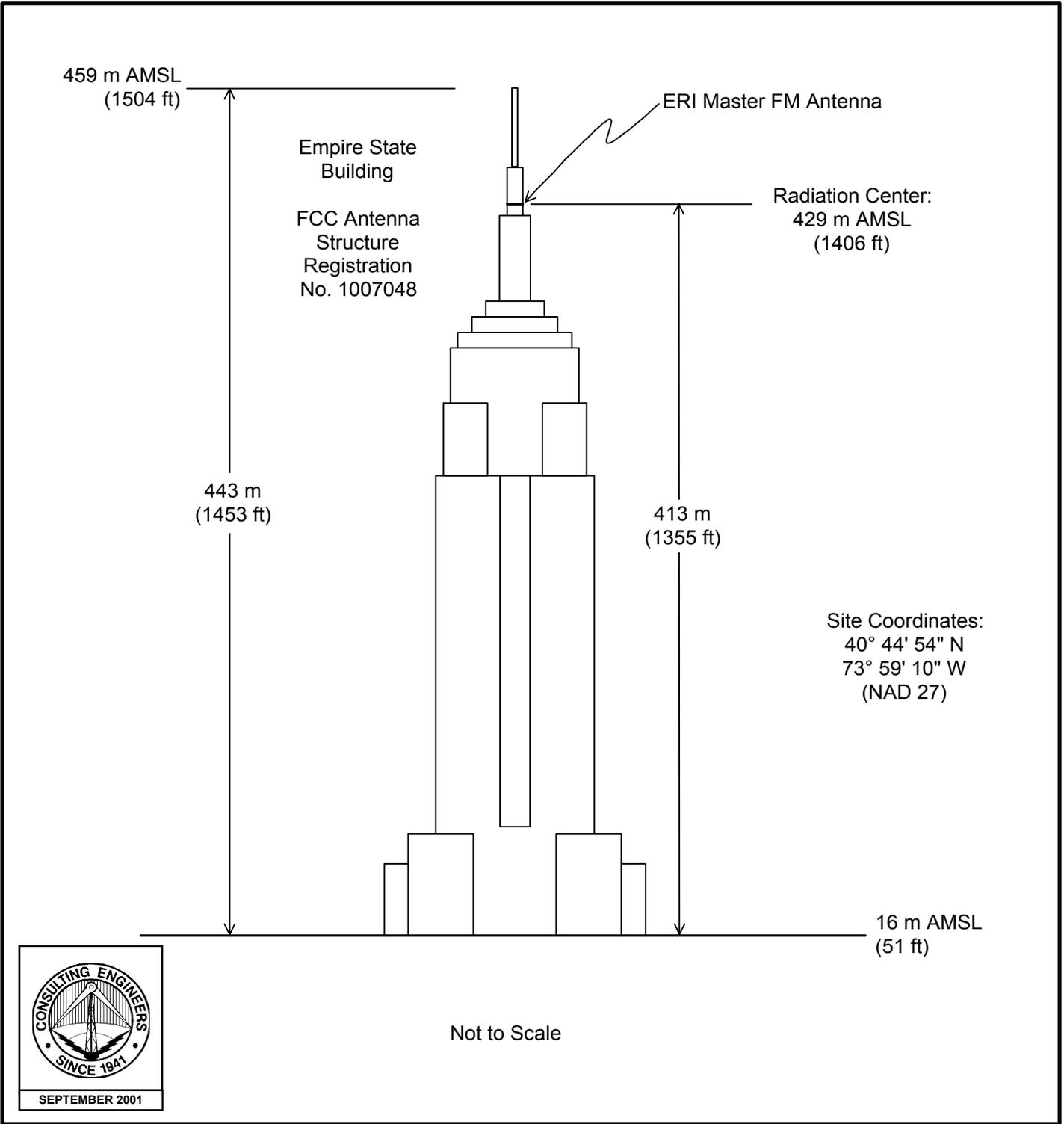
Licensed Site:  
World Trade Center  
40° 42' 43" N  
74° 00' 49" W



**BROOKLYN, N.Y.**  
N4037.5-W7352.5/7.5  
**1967**  
PHOTOREVISED 1979  
AMS 6265 III NW--SERIES V821



**PROPOSED TRANSMITTER SITE**  
RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M  
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



**PROPOSED ANTENNA and SUPPORTING STRUCTURE**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M

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

Figure 3



## FCC PREDICTED COVERAGE CONTOURS

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
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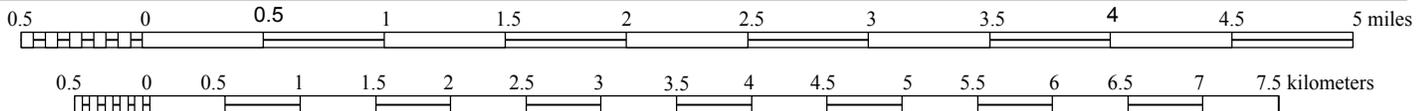
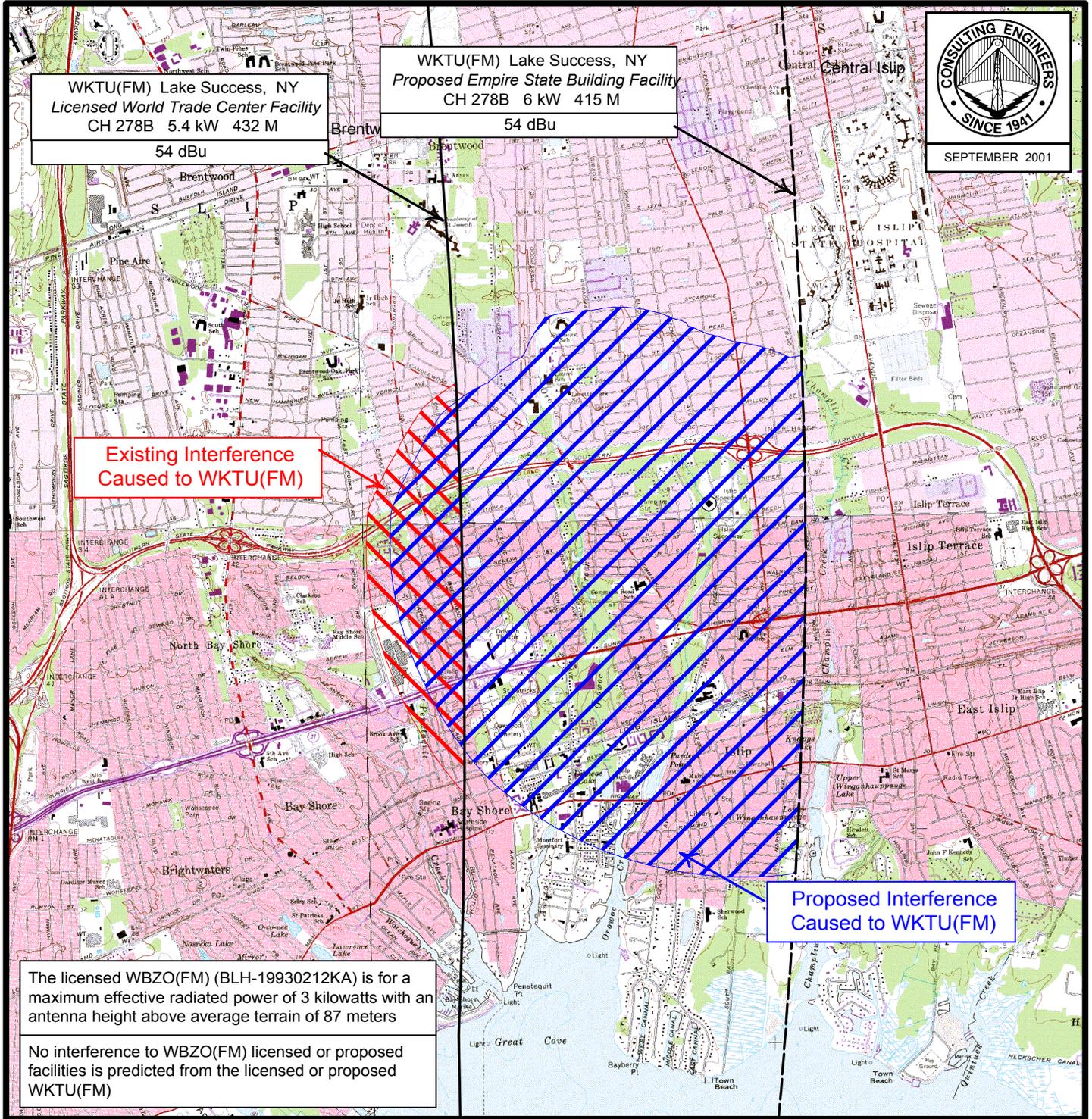
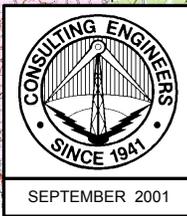
du Treil, Lundin & Rackley, Inc., Sarasota, Florida

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LAKE SUCCESS, NEW YORK  
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Channel 278B Allocation Study

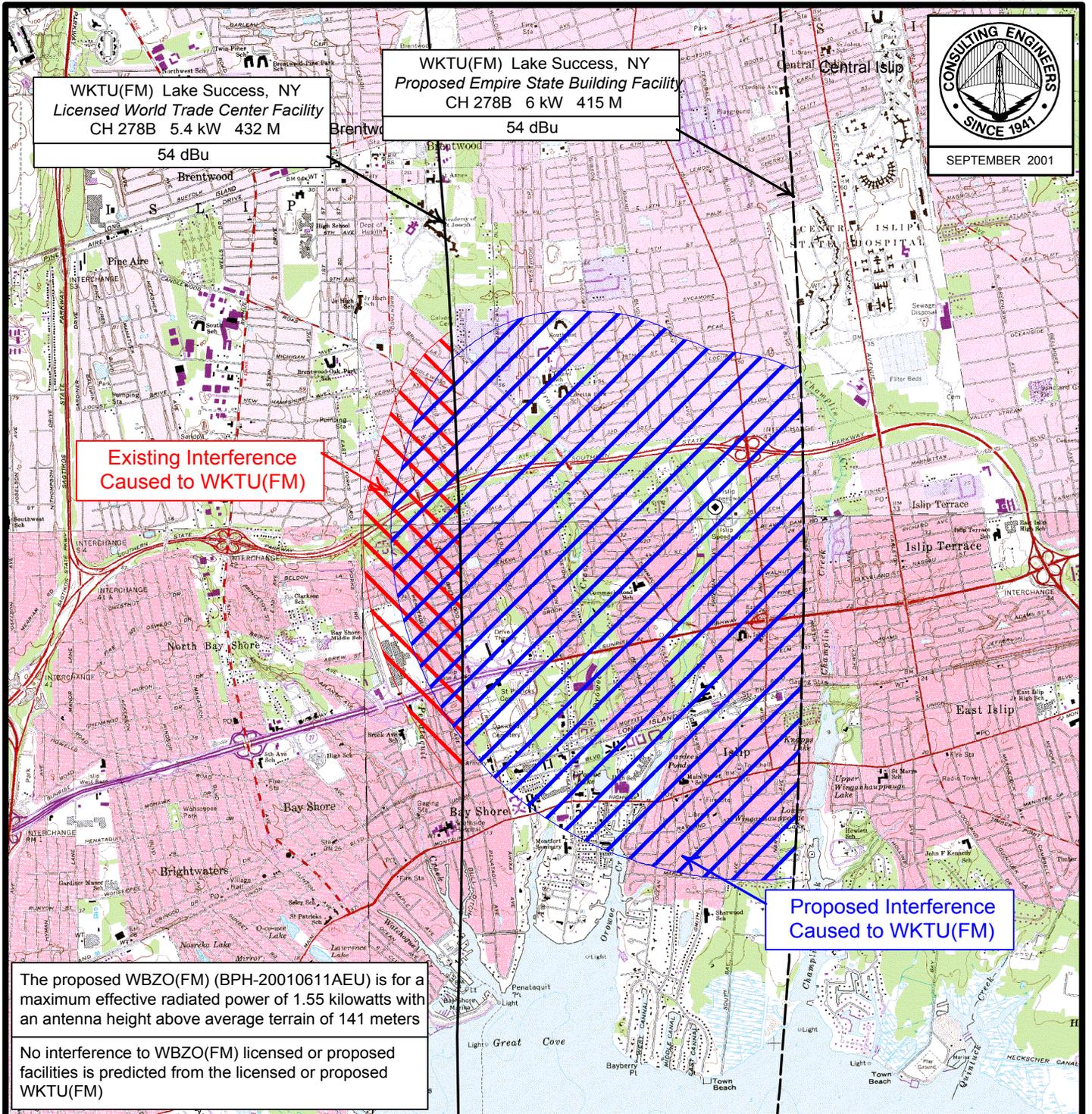
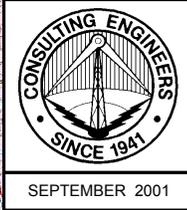
40° 44' 54" North Latitude  
73° 59' 10" West Longitude

Call Id	City St	File Status Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)
WLIR-F 30573	GARDEN CITY NY	BLH LIC C 20000607ACM	224A 92.7	2.0 159		40-45-26 073-42-52	N	87.4	22.96	15.0
WBZO 60245	BAY SHORE NY	BLH LIC C 19930212KA	276A 103.1	3.0 87	Y 14421	40-45-04 073-12-52	Y	89.5	65.17	69.0
<i>[Section 73.213(c) waiver requested to WBZO(FM) at Bay Shore.]</i>										
WBZO 60245	BAY SHORE NY	BPH APP C 20010611AEU	276A 103.1	1.55 141	Y 40034	40-45-03 073-12-49	Y	89.5	65.24	69.0
<i>[Section 73.213(c) waiver requested to WBZO(FM) at Bay Shore.]</i>										
WPRB 53567	PRINCETON NJ	BLH LIC C 19911028KB	277B 103.3	14.0 223	N	40-17-00 074-41-20	N	229.2	78.83	169.0
<i>[Section 73.213(a) processing requested toward WPRB(FM).]</i>										
WKTU 6595	LAKE SUCCES NY	BLH LIC C 19901228KE	278B 103.5	5.4 432	N	40-42-43 074-00-49	N	209.8	4.66	
<i>[Applicant's existing licensed facility.]</i>										
WKAB 141	BERWICK PA	BLH LIC C 19970801KG	278A 103.5	4.1 118	N	41-05-11 076-16-41	N	281.8	196.70	178.0
WNNJ-F 25413	NEWTON NJ	BLH LIC C 19940928KE	279B1 103.7	2.3 272	N	41-11-12 074-46-04	Y	306.9	81.85	145.0
<i>[Section 73.213(a) waiver requested toward WNNJ-FM.]</i>										
WMGM 61100	ATLANTIC CI NJ	BLH LIC C 19971121KA	279 B 103.7	50.000 106	Y 15164	39-23-24 074-30-45	N	196.7	157.36	169.0
<i>[Section 73.213(a) processing requested toward WMGM(FM).]</i>										
WFAS-F 14380	WHITE PLAIN NY	BMLH LIC C 19940928KZ	280A 103.9	0.6 204	N	41-01-32 073-49-39	N	23.3	33.56	69.0
<i>[Section 73.213(a) processing requested toward WFAS-FM.]</i>										



**LICENSED WBZO(FM) INTERFERENCE CAUSED AREAS**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M



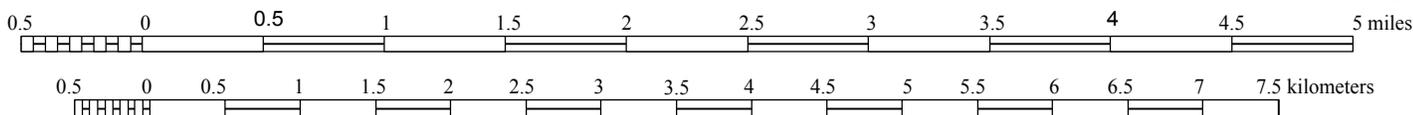
WKTU(FM) Lake Success, NY  
Licensed World Trade Center Facility  
CH 278B 5.4 kW 432 M  
54 dBu

WKTU(FM) Lake Success, NY  
Proposed Empire State Building Facility  
CH 278B 6 kW 415 M  
54 dBu

Existing Interference  
Caused to WKTU(FM)

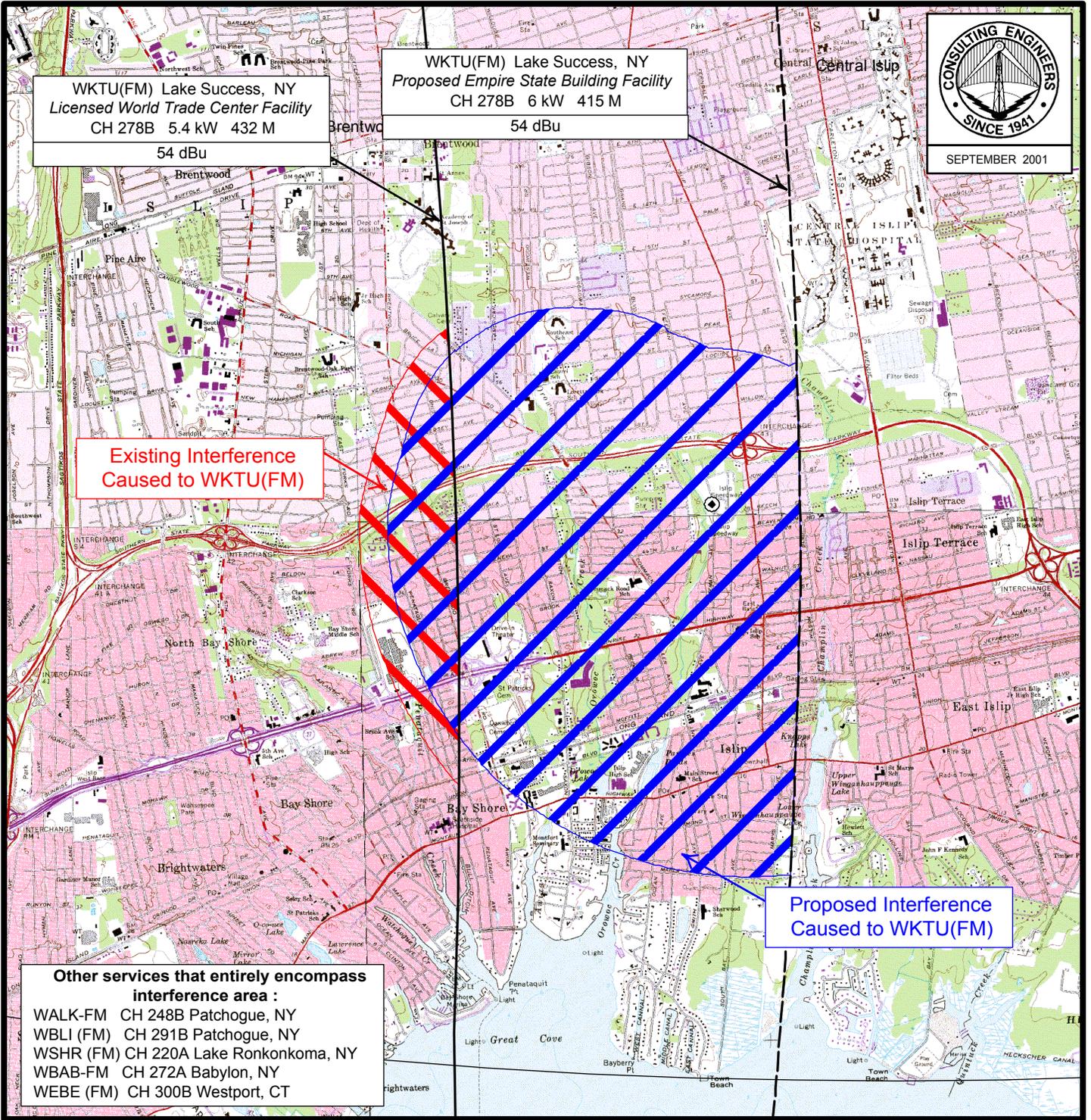
Proposed Interference  
Caused to WKTU(FM)

The proposed WBZO(FM) (BPH-20010611AEU) is for a maximum effective radiated power of 1.55 kilowatts with an antenna height above average terrain of 141 meters  
No interference to WBZO(FM) licensed or proposed facilities is predicted from the licensed or proposed WKTU(FM)



**PROPOSED WBZO(FM) INTERFERENCE CAUSED AREAS**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
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WKTU(FM) Lake Success, NY  
Licensed World Trade Center Facility  
CH 278B 5.4 kW 432 M  
54 dBu

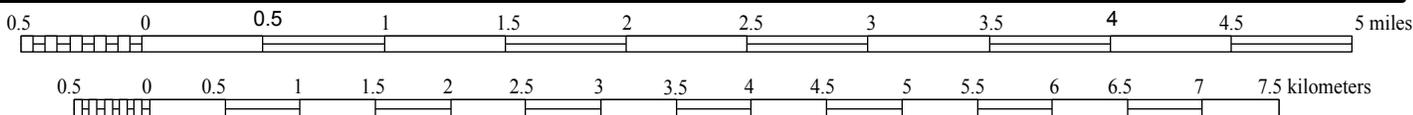
WKTU(FM) Lake Success, NY  
Proposed Empire State Building Facility  
CH 278B 6 kW 415 M  
54 dBu

Existing Interference  
Caused to WKTU(FM)

Proposed Interference  
Caused to WKTU(FM)

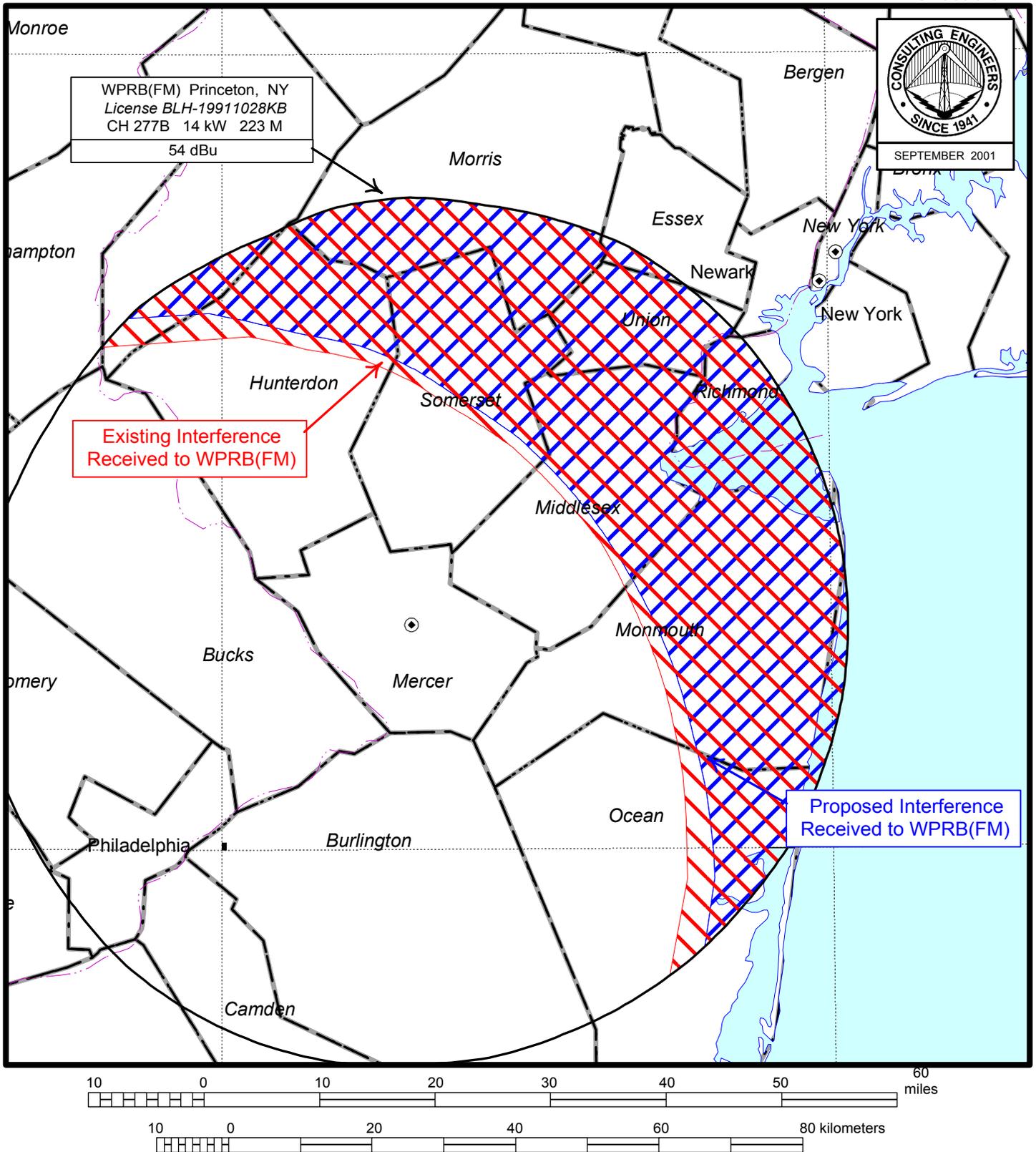
Other services that entirely encompass  
interference area :

- WALK-FM CH 248B Patchogue, NY
- WBLI (FM) CH 291B Patchogue, NY
- WSHR (FM) CH 220A Lake Ronkonkoma, NY
- WBAB-FM CH 272A Babylon, NY
- WEBE (FM) CH 300B Westport, CT



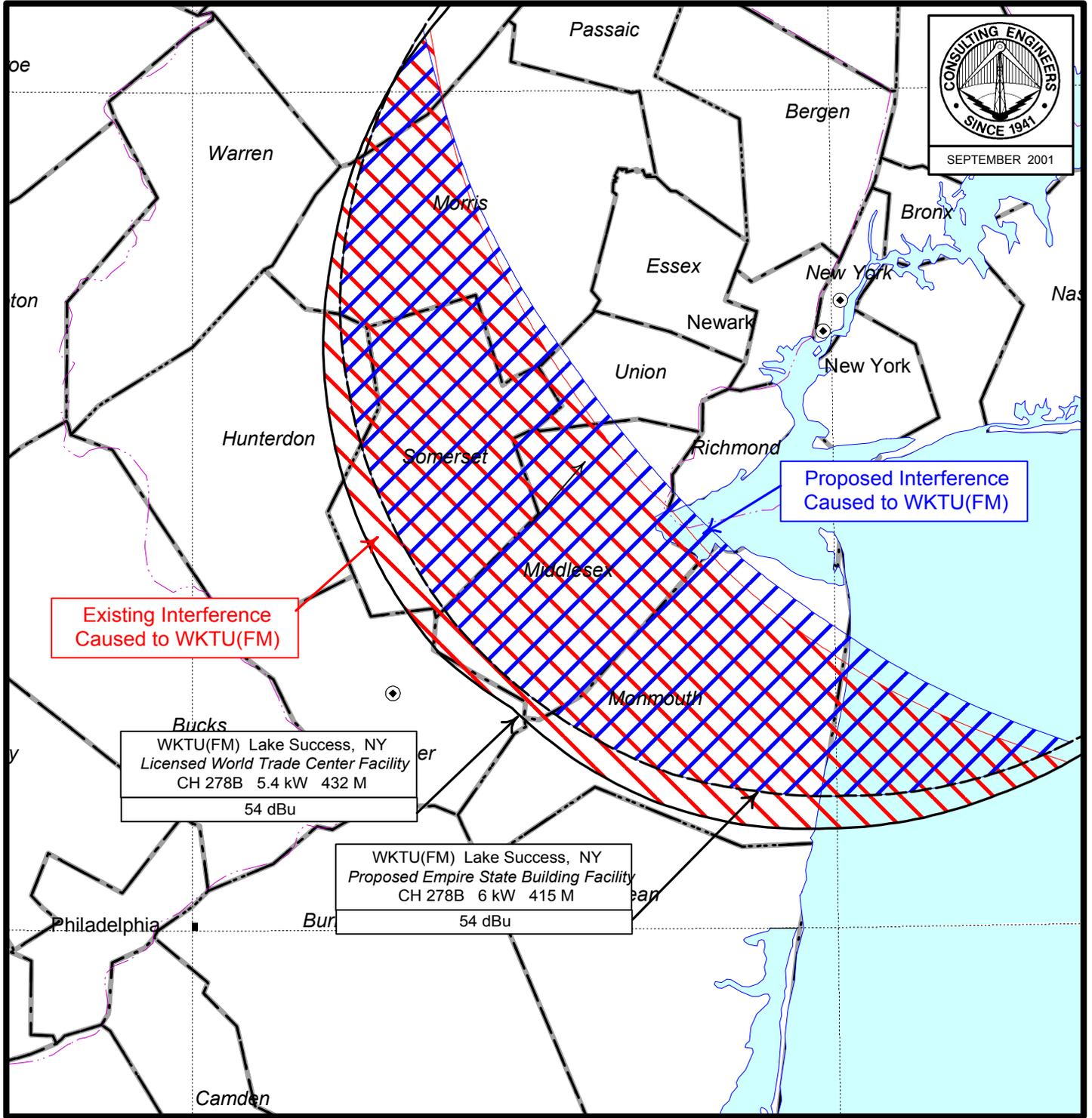
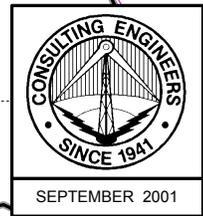
**OTHER AVAILABLE SERVICES TO WBZO(FM) INTERFERENCE AREAS**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M



## WPRB(FM) RECEIVED INTERFERENCE AREAS

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M

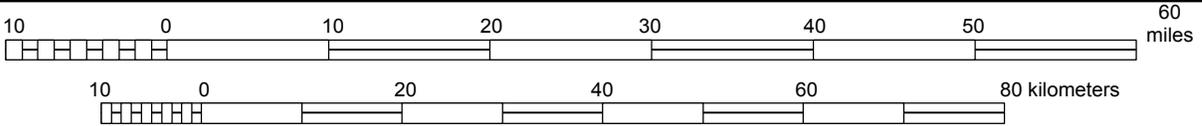


Existing Interference  
Caused to WKTU(FM)

Proposed Interference  
Caused to WKTU(FM)

WKTU(FM) Lake Success, NY  
Licensed World Trade Center Facility  
CH 278B 5.4 kW 432 M  
54 dBu

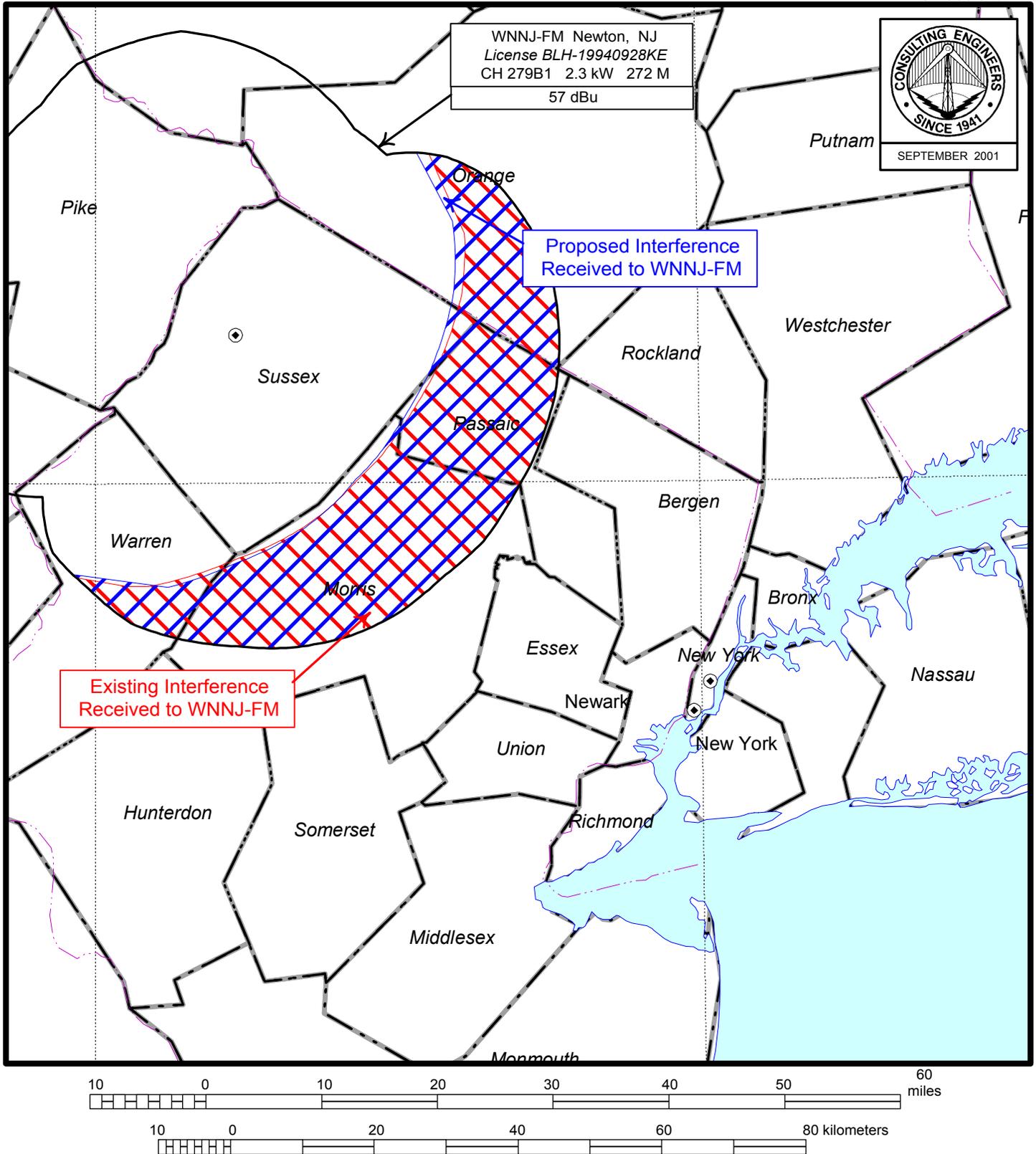
WKTU(FM) Lake Success, NY  
Proposed Empire State Building Facility  
CH 278B 6 kW 415 M  
54 dBu



**WPRB(FM) CAUSED INTERFERENCE AREAS**

RADIO STATION WKTU(FM)  
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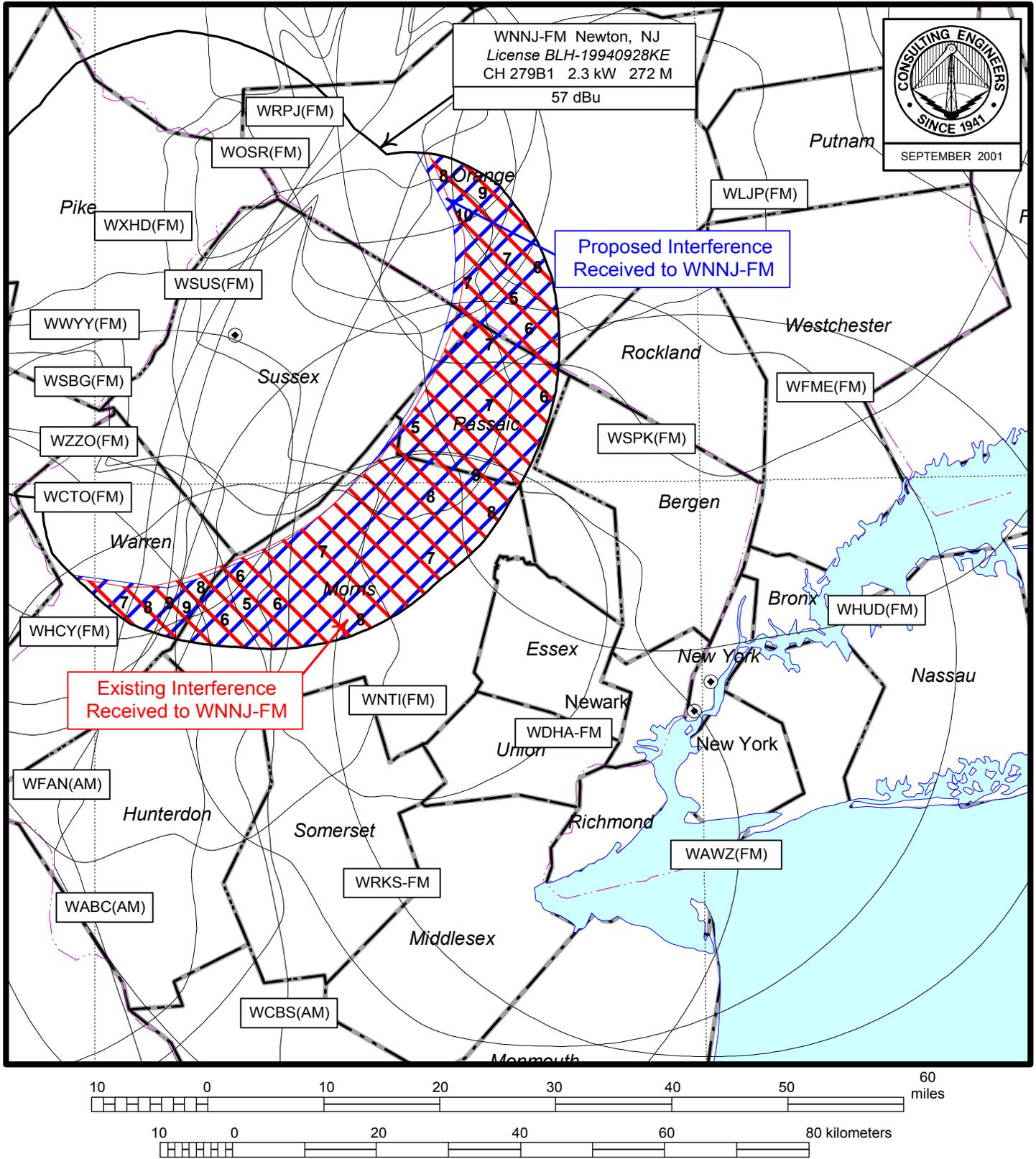




**WNNJ-FM RECEIVED INTERFERENCE AREAS**

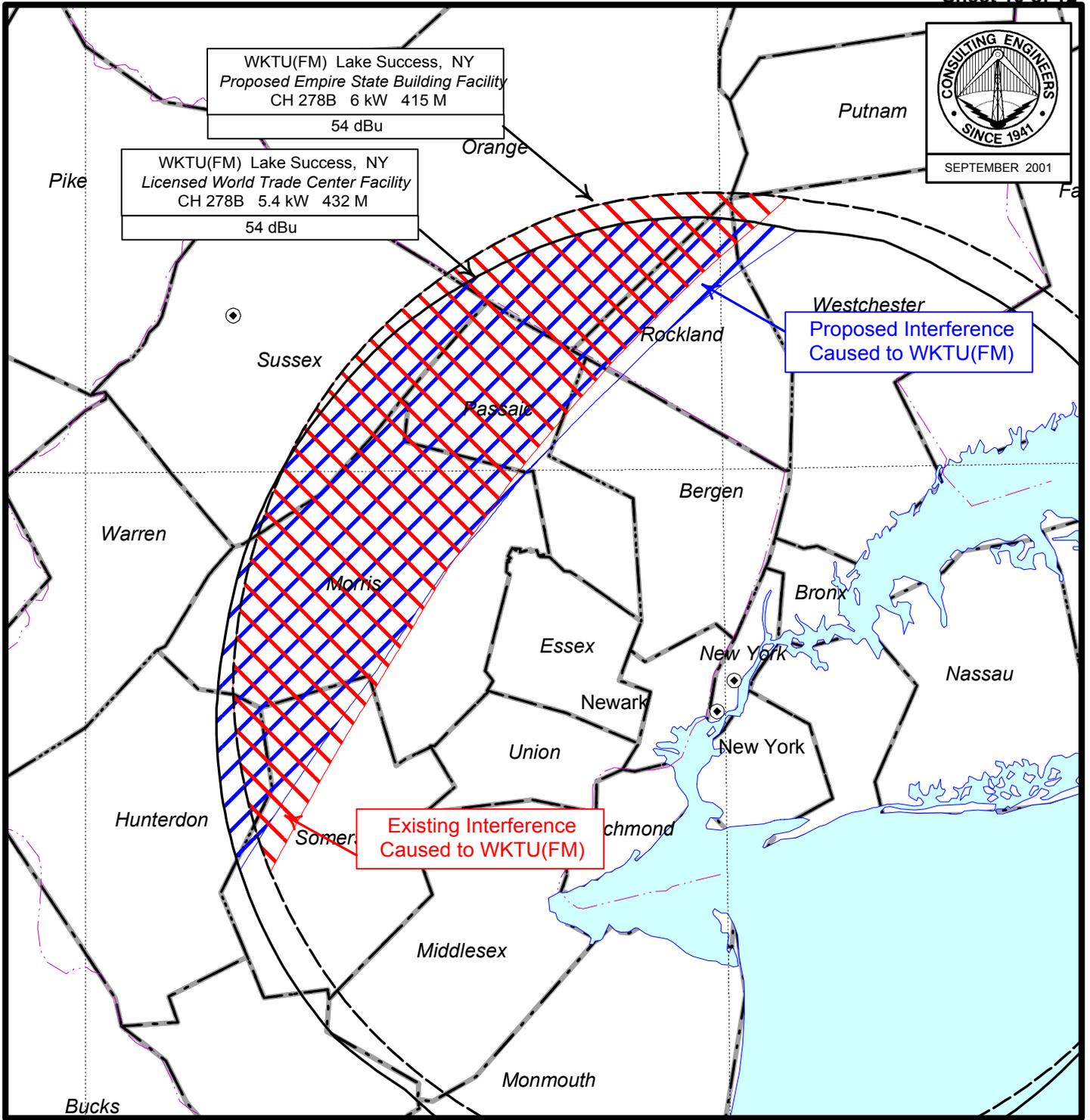
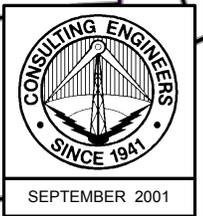
RADIO STATION WKTU(FM)  
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du Treil, Lundin & Rackley, Inc., Sarasota, Florida



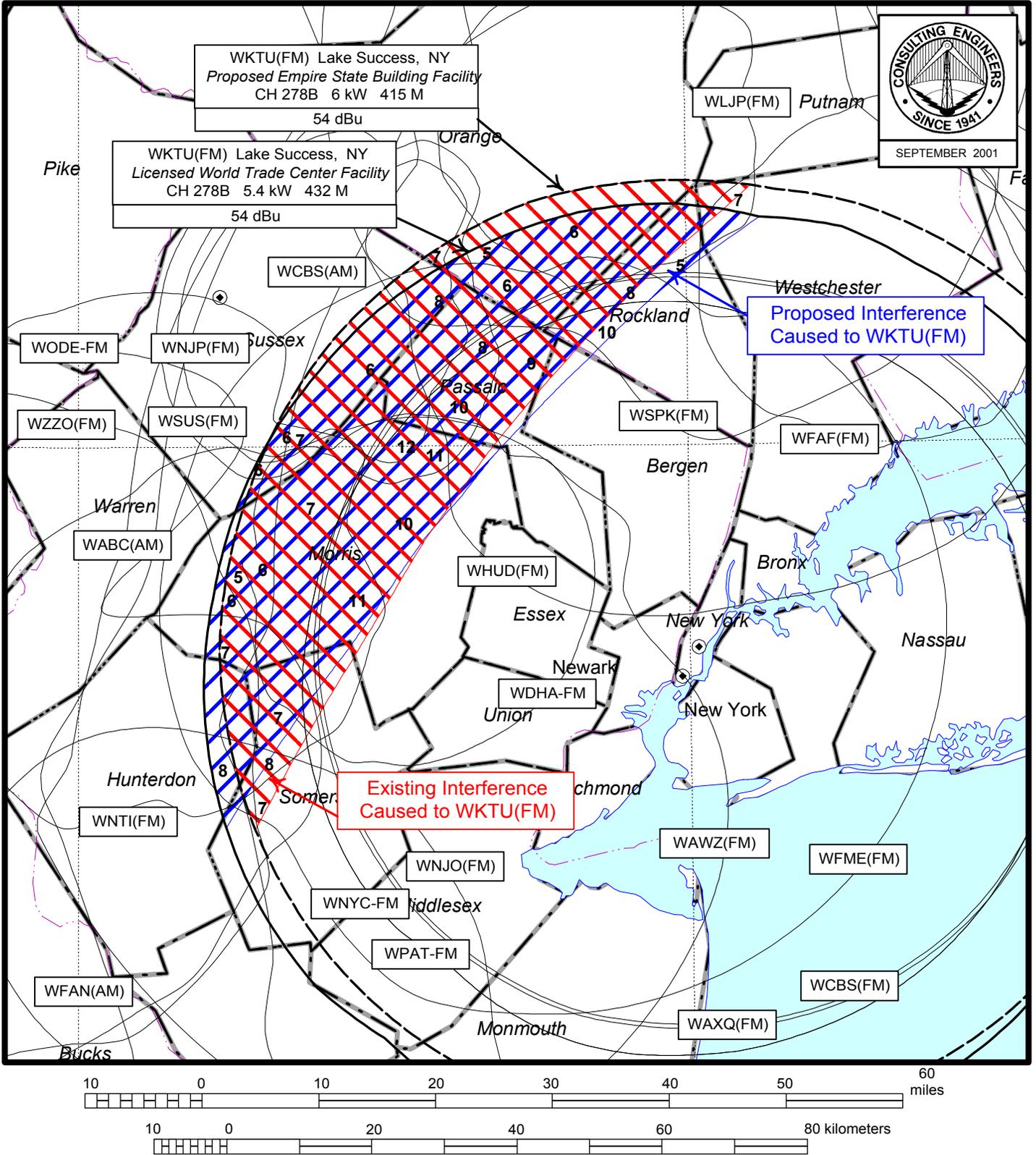
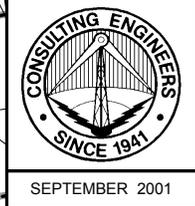
**OTHER AVAILABLE SERVICES TO WNNJ-FM INTERFERENCE AREAS**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M



**WNNJ-FM CAUSED INTERFERENCE AREAS**

RADIO STATION WKTU(FM)  
LAKE SUCCESS, NEW YORK  
CH 278B 6 KW 415 M



**OTHER AVAILABLE SERVICES TO WNNJ-FM INTERFERENCE AREAS**

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SECTION 73.213 WKTU(FM) Interference Analysis

Station	Existing Interference Caused to WKTU(FM)		Existing Interference Received from WKTU(FM)	
	Land (km <sup>2</sup> )	Persons	Land (km <sup>2</sup> )	Persons
WBZO (FM)	2	4,400	0	0
WPRB (FM)	3,100	1,633,000	3,350	2,644,000
WNNJ-FM	2,120	433,300	1,360	363,000
WMGM (FM)	0	0	0	0

Station	Proposed Interference Caused to WKTU(FM)		Proposed Interference Received from WKTU(FM)	
	Land (km <sup>2</sup> )	Persons	Land (km <sup>2</sup> )	Persons
WBZO (FM)	15	26,000	0	0
WPRB (FM)	2,850	1,664,000	3,000	2,473,000
WNNJ-FM	2,160	446,900	1,400	362,600
WMGM (FM)	0	0	0	0

Net Change in Total Interference (Existing minus Proposed)

Land: 507 km<sup>2</sup>  
Population: 105,200 persons

Net Change in Interference Received from WKTU(FM) Caused to:

WBZO (FM)

Land: 0 km<sup>2</sup>  
Population: 0 persons

WPRB (FM)

Land: -350 km<sup>2</sup>  
Population: -171,000 persons

WNNJ-FM

Land: +40 km<sup>2</sup>  
Population: -400 persons

WMGM (FM)

Land: 0 km<sup>2</sup>  
Population: 0 persons