

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of NEW YORK SPECTRUM HOLDING COMPANY, LLC, licensee of digital Low Power Television Station WXNY-LD, Channel 32 in New York, New York, and permittee of a displacement authorization on Channel 23 (LMS-0000148393), in support of its request for Special Temporary Authority to operate on an interim basis on its new channel from a new site, The Empire State Building, while it constructs the authorized displacement facility.

It is proposed to mount a Kathrein wide-band panel antenna at the 298-meter level of the existing 443-meter building. It is also proposed to operate with an effective radiated power of 1.0 kW in the horizontal plane. Exhibit B-1 is a map upon which the predicted 51 dBu service contour of this interim facility is plotted. In Exhibit B-2, we have plotted the contour in relation to that of the WXNY-LD displacement facility on Channel 23, authorized in LMS-0000148393. As shown, the contour of the proposed STA facility is located almost entirely within that of the WXNY-LD authorization.

Azimuth pattern data for the proposed Kathrein directional antenna is included in Exhibit C. Exhibit D contains the summary results from a TVStudy interference study, which was conducted using a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer. It concludes that the proposed WXNY-LD STA facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A and LPTV/translator facilities.

A detailed power density calculation is provided in Exhibit E.

EXHIBIT A

Since no change in the overall height or location of the Empire State Building is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1007048 to this structure.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', with a stylized, elongated final letter.

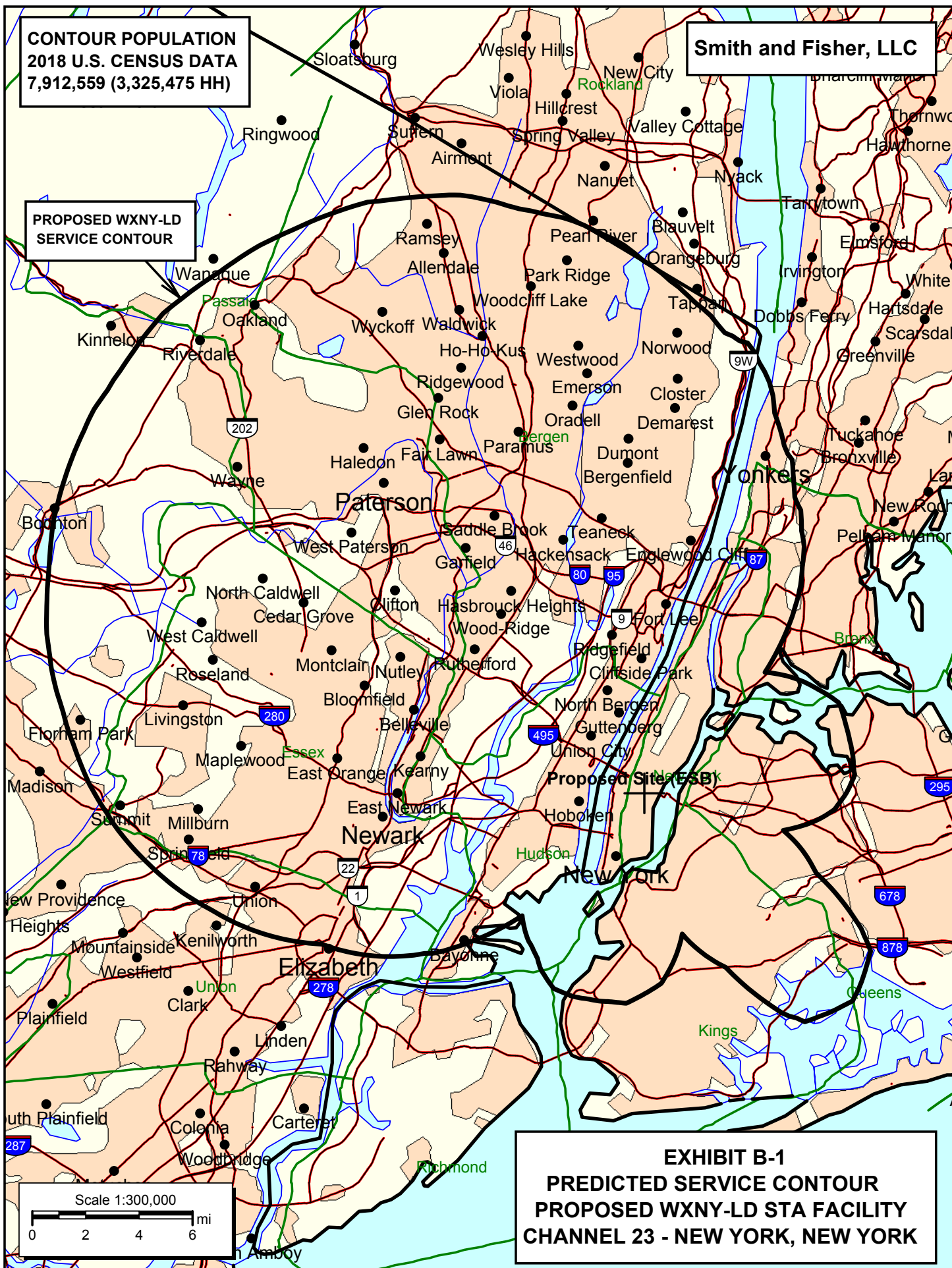
KEVIN T. FISHER

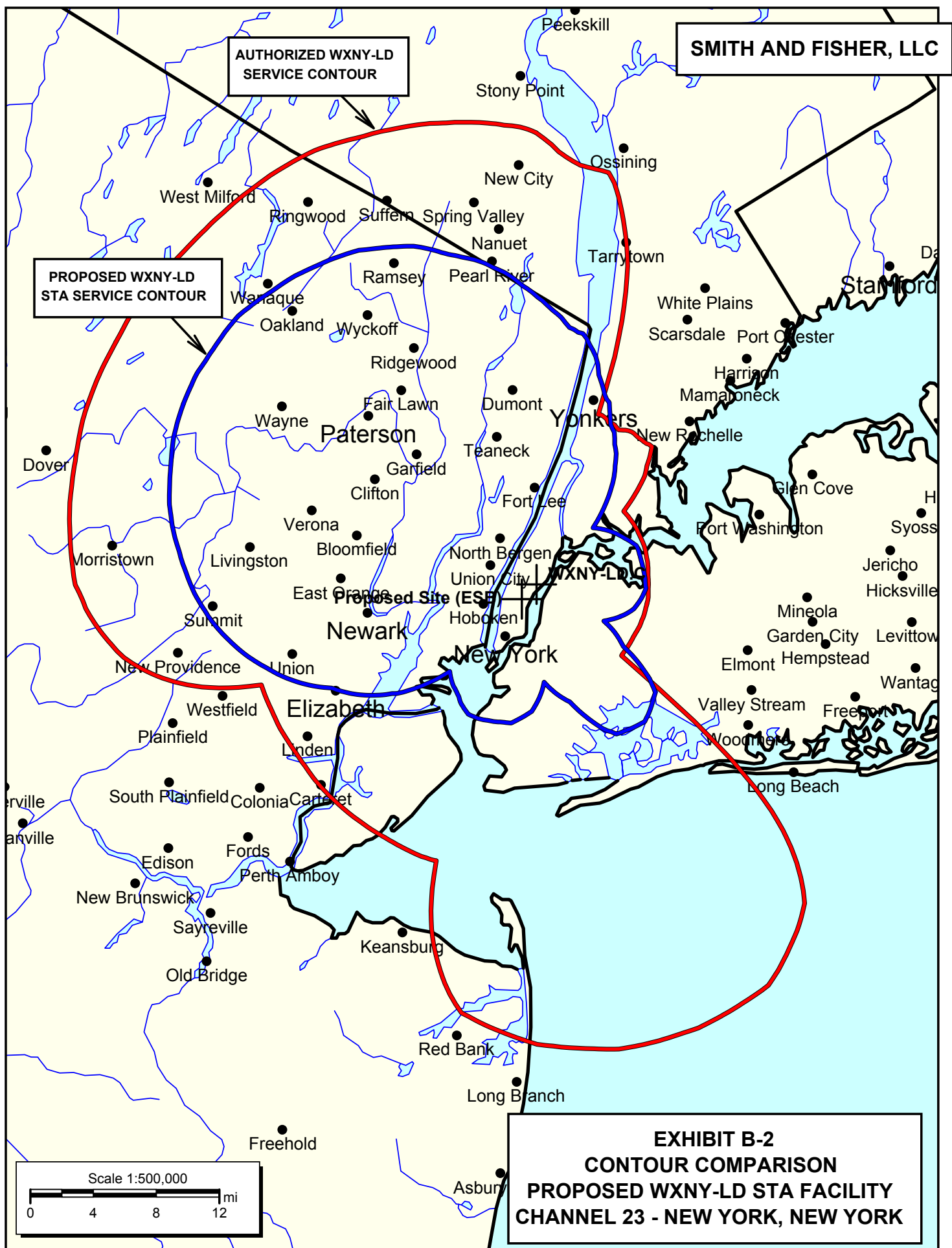
September 9, 2021

**CONTOUR POPULATION
2018 U.S. CENSUS DATA
7,912,559 (3,325,475 HH)**

Smith and Fisher, LLC

**PROPOSED WXNY-LD
SERVICE CONTOUR**

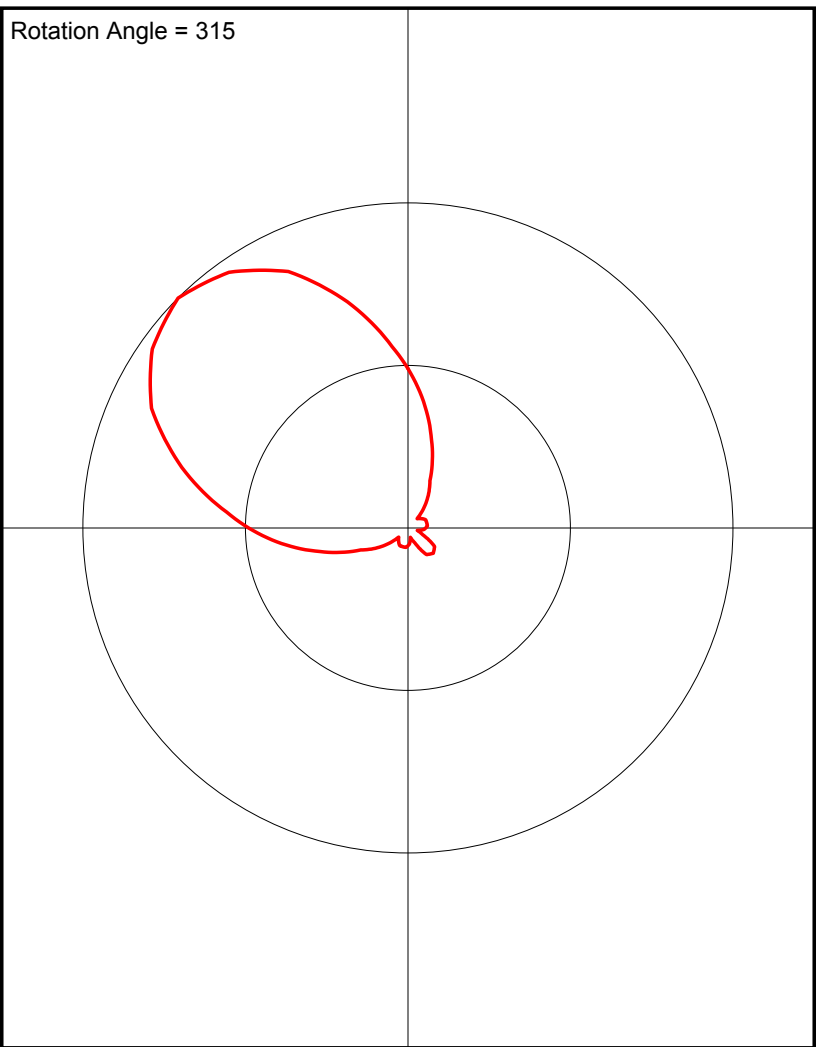




Antenna Pattern

Pre-Rotation Antenna Pattern....

Rotation Angle = 315



Azimuth (deg)	Relative Field
0.0	1.0
10.0	0.96
20.0	0.87
30.0	0.72
40.0	0.56
50.0	0.42
60.0	0.28
70.0	0.16
80.0	0.1
90.0	0.04
100.0	0.05
110.0	0.06
120.0	0.06
130.0	0.06
140.0	0.05
150.0	0.03
160.0	0.05
170.0	0.1
180.0	0.11
190.0	0.1
200.0	0.05
210.0	0.03
220.0	0.05
230.0	0.06
240.0	0.06
250.0	0.06
260.0	0.05
270.0	0.04
280.0	0.1
290.0	0.16
300.0	0.28
310.0	0.42
320.0	0.56
330.0	0.72
340.0	0.87
350.0	0.96

EXHIBIT D

TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED WNYX-LD
 CHANNEL 23 – NEW YORK, NEW YORK

Study created: 2021.09.09 14:22:01

Study build station data: LMS TV 2021-09-09
 Proposal: WXNY-LD D23 LD CP NEW YORK, NY
 File number: BLANK0000053900
 Facility ID: 29231
 Station data: User record
 Record ID: 1176
 Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WUTH-CD	D22	DC	LIC	HARTFORD, CT	BLANK0000080135	165.3 km
No	WBPX-TV	D22	DT	LIC	BOSTON, MA	BLANK0000075858	275.7
No	WDVB-CD	D22	DC	LIC	EDISON, NJ	BLANK0000080314	0.0
No	WPHY-CD	D22	DC	LIC	TRENTON, NJ	BLANK0000079874	131.8
No	WCBS-TV	D22	LD	LIC	NEW YORK, NY	BLANK0000092488	91.6
No	WCWN	D22	DT	LIC	SCHENECTADY, NY	BLANK0000083798	208.6
No	WOLF-TV	D22	DT	LIC	HAZLETON, PA	BLANK0000086376	165.3
No	WDDN-LD	D23	LD	LIC	WASHINGTON, DC	BLDTL20120810AAG	326.1
No	WDMR-LD	D23	LD	LIC	SPRINGFIELD, MA	BLANK0000075390	183.1
No	WDVM-TV	D23	DT	LIC	HAGERSTOWN, MD	BLANK0000080408	358.6
No	WDVM-TV	D23	DT	APP	HAGERSTOWN, MD	BLANK0000127595	373.4
No	W23ED-D	D23	LD	CP	SALISBURY, MD	BLANK0000068887	294.9
No	W23CX	N23+	TX	LIC	SALISBURY, MD	BLTTL20070730AKY	301.7
No	WMJF-CD	D23	DC	LIC	TOWSON, MD	BLANK0000116949	268.1
No	WPXG-TV	D23	DT	LIC	CONCORD, NH	BLANK0000078658	349.1
No	WLED-TV	D23	DT	LIC	LITTLETON, NH	BLANK0000122384	440.9
Yes	WNJS	D23	DT	LIC	CAMDEN, NJ	BLANK0000125056	134.8
Yes	W23EX-D	D23z	LD	LIC	SUSSEX, NJ	BLANK0000080129	63.9
No	WZPJ-LD	D23+	LD	LIC	ALBANY, NY	BLANK0000131751	209.9

SMITH AND FISHER

No	WETM-TV	D23	DT LIC	ELMIRA, NY	BLANK0000129877	283.9
No	WNPI-DT	D23	DT LIC	NORWOOD, NY	BLEDT20050715ABZ	422.1
Yes	W23ER-D	D23z	LD LIC	POUGHKEEPSIE, NY	BLANK0000068283	107.9
Yes	WFTY-DT	D23	DT LIC	SMITHTOWN, NY	BLCDT20120427ABO	88.3
No	WHSU-CD	D23	DC LIC	SYRACUSE, NY	BLANK0000116309	313.8
No	WDWA-LD	D23	LD LIC	Damascus, VA	BLDTL20140528ACM	359.2
No	WTVR-TV	D23	DT LIC	RICHMOND, VA	BLANK0000109887	475.8
No	W23EU-D	D23	LD LIC	RUTLAND, VT	BLANK0000116207	323.6
No	W28AJ	D24z	LD CP	ALLINGTOWN, CT	BLANK0000152150	104.5
No	WDPB	D24	DT LIC	SEAFORD, DE	BLANK0000080899	271.1
No	WLNE-TV	D24	DT LIC	NEW BEDFORD, MA	BLANK0000117589	257.3
No	WHTX-LD	D24	LD LIC	SPRINGFIELD, MA	BLANK0000082009	182.9
No	W48DP-D	D24	LD CP	ATLANTIC CITY, NJ	BLANK0000045666	160.3
No	WTEN	D24	DT LIC	ALBANY, NY	BLANK0000082692	208.6
No	WNYE-TV	D24	DT LIC	NEW YORK, NY	BLANK0000143561	0.9
No	W25FA-D	N24	TX LIC	New york, NY	BLTTL20121024AAA	89.7
No	W24DB-D	D24z	DC LIC	CLARKS SUMMIT, PA	BLANK0000004543	164.8
No	WPHA-CD	D24	DC LIC	PHILADELPHIA, PA	BLDTA20130920ADK	131.8
No	W24CS-D	D24	LD LIC	READING, PA	BLANK0000067784	167.4
No	WNYJ-LD	N26-	TX LIC	New York, NY	BLTTL20070223AHI	89.7
No	DW26CE	N26-	TX APP	NEW YORK, NY	BLTTL20080306ABU	103.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D23

Mask: Full Service

Latitude: 40 44 54.00 N (NAD83)

Longitude: 73 59 9.00 W

Height AMSL: 313.0 m

HAAT: 0.0 m

Peak ERP: 1.00 kW

Antenna: Kathrein Panel 0.0 deg

Elev Pattn: Generic

49.7 dBu contour:

Azimuth	ERP	HAAT	Distance
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0.0 deg	0.240 kW	277.4 m	33.7 km
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45.0	0.002	303.1	11.2
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90.0	0.003	301.0	13.2
135.0	0.012	303.1	19.3
180.0	0.003	296.7	13.1
225.0	0.002	312.4	11.3
270.0	0.240	303.6	34.7
315.0	1.00	302.2	42.5

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 300 m

Distance to Canadian border: 395.2 km

Distance to Mexican border: 2674.8 km

Conditions at FCC monitoring station: Laurel MD

Bearing: 234.8 degrees Distance: 298.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 278.9 degrees Distance: 2629.1 km

Study cell size: 0.50 km

Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED WXNY-LD STA FACILITY
CHANNEL 23 – NEW YORK, NEW YORK

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this New York City facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1.0 kW, an antenna radiation center 298 meters above ground, and assuming a vertical relative field value of 40 percent at the steeper elevation angles for the proposed antenna, maximum power density two meters above ground of 0.000029 mW/cm^2 is calculated to occur near the base of the building. Since this is significantly less than 0.1 percent of the 0.35 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 23 (524-530 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.