

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of FOX TELEVISION STATIONS, INC., licensee of digital television station WNYW-DT, Channel 44 in New York, New York, in support of its Application for Construction Permit for a fill-in translator to serve the area surrounding Newburgh, New York. This area has been suffering from reception issues ever since WNYW changed from analog to digital operation. It is believed that installation of the proposed translator will ameliorate the problem.

It is proposed to mount a 16-bay horizontally-polarized slotted cylinder antenna at the 56-meter level of an existing 72-meter communications tower atop Beacon Mountain. The antenna will contain mechanical beam tilt in order to meet FCC coverage Rules. Exhibit B is a map upon which the predicted 51 dBu service contour of the proposed translator is plotted. In Exhibit C, we show the same contour with reference to the previous analog Grade B contour of WNYW (which operated on Channel 5). It can be seen that the majority of the translator's proposed 51 dBu contour is located within the WNYW contour, as required for fill-in translator operation. If necessary, a waiver of the Commission's Rules is requested with respect to the *de minimis* area that falls outside the Grade B contour. An interference study using the Commission's SunDTV software is provided in Exhibit D, and a power density calculation follows as Exhibit E.

Since no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. In addition, the FCC assigned Antenna Structure Registration number 1021927 to this tower.

EXHIBIT A

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". The signature is stylized with a large initial "K" and a long horizontal stroke at the end.

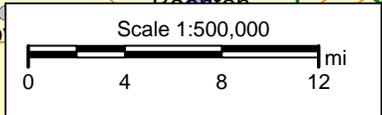
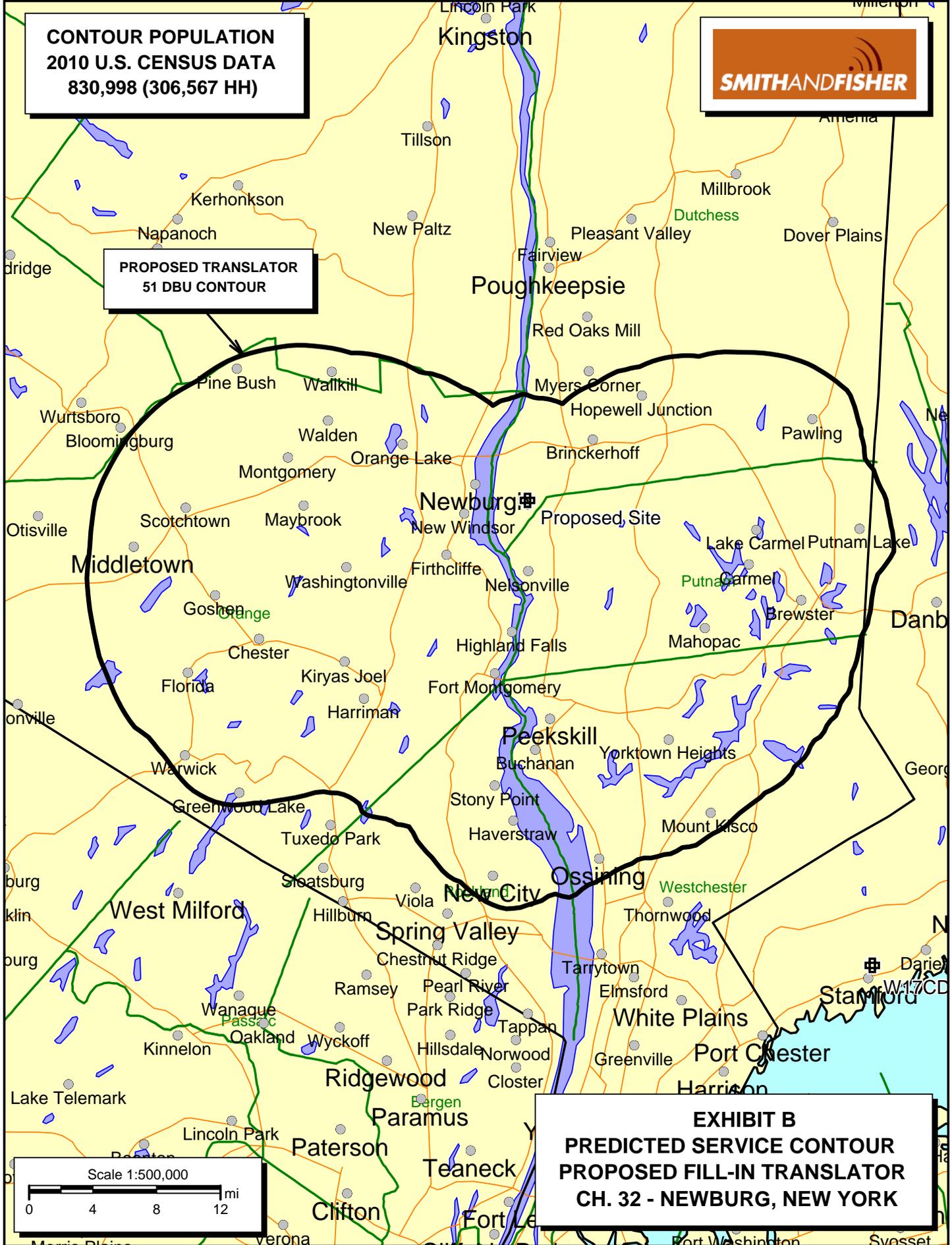
KEVIN T. FISHER

January 9, 2014

**CONTOUR POPULATION  
2010 U.S. CENSUS DATA  
830,998 (306,567 HH)**



**PROPOSED TRANSLATOR  
51 DBU CONTOUR**



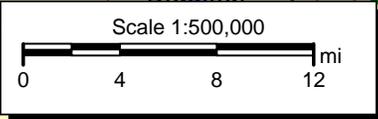
**EXHIBIT B  
PREDICTED SERVICE CONTOUR  
PROPOSED FILL-IN TRANSLATOR  
CH. 32 - NEWBURG, NEW YORK**



**PROPOSED TRANSLATOR  
51 DBU CONTOUR**

**WNYW GRADE B**

**EXHIBIT C  
CONTOUR COMPARISON  
PROPOSED FILL-IN TRANSLATOR  
CH. 32 - NEWBURG, NEW YORK**



LONGLEY-RICE INTERFERENCE STUDY  
PROPOSED FILL-IN TRANSLATOR  
CHANNEL 32 – NEWBURGH, NEW YORK

We conducted a detailed interference study using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The SunDTV software utilizes a 1-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than the proposed Newburgh facility) already is predicted to exist (also known as "masking"). A summary of the results of this study are provided in Exhibit D-2. It concludes that the facility proposed herein causes no significant interference to any of the potentially affected stations.

Summary Study

Percent allowed new interference: 0.500  
 Percent allowed new interference to non Class A LPTV: 2.000  
 Census data selected 2000  
 Data Base Selected  
 ./data\_files/pt\_tvdb.sff  
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-13-2013 Time: 17:45:09

Record Selected for Analysis

BEACON USERRECORD-01            POUGHKEEPSIE        NY US  
 Channel 32 ERP 1.   kW HAAT 343. m RCAMSL 00469 m FULL SERVICE MASK  
 Latitude 041-29-20 Longitude 0073-56-53  
 Status APP    Zone 1    Border    Site number: 01  
 Dir Antenna Make usr Model USRPAT01    Beam tilt N Ref Azimuth 0.  
 Last update    Cutoff date    Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station  
 Service Class = LD  
 Maximum height/power limits not checked

Site number 1

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.000	428.5	5.8
45.0	0.012	376.8	19.6
90.0	0.723	208.9	34.6
135.0	0.706	249.8	36.6
180.0	0.476	368.5	39.4
225.0	0.714	368.0	41.8
270.0	0.723	379.5	42.3
315.0	0.013	361.4	19.7

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

NO LANDMOBILE SPACING VIOLATIONS FOUND

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance  
Distance to border = 333.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is 2.57km from AM station  
BEACON NY WBNR Status: L Antenna: DA2

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Start of Interference Analysis

Proposed Station				
Channel	Call	City/State	ARN	
32	BEACON	POUGHKEEPSIE NY		USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	W17CD	STAMFORD CT	58.4	LIC	BLTTL	-20070201BSO
17	DW44BC	BRENTWOOD NY	104.8	APP	BMPTTL	-19960517UQ
17	W1G-LP	PLAINVIEW, ETC. NY	90.3	LIC	BLTTL	-20050802AAY
18	W18BN	SCRANTON PA	124.0	LIC	BLTTL	-19981228JB
24	W24EF	PORT JERVIS NY	62.4	LIC	BLTTL	-20121024AAA
24	W24BB	EAST STROUDSBURG PA	139.8	LIC	BLTTL	-19911219JM
28	W28AJ	ALLINGTOWN CT	84.7	LIC	BLTTL	-20010608AAO
31	WTIC-TV	HARTFORD CT	95.7	LIC	BLCDDT	-20101222AAE
31	WPPX-TV	WILMINGTON DE	194.0	CP	BPCDDT	-20080620AMP
31	WPPX-TV	WILMINGTON DE	194.0	LIC	BLCDDT	-20031203AFL
31	W31BP	BURLINGTON, ETC. NY	168.2	LIC	BLTTL	-19980120JE
31	WNCE-CD	GLENS FALLS NY	200.8	LIC	BLDTA	-20100812ABN
31	WPXN-TV	NEW YORK NY	82.4	LIC	BLCDDT	-20110729AAQ
31	WPXN-TV	NEW YORK NY	86.4	APP	BMPDDT	-20080620ALZ
31	WSWB-DR	SCRANTON PA	148.5	APP	BPRM	-20080619ALI
31	WSWB	SCRANTON PA	148.5	LIC	BMLCDDT	-20090529AJJ
32	WRZB-LD	WASHINGTON DC	388.5	CP	BDCCDTL	-20110112AAC
32	WBPX-TV	BOSTON MA	243.0	LIC	BLCDDT	-20040723ACG
32	WTMU-LP	BOSTON MA	255.4	LIC	BLTTL	-19950414IE
32	W32EK-D	SALISBURY MD	370.6	CP	BNPDDL	-20100913AAO
32	WMNE-LP	PORTLAND ME	387.5	LIC	BLTT	-20020429AAV
32	WMNE-LP	PORTLAND ME	395.6	CP	MOD BMPDDL	-20120307ABN
32	W59DG	ELMIRA NY	243.5	CP	BDISDDL	-20110829AAJ
32	WXNY-LD	NEW YORK NY	82.4	LIC	BLDDL	-20090908ACO

Beacon32Die\_summary.txt

32	W32EI	PORT JERVIS NY	62.4	LIC	BLTTL	-20121024AAB
32	NEW	SYLVAN BEACH NY	246.2	APP	BDCCTL	-20130903AAR
32	WTAJ-TV	ALTOONA PA	390.4	LIC	BLCDT	-20051018ACE
32	WPSG	PHILADELPHIA PA	194.0	CP	BPCDT	-20111024ACS
32	WPSG	PHILADELPHIA PA	194.0	LIC	BLCDT	-20021025AAS
32	WQPX-TV	SCRANTON PA	148.2	LIC	BLCDT	-20060629AFR
32	WETK	BURLINGTON VT	349.9	LIC	BLEDT	-20061011ADW
33	WFSB	HARTFORD CT	100.1	CP	BPCDT	-20110630AAH
33	WFSB	HARTFORD CT	100.1	LIC	BLCDT	-20041029AIL
33	WCBS-TV	NEW YORK NY	82.4	LIC	BLCDT	-20090612AFN
33	WCBS-TV	NEW YORK NY	86.4	APP	BMPCDT	-20080619AAZ
33	WVVC-LD	UTICA NY	200.4	LIC	BLDTL	-20110829AAZ
33	WZPA-LD	PHILADELPHIA PA	194.1	LIC	BLDTL	-20120615AAK
33	WZPA-LD	PHILADELPHIA PA	194.1	CP	BDFCTL	-20100915ABB
34	W34DI	PORT JERVIS NY	62.4	LIC	BLTTL	-20070223AHK
36	W36AZ	SUSSEX NJ	62.5	LIC	BLTT	-19970806JC

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Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION

PROPOSED FILL-IN TRANSLATOR  
CHANNEL 32 – NEWBURGH, 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 Newburgh facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1 kW, an antenna radiation center 56 meters above ground, and the specific elevation pattern of the Dielectric TLP-16I antenna, maximum power density two meters above ground of  $0.00027 \text{ mW/cm}^2$  is calculated to occur 30 meters northeast and northwest of the base of the tower. Since this is less than 0.1 percent of the  $0.39 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 32 (578-584 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational 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.