

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of LIBERTY COMMUNICATIONS, INC., licensee of Class A digital television station W50CH-D, Channel 50 in Alton, Illinois, in support of its application for modification of Construction Permit 0000027756, which authorizes operation on its post-repack channel, Channel 36, as W36EX-D. The purpose of this application is to specify an increase in effective radiated power to 15.0 kW. No change in site location, antenna azimuth pattern or antenna height is proposed herein.

It is still proposed to mount an ERI omnidirectional antenna at the 56-meter level of the existing 58-meter tower on which the present W50CH-D antenna is located. Exhibit B is a map upon which the predicted 51 dBu service contour of this new proposal is plotted.

An elevation pattern for the proposed ERI omnidirectional antenna is included in Exhibit C. Exhibit D contains the summary results from a TVStudy interference study, which was conducted using a cell size and increment spacing of 1.0 kilometer. It concludes that the proposed W36EX-D 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.

Since no change in the overall height or location of the existing W50CH-D (W36EX-D) tower is proposed herein, and due to the diminutive height of the tower (58 meters) and its proximity to the nearest airport runway, the Federal Aviation Administration has not been notified of this application. In addition, and for the same reasons, FCC Antenna Structure Registration is not required. This conclusion is supported by the Commission's TOWAIR software.

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 "K" and "F".

KEVIN T. FISHER

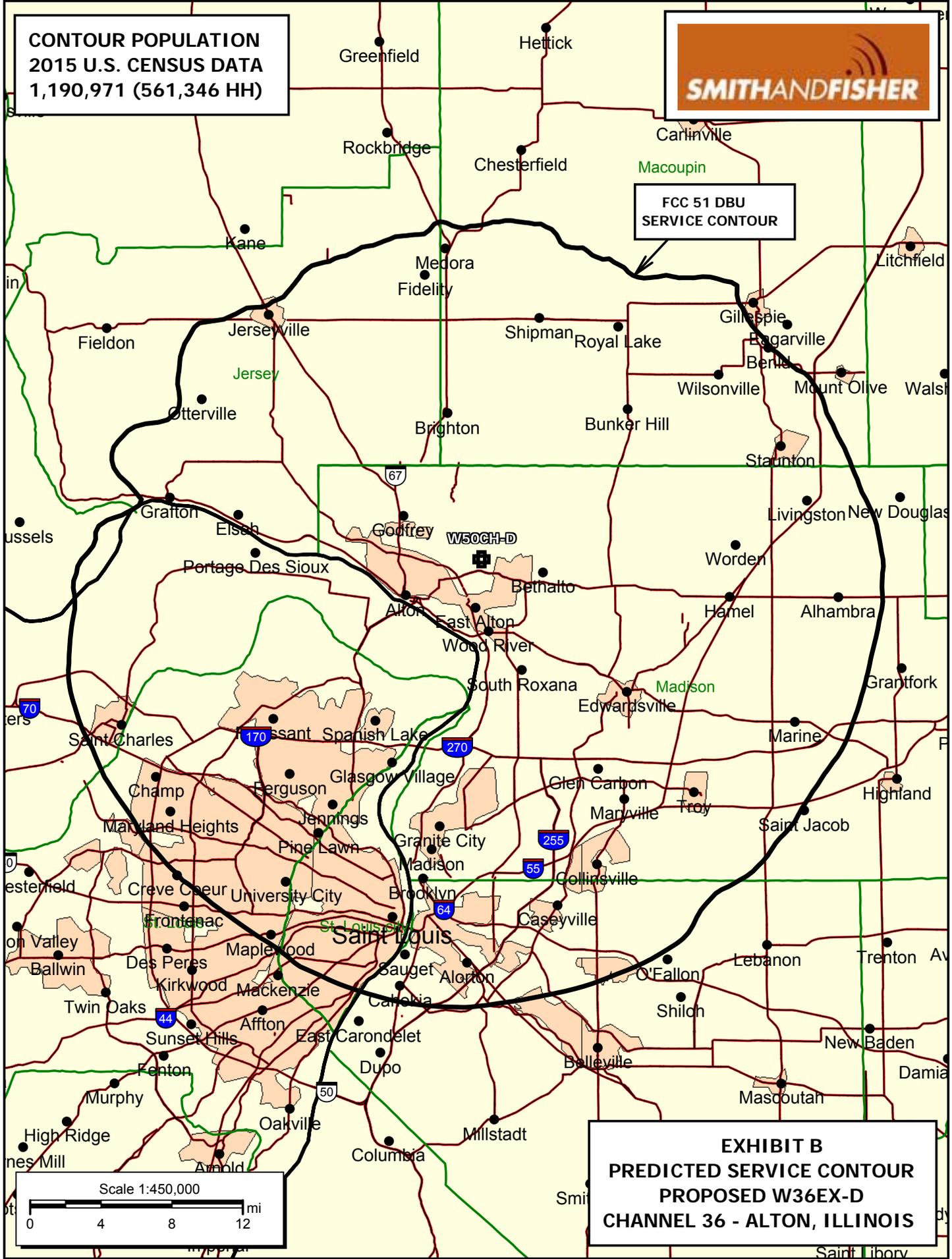
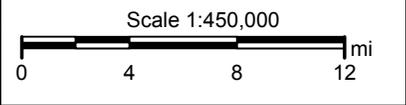
October 29, 2017

**CONTOUR POPULATION
2015 U.S. CENSUS DATA
1,190,971 (561,346 HH)**



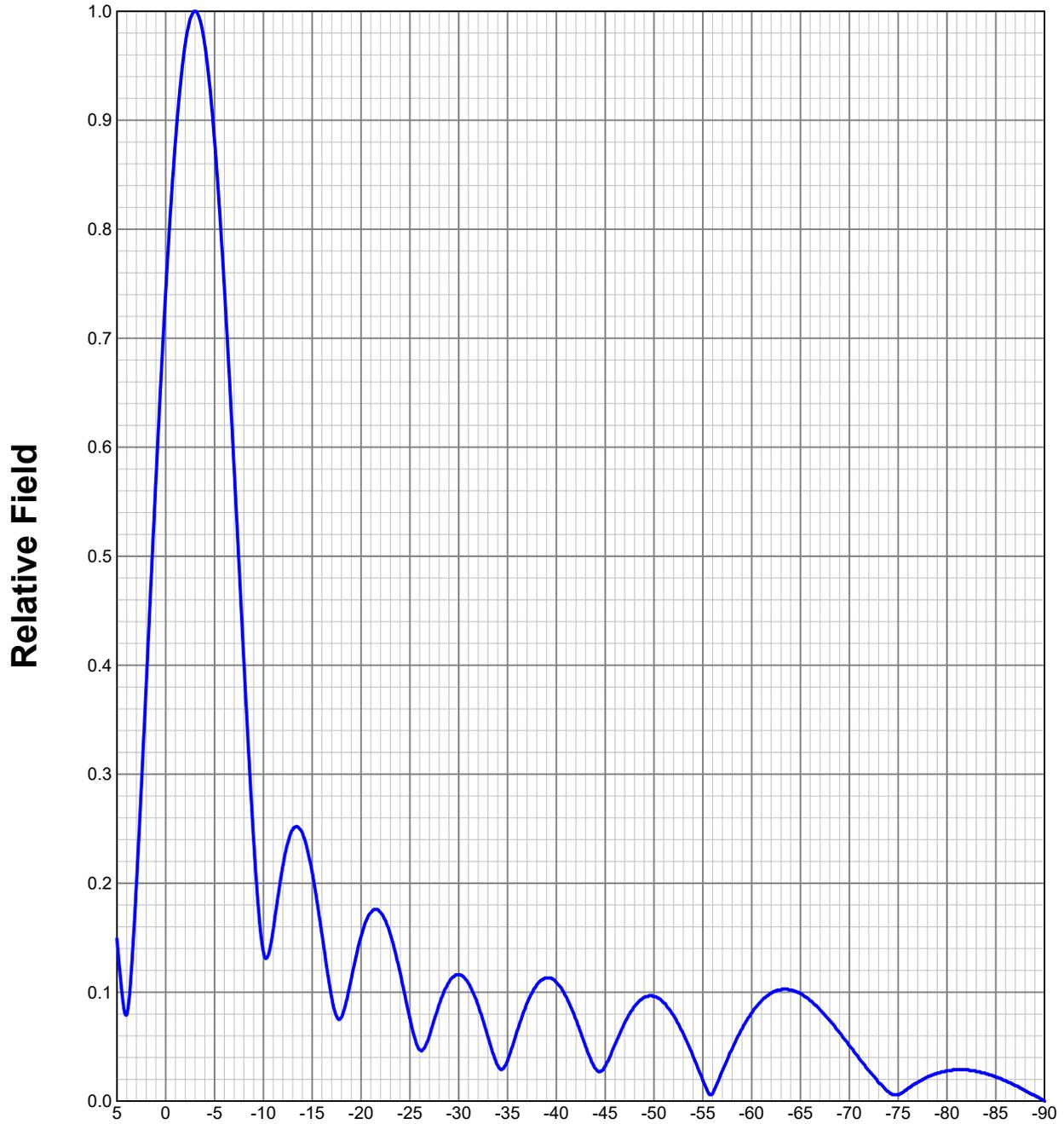
**FCC 51 DBU
SERVICE CONTOUR**

**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED W36EX-D
CHANNEL 36 - ALTON, ILLINOIS**



ELEVATION PATTERN

Type:	AL8		Channel:	36
Directivity:	Numeric	dBd	Location:	
Main Lobe:	8.68	9.39	Beam Tilt:	-1.75
Horizontal:	4.79	6.80	Polarization:	Horizontal



Preliminary, subject to final design and review.

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED W36EX-D
CHANNEL 36 – ALTON, ILLINOIS

Study created: 2017.10.29 12:33:48

Study build station data: LMS TV 2017-10-24 (1)

Proposal: W50CH-D D36 DC CP ALTON, IL
File number: BLANK0000027756
Facility ID: 37238
Station data: User record
Record ID: 11
Country: U.S.

Build options:

Protect LPTV records from Class A

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WMEC	D36	DT	CP	MACOMB, IL	BLANK0000026298	172.8 km
WMEC	D36	DT	BL	MACOMB, IL	DTVBL70537	172.9
KBSI	D36	DT	CP	CAPE GIRARDEAU, MO	BLANK0000025127	174.8
KBSI	D36	DT	BL	CAPE GIRARDEAU, MO	DTVBL19593	174.8
KPTN-LD	D36	LD	LIC	ST. LOUIS, MO	BLDTL20110531AOG	42.9

No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:

KFNS 590 L DA2 D WOOD RIVER, IL BL19810128AD

KFNS 590 L DA2 N WOOD RIVER, IL BL19810128AD

Record parameters as studied:

Channel: D36
Mask: Full Service
Latitude: 38 55 12.10 N (NAD83)
Longitude: 90 6 18.30 W
Height AMSL: 210.0 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: Omnidirectional

Elev Pattn: Generic

Elec Tilt: 1.75

50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	32.8 m	30.1 km
45.0	15.0	41.5	32.7
90.0	15.0	52.9	35.7
135.0	15.0	58.4	36.9
180.0	15.0	80.8	40.4
225.0	15.0	75.1	39.5
270.0	15.0	52.8	35.7
315.0	15.0	38.1	31.7

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 54 m

**Proposal service area extends beyond baseline plus 1.0%

Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 679.3 km

Distance to Mexican border: 1449.9 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 39.1 degrees Distance: 538.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 280.7 degrees Distance: 1301.7 km

Study cell size: 1.00 km

Profile point spacing: 1.00 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 W36EX-D
CHANNEL 36 – ALTON, ILLINOIS

[MODIFICATION OF CONSTRUCTION PERMIT 0000027756]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Alton facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW, an antenna radiation center 56 meters above ground, and the specific elevation pattern of the proposed ERI antenna, maximum power density two meters above ground of 0.0014 mW/cm^2 is calculated to occur 27 meters from the base of the tower. Since this is only 0.4 percent of the 0.40 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 36 (602-608 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.