

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of CAROLINA CHRISTIAN BROADCASTING, INC., licensee of digital Television Translator W28DB-D, Channel 28 in Honea Path, South Carolina, in support of this amendment to its displacement Application for Construction Permit to specify operation on Channel 16 (LMS-0000052465).

The referenced application is mutually exclusive with a Channel 16 displacement application filed by the University of North Carolina for its translator W19CR-D in Tryon, North Carolina (LMS-0000053446) and the two applications are listed by the Commission as the only proposals in FCC MX Group 65. These applications presently cause more than the FCC-allowable limit of interference to each other (2 percent of the station service population). As a result, the owners of the two stations have entered into an agreement whereby the operating parameters of each will be modified and the resulting interference caused by the stations to each other accepted. For its part, the facility of proposed W28DB-D on Channel 16 will be amended to specify a directional antenna oriented away from the facility of W19CR-D on Channel 16. This is the purpose of the engineering amendment specified herein.

It is now proposed to mount an MCI directional panel antenna at the 45-meter level of the existing 56.4-meter WGGS-DT tower. The proposed effective radiated power for the W28DB-D facility will remain 10.0 kW in the horizontal plane. Exhibit B is a map upon which the new predicted 51 dBu service contour is plotted.

Exhibit C is an azimuth pattern for the proposed MCI 955312 antenna, which will be oriented at 135 degrees true (line of symmetry will be 180 degrees true).

Exhibit D is a summary report from a TVStudy interference analysis for the proposed facility. Our study employed a cell size of 1.0 kilometer and increment spacing of 1.0 kilometer. Further the applicant proposes use of a full-service mask filter. The results indicate that the amended W28DB-D facility on Channel 16 meets the Commission's interference requirements to all full-power and low-power co-channel and adjacent-channel television facilities, except to co-owned WGGG-DT (Channel 16 in Greenville, SC) and the proposed W19CR-D facility (LMS-0000053446). WGGG-DT is being repacked to Channel 2 and therefore the interference to that station can be ignored. With respect to W19CR-D, as previously mentioned, that station agrees to accept the interference caused by the amended W28DB-D facility specified herein.

A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing WGGG-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, due to the diminutive height of the tower and its proximity to the nearest airport runway, FCC tower registration is not required for 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 flourish at the end.

KEVIN T. FISHER

November 19, 2018

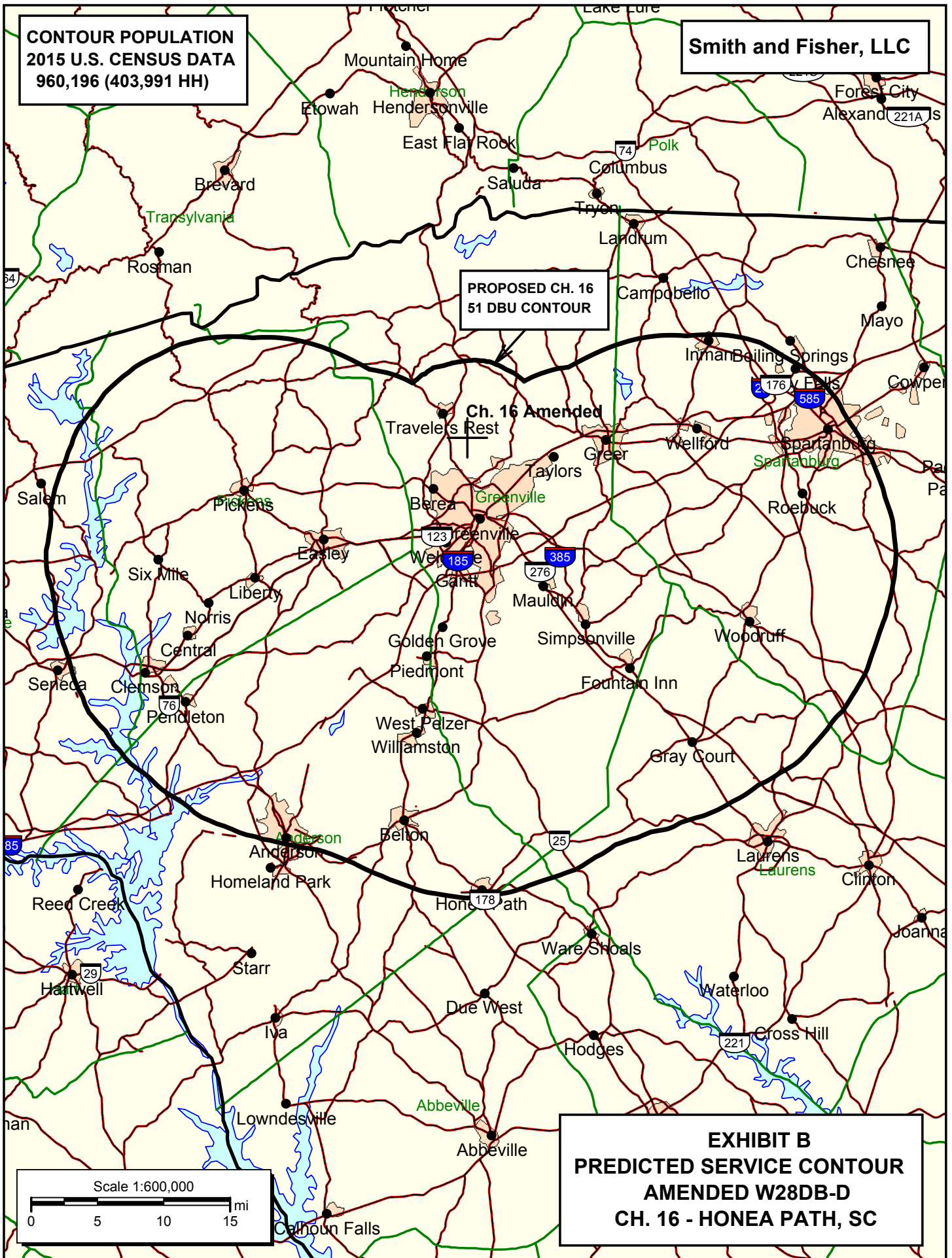
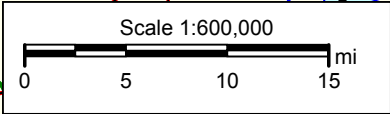
**CONTOUR POPULATION  
2015 U.S. CENSUS DATA  
960,196 (403,991 HH)**

**Smith and Fisher, LLC**

**PROPOSED CH. 16  
51 DBU CONTOUR**

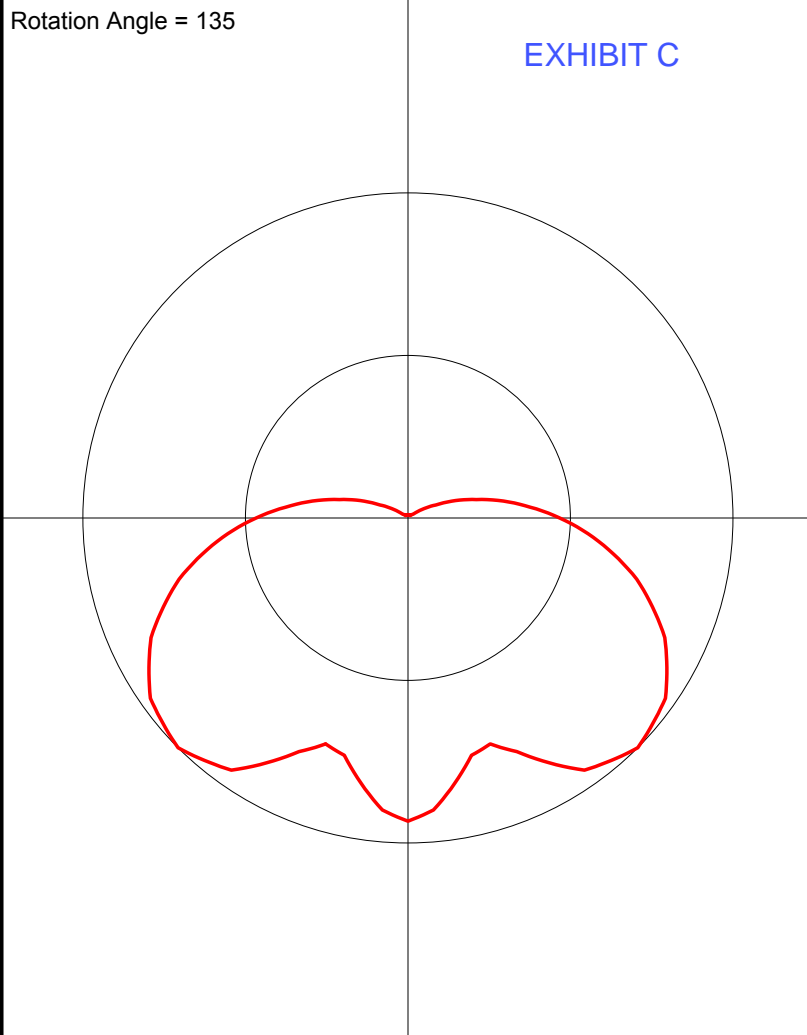
**Ch. 16 Amended**

**EXHIBIT B  
PREDICTED SERVICE CONTOUR  
AMENDED W28DB-D  
CH. 16 - HONEA PATH, SC**



Antenna Pattern

Pre-Rotation Antenna Pattern....



Azimuth (deg)	Relative Field
0.0	1.0
10.0	0.947
20.0	0.793
30.0	0.756
40.0	0.902
50.0	0.902
60.0	0.756
70.0	0.793
80.0	0.947
90.0	1.0
100.0	0.967
110.0	0.872
120.0	0.729
130.0	0.556
140.0	0.378
150.0	0.218
160.0	0.094
170.0	0.021
180.0	0.01
190.0	0.01
200.0	0.01
210.0	0.01
220.0	0.01
230.0	0.01
240.0	0.01
250.0	0.01
260.0	0.01
270.0	0.01
280.0	0.021
290.0	0.094
300.0	0.218
310.0	0.378
320.0	0.556
330.0	0.729
340.0	0.872
350.0	0.967

TVSTUDY INTERFERENCE ANALYSIS RESULTS  
 PROPOSED W28DB-D  
 CHANNEL 16 – HONEA PATH, SOUTH CAROLINA  
 [AMENDMENT TO LMS-0000052465]

Study created: 2018.11.19 16:04:49

Study build station data: LMS TV 2018-10-28

Proposal: W28DB-D D16 LD APP HONEA PATH, SC

File number: BLANK0000052465

Facility ID: 67372

Station data: User record

Record ID: 362

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	WAGC-LD	D15	LD	CP	ATLANTA, GA	BLANK0000054666	217.1 km
No	WGGD-LD	D15	LD	LIC	GAINESVILLE, GA	BLDTL20121213AIK	165.9
No	W08EG-D	D15	LD	APP	TOCCOA, GA	BLANK0000053814	94.5
No	W21CK-D	D15	DC	CP	CHARLOTTE, NC	BLANK0000034509	142.5
No	W15CW-D	D15	LD	LIC	FRANKLIN, NC	BLDTT20111227ABE	109.5
No	W15CW-D	D15	LD	CP	FRANKLIN, NC	BMPDTT20110127AAR	109.5
No	W15CW-D	D15	LD	CP	FRANKLIN, NC	BDISDTT20090824ACL	109.5
No	W31AZ-D	D15	LD	APP	HENDERSONVILLE, NC	BLANK0000052464	0.0
No	W15DR-D	D15	LD	CP	MAGGIE VALLEY, ETC, NC	BDCCDTT20120706ABQ	90.6
No	W15DY-D	D15	LD	CP	MARION, ETC., NC	BLANK0000001742	89.2
No	W02AH	D15	LD	CP	MARS HILL, NC	BLANK0000054154	102.0
No	WHWD-LD	D15	LD	CP	Winston-Salem, NC	BLANK0000029372	213.0
No	WLTX	D15	DT	CP	COLUMBIA, SC	BLANK0000028035	177.6
No	WNSC-TV	D15	DT	LIC	ROCK HILL, SC	BLEDT20060111AAK	127.5
No	WTNZ	D15	DT	CP	KNOXVILLE, TN	BLANK0000055117	182.5
No	W38EI-D	D16	LD	CP	Alexander City, AL	BLANK0000054791	393.9
No	WYGA-CD	D16	DC	LIC	ATLANTA, GA	BLDTL20090904ABS	222.8
Yes	WAGT-CD	D16	DC	LIC	AUGUSTA, GA	BLANK0000001455	166.7
No	WYBU-CD	D16	DC	LIC	COLUMBUS, GA	BLDTA20091228ACN	368.0
No	WELF-TV	D16	DT	LIC	DALTON, GA	BLCDT20130610ACF	274.5
No	W26DS-D	D16	LD	CP	LA GRANGE, GA	BLANK0000053055	330.8
No	WDMA-CD	D16	DC	CP	MACON, GA	BLANK0000034487	260.7

Yes	WGXA	D16	DT LIC	MACON, GA	BLCDT20070501AAI	265.6
Yes	WPXA-TV	D16	DT CP	ROME, GA	BLANK0000034338	216.2
No	WSAV-TV	D16	DT LIC	SAVANNAH, GA	BLANK0000055021	336.5
No	WNKY	D16	DT LIC	BOWLING GREEN, KY	BLANK0000007775	411.0
No	WKHA	D16	DT LIC	HAZARD, KY	BLANK0000001625	259.9
No	WCEE-LD	D16	LD LIC	CHARLOTTE, NC	BLANK0000005163	160.6
No	WCEE-LD	N16-	TX LIC	CHARLOTTE, NC	BLTT20041025ACE	160.6
No	WPXU-TV	D16	DT CP	JACKSONVILLE, NC	BLANK0000026976	455.8
No	WBXU-LD	D16z	LD LIC	RALEIGH, NC	BLANK0000013932	346.9
No	W16DI-D	D16	LD CP	ROCKY MOUNT, NC	BDCCDTL20110725AAC	428.3
Yes	W19CR-D	D16	LD APP	TRYON, NC	BLANK0000053446	39.3
Yes	WXII-TV	D16	DT CP	WINSTON-SALEM, NC	BLANK0000034697	243.5
Yes	WKDC-LD	D16	LD CP	COLUMBIA, SC	BLANK0000054557	154.2
Yes	WJPM-TV	D16	DT CP	FLORENCE, SC	BLANK0000025028	254.9
Yes	WPDE-TV	D16	DT LIC	FLORENCE, SC	BLCDT20080815ABI	288.8
Yes	WGGG-TV	D16	DT LIC	GREENVILLE, SC	BLCDT20130925AJI	0.0
No	WMKH-LD	D16	LD LIC	HILTON HEAD ISLAND, SC	BLDTL20121019ADL	330.4
No	WAPK-CD	D16	DC CP	BRISTOL VA/KINGSPORT, TN	BLANK0000034342	167.5
No	WEZK-LP	D16z	LD CP	KNOXVILLE, TN	BLANK0000053923	181.9
No	WHTN	D16	DT CP	MURFREESBORO, TN	BLANK0000034213	385.2
No	WZTS-LD	D16	LD LIC	Hinton, WV	BLANK0000025146	356.2
No	WUVG-DT	D17	LD LIC	ATHENS, GA	BLCDT20091210ABP	160.6
No	WCEE-LD	D17	LD APP	CHARLOTTE, NC	BLANK0000054738	160.6
No	WDMC-LD	D17	LD APP	CHARLOTTE, NC	BLANK0000054923	160.6
No	WUNE-TV	D17	DT LIC	LINVILLE, NC	BLEDT20091118ADR	135.0
No	W17DS-D	D17	LD CP	SYLVA, ETC, NC	BDCCDTT20120615ADA	85.7
No	WLTX	D17	DT LIC	COLUMBIA, SC	BLCDT20050701AAC	177.6
Yes	WHNS	D17	DT CP	GREENVILLE, SC	BLANK0000024830	36.4
No	WKOP-TV	D17	DT LIC	KNOXVILLE, TN	BLEDT20040405ACC	182.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16  
Mask: Full Service  
Latitude: 34 56 26.40 N (NAD83)  
Longitude: 82 24 40.40 W  
Height AMSL: 652.1 m  
HAAT: 0.0 m  
Peak ERP: 10.0 kW  
Antenna: MCI 955312 0.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.75

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.001 kW	323.6 m	10.6 km
45.0	0.001	354.0	11.0
90.0	2.18	343.6	49.9
135.0	10.0	344.1	58.1
180.0	8.70	356.7	58.0
225.0	10.0	357.8	58.8
270.0	2.18	347.1	50.1
315.0	0.001	326.8	10.6

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 344 m

Distance to Canadian border: 748.7 km

Distance to Mexican border: 1707.6 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 241.2 degrees Distance: 243.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 292.8 degrees Distance: 2085.1 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

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%

\*\*MX with BLANK0000053446 APP scenario 1, 45.14% interference caused

\*\*MX with BLANK0000053446 APP scenario 2, 45.14% interference caused

\*\*MX with BLANK0000053446 APP scenario 3, 45.14% interference caused

\*\*IX check failure to BLCDT20130925AJI LIC scenario 1, 27.97% interference caused

---- Below is IX received by proposal BLANK0000052465 ----

\*\*MX with scenario 1, 15.63% interference received

POWER DENSITY CALCULATION

PROPOSED W28DB-D  
CHANNEL 16 – HONEA PATH, SOUTH CAROLINA  
[AMENDMENT TO LMS-00000524665]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Honea Path facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 10.0 kW, an antenna radiation center 45.1 meters above ground, and assuming a relative field value of 20 percent at the steeper elevation angles for the proposed MCI antenna, maximum power density two meters above ground of  $0.0072 \text{ mW/cm}^2$  is calculated to occur near the base of the tower. Since this value represents only 2.2 percent of the  $0.32 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 16 (482-488 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.