

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of Class A digital television station WBFT-CD, Channel 36 in Sanford, North Carolina, in support of its Application for Construction Permit to specify a new site. The new site is located just 35.7 kilometers northwest of the WBFT-CD site licensed in LMS-0000124673.

It is proposed to mount a Micro Communications directional panel antenna at the 117-meter level of an existing 126.5-meter tower located near Siler City, North Carolina. The proposed effective radiated power for the facility is 15.0 kW in the horizontal plane. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted. In Exhibit C, we have plotted the authorized and proposed 51 dBu contours for comparison. As shown, a significant portion of the licensed WBFT-CD contour is contained within that from the proposed site.

Azimuth pattern data for the proposed MCI antenna appear in Exhibit D. Exhibit E contains the summary results from a TVStudy interference study, which was conducted using a cell size of 1.0 kilometers and an increment spacing of 1.0 kilometer. It concludes that the proposed WBFT-CD 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 F.

Since no change in the overall height or location of the existing tower is proposed herein the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission has issued Antenna Structure Registration Number 1004906 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 "K" and "F".

KEVIN T. FISHER

October 18, 2022

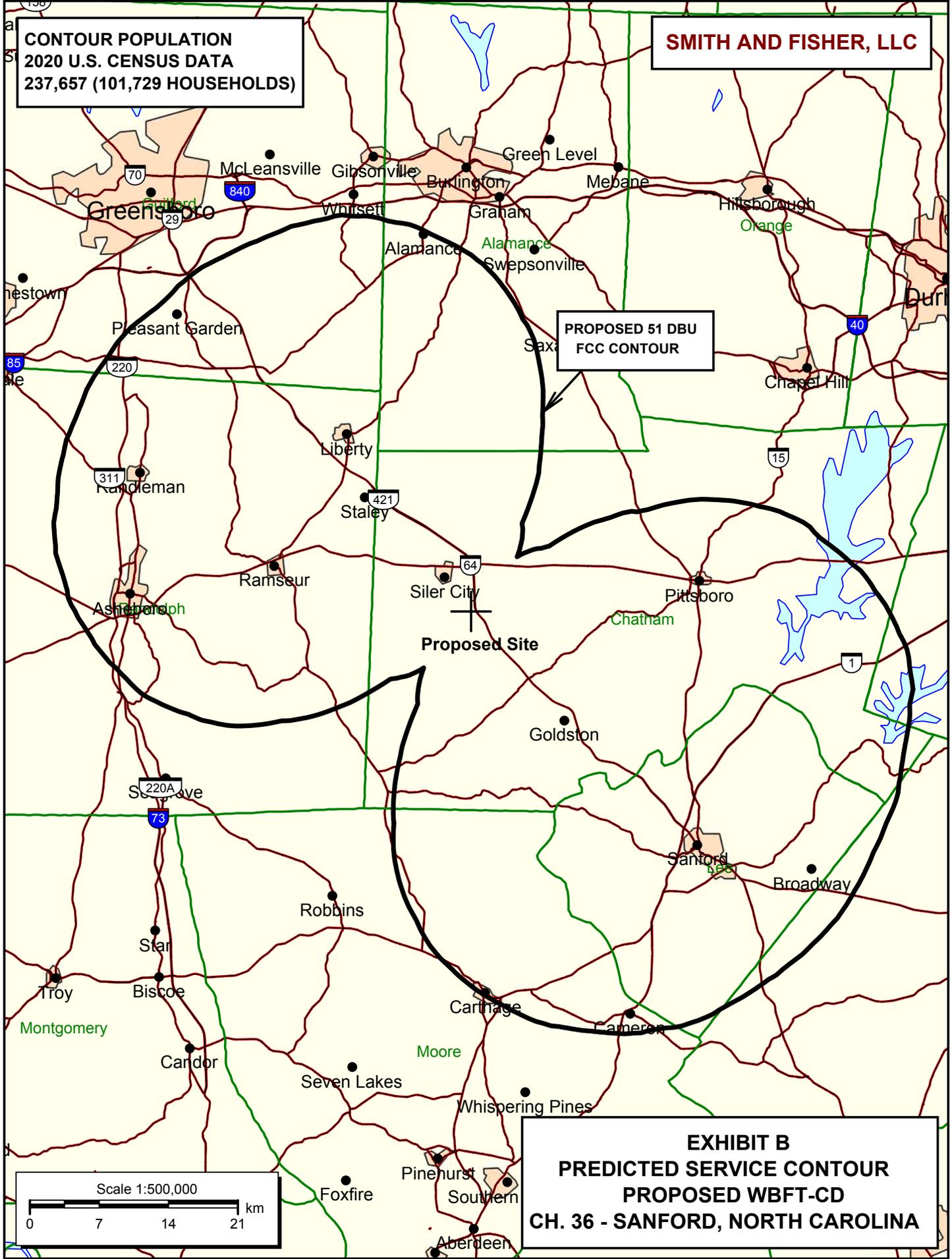
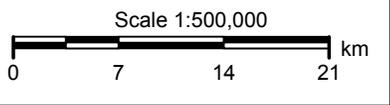
CONTOUR POPULATION
2020 U.S. CENSUS DATA
237,657 (101,729 HOUSEHOLDS)

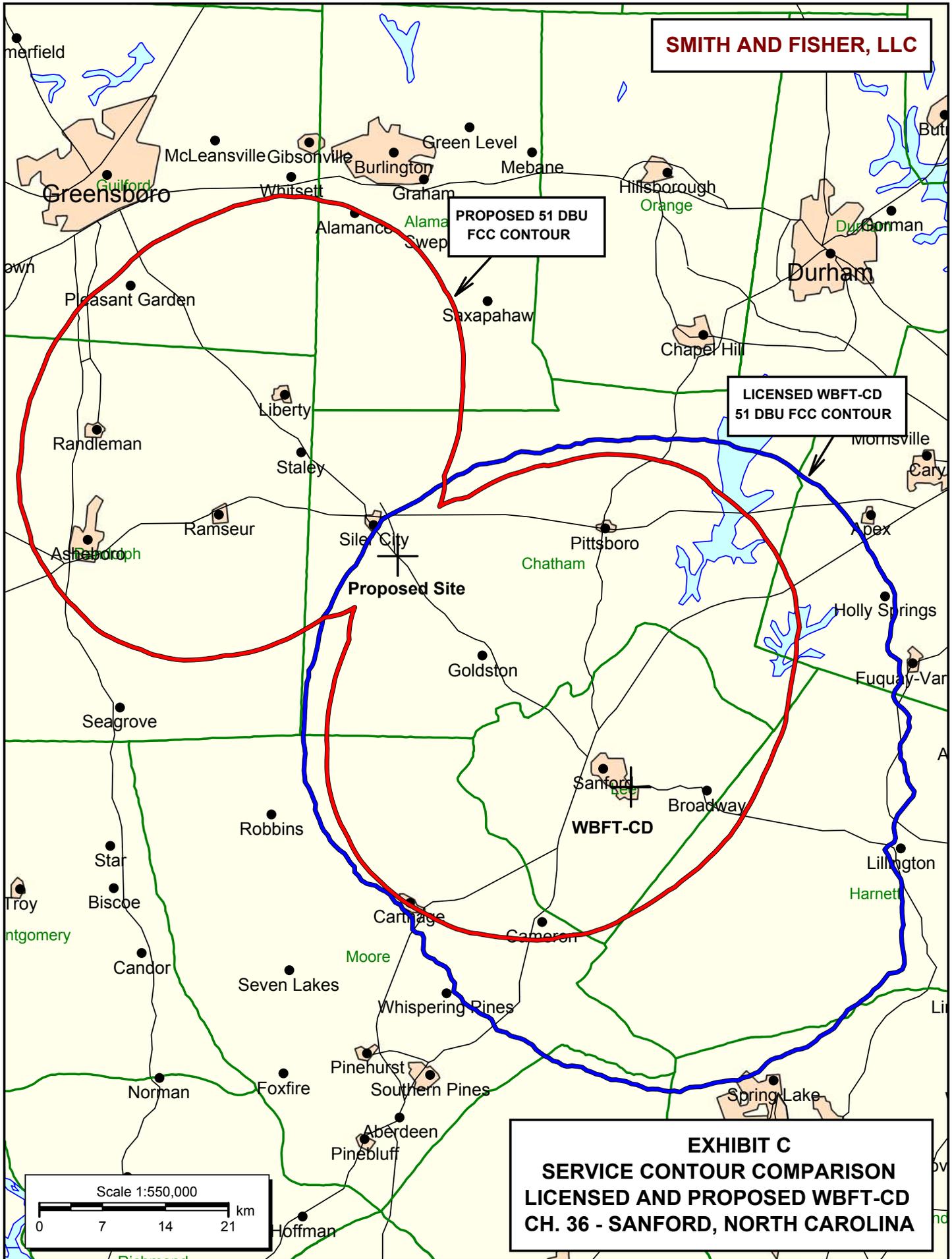
SMITH AND FISHER, LLC

PROPOSED 51 DBU
FCC CONTOUR

Proposed Site

EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED WBFT-CD
CH. 36 - SANFORD, NORTH CAROLINA





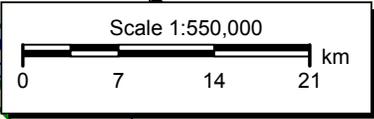
SMITH AND FISHER, LLC

**PROPOSED 51 DBU
FCC CONTOUR**

**LICENSED WBFT-CD
51 DBU FCC CONTOUR**

Proposed Site

WBFT-CD



**EXHIBIT C
SERVICE CONTOUR COMPARISON
LICENSED AND PROPOSED WBFT-CD
CH. 36 - SANFORD, NORTH CAROLINA**

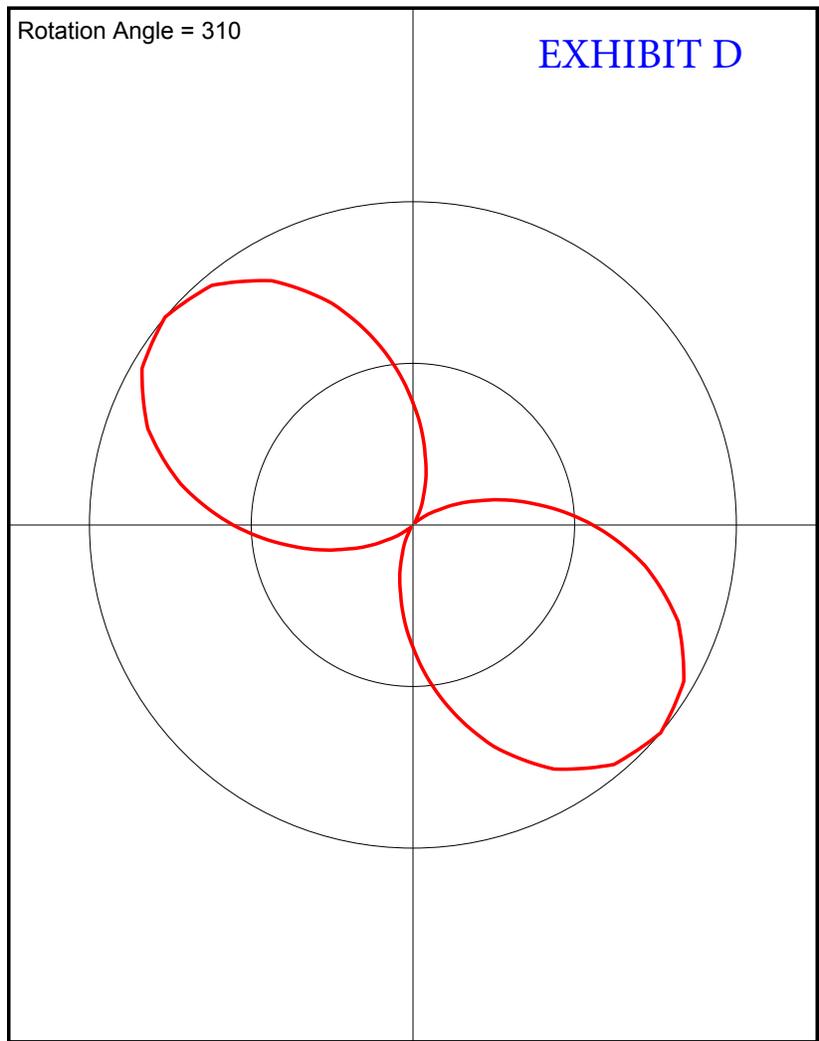
Antenna Pattern

Post-Rotation Antenna Pattern....

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

Rotation Angle = 310

EXHIBIT D



TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED WBFT-CD
 CHANNEL 36 – SANFORD, NORTH CAROLINA

Study created: 2022.10.18 13:13:19

Study build station data: LMS TV 2022-10-06

Proposal: WBFT-CD D36 DC LIC SANFORD, NC

File number: BLANK0000124673

Facility ID: 64400

Station data: User record

Record ID: 28

Country: U.S.

Build options:

Protect LPTV records from Class A

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WACN-LD	N34z	TX	LIC	RALEIGH, NC	BLTTL20060609AAA	81.8 km
Yes	WFMY-TV	D35	DT	LIC	GREENSBORO, NC	BLANK0000113927	41.7
No	W35DW-D	D35	LD	LIC	GREENVILLE, NC	BLANK0000177044	188.6
No	WTMV-LD	D35	LD	LIC	OGDEN, NC	BLANK0000058471	214.4
No	W35ED-D	D35	LD	LIC	FLORENCE, SC	BLANK0000177718	160.1
No	WCYB-TV	D35	DT	CP	BRISTOL, VA	BLANK0000153389	254.6
No	WCYB-TV	D35	DT	BL	BRISTOL, VA	DTVBL2455	254.6
No	WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000152125	417.8
No	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277	335.1
No	WKAS	D36	DT	LIC	ASHLAND, KY	BLANK0000087441	417.9
No	WASV-LD	D36	LD	LIC	ASHEVILLE, NC	BLANK0000108621	293.0
Yes	W36FB-D	D36	LD	CP	BISCOE, NC	BLANK0000150304	58.7
Yes	W36FB-D	D36	LD	LIC	BISCOE, NC	BLANK0000158802	58.7
Yes	W24CP-D	D36	LD	CP	DURHAM, NC	BLANK0000197388	31.6
Yes	WEPX-TV	D36	DT	LIC	GREENVILLE, NC	BLANK0000090758	210.6
Yes	WUNE-TV	D36	DT	LIC	LINVILLE, NC	BLANK0000111606	220.9
Yes	WFXB	D36	DT	LIC	MYRTLE BEACH, SC	BLANK0000081825	168.6
No	WVLR	D36	DT	LIC	TAZEWELL, TN	BLANK0000097858	382.6

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No	WSVF-CD	D36	DC LIC	HARRISONBURG, VA	BLANK0000120243	305.9
No	WRID-LD	D36	LD LIC	RICHMOND, VA	BLANK0000190917	265.1
Yes	WFXR	D36	DT LIC	ROANOKE, VA	BLANK0000080996	179.2
No	WYSJ-CD	D36	DC APP	YORKTOWN, VA	BLANK0000188559	293.6
No	WYSJ-CD	D36	DC LIC	YORKTOWN, VA	BLANK0000150138	308.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36

Mask: Stringent

Latitude: 35 41 32.40 N (NAD83)

Longitude: 79 25 58.00 W

Height AMSL: 315.0 m

HAAT: 147.4 m

Peak ERP: 15.0 kW

Antenna: MCI PEANUT 0.0 deg

Elev Pattn: Generic

50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.14 kW	136.4 m	36.0 km
45.0	0.004	137.8	8.9
90.0	4.64	170.8	42.2
135.0	14.5	173.8	48.3
180.0	2.14	164.1	37.8
225.0	0.004	150.0	9.3
270.0	4.64	136.0	40.0
315.0	14.5	113.1	44.1

Database HAAT does not agree with computed HAAT

Database HAAT: 147 m Computed HAAT: 148 m

Distance to Canadian border: 713.0 km

Distance to Mexican border: 1983.4 km

Conditions at FCC monitoring station: Laurel MD

Bearing: 30.1 degrees Distance: 449.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 290.1 degrees Distance: 2306.2 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 WBFT-CD
CHANNEL 36 – SANFORD, NORTH CAROLINA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Sanford facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW (H-only), an antenna radiation center 117 meters above ground, and assuming a vertical relative field value of 20 percent at the steeper elevation angles for the proposed Micro Communications panel antenna, maximum power density two meters above ground of 0.0015 mW/cm² is calculated to occur southeast and northwest of the base of the tower. Since this value is only 0.4 percent of the 0.40 mW/cm² 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.