

## ENGINEERING EXHIBIT

### **Application for Modification of Digital Television Translator Station Construction Permit**

prepared for

#### **University of North Carolina**

W22FB-D Marion, NC

Facility ID 168595

Ch. 22 (digital) 9 kW

*University of North Carolina (“UNC”)* is the licensee of digital television translator station W51EE-D, Channel 51, Marion NC, Facility ID 168595 (file# BLDTT-20080929AHK). As a result of the Special Displacement Window,<sup>1</sup> a Construction Permit (“CP” file# 0000053445) authorizes W51EE-D to operate on Channel 22 as W22FB-D at 15 kW effective radiated power (“ERP”) and a nondirectional antenna. *UNC* proposes herein a minor modification of the displacement CP to decrease the ERP. No other changes are proposed.

As with the current CP, no change in site location is proposed. W22FB-D will continue to utilize the tower structure associated with FCC Antenna Structure Registration number 1257558 with a side-mounted transmitting antenna. No change to the overall structure height is proposed.

The proposed W22FB-D facility will operate at 9 kW ERP with a circularly polarized nondirectional antenna and a “full service” out of channel emission mask. Figure 1 depicts the 51 dB $\mu$  coverage contour of the licensed Channel 51 facility and those of the Channel 22 CP and proposed facilities, demonstrating compliance with §73.3572 for a minor change.

Interference study per OET Bulletin 69<sup>2</sup> shows that the proposal complies with the FCC’s interference protection requirements toward all digital television, television translator, LPTV,

<sup>1</sup>“Incentive Auction Task Force and Media Bureau Announce Post-Incentive Auction Special Displacement Window April 10, 2018, through May 15, 2018, and Make Location and Channel Data Available,” Public Notice, DA 18-124, released February 9, 2018.

<sup>2</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for*

and Class A stations (existing and post-auction). FCC processing of this proposal is requested using a **1.0 km cell size and 0.2 km terrain profile increment**. The results, summarized in Table 1, show that any new interference does not exceed the FCC's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations) to any facility except with respect to WHNS and WCNC-TV which do not present a conflict for the proposal.

As with the existing W22FB-D CP, the proposal is dependent on spectrum to be vacated and a waiver of the contingent application rule §73.3517 is requested regarding compliance with §73.3700(g)(2)(i). Operation of W22FB-D on Channel 22 will not commence until the following stations discontinue operation on their current channels:

**WHNS(DT) Ch. 21 Greenville SC (repacked to Ch. 17, phase 5)**  
**WCNC-TV Ch. 22 Charlotte NC (repacked to Ch. 24, phase 5)**

The applicant will accept a corresponding special operating condition on the modified CP authorization. Accordingly, the proposal complies with §74.793 regarding interference protection to digital television, low power television, television translator, and Class A television facilities.

#### **Human Exposure to Radiofrequency Electromagnetic Field (Environmental)**

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 15 percent antenna relative field in downward elevations (pattern data shows less than 15 percent relative field at angles 25 – 90 degrees below the horizontal), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $6.4 \mu\text{W/cm}^2$ , which is 1.8 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility

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*Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). This analysis employed the FCC’s current “TVStudy” software with the default application processing template settings, 1 km cell size, and 0.2 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCCs implementation of TVStudy show excellent correlation.

for taking any corrective action in the areas where the proposal's contribution is less than five percent.

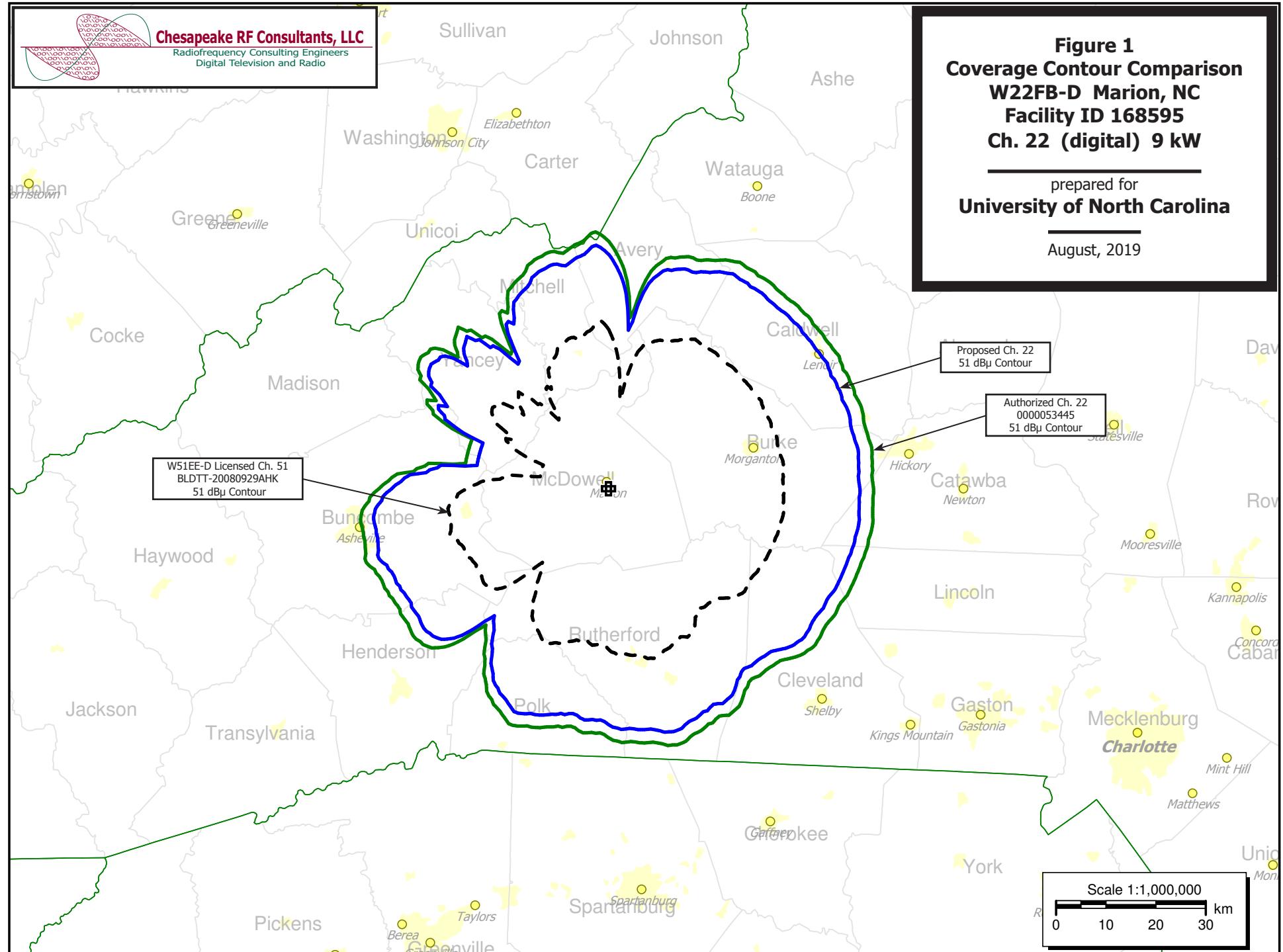
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

List of Attachments

- Figure 1      Coverage Contour Comparison  
Table 1      TVStudy Analysis of Proposal  
Form 2100    Saved Version of Engineering Sections from FCC Form at Time of Upload

**Chesapeake RF Consultants, LLC**

Joseph M. Davis, P.E.      August 19, 2019  
207 Old Dominion Road      Yorktown, VA 23692      703-650-9600



**Table 1 W22FB-D TVStudy Analysis of Proposal**  
(page 1 of 5)



tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: W22FB-D to 9kW 1.0-0.2, Model: Longley-Rice  
Start: 2019.08.16 15:55:25

Study created: 2019.08.16 15:52:37

Study build station data: LMS TV 2019-08-16

Proposal: W22FB-D D22 LD APP MARION, NC  
File number: W22FB-D to 9kW  
Facility ID: 168595  
Station data: User record  
Record ID: 2829  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WDRF-LD	D21	LD	CP	AUGUSTA, GA	BLANK0000067887	199.3 km
No	W40CW-D	D21	LD	CP	BRYSON CITY, NC	BLANK0000054209	131.5
No	W21CK-D	D21	DC	LIC	CHARLOTTE, NC	BLDTA20110706AAV	114.9
No	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000034415	130.9
Yes	WHNS	D21	DT	LIC	GREENVILLE, SC	BLCDT20100430ADX	81.9
No	W14CX-D	D21	LD	CP	KNOXVILLE, TN	BLANK0000051769	179.5
No	WAPW-CD	D21	DC	LIC	ABINGDON, ETC., VA	BLANK0000001495	142.8
No	WSKC-CD	D22	DC	LIC	ATLANTA, GA	BLDTA20130417AAG	272.0
No	NEW	D22	LD	APP	AUGUSTA, GA	BNPDTL20090825BBQ	262.7
No	W22BJ-D	D22	LD	CP	MACON, GA	BMPDTL20130515ACS	354.5
No	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	303.6
No	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019	406.3
No	WCVN-TV	D22	DT	CP	COVINGTON, KY	BLANK0000034633	433.8
Yes	W41BQ	D22-	LD	CP	ASHEVILLE, NC	BLANK0000052015	58.9
Yes	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	83.7
No	WIRP-LD	D22	LD	LIC	FAYETTEVILLE, NC	BLANK0000010748	257.5
Yes	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450	274.2
No	W22FC-D	D22	LD	CP	GREENVILLE, NC	BLANK0000071778	429.0
No	WCPO-TV	D22	DT	LIC	CINCINNATI, OH	BLCDT20101216AAF	442.5
Yes	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098	206.6
No	WEQA-LD	D22	LD	CP	FLORENCE, SC	BLANK0000036548	335.4
No	WEQA-LD	D22	LD	LIC	FLORENCE, SC	BLANK0000008883	298.2
No	WWEB-LD	D22	LD	CP	FLORENCE, SC	BLANK0000051638	114.9
No	W22DY-D	D22	LD	CP	MYRTLE BEACH, SC	BNPDTL20100409AAY	354.3
No	WSPA-TV	D22	LD	LIC	SPARTANBURG, SC	BLANK0000066995	156.1
No	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	305.6
No	WCTD-LP	D22	LD	CP	DUCKTOWN, TN	BDFCDTL20110829AAE	245.7
No	WCTD-LP	N22-	TX	LIC	DUCKTOWN, TN	BLTTL20070622ADD	232.8
No	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	108.5
No	WJZC-LP	N22+	TX	LIC	SEVIERVILLE, TN	BLTTL19901017JE	141.5
No	WJZC-LP	D22	LD	CP	SEVIERVILLE, TN	BDFCDTL20130917AET	141.5
No	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	443.0
No	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000034128	443.0
No	W22EX-D	D22	LD	LIC	STAUNTON, VA	BLANK0000055155	366.2
No	W22CY	D22	LD	CP	CLARKSBURG, WV	BLANK0000068832	429.2
No	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000078552	316.1
No	WOVA-LD	D22	LD	LIC	PARKERSBURG, WV	BLDTL20120904ABM	410.7
No	W22ES-D	D22	LD	CP	SUTTON, WV	BNPDTL20100514AAM	347.5
No	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000034629	185.3
No	W08AO-D	D23	LD	CP	CANTON, NC	BLANK0000054156	82.3
Yes	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	81.5
No	W23ES-D	D23	LD	LIC	MARSHALL, NC	BLANK0000074623	64.2
No	W44CX-D	D23	LD	CP	SYLVA, NC	BLANK0000054210	126.3
No	WPXK-TV	D23	DT	LIC	JELlico, TN	BLCDT20140702ABN	178.5
No	WAPW-CD	D23	DC	CP	ABINGDON, ETC., VA	BLANK0000026135	142.8
No	WJDG-LD	D23	LD	LIC	GRUNDY, VA	BLDTL20120619ABQ	176.9

No non-directional AM stations found within 0.8 km

**Table 1 W22FB-D TVStudy Analysis of Proposal**  
(page 2 of 5)



No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D22  
Mask: Full Service  
Latitude: 35 40 17.30 N (NAD83)  
Longitude: 82 0 18.50 W  
Height AMSL: 643.9 m  
HAAT: 0.0 m  
Peak ERP: 9.00 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 1.75

49.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	9.00 kW	194.1 m	48.5 km
45.0	9.00	246.2	51.5
90.0	9.00	254.3	51.9
135.0	9.00	178.1	47.6
180.0	9.00	199.2	48.8
225.0	9.00	109.7	42.9
270.0	9.00	138.5	45.0
315.0	9.00	102.8	42.2

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 178 m

Distance to Canadian border: 668.3 km

Distance to Mexican border: 1782.2 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 231.8 degrees Distance: 319.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 290.7 degrees Distance: 2089.3 km

Study cell size: 1.00 km

Profile point spacing: 0.20 km

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

Maximum new IX to LPTV: 2.00%

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Interference to BLCDT20100430ADX LIC scenario 1

\*\*IX: 1.32% interference caused

**See text: waiver of the contingent application rule §73.3517 is requested  
WHNS moves to Ch. 17 at phase 5**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHNS	D21	DT	LIC	GREENVILLE, SC	BLCDT20100430ADX	
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW	81.9 km
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	219.0
	WKYT-TV	D21	DT	LIC	LEXINGTON, KY	BLANK0000074953	352.8
	W21CK-D	D21	DC	LIC	CHARLOTTE, NC	BLDTA20110706AAV	164.0
	WWMB	D21	DT	LIC	FLORENCE, SC	BLCDT20090619ACJ	319.1
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	390.0
	WAPW-CD	D21	DC	LIC	ABINGDON, ETC., VA	BLANK0000001495	216.8
	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	138.4
	WKPT-CD	D22	DC	LIC	KINGSPORT, TN	BLDTA20120420ACJ	149.7
Service area					Terrain-limited	IX-free, before	IX-free, after
42347.2	2,550,117	37189.9	2,301,764	36886.4	2,291,788	36564.4	2,261,606
Undesired					Total IX	Unique IX, before	Unique IX, after
W22FB-D	D22	LD	APP	335.0	30,278	322.0	30,182

**Table 1 W22FB-D TVStudy Analysis of Proposal**  
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WPBA D21 DT LIC	84.1	3,569	79.1	3,569	79.1	3,569
WKYT-TV D21 DT LIC	24.1	376	13.0	4	13.0	4
W21CK-D D21 DC LIC	14.0	1,012	6.1	158	2.0	158
WWMB D21 DT LIC	54.7	2,011	28.9	963	21.9	867
WUXP-TV D21 DT LIC	2.0	0	1.0	0	1.0	0
WAPW-CD D21 DC LIC	15.0	364	4.0	0	3.0	0
WCNC-TV D22 DT LIC	149.4	4,886	123.5	3,597	122.5	3,597
WKPT-CD D22 DC LIC	14.1	372	3.0	0	3.0	0

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Interference to BLANK0000052015 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W41BQ	D22-	LD	CP	ASHEVILLE, NC	BLANK0000052015	
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW	58.9 km
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	258.8
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098	238.5
	WWEB-LD	D22	LD	CP	FLORENCE, SC	BLANK0000051638	166.9
	WSPA-TV	D22	LD	LIC	SPARTANBURG, SC	BLANK0000066995	140.1
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	250.6
	WCTD-LP	D22	LD	CP	DUCKTOWN, TN	BDFCDTL20110829AAE	191.5
	WJZC-LP	N22+	TX	LIC	SEVIERVILLE, TN	BLTTL19901017JE	87.0
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	135.2
Service area							
4085.7	398,389	3425.1	338,107	3411.1	337,570	3406.2	337,570
Undesired				Total IX	Unique IX, before	Unique IX, after	
	W22FB-D D22 LD APP	6.0	0	0	5.0	0	
	WHSG-TV D22 DT CP	1.0	377	1.0	377	1.0	377
	WACH D22 DT CP	7.0	17	5.0	17	4.0	17
	WWEB-LD D22 LD CP	1.0	0	0.0	0	0.0	0
	WSPA-TV D22 LD LIC	6.0	140	4.0	140	4.0	140
	WCTE D22 DT LIC	1.0	3	1.0	3	1.0	3
	WBTV D23 DT LIC	1.0	0	0.0	0	0.0	0

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Interference to BLCDT20031211ABN LIC scenario 1

\*\*IX: 1.51% interference caused

**See text: waiver of the contingent application rule §73.3517 is requested  
WCNC-TV moves to Ch. 24 at phase 5**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW	83.7 km
	WWMB	D21	DT	LIC	FLORENCE, SC	BLCDT20090619ACJ	200.1
	WHNS	D21	DT	LIC	GREENVILLE, SC	BLCDT20100430ADX	138.4
	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019	365.9
	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	399.7
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	2.4
Service area				Terrain-limited	IX-free, before	IX-free, after	
39279.3	3,821,390	37772.4	3,748,556	37338.0	3,713,506	36651.5	3,657,363
Undesired				Total IX	Unique IX, before	Unique IX, after	
	W22FB-D D22 LD APP	777.5	65,953	686.5	56,143		
	WWMB D21 DT LIC	40.1	1,198	34.1	1,143		
	WHNS D21 DT LIC	186.9	23,445	123.0	13,877		
	WJCL D22 DT LIC	33.2	376	24.2	343		
	WRIC-TV D22 DT LIC	15.0	623	5.0	11		
	WBTV D23 DT LIC	176.2	11,894	9,408	144.2	7,831	

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Interference to BLANK0000034450 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450	
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW	274.2 km
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000034415	148.8
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000075396	148.9

**Table 1 W22FB-D TVStudy Analysis of Proposal**  
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WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098	225.0
WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000034128	254.1
WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	200.7
WARZ-CD	D23	DC	CP	SMITHFIELD-SELMA, NC	BLANK0000034835	61.2
WECT	D23	DT	CP	WILMINGTON, NC	BLANK0000034156	169.5
Service area						
37849.0	3,765,231	37333.4	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
			3,740,483	36209.3	3,702,655	0.00
				36208.3	3,702,622	0.00
Undesired			Total IX	Unique IX, before	Unique IX, after	
W22FB-D D22 LD APP		4.1	719		1.0	33
WUNG-TV D21 DT CP	310.1	21,109	260.3	17,897	259.3	17,744
WUNJ-TV D21 DT CP	262.0	2,225	140.5	1,186	140.5	1,186
WACH D22 DT CP	107.0	2,741	81.1	1,092	81.1	1,092
WCVE-TV D22 DT CP	444.0	13,072	442.9	12,605	441.9	12,539
WBTV D23 DT LIC	31.8	1,892	3.0	266	3.0	266
WARZ-CD D23 DC CP	15.9	441	15.9	441	15.9	441
WECT D23 DT CP	129.5	1,129	8.0	90	8.0	90
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Interference to BLANK0000080098 CP scenario 1						
Desired:	Call	Chan	Svc	Status	City, State	File Number
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000034415
	WEBA-TV	D21	DT	CP	ALLENDALE, SC	BLANK0000025022
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684
	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB
Service area			Terrain-limited	IX-free, before	IX-free, after	Percent New IX
30094.0	1,410,251	29980.0	1,408,458	29078.2	1,361,231	0.01
				29075.2	1,360,881	0.03
Undesired			Total IX	Unique IX, before	Unique IX, after	
W22FB-D D22 LD APP		6.0	631		3.0	350
WUNG-TV D21 DT CP	39.0	5,594	5.0	579	5.0	579
WEBA-TV D21 DT CP	44.7	1,249	6.0	50	6.0	50
WHSG-TV D22 DT CP	48.7	840	9.9	176	9.9	176
WJCL D22 DT LIC	252.4	4,066	184.9	2,231	184.9	2,231
WUVC-DT D22 DT CP	232.9	7,754	195.8	3,719	195.8	3,719
WBTV D23 DT LIC	427.6	38,000	382.6	32,662	381.6	32,662
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Interference to BLCDT19991025AEB LIC scenario 1						
Desired:	Call	Chan	Svc	Status	City, State	File Number
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB
Undesireds:	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098
	WKPI-TV	D23	DT	CP	PIKEVILLE, KY	BLANK0000034629
	WARZ-CD	D23	DC	CP	SMITHFIELD-SELMA, NC	BLANK0000034835
	WECT	D23	DT	CP	WILMINGTON, NC	BLANK0000034156
	WAPW-CD	D23	DC	CP	ABINGDON, ETC., VA	BLANK0000026135
	WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000034245
	WCNC-TV	D24	DT	CP	CHARLOTTE, NC	BLANK0000063810
Service area			Terrain-limited	IX-free, before	IX-free, after	Percent New IX
46301.0	4,433,864	44325.6	4,295,482	43772.2	4,280,131	0.36
				43614.4	4,268,865	0.26
Undesired			Total IX	Unique IX, before	Unique IX, after	
W22FB-D D22 LD APP		157.8	11,266		157.8	11,266
WUVC-DT D22 DT CP	22.9	807	4.0	115	4.0	115
WACH D22 DT CP	216.5	2,870	208.5	2,831	208.5	2,831
WKPI-TV D23 DT CP	2.0	151	2.0	151	2.0	151
WARZ-CD D23 DC CP	13.9	633	0.0	0	0.0	0
WECT D23 DT CP	246.7	7,418	205.9	5,827	205.9	5,827
WAPW-CD D23 DC CP	1.0	10	1.0	10	1.0	10
WTVR-TV D23 DT CP	11.0	653	5.0	221	5.0	221

**Table 1 W22FB-D TVStudy Analysis of Proposal**  
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WCNC-TV D24 DT CP                  86.2                  4,605                  86.2                  4,605                  86.2                  4,605

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 Interference to proposal scenario 1  
 4.27% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W22FB-D	D22	LD	APP	MARION, NC	W22FB-D to 9kW	
Undesireds:	W41BQ	D22-	LD	CP	ASHEVILLE, NC	BLANK0000052015	58.9 km
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000034450	274.2
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000080098	206.6
	WEQA-LD	D22	LD	CP	FLORENCE, SC	BLANK0000036548	335.4
	WWEB-LD	D22	LD	CP	FLORENCE, SC	BLANK0000051638	114.9
	WSPA-TV	D22	LD	LIC	SPARTANBURG, SC	BLANK0000066995	156.1
	WCTD-LP	D22	LD	CP	DUCKTOWN, TN	BDFCDTL20110829AAE	245.7
	WJZC-LP	N22+	TX	LIC	SEVIERVILLE, TN	BLTTL19901017JE	141.5
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	81.5
Service area							
7007.7	370,646	5619.6	289,561	5452.0	277,199	2.98	4.27
Undesired		Total	IX		Unique IX	Prcnt Unique	Unique IX
W41BQ D22- LD CP		2.0	9	1.0	9	0.02	0.00
WUVC-DT D22 DT CP		15.0	51	1.0	0	0.02	0.00
WACH D22 DT CP		60.8	2,204	34.9	1,348	0.62	0.47
WWEB-LD D22 LD CP		39.9	1,143	4.0	563	0.07	0.19
WSPA-TV D22 LD LIC		4.0	0	1.0	0	0.02	0.00
WBTV D23 DT LIC		113.7	10,414	81.8	9,190	1.46	3.17

Section	Question	Response
Facility ID	168595	
State	North Carolina	
City	MARION	
LPT Channel	22	

Section	Question	Response
Antenna Location Data	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1257558
Coordinates (NAD83)	Latitude	35° 40' 17.3" N+
	Longitude	082° 00' 18.5" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	50.0 meters
	Support Structure Height	50.0 meters
	Ground Elevation (AMSL)	595.9 meters
Antenna Data	Height of Radiation Center Above Ground Level	48 meters
	Height of Radiation Center Above Mean Sea Level	643.9 meters
	Effective Radiated Power	9 kW

<b>Antenna Technical Data</b>	<b>Section</b>	<b>Question</b>	<b>Response</b>
	<b>Antenna Type</b>	Antenna Type	Non-Directional
		Do you have an Antenna ID?	
		Antenna ID	
	<b>Antenna Manufacturer and Model</b>	Manufacturer:	ERI
		Model	AL8O-22-E
		Rotation	
		Electrical Beam Tilt	1.75
		Mechanical Beam Tilt	Not Applicable
		toward azimuth	
	<b>Elevation Radiation Pattern</b>	Polarization	Circular
		Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
		Uploaded file for elevation antenna (or radiation) pattern data	
		Out-of-Channel Emission Mask:	Full Service