

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

University of North Carolina

WUNU(DT) Lumberton, NC

Facility ID 69416

Ch. 30 197 kW 317 m

University of North Carolina (“UNC”) is the licensee of digital television station WUNU(DT), Channel 31, Facility ID 69416, Lumberton, NC. *UNC* herein proposes construction of the WUNU post-auction facility on Channel 30. Reassignment of WUNU from Channel 31 to Channel 30 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”, DA 17-317, released April 13, 2017)*.

The proposed Channel 30 operation will employ a new antenna system to be top-mounted on the WUNU tower in lieu of the existing Channel 31 antenna. *UNC* proposes to operate WUNU with an effective radiated power (“ERP”) of 197 kW at 317 meters antenna height above average terrain (“HAAT”).

The tower structure corresponds to FCC Antenna Structure Registration number 1014580, having an overall structure height above ground of 324.0 meters. The antenna replacement will result in a reduction in the structure’s overall height by 2.9 meters to 321.1 meters above ground level. Following construction, the FAA will be notified of the reduction in height and the FCC ASR will be modified accordingly.

The proposed antenna is an elliptically polarized nondirectional Dielectric model TFU-26GTH/VP-R O4 (35 percent vertical polarization). The horizontally polarized ERP is 197 kW and the vertically polarized ERP is 69 kW.

A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the location of Lumberton, WUNU's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

The proposed noise limited service contour ("NLSC") extends beyond that of the *CCRPN* parameters of 171 kW ERP and 319 meters HAAT.¹ The proposal complies with §73.3700(b)(ii) as described in the following.

WUNU's reassignment facility experiences a loss of interference-free coverage area within the NLSC when compared to that of its baseline² pre-auction facility. Detailed analysis shows that an area of 76.2 square kilometers having a population of 2,222 persons which received interference-free service from the baseline WUNU facility does not receive interference-free service from the reassignment parameters. A map is supplied as Figure 2 which shows the interference-free results for the *CCRPN* parameters and the baseline interference-free individual cells that are lost at reassignment. Therefore, WUNU qualifies under §73.3700(b)(ii)(A) for a contour extension due the loss of interference-free coverage area resulting from the new channel assignment.

Interference study per FCC OET Bulletin 69³ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

¹The antenna height above ground is decreased by 2.4 meters from the licensed value. The proposed WUNU antenna HAAT is recalculated to be 317.1 meters, based on FCC 30 meter terrain data developed by OET.

²"*Final Digital Television Baseline Coverage Area And Population Served Information Related To Incentive Auction Repacking*," DA 15-1296, Public Notice, Released November 12, 2015.

³FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for 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, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

The amount of NLSC extension does not exceed one percent in any direction. Figure 3 supplies a coverage contour comparison of the proposed WUNU facility to the reassignment facility's contour and a one percent extension distance of the reassignment facility's contour. Here, the contour level is adjusted with the dipole factor to match FCC application processing. Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

The proposed WUNU facility's terrain-limited population provides a 101.1 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment

Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	1,120,670	1,129,742
Not affected by terrain losses	1,117,064	1,128,859
Match of Reassignment	---	101.06%

The nearest FCC monitoring station is 524 km distant at Laurel, MD. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3 kilometers of the site. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field

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 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $0.9 \mu\text{W}/\text{cm}^2$, which is 0.2 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in

§1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

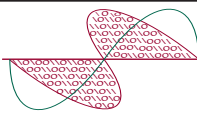
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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.

List of Attachments

Figure 1	Proposed Coverage Contours
Figure 2	Reassignment Service Loss
Figure 3	Proposed Contour Expansion
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	July 5, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

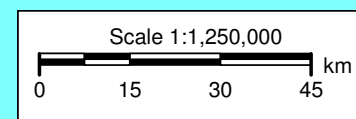
Figure 1
Proposed Coverage Contours
WUNU(DT) Lumberton, NC
Facility ID 69416
Ch. 30 197 kW 317 m

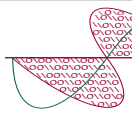
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July, 2017

Proposed WUNU
48 dBμ
(Principal Community)
41 dBμ
(Noise Limited Service Contour)

Proposed Digital Coverage	Area (sq. km)	Population (2010 Census)
Within Noise Limited Service Contour	22,677.1	1,117,992
OET Bulletin 69: TVStudy		
Within noise limited contour	23,215.0	1,129,742
Not affected by terrain losses	23,103.0	1,128,859
Lost to all interference	659.6	27,037
Net Interference-Free Service	22,443.4	1,101,822



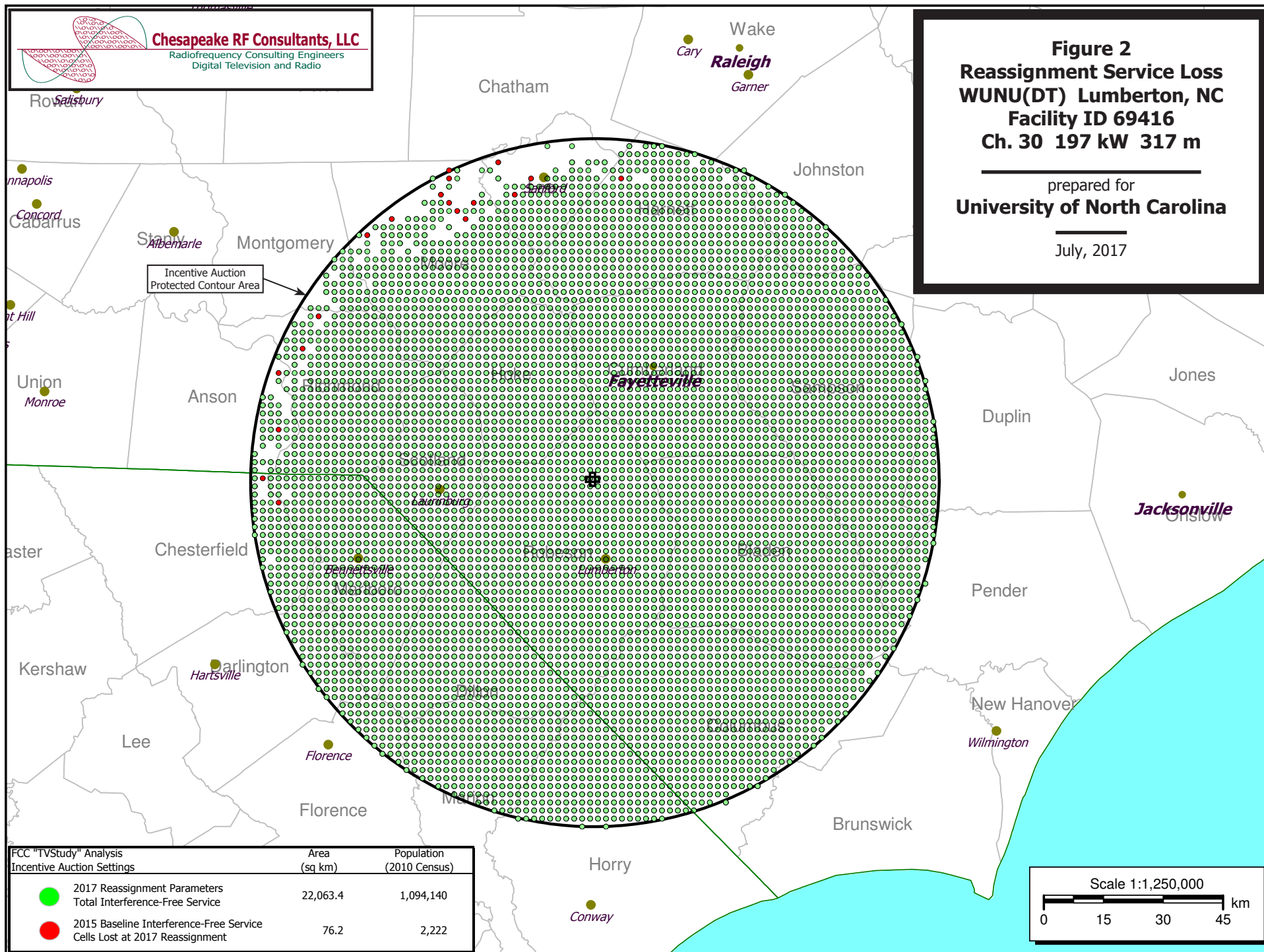


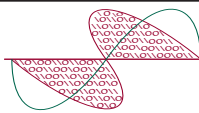
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Figure 2
Reassignment Service Loss
WUNU(DT) Lumberton, NC
Facility ID 69416
Ch. 30 197 kW 317 m

prepared for
University of North Carolina

July, 2017





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Figure 3
Proposed Contour Expansion
WUNU(DT) Lumberton, NC
Facility ID 69416
Ch. 30 197 kW 317 m

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WUNU Reassignment
171 kW 319 m HAAT
40.32 dBu Contour
(Red - Solid)
40.32 dBu Distance plus 1%
(Red - Dashed)

Proposed WUNU
40.32 dBu Contour
(Blue - Solid)

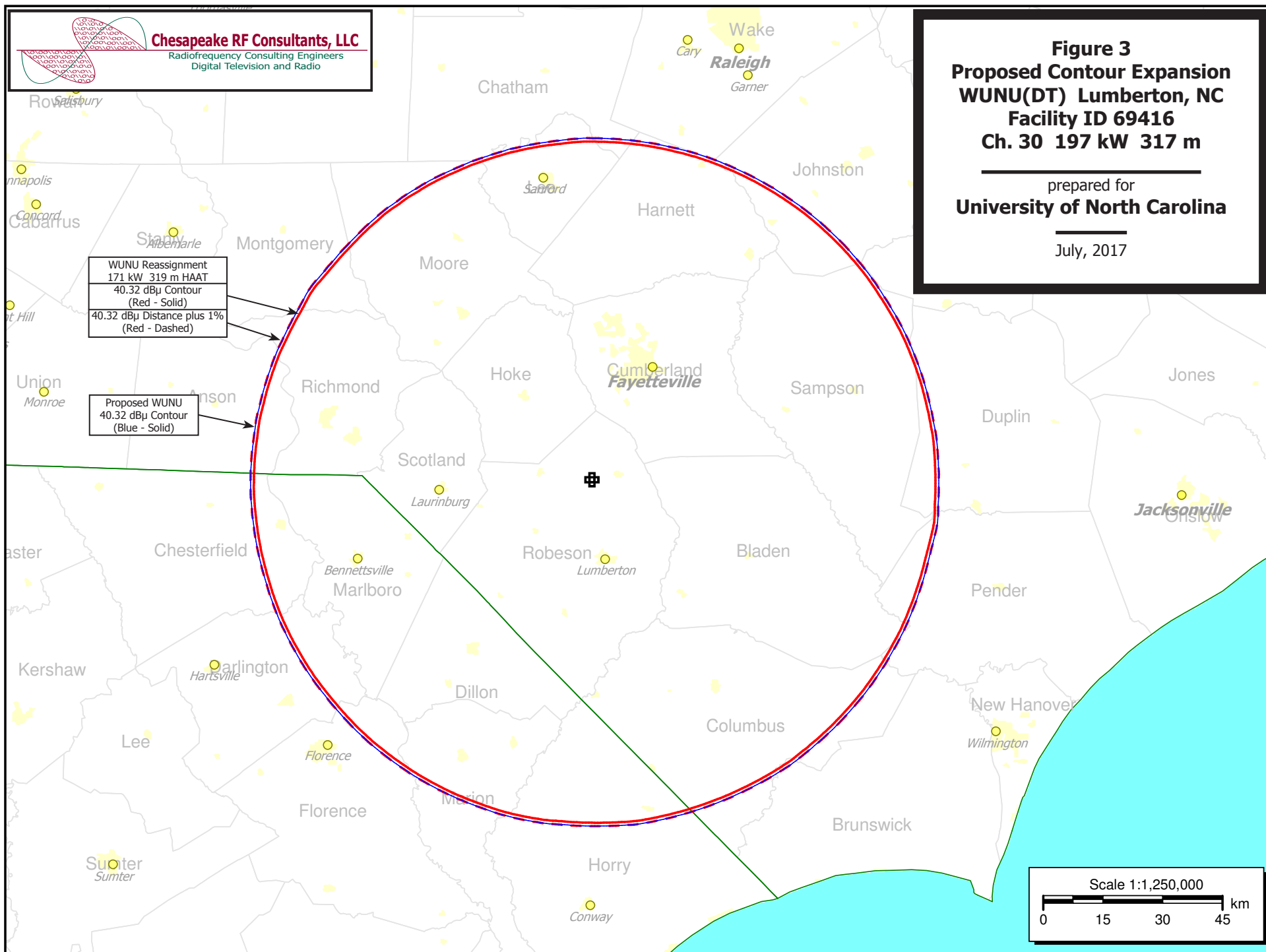


Table 1 WUNU OET Bulletin 69 Interference Study
(page 1 of 6 - condensed to show first scenario only)



tvstudy v2.2.2

Database: localhost, Study: WUNU_197KW, Model: Longley-Rice
Start: 2017.07.05 07:57:25

Study created: 2017.07.05 07:55:39

Study build station data: LMS TV 2017-07-03 LMSTV

Proposal: WUNU D30 DT APP LUMBERTON, NC
File number: WUNU_197KW
Facility ID: 69416
Station data: User record
Record ID: 757
Country: U.S.
Zone: II

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WSFX-TV	D29	DT	APP	WILMINGTON, NC	BLANK0000025216	107.9 km
WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	107.9
WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	138.3
WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	151.8
WRJA-TV	D29	DT	BL	SUMTER, SC	DTVBL61012	151.8
WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	167.9
WYFF	D30	DT	CP	GREENVILLE, SC	BLANK0000024627	326.3
WYFF	D30	DT	BL	GREENVILLE, SC	DTVBL53905	326.3
W30CV-D	D30	DC	LIC	HILTON HEAD ISLAND, SC	BLDTL20110110AAR	334.1
WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	284.6
WGHP	D31	DT	CP	HIGH POINT, NC	BLANK0000025059	134.0
WGHP	D31	DT	BL	HIGH POINT, NC	DTVBL72106	134.0
WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	174.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D30
Latitude: 34 47 51.00 N (NAD83)
Longitude: 79 2 41.00 W
Height AMSL: 368.7 m
HAAT: 317.1 m
Peak ERP: 197 kW
Antenna: Omnidirectional

40.3 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	197 kW	312.5 m	85.4 km
45.0	197	318.3	86.1
90.0	197	323.5	86.7
135.0	197	322.9	86.7
180.0	197	322.3	86.6
225.0	197	317.4	86.0
270.0	197	312.3	85.4
315.0	197	307.6	84.8

Proposal service area is within baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 818.5 km

Distance to Mexican border: 1970.4 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 21.5 degrees Distance: 524.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 292.2 degrees Distance: 2374.9 km

Table 1 WUNU OET Bulletin 69 Interference Study
(page 2 of 6 - condensed to show first scenario only)



Study cell size: 2.00 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%

Interference to BLANK0000025216 APP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WSFX-TV	D29	DT	APP	WILMINGTON, NC	BLANK0000025216	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	107.9 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	107.9
	WUNM-TV	D28	DT	BL	JACKSONVILLE, NC	DTVBL69444	133.2
	WUND-TV	D29	DT	CP	EDENTON, NC	BLANK0000025090	258.4
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	243.7
	WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	193.9
	WCVW	D29	DT	BL	RICHMOND, VA	DTVBL9989	379.5
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	200.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
30178.0		928,247		30178.0		921,409	-0.05 -0.11
Undesired		Total IX		Unique IX, before		Unique IX, after	
WUNU D30 DT BL		79.5		3,753			
WUNU D30 DT APP		63.6		2,713			
WUNM-TV D28 DT BL		27.8		2,773		4.0	578
WUND-TV D29 DT CP		23.8		2,195		0.0	0
WRJA-TV D29 DT CP		12.0		312		12.0	312

Interference to DTVBL72871 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	107.9 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	107.9
	WUNM-TV	D28	DT	BL	JACKSONVILLE, NC	DTVBL69444	133.3
	WUND-TV	D29	DT	CP	EDENTON, NC	BLANK0000025090	258.4
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	243.7
	WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	193.9
	WCVW	D29	DT	BL	RICHMOND, VA	DTVBL9989	379.5
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	200.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
30178.1		923,414		30178.1		916,576	-0.05 -0.11
Undesired		Total IX		Unique IX, before		Unique IX, after	
WUNU D30 DT BL		79.5		3,753			
WUNU D30 DT APP		63.6		2,741			
WUNM-TV D28 DT BL		27.8		2,773		7.9	682
WUND-TV D29 DT CP		19.8		2,091		0.0	0
WRJA-TV D29 DT CP		12.0		312		12.0	312

Interference to BLCDT20050624ABB LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	138.3 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	138.3
	WMYV	D28	DT	BL	GREENSBORO, NC	DTVBL25544	0.0
	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	214.9
	WUND-TV	D29	DT	CP	EDENTON, NC	BLANK0000025090	313.2
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	BLANK0000025216	243.7
	WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	224.5
	WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	372.2
	WCVW	D29	DT	BL	RICHMOND, VA	DTVBL9989	269.6

Table 1 WUNU OET Bulletin 69 Interference Study
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WCHS-TV	D29	DT	BL	CHARLESTON, WV	DTVBL71280	337.2
WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	184.1
WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	150.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
39632.3 4,362,761	38821.8 4,333,737	37821.5 4,255,941	37805.7 4,255,779	0.04 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WUNU D30 DT BL	253.7 6,709	91.1 1,483	
WUNU D30 DT APP	273.6 6,912		107.0 1,645
WMYV D28 DT BL	4.0 0	4.0 0	4.0 0
WUND-TV D29 DT CP	176.6 39,620	120.4 34,916	120.4 34,916
WSFX-TV D29 DT APP	335.1 15,712	120.4 7,616	116.4 7,575
WRJA-TV D29 DT CP	306.1 16,518	210.7 12,655	210.7 12,655
WCVW D29 DT BL	67.9 2,784	43.9 1,349	43.9 1,349
WCHS-TV D29 DT BL	7.9 185	7.9 185	7.9 185
WDBJ D30 DT BL	159.3 11,134	155.3 11,109	155.3 11,109

Interference to BLANK0000025019 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	151.7 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	151.8
	WJBF	D28	DT	BL	AUGUSTA, GA	DTVBL27140	154.0
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000024452	377.9
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	BLANK0000025216	193.9
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	224.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23079.6 1,127,088	22971.8 1,119,936	22353.3 1,107,683	22353.3 1,107,683	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WUNU D30 DT BL	4.0 70	0.0 0	
WUNU D30 DT APP	4.0 70		0.0 0
WJBF D28 DT BL	36.0 1,319	32.0 1,234	32.0 1,234
WSFX-TV D29 DT APP	124.3 1,794	112.3 1,528	112.3 1,528
WXLV-TV D29 DT LIC	474.1 9,491	458.2 9,140	458.2 9,140

Interference to DTVBL61012 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL168101 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL168101 BL, scenario 2
Proposal causes no interference.

Interference to BLANK0000024627 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WYFF	D30	DT	CP	GREENVILLE, SC	BLANK0000024627	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	326.3 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	326.3
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000024452	221.2
	WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	156.7
	WDGA-CD	D30	DC	BL	DALTON, GA	DTVBL49235	223.7
	WMGT-TV	D30	DT	BL	MACON, GA	DTVBL43847	276.6
	WKMR	D30	DT	CP	MOREHEAD, KY	BLANK0000025308	348.1
	W30CV-D	D30	DC	LIC	HILTON HEAD ISLAND, SC	BLDTL20110110AAR	370.3
	WNAB	D30	DT	BL	NASHVILLE, TN	DTVBL73310	399.1
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	319.3
	WPCH-TV	D31	DT	APP	ATLANTA, GA	BLANK0000025264	215.0
	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	201.6
	WBXX-TV	D31	DT	CP	CROSSVILLE, TN	BLANK0000025087	191.8

Table 1 WUNU OET Bulletin 69 Interference Study
(page 4 of 6 - condensed to show first scenario only)



Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
44860.1	2,609,736	39702.9	2,399,774	39280.9	2,364,916	39276.8	2,364,739	0.01	0.01
Undesired		Total IX		Unique IX, before		Unique IX, after			
WUNU D30 DT BL		72.3	7,780	27.9	4,906				
WUNU D30 DT APP		76.4	7,957			32.0	5,083		
WKOP-TV D29 DT CP		20.2	0	12.1	0	12.1	0		
WMGT-TV D30 DT BL		67.7	2,128	67.7	2,128	67.7	2,128		
WDBJ D30 DT BL		302.2	27,753	261.8	24,950	261.8	24,950		
WKTC D31 DT BL		4.0	71	0.0	0	0.0	0		
WBXX-TV D31 DT CP		8.1	0	0.0	0	0.0	0		

Interference to DTVBL53905 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WYFF	D30	DT	BL	GREENVILLE, SC	DTVBL53905	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	326.3 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	326.3
	WYGA-CD	D29	DC	CP	ATLANTA, GA	BLANK0000024452	221.2
	WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	156.7
	WDGA-CD	D30	DC	BL	DALTON, GA	DTVBL49235	223.7
	WMGT-TV	D30	DT	BL	MACON, GA	DTVBL43847	276.6
	WKMR	D30	DT	CP	MOREHEAD, KY	BLANK0000025308	348.0
	W30CV-D	D30	DC	LIC	HILTON HEAD ISLAND, SC	BLDTL20110110AAR	370.3
	WNAB	D30	DT	BL	NASHVILLE, TN	DTVBL73310	399.1
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	319.3
	WPCH-TV	D31	DT	APP	ATLANTA, GA	BLANK0000025264	215.0
	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	201.6
	WBXX-TV	D31	DT	CP	CROSSVILLE, TN	BLANK0000025087	191.7

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
44231.8	2,584,777	39082.6	2,373,019	38680.7	2,344,777	38672.6	2,344,553	0.02	0.01
Undesired		Total IX		Unique IX, before		Unique IX, after			
WUNU D30 DT BL		60.3	8,233	23.9	4,906				
WUNU D30 DT APP		72.4	8,674			32.0	5,130		
WKOP-TV D29 DT CP		20.2	0	12.1	0	12.1	0		
WMGT-TV D30 DT BL		71.7	2,423	71.7	2,423	71.7	2,423		
WKMR D30 DT CP		4.0	24	4.0	24	4.0	24		
WDBJ D30 DT BL		282.1	20,889	245.7	17,562	241.7	17,345		
WBXX-TV D31 DT CP		8.1	0	0.0	0	0.0	0		

Interference to BLDTL20110110AAR LIC, scenario 1
Proposal causes no interference.

Interference to BLDTL20110110AAR LIC, scenario 2
Proposal causes no interference.

Interference to BLDTL20110110AAR LIC, scenario 3
Proposal causes no interference.

Interference to BLDTL20110110AAR LIC, scenario 4
Proposal causes no interference.

Interference to DTVBL71329 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	284.6 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	284.6
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	150.5
	WCHS-TV	D29	DT	BL	CHARLESTON, WV	DTVBL71280	204.2
	WKMR	D30	DT	CP	MOREHEAD, KY	BLANK0000025308	305.9
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	256.3

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WHIZ-TV	D30	DT	CP	ZANESVILLE, OH	BLANK0000024560	342.8
WBVD-CD	D30	DC	BL	PITTSBURGH, PA	DTVBL68395	361.7
WYFF	D30	DT	CP	GREENVILLE, SC	BLANK0000024627	319.3
WAZT-CD	D30	DC	BL	WOODSTOCK, VA	DTVBL57905	284.7
WGHP	D31	DT	CP	HIGH POINT, NC	BLANK0000025059	156.2
WOAY-TV	D31	DT	BL	OAK HILL, WV	DTVBL66804	121.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
45776.6 1,607,006	39770.8 1,414,800	38826.7 1,376,247	38822.8 1,376,193	0.01 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WUNU D30 DT BL	259.2 11,296	79.7 2,457	
WUNU D30 DT APP	263.2 11,350		83.7 2,511
WXLV-TV D29 DT LIC	319.1 21,933	167.5 7,714	167.5 7,714
WCHS-TV D29 DT BL	27.7 109	0.0 0	0.0 0
WKMR D30 DT CP	59.8 375	39.9 257	39.9 257
WHIZ-TV D30 DT CP	55.4 247	23.7 116	23.7 116
WYFF D30 DT CP	414.8 20,340	195.4 5,954	195.4 5,954
WAZT-CD D30 DC BL	4.0 0	4.0 0	4.0 0
WGHP D31 DT CP	91.7 6,405	8.0 0	8.0 0
WOAY-TV D31 DT BL	154.5 4,253	111.0 4,138	111.0 4,138

Interference to BLANK0000025059 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WGHP	D31	DT	CP	HIGH POINT, NC	BLANK0000025059	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	134.0 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	134.0
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	185.9
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	156.2
	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	206.5
	WHRO-TV	D31	DT	BL	HAMPTON-NORFOLK, VA	DTVBL25932	318.8
	WOAY-TV	D31	DT	BL	OAK HILL, WV	DTVBL66804	265.3
	WAXN-TV	D32	DT	CP	KANNAPOLIS, NC	BLANK0000025121	100.9
	WRPX-TV	D32	DT	BL	ROCKY MOUNT, NC	DTVBL20590	151.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
33760.2 3,795,782	33258.0 3,762,150	32221.1 3,579,085	32193.4 3,578,799	0.09 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WUNU D30 DT BL	246.1 7,095	222.3 5,074	
WUNU D30 DT APP	273.8 7,381		250.0 5,360
WDBJ D30 DT BL	135.3 10,917	131.3 9,861	131.3 9,861
WKTC D31 DT BL	182.9 33,350	107.1 10,199	107.1 10,199
WHRO-TV D31 DT BL	92.0 6,713	59.9 3,577	59.9 3,577
WOAY-TV D31 DT BL	4.0 1,056	0.0 0	0.0 0
WAXN-TV D32 DT CP	420.4 135,923	372.5 114,877	372.5 114,877
WRPX-TV D32 DT BL	64.1 15,270	36.1 12,218	36.1 12,218

Interference to DTVBL72106 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WGHP	D31	DT	BL	HIGH POINT, NC	DTVBL72106	
Undesireds:	WUNU	D30	DT	BL	LUMBERTON, NC	DTVBL69416	134.0 km
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	134.0
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	185.9
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	156.2
	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	206.5
	WHRO-TV	D31	DT	BL	HAMPTON-NORFOLK, VA	DTVBL25932	318.8
	WOAY-TV	D31	DT	BL	OAK HILL, WV	DTVBL66804	265.3
	WAXN-TV	D32	DT	CP	KANNAPOLIS, NC	BLANK0000025121	100.9
	WRPX-TV	D32	DT	BL	ROCKY MOUNT, NC	DTVBL20590	151.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
33664.5 3,779,889	33106.5 3,739,869	32021.5 3,540,285	31993.7 3,539,256	0.09 0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WUNU D30 DT BL	254.1 7,386	226.2 5,360	
WUNU D30 DT APP	281.9 8,415		254.0 6,389

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WDBJ D30 DT BL	131.3	10,786	131.3	10,786	131.3	10,786
WKTC D31 DT BL	214.9	31,969	99.3	9,007	99.3	9,007
WHRO-TV D31 DT BL	112.1	14,136	63.9	11,088	63.9	11,088
WOAY-TV D31 DT BL	4.0	331	0.0	0	0.0	0
WAXN-TV D32 DT CP	456.2	146,163	380.6	125,629	380.6	125,629
WRPX-TV D32 DT BL	64.1	14,510	36.1	12,106	36.1	12,106

Interference to DTVBL40902 BL, scenario 1
Proposal causes no interference.

Interference to proposal, scenario 1
**MX: 2.40% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUNU	D30	DT	APP	LUMBERTON, NC	WUNU_197KW	
Undesireds:	WSFX-TV	D29	DT	APP	WILMINGTON, NC	BLANK0000025216	107.9 km
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLCDT20050624ABB	138.3
	WRJA-TV	D29	DT	CP	SUMTER, SC	BLANK0000025019	151.8
	WHIG-CD	D30	DC	BL	ROCKY MOUNT, NC	DTVBL168101	167.9
	WYFF	D30	DT	CP	GREENVILLE, SC	BLANK0000024627	326.3
	W30CV-D	D30	DC	LIC	HILTON HEAD ISLAND, SC	BLDTL20110110AAR	334.1
	WDBJ	D30	DT	BL	ROANOKE, VA	DTVBL71329	284.6
	WGHP	D31	DT	CP	HIGH POINT, NC	BLANK0000025059	134.0
	WKTC	D31	DT	BL	SUMTER, SC	DTVBL40902	174.8

Service area	Terrain-limited	IX-free	Percent IX
23215.0 1,129,742	23103.0 1,128,859	22443.4 1,101,822	2.86 2.40

Undesired	Total IX	Unique IX	Prcnt Unique IX
WSFX-TV D29 DT APP	12.0 218	12.0 218	0.05 0.02
WXLV-TV D29 DT LIC	137.3 6,862	4.0 0	0.02 0.00
WYFF D30 DT CP	123.6 934	55.5 82	0.24 0.01
WDBJ D30 DT BL	507.3 24,684	201.0 10,781	0.87 0.96
WGHP D31 DT CP	331.2 12,882	68.7 1,304	0.30 0.12

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	69416
	State	North Carolina
	City	LUMBERTON
	DTV Channel	30
Facility Type	Facility Type	Noncommercial Educational
	Station Type	Main
Zone	Zone	2

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1014580
Coordinates (NAD83)	Latitude	34° 47' 51.0" N+
	Longitude	079° 02' 41.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	324.0 meters
	Support Structure Height	305.0 meters
	Ground Elevation (AMSL)	56.1 meters
Antenna Data	Height of Radiation Center Above Ground Level	312.6 meters
	Height of Radiation Center Above Average Terrain	317.1 meters
	Height of Radiation Center Above Mean Sea Level	368.7 meters
	Effective Radiated Power	197 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-26GTH/VP-R O4
	Rotation	
	Electrical Beam Tilt	0.50
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	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	

Construction
Permit
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes