

ENGINEERING EXHIBIT

Digital Television Station Application for Minor Modification of Licensed Facility

prepared for

WSFX License Subsidiary, LLC

WSFX-TV Wilmington NC

Facility ID 72871

Ch. 29 240 kW 592 m

WSFX License Subsidiary, LLC (“*WLS*”) is the licensee of digital television station WSFX-TV, Channel 29, Facility ID 72871, Wilmington NC. WSFX-TV is licensed (file# 0000111706) to operate at 200 kW effective radiated power (“ERP”) with a directional antenna at 590 meters height above average terrain (“HAAT”). *WLS* proposes herein to utilize a replacement antenna and operate WSFX-TV at increased ERP of 240 kW at 592 meters HAAT.

The existing WSFX-TV broadband panel directional antenna has become deficient and will be replaced with a new antenna of the same style. WSFX-TV shares the antenna with stations WECT Channel 23 and WWAY Channel 24, both Wilmington NC. The replacement antenna, supplied by an alternate manufacturer, has a similar but not exact directional azimuthal pattern as compared to the licensed facility. Manufacturing differences also place the resulting proposed antenna radiation center height above ground level at 588.2 meters, an increase of 1.2 meters above the licensed value. The proposed replacement antenna will be top-mounted in lieu of the existing antenna on the WSFX-TV tower structure corresponding to FCC Antenna Structure Registration number 1008242.

The proposed antenna is a horizontally polarized ERI model ETU14U4-HTP4Ox-24/23/29. *WLS* proposes to operate WSFX-TV with an ERP of 240 kW at 592 meters antenna HAAT. The directional antenna’s azimuthal pattern is depicted in Figure 1 and the elevation pattern is supplied in Figure 2.

Figure 3 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the baseline facility's population as described in the *Incentive Auction Closing and Channel Reassignment Public Notice* ("CCRPN", DA 17-317, released April 13, 2017).

The proposed facility expands the WSFX-TV noise limited service contour ("NLSC") beyond that established by the CCRPN. Interference study per FCC OET Bulletin 69¹ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby full service and Class A television stations as required by §73.616. FCC processing of this proposal is requested using a 1.0 km cell size and 1.0 km terrain profile increment. The interference study output report is provided as Table 1.

The proposed WSFX-TV NLSC encompasses and expands beyond nearly all of the licensed facility's NLSC. Minor NLSC loss areas are created due to the directional pattern variations of the replacement antenna. The NLSC of nearby licensed television stations which overlap the loss areas are provided on Figure 4 to demonstrate the availability of other services. All of the NLSC loss areas are considered "well served" since at least five other licensed television facilities provide NLSC overlap. There are at least ten other NLSC services available throughout all of the loss areas.

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 15 percent relative field or less 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 $0.5 \mu\text{W}/\text{cm}^2$, which is 0.1 percent of the general population/uncontrolled maximum permitted

¹FCC 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, 1.0 km cell size, and 1.0 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.

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	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Coverage Contour Comparison – Alternate DTV Services
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.	January 13, 2023	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

Azimuth Pattern

Type:	ETUP4Ox-H	Polarization:	Horizontal
Directivity:	1.96 numeric (2.91 dB)	Frequency:	29 (ATSC)
Peak(s) at:		Location:	Wilmington, NC
		NOTE: Pattern shape and directivity may vary with channel and mounting configuration.	

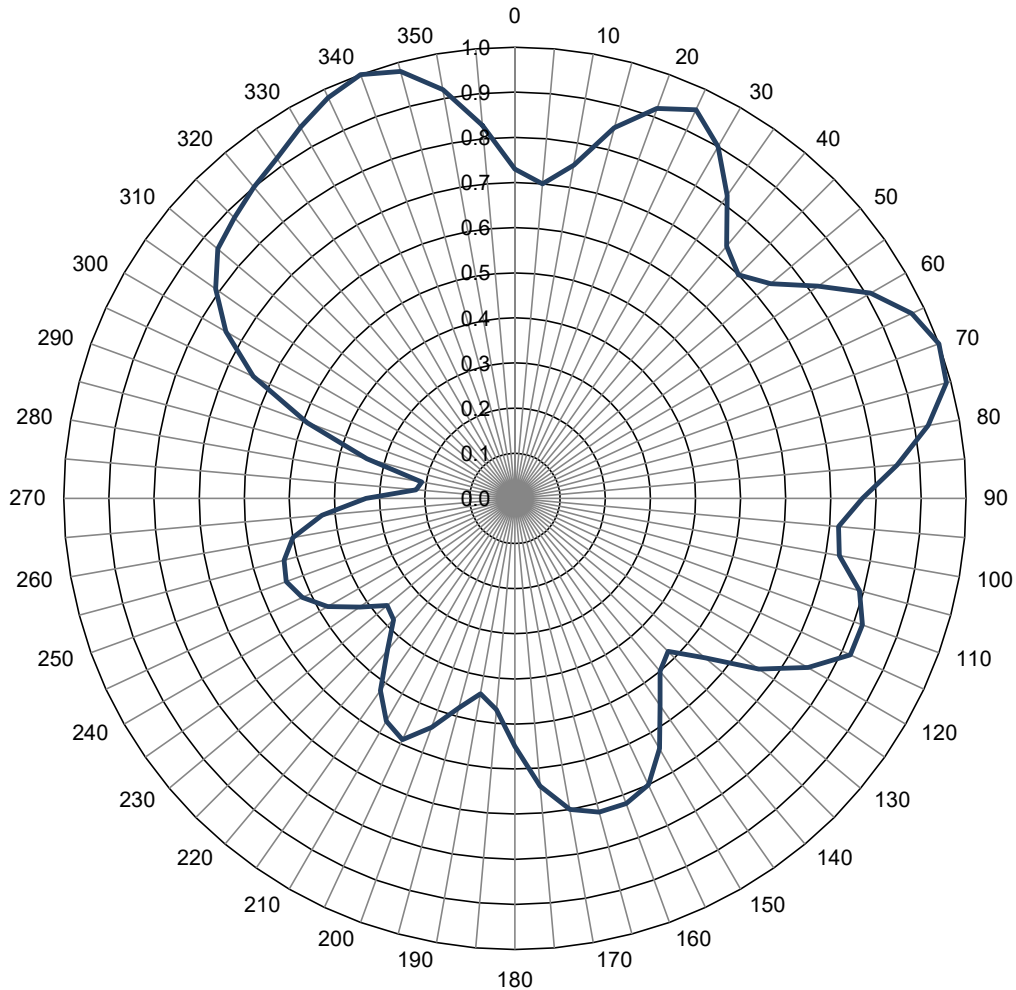


Figure 1
Antenna Azimuthal Pattern
WSFX-TV Wilmington NC
Facility ID 72871
Ch. 29 240 kW 592 m

prepared for
WSFX License Subsidiary, LLC

January, 2023

Elevation Pattern

Type:	ETU-14U4-H	Polarization:	Horizontal
Directivity:		Frequency:	29 (ATSC)
Main Lobe:	31.88 numeric (15.04 dB)	Location:	Wilmington, NC
Horizontal:	13.89 numeric (11.43 dB)	Beam Tilt:	1.00 degrees

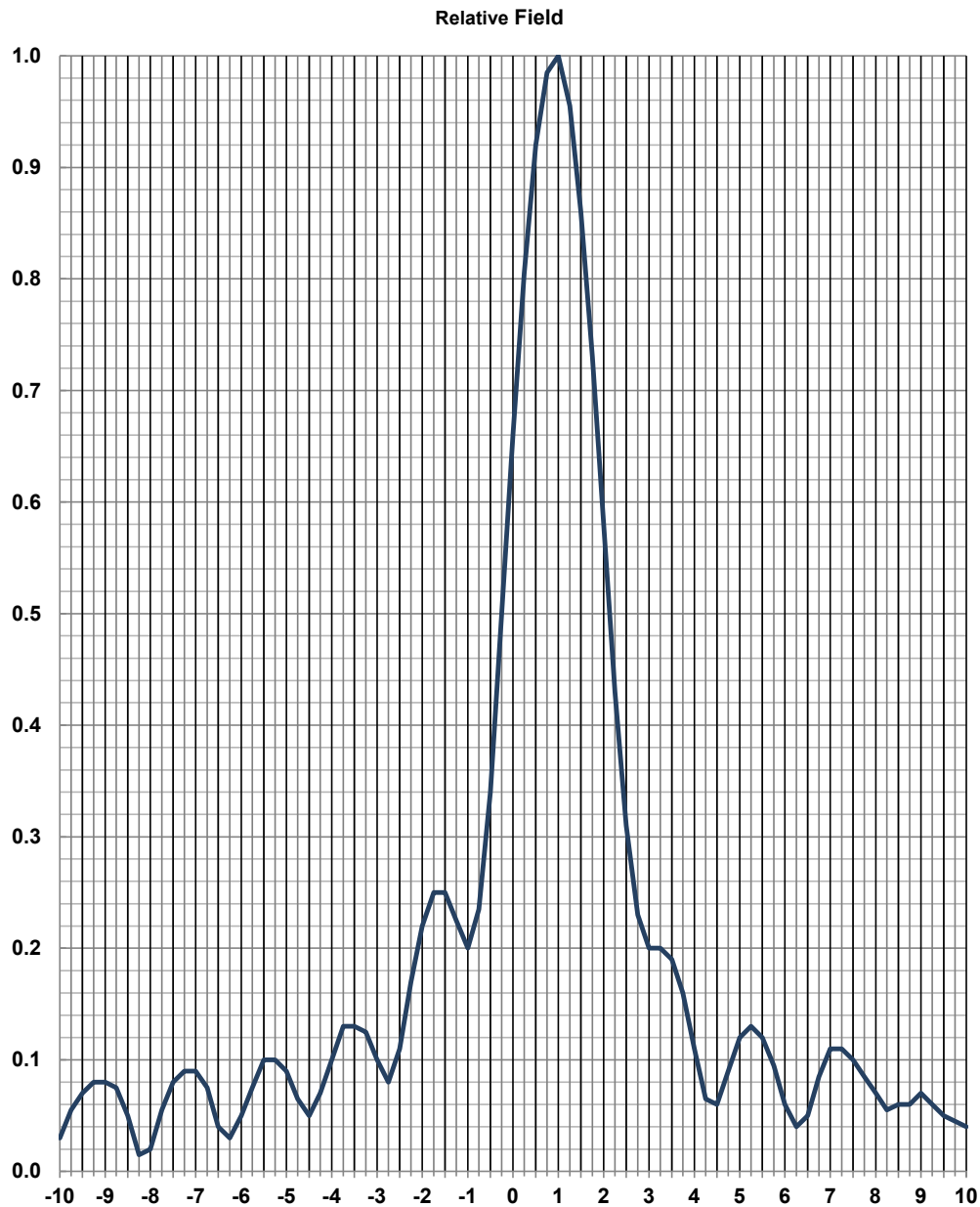
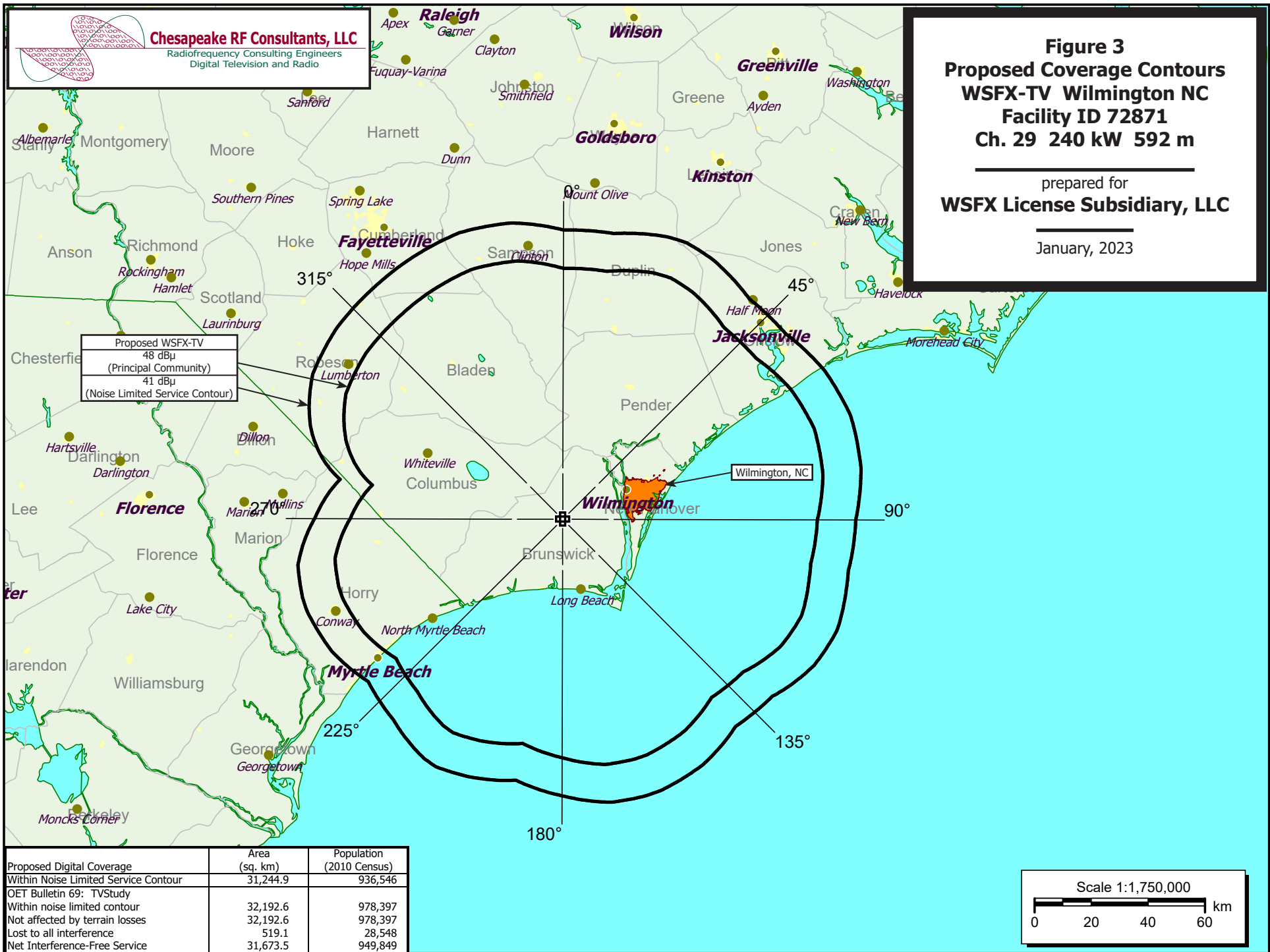
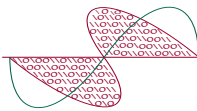


Figure 2
Antenna Elevation Pattern
WSFX-TV Wilmington NC
Facility ID 72871
Ch. 29 240 kW 592 m

prepared for
WSFX License Subsidiary, LLC

January, 2023





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

Figure 4
Coverage Contour Comparison
Alternate DTV Services
WSFX-TV Wilmington NC
Facility ID 72871
Ch. 29 240 kW 592 m

prepared for
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January, 2023

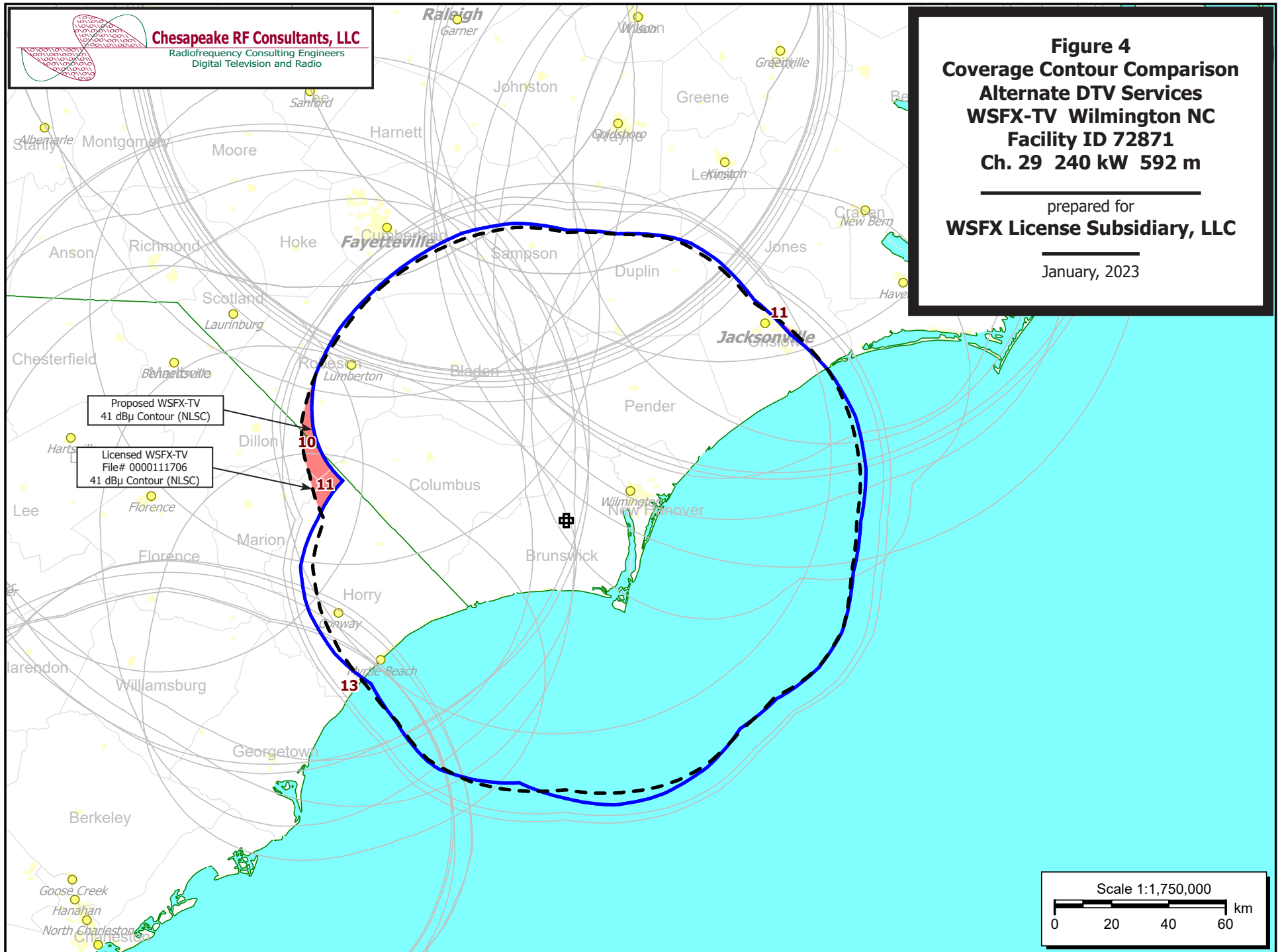


Table 1 WSFX-TV TVStudy Analysis of Proposal
(page 1 of 5)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: WSFX-TV ETU 240kW, Model: Longley-Rice
Start: 2023.01.10 16:18:15

Study created: 2023.01.10 16:18:15

Study build station data: LMS TV 2023-01-07

Proposal: WSFX-TV D29 DT APP WILMINGTON, NC
File number: WSFX-TV ETU 240kW
Facility ID: 72871
Station data: User record
Record ID: 4809
Country: U.S.
Zone: II

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	WMYV	D28	DT	LIC	GREENSBORO, NC	BLANK0000158590	243.7 km
Yes	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	133.2
Yes	WHMC	D28	DT	LIC	CONWAY, SC	BLANK0000115805	87.2
Yes	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	258.4
Yes	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	243.7
Yes	WRJA-TV	D29	DT	LIC	SUMTER, SC	BLANK0000153954	193.9
No	WCVW	D29	DT	LIC	RICHMOND, VA	BLANK0000186570	379.5
Yes	WUNU	D30	DT	LIC	LUMBERTON, NC	BLANK0000114990	107.9
No	WHIG-CD	D30	DC	CP	ROCKY MOUNT, NC	BLANK0000186196	200.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D29
Latitude: 34 7 54.00 N (NAD83)
Longitude: 78 11 16.00 W
Height AMSL: 607.4 m
HAAT: 582.2 m
Peak ERP: 240 kW
Antenna: Ch29 ETU14U4 AZpat 20210304-390-1r1 0.0 deg
Elev Pattn: Generic
Elec Tilt: 1.00

40.2 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	127 kW	590.9 m	103.2 km
45.0	127	591.3	103.2
90.0	142	599.7	104.5
135.0	61.3	592.6	97.1
180.0	72.1	596.6	98.6
225.0	34.5	590.2	92.1
270.0	22.8	588.5	88.6
315.0	181	588.0	106.1

Database HAAT does not agree with computed HAAT
Database HAAT: 582 m Computed HAAT: 592 m

Distance to Canadian border: 916.0 km

Distance to Mexican border: 2013.2 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 11.9 degrees Distance: 572.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 293.5 degrees Distance: 2476.0 km

Table 1 WSFX-TV TVStudy Analysis of Proposal
(page 2 of 5)



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%

Interference to BLANK0000094088 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	133.3 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	133.2
	WUNP-TV	D27	DT	LIC	ROANOKE RAPIDS, NC	BLANK0000121047	139.4
	WPDE-TV	D27	DT	LIC	FLORENCE, SC	BLANK0000120367	199.7
	WMYV	D28	DT	LIC	GREENSBORO, NC	BLANK0000158590	240.5
	WHMC	D28	DT	LIC	CONWAY, SC	BLANK0000115805	206.9
	WRIC-TV	D28	DT	LIC	PETERSBURG, VA	BLANK0000186787	268.7
	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	125.9

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	36490.8	1,352,925	36488.8	1,352,843	34849.7	1,300,093	34823.5 1,293,607 0.08 0.50
Undesired			Total IX	Unique IX, before		Unique IX, after	
WSFX-TV D29 DT BL			214.3	9,194		12.1 270	
WSFX-TV D29 DT APP			393.5	29,152		38.3 6,756	
WUNP-TV D27 DT LIC			41.5	1,733		28.3 1,717	
WPDE-TV D27 DT LIC			1.0	0		0.0 0	
WMYV D28 DT LIC			22.0	337		6.0 230	
WHMC D28 DT LIC			864.1	45,989		505.9 23,534	
WRIC-TV D28 DT LIC			44.4	123		16.1 0	
WUND-TV D29 DT LIC			704.4	4,528		686.2 4,459	

Interference to BLANK0000115805 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHMC	D28	DT	LIC	CONWAY, SC	BLANK0000115805	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	87.2 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	87.2
	WPDE-TV	D27	DT	LIC	FLORENCE, SC	BLANK0000120367	50.7
	WMYV	D28	DT	LIC	GREENSBORO, NC	BLANK0000158590	222.9
	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	206.9
	WRJA-TV	D29	DT	LIC	SUMTER, SC	BLANK0000153954	107.5

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	21985.9	774,132	21985.9	774,132	20605.8	735,926	20598.9 735,921 0.03 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	
WSFX-TV D29 DT BL			22.0	239		0.0 0	
WSFX-TV D29 DT APP			60.9	789		6.9 5	
WPDE-TV D27 DT LIC			1024.9	34,390		1007.8 34,217	
WMYV D28 DT LIC			9.0	146		0.0 0	
WUNM-TV D28 DT LIC			360.3	3,843		301.2 3,047	
WRJA-TV D29 DT LIC			3.0	0		2.0 0	

Interference to BLANK0000132286 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	258.4 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	258.4
	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	125.9
	WCVW	D29	DT	LIC	RICHMOND, VA	BLANK0000186570	211.3
	WHIG-CD	D30	DC	LIC	ROCKY MOUNT, NC	BLANK0000180530	129.3

Table 1 WSFX-TV TVStudy Analysis of Proposal
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Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39006.3	1,499,806	39006.3	1,499,806	38331.5	1,479,357	38331.5	1,479,357	0.00	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
WSFX-TV D29 DT BL	0.0	0	0.0	0		
WSFX-TV D29 DT APP	1.0	0			0.0	0
WUNM-TV D28 DT LIC	336.9	12,332	336.9	12,332	336.9	12,332
WCVW D29 DT LIC	337.9	8,117	337.9	8,117	336.9	8,117

Interference to BLANK0000132286 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	258.4 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	258.4
	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	125.9
	WCVW	D29	DT	LIC	RICHMOND, VA	BLANK0000186570	211.3
	WHIG-CD	D30	DC	CP	ROCKY MOUNT, NC	BLANK0000186196	129.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39006.3	1,499,806	39006.3	1,499,806	38331.5	1,479,357	38331.5	1,479,357	0.00	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
WSFX-TV D29 DT BL	0.0	0	0.0	0		
WSFX-TV D29 DT APP	1.0	0			0.0	0
WUNM-TV D28 DT LIC	336.9	12,332	336.9	12,332	336.9	12,332
WCVW D29 DT LIC	337.9	8,117	336.9	8,117	336.9	8,117
WHIG-CD D30 DC CP	1.0	0	0.0	0	0.0	0

Interference to BLANK0000158591 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	243.7 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	243.7
	WMYV	D28	DT	LIC	GREENSBORO, NC	BLANK0000158590	0.0
	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	313.2
	WRJA-TV	D29	DT	LIC	SUMTER, SC	BLANK0000153954	224.5
	WCVW	D29	DT	LIC	RICHMOND, VA	BLANK0000186570	269.6
	WCHS-TV	D29	DT	LIC	CHARLESTON, WV	BLANK0000167887	337.1
	WUNU	D30	DT	LIC	LUMBERTON, NC	BLANK0000114990	138.3
	WHIG-CD	D30	DC	LIC	ROCKY MOUNT, NC	BLANK0000180530	183.9
	WDBJ	D30	DT	LIC	ROANOKE, VA	BLANK0000199694	150.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39661.5	4,376,164	38845.6	4,348,087	37701.2	4,239,305	37657.4	4,238,464	0.12	0.02

Undesired	Total IX		Unique IX, before		Unique IX, after	
WSFX-TV D29 DT BL	346.5	29,147	86.6	5,814		
WSFX-TV D29 DT APP	429.3	30,954			130.5	6,655
WMYV D28 DT LIC	3.0	229	3.0	229	3.0	229
WUND-TV D29 DT LIC	171.6	50,533	86.4	32,849	76.4	31,179
WRJA-TV D29 DT LIC	390.9	34,813	276.0	29,416	272.0	28,742
WCVW D29 DT LIC	82.3	4,859	43.1	1,317	43.1	1,317
WCHS-TV D29 DT LIC	7.0	60	6.0	60	6.0	60
WUNU D30 DT LIC	347.5	9,493	151.8	2,579	128.8	2,302
WDBJ D30 DT LIC	184.4	11,580	174.4	11,254	174.4	11,254

Interference to BLANK0000153954 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WRJA-TV	D29	DT	LIC	SUMTER, SC	BLANK0000153954	
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	193.9 km
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	193.9
	WJBF	D28	DT	LIC	AUGUSTA, GA	BLANK0000116201	154.0
	WHMC	D28	DT	LIC	CONWAY, SC	BLANK0000115805	107.5
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	224.5

Table 1 WSFX-TV TVStudy Analysis of Proposal
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WAGT-CD		D30	DC	LIC	AUGUSTA, GA		BLANK0000063630		154.0	
WUNU		D30	DT	LIC	LUMBERTON, NC		BLANK0000114990		151.8	
Service area		Terrain-limited			IX-free, before		IX-free, after		Percent New IX	
24629.2	1,203,432	24507.9	1,198,643		23627.1	1,183,406	23557.0	1,182,761	0.30	0.05
Undesired				Total IX		Unique IX, before		Unique IX, after		
WSFX-TV D29 DT BL		236.4	3,190		84.1	1,963				
WSFX-TV D29 DT APP		341.2	5,079				154.2	2,608		
WJBF D28 DT LIC		43.6	1,078		18.8	490	18.8	490		
WHMC D28 DT LIC		183.7	1,696		54.3	906	31.6	339		
WXLV-TV D29 DT LIC		580.3	10,703		547.3	10,188	539.4	9,810		
WAGT-CD D30 DC LIC		23.8	588		0.0	0	0.0	0		
WUNU D30 DT LIC		3.0	0		0.0	0	0.0	0		

Interference to BLANK0000114990 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WUNU	D30	DT	LIC	LUMBERTON, NC	BLANK0000114990			
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	107.9 km		
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	107.9		
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	138.3		
	WHIG-CD	D30	DC	LIC	ROCKY MOUNT, NC	BLANK0000180530	167.9		
	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000190317	326.3		
	WDBJ	D30	DT	LIC	ROANOKE, VA	BLANK0000199694	284.6		
	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000158670	134.0		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
25563.7	1,202,188	25378.3	1,200,904	24425.8	1,166,367	24416.7	1,166,313	0.04	0.00

Interference to BLANK0000114990 LIC scenario 2

Desired:	Call WUNU	Chan D30	Svc DT	Status LIC	City, State LUMBERTON, NC	File Number BLANK0000114990	Distance		
Undesireds:	WSFX-TV	D29	DT	BL	WILMINGTON, NC	DTVBL72871	107.9 km		
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	107.9		
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	138.3		
	WHIG-CD	D30	DC	CP	ROCKY MOUNT, NC	BLANK0000186196	167.9		
	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000190317	326.3		
	WDBJ	D30	DT	LIC	ROANOKE, VA	BLANK0000199694	284.6		
	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000158670	134.0		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
25563.7	1,202,188	25378.3	1,200,904	24407.9	1,166,051	24398.8	1,165,997	0.04	0.00

Interference to proposal scenario 1
2.92% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WSFX-TV	D29	DT	APP	WILMINGTON, NC	WSFX-TV ETU 240kW	

Table 1 WSFX-TV TVStudy Analysis of Proposal
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Undesireds:	WUNM-TV	D28	DT	LIC	JACKSONVILLE, NC	BLANK0000094088	133.2 km
	WHMC	D28	DT	LIC	CONWAY, SC	BLANK0000115805	87.2
	WUND-TV	D29	DT	LIC	EDENTON, NC	BLANK0000132286	258.4
	WXLV-TV	D29	DT	LIC	WINSTON-SALEM, NC	BLANK0000158591	243.7
	WRJA-TV	D29	DT	LIC	SUMTER, SC	BLANK0000153954	193.9
	WUNU	D30	DT	LIC	LUMBERTON, NC	BLANK0000114990	107.9
	WHIG-CD	D30	DC	LIC	ROCKY MOUNT, NC	BLANK0000180530	200.3

Service area	Terrain-limited	IX-free	Percent IX
32192.6 978,397	32192.6 978,397	31673.5 949,849	1.61 2.92

Undesired	Total IX	Unique IX	Prct Unique IX
WUNM-TV D28 DT LIC	152.1 12,299	128.1 10,670	0.40 1.09
WHMC D28 DT LIC	181.6 7,925	103.6 4,336	0.32 0.44
WUND-TV D29 DT LIC	25.0 1,629	1.0 0	0.00 0.00
WXLV-TV D29 DT LIC	3.0 22	0.0 0	0.00 0.00
WRJA-TV D29 DT LIC	80.9 3,651	2.0 62	0.01 0.01
WUNU D30 DT LIC	182.4 8,262	179.4 8,240	0.56 0.84

**Channel and
Facility
Information**

Section	Question	Response
Proposed Community of License	Facility ID	72871
	State	North Carolina
	City	WILMINGTON
	DTV Channel	29
	Designated Market Area	Wilmington
Facility Type	Facility Type	Commercial
	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	1008242
Coordinates (NAD83)	Latitude	34° 07' 54.0" N+
	Longitude	078° 11' 16.0" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	595.6 meters
	Support Structure Height	548.0 meters
	Ground Elevation (AMSL)	19.2 meters
Antenna Data	Height of Radiation Center Above Ground Level	588.2 meters
	Height of Radiation Center Above Average Terrain	592.2 meters
	Height of Radiation Center Above Mean Sea Level	607.4 meters
	Effective Radiated Power	240 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	ETU14U4-HTP4Ox-24/23/29
	Rotation	0 degrees
	Electrical Beam Tilt	1
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
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	

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	0.728	90	0.768	180	0.548	270	0.308
10	0.743	100	0.728	190	0.431	280	0.190
20	0.923	110	0.814	200	0.523	290	0.475
30	0.898	120	0.742	210	0.551	300	0.729
40	0.721	130	0.529	220	0.415	310	0.844
50	0.735	140	0.482	230	0.343	320	0.892
60	0.911	150	0.628	240	0.448	330	0.951
70	1.000	160	0.708	250	0.505	340	1.000
80	0.937	170	0.686	260	0.476	350	0.926

Additional Azimuths

Degree	V _A
253	0.506
24	0.955
207	0.569
163	0.710
112	0.824