



ENGINEERING EXHIBIT

Digital Television Translator Station Application for Minor Modification of Licensed Facility

prepared for

University of North Carolina
W31AN-D Murphy, NC
Facility ID 69154
Ch. 31 11.5 kW Nondirectional

University of North Carolina (“UNC”) is the licensee of digital television translator station W31AN-D, Channel 31, Facility ID 69154, Murphy NC. W31AN-D is licensed to operate (file# BLDTT-20090615AAV) with 0.5 kW effective radiated power (“ERP”), nondirectional. *UNC* herein seeks a minor modification Construction Permit to increase W31AN-D’s ERP to 11.5 kW nondirectional and to correct the site’s geographic coordinates and ground elevation. No change in the antenna height above ground level or actual site location or is proposed.

The corrected site coordinates represent a location 0.1 km distant (2.9 seconds latitude and 0.7 seconds longitude) from the licensed coordinates. The corrected ground elevation at the site (658.4 meters AMSL) is 14.4 meters above the licensed value. The W31AN-D antenna supporting structure does not require registration as the overall structure height does not exceed 61 meters above ground and passes the FCC’s TOWAIR program for the location. The proposed facility will employ a replacement antenna and no change to the overall structure height will occur.

The proposed ERP is 11.5 kW using a “full service” out of channel emission mask. The proposed W31AN-D transmitting antenna is an ERI model AL8O-31-E having elliptical polarization (30 percent vertical power). The horizontally polarized ERP is 11.5 kW and the vertically polarized ERP is 3.45 kW. Figure 1 depicts the 51 dB μ coverage contours of the proposed and licensed facilities. The use of the site’s corrected coordinates and corresponding service area overlap demonstrate compliance with §73.3572 for a minor change.

Interference study per OET Bulletin 69¹ shows that the proposal complies with the FCC's interference protection requirements toward all digital television, television translator, LPTV, and Class A stations. 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.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed facility 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 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 $11.7 \mu\text{W}/\text{cm}^2$, which is 3.1 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 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.

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 km cell size, and 1.0 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.

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

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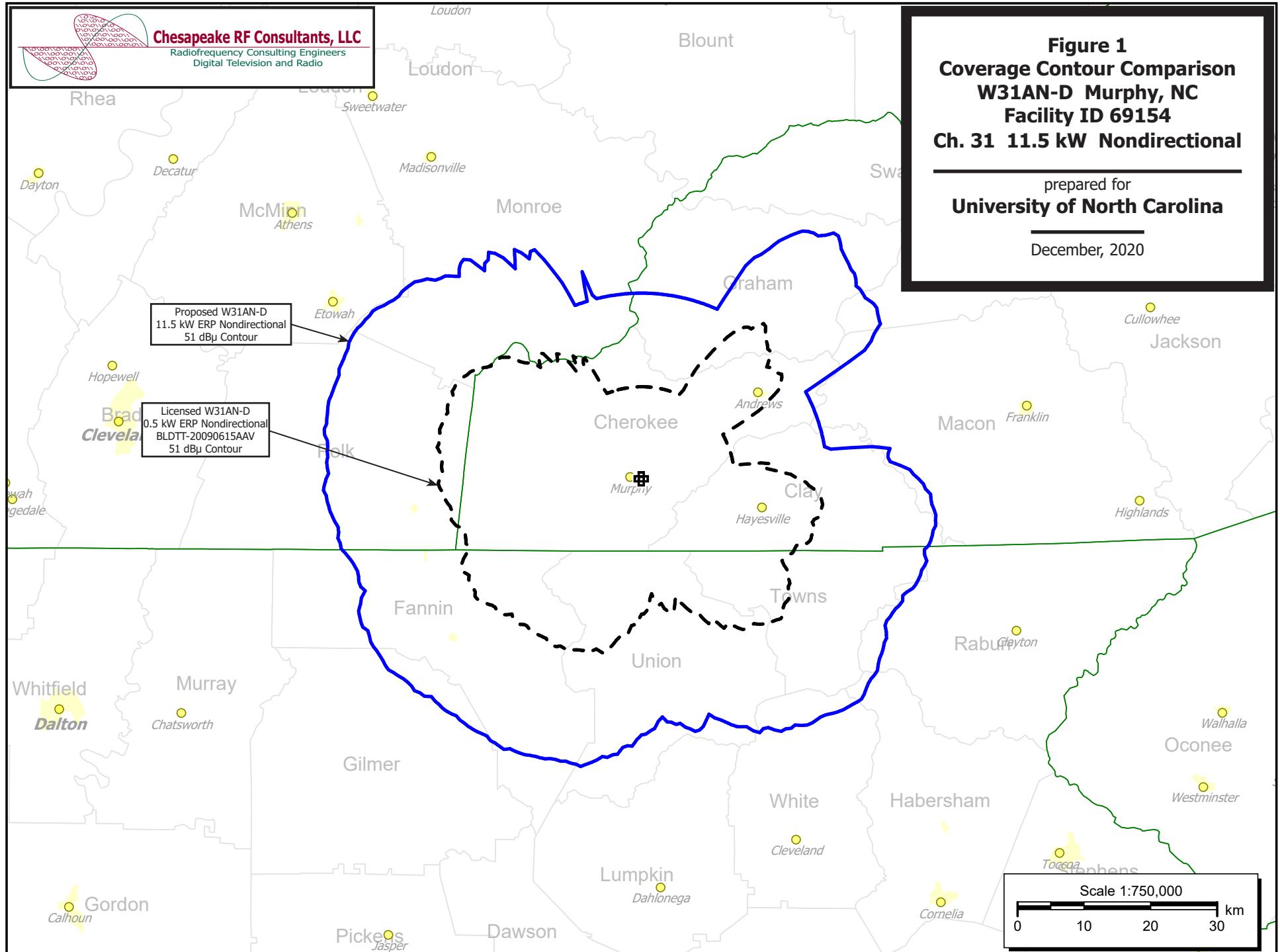


Table 1 W31AN-D TVStudy Analysis of Proposal
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tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: W31AN-D prop 11.5, Model: Longley-Rice
Start: 2020.12.21 17:06:21

Study created: 2020.12.21 17:06:21

Study build station data: LMS TV 2020-12-21

Proposal: W31AN-D D31 LD APP MURPHY, NC
File number: W31AN-D prop 11.5
Facility ID: 69154
Station data: User record
Record ID: 3419
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	WTBS-LD	D30	LD	LIC	ATLANTA, GA	BLDTL20110105ABR	145.0 km
No	WBUD-LD	D30	LD	CP	BLAIRSVILLE, GA	BLANK0000071622	145.0
No	WDGA-CD	D30	DC	LIC	DALTON, GA	BLANK0000098047	99.3
No	WMGT-TV	D30	DT	LIC	MACON, GA	BLANK0000075816	262.5
No	W30DX-D	D30	LD	LIC	BRYSON CITY, ETC, NC	BLANK0000119378	59.3
Yes	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000081030	128.2
No	W30DP-D	D30	LD	CP	ALGOOD, TN	BNPDTL20100609AFX	176.9
No	W11DM-D	N30-	TX	LIC	COLLEGEDALE, TN	BLTTL19990802JH	96.4
No	W45DF-D	D30	LD	CP	KNOXVILLE, TN	BLANK0000114382	101.4
No	WCYB-TV	D30	DT	APP	BRISTOL, VA	BLANK0000127663	229.4
No	WAXC-LD	D31	LD	LIC	ALEXANDER CITY, AL	BLDTL20110329ABN	296.6
No	WSFG-LD	D31	LD	CP	BERRY, AL	BLANK0000029418	360.6
No	WWHL-LD	D31-	LD	LIC	Huntsville, AL	BLANK0000118828	265.2
No	WNCF	D31	DT	LIC	MONTGOMERY, AL	BLANK0000001319	414.5
No	W31DS-D	D31	LD	CP	ASHBURN, GA	BNPDTL20100510ABE	372.9
Yes	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	145.0
No	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	130.0
No	W31EU-D	D31	LD	CP	COLUMBUS, GA	BLANK0000071968	283.3
No	WSWG	D31	DT	LIC	VALDOSTA, GA	BLANK0000063722	439.1
No	WMUB-LD	D31	LD	CP	WARNER ROBINS, GA	BLANK0000054344	261.3
No	WKMA-TV	D31	DT	LIC	MADISONVILLE, KY	BLANK0000087442	391.5
Yes	W31DH-D	D31	LD	APP	FRANKLIN, ETC, NC	BLANK0000129897	67.4
Yes	W31DH-D	D31	LD	LIC	FRANKLIN, ETC, NC	BLDTT20090615AAP	67.4
No	WDKT-LD	N31-	TX	LIC	HENDERSONVILLE, NC	BLTTL19940525JJ	144.7
No	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000116302	386.6
No	W31DI-D	D31	LD	APP	SPRUCE PINE, NC	BLANK0000129695	194.3
No	W31DI-D	D31	LD	LIC	SPRUCE PINE, NC	BLDTT20090506ABZ	194.3
No	WTZF-LD	D31	LD	LIC	PORTSMOUTH, OH	BLANK0000074508	417.4
No	W31DY-D	D31	LD	LIC	PICKENS, SC	BLANK0000119379	147.0
No	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	316.4
Yes	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	117.5
No	WOAY-TV	D31	DT	LIC	OAK HILL, WV	BLANK0000096583	409.2
No	WSB-TV	D32	LD	CP	ATLANTA, GA	BLANK0000054733	130.0
No	WSB-TV	D32	LD	CP	ATLANTA, GA	BLANK0000054736	107.6
No	WSB-TV	D32	DT	LIC	ATLANTA, GA	BLANK0000104824	150.1
No	W11DD-D	D32	LD	CP	HARTWELL & ROYSTON, GA	BLANK0000053811	130.7
No	W32FI-D	D32	LD	LIC	BREVARD, NC	BLANK0000074959	121.9
No	W32EO-D	D32	LD	LIC	TRYON, ETC., NC	BLANK0000119355	162.2
No	WKPT-TV	D32	DT	LIC	KINGSPORT, TN	BLANK0000070485	226.1
No	WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BP TTL20120508ADS	101.4
No	WEEE-LP	N32+	TX	LIC	KNOXVILLE, TN	BLTT19980717JA	97.6
No	WEEE-LP	D32	LD	CP	KNOXVILLE, TN	BMPDTA20120605AAP	101.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Table 1 W31AN-D TVStudy Analysis of Proposal
(page 2 of 5)



Channel: D31
Mask: Full Service
Latitude: 35° 5' 5.20 N (NAD83)
Longitude: 84° 0' 58.30 W
Height AMSL: 691.4 m
HAAT: 0.0 m
Peak ERP: 11.5 kW
Antenna: Omnidirectional
Elev Pattrn: Generic
Elec Tilt: 1.75

50.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	11.5 kW	-2.7 m	28.7 km
45.0	11.5	135.7	45.1
90.0	11.5	99.2	42.0
135.0	11.5	169.3	47.3
180.0	11.5	75.4	38.8
225.0	11.5	160.0	46.7
270.0	11.5	180.2	48.0
315.0	11.5	108.9	43.0

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 116 m

Distance to Canadian border: 741.8 km

Distance to Mexican border: 1595.1 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 205.7 degrees Distance: 150.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 293.0 degrees Distance: 1944.3 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%

Interference to BLANK0000081030 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000081030	
Undesireds:	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop 11.5	128.2 km
	WYGA-CD	D29	DC	APP	ATLANTA, GA	BLANK0000127583	221.2
	WKOP-TV	D29	DT	LIC	KNOXVILLE, TN	BLANK0000081273	156.7
	WAGT-CD	D30	DC	LIC	AUGUSTA, GA	BLANK0000063630	202.5
	WMGT-TV	D30	DT	LIC	MACON, GA	BLANK0000075816	276.6
	WKMR	D30	DT	LIC	MOREHEAD, KY	BLANK0000075044	348.1
	WUNU	D30	DT	LIC	LUMBERTON, NC	BLANK0000114990	326.3
	W30CV-D	D30	DC	CP	HILTON HEAD ISLAND, SC	BLANK0000127486	359.2
	WCYB-TV	D30	DT	APP	BRISTOL, VA	BLANK0000127663	155.3
	WDBJ	D30	DT	LIC	ROANOKE, VA	BLANK0000094109	319.3
	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	215.0
	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	201.6
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	191.8
45301.7	2,629,601	40241.2	2,421,024	39055.5	IX-free, before 2,378,396	IX-free, after 39048.5 2,378,396	Percent New IX 0.02 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	
W31AN-D D31 LD APP		8.0	0			7.0	0
WKOP-TV D29 DT LIC		24.8	0	5.9	0	5.9	0
WAGT-CD D30 DC LIC		536.6	6,343	488.8	5,805	488.8	5,805
WMGT-TV D30 DT LIC		65.9	1,750	33.0	1,129	33.0	1,129

Table 1 W31AN-D TVStudy Analysis of Proposal
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WKMR D30 DT LIC	14.0	24	2.0	0	2.0	0
WUNU D30 DT LIC	103.6	8,995	51.9	5,616	51.9	5,616
WCYB-TV D30 DT APP	338.5	12,481	254.8	8,357	253.8	8,357
WDBJ D30 DT LIC	274.6	20,710	195.9	14,944	195.9	14,944
WPCH-TV D31 DT LIC	1.0	6	1.0	6	1.0	6
WKTC D31 DT LIC	1.0	35	0.0	0	0.0	0
WBXX-TV D31 DT LIC	8.9	0	3.0	0	3.0	0

Interference to BLANK0000081575 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	
Undesireds:	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop 11.5	145.0 km
	WDGA-CD	D30	DC	LIC	DALTON, GA	BLANK0000098047	120.3
	WMGT-TV	D30	DT	LIC	MACON, GA	BLANK0000075816	137.6
	WNCF	D31	DT	LIC	MONTGOMERY, AL	BLANK0000001319	292.7
	WSWG	D31	DT	LIC	VALDOSTA, GA	BLANK0000063722	306.8
	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	331.4
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	255.8
	WSB-TV	D32	DT	LIC	ATLANTA, GA	BLANK0000104824	5.2
Service area		Terrain-limited			IX-free, before	IX-free, after	Percent New IX
30835.6	5,947,220	29471.1	5,881,851	28442.7	5,813,086	28436.7	5,812,462
Undesired		Total IX		Unique IX, before	Unique IX, after		
W31AN-D D31 LD APP		33.1	3,399		6.0	624	
WDGA-CD D30 DC LIC		328.9	26,393	120.7	6,246	119.7	6,246
WMGT-TV D30 DT LIC		4.0	51	2.0	51	2.0	51
WNCF D31 DT LIC		229.5	8,313	165.0	4,824	163.0	4,809
WSWG D31 DT LIC		12.0	1,462	4.0	77	4.0	77
WKTC D31 DT LIC		65.8	2,777	57.8	2,737	57.8	2,737
WBXX-TV D31 DT LIC		538.4	43,308	277.6	20,851	267.6	19,827
WSB-TV D32 DT LIC		140.4	10,544	121.5	10,035	121.5	10,035

Interference to BLANK0000129897 APP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W31DH-D	D31	LD	APP	FRANKLIN, ETC, NC	BLANK0000129897	
Undesireds:	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop 11.5	67.4 km
	W30DX-D	D30	LD	LIC	BRYSON CITY, ETC, NC	BLANK0000119378	17.7
	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000081030	70.5
	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	192.3
	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	160.6
	WDKT-LD	N31-	TX	LIC	HENDERSONVILLE, NC	BLTTL19940525JJ	82.3
	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000116302	320.5
	W31DI-D	D31	LD	APP	SPRUCE PINE, NC	BLANK0000129695	127.1
	W31DY-D	D31	LD	LIC	PICKENS, SC	BLANK0000119379	94.4
	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	270.8
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	125.4
	WSB-TV	D32	LD	CP	ATLANTA, GA	BLANK0000054733	160.6
	W32FI-D	D32	LD	LIC	BREVARD, NC	BLANK0000074959	61.8
	WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BPTTL20120508ADS	93.0
Service area		Terrain-limited			IX-free, before	IX-free, after	Percent New IX
14719.5	397,345	8309.9	162,488	8060.8	160,806	8026.9	160,674
Undesired		Total IX		Unique IX, before	Unique IX, after		
W31AN-D D31 LD APP		55.9	147		33.9	132	
W30DX-D D30 LD LIC		29.8	116	24.9	24.9	116	
WYFF D30 DT LIC		53.9	1,059	16.0	484	16.0	484
WPCH-TV D31 DT LIC		58.0	591	26.0	1	18.0	1
WSB-TV D31 LD LIC		32.0	580	4.0	138	4.0	138
WDKT-LD N31- TX LIC		3.0	0	0.0	0	0.0	0
WGHP D31 DT LIC		6.0	374	0.0	0	0.0	0
W31DY-D D31 LD LIC		36.0	282	3.0	175	3.0	175
WKTC D31 DT LIC		22.0	185	1.0	63	1.0	63
WBXX-TV D31 DT LIC		128.3	132	108.4	39	99.4	24
W32FI-D D32 LD LIC		1.0	346	0.0	0	0.0	0

Table 1 W31AN-D TVStudy Analysis of Proposal
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Interference to BLDTT20090615AAP LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W31DH-D	D31	LD	LIC	FRANKLIN, ETC, NC	BLDTT20090615AAP	
Undesireds:	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop 11.5	67.4 km
	W30DX-D	D30	LD	LIC	BRYSON CITY, ETC, NC	BLANK0000119378	17.6
	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	192.3
	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	160.6
	WDKT-LD	N31-	TX	LIC	HENDERSONVILLE, NC	BLTTL19940525JJ	82.3
	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000116302	320.6
	W31DI-D	D31	LD	APP	SPRUCE PINE, NC	BLANK0000129695	127.1
	W31DY-D	D31	LD	LIC	PICKENS, SC	BLANK0000119379	94.5
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	125.4
	WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BPTTL20120508ADS	93.0
Service area					Terrain-limited	IX-free, before	IX-free, after
7538.1	169,002	5423.2	107,991	5302.7	106,768	5295.7	106,768
							Percent New IX
						0.13	0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
W31AN-D	D31	LD APP	18.0	0	7.0	0	
W30DX-D	D30	LD LIC	5.0	443	4.0	118	
WPCH-TV	D31	DT LIC	38.0	673	20.0	352	
WSB-TV	D31	LD LIC	33.0	373	15.0	52	
WDKT-LD	N31-	TX LIC	1.0	0	1.0	0	
WGHP	D31	DT LIC	1.0	0	0.0	0	
W31DY-D	D31	LD LIC	2.0	43	0.0	0	
WBXX-TV	D31	DT LIC	63.6	380	60.6	55	
						53.6	55

Interference to BLANK0000081641 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	
Undesireds:	W31AN-D	D31	LD APP	MURPHY, NC	W31AN-D prop 11.5	117.5 km	
	WDGA-CD	D30	DC	LIC	DALTON, GA	BLANK0000098047	164.8
	WYFF	D30	DT	LIC	GREENVILLE, SC	BLANK0000081030	191.8
	WCYB-TV	D30	DT	APP	BRISTOL, VA	BLANK0000127663	203.4
	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	255.8
	WKMA-TV	D31	DT	LIC	MADISONVILLE, KY	BLANK0000087442	307.6
	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000116302	405.9
	WDTN	D31	DT	LIC	DAYTON, OH	BLANK0000126718	401.3
	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	393.2
	WOAY-TV	D31	DT	LIC	OAK HILL, WV	BLANK0000096583	349.5
	WKPT-TV	D32	DT	LIC	KINGSPORT, TN	BLANK0000070485	200.4
Service area				Terrain-limited	IX-free, before	IX-free, after	Percent New IX
49818.8	2,142,237	44471.4	1,987,590	44019.2	1,975,309	43779.6	1,968,571
						0.54	0.34
Undesired				Total IX	Unique IX, before	Unique IX, after	
W31AN-D	D31	LD APP	309.4	8,053	239.6	6,738	
WDGA-CD	D30	DC LIC	72.9	1,942	56.0	1,298	
WYFF	D30	DT LIC	4.0	0	4.0	0	
WCYB-TV	D30	DT APP	65.6	2,130	57.6	2,127	
WPCH-TV	D31	DT LIC	244.5	5,762	214.4	4,508	
WKMA-TV	D31	DT LIC	48.4	2,038	35.2	1,428	
WGHP	D31	DT LIC	4.0	6	4.0	6	
WDTN	D31	DT LIC	30.9	1,397	29.9	1,351	
WKTC	D31	DT LIC	1.0	0	1.0	0	
WOAY-TV	D31	DT LIC	5.0	114	3.0	68	
WKPT-TV	D32	DT LIC	16.1	195	8.0	192	

Interference to proposal scenario 1

**MX: 10.39% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop 11.5	
Undesireds:	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	145.0 km
	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	130.0

Table 1 W31AN-D TVStudy Analysis of Proposal
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W31DH-D	D31	LD	APP	FRANKLIN, ETC, NC	BLANK0000129897	67.4
W31DI-D	D31	LD	APP	SPRUCE PINE, NC	BLANK0000129695	194.3
WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	117.5
WSB-TV	D32	LD	CP	ATLANTA, GA	BLANK0000054733	130.0
WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BPTTL20120508ADS	101.4

Service area	Terrain-limited			IX-free	Percent IX	
5532.9	111,340	3959.8	79,593	3570.0	71,320	9.84
						10.39

Undesired	Total IX	Unique IX	Prcnt Unique IX
WPCH-TV D31 DT LIC	40.9	82	0.50
WSB-TV D31 LD LIC	12.0	0	0.08
W31DH-D D31 LD APP	84.9	1,281	0.81
WBXX-TV D31 DT LIC	320.9	7,573	6,910
	273.9		8.68

Interference to proposal scenario 2
9.62% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W31AN-D	D31	LD	APP	MURPHY, NC	W31AN-D prop	11.5
Undesireds:	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	145.0 km
	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	130.0
	W31DH-D	D31	LD	LIC	FRANKLIN, ETC, NC	BLDTT20090615AAP	67.4
	W31DI-D	D31	LD	APP	SPRUCE PINE, NC	BLANK0000129695	194.3
	WBXX-TV	D31	DT	LIC	CROSSVILLE, TN	BLANK0000081641	117.5
	WSB-TV	D32	LD	CP	ATLANTA, GA	BLANK0000054733	130.0
	WEEE-LP	N32+	TX	CP	KNOXVILLE, TN	BPTTL20120508ADS	101.4

Service area	Terrain-limited			IX-free	Percent IX	
5532.9	111,340	3959.8	79,593	3599.9	71,938	9.09
						9.62

Undesired	Total IX	Unique IX	Prcnt Unique IX
WPCH-TV D31 DT LIC	40.9	82	0.53
WSB-TV D31 LD LIC	12.0	0	0.10
W31DH-D D31 LD LIC	21.9	97	0.05
WBXX-TV D31 DT LIC	320.9	7,573	7,476
	303.9		9.39

Channel and Facility Information	Section	Question	Response
	Facility ID	69154	
	State	North Carolina	
	City	MURPHY	
	LPT Channel	31	

Antenna Location Data	Section	Question	Response
	Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	No
		ASR Number	
	Coordinates (NAD83)	Latitude	35° 05' 05.2" N+
		Longitude	084° 00' 58.3" W-
		Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
		Overall Structure Height	36 meters
		Support Structure Height	36 meters
		Ground Elevation (AMSL)	658.4 meters
	Antenna Data	Height of Radiation Center Above Ground Level	33 meters
		Height of Radiation Center Above Mean Sea Level	691.4 meters
		Effective Radiated Power	11.5 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:	ERI
		Model	AL8O-31-E
		Rotation	
		Electrical Beam Tilt	1.75
		Mechanical Beam Tilt	Not Applicable
		toward azimuth	
	Elevation Radiation Pattern	Polarization	Elliptical
		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