

***APPLICATION FOR CONSTRUCTION PERMIT  
DISPLACEMENT***

**W23FE-D – SAVANNAH, GEORGIA  
FACILITY ID: 129370**

**DIGITAL NETWORKS—SOUTHEAST, LLC**

**MAY 2021**

## **APPLICATION FOR CONSTRUCTION PERMIT - DISPLACEMENT**

The following engineering statement and attached exhibits have been prepared for **Digital Networks-Southeast, LLC** ("Southeast"), licensee of digital low power television station W23FE-D at Savannah, Georgia, and are in support of their application for construction permit for displacement of that facility.<sup>1</sup> The current license for W23FE-D is assigned LMS File No. 0000129913. This application seeks displacement relief, and a physical relocation of the transmitter facility in accordance with Rules and Policies of the Commission.

The licensed facility is authorized to operate on television channel 23 with a maximum effective radiated power of 2 kW at a center of radiation of 77.3 meters above mean sea level, 30 meters above ground, using a composite directional antenna. The proposed facility would operate on television channel 31 with a maximum effective radiated power of 2 kW at a center of radiation of 35.8 meters above mean sea level, or 30 meters above ground. The antenna proposed for use by the displaced facility is a composite array consisting of two Kathrein-Scala PR-TV antennas with equal power division between them. One element is to be oriented at 90 degrees true, and the other at 275 degrees true.

The map in Exhibit E-1 provides a comparison between the licensed and proposed contours. As is demonstrated, the proposed 51 dBu F(50,90) service contour overlaps the licensed 51 dBu F(50,90) service contours. Additionally, the proposed site is located within 30 miles of the licensed transmitter site.

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<sup>1</sup> The Facility ID for W23FE-D at Savannah, Georgia is 129370.

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Exhibit E-2 is the output from *TVStudy* for the proposed facility. This study demonstrates that there are no outgoing interference check failures to any proposed or authorized facility on the proposed channel of operation, channel 31. This study was performed at a cell size resolution of 1.0 kilometer, and a profile spacing increment of 1.0 kilometer.

Displacement to channel 31 is being sought because of the issuance of a construction permit to the licensee of WTOC-TV at Savannah, Georgia.<sup>2</sup> That station is licensed to operate on channel 11 under FCC File No. BLCDT-20090622ABP. A construction permit to change the channel of operation to 23 has been issued by the Commission under LMS File No. 0000127532. The licensed site for W23FE-D is located within the noise-limited service contour of WTOC-TV. This location would imply bi-directional interference, thereby justifying the displacement request.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. The proposed antenna would be mounted to an existing tower that is registered with the Commission. The addition of the antenna to this tower would not increase the already existing environmental impact present from the tower.

In addition, the proposed facility would not result in human exposure at ground level to radiofrequency radiation in excess of the Commission's safety standards. Using the equations in Supplement A of *OET Bulletin 65*, the calculated worst-case power density at ground level assuming a downward radiation relative field of 0.3 is  $7.67 \mu\text{W}/\text{cm}^2$ . This value is substantially below the upper limit of the uncontrolled environment condition. Southeast certifies it will coordinate with all other users of the site to ensure that workers and other personnel are not

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<sup>2</sup> The Facility ID for WTOC-TV at Savannah, Georgia is 590.

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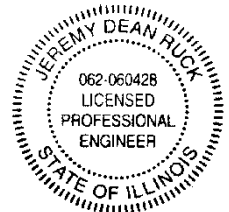
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exposed to levels of radiofrequency radiation in excess of the applicable safety standards.

Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The proposed facility complies with the provisions of Section 74.709 of the Commission's Rules. No land mobile protection issues have been identified based on the tables in that section of the rules, or on the output of *TVStudy*. The proposed facility also complies with Sections 74.793(e)-(h) and 74.793(h) of the Commission's Rules. The proposed facility is not located within the vicinity of the Table Mountain receiving zone. Additionally, the proposed facility is located at a large distance from both the Powder Springs, Georgia monitoring station, and the West Virginia quiet zone area.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2021

Jeremy D. Ruck, PE  
May 31, 2021

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5.31.2021

**W23FE-D**

0000129913

Latitude: 32-09-03.40 N

Longitude: 081-44-52.10 W

ERP: 2.00 kW

Channel: 23

Frequency: 527.0 MHz

AMSL Height: 77.4 m

Horiz. Pattern: Directional

Prop Model: FCC Contour

**W23FE-D.X**

PROPOSED

Latitude: 32-04-07 N

Longitude: 081-21-23 W

ERP: 2.00 kW

Channel: 31

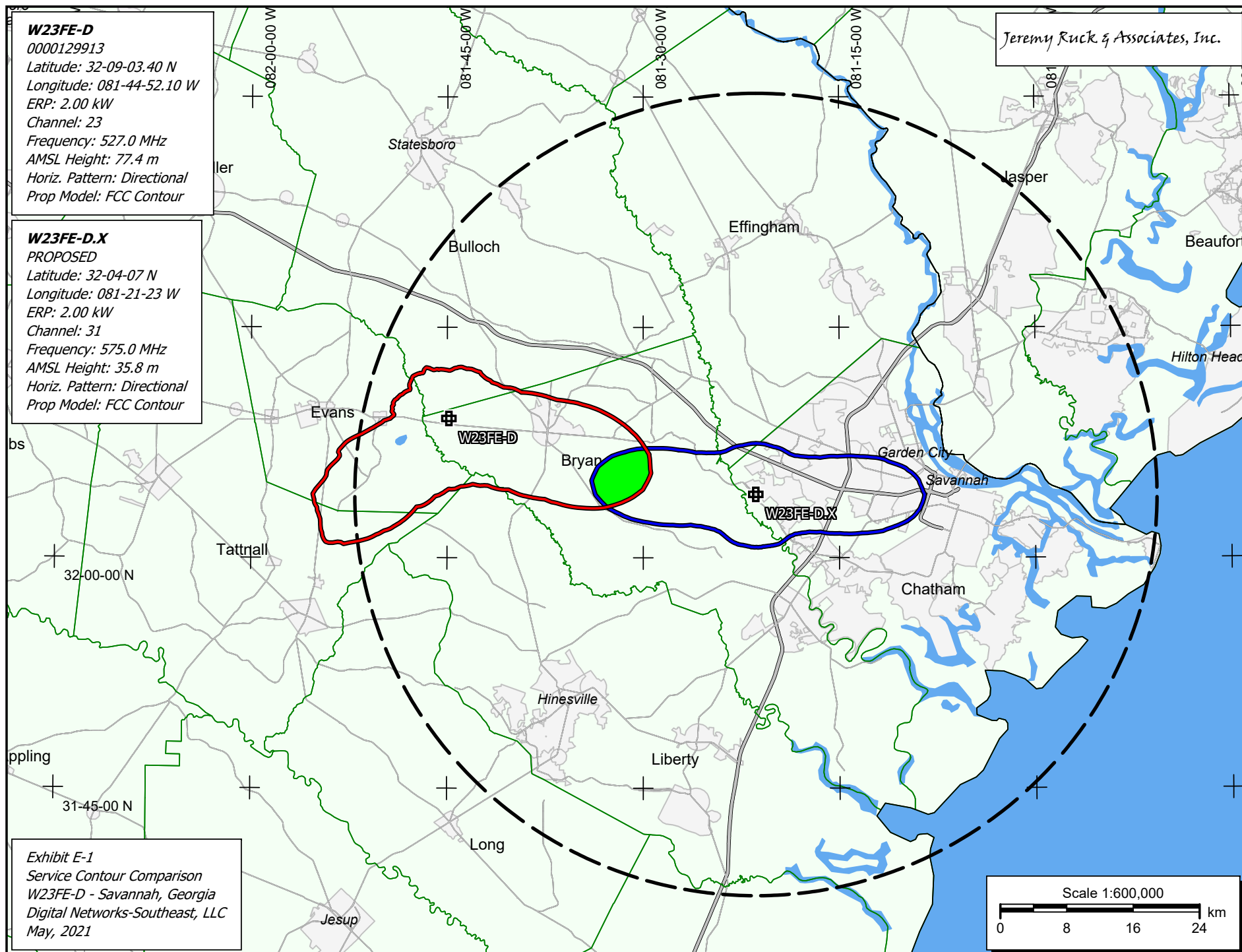
Frequency: 575.0 MHz

AMSL Height: 35.8 m

Horiz. Pattern: Directional

Prop Model: FCC Contour

Jeremy Ruck &amp; Associates, Inc.

**Exhibit E-1**

Service Contour Comparison

W23FE-D - Savannah, Georgia

Digital Networks-Southeast, LLC

May, 2021

Scale 1:600,000

0 8 16 24 km

## Exhibit E-2 - TVStudy Interference Study

tvstudy v2.2.5 (4uoc83)

Database: 127.0.0.1, Study: W23FE CH 31 ASRN 1013906 35.8 m AMSL 2 kW ERP PR-TV x2 1@90 1@275, Model: Longley-Rice  
Start: 2021.05.31 14:52:48

Study created: 2021.05.31 14:52:48

Study build station data: LMS TV 2021-05-29

Proposal: W23FE-D D31 LD LIC Savannah, GA  
File number: BLANK0000129913  
Facility ID: 129370  
Station data: User record  
Record ID: 327  
Country: U.S.  
Zone: II

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	W30EE-D	D30	LD	LIC	JACKSONVILLE, FL	BLANK0000090922	195.8 km
No	WAGT-CD	D30	DC	LIC	AUGUSTA, GA	BLANK0000063630	155.2
No	WMGT-TV	D30	DT	LIC	MACON, GA	BLANK0000075816	220.6
No	WLOW-LD	D30	LD	CP	Charleston, SC	BLANK0000130090	163.4
No	WLOW-LD	D30	LD	LIC	Charleston, SC	BLANK0000118486	131.5
No	W30CV-D	D30	DC	CP	HILTON HEAD ISLAND, SC	BLANK0000127486	50.5
No	W30CV-D	D30	DC	LIC	HILTON HEAD ISLAND, SC	BLDTL20110110AAR	56.7
No	WODH-LD	D31	LD	LIC	Jacksonville, FL	BLANK0000108060	200.2
No	K31PL-D	D31	LD	CP	MADISON, FL	BNPDTL20090825AHL	277.8
No	WOGX	D31	DT	LIC	OCALA, FL	BLCDT20020730ABS	315.1
No	WTMO-CD	D31	DC	LIC	ORLANDO, FL	BLDTA20110815ACQ	385.0
No	W31DS-D	D31	LD	CP	ASHBURN, GA	BNPDTL20100510ABE	220.4
No	WPCH-TV	D31	DT	LIC	ATLANTA, GA	BLANK0000081575	338.8
No	WSB-TV	D31	LD	LIC	ATLANTA, GA	BLCDT20100429ADZ	306.6
No	W31EU-D	D31	LD	CP	COLUMBUS, GA	BLANK0000071968	374.5
No	W31FD-D	D31	LD	CP	Soperton, GA	BLANK0000145822	104.8
No	WSWG	D31	DT	LIC	VALDOSTA, GA	BLANK0000063722	214.7
No	WMUB-LD	D31	LD	LIC	WARNER ROBINS, GA	BLANK0000135124	220.7
No	WDKT-LD	N31-	TX	LIC	HENDERSONVILLE, NC	BLTTL19940525JJ	366.7
No	WGHP	D31	DT	LIC	HIGH POINT, NC	BLANK0000116302	439.0
No	W31ER-D	D31	LD	CP	LUMBERTON, NC	BLANK0000071883	360.7
No	W31DR-D	D31	LD	CP	WILMINGTON, NC	BNPDTL20100422AAO	399.9
No	W31EM-D	D31	LD	LIC	MYRTLE BEACH, SC	BLANK0000118241	274.5
No	WJNI-LD	D31	LD	LIC	NORTH CHARLESTON, SC	BLDTL20100916ADG	151.4
No	W31DY-D	D31	LD	LIC	PICKENS, SC	BLANK0000119379	333.9
No	WKTC	D31	DT	LIC	SUMTER, SC	BLANK0000093003	234.2
No	W50CO	D32-	LD	CP	JACKSONVILLE, FL	BLANK0000052065	195.9
No	W44DD-D	D32	LD	CP	VALDOSTA, GA	BLANK0000071821	214.7
Yes	WJWJ-TV	D32	DT	LIC	BEAUFORT, SC	BLANK0000100564	95.5
No	WSCG-LD	N32+	TX	LIC	BEAUFORT, ETC., SC	BLTT19970401JB	68.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D31  
Mask: Full Service  
Latitude: 32 4 7.00 N (NAD83)  
Longitude: 81 21 23.00 W  
Height AMSL: 35.8 m  
HAAT: 27.9 m  
Peak ERP: 2.00 kW  
Antenna: SCA PR-TV x2 Array 1@90 1@275 0.0 deg  
Elev Pattern: Generic

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## Exhibit E-2 - TVStudy Interference Study

50.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.017 kW	23.0 m	6.4 km
45.0	0.023	30.0	6.9
90.0	2.00	31.7	21.0
135.0	0.022	32.2	6.9
180.0	0.017	32.5	6.5
225.0	0.018	30.4	6.5
270.0	1.78	20.2	20.1
315.0	0.032	23.6	7.4

Distance to Canadian border: 1071.9 km

Distance to Mexican border: 1655.5 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 303.3 degrees Distance: 371.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 299.5 degrees Distance: 2313.7 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%

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Interference to BLANK0000100564 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WJWJ-TV	D32	DT	LIC	BEAUFORT, SC	BLANK0000100564	
Undesireds:	W23FE-D	D31	LD	LIC	Savannah, GA	BLANK0000129913	95.5 km
	WAXN-TV	D32	DT	LIC	KANNAPOLIS, NC	BLANK0000146859	283.4
	WMBF-TV	D32	DT	LIC	MYRTLE BEACH, SC	BLCDT20091105AAP	187.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
20264.9		1,037,497		20264.9		1,037,497	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
W23FE-D D31 LD LIC		1.0		0		1.0 0	
WMBF-TV D32 DT LIC		1.0		0 1.0		1.0 0	

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Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W23FE-D	D31	LD	LIC	Savannah, GA	BLANK0000129913	
Undesireds:	W30CV-D	D30	DC	CP	HILTON HEAD ISLAND, SC	BLANK0000127486	50.5 km
Service area		Terrain-limited		IX-free		Percent IX	
380.1		34,730		380.1		34,730 0.00 0.00	

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