

# GRAHAM BROCK, INC.

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BROADCAST TECHNICAL CONSULTANTS

**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

**CUMULUS LICENSING LLC**

**WNCV FM RADIO STATION**

**CH 227C2 - 93.3 MHZ - 9.5 KW**

**SHALIMAR, FLORIDA**

**April 2018**

**TECHNICAL EXHIBIT**

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**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**  
**CUMULUS LICENSING LLC**  
**WNCV FM RADIO STATION**  
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**SHALIMAR, FLORIDA**  
**April 2018**

**TECHNICAL STATEMENT**

This Technical Statement was prepared on behalf of Cumulus Licensing LLC ("Cumulus"), licensee of FM station WNCV, Channel 227C2, Shalimar, Florida. Cumulus herein requests Special Temporary Authority ("STA") to operate WNCV at another location at a reduced height and power of 9.5 kilowatts (9,500 watts). This STA is necessary due to the pending work to be done on the WNCV licensed antenna system and tower. At this power, the predicted 60 dBu signal of this STA will not extend past the WNCV licensed 60 dBu contour, as shown in Exhibit A. Cumulus proposes to mount the Dielectric four bay full wavelength antenna mounted 68.6 meters (225 feet) above ground level on an existing tower (Antenna Structure Registration Number 1041157) to maintain service to Shalimar.

It is proposed to utilize a Dielectric DCR-L four bay, full wavelength spaced antenna, (FCC Type 1) for the WNCV STA. Using the FCC's Program FM Model, an RF exposure level of 0.0842 mW/cm<sup>2</sup> is predicted at the base of the tower, as shown in Exhibit B1.<sup>1</sup> This represents 8.4% of the controlled limit of 1 mW/cm<sup>2</sup> and 42.1% of the controlled environment limit of 0.2 mW/cm<sup>2</sup>.

WYZB, Channel 288C3, Mary Esther, Florida is co-located with this proposed STA operation operates with 25.0 kilowatts of power. The WYZB antenna is a Shively 6810-4, FCC

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1) This level is predicted to fall 12 meters from the base of the tower and is considered worst case.

Type 1, four bay full wavelength spaced antenna. Using the FCC's Program FM Model, an RF exposure level of 0.1132 mW/cm<sup>2</sup> is predicted at the base of the tower, as shown in Exhibit B2.<sup>2</sup> This represents 11.3% of the controlled limit of 1 mW/cm<sup>2</sup> and 56.6% of the controlled environment limit of 0.2 mW/cm<sup>2</sup>.

Adding the contributions of the proposed WNCV STA antenna and WYZB, a total of 19.7% of the controlled environment RF level and 98.7% of the uncontrolled environment RF level is delivered at and around the tower base. Since this level for controlled and uncontrolled environments is less than the limit defined by the Commission in §1.1307(b)(3)(I) of the Commission's rules, the proposed WNCV STA antenna system facility is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, Cumulus will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Cumulus will reduce the power of the facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines

The foregoing was prepared on behalf Cumulus Licensing LLC by Graham Brock, Inc., its Technical Consultants. All information contained herein was extracted from the Commission's CDBS database and is true and accurate to the best of our belief and knowledge. We assume no liability for omissions or errors in this source.

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2) This level is predicted to fall 16.8 meters from the base of the tower and is considered worst case.

WNCV - Shalimar, FL - BLH20060802AYR  
Latitude: 30-24-38 N - Longitude: 086-37-22 W  
Channel: 227 - Frequency: 93.3 MHz  
ERP: 50.00 kW - AMSL Height: 148.0 m

WNCV STA - Shalimar, FL - STA  
Latitude: 30-24-41.30 N - Longitude: 086-37-13.20 W  
Channel: 227 - Frequency: 93.3 MHz  
ERP: 9.50 kW - AMSL Height: 72.6

GRAHAM BROCK, INC.  
BROADCAST TECHNICAL CONSULTANTS

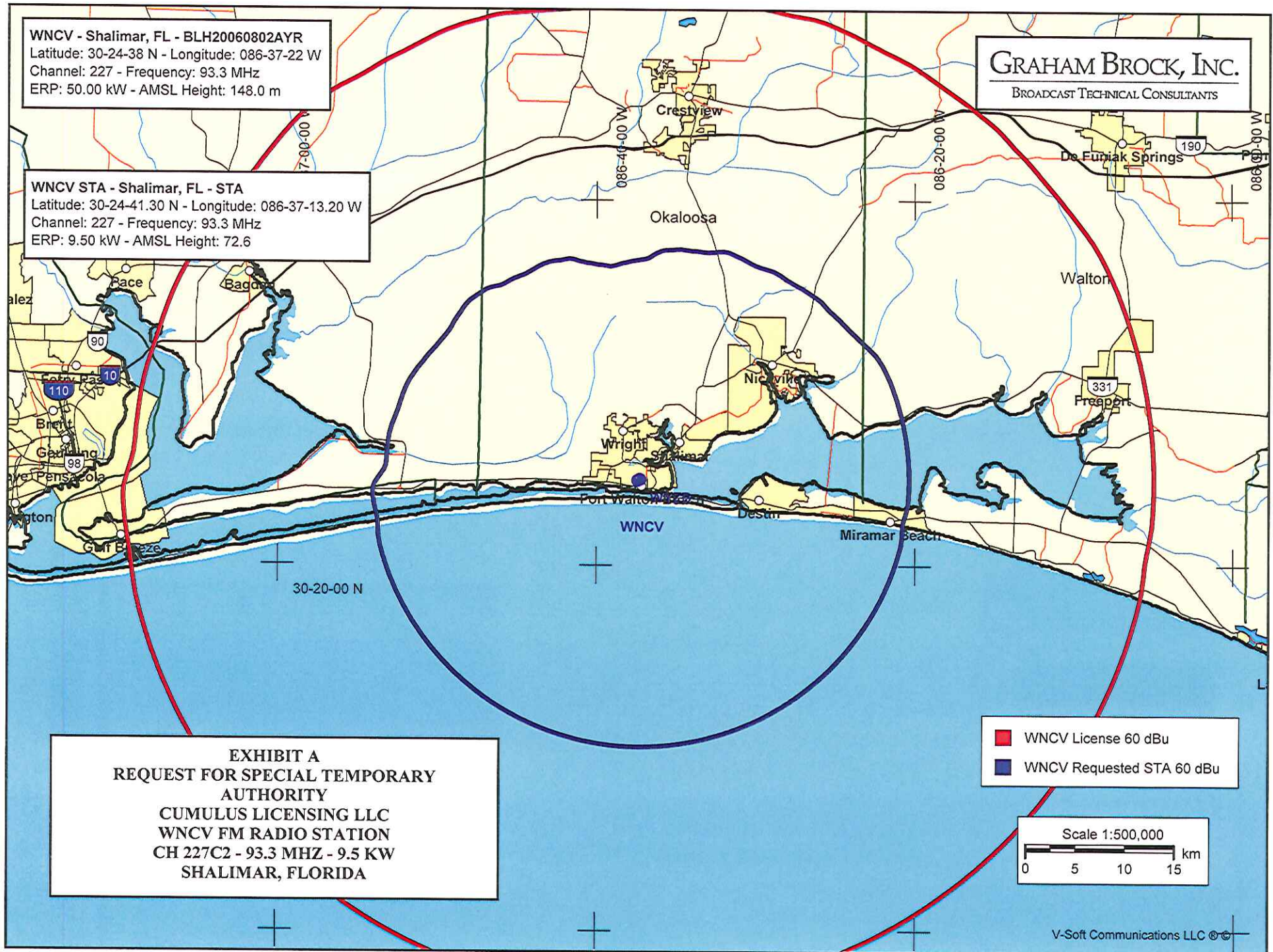
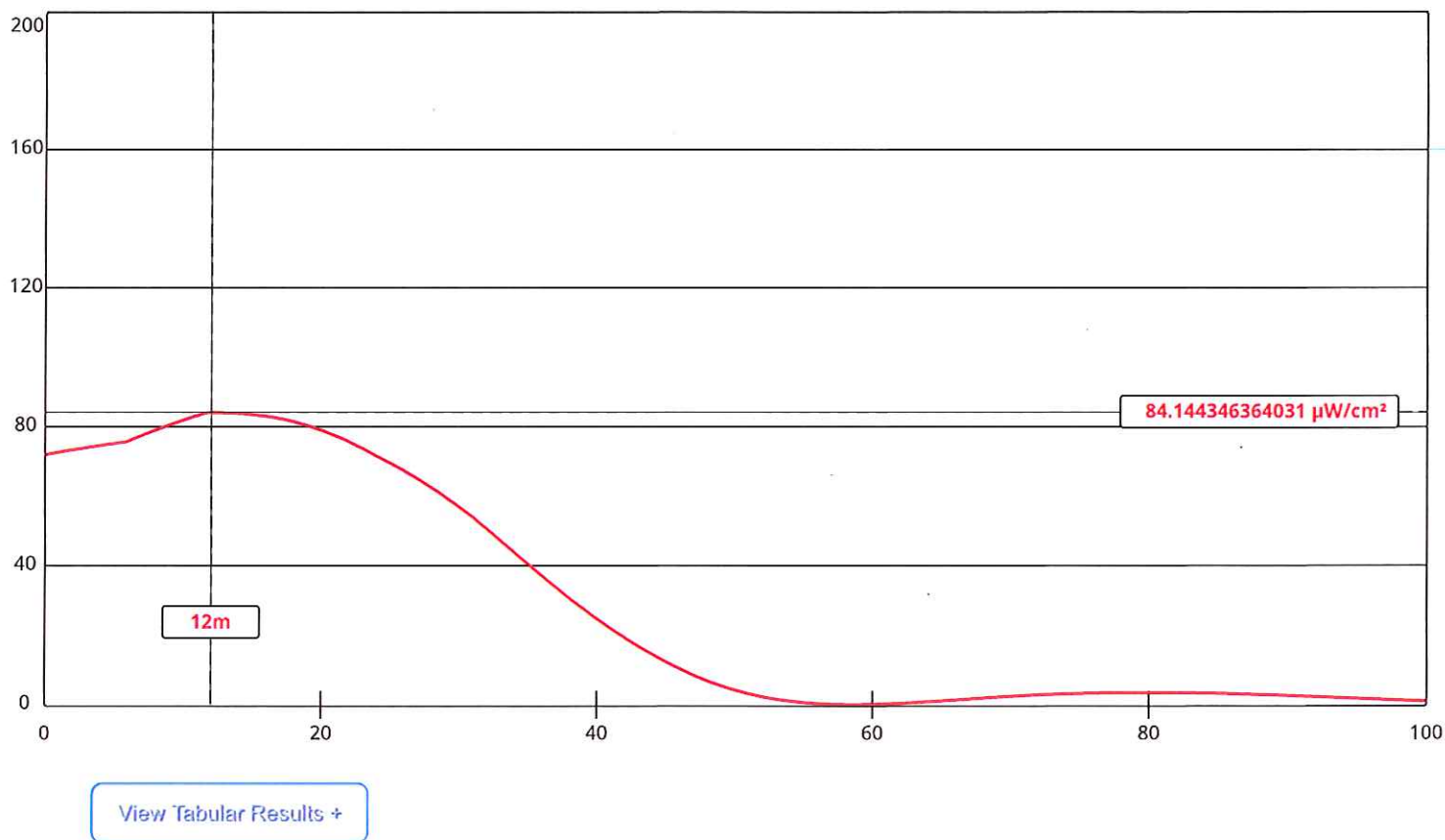


EXHIBIT A  
REQUEST FOR SPECIAL TEMPORARY  
AUTHORITY  
CUMULUS LICENSING LLC  
WNCV FM RADIO STATION  
CH 227C2 - 93.3 MHZ - 9.5 KW  
SHALIMAR, FLORIDA

# FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA](#)

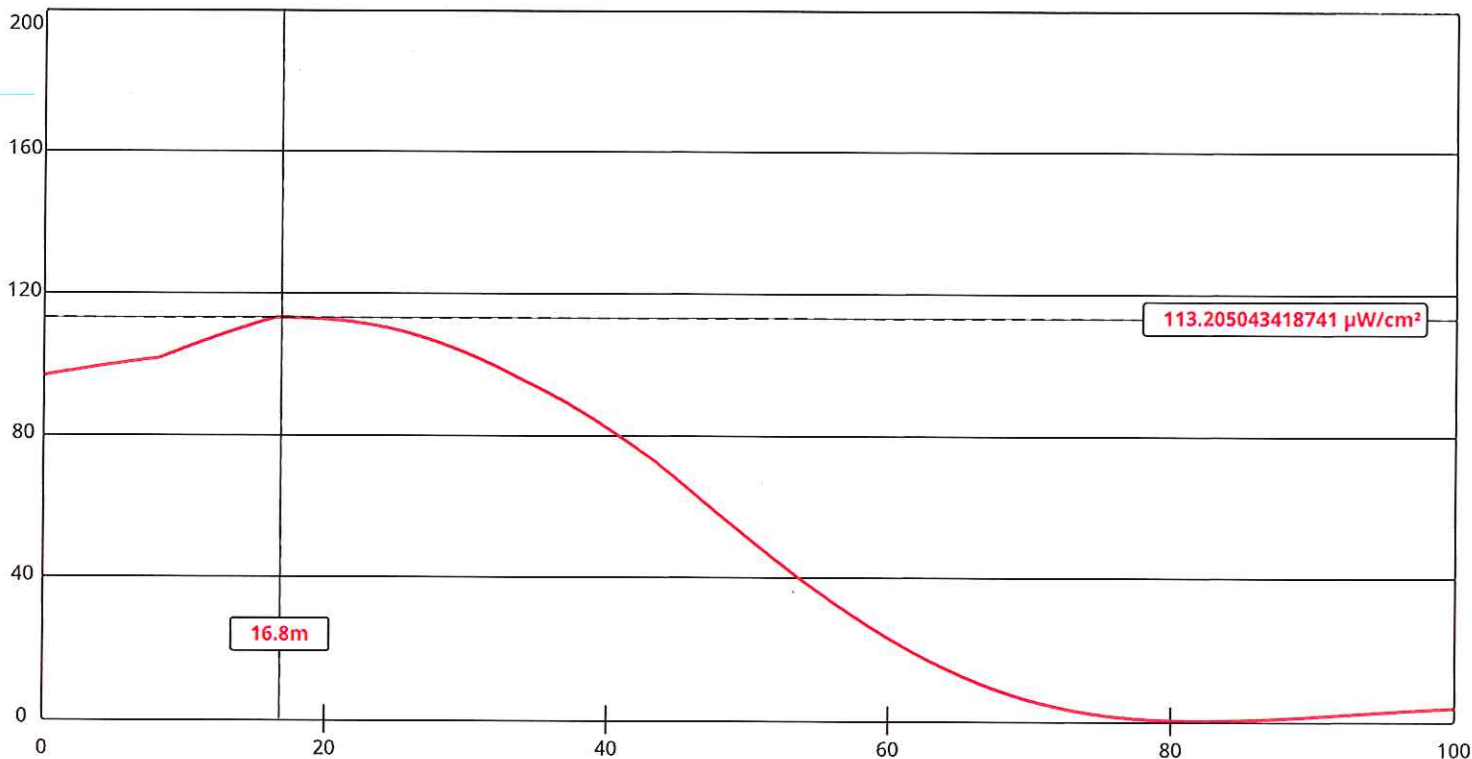


Channel Selection	Channel 227 (93.3 MHz) ▼	
<a href="#">Antenna Type</a> ▼	EPA Type 1: Ring-and-Stub or "Other" ▼	
Height (m)	<input type="text" value="68.6"/>	Distance (m) <input type="text" value="100"/>
ERP-H (W)	<input type="text" value="9500"/>	ERP-V (W) <input type="text" value="9500"/>
Num of Elements	<input type="text" value="4"/>	Element Spacing ( $\lambda$ ) <input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>

**EXHIBIT B1**  
**REQUEST FOR SPECIAL TEMPORARY AUTHORITY**  
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**WNCV FM RADIO STATION**  
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**SHALIMAR, FLORIDA**  
**April 2018**

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[View Tabular Results +](#)

Channel Selection

[Antenna Type +](#)

Height (m)

ERP-H (W)

Num of Elements

Num of Points

Channel 288 (105.5 MHz) ▼

EPA Type 1: Ring-and-Stub or "Other" ▼

95

Distance (m)

25000

ERP-V (W)

4

Element Spacing (λ)

500

100

25000

1

Apply

**EXHIBIT B2**  
**REQUEST FOR SPECIAL TEMPORARY**  
**AUTHORITY**  
**CUMULUS LICENSING LLC**  
**WNCV FM RADIO STATION**  
**CH 227C2 - 93.3 MHz - 9.5 KW**  
**SHALIMAR, FLORIDA**

**AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT**

*State of Georgia    )*  
*St. Simons Island    ) ss:*  
*County of Glynn    )*

**R. STUART GRAHAM**, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Cumulus Licensing LLC to prepare the attached Technical Exhibit.

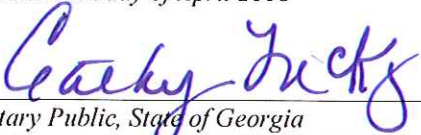
His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979.

The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

*This the 18th day of April 2018.*

  
\_\_\_\_\_  
R. Stuart Graham  
*Affiant*

*Sworn to and subscribed before me  
this the 18th day of April 2018*

  
\_\_\_\_\_  
*Notary Public, State of Georgia*  
*My Commission Expires: March 12, 2019*