

## **ENGINEERING EXHIBIT**

### **Request for Special Temporary Authorization** prepared for

#### **Bluestone License Holdings Inc.**

KCFW-TV Kalispell, MT

Facility ID 18079

Ch. 9 17 kW 850 m

*Bluestone License Holdings Inc.* (“*Bluestone*”) is the licensee of KCFW-TV, Facility ID 18079, Kalispell, MT. KCFW-TV is licensed to operate on Channel 9 with an effective radiated power (“ERP”) of 2.5 kW, nondirectional. This statement supports *Bluestone’s* request for Special Temporary Authority (“STA”) to increase KCFW-TV’s ERP to 17 kW. A Construction Permit (BMPCDT-20080613ABC), which expired on October 29, 2012, previously authorized KCFW-TV to operate with the 17 kW ERP facilities specified herein.

The proposed STA would allow KCFW-TV to operate with its licensed antenna at 17 kW ERP in order to provide better reception by viewers and Multichannel Video Programming Distributor headend facilities.

The proposed 17 kW ERP power level can be implemented simply by raising the transmitter’s output power. The existing transmitter has capacity to accomplish the power increase upon FCC grant of the STA. The current 0.41 kW transmitter power output will be raised to 2.76 kW.

The proposed 17 kW ERP complies with the §73.622(f) power limit for 850 m HAAT. A coverage contour comparison map is supplied as Figure 1, showing the licensed and proposed noise limited service contour (“NLSC”).

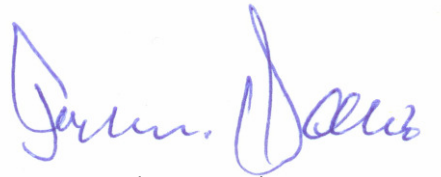
The proposed facility expands the KCFW-TV NLSC contour beyond the technical parameters specified in Appendix B of the Seventh Report and Order in MB Docket 87-268. A detailed interference study per OET Bulletin 69 shows that the proposal does not cause any interference to any full service or Class A television station. The interference study output report is provided as Table 1. Therefore, the proposed STA facility complies with the 0.5 percent interference limit of §73.616(e).

The site is located 100 km from the U.S. – Canada border, within the international coordination zone. However, further international coordination should not be necessary as the proposed facility parameters match those which have previously been authorized for KCFW-TV (BMPCDT-20080613ABC, 17 kW ERP / 850 m HAAT).

Regarding RF exposure, calculations per OET Bulletin Number 65 considering 25 percent antenna relative field in downward elevations show that the signal density near the tower at two meters above ground level attributable to the proposed facility is  $8.4 \mu\text{W}/\text{cm}^2$ , which is 4.2 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 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.

### **Certification**

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.

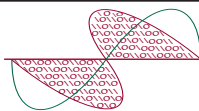


Joseph M. Davis, P.E.  
June 12, 2014

**Chesapeake RF Consultants, LLC**  
207 Old Dominion Road  
Yorktown, VA 23692  
703-650-9600

### List of Attachments

Figure 1	Coverage Contour Comparison
Table 1	OET Bulletin 69 Interference Study

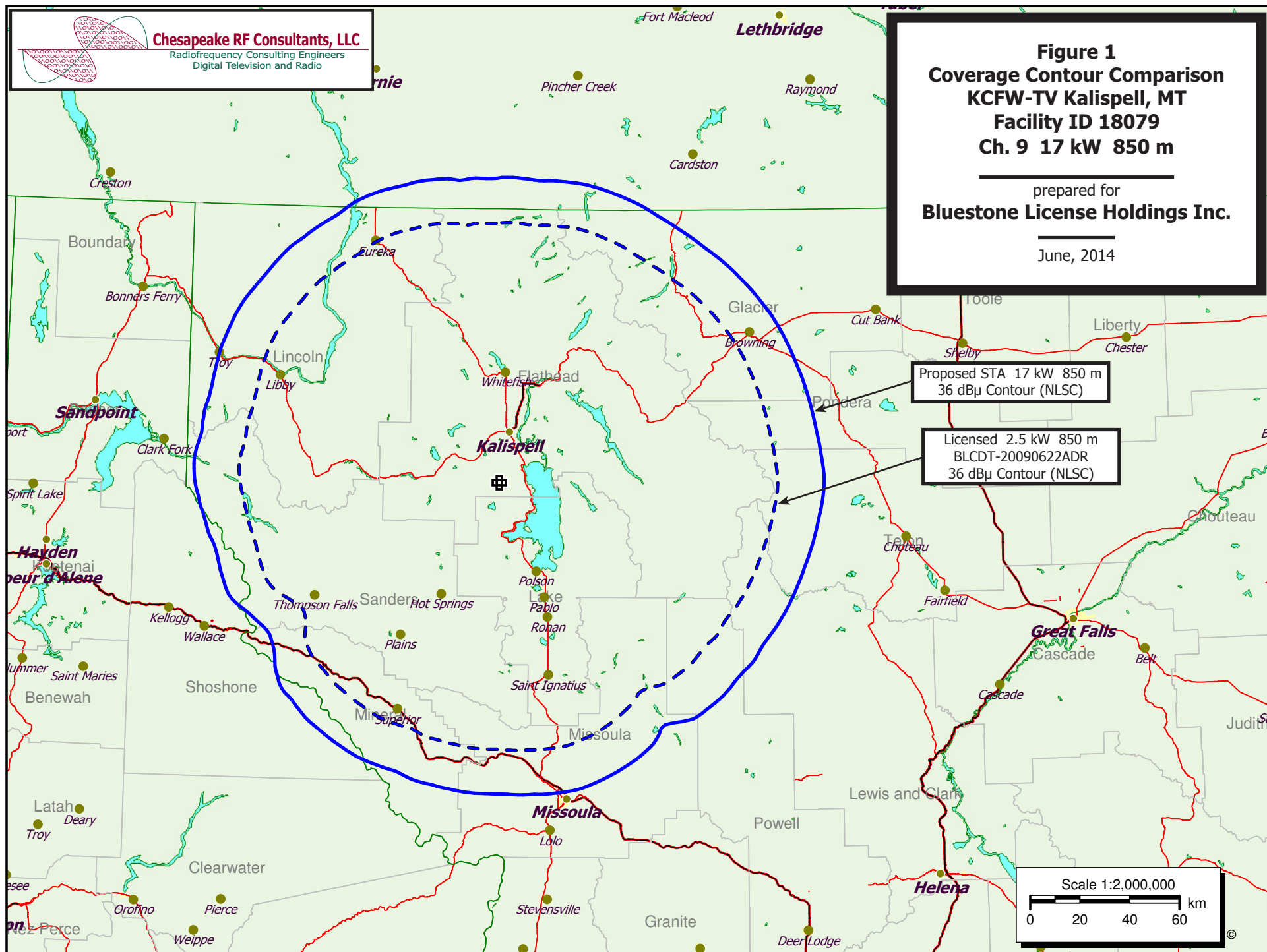


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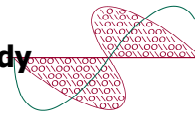
**Figure 1**  
**Coverage Contour Comparison**  
**KCFW-TV Kalispell, MT**  
**Facility ID 18079**  
**Ch. 9 17 kW 850 m**

prepared for  
**Bluestone License Holdings Inc.**

June, 2014



**Table 1 KCFW-TV OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 1 of 2)



**Chesapeake RF Consultants, LLC**  
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TW Census data selected 2000  
Data Base Selected  
/space/software/cdbb/pt\_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-12-2014 Time: 14:18:58

Record Selected for Analysis

KCFW-TV USERRECORD-01 KALISPELL MT US  
Channel 09 ERP 17. kW HAAT 847. m RCAMSL 02103 m  
Latitude 048-00-48 Longitude 0114-21-55  
Status APP Zone 2 Border Site number: 01

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) meets maximum height/power limits

Site number	1			
Azimuth	ERP	HAAT	36.0 dBu F(50,90)	
(Deg)	(kW)	(m)	(km)	
0.0	17.000	728.8	121.9	
45.0	16.868	938.6	126.1	
90.0	16.755	1127.9	130.4	
135.0	16.961	790.6	123.3	
180.0	16.911	869.8	124.7	
225.0	17.000	675.2	120.2	
270.0	17.000	723.4	121.7	
315.0	16.877	924.1	125.7	

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap  
to Class A stations from site # 01

Class A Evaluation Complete

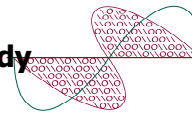
Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

**Table 1 KCFW-TV OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 2 of 2)



**Chesapeake RF Consultants, LLC**  
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Proposed facility is within the Canadian coordination distance  
Distance to border = 109.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
09	KCFW-TV	KALISPELL MT	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KCFW-TV	KALISPELL MT	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 1  
Before Analysis

Results for: 9A MT KALISPELL USERRECORD01 APP  
HAAT 847.0 m, ATV ERP 17.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	153731	48536.6
not affected by terrain losses	119116	38193.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

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