

## ENGINEERING EXHIBIT

### Application for Digital Flash-Cut Construction Permit

prepared for

#### **Caballero Acquisition Inc.**

KMUM-CA Sacramento, CA

Facility ID 18736

Ch. 15 (digital) 15 kW

*Caballero Acquisition Inc.* (“CAI”) is the licensee of Class A Television station KMUM-CA, analog Channel 15, Sacramento, CA, Facility ID 18736 (BLTTA-20010625AAO). CAI herein proposes herein to flash-cut to digital operation on Channel 15. The instant application is intended to be filed on August 4, 2008 in response to the FCC’s lifting of the August 3, 2004 “freeze” concerning displacement channel relief and expansion in service area.<sup>1</sup>

The proposed facility will operate on Channel 15 using a “stringent” out of channel emission mask. **Figure 1** depicts the 51 dB $\mu$  coverage contours of the proposed facility, as well as that of the KMUM-CA licensed analog Channel 15 facility. The use of the same transmitter site and the service area overlap shown demonstrates compliance with §73.3572 for a minor change.

The proposed antenna is a PSI model PSILP8BB-15-CP and will employ circular polarization. The proposed antenna system will be side-mounted on an existing antenna support structure, having FCC Antenna Structure Registration number 1021056, in place of the licensed KMUM-CA antenna. No change in overall structure height is proposed.

A detailed interference study per OET Bulletin 69<sup>2</sup> shows that the proposal complies with the Commission’s interference protection requirements toward all NTSC, DTV, television translator,

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<sup>1</sup>Public Notice “*Commission Lifts the Freeze On the Filing of Certain Class A Television Applications Effective August 4, 2008*” DA 08-1644, released July 14, 2008.

<sup>2</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A cell size of 1 km was employed. Comparisons of various results of this

LPTV, and Class A stations. The results, summarized in **Table 1**, show that any new interference does not exceed the Commission's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations).

The nearest FCC monitoring station is 111.8 km distant at Livermore, CA. This exceeds the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no AM stations within 3.2 kilometers of the site, based on information contained within the Commission's database. The site location is beyond the border areas requiring international coordination.

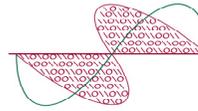
### **Human Exposure to Radiofrequency Electromagnetic Field (Environmental)**

The proposed transmitting antenna will be installed on an existing antenna support structure. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 20 percent antenna relative field in downward elevations, the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $2.1 \mu\text{W}/\text{cm}^2$ , which is 0.7 percent of the general population/uncontrolled maximum permitted 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.

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computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.



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.

### **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.  
July 31, 2008

**Chesapeake RF Consultants, LLC**  
11993 Kahns Road  
Manassas, VA 20112  
703-650-9600

### List of Attachments

Figure 1 Coverage Contour Comparison  
Table 1 Interference Analysis Results Summary  
Form 301-CA Saved Version of Engineering Sections from FCC Form at Time of Upload

*This material was entered July 31, 2008 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.*

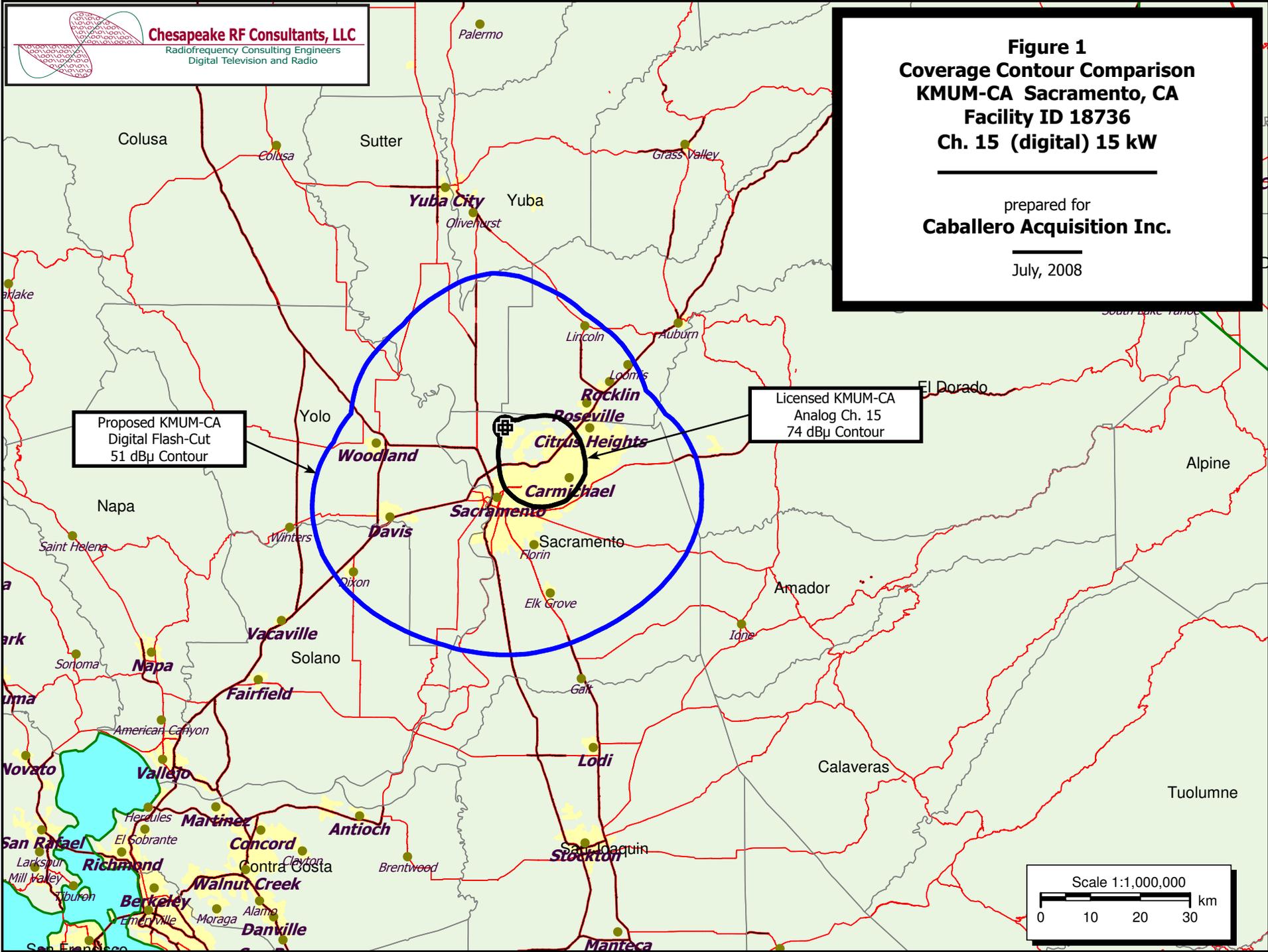
**Figure 1**  
**Coverage Contour Comparison**  
**KMUM-CA Sacramento, CA**  
**Facility ID 18736**  
**Ch. 15 (digital) 15 kW**

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prepared for  
**Caballero Acquisition Inc.**

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July, 2008



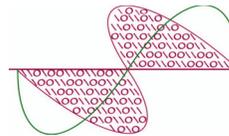
**Table 1**

**Interference Analysis Results Summary**

prepared for

**Caballero Acquisition Inc.**

KMUM-CA Sacramento, CA

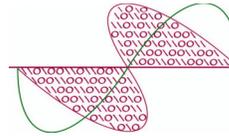


**Chesapeake RF Consultants, LLC**

Radiofrequency Consulting Engineers  
Digital Television and Radio

Ch.	Call	City/State	Dist	Status	Application Ref. No.	---Population (1990 Census)---	
			(km)			Baseline	New Interference
14	KAZV-LP	MODESTO CA	136.9	LIC	BLTTL-19960812IA	---	none
14	KAZV-LP	MODESTO CA	136.9	CP	BDFCDTA-20060711ABQ	---	none
14	KMMK-LP	SACRAMENTO CA	54.5	LIC	BLTTL-20020423ABD	587,295	0 (0.00%)
14	KMMK-LP	SACRAMENTO CA	54.5	CP	BDFCDTL-20060331BAP	724,360	13,090 (1.81%)
14	KDTV	SAN FRANCISCO CA	138.7	LIC	BLCT-19990625KG	6,286,860	0 (0.00%)
14	K14MW-D	SANTA ROSA CA	105.3	CP MOD	BMPDPTT-20080220AAG	---	none
14	K14AJ	INCLINE VILLAGE NV	147.1	LIC	BLTTL-19831206IC	---	none
15	KBSV	CERES CA	136.9	APP	BMPEDT-20080716AGS	362,166	667 (0.18%)
15	KBSV-DT	CERES CA	132.4	PLN	DTVPLN-DTVP0159	---	none
15	KBSV	CERES CA	136.9	CP MOD	BMPEDT-20060622ABE	362,166	259 (0.07%)
15	K15HV-D	CHICO CA	140.5	CP MOD	BMPDTL-20071025ACV	---	none
15	K15HV-D	CHICO CA	116.3	CP	BDISTTL-20061208AAE	---	none
15	K15DP	CROWLEY LAKE-LONG VA CA	269.8	LIC	BLTTL-19940818IC	---	none
15	KFWU-DT	FORT BRAGG CA	211.7	PLN	DTVPLN-DTVP0160	---	none
15	K15ET	FRESNO CA	181.6	LIC	BLTT-19980710JA	---	none
15	K15FJ	LAKEPORT CA	116.2	LIC	BLTTL-20011115ACR	---	none
15	K15CX	OROVILLE CA	84.4	LIC	BLTTL-20020613AAH	---	none
15	K15CO	PORTERVILLE CA	355.7	CP	BDFCDTT-20060329AKF	---	none
15	K15CO	PORTERVILLE CA	355.7	LIC	BLTT-19891122JU	---	none
15	NEW	RED BLUFF CA	222.5	APP	BSFDTL-20060630AXO	---	none
15	NEW	REDDING CA	225.2	APP	BSFDTL-20060630CCL	---	none
15	K15CU	SALINAS CA	216.9	LIC	BLTTL-20001122AAH	---	none
15	KSBY-DT	SAN LUIS OBISPO CA	379.1	PLN	DTVPLN-DTVP0161	---	none
15	KSBY	SAN LUIS OBISPO CA	379.1	CP	BPCDT-19991012AAY	---	none
15	K15HO-D	YREKA CA	349.4	CP	BDCCDTT-20061030AHZ	---	none
15	KNPB	CARSON CITY NV	157.8	STA	BEXP-20080527AEZ	---	none
15	KNPB-DT	RENO NV	174.3	PLN	DTVPLN-DTVP0182	---	none
15	KNPB	RENO NV	174.3	LIC	BLEDT-20031023AAU	---	none
15	K15HU-D	LAKEVIEW OR	400.3	CP MOD	BMPDPTT-20080603AAD	---	none
16	K16CX	GRASS VALLEY CA	57.4	LIC	BLTTL-19960403IB	---	none
16	K16GM	YERINGTON NV	195.7	LIC	BLTT-20050506ACP	---	none
17	KXVU-LP	CHICO CA	141.0	LIC	BLTTL-20060303AAJ	---	none
17	KSTV-LP	SACRAMENTO CA	33.5	APP	BDISTTL-20070103AAV	981,194	0 (0.00%)
19	K19FY	CHICO CA	140.9	LIC	BLTT-20060109ABD	---	none
19	KUVS-TV	MODESTO CA	92.6	LIC	BLCT-20011012ABT	---	none

Table 1  
**Interference Analysis Results Summary**  
 (page 2 of 2)



**Chesapeake RF Consultants, LLC**

Radiofrequency Consulting Engineers  
 Digital Television and Radio

<u>Ch.</u>	<u>Call</u>	<u>City/State</u>	<u>Dist</u> <u>(km)</u>	<u>Status</u>	<u>Application Ref. No.</u>	<u>---Population (1990 Census)---</u>	
						<u>Baseline</u>	<u>New Interference</u>
22	KZVU-LP	CHICO CA	140.9	LIC	BLTTL-20000531AEC	---	none
22	KRCB	COTATI CA	103.8	LIC	BLET-20070905AAG	---	none
22	K22FR	SACRAMENTO CA	13.1	LIC	BLTT-20061204ADU	---	none
22	KDTS-LP	STOCKTON CA	97.9	APP	BDISTTL-20061121AKD	---	none
23	KBSV	CERES CA	132.4	LIC	BLET-19960319KE	---	none
23	KEZT-CA	SACRAMENTO CA	15.7	LIC	BLTTL-19970918JA	---	none

**SECTION III PREPARER'S CERTIFICATION**

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature		Date 7/31/2008	
Mailing Address CHESAPEAKE RF CONSULTANTS LLC 11993 KAHNS ROAD			
City MANASSAS		State or Country (if foreign address) VA	Zip Code 20112-
Telephone Number (include area code) 7036509600		E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

**SECTION III - Engineering (Digital)**

**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. All items must be completed. The response "on file" is not acceptable.

**NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.**

**TECH BOX**

1.	Channel Number: 15																																																																																					
2.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 38 Minutes 42 Seconds 28 <input checked="" type="radio"/> North <input type="radio"/> South  Longitude: Degrees 121 Minutes 28 Seconds 32 <input checked="" type="radio"/> West <input type="radio"/> East																																																																																					
3.	Antenna Structure Registration Number: 1021056 <input type="checkbox"/> Not Applicable [Exhibit 8] <input type="checkbox"/> Notification filed with FAA																																																																																					
4.	Antenna Location Site Elevation Above Mean Sea Level:	10.4 meters																																																																																				
5.	Overall Tower Height Above Ground Level:	153.6 meters																																																																																				
6.	Height of Radiation Center Above Ground Level:	129.6 meters																																																																																				
7.	Maximum Effective Radiated Power (ERP):	15 kW																																																																																				
8.	Transmitter Output Power:	2.2 kW																																																																																				
9.	<p>a. Transmitting Antenna: Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under <a href="http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm">CDBS Public Access</a> (http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search. <input type="radio"/> Nondirectional <input type="radio"/> Directional "Off-the-shelf" <input checked="" type="radio"/> Directional composite</p> <p>Manufacturer PSI Model PSILP8BB-15-CP CIRCULARLY POLARIZED</p> <p>b. Electrical Beam Tilt: 1 degrees <input type="checkbox"/> Not Applicable</p> <p>c. Directional Antenna Relative Field Values: <input type="checkbox"/> N/A (Nondirectional or Directional "Off-the-shelf") Rotation (Degrees): 175 <input type="checkbox"/> No Rotation</p> <table border="1"> <thead> <tr> <th>Degrees</th> <th>Value</th> <th>Degrees</th> <th>Value</th> <th>Degrees</th> <th>Value</th> <th>Degrees</th> <th>Value</th> <th>Degrees</th> <th>Value</th> <th>Degrees</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>10</td> <td>0.98</td> <td>20</td> <td>0.95</td> <td>30</td> <td>0.96</td> <td>40</td> <td>0.98</td> <td>50</td> <td>0.97</td> </tr> <tr> <td>60</td> <td>0.89</td> <td>70</td> <td>0.72</td> <td>80</td> <td>0.52</td> <td>90</td> <td>0.33</td> <td>100</td> <td>0.24</td> <td>110</td> <td>0.24</td> </tr> <tr> <td>120</td> <td>0.23</td> <td>130</td> <td>0.21</td> <td>140</td> <td>0.2</td> <td>150</td> <td>0.21</td> <td>160</td> <td>0.22</td> <td>170</td> <td>0.24</td> </tr> <tr> <td>180</td> <td>0.25</td> <td>190</td> <td>0.24</td> <td>200</td> <td>0.22</td> <td>210</td> <td>0.21</td> <td>220</td> <td>0.2</td> <td>230</td> <td>0.21</td> </tr> <tr> <td>240</td> <td>0.23</td> <td>250</td> <td>0.24</td> <td>260</td> <td>0.24</td> <td>270</td> <td>0.33</td> <td>280</td> <td>0.52</td> <td>290</td> <td>0.72</td> </tr> <tr> <td>300</td> <td>0.89</td> <td>310</td> <td>0.97</td> <td>320</td> <td>0.98</td> <td>330</td> <td>0.96</td> <td>340</td> <td>0.95</td> <td>350</td> <td>0.98</td> </tr> </tbody> </table> <p>Additional Azimuths</p>		Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0	1	10	0.98	20	0.95	30	0.96	40	0.98	50	0.97	60	0.89	70	0.72	80	0.52	90	0.33	100	0.24	110	0.24	120	0.23	130	0.21	140	0.2	150	0.21	160	0.22	170	0.24	180	0.25	190	0.24	200	0.22	210	0.21	220	0.2	230	0.21	240	0.23	250	0.24	260	0.24	270	0.33	280	0.52	290	0.72	300	0.89	310	0.97	320	0.98	330	0.96	340	0.95	350	0.98
Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value																																																																											
0	1	10	0.98	20	0.95	30	0.96	40	0.98	50	0.97																																																																											
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[Relative Field Polar Plot](#)

**NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided**

for which a response is provided.	
10. <b>Out-of-channel Emission Mask:</b>	<input type="radio"/> Simple <input checked="" type="radio"/> Stringent
<b>CERTIFICATION</b>	
11. <b>Interference.</b> The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 73.6016, 73.6017, 73.6018, 73.6019, 73.6020, 73.6027 and 74.794(b).	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 9]
12. <b>Environmental Protection Act.</b> The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance, an <b>Exhibit is required.</b>  By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 10]
13. <b>Channels 52-59.</b> If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:  <input type="checkbox"/> The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.  <input type="checkbox"/> Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.	
<b>PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.</b>	

Any specified rotation has already been applied to the plotted pattern.  
Field strength values shown on a rotated pattern may differ from the listed values because intermediate azimuths are interpolated between entered azimuths.

