

ENGINEERING EXHIBIT

Application for Low Power Television Digital Companion Construction Permit

prepared for

New Moon Communications, LLC

WDON-LP Dothan, AL

Facility ID 191163

Ch. 23 (digital) 15 kW

New Moon Communications, LLC (“*New Moon*”) is the licensee of Low Power Television station WDON-LP, analog Channel 41, Dothan, AL, Facility ID 67925 (BLTT-19930122JE). *New Moon* proposes herein to construct a digital companion facility on Channel 23.

The proposed facility will employ a new antenna system to be side-mounted on an existing tower structure which is associated with FCC Antenna Structure Registration number 1056648. No change to the overall structure height will result from this proposal.

The proposed facility will operate on Channel 23 as digital at 15 kW effective radiated power using a “stringent” out of channel emission mask. The proposed directional antenna is an ERI model ALP12L3-HSMR-23. Figure 1 depicts the coverage contour of the proposed facility as well as that of the WDON-LP licensed analog Channel 41 facility. The service area overlap shown demonstrates compliance with the requirements for a digital companion facility.

Detailed interference study per OET Bulletin 69¹ show that the proposal complies with the Commission’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

¹FCC 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 computer program (run on a Sun Sparc processor) to the Commission’s implementation of OET-69 show excellent correlation.

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) to any facility.

The nearest FCC monitoring station is 340 km distant at Powder Springs, GA. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. There are no authorized AM stations within 3.2 kilometers of the site. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field

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 assuming the worst-case of 100 percent field in downward elevations, the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $2.2 \mu\text{W}/\text{cm}^2$, which is 0.6 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 calculated signal density will be even lower when the antenna's elevation pattern is considered.

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 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. The proposed transmitting antenna will be side-mounted on an existing antenna support structure which was constructed prior to March 16, 2001. No change in structure height is proposed.

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.
January 22, 2013

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

List of Attachments

Figure 1	Coverage Contour Comparison
Table 1	Interference Analysis Results Summary
Form 346	Saved Version of Engineering Sections from FCC Form at Time of Upload

This material was entered January 22, 2013 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's account number 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.

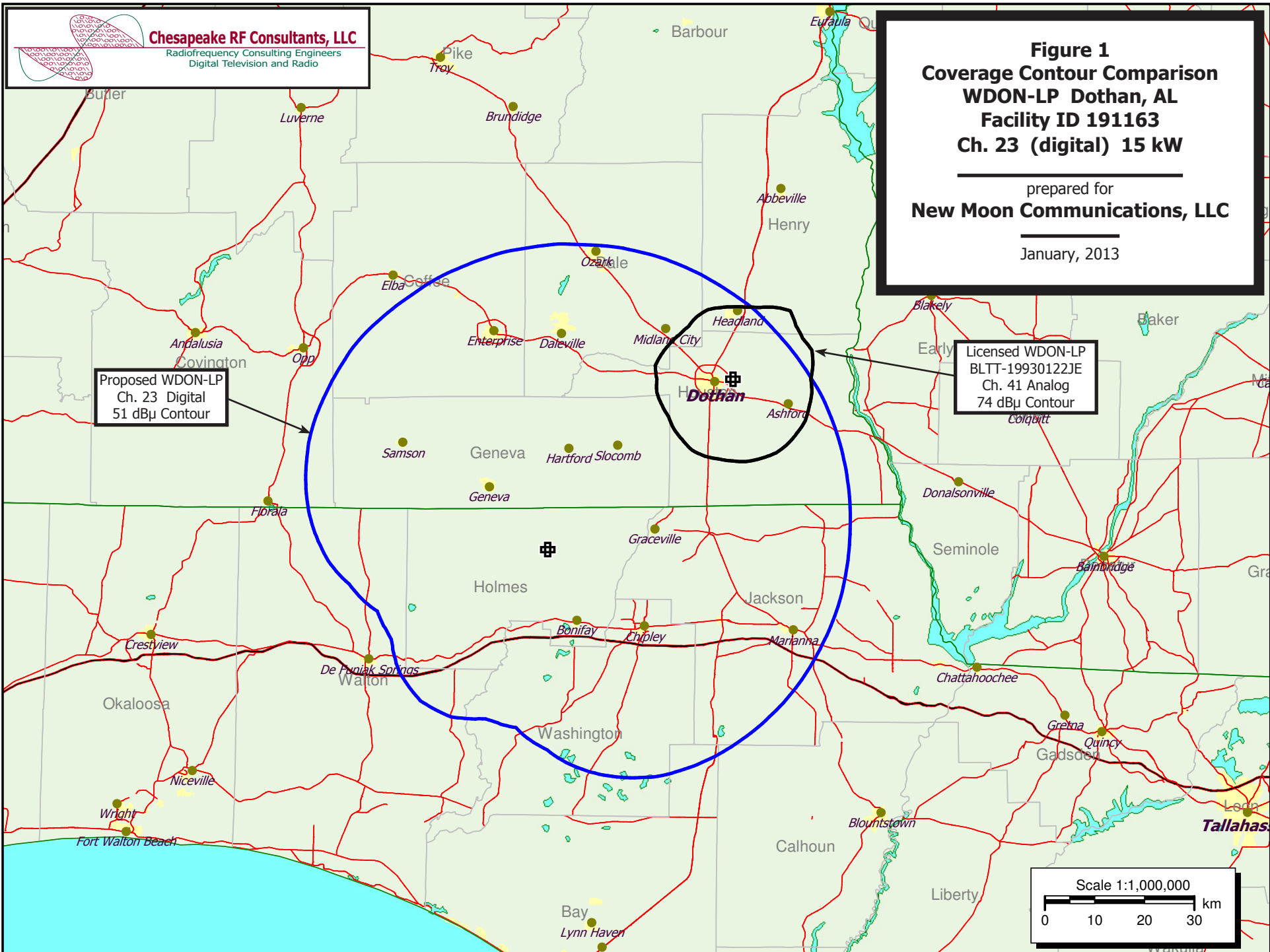


Table 1

Interference Analysis Results Summary

prepared for

New Moon Communications, LLC

WDON-LP Dothan, AL



NEW-LD	USERRECORD-01	DOTHAN	AL US
Channel 23	ERP 15.	kW HAAT 481. m	RCAMSL 00521 m STRINGENT MASK
Latitude 030-55-11	Longitude 0085-44-30		
Dir Antenna Make	usr Model ALP_MR	Beam tilt N	Ref Azimuth 40.

Ch.	Call	City/State	Dist	Status	Application Ref. No.	---Population (2000 Census)---	
			(km)			Baseline	New Interference
22	WBMM	TUSKEGEE AL	129.1	LIC	BLCDT-20090428ABH	531,036	993 (0.19%)
22	WPFN-CA	PANAMA CITY FL	82.0	LIC	BLTTL-19970408JA	---	none
22	W22EG-D	ALBANY GA	169.4	CP	BNPDTL-20100524ABY	---	none
22	W22EA-D	COLUMBUS GA	191.0	CP	BNPDTL-20100423ACH	---	none
23	W23AK	JASPER AL	345.1	LIC	BLTTL-19900102IH	---	none
23	WDPM-DT	MOBILE AL	181.5	CP MOD	BMPCDT-20081110AAA	1,270,786	4,140 (0.33%)
23	NEW	MONTGOMERY AL	161.4	APP	BNPDTL-20090825BZQ	---	none
23	WVUA-CA	TUSCALOOSA AL	299.9	CP MOD	BMPDTA-20120906ACF	---	none
23	W23DG-D	GAINESVILLE FL	347.6	LIC	BLDTL-20111207AAM	---	none
23	WUBF-LP	JACKSONVILLE FL	389.9	APP	BDFCDTL-20090127AEU	---	none
23	W23AQ	LAKE CITY FL	298.6	LIC	BLTT-19931215JE	---	none
23	NEW	MADISON FL	216.2	APP	BNPDTL-20090825AHQ	---	none
23	NEW	PANAMA CITY FL	75.3	APP	BNPDTL-20090825ASZ	138,066	142 (0.10%)
23	W23EF-D	TALLAHASSEE FL	135.1	CP MOD	BMPDTL-20110721ABW	---	none
23	W23DU-D	ALBANY GA	169.4	CP	BNPDTL-20090825CAB	---	none
23	W23EE-D	ASHBURN GA	217.7	CP	BNPDTL-20100510ABC	---	none
23	WGGD-LD	CLEVELAND GA	395.0	APP	BSTA-20081204AFJ	---	none
23	WJSP-TV	COLUMBUS GA	236.2	LIC	BLEDT-20080521AAH	1,163,488	29 (0.00%)
23	W23DT-D	DUBLIN GA	320.6	CP	BNPDTL-20090825AID	---	none
23	NEW	VALDOSTA GA	230.9	APP	BNPDTL-20090825AHJ	---	none
23	NEW	BILOXI MS	298.6	APP	BSFDTT-20060630CRN	---	none
23	WHPM-LD	HATTIESBURG MS	352.0	LIC	BLDTL-20111201MCO	---	none
24	DWGHA-LP	GULF SHORES AL	152.2	APP	BDISTTL-20060331AQV	---	none
24	NEW	MONTGOMERY AL	169.7	APP	BNPDTL-20090825ANN	---	none
24	NEW	MONTGOMERY AL	165.6	APP	BNPDTL-20091026ABE	---	none
24	WWEO-CD	DEFUNIAK SPRINGS FL	40.2	LIC	BLTTL-19891109JK	---	none
24	WWEO-CD	DEFUNIAK SPRINGS FL	40.2	LIC	BLDTA-20120712ABF	---	none
24	NEW	PANAMA CITY FL	64.9	APP	BNPDTL-20090825AVR	---	none
24	NEW	PANAMA CITY FL	66.0	APP	BNPDTL-20090825BWW	---	none
24	WTLF	TALLAHASSEE FL	135.1	LIC	BLCDT-20030303ABF	---	none
24	WTLF	TALLAHASSEE FL	135.1	CP	BPCDT-20040514ACK	406,319	1,133 (0.28%)

Table 1

Interference Analysis Results Summary

(page 2 of 2)



<u>Ch.</u>	<u>Call</u>	<u>City/State</u>	<u>Dist</u>	<u>Status</u>	<u>Application Ref. No.</u>	<u>---Population (2000 Census)---</u>	
			<u>(km)</u>			<u>Baseline</u>	<u>New Interference</u>
24	W24DY-D	ALBANY GA	169.4	CP	BNPDTL-20090825CAC	---	none
24	W24ED-D	COLUMBUS GA	193.8	CP	BNPDTL-20090825BAZ	---	none
25	WKNI-LP	ANDALUSIA AL	86.3	LIC	BLTTL-20050131AAD	---	none
26	W26BV	PANAMA CITY FL	101.6	LIC	BLTTL-20001201ABZ	---	none
30	W30BD	EUFAULA AL	122.8	LIC	BLTTL-19960628JF	---	none

Section III - Engineering (Digital)**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1.	Channel: 23																																																																																																
2.	Translator Input Channel No. :																																																																																																
3.	Primary station proposed to be rebroadcast: <table border="1"><tr><td>Facility Identifier</td><td>Call Sign</td><td>City</td><td>State</td><td>Channel</td></tr></table>	Facility Identifier	Call Sign	City	State	Channel																																																																																											
Facility Identifier	Call Sign	City	State	Channel																																																																																													
4.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 30 Minutes 55 Seconds 11 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 85 Minutes 44 Seconds 30 <input checked="" type="radio"/> West <input type="radio"/> East																																																																																																
5.	Antenna Structure Registration Number: 1056648 <input type="checkbox"/> Not Applicable [Exhibit 11] <input type="checkbox"/> Notification filed with FAA																																																																																																
6.	Antenna Location Site Elevation Above Mean Sea Level: 41.1 meters																																																																																																
7.	Overall Tower Height Above Ground Level: 579.4 meters																																																																																																
8.	Height of Radiation Center Above Ground Level: 480.1 meters																																																																																																
9.	Maximum Effective Radiated Power (ERP): 15 kW																																																																																																
10.	Transmitter Output Power: 0.96 kW																																																																																																
11.	a. Transmitting Antenna: Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under CDBS Public Access (http://licensing.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 Manufacturer ERI Model ALP12L3-HSMR-23 b. Electrical Beam Tilt: 0.75 degrees <input type="checkbox"/> Not Applicable c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable d. Directional Antenna Relative Field Values: <input type="checkbox"/> N/A (Nondirectional or Off-the-Shelf) Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation <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>0.832</td><td>10</td><td>0.895</td><td>20</td><td>0.949</td><td>30</td><td>0.985</td><td>40</td><td>1.0</td><td>50</td><td>0.985</td></tr><tr><td>60</td><td>0.949</td><td>70</td><td>0.895</td><td>80</td><td>0.832</td><td>90</td><td>0.767</td><td>100</td><td>0.698</td><td>110</td><td>0.626</td></tr><tr><td>120</td><td>0.556</td><td>130</td><td>0.490</td><td>140</td><td>0.425</td><td>150</td><td>0.358</td><td>160</td><td>0.287</td><td>170</td><td>0.212</td></tr><tr><td>180</td><td>0.141</td><td>190</td><td>0.101</td><td>200</td><td>0.10</td><td>210</td><td>0.122</td><td>220</td><td>0.132</td><td>230</td><td>0.122</td></tr><tr><td>240</td><td>0.10</td><td>250</td><td>0.101</td><td>260</td><td>0.141</td><td>270</td><td>0.212</td><td>280</td><td>0.287</td><td>290</td><td>0.358</td></tr><tr><td>300</td><td>0.425</td><td>310</td><td>0.490</td><td>320</td><td>0.556</td><td>330</td><td>0.626</td><td>340</td><td>0.698</td><td>350</td><td>0.767</td></tr><tr><td>Additional Azimuths</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> e. Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt? <input type="radio"/> Yes <input checked="" type="radio"/> No <div style="text-align: right;">[Exhibit 12]</div> If Yes, attach an Exhibit (see instructions for details).	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0	0.832	10	0.895	20	0.949	30	0.985	40	1.0	50	0.985	60	0.949	70	0.895	80	0.832	90	0.767	100	0.698	110	0.626	120	0.556	130	0.490	140	0.425	150	0.358	160	0.287	170	0.212	180	0.141	190	0.101	200	0.10	210	0.122	220	0.132	230	0.122	240	0.10	250	0.101	260	0.141	270	0.212	280	0.287	290	0.358	300	0.425	310	0.490	320	0.556	330	0.626	340	0.698	350	0.767	Additional Azimuths											
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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.

12. **Out-of-channel Emission Mask:** ☐ Simple ☒ Stringent ☐ Full Service

CERTIFICATION

13. **Interference :** The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. ☒ Yes ☐ No

See Explanation in

		[Exhibit 13]
14.	<p>Environmental Protection Act. 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 Exhibit is required.</p> <p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 14]</p>
15.	<p>Channels 52-59. If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:</p> <p><input type="checkbox"/> The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.</p> <p><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.</p>	
16.	<p>Channels 60-69. If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), 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.</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreements(s) with 700 MHz public safety regional planning committee(s) and state administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), the applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.</p>	
<p>PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.</p>		

SECTION III PREPARER'S CERTIFICATION

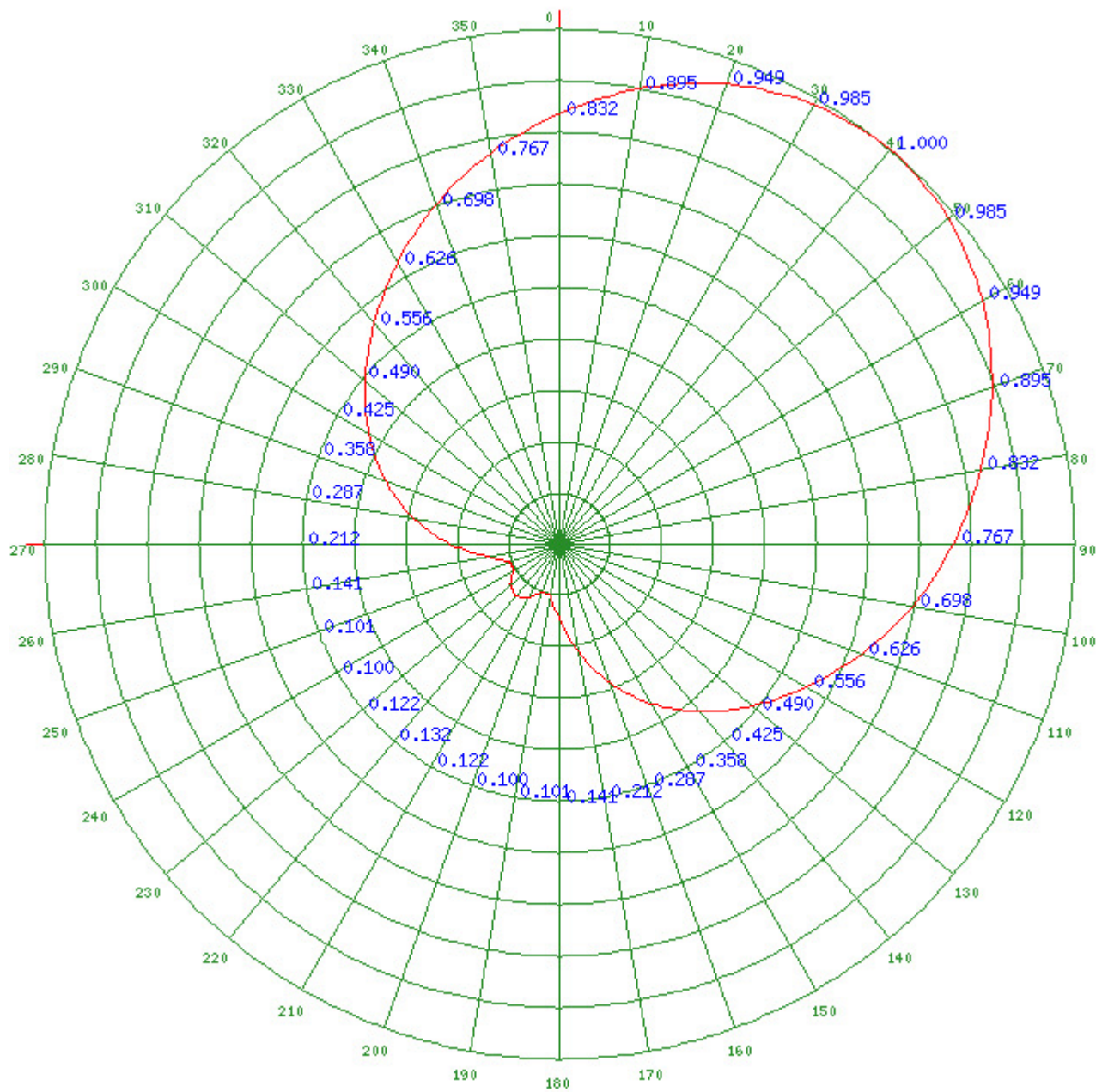
I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature		Date 1/22/2013	
Mailing Address CHESAPEAKE RF CONSULTANTS LLC 207 OLD DOMINION ROAD			
City YORKTOWN		State or Country (if foreign address) VA	Zip Code 23692 -
Telephone Number (include area code) 7036509600		E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

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.

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