

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Modification of Digital Television Station Construction Permit

prepared for

WBOC, Inc.

WBOC-TV Salisbury, MD

Facility ID 71218

Ch. 32 1000 kW 284 m

WBOC, Inc. (“*WBOC*”) is the licensee of digital television station WBOC-TV, Channel 21, Facility ID 71218, Salisbury, MD. Reassignment of WBOC-TV from Channel 21 to Channel 32 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“*CCRPN*”, DA 17-317, released April 13, 2017). *WBOC* herein proposes modification of the WBOC-TV Channel 32 Construction Permit (“*CP*”, file# 0000028422). This application is intended to be filed during the second filing window.¹ The *CP* authorizes operation at 920 kW effective radiated power (“*ERP*”) with a directional antenna at 284 meters antenna height above average terrain. *WBOC* proposes herein to increase the *ERP* to 1000 kW and adjust the directional antenna pattern.

As with the current authorization, the proposed Channel 32 operation will employ a new antenna system to be top-mounted on the WBOC-TV tower. The new antenna will take the place of the existing top-mounted stack of two antennas, where the current WBOC-TV Channel 21 antenna is beneath WBOC-TV’s former analog Channel 16 antenna. The tower structure corresponds to FCC Antenna Structure Registration number 1301089, having an overall structure height above ground of 305.4 meters. The antenna replacement will result in a reduction in the structure’s overall height by 18.0 meters to 287.4 meters above ground level. The FAA will be notified of the reduction in height and the FCC ASR will be modified accordingly as appropriate.

¹Public Notice “*Incentive Auction Task Force and Media Bureau Announce the Opening of the Second Filing Window for Eligible Full Power and Class A Television Station—October 3 Through November 2, 2017*” DA 17-911, released September 20, 2017.

The proposed antenna is an elliptically polarized directional Dielectric model TFU-24JTH/VP-R P250 (25 percent vertical polarization). The maximum horizontally polarized ERP is 1000 kW and the maximum vertically polarized ERP is 250 kW. The vertically polarized component will not exceed the horizontally polarized component at any azimuth. The directional antenna's azimuthal patterns are depicted in Figures 1 and 1A for horizontal and vertical polarization, respectively. The antenna's elevation pattern is depicted in Figure 2.

Figure 3 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

Interference study per FCC OET Bulletin 69² shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1.

The nearest FCC monitoring station is 126 km distant at Laurel, MD. This exceeds by a large margin 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). The site location is beyond the border areas requiring international coordination. There are no authorized AM stations within 3 kilometers of the site.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows

²FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $5.4 \mu\text{W}/\text{cm}^2$, which is 1.4 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.

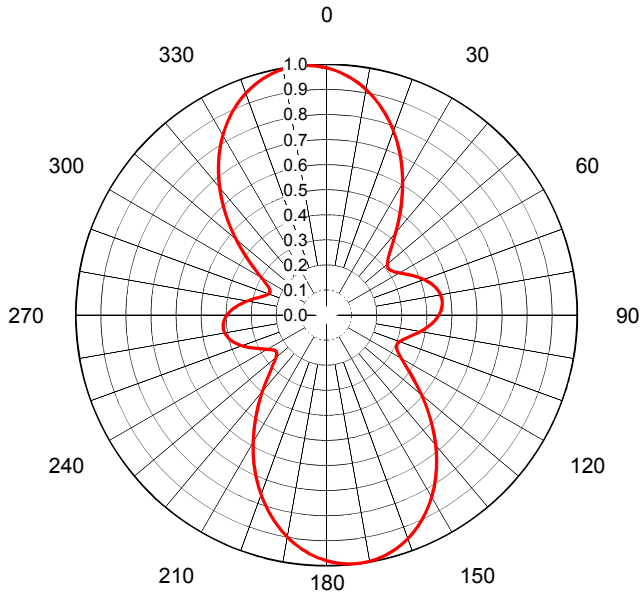
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

List of Attachments

Figure 1, 1A	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	October 13, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70400-2**
 Date **6-Mar-17**
 Call Letters **WBOC**
 Channel **32**
 Frequency **581 MHz**
 Antenna Type **TFU-24JTH/VP-R P250**
 Gain **2.51 (3.99dB)**
Calculated

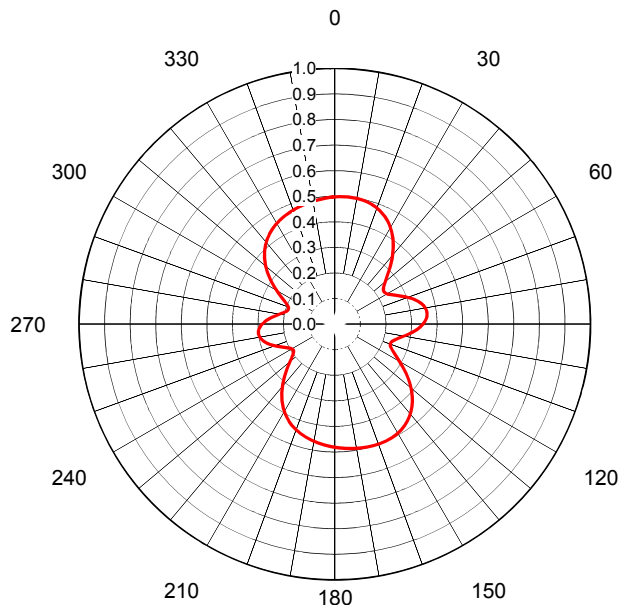
Drawing # **WBOC H-POL**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.986	36	0.498	72	0.428	108	0.319	144	0.747	180	0.980	216	0.471	252	0.374	288	0.254
1	0.982	37	0.480	73	0.434	109	0.314	145	0.763	181	0.974	217	0.452	253	0.381	289	0.250
2	0.977	38	0.462	74	0.440	110	0.310	146	0.779	182	0.969	218	0.433	254	0.387	290	0.246
3	0.971	39	0.446	75	0.445	111	0.307	147	0.795	183	0.962	219	0.415	255	0.393	291	0.244
4	0.964	40	0.429	76	0.450	112	0.305	148	0.810	184	0.955	220	0.397	256	0.398	292	0.243
5	0.957	41	0.414	77	0.454	113	0.305	149	0.824	185	0.947	221	0.380	257	0.402	293	0.245
6	0.950	42	0.398	78	0.457	114	0.305	150	0.839	186	0.939	222	0.363	258	0.406	294	0.247
7	0.941	43	0.384	79	0.460	115	0.309	151	0.852	187	0.930	223	0.347	259	0.409	295	0.253
8	0.932	44	0.371	80	0.462	116	0.312	152	0.865	188	0.920	224	0.331	260	0.412	296	0.259
9	0.923	45	0.359	81	0.463	117	0.318	153	0.878	189	0.910	225	0.317	261	0.413	297	0.268
10	0.913	46	0.347	82	0.465	118	0.325	154	0.890	190	0.899	226	0.303	262	0.415	298	0.277
11	0.902	47	0.338	83	0.465	119	0.334	155	0.901	191	0.888	227	0.291	263	0.415	299	0.289
12	0.891	48	0.329	84	0.464	120	0.343	156	0.912	192	0.876	228	0.280	264	0.415	300	0.301
13	0.879	49	0.323	85	0.463	121	0.355	157	0.922	193	0.863	229	0.271	265	0.413	301	0.315
14	0.866	50	0.317	86	0.462	122	0.367	158	0.932	194	0.851	230	0.262	266	0.412	302	0.330
15	0.853	51	0.313	87	0.459	123	0.381	159	0.940	195	0.837	231	0.257	267	0.409	303	0.346
16	0.840	52	0.310	88	0.456	124	0.394	160	0.949	196	0.823	232	0.252	268	0.406	304	0.362
17	0.826	53	0.310	89	0.452	125	0.410	161	0.957	197	0.809	233	0.250	269	0.401	305	0.380
18	0.811	54	0.309	90	0.448	126	0.425	162	0.964	198	0.794	234	0.248	270	0.397	306	0.397
19	0.796	55	0.312	91	0.443	127	0.442	163	0.970	199	0.778	235	0.249	271	0.391	307	0.416
20	0.781	56	0.314	92	0.438	128	0.459	164	0.976	200	0.763	236	0.251	272	0.386	308	0.434
21	0.765	57	0.319	93	0.432	129	0.477	165	0.981	201	0.746	237	0.255	273	0.379	309	0.453
22	0.749	58	0.323	94	0.426	130	0.494	166	0.986	202	0.730	238	0.259	274	0.372	310	0.472
23	0.732	59	0.329	95	0.419	131	0.512	167	0.989	203	0.712	239	0.266	275	0.364	311	0.491
24	0.715	60	0.336	96	0.412	132	0.531	168	0.993	204	0.695	240	0.272	276	0.356	312	0.511
25	0.698	61	0.343	97	0.404	133	0.549	169	0.995	205	0.677	241	0.280	277	0.348	313	0.530
26	0.680	62	0.351	98	0.396	134	0.568	170	0.997	206	0.659	242	0.288	278	0.339	314	0.549
27	0.662	63	0.359	99	0.388	135	0.586	171	0.998	207	0.641	243	0.297	279	0.330	315	0.569
28	0.644	64	0.367	100	0.380	136	0.605	172	0.999	208	0.623	244	0.306	280	0.321	316	0.588
29	0.626	65	0.375	101	0.372	137	0.623	173	0.999	209	0.604	245	0.315	281	0.311	317	0.607
30	0.608	66	0.383	102	0.363	138	0.642	174	0.998	210	0.585	246	0.324	282	0.302	318	0.626
31	0.589	67	0.391	103	0.355	139	0.660	175	0.996	211	0.566	247	0.333	283	0.293	319	0.644
32	0.571	68	0.399	104	0.347	140	0.678	176	0.995	212	0.547	248	0.342	284	0.284	320	0.663
33	0.552	69	0.407	105	0.339	141	0.695	177	0.992	213	0.528	249	0.350	285	0.276	321	0.681
34	0.534	70	0.414	106	0.332	142	0.713	178	0.989	214	0.509	250	0.359	286	0.268	322	0.699
35	0.516	71	0.421	107	0.325	143	0.730	179	0.984	215	0.490	251	0.366	287	0.261	323	0.716

Figure 1
Antenna Azimuthal Pattern
Horizontal Polarization
WBOC-TV Salisbury, MD
Facility ID 71218
Ch. 32 1000 kW 284 m

prepared for
WBOC, Inc.

October, 2017



AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70400-2**
Date **6-Mar-17**
Call Letters **WBOC**
Channel **32**
Frequency **581 MHz**
Antenna Type **TFU-24JTH/VP-R P250**
Gain **1.74 (2.42dB)**
Calculated

Drawing # **WBOC V-POL**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.497	36	0.389	72	0.320	108	0.231	144	0.477	180	0.481	216	0.352	252	0.262	288	0.190
1	0.498	37	0.380	73	0.327	109	0.231	145	0.480	181	0.480	217	0.344	253	0.268	289	0.191
2	0.499	38	0.371	74	0.334	110	0.231	146	0.483	182	0.479	218	0.336	254	0.274	290	0.193
3	0.499	39	0.361	75	0.340	111	0.233	147	0.486	183	0.477	219	0.327	255	0.279	291	0.196
4	0.500	40	0.352	76	0.345	112	0.236	148	0.488	184	0.476	220	0.318	256	0.284	292	0.201
5	0.500	41	0.342	77	0.350	113	0.240	149	0.491	185	0.474	221	0.309	257	0.288	293	0.206
6	0.500	42	0.332	78	0.354	114	0.245	150	0.493	186	0.473	222	0.300	258	0.292	294	0.212
7	0.500	43	0.322	79	0.357	115	0.251	151	0.494	187	0.471	223	0.291	259	0.295	295	0.219
8	0.500	44	0.312	80	0.360	116	0.258	152	0.496	188	0.469	224	0.282	260	0.297	296	0.227
9	0.500	45	0.302	81	0.362	117	0.266	153	0.497	189	0.468	225	0.272	261	0.299	297	0.235
10	0.499	46	0.293	82	0.363	118	0.275	154	0.498	190	0.466	226	0.263	262	0.300	298	0.244
11	0.499	47	0.283	83	0.364	119	0.284	155	0.499	191	0.464	227	0.254	263	0.301	299	0.253
12	0.498	48	0.274	84	0.363	120	0.293	156	0.499	192	0.462	228	0.245	264	0.300	300	0.262
13	0.497	49	0.266	85	0.362	121	0.303	157	0.499	193	0.460	229	0.236	265	0.299	301	0.271
14	0.496	50	0.258	86	0.360	122	0.313	158	0.500	194	0.457	230	0.228	266	0.297	302	0.281
15	0.494	51	0.251	87	0.357	123	0.323	159	0.500	195	0.455	231	0.221	267	0.295	303	0.290
16	0.492	52	0.245	88	0.354	124	0.333	160	0.500	196	0.452	232	0.214	268	0.292	304	0.299
17	0.490	53	0.239	89	0.350	125	0.342	161	0.499	197	0.450	233	0.207	269	0.288	305	0.309
18	0.488	54	0.235	90	0.345	126	0.352	162	0.499	198	0.447	234	0.202	270	0.284	306	0.318
19	0.486	55	0.232	91	0.340	127	0.362	163	0.499	199	0.444	235	0.198	271	0.279	307	0.327
20	0.483	56	0.231	92	0.334	128	0.371	164	0.498	200	0.441	236	0.195	272	0.274	308	0.335
21	0.480	57	0.230	93	0.327	129	0.381	165	0.497	201	0.437	237	0.193	273	0.268	309	0.344
22	0.476	58	0.231	94	0.320	130	0.389	166	0.497	202	0.433	238	0.192	274	0.261	310	0.352
23	0.472	59	0.233	95	0.313	131	0.398	167	0.496	203	0.430	239	0.192	275	0.255	311	0.360
24	0.468	60	0.236	96	0.305	132	0.406	168	0.495	204	0.425	240	0.194	276	0.248	312	0.368
25	0.464	61	0.241	97	0.297	133	0.414	169	0.494	205	0.421	241	0.196	277	0.241	313	0.375
26	0.459	62	0.246	98	0.289	134	0.422	170	0.493	206	0.416	242	0.200	278	0.234	314	0.382
27	0.453	63	0.252	99	0.282	135	0.429	171	0.492	207	0.411	243	0.204	279	0.227	315	0.389
28	0.448	64	0.259	100	0.274	136	0.436	172	0.491	208	0.406	244	0.209	280	0.221	316	0.395
29	0.442	65	0.266	101	0.266	137	0.442	173	0.490	209	0.400	245	0.215	281	0.214	317	0.401
30	0.435	66	0.273	102	0.259	138	0.448	174	0.489	210	0.394	246	0.221	282	0.208	318	0.407
31	0.429	67	0.281	103	0.252	139	0.454	175	0.488	211	0.388	247	0.228	283	0.203	319	0.412
32	0.421	68	0.289	104	0.246	140	0.459	176	0.486	212	0.382	248	0.235	284	0.199	320	0.417
33	0.414	69	0.297	105	0.241	141	0.464	177	0.485	213	0.375	249	0.242	285	0.195	321	0.422
34	0.406	70	0.305	106	0.237	142	0.469	178	0.484	214	0.368	250	0.249	286	0.192	322	0.426
35	0.398	71	0.313	107	0.234	143	0.473	179	0.483	215	0.360	251	0.255	287	0.191	323	0.431

Figure 1A
Antenna Azimuthal Pattern
Vertical Polarization
WBOC-TV Salisbury, MD
Facility ID 71218
Ch. 32 1000 kW 284 m

prepared for
WBOC, Inc.

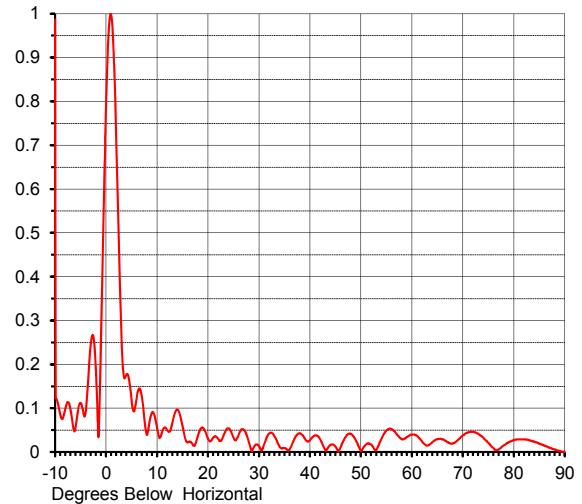
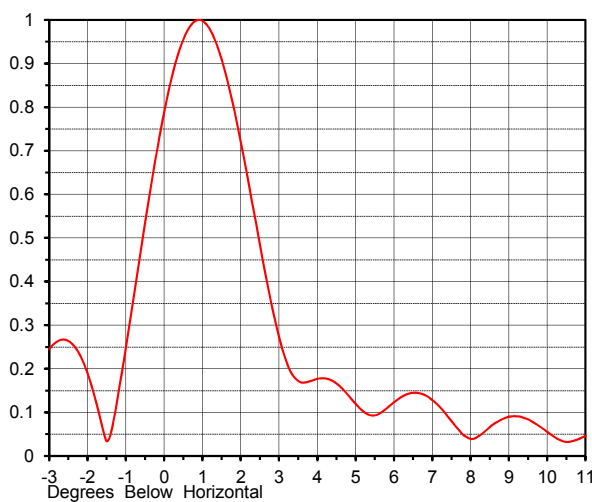
October, 2017

ELEVATION PATTERN

Proposal No. **C-70400-2**
 Date **6-Mar-17**
 Call Letters **WBOC**
 Channel **32**
 Frequency **581 MHz**
 Antenna Type **TFU-24JTH/VP-R P250**

RMS Directivity at Main Lobe **24.5 (13.89 dB)**
 RMS Directivity at Horizontal **15.2 (11.82 dB)**
 Calculated

Beam Tilt **0.75 deg**
 Drawing Number **24J245075**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.987	10.0	0.055	30.0	0.013	50.0	0.002	70.0	0.038
-9.0	0.087	11.0	0.046	31.0	0.017	51.0	0.017	71.0	0.045
-8.0	0.098	12.0	0.050	32.0	0.042	52.0	0.017	72.0	0.046
-7.0	0.099	13.0	0.066	33.0	0.037	53.0	0.004	73.0	0.042
-6.0	0.055	14.0	0.097	34.0	0.013	54.0	0.029	74.0	0.033
-5.0	0.112	15.0	0.060	35.0	0.009	55.0	0.049	75.0	0.021
-4.0	0.090	16.0	0.022	36.0	0.005	56.0	0.052	76.0	0.009
-3.0	0.245	17.0	0.017	37.0	0.031	57.0	0.041	77.0	0.006
-2.0	0.190	18.0	0.036	38.0	0.043	58.0	0.030	78.0	0.015
-1.0	0.247	19.0	0.055	39.0	0.031	59.0	0.034	79.0	0.022
0.0	0.788	20.0	0.030	40.0	0.027	60.0	0.040	80.0	0.027
1.0	0.998	21.0	0.033	41.0	0.038	61.0	0.037	81.0	0.029
2.0	0.721	22.0	0.030	42.0	0.029	62.0	0.024	82.0	0.029
3.0	0.273	23.0	0.036	43.0	0.005	63.0	0.015	83.0	0.027
4.0	0.177	24.0	0.054	44.0	0.016	64.0	0.022	84.0	0.024
5.0	0.119	25.0	0.033	45.0	0.012	65.0	0.029	85.0	0.019
6.0	0.123	26.0	0.039	46.0	0.011	66.0	0.029	86.0	0.015
7.0	0.128	27.0	0.051	47.0	0.034	67.0	0.023	87.0	0.010
8.0	0.039	28.0	0.023	48.0	0.041	68.0	0.019	88.0	0.006
9.0	0.090	29.0	0.011	49.0	0.027	69.0	0.027	89.0	0.002

Figure 2
Antenna Elevation Pattern
WBOC-TV Salisbury, MD
Facility ID 71218
Ch. 32 1000 kW 284 m

prepared for
WBOC, Inc.

October, 2017

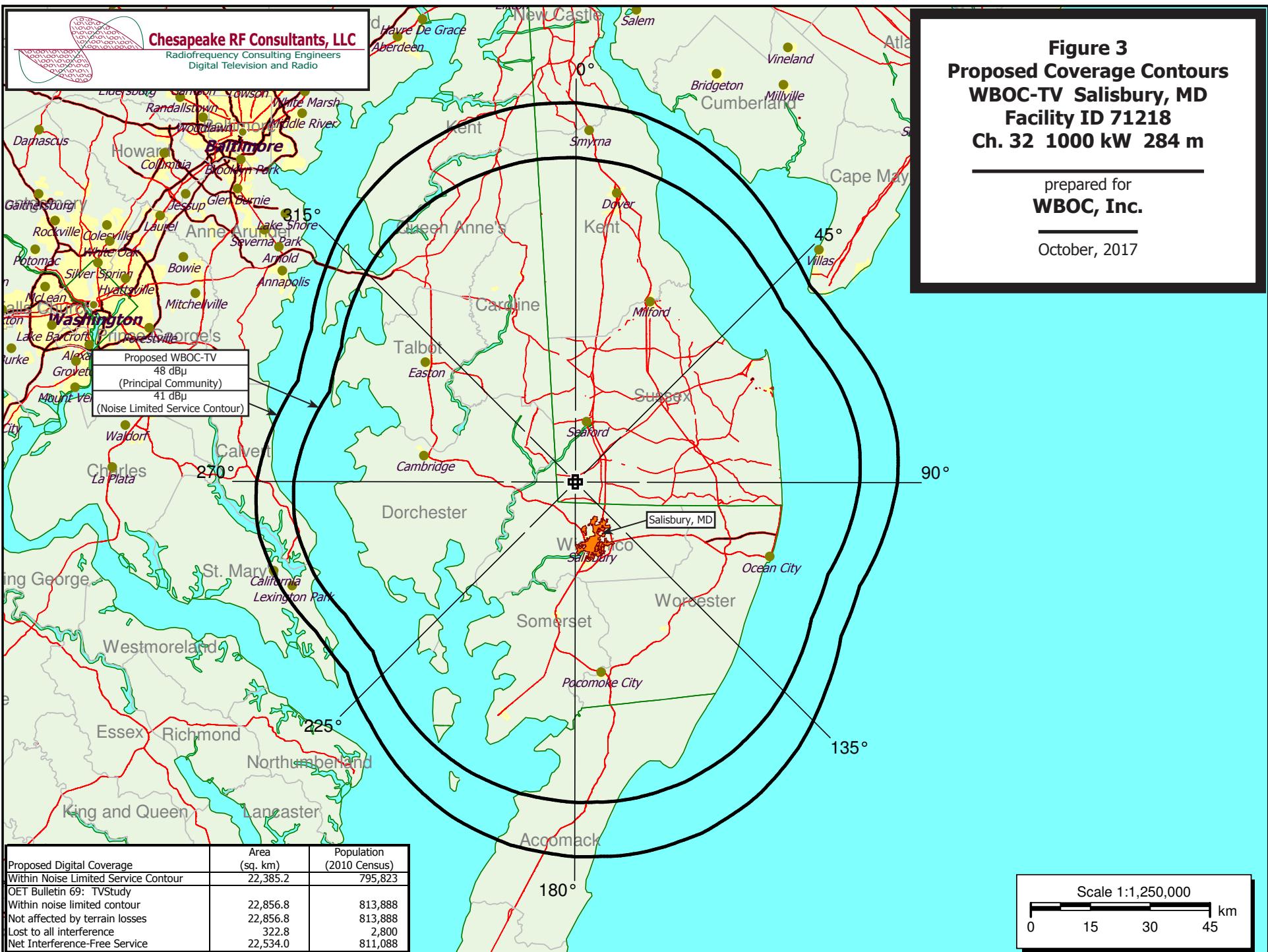
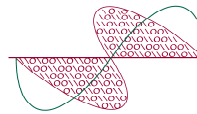


Table 1 WBOC-TV OET Bulletin 69 Interference Study
(page 1 of 6)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

tvstudy v2.2.3 (6K70F1)

Database: localhost, Study: WBOC 1000kW P250_20171004, Model: Longley-Rice
Start: 2017.10.13 19:46:37

Study created: 2017.10.13 19:46:05

Study build station data: LMS TV 2017-10-07 LMSTV

Proposal: WBOC-TV D32 DT APP SALISBURY, MD
File number: WBOC 1000kW P250_20171004
Facility ID: 71218
Station data: User record
Record ID: 1356
Country: U.S.
Zone: I

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	134.0 km
Yes	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	100.8
No	WTFX-TV	D31	DT	CP	PHILADELPHIA, PA	BLANK0000027331	174.2
No	WHRO-TV	D31	DT	CP	HAMPTON-NORFOLK, VA	BLANK0000026987	203.1
No	WRPX-TV	D32	DT	CP	ROCKY MOUNT, NC	BLANK0000027007	349.3
Yes	WLIW	D32	DT	CP	GARDEN CITY, NY	BLANK0000025351	315.6
Yes	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	230.0
Yes	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	254.4
Yes	WPXV-TV	D32	DT	CP	NORFOLK, VA	BLANK0000026979	203.1
Yes	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	134.0
Yes	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	134.0
No	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000024876	174.3
No	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLCDT20090602ABA	203.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32
Latitude: 38 30 18.00 N (NAD83)
Longitude: 75 38 36.00 W
Height AMSL: 293.5 m
HAAT: 284.1 m
Peak ERP: 1000 kW
Antenna: TFU-24JTH P250_20171004 0.0 deg
Elev Pattern: Generic
Elec Tilt: 0.75

40.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	972 kW	288.3 m	96.2 km
45.0	139	283.5	79.5
90.0	201	281.1	81.4
135.0	343	279.0	85.0
180.0	960	280.4	95.0
225.0	109	285.4	78.2
270.0	158	288.4	80.7
315.0	322	286.8	85.6

**Proposal service area extends beyond baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 554.8 km

Distance to Mexican border: 2427.7 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 306.1 degrees Distance: 125.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Table 1 WBOC-TV OET Bulletin 69 Interference Study
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Bearing: 283.5 degrees Distance: 2538.2 km

Study cell size: 2.00 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%

Interference to BLANK0000029879 APP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	134.0 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	134.0
	WAZT-CD	D30	DC	CP	WOODSTOCK, VA	BLANK0000027758	54.2
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	41.2
	WATM-TV	D31	DT	CP	ALTOONA, PA	BLANK0000028661	214.3
	WTFX-TV	D31	DT	CP	PHILADELPHIA, PA	BLANK0000027331	199.0
	WHRO-TV	D31	DT	CP	HAMPTON-NORFOLK, VA	BLANK0000026987	243.3
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	156.1
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	162.5

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	26547.6	8,315,499	25551.9	8,258,807	11241.9	5,402,104	0.00 0.00

Undesired			Total IX	Unique IX, before		Unique IX, after	
WBOC-TV D32 DT BL			92.5	2,640		0.0	
WBOC-TV D32 DT APP			96.5	2,650		0.0	
WAZT-CD D30 DC CP			164.2	3,022		32.0	
WMPT D31 DT CP			14194.5	2,853,463		13436.9	
WATM-TV D31 DT CP			222.6	16,037		15.8	
WTFX-TV D31 DT CP			191.4	11,754		7.9	
WHRO-TV D31 DT CP			346.5	17,537		39.8	
WHP-TV D32 DT CP			4.0	326		0.0	
WCAV D32 DT CP			4.0	51		0.0	

Interference to BLANK0000025178 CP, scenario 1

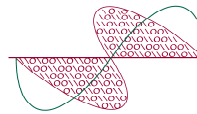
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	100.8 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	100.8
	WIAV-CD	D30	DC	APP	WASHINGTON, DC	BLANK0000029340	41.6
	KYW-TV	D30	DT	CP	PHILADELPHIA, PA	BLANK0000024874	164.0
	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	41.2
	WATM-TV	D31	DT	CP	ALTOONA, PA	BLANK0000028661	233.5
	WTFX-TV	D31	DT	CP	PHILADELPHIA, PA	BLANK0000027331	164.1
	WHRO-TV	D31	DT	CP	HAMPTON-NORFOLK, VA	BLANK0000026987	244.9
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	150.1

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	23985.0	7,951,360	23741.9	7,919,943	8620.4	3,039,717	0.00 0.00

Undesired			Total IX	Unique IX, before		Unique IX, after	
WBOC-TV D32 DT BL			401.3	12,014		0.0	
WBOC-TV D32 DT APP			453.5	13,507		0.0	
WIAV-CD D30 DC APP			32.0	30,954		4.0	
KYW-TV D30 DT CP			4.0	8		0.0	
WETA-TV D31 DT APP			15021.6	4,858,289		13187.2	
WATM-TV D31 DT CP			107.4	7,256		4.0	
WTFX-TV D31 DT CP			1318.3	100,119		51.9	
WHRO-TV D31 DT CP			282.7	17,013		3.9	
WHP-TV D32 DT CP			8.1	238		0.0	

Interference to BLANK0000025351 CP, scenario 1

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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLIW	D32	DT	CP	GARDEN CITY, NY	BLANK0000025351	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	315.6 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	315.6
	WGBX-TV	D32	DT	APP	BOSTON, MA	BLANK0000025427	250.1
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	292.7
	WCCT-TV	D33	DT	CP	WATERBURY, CT	BLANK0000025071	114.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
10816.4 14,008,719		10639.8 13,851,979		10571.9 13,753,912		10571.9 13,753,912	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WBOC-TV D32 DT BL		4.0 24,249		0.0 0			
WBOC-TV D32 DT APP		8.0 39,752				0.0 0	
WGBX-TV D32 DT APP		32.0 6,969		19.9 4,457		19.9 4,457	
WHP-TV D32 DT CP		44.0 93,610		31.9 66,849		27.9 51,346	
WCCT-TV D33 DT CP		4.0 0		0.0 0		0.0 0	

Interference to BLANK0000025351 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLIW	D32	DT	CP	GARDEN CITY, NY	BLANK0000025351	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	315.6 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	315.6
	WGBX-TV	D32	DT	BL	BOSTON, MA	DTVBL72098	250.1
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	292.7
	WCCT-TV	D33	DT	CP	WATERBURY, CT	BLANK0000025071	114.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
10816.4 14,008,719		10639.8 13,851,979		10575.9 13,754,349		10575.9 13,754,349	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WBOC-TV D32 DT BL		4.0 24,249		0.0 0			
WBOC-TV D32 DT APP		8.0 39,752				0.0 0	
WGBX-TV D32 DT BL		23.9 4,867		15.9 4,020		15.9 4,020	
WHP-TV D32 DT CP		44.0 93,610		36.0 68,514		32.0 53,011	
WCCT-TV D33 DT CP		4.0 0		0.0 0		0.0 0	

Interference to BLANK0000027770 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	230.0 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	230.0
	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	156.1
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	150.1
	WATM-TV	D31	DT	CP	ALTOONA, PA	BLANK0000028661	135.5
	WTFX-TV	D31	DT	CP	PHILADELPHIA, PA	BLANK0000027331	142.5
	WNLO	D32	DT	LIC	BUFFALO, NY	BLCDT20070320AAV	343.6
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	296.9
	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	156.1
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000024876	142.2
	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000026991	154.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27891.2 3,046,000		24602.2 2,774,275		23606.2 2,668,144		23486.6 2,660,446	0.51 0.29
Undesired		Total IX		Unique IX, before		Unique IX, after	
WBOC-TV D32 DT BL		831.9 90,789		652.0 57,910			
WBOC-TV D32 DT APP		951.5 97,300				771.5 65,608	
WETA-TV D31 DT APP		23.8 2,819		0.0 0		0.0 0	
WMPT D31 DT CP		55.5 15,954		11.9 2,175		11.9 2,175	
WATM-TV D31 DT CP		43.9 1,151		43.9 1,151		43.9 1,151	
WTFX-TV D31 DT CP		116.8 16,080		20.1 2,456		20.1 2,456	
WNLO D32 DT LIC		7.9 149		7.9 149		7.9 149	
WCAV D32 DT CP		55.7 9,893		19.8 3,066		19.8 3,066	
WPSG D33 DT CP		129.1 14,589		20.2 1,458		16.2 1,043	
WQPX-TV D33 DT CP		4.0 51		4.0 51		4.0 51	

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Interference to BLANK0000027770 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	230.0 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	230.0
	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	156.1
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	150.1
	WATM-TV	D31	DT	CP	ALTOONA, PA	BLANK0000028661	135.5
	WTFX-TV	D31	DT	CP	PHILADELPHIA, PA	BLANK0000027331	142.5
	WNLO	D32	DT	LIC	BUFFALO, NY	BLCDT20070320AAV	343.6
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	296.9
	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	156.1
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000024876	142.2
	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000026991	154.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27891.2 3,046,000		24602.2 2,774,275		23606.2 2,668,144		23486.6 2,660,446	0.51 0.29

Undesired	Total IX	Unique IX, before	Unique IX, after
WBOC-TV D32 DT BL	831.9 90,789	644.0 56,759	
WBOC-TV D32 DT APP	951.5 97,300		763.6 64,457
WETA-TV D31 DT APP	23.8 2,819	0.0 0	0.0 0
WMPT D31 DT CP	55.5 15,954	11.9 2,175	11.9 2,175
WATM-TV D31 DT CP	43.9 1,151	43.9 1,151	43.9 1,151
WTFX-TV D31 DT CP	116.8 16,080	20.1 2,456	20.1 2,456
WNLO D32 DT LIC	7.9 149	7.9 149	7.9 149
WCAV D32 DT CP	55.7 9,893	19.8 3,066	19.8 3,066
WHUT-TV D33 DT CP	31.7 3,970	0.0 0	0.0 0
WPSG D33 DT CP	129.1 14,589	20.2 1,458	16.2 1,043
WQPX-TV D33 DT CP	4.0 51	4.0 51	4.0 51

Interference to BLANK0000025088 CP, scenario 1

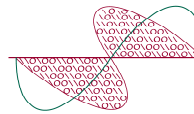
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	254.4 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	254.4
	WRPX-TV	D32	DT	CP	ROCKY MOUNT, NC	BLANK0000027007	210.7
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	296.9
	WPXV-TV	D32	DT	CP	NORFOLK, VA	BLANK0000026979	218.1
	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	162.5
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
20944.5 958,555		17856.2 733,735		17609.1 729,073		17593.1 729,022	0.09 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
WBOC-TV D32 DT BL	20.1 110	8.0 31	
WBOC-TV D32 DT APP	36.2 161		24.1 82
WRPX-TV D32 DT CP	155.2 2,672	139.3 2,485	139.3 2,485
WHP-TV D32 DT CP	12.1 43	0.0 0	0.0 0
WPXV-TV D32 DT CP	95.7 2,146	67.7 1,856	67.7 1,856

Interference to BLANK0000026979 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPXV-TV	D32	DT	CP	NORFOLK, VA	BLANK0000026979	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	203.1 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	203.1
	WRPX-TV	D32	DT	CP	ROCKY MOUNT, NC	BLANK0000027007	170.1
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	218.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
26104.8 1,893,553		26092.9 1,893,377		25698.6 1,885,544		25658.8 1,885,579	0.15 -0.00
Undesired	Total IX		Unique IX, before		Unique IX, after		

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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

WBOC-TV D32 DT BL	179.0	2,371	163.1	2,239		
WBOC-TV D32 DT APP	210.8	2,319			202.9	2,204
WRPX-TV D32 DT CP	107.7	1,700	107.7	1,700	107.7	1,700
WCAV D32 DT CP	123.5	3,894	107.6	3,762	115.6	3,779

Interference to BLEDT20071018AIJ LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	134.0 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	134.0
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000024876	198.9
	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLCDT20090602ABA	243.3
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000026891	1.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
17873.1	7,649,763	17590.4	7,617,337	17042.7	7,537,390	17042.7 7,537,390	0.00 0.00
Undesired	Total IX		Unique IX, before		Unique IX, after		
WBOC-TV D32 DT BL	4.0	442	0.0	0			
WBOC-TV D32 DT APP	4.0	442			0.0	0	
WPSG D33 DT CP	343.6	60,036	271.7	41,388	271.7	41,388	
WTVZ-TV D33 DT LIC	147.9	21,741	92.0	4,050	92.0	4,050	
WRC-TV D34 DT CP	136.1	16,970	104.1	15,709	104.1	15,709	

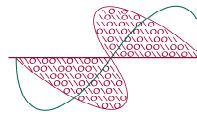
Interference to BPEDT20120627AAD CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	
Undesireds:	WBOC-TV	D32	DT	BL	SALISBURY, MD	DTVBL71218	134.0 km
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	134.0
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	162.5
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000024876	198.9
	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLCDT20090602ABA	243.3
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000026891	1.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
26344.4	8,298,094	25340.7	8,242,676	24440.6	8,152,376	24436.6 8,152,276	0.02 0.00
Undesired	Total IX		Unique IX, before		Unique IX, after		
WBOC-TV D32 DT BL	56.3	2,371	4.0	1			
WBOC-TV D32 DT APP	72.4	2,606			8.0	101	
WCAV D32 DT CP	4.0	51	0.0	0	0.0	0	
WPSG D33 DT CP	658.0	75,493	489.8	67,770	489.8	67,770	
WTVZ-TV D33 DT LIC	378.4	22,270	222.2	14,557	218.1	14,557	
WRC-TV D34 DT CP	23.9	304	15.9	249	15.9	249	

Interference to proposal, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	
Undesireds:	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK0000029879	134.0 km
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK0000025178	100.8
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000027770	230.0
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000025088	254.4
	WPXV-TV	D32	DT	CP	NORFOLK, VA	BLANK0000026979	203.1
	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	134.0
Service area		Terrain-limited		IX-free		Percent IX	
22856.8	813,888	22856.8	813,888	22534.0	811,088	1.41 0.34	
Undesired	Total IX		Unique IX		Prct Unique IX		
WETA-TV D31 DT APP	4.0	112	0.0	0	0.00	0.00	
WMPT D31 DT CP	155.8	1,033	151.8	921	0.66	0.11	
WHP-TV D32 DT CP	16.0	521	8.0	190	0.03	0.02	
WCAV D32 DT CP	12.0	422	0.0	0	0.00	0.00	
WPXV-TV D32 DT CP	159.0	1,577	151.0	1,267	0.66	0.16	

Table 1 WBOC-TV OET Bulletin 69 Interference Study
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Interference to proposal, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WBOC-TV	D32	DT	APP	SALISBURY, MD	WBOC 1000kW P250_20171	
Undesireds:	WETA-TV	D31	DT	APP	WASHINGTON, DC	BLANK00000029879	134.0 km
	WMPT	D31	DT	CP	ANNAPOLIS, MD	BLANK00000025178	100.8
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK00000027770	230.0
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK00000025088	254.4
	WPXV-TV	D32	DT	CP	NORFOLK, VA	BLANK00000026979	203.1
	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	134.0
Service area		Terrain-limited		IX-free		Percent IX	
22856.8	813,888	22856.8	813,888	22534.0	811,088	1.41	0.34
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WETA-TV	D31 DT APP	4.0	112	0.0	0	0.00	0.00
WMPT	D31 DT CP	155.8	1,033	151.8	921	0.66	0.11
WHP-TV	D32 DT CP	16.0	521	8.0	190	0.03	0.02
WCAV	D32 DT CP	12.0	422	0.0	0	0.00	0.00
WPXV-TV	D32 DT CP	159.0	1,577	151.0	1,267	0.66	0.16
WHUT-TV	D33 DT CP	8.0	331	0.0	0	0.00	0.00

**Channel and
Facility
Information**

Section	Question	Response
Proposed Community of License	Facility ID	71218
	State	Maryland
	City	SALISBURY
	DTV Channel	32
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	1

**Antenna Location
Data**

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1301089
Coordinates (NAD83)	Latitude	38° 30' 18.0" N+
	Longitude	075° 38' 36.0" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	305.4 meters
	Support Structure Height	271.3 meters
	Ground Elevation (AMSL)	14.0 meters
Antenna Data	Height of Radiation Center Above Ground Level	279.5 meters
	Height of Radiation Center Above Average Terrain	284.1 meters
	Height of Radiation Center Above Mean Sea Level	293.5 meters
	Effective Radiated Power	1000 kW

Antenna Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-24JTH/VP-R P250
	Rotation	0 degrees
	Electrical Beam Tilt	0.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)
0	0.986	90	0.448	180	0.980	270	0.397
10	0.913	100	0.380	190	0.899	280	0.321
20	0.781	110	0.310	200	0.763	290	0.246
30	0.608	120	0.343	210	0.585	300	0.301
40	0.429	130	0.494	220	0.397	310	0.472
50	0.317	140	0.678	230	0.262	320	0.663
60	0.336	150	0.839	240	0.272	330	0.827
70	0.414	160	0.949	250	0.359	340	0.942
80	0.462	170	0.997	260	0.412	350	0.996

Additional Azimuths

Degree	V _A
83	0.465
353	1.000
263	0.415
173	0.999

**Construction
Permit
Certifications**

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes