

ENGINEERING STATEMENT
APPLICATION FOR DIGITAL DISPLACEMENT
OF STATION W41DT LICENSED TO
VIRGINIA BROADCASTING, LLC
CHANNEL 22 15 KW MAX ERP 1295 METERS
RC/AMSL

OCTOBER 2017

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

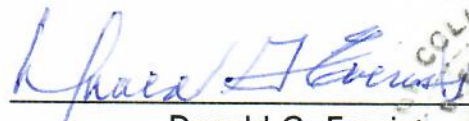
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

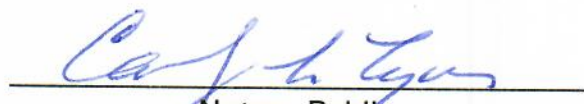
That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 4th day of October, 2017.




Notary Public

My Commission Expires: 2/28/2018

Introduction

This engineering statement supports the application filed on behalf of Virginia Broadcasting, LLC, licensee of television translator station W41DT, Staunton, Virginia (Facility ID: 168768) for a construction permit due to its displacement from its currently licensed Channel 41 to the proposed Channel 22 due to the Incentive Auction. Further, T-Mobile has advised that it requires the station to terminate its operation by December 7, 2017. This displacement application has a companion special temporary authority (“STA”) that accompanies this request.

W41DT displacement is due to the Incentive Auction. W41DT requests a construction permit for digital translator television facilities to operate on Channel 22 herein with an effective radiated power (“ERP”) of 15 kW directional at a radiation center above mean sea level (“RCAMSL”) of 1295 meters.

The September 28, 2017 notification was for an ERP of 10.1 kW and the NRAO will be updated to an ERP of 15 kW as demonstrated in the attached letter. In accordance with Section 73.1030(a)(1) notification to the National Radio Astronomy Observatory (“NRAO”) was sent by U.S.P.S. Mail and E-Mail on October 6, 2017. The FCC will be updated upon any response.

W41DT is located at the same transmitter site and specifies a similar radiation pattern with the same center of radiation to accommodate the proposed channel operation. In addition to the change in ERP and channel, no other changes are requested.

Discussion

Tower Location

The geographic coordinates of the proposed transmitter site are as follows:

North Latitude: 38° 09' 55"

West Longitude: 79° 18' 44"

NAD-27

North Latitude: 38° 09' 55.5"

West Longitude: 79° 18' 43.1"

NAD-83

Equipment Data

Antenna: Alive Tele, Model ATC-BCSH8CIR-UI (or equivalent) antenna with 1° electrical beam tilt. The vertical plane pattern and other exhibits required by the FCC are herein included as Exhibit E-2.

Transmission Line: 30 meters (98.4 ft) of Andrew, Type LDF7-50 1-5/8" 50 ohm foam or equivalent with loss of 0.563 dB/100 feet

Power Data

Transmitter output past filter	1.208 kW	0.820 dBk
Transmission line efficiency/loss	88.7%	-0.52 dB
Input power to the antenna	1.071 kW	0.300 dBk
Antenna power gain, Horizontal Main Lobe	14.4	11.58 dB
Effective Radiated Power, Horizontal	15 kW	11.76 dBk

Elevation Data
(Unchanged)

Antenna Location Site Elevation Above Mean Sea Level	1280.2 meters
Height of Radiation Center Above Ground Level	15 meters 49.2 feet
Overall Tower Height Above Ground Level	23 meters 75.5 feet
Height of Radiation Center Above Mean Sea Level	1295.2 meters 4249.3 feet
Out-of-Channel Emission Mask	Stringent

As indicated above, the transmitter with typical power output of 1.208 kW will deliver 1.071 kW to the input of the antenna. The side-mounted antenna, having a maximum gain of 14.4 dB will produce a directional ERP of 15 kW. Exhibit E-3 provide the coverage from the proposed operation. A coverage map providing the licensed normally protected digital contour of 49.6 dBu in relation to the proposed normally protected contour for the digital facility has been included as Exhibit E-4 of this report.

Other Broadcast Facilities

A brief analysis was completed to determine the presence of stations in the vicinity of the proposed tower site using the September 26, 2017 data contained within the Commission's Consolidated Database System ("CDBS"). Within 0.1 kilometer of the proposed site, there are no authorized FM radio stations; one DTV station, WHSV application and no low-power television or

television translator station authorization. There are no AM directional¹ facilities within 3.22 km of the existing tower. Although no adverse technical effects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

Interference Analysis

A study of predicted interference caused by the proposed W41DT operation on Channel 22 digital operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at <http://www.fcc.gov/oet/tvstudy>. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital TVStudy 2.2 evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using one-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2010 census centroids, all studies are based upon data in the Commission's current Licensing and Management System ("LMS") database update of the FCC's engineering database.

Allocation

The proposed Channel 22 operation of W41DT is met through demonstrations of Longley-Rice prediction methodology (TVStudy 2.2), attached is Table 1 that interference analysis. As demonstrated in Table 1, the proposed low-power television station will not cause any objectionable

¹A non-directional facility (WATW) is located 2.97 km and is located outside the required 0.8 km distance.

interference to any existing or proposed full-service DTV stations or analog or digital LPTV/TV translators. Additionally, the proposed operation includes will install a filter that will meet the stringent mask with attenuation of at least 85 dB in the [1.5 (1164-1215 MHz), L2 (1215-1240 MHz),] and L1 (1559-1610 MHz)] bands in order to comply with Section 74.794(b) of the FCC Rules. The proposed operation is not within the Canadian coordination zone.

FCC Rule, Section 1.1307

The proposed 15 kW directional operation will utilize an Alive Tele, Type ATC-PCSH8 CIR-UI custom antenna (or equivalent) described above with a center of radiation above ground of 15 meters. The antenna will be side-mounted on an existing tower with an overall height of 38 meters above ground. Assuming a downward relative field of 0.055 (85-90°), the proposed digital operation of W41DT on Channel 22 will create a radiofrequency field level of less than 9 uW/cm² at 2 meters above the base of the tower. This level is less than 5% of the Maximum Permissible Exposure (“MPE”) level for the general population and uncontrolled environment, which is less than 1% of the MPE level for an occupational/controlled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high radio frequency field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

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October 6, 2017

Via Mail and E-mail

Ms. Paulette Woody
Interference Office
National Radio Astronomy Observatory
P.O. Box 2
Green Bank, WV 24944

Re: NROZ ID 11128
FCC File No. BLDTT-20110110AAC (CDBS)
per FCC Rule 73.1030(a)(1)
Facility ID 168768

Dear Ms. Woody:

Per your response the following is an update to the September 28, 2017 letter. The maximum ERP has been updated to 15 kW from 10.1 kW.

This request is for the relevant details of a proposed translator operation for which concurrence is requested. This letter is in response to the T-Mobile's request to terminate Channel 41 operation. W41DT is licensed, owned and operated by Virginia Broadcasting, LLC. W41DT seeks displacement of its licensed Channel 41 operation by substitution of Channel 22.

Certain minor modifications are required to accommodate Channel 22. Based on recent discussions with an antenna manufacturer, the latest antenna pattern is provided. The letter [R] denotes a special screen to enhance the suppression in the reduced field value areas as depicted on the pattern. There are no other changes requested. The Federal Communications Commission will be updated through a modification request to its license.

The physical location of the site remains unchanged and is described by the following coordinates:

North Latitude: 38° 09' 55"
West Longitude: 79° 18' 44"

NAD-27

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Ms. Paulette Woody
October 6, 2017
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North Latitude: 38° 09' 55.5"
West Longitude: 79° 18' 43.1"

NAD-83

Current Channel:	41
Current Licensed File No.:	BLDTT-20110110AAC per CDBS
Requested New Channel:	22
Current Application File No.:	To Be Filed
Proposed Antenna:	Alive Telecom, Type ATC-BCSH8C1R-U1
Pattern:	Directional with 1° electrical beam tilt
Site Elevation:	1280.2 meters (4200 feet)
Overall tower height:	23 meters (unchanged)
Height of radiation center above ground:	15 meters (unchanged)
Height of radiation center above mean sea level:	1295.2 meters
Maximum ERP:	15 kW

For many years, this site has been the location of analog translator station, W31CE TX as well as digital translator station W41DT. The site is located on a side of the Elliott Knob Mountain. As documented in the report entitled, "Engineering Report Application for Channel 30 (+) TV Translator Station, Elliott Knob, Virginia, March 1989", Page 7, the shielding loss from this site to the Green Bank National Radio Astronomy Observatory ("NRAO") based on Technical Note 101 methodology is 63 dB. Figure 4 in that report shows the top of Elliott Knob is between this site and NRAO. Inspection of this slight site correction is shown in the October 29, 2009 letter to you and finds a differential from the center of radiation to the peak of Elliott Knob over 50 meters whereas the March 1989 differential showing was approximately 25 meters. Therefore, additional shielding loss from this site results above the previously reported 63 dB.

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It is believed with the suppression by the proposed directional antenna with the proposed 1° electrical beam tilt together with the inherent shielding provided by this site that the National Radio Astronomy Observatory facilities will be protected.

The NRAO's request for additional technical information is being completed.

If there are any questions, please do not hesitate to contact this office.

Thank you.

Sincerely,



Donald G. Everist, P.E.
Consulting Engineer
DC Registration No. 5714

DGE:cc
Enclosures
cc: Karen O'Neil, Director
Harold Wright
Bob Jenkins
Pat Murphy
Peter Tannenwald

ANTENNA MANUFACTURER DATA



Summary

Antenna Specifications

Antenna Type Cavity Slot

Antenna Model ATC-BCSH8C1R-U1

Electrical Specifications

Channel(s) 22

Frequency Range (MHz) 518 - 524

Polarization Horizontal

Horizontal Azimuth Pattern C1R

Directivity 1.80

dB 2.60

Azimuth Peak of Beam 120 °

Elevation Pattern 8

Directivity 8.00

dB 9.03

Electrical Beam Tilt 1.00 °

Antenna Peak Power Gain

Horizontal Gain Power 14.40

Horizontal Gain Ratio 11.64 dBd

Line Type 1-5/8" 50 Ohm Foam Flex Line

Line Length 98 ft

Total Line Loss 0.51 dB Plus 0.50 dB Filter Loss

Effective Radiated Power (ERP) 15 kW

Transmitter Power Output (TPO)

TPO Power 1.30 kW

TPO Ratio 1.13 dBk

Input Type EIA 7/8"

Mechanical Specifications

Mount Type Side Mount

Length of Antenna 12 ft

Center of Radiation 6.00 ft

Radome Diameter TBD

Color White

Calculated Weight Contact Alive Telecom 1 2

Windload (Shear) Contact Alive Telecom 1 2

AZIMUTH PATTERN



TYPE:

Directivity:

Polarization:

Channel:

Location:

Numeric

1.8

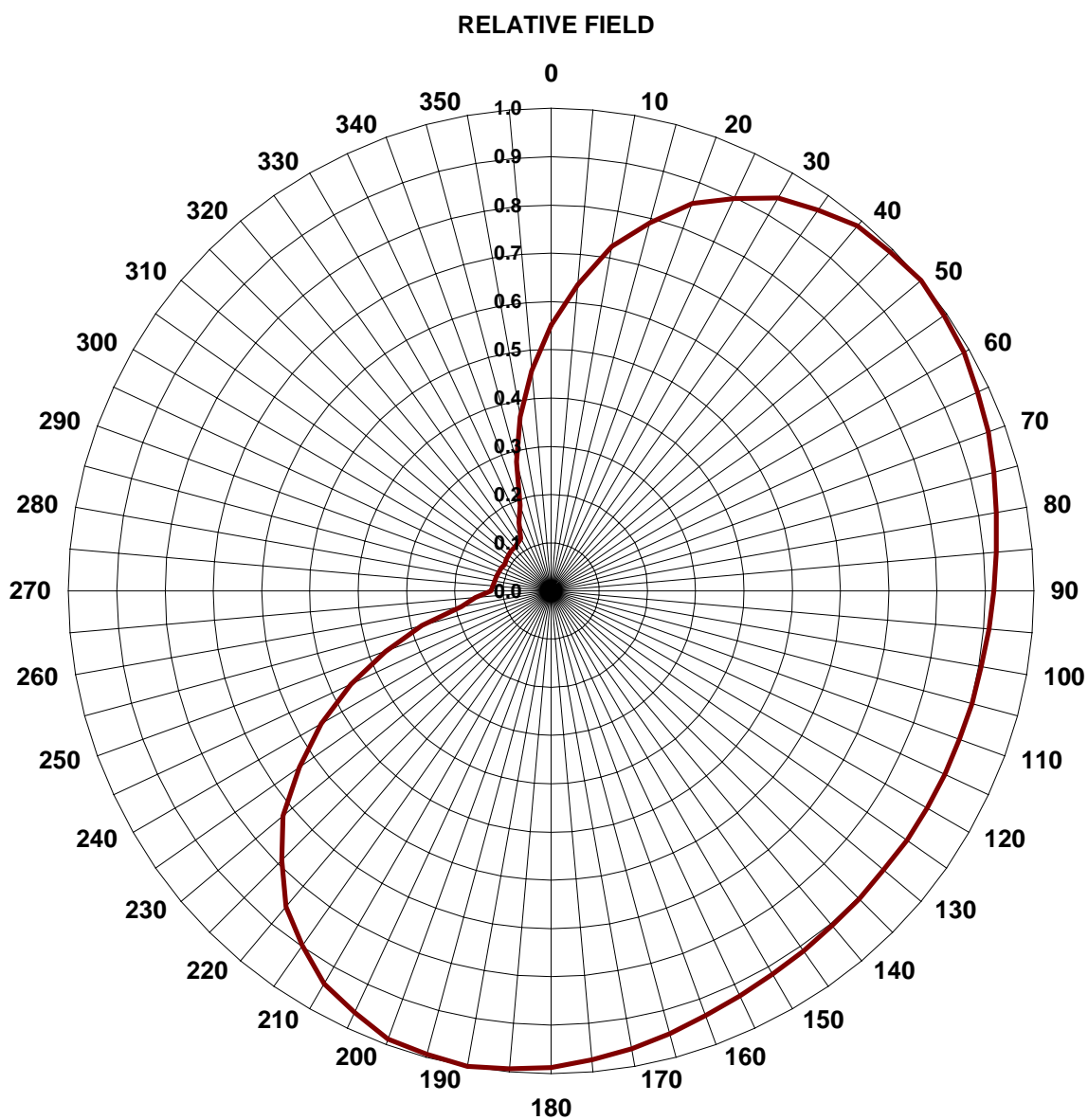
dB

2.60

Horizontal

22

W41DT



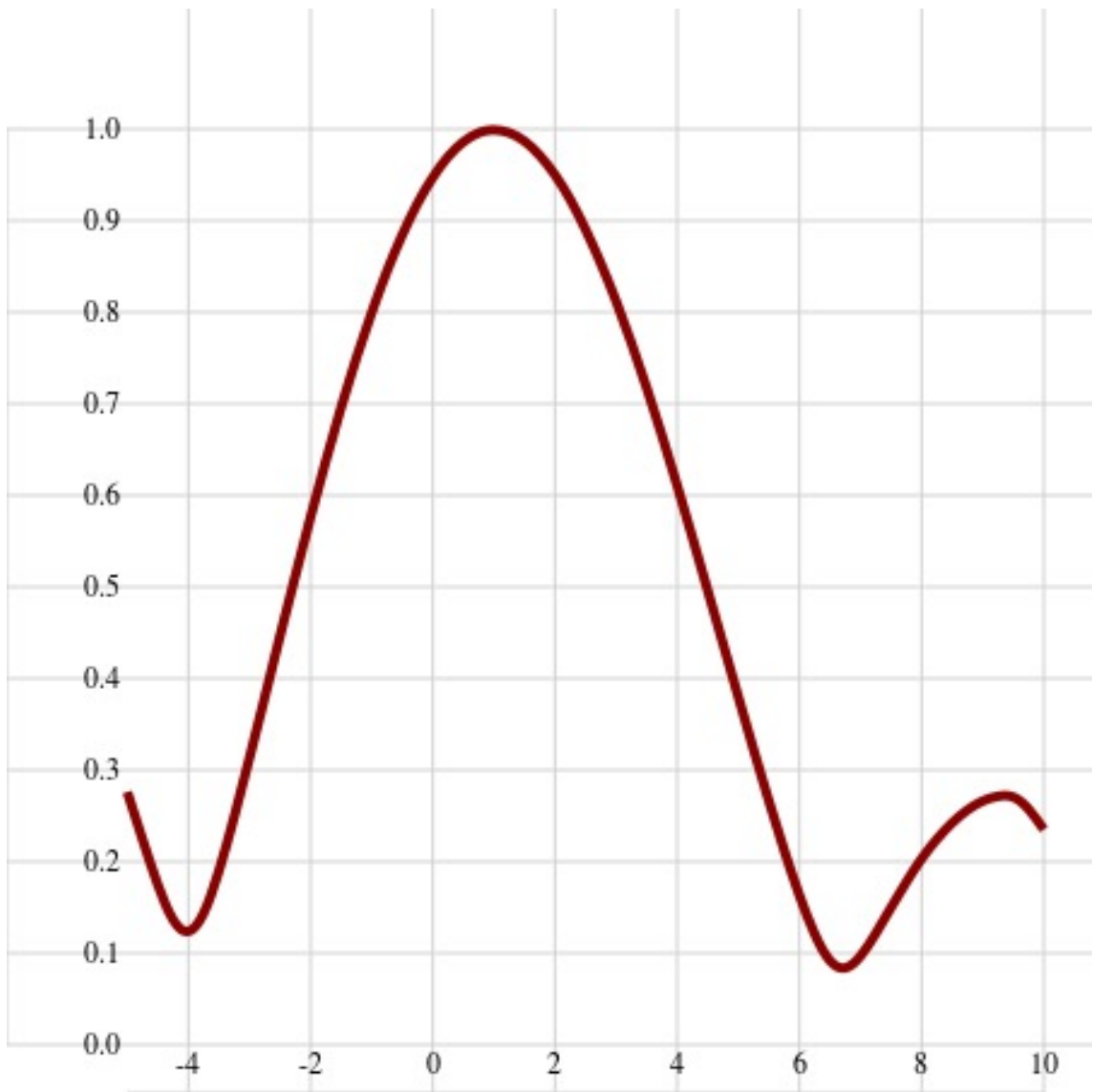
AZIMUTH PATTERN TABULATION

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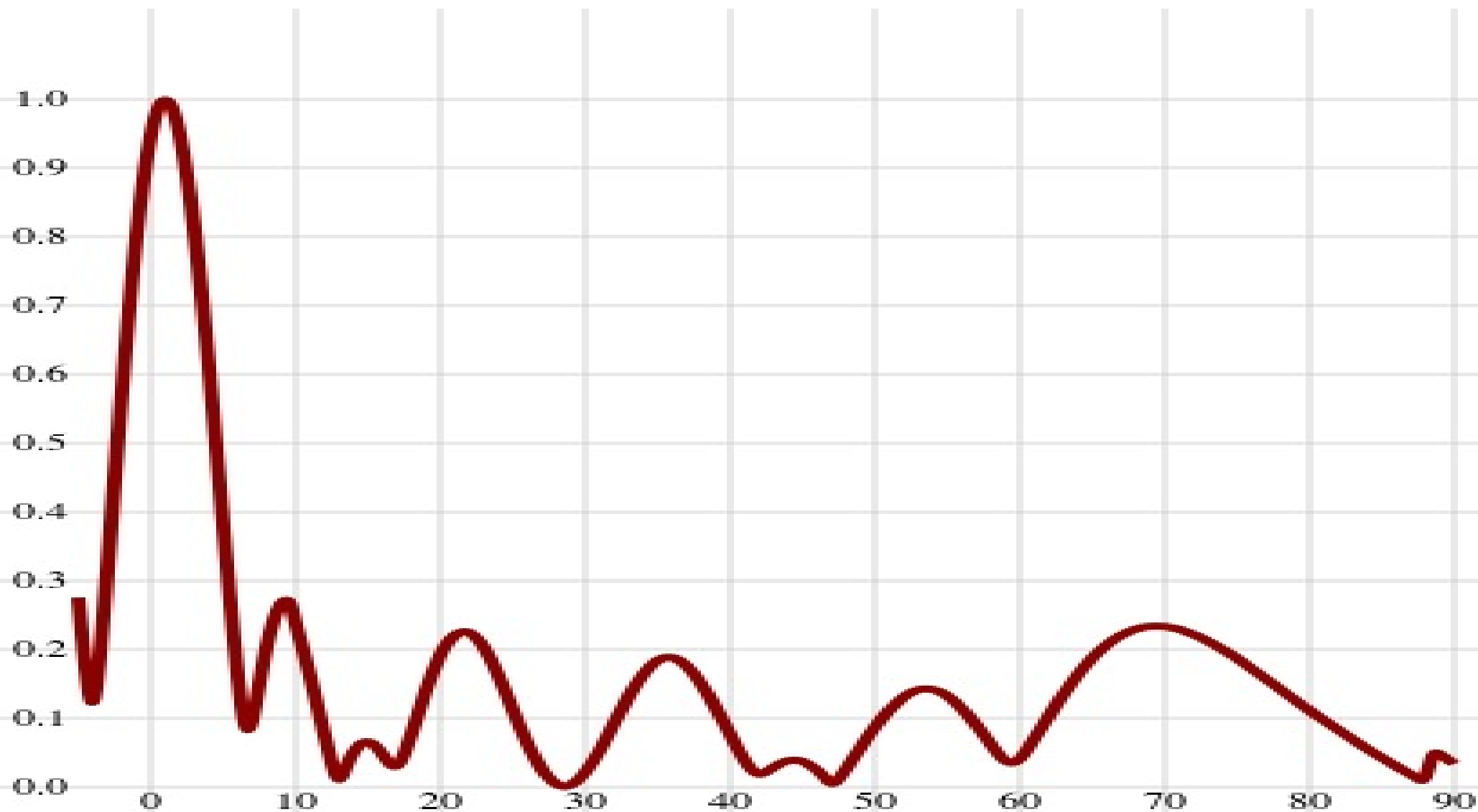


ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.550	-5.19	94	0.913	-0.80	188	0.999	-0.01	282	0.118	-18.59
2	0.550	-5.19	96	0.910	-0.82	190	1.000	0.00	284	0.117	-18.65
4	0.616	-4.21	98	0.907	-0.85	192	0.998	-0.01	286	0.116	-18.70
6	0.659	-3.62	100	0.905	-0.87	194	0.995	-0.04	288	0.115	-18.76
8	0.681	-3.33	102	0.904	-0.87	196	0.992	-0.07	290	0.115	-18.79
10	0.725	-2.79	104	0.903	-0.89	198	0.989	-0.10	292	0.114	-18.83
12	0.725	-2.79	106	0.902	-0.90	200	0.987	-0.11	294	0.113	-18.93
14	0.773	-2.23	108	0.901	-0.91	202	0.981	-0.17	296	0.112	-19.03
16	0.806	-1.88	110	0.900	-0.92	204	0.969	-0.27	298	0.111	-19.12
18	0.838	-1.54	112	0.900	-0.92	206	0.958	-0.38	300	0.110	-19.17
20	0.854	-1.37	114	0.900	-0.92	208	0.946	-0.48	302	0.111	-19.12
22	0.865	-1.26	116	0.899	-0.92	210	0.940	-0.54	304	0.112	-19.03
24	0.886	-1.05	118	0.899	-0.92	212	0.929	-0.64	306	0.113	-18.93
26	0.908	-0.84	120	0.899	-0.92	214	0.908	-0.84	308	0.114	-18.83
28	0.929	-0.64	122	0.899	-0.92	216	0.886	-1.05	310	0.115	-18.79
30	0.940	-0.54	124	0.899	-0.92	218	0.865	-1.26	312	0.115	-18.76
32	0.946	-0.48	126	0.900	-0.92	220	0.854	-1.37	314	0.116	-18.70
34	0.958	-0.38	128	0.900	-0.92	222	0.838	-1.54	316	0.117	-18.65
36	0.969	-0.27	130	0.900	-0.92	224	0.806	-1.88	318	0.118	-18.59
38	0.981	-0.17	132	0.901	-0.91	226	0.773	-2.23	320	0.118	-18.56
40	0.987	-0.11	134	0.902	-0.90	228	0.741	-2.60	322	0.119	-18.51
42	0.989	-0.10	136	0.903	-0.89	230	0.725	-2.79	324	0.120	-18.40
44	0.992	-0.07	138	0.904	-0.88	232	0.703	-3.06	326	0.122	-18.29
46	0.995	-0.04	140	0.905	-0.87	234	0.659	-3.62	328	0.123	-18.18
48	0.998	-0.01	142	0.907	-0.85	236	0.616	-4.21	330	0.124	-18.13
50	1.000	0.00	144	0.910	-0.82	238	0.572	-4.85	332	0.132	-17.58
52	0.999	-0.01	146	0.913	-0.80	240	0.550	-5.19	334	0.148	-16.57
54	0.996	-0.04	148	0.916	-0.77	242	0.527	-5.57	336	0.165	-15.67
56	0.993	-0.07	150	0.917	-0.75	244	0.481	-6.36	338	0.181	-14.85
58	0.990	-0.09	152	0.919	-0.73	246	0.434	-7.24	340	0.189	-14.47
60	0.988	-0.10	154	0.924	-0.69	248	0.388	-8.22	342	0.211	-13.51
62	0.985	-0.13	156	0.929	-0.64	250	0.365	-8.75	344	0.255	-11.87
64	0.979	-0.19	158	0.934	-0.60	252	0.343	-9.29	346	0.299	-10.49
66	0.972	-0.24	160	0.936	-0.57	254	0.299	-10.49	348	0.343	-9.29
68	0.966	-0.30	162	0.939	-0.54	256	0.255	-11.87	350	0.365	-8.75
70	0.963	-0.33	164	0.946	-0.48	258	0.211	-13.51	352	0.388	-8.22
72	0.960	-0.36	166	0.953	-0.42	260	0.189	-14.47	354	0.434	-7.24
74	0.953	-0.42	168	0.960	-0.36	262	0.181	-14.85	356	0.481	-6.36
76	0.946	-0.48	170	0.963	-0.33	264	0.165	-15.67	358	0.527	-5.57
78	0.939	-0.54	172	0.966	-0.30	266	0.148	-16.57	360	0.550	-5.19
80	0.936	-0.57	174	0.972	-0.24	268	0.132	-17.58			
82	0.934	-0.60	176	0.979	-0.19	270	0.124	-18.13			
84	0.929	-0.64	178	0.985	-0.13	272	0.123	-18.18			
86	0.924	-0.69	180	0.988	-0.10	274	0.122	-18.29			
88	0.919	-0.73	182	0.990	-0.09	276	0.120	-18.40			
90	0.917	-0.75	184	0.993	-0.07	278	0.119	-18.51			
92	0.916	-0.77	186	0.996	-0.04	280	0.118	-18.56			

Elevation pattern -5 to 10



Elevation pattern -5 to 90



Elevation Pattern Tabulation

-5 to 10 in 0.25 increments, 10 to 90 in 0.50 increments

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.276	-11.18	8.75	0.257	-11.80	35.00	0.185	-14.66	62.50	0.120	-18.42
-4.75	0.224	-13.00	9.00	0.267	-11.47	35.50	0.189	-14.47	63.00	0.135	-17.39
-4.50	0.173	-15.24	9.25	0.272	-11.31	36.00	0.189	-14.47	63.50	0.150	-16.48
-4.25	0.132	-17.59	9.50	0.273	-11.28	36.50	0.185	-14.66	64.00	0.164	-15.70
-4.00	0.118	-18.56	9.75	0.259	-11.73	37.00	0.177	-15.04	64.50	0.177	-15.04
-3.75	0.139	-17.14	10.00	0.235	-12.58	37.50	0.166	-15.60	65.00	0.188	-14.52
-3.50	0.188	-14.52	10.50	0.201	-13.94	38.00	0.151	-16.42	65.50	0.198	-14.07
-3.25	0.248	-12.11	11.00	0.161	-15.86	38.50	0.134	-17.46	66.00	0.207	-13.68
-3.00	0.313	-10.09	11.50	0.118	-18.56	39.00	0.116	-18.71	66.50	0.215	-13.35
-2.75	0.379	-8.43	12.00	0.075	-22.50	39.50	0.096	-20.35	67.00	0.221	-13.11
-2.50	0.447	-6.99	12.50	0.034	-29.37	40.00	0.076	-22.38	67.50	0.226	-12.92
-2.25	0.512	-5.81	13.00	0.001	-60.00	40.50	0.056	-25.04	68.00	0.230	-12.77
-2.00	0.577	-4.78	13.50	0.031	-30.17	41.00	0.038	-28.40	68.50	0.233	-12.65
-1.75	0.638	-3.90	14.00	0.052	-25.68	41.50	0.024	-32.40	69.00	0.234	-12.62
-1.50	0.697	-3.14	14.50	0.064	-23.88	42.00	0.017	-35.39	69.50	0.234	-12.62
-1.25	0.751	-2.49	15.00	0.067	-23.48	42.50	0.022	-33.15	70.00	0.234	-12.62
-1.00	0.800	-1.94	15.50	0.061	-24.29	43.00	0.029	-30.75	70.50	0.232	-12.69
-0.75	0.846	-1.45	16.00	0.048	-26.38	43.50	0.035	-29.12	71.00	0.230	-12.77
-0.50	0.885	-1.06	16.50	0.032	-29.90	44.00	0.039	-28.18	71.50	0.226	-12.92
-0.25	0.920	-0.72	17.00	0.027	-31.37	44.50	0.040	-27.96	72.00	0.222	-13.07
0.00	0.948	-0.46	17.50	0.047	-26.56	45.00	0.038	-28.40	72.50	0.218	-13.23
0.25	0.971	-0.26	18.00	0.077	-22.27	45.50	0.032	-29.90	73.00	0.212	-13.47
0.50	0.987	-0.11	18.50	0.109	-19.25	46.00	0.025	-32.04	73.50	0.207	-13.68
0.75	0.997	-0.03	19.00	0.141	-17.02	46.50	0.015	-36.48	74.00	0.200	-13.98
1.00	1.000	0.00	19.50	0.169	-15.44	47.00	0.002	-53.98	74.50	0.194	-14.24
1.25	0.997	-0.03	20.00	0.193	-14.29	47.50	0.011	-39.17	75.00	0.187	-14.56
1.50	0.988	-0.10	20.50	0.211	-13.51	48.00	0.026	-31.70	75.50	0.180	-14.89
1.75	0.972	-0.25	21.00	0.222	-13.07	48.50	0.042	-27.54	76.00	0.172	-15.29
2.00	0.951	-0.44	21.50	0.227	-12.88	49.00	0.057	-24.88	76.50	0.165	-15.65
2.25	0.924	-0.69	22.00	0.226	-12.92	49.50	0.073	-22.73	77.00	0.157	-16.08
2.50	0.891	-1.00	22.50	0.217	-13.27	50.00	0.087	-21.21	77.50	0.150	-16.48
2.75	0.854	-1.37	23.00	0.204	-13.81	50.50	0.101	-19.91	78.00	0.142	-16.95
3.00	0.813	-1.80	23.50	0.185	-14.66	51.00	0.113	-18.94	78.50	0.134	-17.46
3.25	0.767	-2.30	24.00	0.163	-15.76	51.50	0.123	-18.20	79.00	0.127	-17.92
3.50	0.718	-2.88	24.50	0.138	-17.20	52.00	0.132	-17.59	79.50	0.119	-18.49
3.75	0.666	-3.53	25.00	0.113	-18.94	52.50	0.138	-17.20	80.00	0.112	-19.02
4.00	0.611	-4.28	25.50	0.087	-21.21	53.00	0.142	-16.95	80.50	0.104	-19.66
4.25	0.554	-5.13	26.00	0.064	-23.88	53.50	0.143	-16.89	81.00	0.097	-20.26
4.50	0.496	-6.09	26.50	0.043	-27.33	54.00	0.142	-16.95	81.50	0.090	-20.92
4.75	0.438	-7.17	27.00	0.025	-32.04	54.50	0.139	-17.14	82.00	0.083	-21.62
5.00	0.380	-8.40	27.50	0.012	-38.42	55.00	0.133	-17.52	82.50	0.076	-22.38
5.25	0.322	-9.84	28.00	0.004	-47.96	55.50	0.125	-18.06	83.00	0.069	-23.22
5.50	0.266	-11.50	28.50	0.000	inf	56.00	0.115	-18.79	83.50	0.062	-24.15
5.75	0.212	-13.47	29.00	0.003	-50.46	56.50	0.103	-19.74	84.00	0.056	-25.04
6.00	0.162	-15.81	29.50	0.010	-40.00	57.00	0.090	-20.92	84.50	0.049	-26.20
6.25	0.119	-18.49	30.00	0.021	-33.56	57.50	0.076	-22.38	85.00	0.043	-27.33
6.50	0.088	-21.11	30.50	0.036	-28.87	58.00	0.062	-24.15	85.50	0.037	-28.64
6.75	0.080	-21.94	31.00	0.053	-25.51	58.50	0.048	-26.38	86.00	0.030	-30.46
7.00	0.095	-20.45	31.50	0.072	-22.85	59.00	0.037	-28.64	86.50	0.024	-32.40
7.25	0.121	-18.34	32.00	0.093	-20.63	59.50	0.034	-29.37	87.00	0.018	-34.89
7.50	0.150	-16.48	32.50	0.113	-18.94	60.00	0.040	-27.96	87.50	0.012	-38.42
7.75	0.178	-14.99	33.00	0.132	-17.59	60.50	0.054	-25.35	88.00	0.006	-44.44
8.00	0.204	-13.81	33.50	0.150	-16.48	61.00	0.070	-23.10	88.50	0.055	-25.19
8.25	0.225	-12.96	34.00	0.165	-15.65	61.50	0.086	-21.31	89.00	0.048	-26.38
8.50	0.243	-12.29	34.50	0.177	-15.04	62.00	0.103	-19.74	89.50	0.041	-27.74
8.75	0.257	-11.80	35.00	0.185	-14.66	62.50	0.120	-18.42	90.00	0.034	-29.37

INFORMATION
ABSTRACTED FROM
OCTOBER 29, 2009 LETTER TO
NATIONAL RADIO ASTRONOMY OBSERVATORY

ELEVATION IN FEET AMSL

K&E 10 X 10 TO 1/2 INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

4450
4400
4350
4300
4275
4250
4200
4150
4100

500

0

500

1000

1500

DISTANCE IN FEET

ELLIOTT KNOB

23 meters (75')
overall above ground

ANTENNA

BASED ON 7 1/2' QUADRANGLE

N 300° E
TOWARD GREEN BANK NAVAL RADIO ASTRONOMY SITE
OCTOBER 2009

COHEN, DIPPELL AND EVERIST, P. C.
CONSULTING ENGINEERS
RADIO-TELEVISION
1420 N STREET, N.W.
SUITE ONE
WASHINGTON, D. C. 20005
(202) 898-0111

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PRESIDENT
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THOMAS G. LOCKE
CONSULTANT
ROBERT P. ECKERT, PE

JULIUS COHEN
(1913-1993)
—
RALPH E. DIPPELL, JR.
(1922-1992)
—
FACSIMILE
(202) 898-0895
E-MAIL:
CDEPC@COMCAST.NET

September 28, 2017

Via Priority Mail Express

Ms. Karen O'Neil, Director
Interference Office
National Radio Astronomy Observatory
P.O. Box 2
Green Bank, WV 24944

Re: FCC File No. BLDTT-20110110AAC (CDBS)
per FCC Rule 73.1030(a)(1)
Facility ID 168768

Dear Ms. O'Neil:

This request is for the relevant details of a proposed translator operation for which concurrence is requested. This letter is in response to the T-Mobile's request to terminate Channel 41 operation. W41DT is licensed, owned and operated by Virginia Broadcasting, LLC. W41DT seeks displacement of its licensed Channel 41 operation by substitution of Channel 22 .

Certain minor modifications are required to accommodate Channel 22. Based on recent discussions with an antenna manufacturer, the latest antenna pattern is provided. There are no other changes requested except the ERP is reduced in accordance with current FCC Rules. The Federal Communications Commission will be updated through a modification request to its license.

The physical location of the site remains unchanged and is described by the following coordinates:

North Latitude: 38° 09' 55"
West Longitude: 79° 18' 44"

NAD-27

North Latitude: 38° 09' 55.5"
West Longitude: 79° 18' 43.1"

NAD-83

COHEN, DIPPELL AND EVERIST, P. C.

Ms. Karen O'Neil
September 28, 2017
Page 2

Current Channel:	41
Current Licensed File No.:	BLDTT-20110110AAC per CDBS
Requested New Channel:	22
Current Application File No.:	To Be Filed
Proposed Antenna:	Alive Telecom, Type ATC-BCSH8C1R-U1
Pattern:	Directional with 1° electrical beam tilt
Site Elevation:	1280.2 meters (4200 feet)
Overall tower height:	23 meters (unchanged)
Height of radiation center above ground:	15 meters (unchanged)
Height of radiation center above mean sea level:	1295.2 meters
Maximum ERP:	10.1 kW*

*per current FCC Rules

For many years, this site has been the location of analog translator station, W31CE TX as well as digital translator station W41DT. The site is located on a side of the Elliott Knob Mountain. As documented in the report entitled, "Engineering Report Application for Channel 30 (+) TV Translator Station, Elliott Knob, Virginia, March 1989", Page 7, the shielding loss from this site to the Green Bank National Radio Astronomy Observatory ("NRAO") based on Technical Note 101 methodology is 63 dB. Figure 4 in that report shows the top of Elliott Knob is between this site and NRAO. Inspection of this slight site correction is shown in the October 29, 2009 letter to Ms. Paulette Woody at NRAO and finds a differential from the center of radiation to the peak of Elliott Knob over 50 meters whereas the March 1989 differential showing was approximately 25 meters. Therefore, additional shielding loss from this site results above the previously reported 63 dB.

It is believed with the suppression by the proposed directional antenna with the proposed 1° electrical beam tilt together with the inherent shielding provided by this site that the National Radio Astronomy Observatory facilities will be protected.

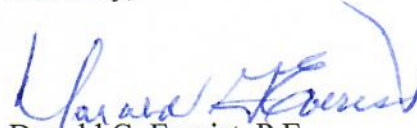
COHEN, DIPPELL AND EVERIST, P. C.

Ms. Karen O'Neil
September 28, 2017
Page 3

If there are any questions, please do not hesitate to contact this office.

Thank you.

Sincerely,



Donald G. Everist, P.E.
Consulting Engineer
DC Registration No. 5714

DGE:cc
Enclosures
cc: Harold Wright
Bob Jenkins
Pat Murphy
Peter Tannenwald

EXHIBIT E-1

ABSTRACTED FROM

OCTOBER 29, 2009 LETTER TO

NATIONAL RADIO ASTRONOMY OBSERVATORY

ELEVATION IN FEET AMSL

K&E 10 X 10 TO 1/2 INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

4450
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4275
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4200
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500

0

500

1000

1500

DISTANCE IN FEET

ELLIOTT KNOB

23 meters (75')
overall above ground

ANTENNA

BASED ON 7 1/2' QUADRANGLE

N 300° E
TOWARD GREEN BANK NAVAL RADIO ASTRONOMY SITE
OCTOBER 2009

EXHIBIT E-2

ANTENNA MANUFACTURER DATA



Summary

Antenna Specifications

Antenna Type Cavity Slot

Antenna Model ATC-BCSH8C1R-U1

Electrical Specifications

Channel(s) 22

Frequency Range (MHz) 518 - 524

Polarization Horizontal

Horizontal Azimuth Pattern C1R

Directivity 1.80

dB 2.60

Azimuth Peak of Beam 120 °

Elevation Pattern 8

Directivity 8.00

dB 9.03

Electrical Beam Tilt 1.00 °

Antenna Peak Power Gain

Horizontal Gain Power 14.40

Horizontal Gain Ratio 11.64 dBd

Line Type 1-5/8" 50 Ohm Foam Flex Line

Line Length 98 ft

Total Line Loss 0.51 dB Plus 0.50 dB Filter Loss

Effective Radiated Power (ERP) 15 kW

Transmitter Power Output (TPO)

TPO Power 1.30 kW

TPO Ratio 1.13 dBk

Input Type EIA 7/8"

Mechanical Specifications

Mount Type Side Mount

Length of Antenna 12 ft

Center of Radiation 6.00 ft

Radome Diameter TBD

Color White

Calculated Weight Contact Alive Telecom 1 2

Windload (Shear) Contact Alive Telecom 1 2

AZIMUTH PATTERN



TYPE:

Directivity:

Polarization:

Channel:

Location:

Numeric

1.8

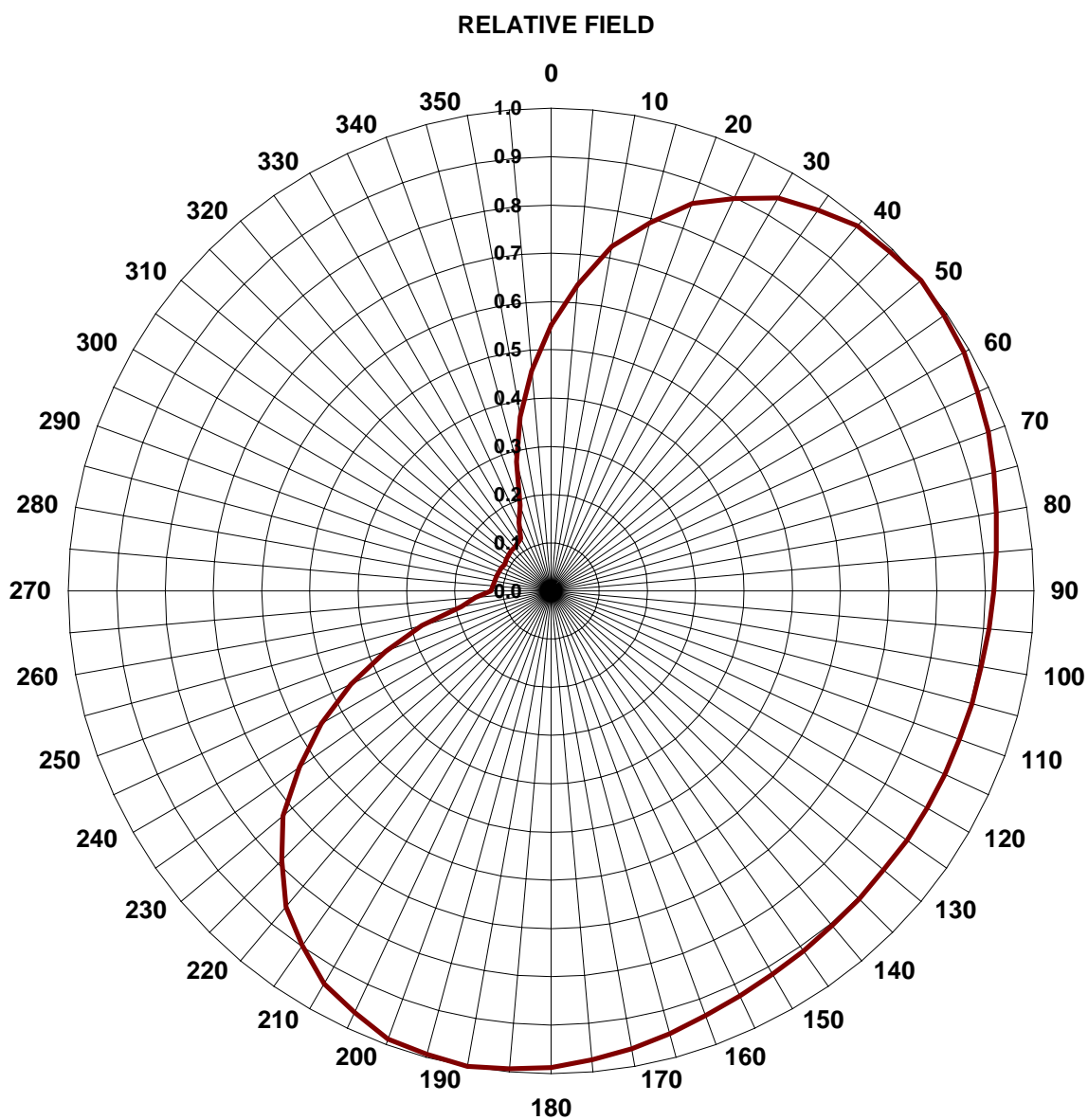
dB

2.60

Horizontal

22

W41DT



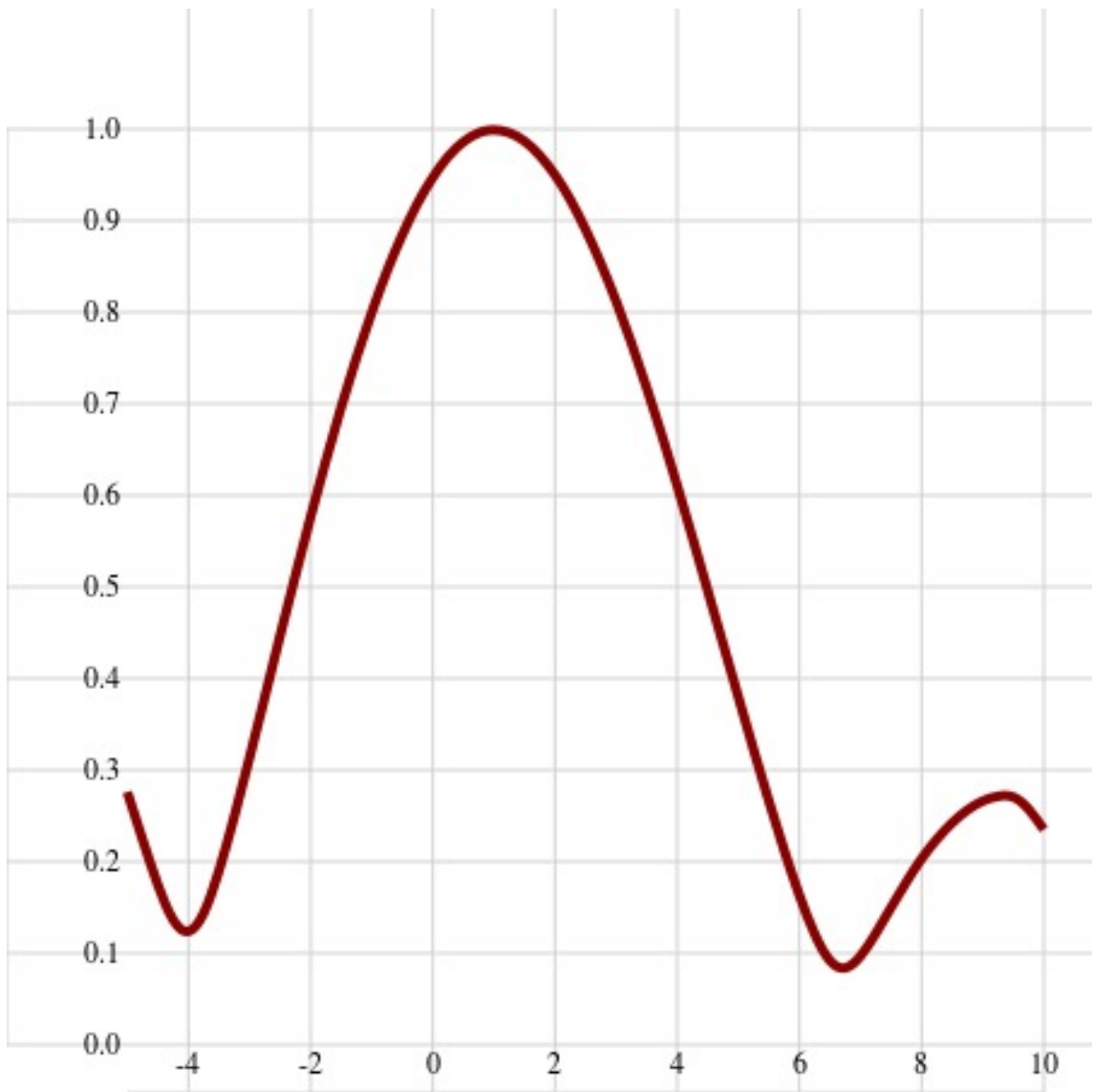
AZIMUTH PATTERN TABULATION

TYPE:

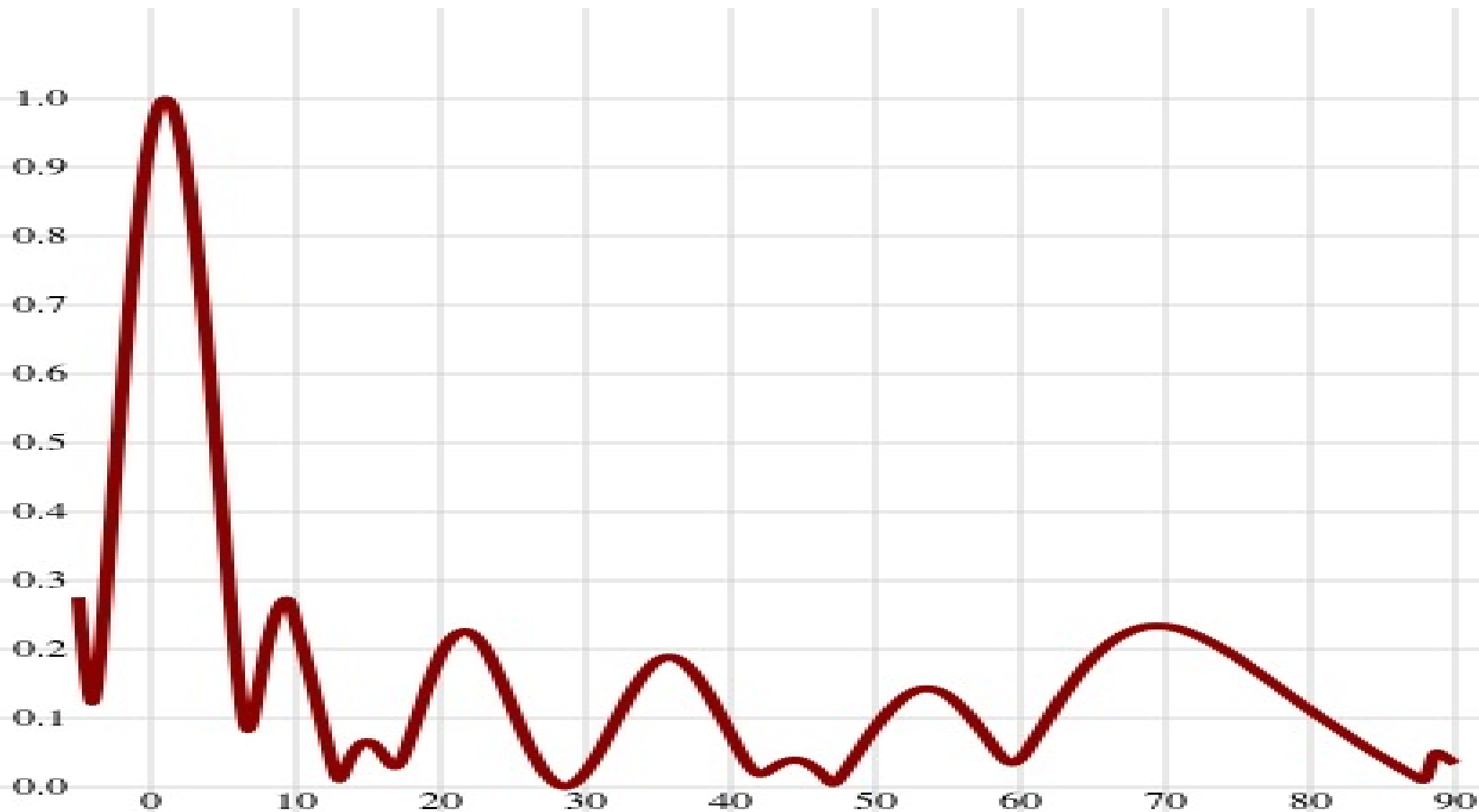


ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.550	-5.19	94	0.913	-0.80	188	0.999	-0.01	282	0.118	-18.59
2	0.550	-5.19	96	0.910	-0.82	190	1.000	0.00	284	0.117	-18.65
4	0.616	-4.21	98	0.907	-0.85	192	0.998	-0.01	286	0.116	-18.70
6	0.659	-3.62	100	0.905	-0.87	194	0.995	-0.04	288	0.115	-18.76
8	0.681	-3.33	102	0.904	-0.87	196	0.992	-0.07	290	0.115	-18.79
10	0.725	-2.79	104	0.903	-0.89	198	0.989	-0.10	292	0.114	-18.83
12	0.725	-2.79	106	0.902	-0.90	200	0.987	-0.11	294	0.113	-18.93
14	0.773	-2.23	108	0.901	-0.91	202	0.981	-0.17	296	0.112	-19.03
16	0.806	-1.88	110	0.900	-0.92	204	0.969	-0.27	298	0.111	-19.12
18	0.838	-1.54	112	0.900	-0.92	206	0.958	-0.38	300	0.110	-19.17
20	0.854	-1.37	114	0.900	-0.92	208	0.946	-0.48	302	0.111	-19.12
22	0.865	-1.26	116	0.899	-0.92	210	0.940	-0.54	304	0.112	-19.03
24	0.886	-1.05	118	0.899	-0.92	212	0.929	-0.64	306	0.113	-18.93
26	0.908	-0.84	120	0.899	-0.92	214	0.908	-0.84	308	0.114	-18.83
28	0.929	-0.64	122	0.899	-0.92	216	0.886	-1.05	310	0.115	-18.79
30	0.940	-0.54	124	0.899	-0.92	218	0.865	-1.26	312	0.115	-18.76
32	0.946	-0.48	126	0.900	-0.92	220	0.854	-1.37	314	0.116	-18.70
34	0.958	-0.38	128	0.900	-0.92	222	0.838	-1.54	316	0.117	-18.65
36	0.969	-0.27	130	0.900	-0.92	224	0.806	-1.88	318	0.118	-18.59
38	0.981	-0.17	132	0.901	-0.91	226	0.773	-2.23	320	0.118	-18.56
40	0.987	-0.11	134	0.902	-0.90	228	0.741	-2.60	322	0.119	-18.51
42	0.989	-0.10	136	0.903	-0.89	230	0.725	-2.79	324	0.120	-18.40
44	0.992	-0.07	138	0.904	-0.88	232	0.703	-3.06	326	0.122	-18.29
46	0.995	-0.04	140	0.905	-0.87	234	0.659	-3.62	328	0.123	-18.18
48	0.998	-0.01	142	0.907	-0.85	236	0.616	-4.21	330	0.124	-18.13
50	1.000	0.00	144	0.910	-0.82	238	0.572	-4.85	332	0.132	-17.58
52	0.999	-0.01	146	0.913	-0.80	240	0.550	-5.19	334	0.148	-16.57
54	0.996	-0.04	148	0.916	-0.77	242	0.527	-5.57	336	0.165	-15.67
56	0.993	-0.07	150	0.917	-0.75	244	0.481	-6.36	338	0.181	-14.85
58	0.990	-0.09	152	0.919	-0.73	246	0.434	-7.24	340	0.189	-14.47
60	0.988	-0.10	154	0.924	-0.69	248	0.388	-8.22	342	0.211	-13.51
62	0.985	-0.13	156	0.929	-0.64	250	0.365	-8.75	344	0.255	-11.87
64	0.979	-0.19	158	0.934	-0.60	252	0.343	-9.29	346	0.299	-10.49
66	0.972	-0.24	160	0.936	-0.57	254	0.299	-10.49	348	0.343	-9.29
68	0.966	-0.30	162	0.939	-0.54	256	0.255	-11.87	350	0.365	-8.75
70	0.963	-0.33	164	0.946	-0.48	258	0.211	-13.51	352	0.388	-8.22
72	0.960	-0.36	166	0.953	-0.42	260	0.189	-14.47	354	0.434	-7.24
74	0.953	-0.42	168	0.960	-0.36	262	0.181	-14.85	356	0.481	-6.36
76	0.946	-0.48	170	0.963	-0.33	264	0.165	-15.67	358	0.527	-5.57
78	0.939	-0.54	172	0.966	-0.30	266	0.148	-16.57	360	0.550	-5.19
80	0.936	-0.57	174	0.972	-0.24	268	0.132	-17.58			
82	0.934	-0.60	176	0.979	-0.19	270	0.124	-18.13			
84	0.929	-0.64	178	0.985	-0.13	272	0.123	-18.18			
86	0.924	-0.69	180	0.988	-0.10	274	0.122	-18.29			
88	0.919	-0.73	182	0.990	-0.09	276	0.120	-18.40			
90	0.917	-0.75	184	0.993	-0.07	278	0.119	-18.51			
92	0.916	-0.77	186	0.996	-0.04	280	0.118	-18.56			

Elevation pattern -5 to 10



Elevation pattern -5 to 90



Elevation Pattern Tabulation

-5 to 10 in 0.25 increments, 10 to 90 in 0.50 increments

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5.00	0.276	-11.18	8.75	0.257	-11.80	35.00	0.185	-14.66	62.50	0.120	-18.42
-4.75	0.224	-13.00	9.00	0.267	-11.47	35.50	0.189	-14.47	63.00	0.135	-17.39
-4.50	0.173	-15.24	9.25	0.272	-11.31	36.00	0.189	-14.47	63.50	0.150	-16.48
-4.25	0.132	-17.59	9.50	0.273	-11.28	36.50	0.185	-14.66	64.00	0.164	-15.70
-4.00	0.118	-18.56	9.75	0.259	-11.73	37.00	0.177	-15.04	64.50	0.177	-15.04
-3.75	0.139	-17.14	10.00	0.235	-12.58	37.50	0.166	-15.60	65.00	0.188	-14.52
-3.50	0.188	-14.52	10.50	0.201	-13.94	38.00	0.151	-16.42	65.50	0.198	-14.07
-3.25	0.248	-12.11	11.00	0.161	-15.86	38.50	0.134	-17.46	66.00	0.207	-13.68
-3.00	0.313	-10.09	11.50	0.118	-18.56	39.00	0.116	-18.71	66.50	0.215	-13.35
-2.75	0.379	-8.43	12.00	0.075	-22.50	39.50	0.096	-20.35	67.00	0.221	-13.11
-2.50	0.447	-6.99	12.50	0.034	-29.37	40.00	0.076	-22.38	67.50	0.226	-12.92
-2.25	0.512	-5.81	13.00	0.001	-60.00	40.50	0.056	-25.04	68.00	0.230	-12.77
-2.00	0.577	-4.78	13.50	0.031	-30.17	41.00	0.038	-28.40	68.50	0.233	-12.65
-1.75	0.638	-3.90	14.00	0.052	-25.68	41.50	0.024	-32.40	69.00	0.234	-12.62
-1.50	0.697	-3.14	14.50	0.064	-23.88	42.00	0.017	-35.39	69.50	0.234	-12.62
-1.25	0.751	-2.49	15.00	0.067	-23.48	42.50	0.022	-33.15	70.00	0.234	-12.62
-1.00	0.800	-1.94	15.50	0.061	-24.29	43.00	0.029	-30.75	70.50	0.232	-12.69
-0.75	0.846	-1.45	16.00	0.048	-26.38	43.50	0.035	-29.12	71.00	0.230	-12.77
-0.50	0.885	-1.06	16.50	0.032	-29.90	44.00	0.039	-28.18	71.50	0.226	-12.92
-0.25	0.920	-0.72	17.00	0.027	-31.37	44.50	0.040	-27.96	72.00	0.222	-13.07
0.00	0.948	-0.46	17.50	0.047	-26.56	45.00	0.038	-28.40	72.50	0.218	-13.23
0.25	0.971	-0.26	18.00	0.077	-22.27	45.50	0.032	-29.90	73.00	0.212	-13.47
0.50	0.987	-0.11	18.50	0.109	-19.25	46.00	0.025	-32.04	73.50	0.207	-13.68
0.75	0.997	-0.03	19.00	0.141	-17.02	46.50	0.015	-36.48	74.00	0.200	-13.98
1.00	1.000	0.00	19.50	0.169	-15.44	47.00	0.002	-53.98	74.50	0.194	-14.24
1.25	0.997	-0.03	20.00	0.193	-14.29	47.50	0.011	-39.17	75.00	0.187	-14.56
1.50	0.988	-0.10	20.50	0.211	-13.51	48.00	0.026	-31.70	75.50	0.180	-14.89
1.75	0.972	-0.25	21.00	0.222	-13.07	48.50	0.042	-27.54	76.00	0.172	-15.29
2.00	0.951	-0.44	21.50	0.227	-12.88	49.00	0.057	-24.88	76.50	0.165	-15.65
2.25	0.924	-0.69	22.00	0.226	-12.92	49.50	0.073	-22.73	77.00	0.157	-16.08
2.50	0.891	-1.00	22.50	0.217	-13.27	50.00	0.087	-21.21	77.50	0.150	-16.48
2.75	0.854	-1.37	23.00	0.204	-13.81	50.50	0.101	-19.91	78.00	0.142	-16.95
3.00	0.813	-1.80	23.50	0.185	-14.66	51.00	0.113	-18.94	78.50	0.134	-17.46
3.25	0.767	-2.30	24.00	0.163	-15.76	51.50	0.123	-18.20	79.00	0.127	-17.92
3.50	0.718	-2.88	24.50	0.138	-17.20	52.00	0.132	-17.59	79.50	0.119	-18.49
3.75	0.666	-3.53	25.00	0.113	-18.94	52.50	0.138	-17.20	80.00	0.112	-19.02
4.00	0.611	-4.28	25.50	0.087	-21.21	53.00	0.142	-16.95	80.50	0.104	-19.66
4.25	0.554	-5.13	26.00	0.064	-23.88	53.50	0.143	-16.89	81.00	0.097	-20.26
4.50	0.496	-6.09	26.50	0.043	-27.33	54.00	0.142	-16.95	81.50	0.090	-20.92
4.75	0.438	-7.17	27.00	0.025	-32.04	54.50	0.139	-17.14	82.00	0.083	-21.62
5.00	0.380	-8.40	27.50	0.012	-38.42	55.00	0.133	-17.52	82.50	0.076	-22.38
5.25	0.322	-9.84	28.00	0.004	-47.96	55.50	0.125	-18.06	83.00	0.069	-23.22
5.50	0.266	-11.50	28.50	0.000	inf	56.00	0.115	-18.79	83.50	0.062	-24.15
5.75	0.212	-13.47	29.00	0.003	-50.46	56.50	0.103	-19.74	84.00	0.056	-25.04
6.00	0.162	-15.81	29.50	0.010	-40.00	57.00	0.090	-20.92	84.50	0.049	-26.20
6.25	0.119	-18.49	30.00	0.021	-33.56	57.50	0.076	-22.38	85.00	0.043	-27.33
6.50	0.088	-21.11	30.50	0.036	-28.87	58.00	0.062	-24.15	85.50	0.037	-28.64
6.75	0.080	-21.94	31.00	0.053	-25.51	58.50	0.048	-26.38	86.00	0.030	-30.46
7.00	0.095	-20.45	31.50	0.072	-22.85	59.00	0.037	-28.64	86.50	0.024	-32.40
7.25	0.121	-18.34	32.00	0.093	-20.63	59.50	0.034	-29.37	87.00	0.018	-34.89
7.50	0.150	-16.48	32.50	0.113	-18.94	60.00	0.040	-27.96	87.50	0.012	-38.42
7.75	0.178	-14.99	33.00	0.132	-17.59	60.50	0.054	-25.35	88.00	0.006	-44.44
8.00	0.204	-13.81	33.50	0.150	-16.48	61.00	0.070	-23.10	88.50	0.055	-25.19
8.25	0.225	-12.96	34.00	0.165	-15.65	61.50	0.086	-21.31	89.00	0.048	-26.38
8.50	0.243	-12.29	34.50	0.177	-15.04	62.00	0.103	-19.74	89.50	0.041	-27.74
8.75	0.257	-11.80	35.00	0.185	-14.66	62.50	0.120	-18.42	90.00	0.034	-29.37

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I
ALLOCATION STUDY
W41DT, STAUNTON, VIRGINIA
OCTOBER 2017

tvstudy v2.2.3 (Dxtpx3)
Database: localhost, Study: W41DT-AliveReducedMax, Model: Longley-Rice
Start: 2017.10.03 17:13:47

Study created: 2017.10.03 17:04:45

Study build station data: LMS TV 2017-10-01 (16)

Proposal: W41DT-D D22 LD LIC STAUNTON, VA
File number: AliveReducedMax
Facility ID: 168768
Station data: User record
Record ID: 84
Country: U.S.

Build options:
Protect records not on baseline channel
Protect baseline records from LPTV

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WVPY	D21	DD	LIC	FRONT ROYAL, VA	BLEDT20140714AAV	122.8 km
WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	98.0
WMDO-CD	D22	DC	LIC	WASHINGTON, DC	BLANK0000001466	212.1
WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	261.5
WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	261.5
WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	296.4
WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	166.8
WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	166.8
W22CV-D	D22	LD	LIC	MOOREFIELD, WV	BLDTT20120608ABX	97.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D22
Mask: Stringent
Latitude: 38 9 55.40 N (NAD83)
Longitude: 79 18 43.10 W
Height AMSL: 1295.0 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: ALIVE Reduced 0.0 deg
Elev Pattn: Generic

Elec Tilt: 1.5

49.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	4.54 kW	642.4 m	62.8 km
45.0	14.8	645.9	70.8
90.0	12.6	743.7	71.9
135.0	12.2	675.9	70.2
180.0	14.6	683.8	71.6
225.0	9.35	584.2	66.0
270.0	0.231	619.4	43.4
315.0	0.204	562.3	41.7

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 645 m

Distance to Canadian border: 470.5 km

Distance to Mexican border: 2135.2 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 62.0 degrees Distance: 243.1 km

**Proposal is within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 283.8 degrees Distance: 2236.3 km

Study cell size: 1.00 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 BLEDT20140714AAV LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WVPY	D21	DD	LIC	FRONT ROYAL, VA	BLEDT20140714AAV	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	122.8 km
	WHSV-TV	D20	DT	APP	HARRISONBURG, VA	BLANK0000029912	122.8
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	148.9
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	94.0
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	246.1

WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	222.7
WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	214.8
WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	286.4
WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	144.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23052.6 1,812,249	19622.0 1,656,095	15151.7 808,312	15127.7 807,568	0.16 0.09

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	252.5 22,559	24.0 744	
WHSV-TV D20 DT APP	225.5 21,815	183.4 18,595	0.0 0
WMPT D21 DT APP	3767.3 753,266	1961.5 204,841	1960.5 204,841
WFPT D21 DT CP	2020.9 616,317	373.8 69,254	373.8 69,254
WCPB D21 DT CP	168.8 29,723	7.0 22	7.0 22
WPNT D21 DT CP	170.3 7,135	49.7 478	47.7 478
WWCW D21 DT CP	210.6 42,968	48.0 838	48.0 838
WVBT D21 DT CP	88.0 9,904	4.0 12	4.0 12

Interference to BLEDT20140714AAV LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WVPY	D21	DD	LIC	FRONT ROYAL, VA	BLEDT20140714AAV	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	122.8 km
	WHSV-TV	D20	DT	BL	HARRISONBURG, VA	DTVBL4688	47.6
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	148.9
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	94.0
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	246.1
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	222.7
	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	214.8
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	286.4
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	144.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23052.6 1,812,249	19622.0 1,656,095	14802.3 799,811	14764.3 799,127	0.26 0.09

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	252.5 22,559	38.0 684	
WHSV-TV D20 DT BL	712.7 30,827	532.8 27,096	363.4 8,441
WMPT D21 DT APP	3767.3 753,266	1883.6 204,778	1881.6 204,778
WFPT D21 DT CP	2020.9 616,317	371.8 69,254	371.8 69,254
WCPB D21 DT CP	168.8 29,723	5.0 22	5.0 22
WPNT D21 DT CP	170.3 7,135	44.7 478	44.7 478
WWCW D21 DT CP	210.6 42,968	18.0 414	18.0 414
WVBT D21 DT CP	88.0 9,904	4.0 12	4.0 12

Interference to BLEDT20140714AAV LIC, scenario 3

Desired:	Call WVPY	Chan D21	Svc DD	Status LIC	City, State FRONT ROYAL, VA	File Number BLEDT20140714AAV	Distance
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	122.8 km
	WHSV-TV	D20	DT	APP	HARRISONBURG, VA	BLANK0000029912	122.8
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	148.9
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	94.0
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	246.1
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	222.7
	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	214.8
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	286.4
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	144.1

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	23052.6	1,812,249	19622.0	1,656,095	15151.7	808,312	15127.7	807,568	0.16 0.09

Undesired				Total IX		Unique IX, before		Unique IX, after
W41DT-D D22 LD LIC		252.5		22,559			24.0	744
WHSV-TV D20 DT APP		225.5		21,815	183.4	18,595	0.0	0
WMPT D21 DT APP		3767.3		753,266	1961.5	204,841	1960.5	204,841
WFPT D21 DT CP		2020.9		616,317	373.8	69,254	373.8	69,254
WCPB D21 DT CP		168.8		29,723	7.0	22	7.0	22
WPNT D21 DT CP		170.3		7,135	49.7	478	47.7	478
WWCW D21 DT CP		210.6		42,968	48.0	838	48.0	838
WVBT D21 DT CP		88.0		9,904	4.0	12	4.0	12
WMPB D22 DT APP		1.0		0	0.0	0	0.0	0

Interference to BLEDT20140714AAV LIC, scenario 4

Desired:	Call WVPY	Chan D21	Svc DD	Status LIC	City, State FRONT ROYAL, VA	File Number BLEDT20140714AAV	Distance
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	122.8 km
	WHSV-TV	D20	DT	BL	HARRISONBURG, VA	DTVBL4688	47.6
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	148.9
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	94.0
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	246.1
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	222.7
	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	214.8
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	286.4
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	144.1

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
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23052.6	1,812,249	19622.0	1,656,095	14802.3	799,811	14764.3	799,127	0.26	0.09
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Undesired		Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	252.5	22,559		38.0 684
WHSV-TV D20 DT BL	712.7	30,827	532.8 27,096	363.4 8,441
WMPT D21 DT APP	3767.3	753,266	1883.6 204,778	1881.6 204,778
WFPT D21 DT CP	2020.9	616,317	371.8 69,254	371.8 69,254
WCPB D21 DT CP	168.8	29,723	5.0 22	5.0 22
WPNT D21 DT CP	170.3	7,135	44.7 478	44.7 478
WWCW D21 DT CP	210.6	42,968	18.0 414	18.0 414
WVBT D21 DT CP	88.0	9,904	4.0 12	4.0 12
WMPB D22 DT APP	1.0	0	0.0 0	0.0 0

Interference to BLANK0000027725 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	98.0 km
	WUNC-TV	D20	DT	CP	CHAPEL HILL, NC	BLANK0000025215	166.9
	WHSV-TV	D20	DT	APP	HARRISONBURG, VA	BLANK0000029912	98.0
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	324.1
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	295.7
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	373.8
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	235.0
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	356.6
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	354.3
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	282.3
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38590.6 1,395,171	32359.3 1,202,547	31191.2 1,176,317	31074.7 1,175,118	0.37 0.10

Undesired		Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	250.0	2,608		116.5 1,199
WUNC-TV D20 DT CP	91.7	6,549	39.3 2,750	39.3 2,750
WHSV-TV D20 DT APP	121.3	1,168	76.9 839	0.0 0
WMPT D21 DT APP	413.9	5,580	323.8 4,437	319.8 4,437
WFPT D21 DT CP	1.0	0	0.0 0	0.0 0
WCPB D21 DT CP	7.1	52	0.0 0	0.0 0
WUNG-TV D21 DT CP	595.6	14,925	482.7 10,533	475.6 10,292
WUNJ-TV D21 DT CP	117.8	5,144	23.1 423	23.1 423
WPNT D21 DT CP	10.1	21	4.0 0	4.0 0
WVBT D21 DT CP	31.4	600	6.1 147	6.1 147
WCVE-TV D22 DT CP	35.6	536	3.0 12	3.0 12

Interference to BLANK0000027725 CP, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	98.0 km
	WUNC-TV	D20	DT	CP	CHAPEL HILL, NC	BLANK0000025215	166.9
	WHSV-TV	D20	DT	BL	HARRISONBURG, VA	DTVBL4688	167.2
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	324.1
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	295.7
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	373.8
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	235.0
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	356.6
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	354.3
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	282.3
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	180.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38590.6 1,395,171	32359.3 1,202,547	31267.1 1,177,156	31073.6 1,175,118	0.62 0.17

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC 250.0	2,608	193.4 2,038	
WUNC-TV D20 DT CP 91.7	6,549	39.3 2,750	
WHSV-TV D20 DT BL 9.1	95	1.0 0	
WMPT D21 DT APP 413.9	5,580	318.8 4,437	
WFPT D21 DT CP 1.0	0	0.0 0	
WCPB D21 DT CP 7.1	52	0.0 0	
WUNG-TV D21 DT CP 595.6	14,925	475.6 10,292	
WUNJ-TV D21 DT CP 117.8	5,144	23.1 423	
WPNT D21 DT CP 10.1	21	3.0 0	
WVBT D21 DT CP 31.4	600	6.1 147	
WCVE-TV D22 DT CP 35.6	536	3.0 12	

Interference to BLANK0000001466 LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WMDO-CD	D22	DC	LIC	WASHINGTON, DC	BLANK0000001466	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	212.1 km
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	41.6
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	62.1
	WNJS	D22	DT	LIC	CAMDEN, NJ	BLEDT20070611AAY	211.4
	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	165.0
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	165.0
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	65.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
3139.7 3,754,697	3088.9 3,731,777	1585.7 2,391,412	1585.7 2,391,412	0.00 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
W41DT-D D22 LD LIC	1.0 385	0.0 0		
WMPT D21 DT APP	348.7 168,436	35.9 13,687	35.9 13,687	
WMPB D22 DT CP	1437.4 1,314,682	1062.8 1,098,616	1062.8 1,098,616	
WNJS D22 DT LIC	13.0 11,249	0.0 0	0.0 0	
WRIC-TV D22 DT LIC	159.3 105,448	14.0 5,612	14.0 5,612	
WCVE-TV D22 DT CP	50.8 34,595	0.0 0	0.0 0	

Interference to BLANK0000001466 LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMDO-CD	D22	DC	LIC	WASHINGTON, DC	BLANK0000001466	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	212.1 km
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	41.6
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	62.1
	WNJS	D22	DT	LIC	CAMDEN, NJ	BLEDT20070611AAY	211.4
	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	165.0
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	165.0
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	65.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
3139.7 3,754,697	3088.9 3,731,777	1335.5 2,040,204	1335.5 2,040,204	0.00 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
W41DT-D D22 LD LIC	1.0 385	0.0 0		
WMPT D21 DT APP	348.7 168,436	31.9 12,367	31.9 12,367	
WMPB D22 DT APP	1692.6 1,667,334	1313.0 1,449,824	1313.0 1,449,824	
WNJS D22 DT LIC	13.0 11,249	0.0 0	0.0 0	
WRIC-TV D22 DT LIC	159.3 105,448	13.0 5,488	13.0 5,488	
WCVE-TV D22 DT CP	50.8 34,595	0.0 0	0.0 0	

Interference to BLANK0000025181 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	261.5 km
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	50.8
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	50.2
	WPHY-CD	D22	DC	CP	TRENTON, NJ	BLANK0000028171	152.6

WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	178.6
WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	207.8
WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	226.6
WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	104.3
WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	16.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
17058.2	6,475,898	16576.8	6,377,464	14765.5	5,509,189	14764.5	5,509,168	0.01	0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	10.0 2,983		1.0 21
WMPT D21 DT APP	1040.6 703,782	1012.7 629,481	1012.7 629,481
WFPT D21 DT CP	267.0 31,049	198.4 24,212	198.4 24,212
WPHY-CD D22 DC CP	2.0 0	0.0 0	0.0 0
WTOO-CD D22 DC CP	12.0 1,901	2.0 1,290	1.0 1,285
WOLF-TV D22 DT CP	508.4 163,459	360.6 92,351	360.6 92,351
WCVE-TV D22 DT CP	206.6 104,930	50.9 11,003	50.9 11,003
WDVM-TV D23 DT CP	10.0 585	3.0 298	1.0 218

Interference to BLANK0000029875 APP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	261.5 km
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	50.8
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	50.2
	WPHY-CD	D22	DC	CP	TRENTON, NJ	BLANK0000028171	152.6
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	178.6
	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	207.8
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	226.6
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	104.3
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	16.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
19592.0	7,301,599	18944.8	7,209,020	16978.3	6,398,874	16978.3	6,398,874	0.00	0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	9.9 1,230		0.0 0
WMPT D21 DT APP	1191.8 633,089	1172.9 598,957	1172.9 598,957
WFPT D21 DT CP	231.2 18,186	178.7 14,226	178.7 14,226
WPHY-CD D22 DC CP	4.9 507	1.0 0	1.0 0
WTOO-CD D22 DC CP	20.9 921	4.0 289	3.0 284
WOLF-TV D22 DT CP	526.4 165,225	410.8 124,049	410.8 124,049
WCVE-TV D22 DT CP	152.4 59,606	47.8 12,877	47.8 12,877
WDVM-TV D23 DT CP	23.8 1,256	6.0 665	5.0 635

Interference to BLANK0000025149 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	296.4 km
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	148.8
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	149.0
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000027392	225.0
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	254.1
	WBTB	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	200.7
	WARZ-CD	D23	DC	CP	SMITHFIELD-SELMA, NC	BLANK0000026452	44.0
	WECT	D23	DT	CP	WILMINGTON, NC	BLANK0000025214	169.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
34089.4 3,525,632	33720.8 3,512,986	32925.8 3,482,715	32913.7 3,482,468	0.04 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC 25.2	401	12.1 247	
WUNG-TV D21 DT CP 187.0	4,648	154.2 3,737	154.2 3,737
WUNJ-TV D21 DT CP 67.2	401	41.1 308	41.1 308
WACH D22 DT CP 68.9	3,661	51.0 3,416	51.0 3,416
WCVE-TV D22 DT CP 193.4	8,981	191.3 8,456	178.2 8,302
WBTB D23 DT LIC 22.9	927	5.0 243	5.0 243
WARZ-CD D23 DC CP 289.5	13,098	287.5 12,573	287.5 12,573
WECT D23 DT CP 29.1	93	3.0 0	3.0 0

Interference to BLCDT20090209ABZ LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	166.8 km
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4
	WMDO-CD	D22	DC	LIC	WASHINGTON, DC	BLANK0000001466	165.0
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	226.6
	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	399.7
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
	WNJS	D22	DT	LIC	CAMDEN, NJ	BLEDT20070611AAY	343.4
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	0.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32108.8 1,992,206	31607.5 1,941,037	3354.4 122,879	3354.4 122,879	0.00 0.00

Undesired				Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	225.0			21,159		0.0 0
WVBT D21 DT CP	71.8			693	0.0 0	0.0 0
WMDO-CD D22 DC LIC	90.5			2,622	0.0 0	0.0 0
WMPB D22 DT CP	155.9			10,504	0.0 0	0.0 0
WCNC-TV D22 DT LIC	1.0			0	0.0 0	0.0 0
WUVC-DT D22 DT CP	117.3			1,380	0.0 0	0.0 0
WNJS D22 DT LIC	16.1			270	0.0 0	0.0 0
WCVE-TV D22 DT CP	28253.1			1,818,158	27888.0 1,804,748	27717.3 1,791,240

Interference to BLCDT20090209ABZ LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WRIC-TV	D22	DT	LIC	PETERSBURG, VA	BLCDT20090209ABZ	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	166.8 km
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4
	WMDO-CD	D22	DC	LIC	WASHINGTON, DC	BLANK0000001466	165.0
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	226.6
	WCNC-TV	D22	DT	LIC	CHARLOTTE, NC	BLCDT20031211ABN	399.7
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
	WNJS	D22	DT	LIC	CAMDEN, NJ	BLEDT20070611AAY	343.4
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	0.0
Service area				Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32108.8	1,992,206	31607.5		1,941,037	3354.4 122,879	3354.4 122,879	0.00 0.00

Undesired				Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	225.0			21,159		0.0 0
WVBT D21 DT CP	71.8			693	0.0 0	0.0 0
WMDO-CD D22 DC LIC	90.5			2,622	0.0 0	0.0 0
WMPB D22 DT APP	318.9			21,094	0.0 0	0.0 0
WCNC-TV D22 DT LIC	1.0			0	0.0 0	0.0 0
WUVC-DT D22 DT CP	117.3			1,380	0.0 0	0.0 0
WNJS D22 DT LIC	16.1			270	0.0 0	0.0 0
WCVE-TV D22 DT CP	28253.1			1,818,158	27737.0 1,794,599	27587.5 1,785,454

Interference to BLANK0000027467 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	166.8 km
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	226.6

WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000024885	0.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
23452.4	1,594,323	23405.0	1,593,797	23267.7	1,588,789	23049.2	1,583,619	0.94 0.33

Undesired		Total IX		Unique IX, before		Unique IX, after
W41DT-D D22 LD LIC	238.6	5,213			218.5	5,170
WVBT D21 DT CP	7.0	1,872	7.0	1,872	7.0	1,872
WMPB D22 DT CP	36.3	1,978	36.3	1,978	26.2	1,943
WUVC-DT D22 DT CP	84.0	1,004	84.0	1,004	74.0	996
WTVR-TV D23 DT CP	10.1	154	10.1	154	10.1	154

Interference to BLANK0000027467 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	166.8 km
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	226.6
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
	WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000024885	0.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
23452.4	1,594,323	23405.0	1,593,797	23224.3	1,586,447	23007.8	1,581,277	0.93 0.33

Undesired		Total IX		Unique IX, before		Unique IX, after
W41DT-D D22 LD LIC	238.6	5,213			216.5	5,170
WVBT D21 DT CP	7.0	1,872	7.0	1,872	7.0	1,872
WMPB D22 DT APP	79.6	4,320	79.6	4,320	67.5	4,285
WUVC-DT D22 DT CP	84.0	1,004	84.0	1,004	74.0	996
WTVR-TV D23 DT CP	10.1	154	10.1	154	10.1	154

Interference to BLDDTT20120608ABX LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W22CV-D	D22	LD	LIC	MOOREFIELD, WV	BLDDTT20120608ABX	
Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	97.4 km
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	190.4
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	148.3
	W22CY	D22	LD	CP	CLARKSBURG, WV	BDFCDTL20120329AOH	123.9
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	110.9
	W23DR-D	D23	LD	LIC	ROMNEY, WV	BLDDTT20090609AAZ	39.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
1332.8 14,504	965.3 11,376	935.4 10,657	931.4 10,657	0.43 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	8.0 0		4.0 0
WMPB D22 DT CP	1.0 0	0.0 0	0.0 0
WTOO-CD D22 DC CP	5.0 332	5.0 332	5.0 332
WDVM-TV D23 DT CP	1.0 0	0.0 0	0.0 0
W23DR-D D23 LD LIC	24.8 387	23.9 387	20.9 387

Interference to BLDDTT20120608ABX LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W22CV-D	D22	LD	LIC	MOOREFIELD, WV	BLDDTT20120608ABX	

Undesireds:	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	97.4 km
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	190.4
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	148.3
	W22CY	D22	LD	CP	CLARKSBURG, WV	BDFCDTL20120329AOH	123.9
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	110.9
	W23DR-D	D23	LD	LIC	ROMNEY, WV	BLDDTT20090609AAZ	39.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
1332.8 14,504	965.3 11,376	934.4 10,657	930.5 10,657	0.43 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W41DT-D D22 LD LIC	8.0 0		4.0 0
WMPB D22 DT APP	3.0 0	1.0 0	1.0 0
WTOO-CD D22 DC CP	5.0 332	4.0 332	4.0 332
WDVM-TV D23 DT CP	1.0 0	0.0 0	0.0 0
W23DR-D D23 LD LIC	24.8 387	23.9 387	20.9 387

Interference to proposal, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	

Undesireds:	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	98.0 km
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	261.5
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	296.4
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	244.8
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	166.8
	W22CY	D22	LD	CP	CLARKSBURG, WV	BDFCDTL20120329AOH	150.0
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000025191	256.3

Service area	Terrain-limited	IX-free	Percent IX
12658.7 373,536	9142.1 300,673	9024.0 299,150	1.29 0.51

Undesired	Total IX	Unique IX	Prcnt Unique IX
WWCW D21 DT CP	6.1 284	1.0 168	0.01 0.06
WUVC-DT D22 DT CP	7.1 0	0.0 0	0.00 0.00
WTOO-CD D22 DC CP	3.0 0	1.0 0	0.01 0.00
WCVE-TV D22 DT CP	114.0 1,355	104.9 1,239	1.15 0.41
WSAZ-TV D22 DT CP	1.0 0	0.0 0	0.00 0.00

Interference to proposal, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	W41DT-D	D22	LD	LIC	STAUNTON, VA	AliveReducedMax	

Undesireds:	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	98.0 km
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	261.5
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	296.4
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	244.8
	WCVE-TV	D22	DT	CP	RICHMOND, VA	BLANK0000027467	166.8
	W22CY	D22	LD	CP	CLARKSBURG, WV	BDFCDTL20120329AOH	150.0
	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000025191	256.3

Service area	Terrain-limited	IX-free	Percent IX
12658.7 373,536	9142.1 300,673	9022.0 299,150	1.31 0.51

Undesired	Total IX	Unique IX	Prcnt Unique IX
WWCW D21 DT CP	6.1 284	1.0 168	0.01 0.06
WMPB D22 DT APP	5.1 90	2.0 0	0.02 0.00
WUVC-DT D22 DT CP	7.1 0	0.0 0	0.00 0.00
WTOO-CD D22 DC CP	3.0 0	1.0 0	0.01 0.00
WCVE-TV D22 DT CP	114.0 1,355	103.9 1,149	1.14 0.38
WSAZ-TV D22 DT CP	1.0 0	0.0 0	0.00 0.00

