[Exhibit 13]

Non-Interference Compliance

Regarding Facility id 154324 Channel 225

Description of Exhibit 13 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

> *[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 5 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 6 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBµ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 7 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 8 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

This proposal is for a first adjacent fill-in for WPOC. Since there is no predicted interference in the community of license for WPOC, this proposal is exempt from the contour overlap prohibitions of Section 74.1204 with respect to WPOC.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBµ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
138296	BLH19891228KA	WERQ-FM	73	73
1548181	BPH20130404ABN	WERQ-FM	78.3	77.8
		Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour		**73**

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **73 dBµ**, this makes the proposed translator's worst-case interfering contour **113 dBµ.** By the free-space equation, this contour is calculated to extend a maximum of **68.5 m** from the transmit antenna.

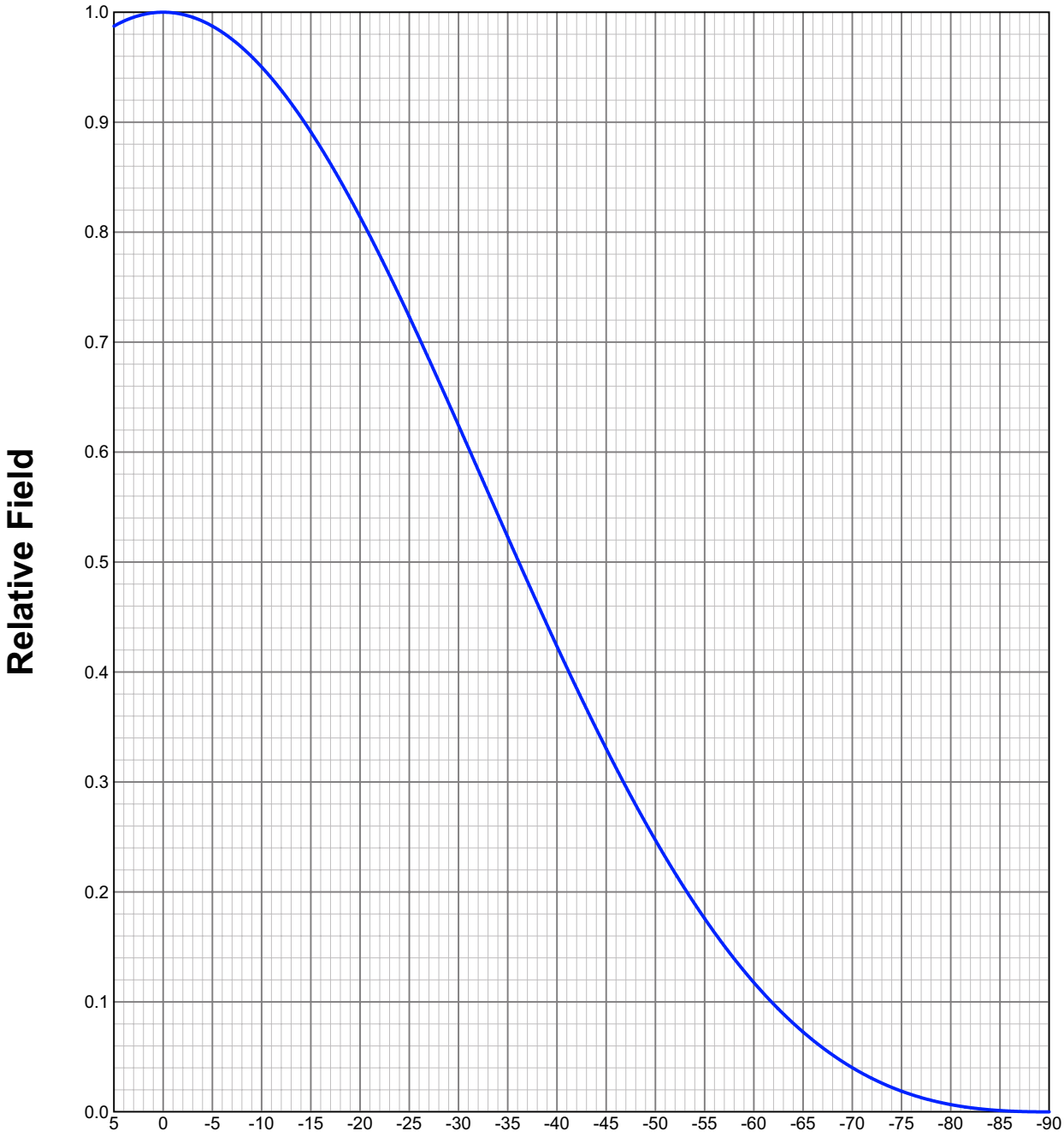
The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 7 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **11.6 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference. Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	**ERI**
Antenna Model:	**100-2 (HW)**
CORAGL:	**33 m**
Maximum ERP:	**0.019 kW**
Interfering Contour:	**113 dBµ**
Max Int. Contour Distance:	**68.5 m**
Min Ground Clearance:	**11.6 m**

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.987	18.5	67.6	67.3	27.1
10	.950	17.1	65.0	64.0	21.7
15	.891	15.1	61.0	58.9	17.2
20	.814	12.6	55.7	52.4	13.9
25	.723	9.9	49.5	44.9	12.1
30	.624	7.4	42.7	37.0	11.6
35	.523	5.2	35.8	29.3	12.5
40	.423	3.4	29.0	22.2	14.4
45	.330	2.1	22.6	16.0	17.0
50	.247	1.2	16.9	10.9	20.0
55	.176	0.6	12.0	6.9	23.1
60	.118	0.3	8.1	4.0	26.0
65	.073	0.1	5.0	2.1	28.5
70	.040	0.0	2.7	0.9	30.4
75	.019	0.0	1.3	0.3	31.7
80	.007	0.0	0.5	0.1	32.5
85	.001	0.0	0.1	0.0	32.9
90	.000	0.0	0.0	0.0	33.0
			Minimum Clearance above TGL:		**11.6 m**

ELEVATION PATTERN

Type:	1002H		Channel:	201
Directivity:	Numeric	dBd	Location:	
Main Lobe:	0.63	-1.99	Beam Tilt:	0.00
Horizontal:	0.63	-1.99	Polarization:	Circular



TABULATED DATA FOR ELEVATION PATTERN

Type: 1002H
Polarization: Circular

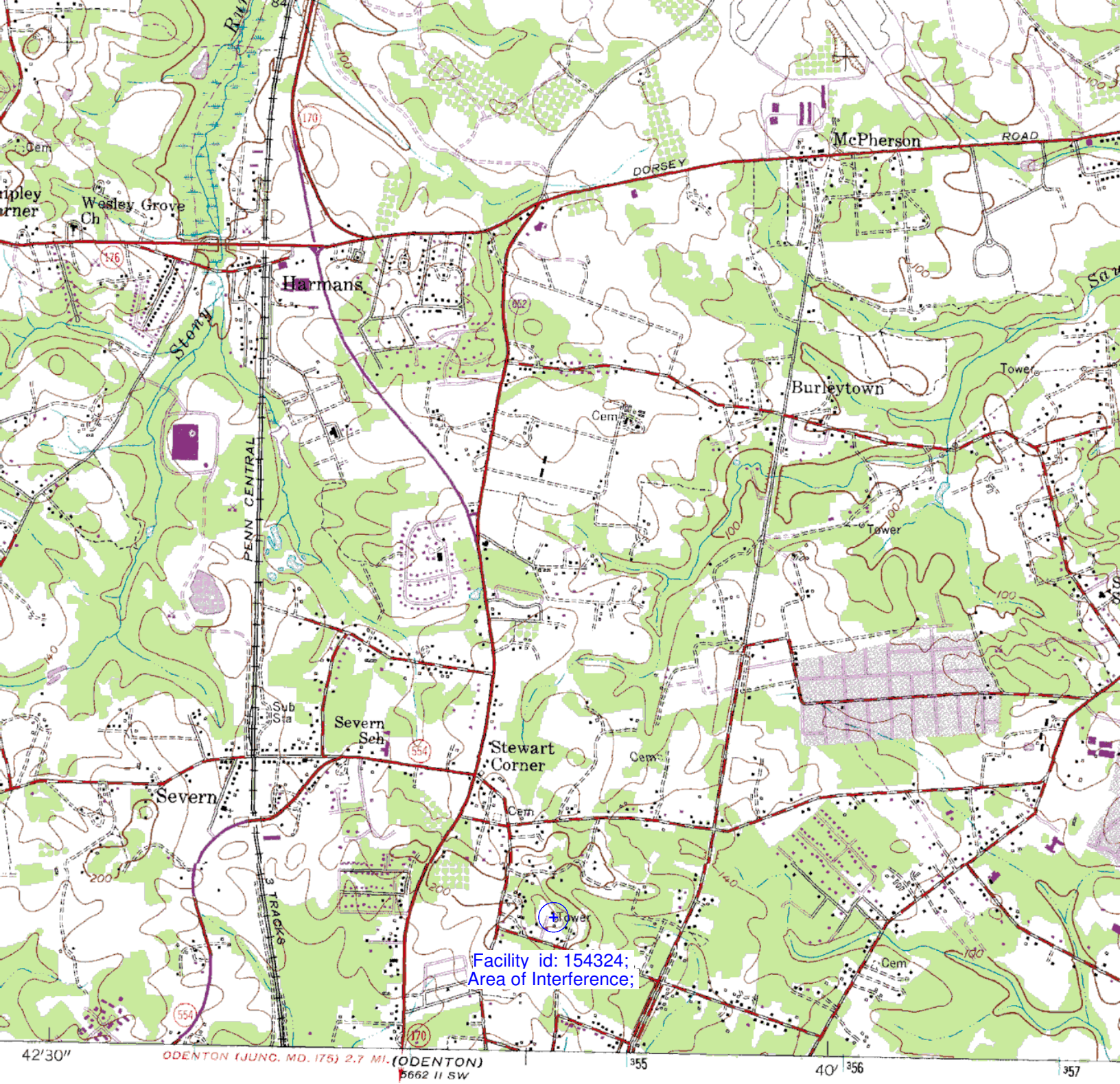
ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
5.00	0.987	-0.11	-6.75	0.977	-0.20	-27.00	0.684	-3.30	-50.50	0.239	-12.42	-74.00	0.022	-33.03
4.75	0.989	-0.10	-7.00	0.975	-0.22	-27.50	0.674	-3.42	-51.00	0.232	-12.70	-74.50	0.021	-33.75
4.50	0.990	-0.09	-7.25	0.974	-0.23	-28.00	0.664	-3.55	-51.50	0.224	-12.98	-75.00	0.019	-34.50
4.25	0.991	-0.08	-7.50	0.972	-0.25	-28.50	0.654	-3.68	-52.00	0.217	-13.27	-75.50	0.017	-35.27
4.00	0.992	-0.07	-7.75	0.970	-0.27	-29.00	0.644	-3.82	-52.50	0.210	-13.56	-76.00	0.016	-36.06
3.75	0.993	-0.06	-8.00	0.968	-0.28	-29.50	0.634	-3.95	-53.00	0.203	-13.86	-76.50	0.014	-36.88
3.50	0.994	-0.05	-8.25	0.966	-0.30	-30.00	0.624	-4.09	-53.50	0.196	-14.16	-77.00	0.013	-37.73
3.25	0.995	-0.05	-8.50	0.964	-0.32	-30.50	0.614	-4.23	-54.00	0.189	-14.47	-77.50	0.012	-38.61
3.00	0.995	-0.04	-8.75	0.962	-0.34	-31.00	0.604	-4.38	-54.50	0.182	-14.78	-78.00	0.011	-39.53
2.75	0.996	-0.03	-9.00	0.960	-0.36	-31.50	0.594	-4.53	-55.00	0.176	-15.10	-78.50	0.009	-40.48
2.50	0.997	-0.03	-9.25	0.957	-0.38	-32.00	0.584	-4.68	-55.50	0.169	-15.42	-79.00	0.008	-41.46
2.25	0.997	-0.02	-9.50	0.955	-0.40	-32.50	0.574	-4.83	-56.00	0.163	-15.75	-79.50	0.008	-42.50
2.00	0.998	-0.02	-9.75	0.953	-0.42	-33.00	0.563	-4.98	-56.50	0.157	-16.08	-80.00	0.007	-43.57
1.75	0.998	-0.01	-10.00	0.950	-0.44	-33.50	0.553	-5.14	-57.00	0.151	-16.42	-80.50	0.006	-44.70
1.50	0.999	-0.01	-10.50	0.945	-0.49	-34.00	0.543	-5.30	-57.50	0.145	-16.77	-81.00	0.005	-45.88
1.25	0.999	-0.01	-11.00	0.940	-0.54	-34.50	0.533	-5.47	-58.00	0.139	-17.12	-81.50	0.004	-47.13
1.00	0.999	0.00	-11.50	0.935	-0.59	-35.00	0.523	-5.63	-58.50	0.134	-17.48	-82.00	0.004	-48.44
0.75	1.000	0.00	-12.00	0.929	-0.64	-35.50	0.513	-5.80	-59.00	0.128	-17.84	-82.50	0.003	-49.83
0.50	1.000	0.00	-12.50	0.923	-0.69	-36.00	0.503	-5.98	-59.50	0.123	-18.21	-83.00	0.003	-51.30
0.25	1.000	0.00	-13.00	0.917	-0.75	-36.50	0.492	-6.15	-60.00	0.118	-18.59	-83.50	0.002	-52.87
0.00	1.000	0.00	-13.50	0.911	-0.81	-37.00	0.482	-6.33	-60.50	0.113	-18.98	-84.00	0.002	-54.56
-0.25	1.000	0.00	-14.00	0.905	-0.87	-37.50	0.472	-6.51	-61.00	0.108	-19.37	-84.50	0.002	-56.38
-0.50	1.000	0.00	-14.50	0.898	-0.94	-38.00	0.463	-6.70	-61.50	0.103	-19.76	-85.00	0.001	-58.36
-0.75	1.000	0.00	-15.00	0.891	-1.00	-38.50	0.453	-6.88	-62.00	0.098	-20.17	-85.50	0.001	-60.52
-1.00	0.999	0.00	-15.50	0.884	-1.07	-39.00	0.443	-7.08	-62.50	0.093	-20.58	-86.00	0.001	-62.91
-1.25	0.999	-0.01	-16.00	0.877	-1.14	-39.50	0.433	-7.27	-63.00	0.089	-21.01	-86.50	0.001	-65.59
-1.50	0.999	-0.01	-16.50	0.870	-1.21	-40.00	0.423	-7.47	-63.50	0.085	-21.44	-87.00	0.000	-68.64
-1.75	0.998	-0.01	-17.00	0.862	-1.29	-40.50	0.414	-7.67	-64.00	0.081	-21.87	-87.50	0.000	-72.20
-2.00	0.998	-0.02	-17.50	0.854	-1.37	-41.00	0.404	-7.87	-64.50	0.077	-22.32	-88.00	0.000	-76.49
-2.25	0.997	-0.02	-18.00	0.847	-1.45	-41.50	0.395	-8.08	-65.00	0.073	-22.78	-88.50	0.000	-81.92
-2.50	0.997	-0.03	-18.50	0.839	-1.53	-42.00	0.385	-8.29	-65.50	0.069	-23.24	-89.00	0.000	-89.42
-2.75	0.996	-0.03	-19.00	0.831	-1.61	-42.50	0.376	-8.50	-66.00	0.065	-23.72	-89.50	0.000	-101.95
-3.00	0.995	-0.04	-19.50	0.822	-1.70	-43.00	0.367	-8.72	-66.50	0.062	-24.20	-90.00	0.000	-409.33
-3.25	0.995	-0.05	-20.00	0.814	-1.79	-43.50	0.357	-8.94	-67.00	0.058	-24.70			
-3.50	0.994	-0.05	-20.50	0.805	-1.88	-44.00	0.348	-9.16	-67.50	0.055	-25.20			
-3.75	0.993	-0.06	-21.00	0.797	-1.98	-44.50	0.339	-9.39	-68.00	0.052	-25.72			
-4.00	0.992	-0.07	-21.50	0.788	-2.07	-45.00	0.330	-9.62	-68.50	0.049	-26.25			
-4.25	0.991	-0.08	-22.00	0.779	-2.17	-45.50	0.322	-9.86	-69.00	0.046	-26.79			
-4.50	0.990	-0.09	-22.50	0.770	-2.27	-46.00	0.313	-10.09	-69.50	0.043	-27.35			
-4.75	0.989	-0.10	-23.00	0.761	-2.38	-46.50	0.304	-10.34	-70.00	0.040	-27.92			
-5.00	0.987	-0.11	-23.50	0.751	-2.48	-47.00	0.296	-10.58	-70.50	0.038	-28.50			
-5.25	0.986	-0.12	-24.00	0.742	-2.59	-47.50	0.287	-10.83	-71.00	0.035	-29.10			
-5.50	0.985	-0.13	-24.50	0.733	-2.70	-48.00	0.279	-11.09	-71.50	0.033	-29.71			
-5.75	0.983	-0.15	-25.00	0.723	-2.82	-48.50	0.271	-11.34	-72.00	0.030	-30.34			
-6.00	0.982	-0.16	-25.50	0.714	-2.93	-49.00	0.263	-11.61	-72.50	0.028	-30.98			
-6.25	0.980	-0.17	-26.00	0.704	-3.05	-49.50	0.255	-11.87	-73.00	0.026	-31.65			
-6.50	0.979	-0.19	-26.50	0.694	-3.17	-50.00	0.247	-12.14	-73.50	0.024	-32.33			

Adjacent Channel Study
For Station NEW, Facility_id: 154324

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
507972	47747	BLH-20000714ABE	WPOC	CITICASTERS LICENSES, INC.	B	BALTIMORE	MD	LIC	16	363	226	1	18.5	401.474
1548443	68827	BSTA-20130328AJL	WERQ-FM	RADIO ONE LICENSES, LLC	B	BALTIMORE	MD	APP	5	270	222	3	23.1	1.169
1548181	68827	BPH-20130404ABN	WERQ-FM	RADIO ONE LICENSES, LLC	B	BALTIMORE	MD	CP	37	269	222	3	23.1	1.169
138296	68827	BLH-19891228KA	WERQ-FM	RADIO ONE LICENSES, LLC	B	BALTIMORE	MD	LIC	37	270	222	3	23.2	1.169
284802	93478	BPEX-19990505MF	WD2XAB	USA DIGITAL RADIO, INC.	A	COLUMBIA	MD	CP	2	136	228	3	13.5	0.2937
1038730	43277	BMLH-20050228AAV	WWXT	RED ZEBRA BROADCASTING LICENSEE, LLC	A	PRINCE FREDERIC	MD	LIC	2.85	164	224	1	51.3	0
192656	4676	BLH-19931203KC	WRDX	CAPSTAR TX LLC	A	SMYRNA	DE	LIC	1.7	123	225	0	96.6	0
982176	62368	BLH-20040322AFY	WKZF	HALL COMMUNICATIONS, INC.	A	STARVIEW	PA	LIC	0.7	429	224	1	105.6	0
116854	65641	BLH-19880809LD	WFLS-FM	THE FREE LANCE-STAR PUBLISHING CO. OF FR	B	FREDERICKSBURG	VA	LIC	50	200	227	2	112.2	0
165376	41810	BLH-19910930KD	WINC-FM	CENTENNIAL LICENSING II, LLC	B	WINCHESTER	VA	LIC	22	706	223	2	117.6	0
1195279	25003	BMPH-20070511ACZ	WZBH	GREAT SCOTT BROADCASTING	B	MILLSBORO	DE	APP	50	160	228	3	137.5	0

Prepared by Weston McCarron
August 19, 2013



SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

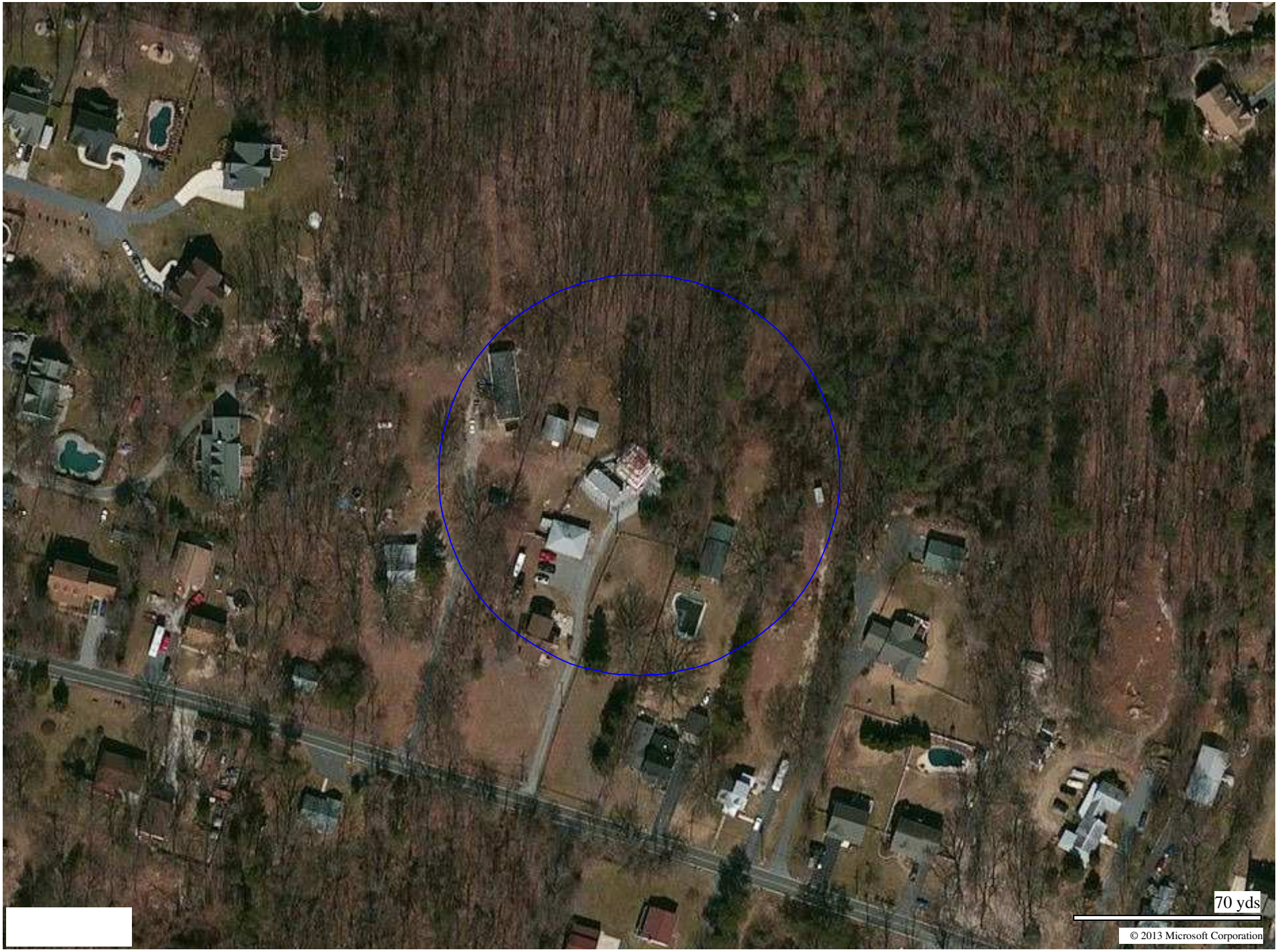
1 KILOMETRE

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

'Relay; MD'; Scale: 1" = 0.379Mi 610Mt 2,000Ft, 1 Mi = 2.640" , 1 cm = 240Mt


70 yds
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