

MINOR CHANGE APPLICATION
NANTUCKET PUBLIC RADIO, INC.
W300BE FM TRANSLATOR STATION
CH 300D - 107.9 MHZ - 0.05 KW - DA
VINEYARD HAVEN, MASSACHUSETTS
August 2015

EXHIBIT C1

Interference Study for W300BE

Nantucket Public Radio, Inc.

REFERENCE	CH# 300D - 107.9 MHz, Pwr= 0.05 kW DA, HAAT= 0.0 M, COR= 141 M	DISPLAY DATES
41 33 30.6 N.	Average Protected F(50-50)= 4.7 km	DATA 08-08-15
70 35 45.9 W.	Standard Directional	SEARCH 08-08-15

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
300B Medford	WXKS-FM	LIC	CN MA	335.5 155.2	96.49 BLH19911018KE	42 20 50.0 71 04 59.0	20.500 235	129.3 258	65.8 Amfm Radio Licenses, L.l.c	-35.0*	21.4
300D Vineyard Haven	W300BE!	LIC	DV MA	0.0 0.0	0.00 BLFT20150619AAD	41 33 30.6 70 35 45.9	0.050	5.2 141	1.5 Nantucket Public Radio, In	-6.8	-7.7
298B Chatham	WFCC-FM	LIC	CN MA	67.6 248.0	52.50 BMLH19990910AAH	41 44 14.0 70 00 40.0	50.000 104	5.0 111	57.5 Cape Cod Broadcasting Lice	40.7	-5.3*

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd adjacent.

All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt (Y,N,X)

***affixed to 'IN' or 'OUT' values = site inside restricted contour.

W300BE - Vineyard Haven, MA - Proposed

Latitude: 41-33-30.60 N / Longitude: 070-35-45.90 W
ERP: 0.05 kW / Channel: 300 / Freq: 107.9 MHz
AMSL Height: 141.0 m

WXKS-FM - Medford, MA - BLH19911018KE

Latitude: 42-20-50 N / Longitude: 071-04-59 W
ERP: 20.50 kW / Channel: 300 / Freq: 107.9 MHz
AMSL Height: 258.0 m

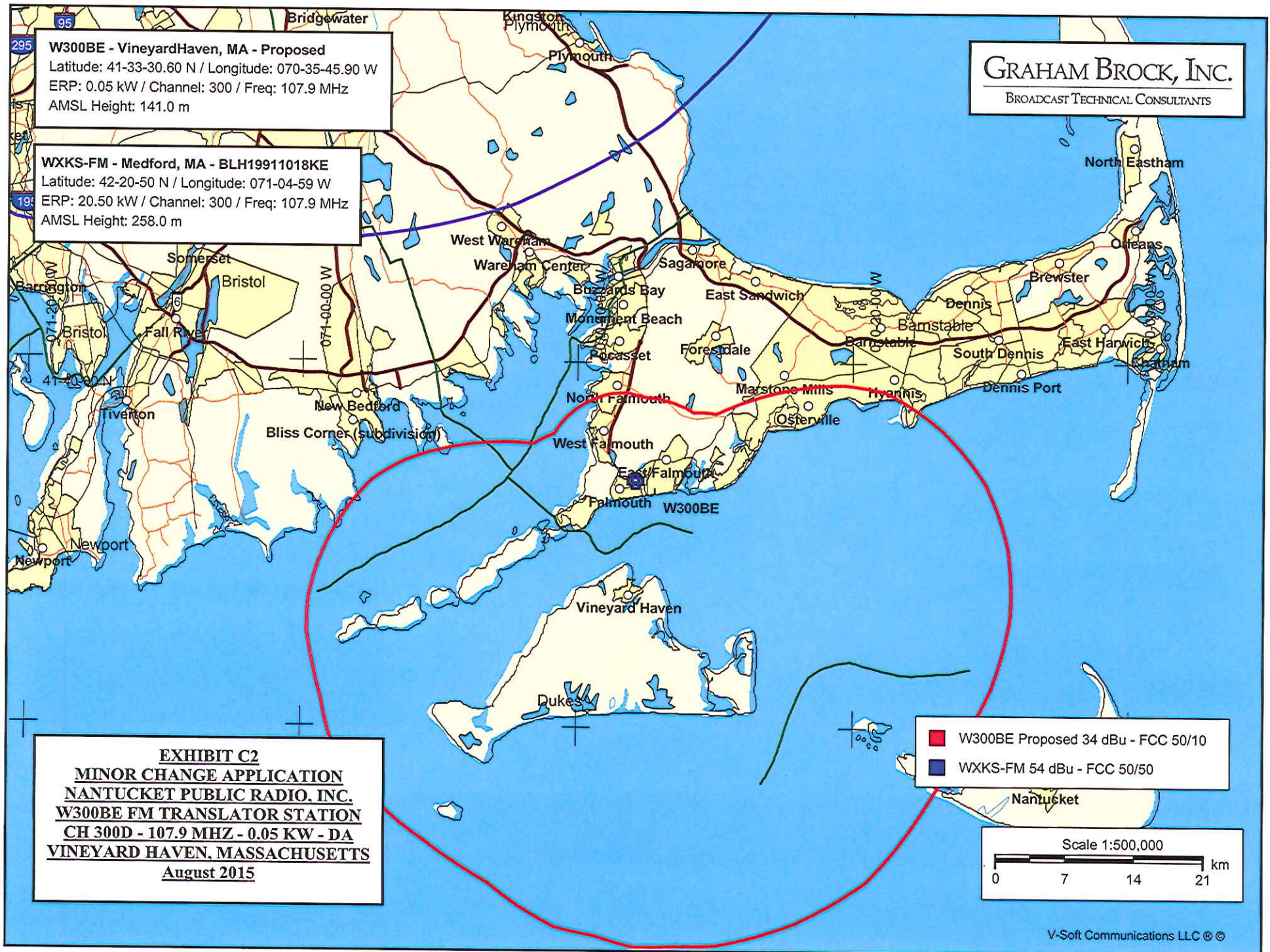


EXHIBIT C2
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■ W300BE Proposed 34 dBu - FCC 50/10
■ WXKS-FM 54 dBu - FCC 50/50

Scale 1:500,000

0 7 14 21 km

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EXHIBIT C3

FMOVER Study for W300BE vs WXKS-FM
Using Proposed Site as Reference

WXKS-FM - BLH-19911018KE
Channel = 300B
Max ERP = 20.5 kW
RCAMSL = 258 M
N. Lat. 42 20 50.0
W. Lng. 71 04 59.0

W300BE - Proposed
Channel = 300D
Max ERP = 0.05 kW
RCAMSL = 141 M
N. Lat. 41 33 30.6
W. Lng. 70 35 45.9

Protected
54 dBu

Interfering
34 dBu

FCC NGDC 30 Second Terrain Database

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
095.0	020.5000	0258.0	066.9	018.1	000.0001	0116.1	085.8	-07.15	
096.0	020.5000	0258.0	066.9	018.2	000.0001	0116.2	084.7	-06.82	
097.0	020.5000	0258.0	066.9	018.4	000.0001	0116.2	083.5	-06.49	
098.0	020.5000	0258.0	066.9	018.5	000.0001	0116.2	082.4	-06.16	
099.0	020.5000	0258.0	066.9	018.7	000.0001	0116.2	081.2	-05.83	
100.0	020.5000	0257.9	066.9	018.8	000.0001	0116.2	080.1	-05.50	
101.0	020.5000	0257.8	066.9	018.9	000.0001	0116.2	078.9	-05.16	
102.0	020.5000	0257.7	066.9	019.0	000.0001	0116.2	077.8	-04.83	
103.0	020.5000	0257.6	066.9	019.1	000.0001	0116.2	076.6	-04.49	
104.0	020.5000	0257.5	066.9	019.2	000.0001	0116.3	075.4	-04.14	
105.0	020.5000	0257.3	066.8	019.2	000.0001	0116.3	074.3	-03.80	
106.0	020.5000	0257.1	066.8	019.3	000.0001	0116.3	073.1	-03.45	
107.0	020.5000	0256.8	066.8	019.3	000.0001	0116.3	071.9	-03.10	
108.0	020.5000	0256.6	066.8	019.3	000.0001	0116.3	070.8	-02.75	
109.0	020.5000	0256.3	066.8	019.3	000.0001	0116.3	069.6	-02.39	
110.0	020.5000	0256.1	066.7	019.3	000.0001	0116.3	068.4	-02.03	
111.0	020.5000	0255.9	066.7	019.2	000.0001	0116.3	067.3	-01.67	
112.0	020.5000	0255.8	066.7	019.2	000.0001	0116.3	066.1	-01.31	
113.0	020.5000	0255.7	066.7	019.1	000.0001	0116.2	065.0	-00.94	
114.0	020.5000	0255.8	066.7	019.0	000.0001	0116.2	063.8	-00.57	
115.0	020.5000	0255.9	066.7	018.9	000.0001	0116.2	062.6	-00.18	
116.0	020.5000	0256.1	066.7	018.8	000.0001	0116.2	061.5	00.21	
117.0	020.5000	0256.2	066.8	018.7	000.0001	0116.2	060.3	00.62	
118.0	020.5000	0256.2	066.8	018.5	000.0001	0116.2	059.2	01.04	
119.0	020.5000	0256.3	066.8	018.3	000.0001	0116.2	058.0	01.46	
120.0	020.5000	0256.5	066.8	018.1	000.0001	0116.1	056.9	01.89	
121.0	020.5000	0256.7	066.8	017.8	000.0001	0116.1	055.7	02.32	
122.0	020.5000	0256.9	066.8	017.5	000.0001	0116.0	054.6	02.76	
123.0	020.5000	0257.1	066.8	017.2	000.0001	0116.0	053.5	03.20	
124.0	020.5000	0257.1	066.8	016.9	000.0001	0116.0	052.4	03.63	
125.0	020.5000	0257.1	066.8	016.4	000.0001	0116.1	051.3	04.07	
126.0	020.5000	0257.1	066.8	016.0	000.0001	0116.2	050.2	04.51	
127.0	020.5000	0257.3	066.8	015.5	000.0001	0116.3	049.1	04.94	
128.0	020.5000	0257.5	066.9	015.0	000.0001	0116.4	048.0	05.36	
129.0	020.5000	0257.7	066.9	014.5	000.0001	0116.4	046.9	05.78	

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EXHIBIT C3 (continued)

FMOVER Study for W300BE vs WXKS-FM
Using Proposed Site as Reference

WXKS-FM - BLH-19911018KE
Channel = 300B
Max ERP = 20.5 kW
RCAMSL = 258 M
N. Lat. 42 20 50.0
W. Lng. 71 04 59.0

W300BE - Proposed
Channel = 300D
Max ERP = 0.05 kW
RCAMSL = 141 M
N. Lat. 41 33 30.6
W. Lng. 70 35 45.9

Protected
54 dBu

Interfering
34 dBu

FCC NGDC 30 Second Terrain Database

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
130.0	020.5000	0257.8	066.9	013.9	000.0001	0116.2	045.9	06.19	
131.0	020.5000	0257.7	066.9	013.2	000.0001	0115.7	044.8	06.57	
132.0	020.5000	0257.5	066.9	012.4	000.0001	0115.0	043.8	06.95	
133.0	020.5000	0257.4	066.9	011.6	000.0001	0114.3	042.8	07.31	
134.0	020.5000	0257.5	066.9	010.8	000.0001	0113.6	041.8	07.68	
135.0	020.5000	0257.6	066.9	009.9	000.0001	0113.0	040.9	08.05	
136.0	020.5000	0257.6	066.9	008.9	000.0001	0112.6	039.9	08.43	
137.0	020.5000	0257.6	066.9	007.8	000.0001	0112.4	039.0	08.82	
138.0	020.5000	0257.7	066.9	006.7	000.0001	0112.3	038.1	09.21	
139.0	020.5000	0257.8	066.9	005.5	000.0001	0112.9	037.2	09.64	
140.0	020.5000	0257.8	066.9	004.2	000.0001	0114.1	036.4	10.10	
141.0	020.5000	0257.5	066.9	002.8	000.0001	0114.1	035.6	10.47	
142.0	020.5000	0257.0	066.8	001.4	000.0001	0115.2	034.9	10.88	
143.0	020.5000	0256.3	066.8	359.8	000.0001	0118.7	034.3	11.44	
144.0	020.5000	0255.4	066.7	358.1	000.0001	0121.9	033.6	11.94	
145.0	020.5000	0254.2	066.6	356.3	000.0001	0123.6	033.1	12.31	
146.0	020.5000	0253.0	066.5	354.5	000.0001	0124.7	032.6	12.62	
147.0	020.5000	0251.8	066.4	352.6	000.0001	0125.0	032.2	12.86	
148.0	020.5000	0250.2	066.3	350.6	000.0001	0126.1	031.8	13.11	
149.0	020.5000	0248.6	066.1	348.5	000.0001	0128.5	031.5	13.41	
150.0	020.5000	0247.4	066.0	346.5	000.0001	0130.0	031.3	13.63	
151.0	020.5000	0246.3	066.0	344.4	000.0001	0130.8	031.1	13.80	
152.0	020.5000	0245.1	065.9	342.3	000.0001	0131.7	031.0	13.93	
153.0	020.5000	0244.5	065.8	340.1	000.0001	0132.6	030.8	14.05	
154.0	020.5000	0244.6	065.8	338.0	000.0001	0133.1	030.7	14.15	
155.0	020.5000	0244.8	065.8	335.9	000.0001	0133.4	030.7	14.19	
156.0	020.5000	0244.2	065.8	333.7	000.0001	0133.7	030.7	14.18	
157.0	020.5000	0243.5	065.7	331.6	000.0001	0134.2	030.9	14.13	
158.0	020.5000	0242.8	065.7	329.5	000.0001	0135.1	031.1	14.08	
159.0	020.5000	0241.5	065.6	327.5	000.0001	0136.2	031.4	13.98	
160.0	020.5000	0239.3	065.4	325.5	000.0001	0137.1	031.8	13.81	
161.0	020.5000	0237.2	065.2	323.7	000.0001	0137.7	032.3	13.60	
162.0	020.5000	0236.0	065.1	321.8	000.0001	0138.1	032.8	13.40	
163.0	020.5000	0235.4	065.1	320.0	000.0001	0138.5	033.2	13.18	
164.0	020.5000	0235.0	065.0	318.3	000.0001	0138.8	033.7	12.95	
165.0	020.5000	0234.3	065.0	316.7	000.0001	0139.1	034.3	12.68	

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Protected
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Interfering
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166.0	020.5000	0233.4	064.9	315.1	000.0001	0139.3	035.0	12.39	
167.0	020.5000	0231.5	064.7	313.7	000.0001	0139.6	035.7	12.03	
168.0	020.5000	0229.2	064.5	312.4	000.0001	0139.7	036.5	11.66	
169.0	020.5000	0227.2	064.3	311.2	000.0001	0139.9	037.3	11.27	
170.0	020.5000	0225.3	064.2	310.0	000.0001	0140.0	038.2	10.88	
171.0	020.5000	0223.3	064.0	308.9	000.0001	0140.2	039.0	10.48	
172.0	020.5000	0222.3	063.9	307.9	000.0001	0140.3	039.9	10.11	
173.0	020.5000	0222.8	064.0	306.7	000.0001	0140.4	040.6	09.76	
174.0	020.5000	0223.7	064.0	305.6	000.0001	0140.5	041.4	09.42	
175.0	020.5000	0224.7	064.1	304.5	000.0001	0140.6	042.2	09.07	
176.0	020.5000	0224.2	064.1	303.6	000.0001	0140.6	043.1	08.68	
177.0	020.5000	0223.8	064.0	302.8	000.0001	0140.7	044.0	08.29	
178.0	020.5000	0224.2	064.1	301.9	000.0001	0140.7	044.9	07.91	
179.0	020.5000	0225.3	064.2	301.0	000.0001	0140.7	045.8	07.54	
180.0	020.5000	0226.5	064.3	300.2	000.0001	0140.7	046.7	07.17	
181.0	020.5000	0227.6	064.4	299.5	000.0001	0140.7	047.7	07.02	
182.0	020.5000	0228.8	064.5	298.7	000.0001	0140.6	048.6	06.87	
183.0	020.5000	0229.6	064.6	298.1	000.0001	0140.6	049.6	06.61	
184.0	020.5000	0228.4	064.5	297.7	000.0001	0140.5	050.7	06.27	
185.0	020.5000	0226.5	064.3	297.4	000.0001	0140.5	051.8	05.90	
186.0	020.5000	0224.8	064.1	297.1	000.0001	0140.5	052.9	05.52	
187.0	020.5000	0224.0	064.1	296.7	000.0001	0140.4	053.9	05.22	
188.0	020.5000	0223.4	064.0	296.4	000.0001	0140.4	055.0	04.92	
189.0	020.5000	0223.7	064.0	296.0	000.0001	0140.3	056.1	04.65	
190.0	020.5000	0224.2	064.1	295.7	000.0001	0140.3	057.1	04.31	
191.0	020.5000	0224.9	064.1	295.3	000.0001	0140.2	058.2	03.97	
192.0	020.5000	0227.3	064.4	294.9	000.0001	0140.1	059.3	03.68	
193.0	020.5000	0230.6	064.6	294.4	000.0001	0140.1	060.3	03.47	
194.0	020.5000	0234.0	064.9	293.9	000.0001	0140.0	061.4	03.24	
195.0	020.5000	0236.9	065.2	293.5	000.0001	0139.9	062.4	02.99	
196.0	020.5000	0239.4	065.4	293.2	000.0001	0139.8	063.5	02.72	
197.0	020.5000	0241.6	065.6	292.9	000.0001	0139.8	064.7	02.42	
198.0	020.5000	0243.0	065.7	292.8	000.0001	0139.7	065.8	02.08	
199.0	020.5000	0243.4	065.7	292.7	000.0001	0139.7	066.9	01.72	
200.0	020.5000	0243.0	065.7	292.6	000.0001	0139.7	068.1	01.36	

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FMOVER Study for W300BE vs WXKS-FM
Using Proposed Site as Reference

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Channel = 300D
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Protected
54 dBu

Interfering
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FCC NGDC 30 Second Terrain Database

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
201.0	020.5000	0241.7	065.6	292.7	000.0001	0139.7	069.2	00.98	
202.0	020.5000	0239.4	065.4	292.8	000.0001	0139.8	070.4	00.60	
203.0	020.5000	0236.5	065.1	293.0	000.0001	0139.8	071.5	00.20	
204.0	020.5000	0233.8	064.9	293.2	000.0001	0139.8	072.6	-00.21	
205.0	020.5000	0232.0	064.8	293.4	000.0001	0139.9	073.8	-00.61	
206.0	020.5000	0231.0	064.7	293.5	000.0001	0139.9	074.9	-00.99	
207.0	020.5000	0230.3	064.6	293.6	000.0001	0139.9	076.0	-01.37	
208.0	020.5000	0229.5	064.5	293.7	000.0001	0139.9	077.1	-01.75	
209.0	020.5000	0228.7	064.5	293.8	000.0001	0139.9	078.3	-02.13	
210.0	020.5000	0227.9	064.4	293.9	000.0001	0140.0	079.4	-02.51	
211.0	020.5000	0227.1	064.3	294.1	000.0001	0140.0	080.5	-02.89	
212.0	020.5000	0226.1	064.2	294.3	000.0001	0140.0	081.6	-03.27	
213.0	020.5000	0224.8	064.1	294.4	000.0001	0140.1	082.7	-03.66	
214.0	020.5000	0223.6	064.0	294.6	000.0001	0140.1	083.8	-04.05	

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EXHIBIT C4

Interference Study for W300BE vs WFCC-FM
Using Proposed Site as Reference

As noted on Exhibit C1, the proposed W300BE is within the predicted 54 dBu contour of second adjacent station WFCC-FM, Channel 298B, Chatham, Massachusetts. Due to the relationship between the proposed W300BE and WFCC-FM, a 40 db ratio of the protected and interfering contours applies. We have, therefore, calculated the WFCC-FM level of signal at the proposed W300BE new site. Exhibit C5 is a map showing the WFCC-FM contour at the proposed W300BE site. The WFCC-FM licensed contour at the proposed W300BE site is 56.4 dBu (50/50), and the corresponding interfering contour for W300BE is 96.4 dBu (50/10). It is proposed that W300BE use a Kathrein Scala antenna (Two CL-FM/VRM/50N) oriented at 170° True. A tabulation of this antenna's horizontal and vertical plane patterns are included in Exhibits C8 and C9. Due to the relatively low power and height above ground level of the proposed translator's antenna, the 96.4 dBu interfering contour of the proposed W300BE is limited and extends no closer than 19.265 meters (63 feet)¹ from the ground along the proposed translator's major lobe. The interference, which is tabulated in Exhibit C7, does not reach ground level or any building structure. As such, the licensed WFCC-FM facility will not receive interference from the proposed W300BE.

1) This point is 445.7 meters out from the tower base along the proposed major lobe (170° True) as detailed in the graph of Exhibit C6. Lack of interference calculated using V-Soft program X-Field.

W300BE - Vineyard Haven, MA - Proposed

Latitude: 41-33-30.60 N / Longitude: 070-35-45.90 W
ERP: 0.05 kW / Channel: 300 / Freq: 107.9 MHz
AMSL Height: 141.0 m

WFCC-FM - Chatham, MA - BMLH19990910AAH

Latitude: 41-44-14 N / Longitude: 070-00-40 W
ERP: 50.00 kW / Channel: 298 / Freq: 107.5 MHz
AMSL Height: 111.0 m

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

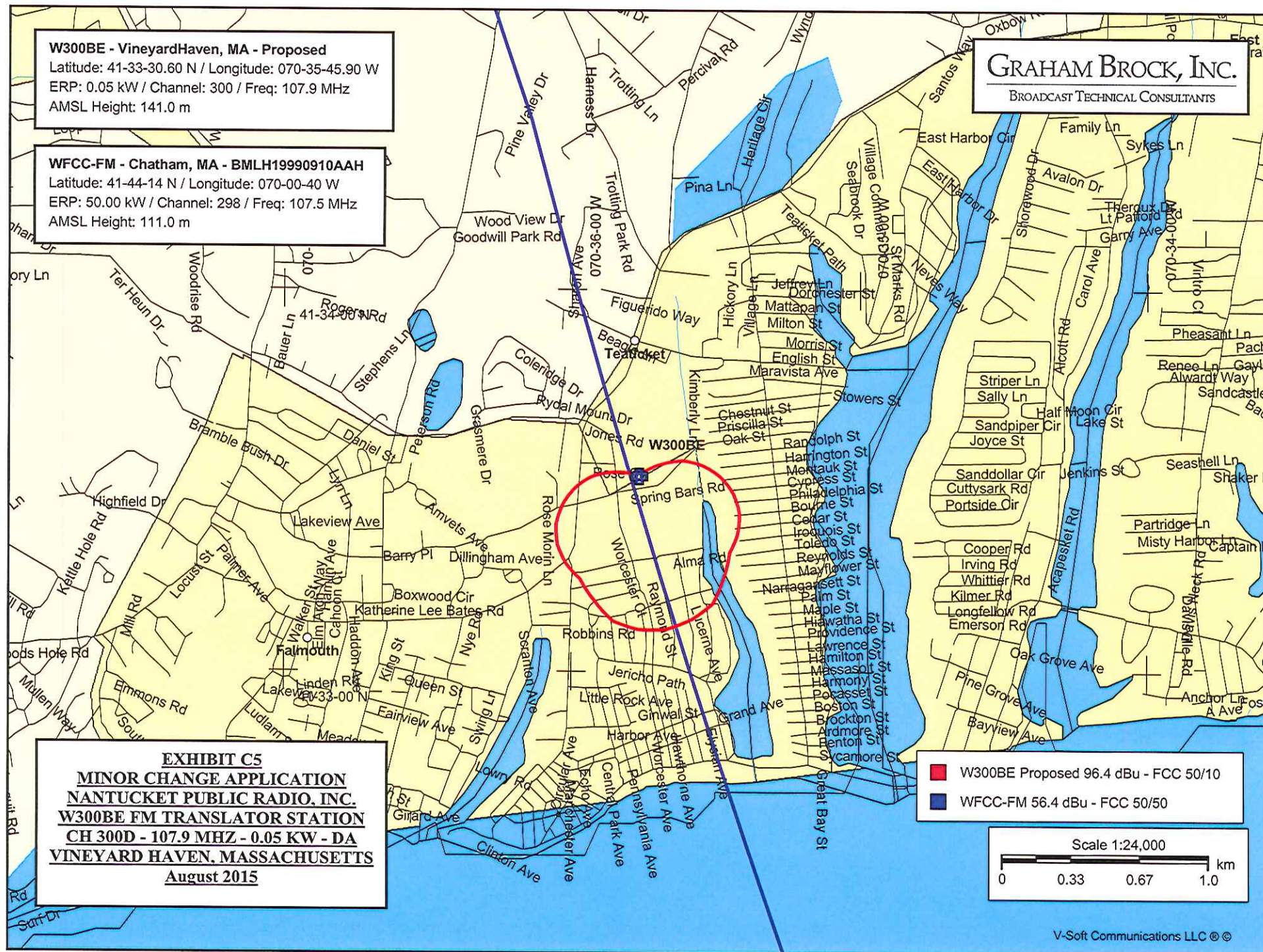


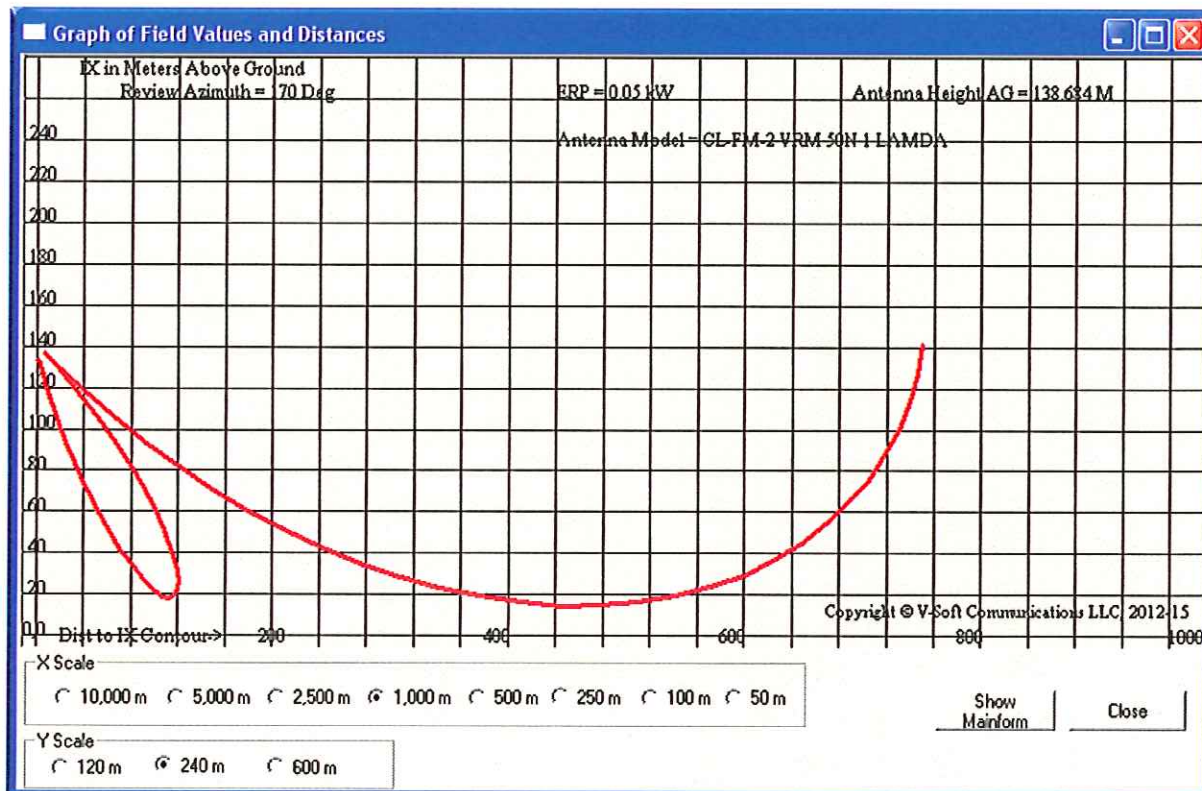
EXHIBIT C5

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EXHIBIT C6

Graph Showing Lack of Interference On the Ground
W300BE vs WFCC-FM Using Proposed Site as Reference



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EXHIBIT C7

Tabulation Showing Lack of Interference On The Ground
W300BE vs WFCC-FM Using Proposed Site as Reference

W300BE Vineyard Haven, MA 74.1204(d) Showing
 Translator Maximum Licensed ERP = 0.05 Translator Antenna Height AG = 138.684 Meters
 W300BE Antenna Model = CL-FM-2 VRM 50N 1 LAMDA

Protected Station's Contour = 56.40564 dBu Translator's full Interference contour 96.40564

Review Azimuth = 170 Degrees True (Main Lobe)
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator ERP on the horizon at Review Azimuth = 0.05 kW
 Distance between stations = 52.5 km
 Protected Station= WFCC-FM, 50 kW, 111 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.000	1.0	0.0500	750.2448	750.2448	138.684
01.00	0.995	1.0	0.0495	746.4936	746.3799	125.656
02.00	0.986	1.0	0.0486	739.7414	739.2908	112.867
03.00	0.975	1.0	0.0475	731.4887	730.4862	100.401
04.00	0.96	1.0	0.0461	720.2350	718.4805	88.443
05.00	0.943	1.0	0.0445	707.4809	704.7887	77.023
06.00	0.922	1.0	0.0425	691.7257	687.9364	66.379
07.00	0.898	1.0	0.0403	673.7198	668.6980	56.578
08.00	0.872	1.0	0.0380	654.2135	647.8467	47.635
09.00	0.843	1.0	0.0355	632.4564	624.6698	39.746
10.00	0.812	1.0	0.0330	609.1988	599.9437	32.898
11.00	0.775	1.0	0.0300	581.4397	570.7570	27.740
12.00	0.737	1.0	0.0272	552.9304	540.8476	23.723
13.00	0.697	1.0	0.0243	522.9207	509.5182	21.052
14.00	0.657	1.0	0.0216	492.9108	478.2693	19.438
15.00	0.615	1.0	0.0189	461.4006	445.6787	19.265 *
16.00	0.57	1.0	0.0162	427.6395	411.0735	20.811
17.00	0.525	1.0	0.0138	393.8785	376.6679	23.525
18.00	0.48	1.0	0.0115	360.1175	342.4921	27.402
19.00	0.435	1.0	0.0095	326.3565	308.5761	32.433
20.00	0.39	1.0	0.0076	292.5955	274.9498	38.610
21.00	0.346	1.0	0.0060	259.5847	242.3432	45.657
22.00	0.302	1.0	0.0046	226.5739	210.0757	53.808
23.00	0.259	1.0	0.0034	194.3134	178.8664	62.760
24.00	0.217	1.0	0.0024	162.8031	148.7280	72.466
25.00	0.177	1.0	0.0016	132.7933	120.3516	82.563
26.00	0.138	1.0	0.0010	103.5338	93.0555	93.298
27.00	0.101	1.0	0.0005	75.7747	67.5158	104.283
28.00	0.065	1.0	0.0002	48.7659	43.0577	115.790
29.00	0.032	1.0	0.0001	24.0078	20.9977	127.045
30.00	0.01	1.0	0.0000	007.5024	006.4973	134.933
31.00	0.03	1.0	0.0000	022.5073	019.2926	127.092
32.00	0.057	1.0	0.0002	042.7640	036.2659	116.023
33.00	0.083	1.0	0.0003	062.2703	052.2243	104.769
34.00	0.107	1.0	0.0006	080.2762	066.5520	93.794
35.00	0.129	1.0	0.0008	096.7816	079.2788	83.172
36.00	0.148	1.0	0.0011	111.0362	089.8302	73.419
37.00	0.165	1.0	0.0014	123.7904	098.8634	64.185
38.00	0.18	1.0	0.0016	135.0441	106.4162	55.543
39.00	0.193	1.0	0.0019	144.7973	112.5286	47.560
40.00	0.204	1.0	0.0021	153.0499	117.2431	40.305
41.00	0.211	1.0	0.0022	158.3017	119.4718	34.829
42.00	0.216	1.0	0.0023	162.0529	120.4288	30.249
43.00	0.219	1.0	0.0024	164.3036	120.1641	26.629
44.00	0.219	1.0	0.0024	164.3036	118.1901	24.549
45.00	0.218	1.0	0.0024	163.5534	115.6497	23.034

* - Point Closest to Ground

MINOR CHANGE APPLICATION
NANTUCKET PUBLIC RADIO, INC.
W300BE FM TRANSLATOR STATION
CH 300D - 107.9 MHZ - 0.05 KW - DA
VINEYARD HAVEN, MASSACHUSETTS
August 2015

EXHIBIT C7 (continued)

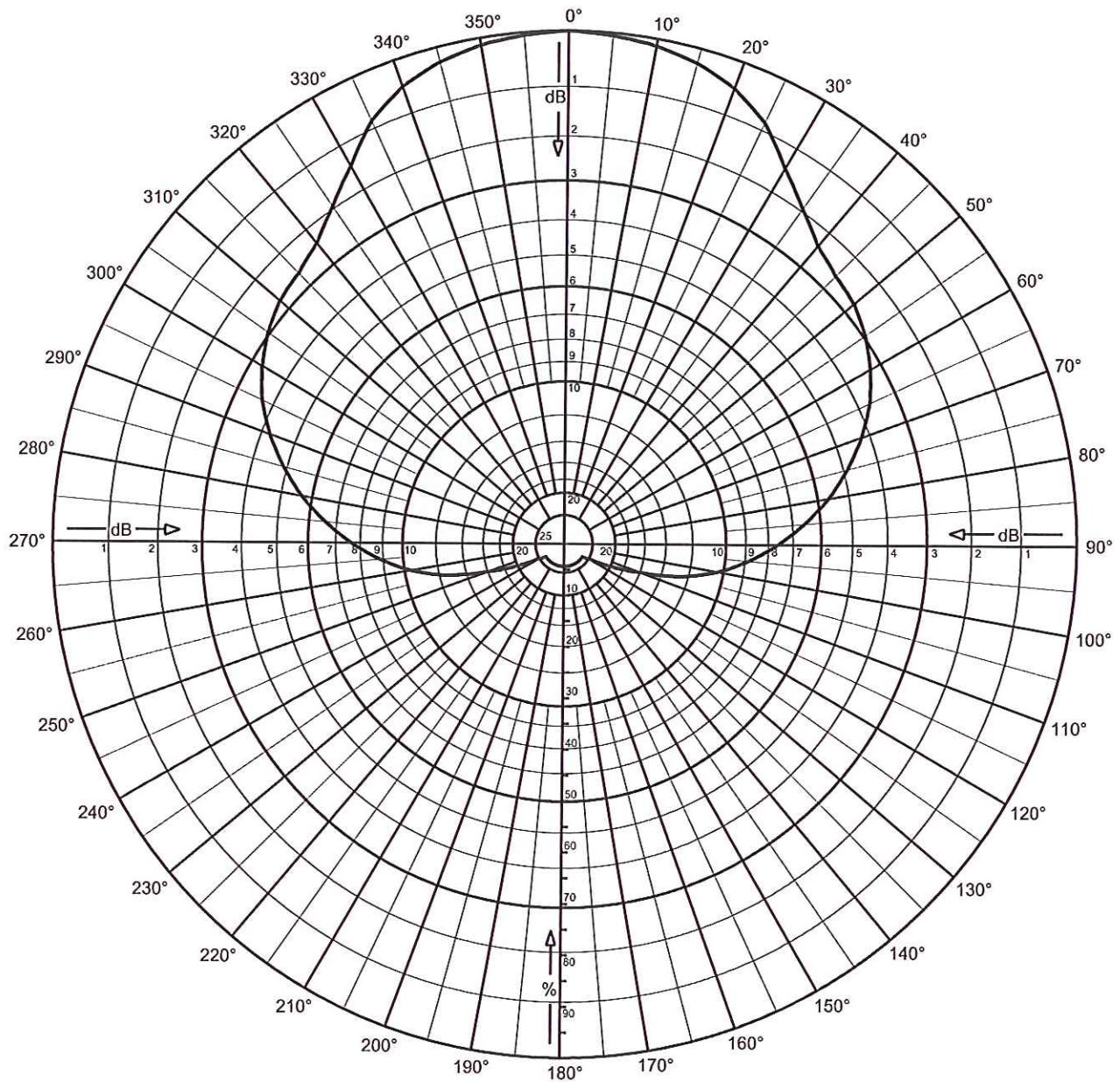
Tabulation Showing Lack of Interference On The Ground
W300BE vs WFCC-FM Using Proposed Site as Reference

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 W300BE Antenna Model = CL-FM-2 VRM 50N 1 LAMDA

Protected Station's Contour = 56.40564 dBu Translator's full Interference contour 96.40564

Review Azimuth = 170 Degrees True (Main Lobe)
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator ERP on the horizon at Review Azimuth = 0.05 kW
 Distance between stations = 52.5 km
 Protected Station= WFCC-FM, 50 kW, 111 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
46.00	0.215	1.0	0.0023	161.3026	112.0502	022.653
47.00	0.21	1.0	0.0022	157.5514	107.4498	023.458
48.00	0.203	1.0	0.0021	152.2997	101.9084	025.503
49.00	0.195	1.0	0.0019	146.2977	095.9799	028.272
50.00	0.185	1.0	0.0017	138.7953	089.2159	032.361
51.00	0.177	1.0	0.0016	132.7933	083.5696	035.484
52.00	0.167	1.0	0.0014	125.2909	077.1368	039.953
53.00	0.156	1.0	0.0012	117.0382	070.4353	045.213
54.00	0.144	1.0	0.0010	108.0352	063.5015	051.282
55.00	0.131	1.0	0.0009	098.2821	056.3723	058.176
56.00	0.121	1.0	0.0007	090.7796	050.7633	063.424
57.00	0.111	1.0	0.0006	083.2772	045.3560	068.842
58.00	0.1	1.0	0.0005	075.0245	039.7569	075.060
59.00	0.089	1.0	0.0004	066.7718	034.3900	081.449
60.00	0.078	1.0	0.0003	058.5191	029.2595	088.005
61.00	0.071	1.0	0.0003	053.2674	025.8245	092.095
62.00	0.064	1.0	0.0002	048.0157	022.5420	096.289
63.00	0.057	1.0	0.0002	042.7640	019.4144	100.581
64.00	0.05	1.0	0.0001	037.5122	016.4443	104.968
65.00	0.043	1.0	0.0001	032.2605	013.6339	109.446
66.00	0.039	1.0	0.0001	029.2595	011.9009	111.954
67.00	0.034	1.0	0.0001	025.5083	009.9669	115.203
68.00	0.029	1.0	0.0000	021.7571	008.1504	118.511
69.00	0.024	1.0	0.0000	018.0059	006.4527	121.874
70.00	0.02	1.0	0.0000	015.0049	005.1320	124.584
71.00	0.018	1.0	0.0000	013.5044	004.3966	125.915
72.00	0.016	1.0	0.0000	012.0039	003.7094	127.268
73.00	0.014	1.0	0.0000	010.5034	003.0709	128.640
74.00	0.012	1.0	0.0000	009.0029	002.4815	130.030
75.00	0.01	1.0	0.0000	007.5024	001.9418	131.437
76.00	0.01	1.0	0.0000	007.5024	001.8150	131.404
77.00	0.01	1.0	0.0000	007.5024	001.6877	131.374
78.00	0.01	1.0	0.0000	007.5024	001.5598	131.345
79.00	0.01	1.0	0.0000	007.5024	001.4315	131.319
80.00	0.01	1.0	0.0000	007.5024	001.3028	131.296
81.00	0.01	1.0	0.0000	007.5024	001.1736	131.274
82.00	0.01	1.0	0.0000	007.5024	001.0441	131.255
83.00	0.01	1.0	0.0000	007.5024	000.9143	131.237
84.00	0.01	1.0	0.0000	007.5024	000.7842	131.223
85.00	0.01	1.0	0.0000	007.5024	000.6539	131.210
86.00	0.01	1.0	0.0000	007.5024	000.5233	131.200
87.00	0.01	1.0	0.0000	007.5024	000.3926	131.192
88.00	0.01	1.0	0.0000	007.5024	000.2618	131.186
89.00	0.01	1.0	0.0000	007.5024	000.1309	131.183
90.00	0.01	1.0	0.0000	007.5024	000.0000	131.182



Two CL-FM/VRM/50N

Frequency: 107.9 MHz

Gain: 6.2 dBd (x 4.16)

Oriented at 40 & 320 degrees

Vertical Polarization

Vertical Stacked 1.0 wavelength

Horizontal plane Pattern



Two CL-FM/VRM/50N

Frequency: 107.9 MHz

Gain: 6.2 dBd (x 4.16)

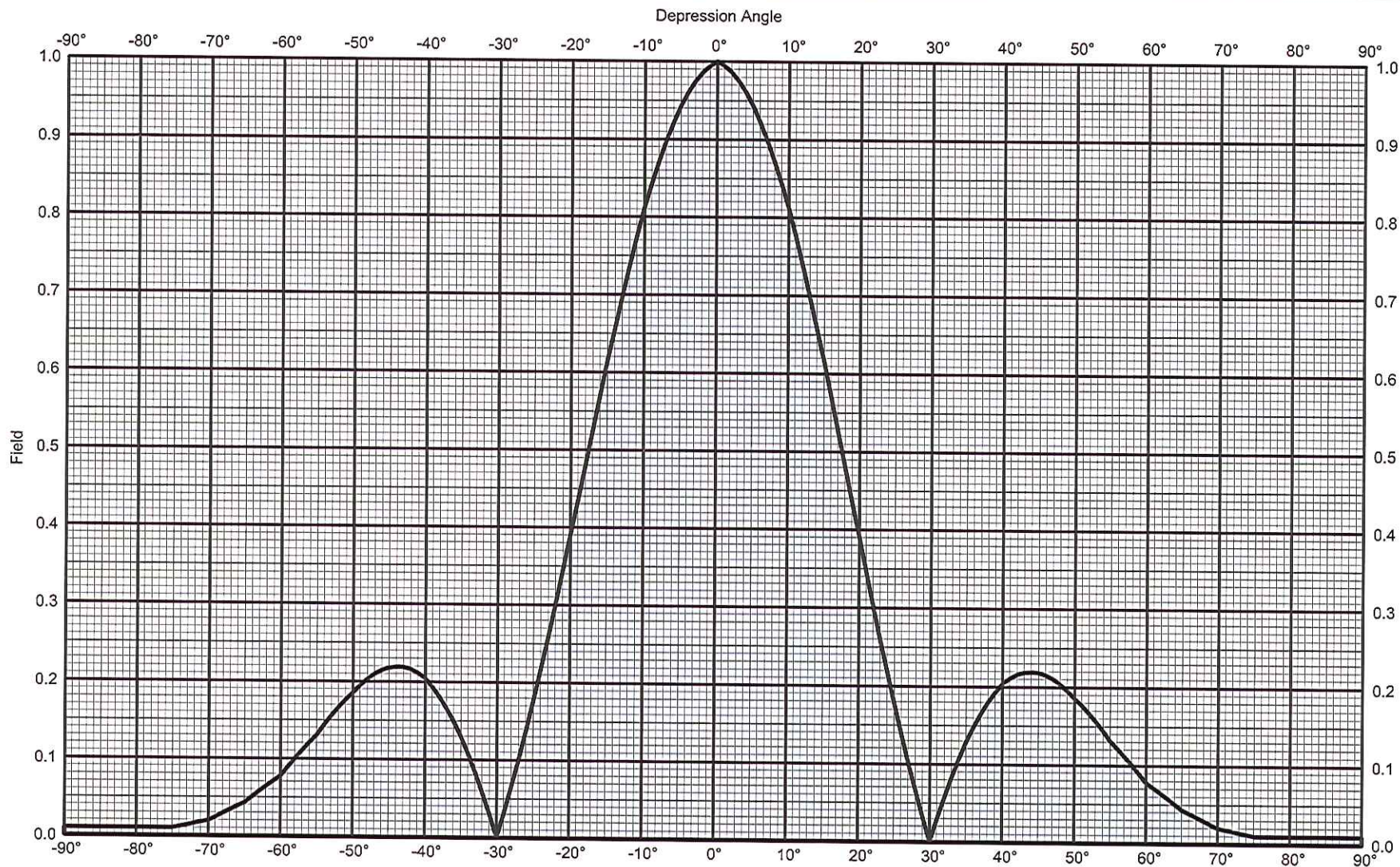
Oriented at 40 & 320 degrees

Vertical Polarization

Vertical Stacked 1.0 wavelength

Horizontal plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	6.20	4.17	180	0.043	-27.23	-21.03	0.01
5	0.995	-0.04	6.16	4.13	185	0.043	-27.23	-21.03	0.01
10	0.986	-0.12	6.08	4.05	190	0.043	-27.23	-21.03	0.01
15	0.971	-0.26	5.94	3.93	195	0.043	-27.23	-21.03	0.01
20	0.947	-0.48	5.72	3.74	200	0.043	-27.23	-21.03	0.01
25	0.908	-0.84	5.36	3.43	205	0.043	-27.23	-21.03	0.01
30	0.848	-1.43	4.77	3.00	210	0.043	-27.23	-21.03	0.01
35	0.800	-1.94	4.26	2.67	215	0.043	-27.23	-21.03	0.01
40	0.761	-2.37	3.83	2.41	220	0.043	-27.23	-21.03	0.01
45	0.742	-2.60	3.60	2.29	225	0.043	-27.23	-21.03	0.01
50	0.732	-2.71	3.49	2.23	230	0.043	-27.23	-21.03	0.01
55	0.712	-2.95	3.25	2.11	235	0.043	-27.23	-21.03	0.01
60	0.686	-3.28	2.92	1.96	240	0.058	-24.74	-18.54	0.01
65	0.654	-3.69	2.51	1.78	245	0.101	-19.88	-13.68	0.04
70	0.614	-4.23	1.97	1.57	250	0.159	-15.95	-9.75	0.11
75	0.569	-4.89	1.31	1.35	255	0.239	-12.43	-6.23	0.24
80	0.522	-5.65	0.55	1.13	260	0.304	-10.33	-4.13	0.39
85	0.469	-6.57	-0.37	0.92	265	0.361	-8.86	-2.66	0.54
90	0.416	-7.63	-1.43	0.72	270	0.416	-7.63	-1.43	0.72
95	0.361	-8.86	-2.66	0.54	275	0.469	-6.57	-0.37	0.92
100	0.304	-10.33	-4.13	0.39	280	0.522	-5.65	0.55	1.13
105	0.239	-12.43	-6.23	0.24	285	0.569	-4.89	1.31	1.35
110	0.159	-15.95	-9.75	0.11	290	0.614	-4.23	1.97	1.57
115	0.101	-19.88	-13.68	0.04	295	0.654	-3.69	2.51	1.78
120	0.058	-24.74	-18.54	0.01	300	0.686	-3.28	2.92	1.96
125	0.043	-27.23	-21.03	0.01	305	0.712	-2.95	3.25	2.11
130	0.043	-27.23	-21.03	0.01	310	0.732	-2.71	3.49	2.23
135	0.043	-27.23	-21.03	0.01	315	0.742	-2.60	3.60	2.29
140	0.043	-27.23	-21.03	0.01	320	0.761	-2.37	3.83	2.41
145	0.043	-27.23	-21.03	0.01	325	0.800	-1.94	4.26	2.67
150	0.043	-27.23	-21.03	0.01	330	0.848	-1.43	4.77	3.00
155	0.043	-27.23	-21.03	0.01	335	0.908	-0.84	5.36	3.43
160	0.043	-27.23	-21.03	0.01	340	0.947	-0.48	5.72	3.74
165	0.043	-27.23	-21.03	0.01	345	0.971	-0.26	5.94	3.93
170	0.043	-27.23	-21.03	0.01	350	0.986	-0.12	6.08	4.05
175	0.043	-27.23	-21.03	0.01	355	0.995	-0.04	6.16	4.13



KATHREIN
SCALA DIVISION
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 Medford, OR 97501 (USA) Fax: (541) 779-3991
<http://www.kathrein-scala.com>

Two CL-FM/VRM/50N
 Frequency: 107.9 MHz
 Gain: 6.2 dBd (x 4.16)
 Oriented at 40 & 320 degrees

Vertical Polarization
 Vertical Stacked 1.0 wavelength
 Vertical plane Pattern

EXHIBIT C9



Two CL-FM/VRM/50N

Frequency: 107.9 MHz

Gain: 6.2 dBd (x 4.16)

Oriented at 40 & 320 degrees

Vertical Polarization

Vertical Stacked 1.0 wavelength

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-33.80	0.00	-45	0.218	-13.23	-7.03	0.20
-89	0.010	-40.00	-33.80	0.00	-44	0.219	-13.18	-6.98	0.20
-88	0.010	-40.00	-33.80	0.00	-43	0.219	-13.21	-7.01	0.20
-87	0.010	-40.00	-33.80	0.00	-42	0.216	-13.32	-7.12	0.19
-86	0.010	-40.00	-33.80	0.00	-41	0.211	-13.52	-7.32	0.19
-85	0.010	-40.00	-33.80	0.00	-40	0.204	-13.82	-7.62	0.17
-84	0.010	-40.00	-33.80	0.00	-39	0.193	-14.29	-8.09	0.16
-83	0.010	-40.00	-33.80	0.00	-38	0.180	-14.89	-8.69	0.14
-82	0.010	-40.00	-33.80	0.00	-37	0.165	-15.64	-9.44	0.11
-81	0.010	-40.00	-33.80	0.00	-36	0.148	-16.59	-10.39	0.09
-80	0.010	-40.00	-33.80	0.00	-35	0.129	-17.80	-11.60	0.07
-79	0.010	-40.00	-33.80	0.00	-34	0.107	-19.41	-13.21	0.05
-78	0.010	-40.00	-33.80	0.00	-33	0.083	-21.60	-15.40	0.03
-77	0.010	-40.00	-33.80	0.00	-32	0.057	-24.82	-18.62	0.01
-76	0.010	-40.00	-33.80	0.00	-31	0.030	-30.56	-24.36	0.00
-75	0.010	-40.00	-33.80	0.00	-30	0.010	-40.00	-33.80	0.00
-74	0.012	-38.48	-32.28	0.00	-29	0.032	-29.99	-23.79	0.00
-73	0.014	-37.16	-30.96	0.00	-28	0.065	-23.71	-17.51	0.02
-72	0.016	-36.02	-29.82	0.00	-27	0.101	-19.94	-13.74	0.04
-71	0.018	-35.02	-28.82	0.00	-26	0.138	-17.20	-11.00	0.08
-70	0.020	-34.14	-27.94	0.00	-25	0.177	-15.04	-8.84	0.13
-69	0.024	-32.23	-26.03	0.00	-24	0.217	-13.26	-7.06	0.20
-68	0.029	-30.69	-24.49	0.00	-23	0.259	-11.74	-5.54	0.28
-67	0.034	-29.39	-23.19	0.00	-22	0.302	-10.41	-4.21	0.38
-66	0.039	-28.28	-22.08	0.01	-21	0.346	-9.23	-3.03	0.50
-65	0.043	-27.32	-21.12	0.01	-20	0.390	-8.17	-1.97	0.64
-64	0.050	-25.96	-19.76	0.01	-19	0.435	-7.23	-1.03	0.79
-63	0.057	-24.81	-18.61	0.01	-18	0.480	-6.38	-0.18	0.96
-62	0.064	-23.82	-17.62	0.02	-17	0.525	-5.60	0.60	1.15
-61	0.071	-22.96	-16.76	0.02	-16	0.570	-4.88	1.32	1.36
-60	0.078	-22.21	-16.01	0.03	-15	0.615	-4.22	1.98	1.58
-59	0.089	-20.99	-14.79	0.03	-14	0.657	-3.65	2.55	1.80
-58	0.100	-19.97	-13.77	0.04	-13	0.697	-3.13	3.07	2.03
-57	0.111	-19.09	-12.89	0.05	-12	0.737	-2.65	3.55	2.26
-56	0.121	-18.33	-12.13	0.06	-11	0.775	-2.21	3.99	2.51
-55	0.131	-17.68	-11.48	0.07	-10	0.812	-1.81	4.39	2.75
-54	0.144	-16.86	-10.66	0.09	-9	0.843	-1.48	4.72	2.96
-53	0.156	-16.16	-9.96	0.10	-8	0.872	-1.19	5.01	3.17
-52	0.167	-15.56	-9.36	0.12	-7	0.898	-0.94	5.26	3.36
-51	0.177	-15.06	-8.86	0.13	-6	0.922	-0.71	5.49	3.54
-50	0.185	-14.64	-8.44	0.14	-5	0.943	-0.51	5.69	3.71
-49	0.195	-14.19	-7.99	0.16	-4	0.960	-0.35	5.85	3.85
-48	0.203	-13.84	-7.64	0.17	-3	0.975	-0.22	5.98	3.96
-47	0.210	-13.56	-7.36	0.18	-2	0.986	-0.12	6.08	4.05
-46	0.215	-13.36	-7.16	0.19	-1	0.995	-0.05	6.15	4.12
					0	1.000	0.00	6.20	4.17



Two CL-FM/VRM/50N

Frequency: 107.9 MHz

Gain: 6.2 dBd (x 4.16)

Oriented at 40 & 320 degrees

Vertical Polarization

Vertical Stacked 1.0 wavelength

Vertical plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	6.20	4.17	45	0.218	-13.23	-7.03	0.20
1	0.995	-0.05	6.15	4.12	46	0.215	-13.36	-7.16	0.19
2	0.986	-0.12	6.08	4.05	47	0.210	-13.56	-7.36	0.18
3	0.975	-0.22	5.98	3.96	48	0.203	-13.84	-7.64	0.17
4	0.960	-0.35	5.85	3.85	49	0.195	-14.19	-7.99	0.16
5	0.943	-0.51	5.69	3.71	50	0.185	-14.64	-8.44	0.14
6	0.922	-0.71	5.49	3.54	51	0.177	-15.06	-8.86	0.13
7	0.898	-0.94	5.26	3.36	52	0.167	-15.56	-9.36	0.12
8	0.872	-1.19	5.01	3.17	53	0.156	-16.16	-9.96	0.10
9	0.843	-1.48	4.72	2.96	54	0.144	-16.86	-10.66	0.09
10	0.812	-1.81	4.39	2.75	55	0.131	-17.68	-11.48	0.07
11	0.775	-2.21	3.99	2.51	56	0.121	-18.33	-12.13	0.06
12	0.737	-2.65	3.55	2.26	57	0.111	-19.09	-12.89	0.05
13	0.697	-3.13	3.07	2.03	58	0.100	-19.97	-13.77	0.04
14	0.657	-3.65	2.55	1.80	59	0.089	-20.99	-14.79	0.03
15	0.615	-4.22	1.98	1.58	60	0.078	-22.21	-16.01	0.03
16	0.570	-4.88	1.32	1.36	61	0.071	-22.96	-16.76	0.02
17	0.525	-5.60	0.60	1.15	62	0.064	-23.82	-17.62	0.02
18	0.480	-6.38	-0.18	0.96	63	0.057	-24.81	-18.61	0.01
19	0.435	-7.23	-1.03	0.79	64	0.050	-25.96	-19.76	0.01
20	0.390	-8.17	-1.97	0.64	65	0.043	-27.32	-21.12	0.01
21	0.346	-9.23	-3.03	0.50	66	0.039	-28.28	-22.08	0.01
22	0.302	-10.41	-4.21	0.38	67	0.034	-29.39	-23.19	0.00
23	0.259	-11.74	-5.54	0.28	68	0.029	-30.69	-24.49	0.00
24	0.217	-13.26	-7.06	0.20	69	0.024	-32.23	-26.03	0.00
25	0.177	-15.04	-8.84	0.13	70	0.020	-34.14	-27.94	0.00
26	0.138	-17.20	-11.00	0.08	71	0.018	-35.02	-28.82	0.00
27	0.101	-19.94	-13.74	0.04	72	0.016	-36.02	-29.82	0.00
28	0.065	-23.71	-17.51	0.02	73	0.014	-37.16	-30.96	0.00
29	0.032	-29.99	-23.79	0.00	74	0.012	-38.48	-32.28	0.00
30	0.010	-40.00	-33.80	0.00	75	0.010	-40.00	-33.80	0.00
31	0.030	-30.56	-24.36	0.00	76	0.010	-40.00	-33.80	0.00
32	0.057	-24.82	-18.62	0.01	77	0.010	-40.00	-33.80	0.00
33	0.083	-21.60	-15.40	0.03	78	0.010	-40.00	-33.80	0.00
34	0.107	-19.41	-13.21	0.05	79	0.010	-40.00	-33.80	0.00
35	0.129	-17.80	-11.60	0.07	80	0.010	-40.00	-33.80	0.00
36	0.148	-16.59	-10.39	0.09	81	0.010	-40.00	-33.80	0.00
37	0.165	-15.64	-9.44	0.11	82	0.010	-40.00	-33.80	0.00
38	0.180	-14.89	-8.69	0.14	83	0.010	-40.00	-33.80	0.00
39	0.193	-14.29	-8.09	0.16	84	0.010	-40.00	-33.80	0.00
40	0.204	-13.82	-7.62	0.17	85	0.010	-40.00	-33.80	0.00
41	0.211	-13.52	-7.32	0.19	86	0.010	-40.00	-33.80	0.00
42	0.216	-13.32	-7.12	0.19	87	0.010	-40.00	-33.80	0.00
43	0.219	-13.21	-7.01	0.20	88	0.010	-40.00	-33.80	0.00
44	0.219	-13.18	-6.98	0.20	89	0.010	-40.00	-33.80	0.00
					90	0.010	-40.00	-33.80	0.00

MINOR CHANGE APPLICATION
NANTUCKET PUBLIC RADIO, INC.
W300BE FM TRANSLATOR STATION
CH 300D - 107.9 MHZ - 0.05 KW - DA
VINEYARD HAVEN, MASSACHUSETTS
August 2015

EXHIBIT C10

North Latitude: 41° 33' 30.6" - Protected and Interference Contour Tabulation
 West Longitude: 70° 35' 45.9" - W300BE, Vineyard Haven, Massachusetts

HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi. 34-F1	AV EL	HAAT	ERP kW	dBk	Field	100-F1	96.4-F1	60-F5	57-F1	54-F1	
000	22.8	118.2	0.0001	-40.34	0.043	0.02	0.03	1.64	2.08	2.55	8.74
010	27.9	113.1	0.0001	-40.34	0.043	0.02	0.03	1.62	2.05	2.51	8.56
020	24.7	116.3	0.0001	-40.34	0.043	0.02	0.03	1.63	2.07	2.54	8.67
030	19.3	121.7	0.0001	-40.34	0.043	0.02	0.03	1.65	2.09	2.58	8.86
040	13.1	127.9	0.0001	-40.34	0.043	0.02	0.03	1.67	2.12	2.62	9.08
050	9.6	131.4	0.0002	-37.74	0.058	0.03	0.04	2.07	2.57	3.16	10.65
060	4.7	136.3	0.0013	-28.98	0.159	0.08	0.12	3.87	4.72	5.70	18.87
070	1.0	140.0	0.0046	-23.35	0.304	0.15	0.23	5.65	6.72	7.97	26.76
080	0.8	140.2	0.0087	-20.63	0.416	0.21	0.31	6.62	7.85	9.36	31.29
090	0.0	141.0	0.0136	-18.66	0.522	0.26	0.39	7.42	8.85	10.49	35.29
100	0.0	141.0	0.0188	-17.25	0.614	0.30	0.46	8.05	9.59	11.35	38.23
110	0.0	141.0	0.0235	-16.28	0.686	0.34	0.51	8.53	10.13	11.97	40.31
120	0.0	141.0	0.0268	-15.72	0.732	0.36	0.55	8.82	10.45	12.35	41.56
130	0.0	141.0	0.0290	-15.38	0.761	0.38	0.57	8.99	10.65	12.58	42.33
140	0.0	141.0	0.0360	-14.44	0.848	0.42	0.64	9.49	11.22	13.27	44.51
150	0.0	141.0	0.0448	-13.48	0.947	0.47	0.71	10.02	11.84	14.02	46.84
160	0.0	141.0	0.0482	-13.17	0.982	0.49	0.74	10.20	12.04	14.29	47.63
170	1.9	139.1	0.0500	-13.01	1.000	0.50	0.75	10.21	12.06	14.31	47.78
180	3.9	137.1	0.0486	-13.13	0.986	0.49	0.74	10.07	11.89	14.10	47.21
190	7.1	133.9	0.0448	-13.48	0.947	0.47	0.71	9.75	11.52	13.64	45.91
200	9.3	131.7	0.0360	-14.44	0.848	0.42	0.64	9.16	10.84	12.81	43.33
210	0.6	140.4	0.0290	-15.38	0.761	0.38	0.57	8.97	10.63	12.55	42.25
220	0.0	141.0	0.0268	-15.72	0.732	0.36	0.55	8.82	10.45	12.35	41.56
230	0.3	140.7	0.0235	-16.28	0.686	0.34	0.51	8.51	10.12	11.95	40.27
240	6.3	134.7	0.0190	-17.20	0.617	0.31	0.46	7.88	9.39	11.11	37.54
250	1.4	139.6	0.0136	-18.66	0.522	0.26	0.39	7.38	8.80	10.44	35.12
260	1.8	139.2	0.0087	-20.63	0.416	0.21	0.31	6.60	7.82	9.33	31.17
270	2.4	138.6	0.0046	-23.35	0.304	0.15	0.23	5.62	6.69	7.93	26.62
280	2.5	138.5	0.0013	-28.98	0.159	0.08	0.12	3.90	4.76	5.75	19.05
290	1.8	139.2	0.0002	-37.74	0.058	0.03	0.04	2.10	2.62	3.24	10.96
300	0.3	140.7	0.0001	-40.34	0.043	0.02	0.03	1.70	2.18	2.71	9.53
310	1.0	140.0	0.0001	-40.34	0.043	0.02	0.03	1.70	2.18	2.71	9.51
320	2.5	138.5	0.0001	-40.34	0.043	0.02	0.03	1.69	2.17	2.69	9.45
330	6.1	134.9	0.0001	-40.34	0.043	0.02	0.03	1.68	2.15	2.67	9.32
340	8.4	132.6	0.0001	-40.34	0.043	0.02	0.03	1.68	2.14	2.65	9.24
350	14.3	126.7	0.0001	-40.34	0.043	0.02	0.03	1.66	2.11	2.61	9.04

AMSL= 141