

TECHNICAL EXHIBIT  
PREPARED IN SUPPORT OF A  
PETITION FOR RULE MAKING TO  
MODIFY THE DTV ALLOTMENT TABLE  
NEW DTV STATION  
PITTSFIELD, MASSACHUSETTS

Technical Summary

This technical narrative and associated exhibits have been prepared on behalf of Venture Technologies Group, LLC in support of a Petition for Rule Making to modify the NTSC channel 51 TV allotment at Pittsfield, Massachusetts from NTSC channel 51 to DTV channel 4.

Currently WNYA(TV) is authorized for NTSC operation on channel 51 (692-698 MHz) with an antenna directional maximum effective radiated power (ERP) of 1580 kilowatts and an HAAT of 305 meters (BNPCT-20020320ABU, Facility ID 136751).

An allocation study was conducted to determine if WNYA(TV) could change its channel 51 NTSC allotment to DTV channel 4. The study results indicate that channel 4 will satisfy all of the Commission's separation requirements, except with respect to DTV station WXXA-DT on channel 4 at Albany, New York, DTV station WIVT-DT on channel 4 at Binghamton, New York, NTSC station WNBC on channel 4 at New York, New York, and NTSC station WBZ-TV on channel 4 at Boston, Massachusetts.

Station WXXA-DT is only located 1 kilometer away from the WNYA-DT site, however WXXA-DT filed a petition for rulemaking (BPRM-20000718AAA) to change its DTV allotment from channel 4 to channel 7 (See MM Docket 02-92, RM-10363). On March 10, 2004 the Commission issued a Report and Order changing WXXA-DT's allotment from channel 4 to channel 7. Therefore, WXXA-DT is no longer an allocation issue.

Station WIVT-DT was allotted a DTV facility on channel 4 with a directional maximum of 1 kilowatt and an HAAT of 281. It currently is authorized by construction permit (BPCDT-19991101AGJ) to operate with nondirectional ERP of 1 kilowatt and an HAAT of 274.7 meters. It also has a pending application (BMPCDT-20021213AAS) to operate with a nondirectional ERP of 1.5 kilowatts and an HAAT of 263 meters. Based on OET-69 interference studies the proposed WNYA-DT would not cause prohibited interference to either the allotted, authorized or pending WIVT-DT facilities. Therefore a waiver will be requested with respect to the WIVT-DT facilities.

With respect to NTSC stations WNBC and WBZ-TV, the WNYA-DT site does not meet the required separation distances, however it is believed that the proposal will not cause prohibited interference to either station based on OET-69 interference studies. Therefore a waiver will be requested with respect to each station.

DTV channel 4 can be substituted and allotted to Pittsfield, Massachusetts in compliance with the principle community coverage requirements of Section 73.625(a) at reference coordinates Latitude 42°37'31", Longitude 74°00'38. In addition, operation on DTV channel 4 appears possible with an effective radiated power (ERP) of up to 4.15 kW utilizing a Dielectric THB-C3 directional pattern and an antenna height above average terrain (HAAT) of 397 meters. The proposed channel change is acceptable under the 2 percent criterion for *de minimis* impact applicable to DTV allotment modifications under Section 73.623(c)(2).

The proposed facilities do not exceed (ERP 4.15 kW/HAAT 397 meters) the nominal maximum permitted pursuant to Section 73.622(f)(6)(ii).

It is proposed to modify the Pittsfield NTSC channel 51 allotment to specify a DTV allotment on channel 4 with the following specifications:

State & City	DTV Channel	DTV ERP (kW)	Antenna HAAT (m)
MA, Pittsfield	4	4.15 (MAX-DA)	397

It is proposed to amend the analog (NTSC) TV table of allotments, Section 73.606(b) of the Commission's Rules as follows:

<u>City</u>	<u>Channel No.</u>	
	<u>Present</u>	<u>Proposed</u>
Pittsfield, MA	51(+)	-

It is also proposed to amend the DTV Table of Allotments, Section 73.622(b) of the Commission's Rules, as follows:

<u>City</u>	<u>Channel No.</u>	
	<u>Present</u>	<u>Proposed</u>
Pittsfield, MA	-	4

It is proposed to allot DTV channel 4 at Latitude 42°37'31", Longitude 74°00'38". It is proposed to operate with an antenna radiation center height above mean sea level (RCAMSL) of 653 meters, an antenna radiation center height above average terrain of (HAAT) of 397 meters and a directional antenna maximum ERP of 4.15 kW. The FCC Tower Registration Number for the existing tower is 1231728.

Figure 1 is a DTV channel 4 separation study toward other NTSC and DTV allotments based on a 65 kilometer "buffer". As shown, the proposed operation satisfies all of the Commission's separation requirements except to the allotment, authorized CP, and pending application facilities of DTV station WIVT-DT on channel 4 at Binghamton, New York, the licensed operation of NTSC station WNBC on channel 4 at New York, New York and NTSC station WBZ-TV on channel 4 at Boston,

Massachusetts. However, interference calculations were prepared with respect to WIVT-DT, WNBC, and WBZ-TV based on the procedures outlined in the FCC's OET-69 Bulletin. Results of the calculations indicate that the proposed operation is predicted to cause no interference to station WNBC and only "de minimis" interference to WIVT-DT and WBZ-TV. Therefore a waiver of Section 73.623(d) is respectfully requested with respect to each station based on the use of the OET-69 methods.

Figure 2 shows the horizontal and vertical relative field patterns for the proposed Dielectric THB-C3-2/6-1 directional antenna.

Figure 3 provides a summary of interference and service for the proposed channel 4 allotment. Determination of interference and service was based on the procedures outlined in OET Bulletin No. 69 and criteria contained in Sections 73.622 and 73.623 of the FCC's rules.<sup>1</sup>

It is believed that the proposed channel 4 operation is in full compliance with the FCC's 2%/10% interference criteria.

Figure 4 is a map which depicts the 28 dBu and 35 dBu, noise limited contours for the proposed channel 4 DTV operation. As shown, all of Pittsfield is located within the 35 dBu contour. Therefore, the proposed channel 4 DTV allotment will comply with the city coverage requirements contained in Section 73.625(a).

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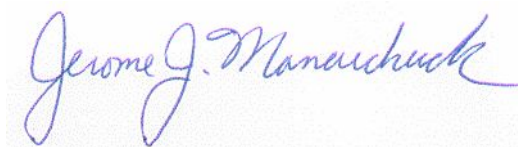
<sup>1</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

Studies indicate the proposed DTV channel 4 operation will not be involved in prohibited contour overlap with any pertinent Class A stations.

As shown in Figure 1 the proposal meets all the separation distances to pertinent Canadian stations and allotments except with respect to the channel 4 vacant DTV allotment at St. Jean, Quebec. However, in compliance with the Letter of Understanding (LOU) Between the Federal Communications Commission of the United States of America and Industry Canada, the proposed interfering contour (9.4 dBu (F(50,10)) of WNYA-DT will not overlap the protected coverage (45 km) of the Class B vacant allotment at St. Jean, Quebec. Therefore it is believed the proposal complies with the LOU toward all Canadian DTV stations and allotments. However, since the proposed site is located only 247 kilometers from the U.S./Canadian border, if necessary coordination with Canada is respectfully requested.

#### Conclusion

It is believed VHF DTV channel 4 can be substituted for the current UHF NTSC channel 51 allotment at Pittsfield, Massachusetts in compliance with the FCC's rules concerning DTV allotment changes.



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March 10, 2004

Figure 1

## CDBS TV/DTV SEPARATION STUDY

Job Title:							Separation Buffer: 65 km			
Channel: 4							Coordinates: 42-37-31 74-00-38			
Class: VU							Zone: I			
Type: DT										
Call	City	File	Channel	ERP	DA	Latitude	Bear	Dist.	Req.	
Id	St	Status	Num	Zone	HAAT	Id	Longitude	(km)	min	max
WFSB	HARTFORD	BMLCT	3 (+)	100.000	N	41-46-30	133.2	137.2	9.0	125.0
53115	CT LIC C	19841204KH	I	276		072-48-20		12.20	Close	
WSTM-T	SYRACUSE	BPCT	3 (-)	41.900	N	42-56-42	282.4	176.1	9.0	125.0
21252	NY CP C	20020625AA	I	396	44004	076-07-07		51.11	Clear	
WSTM-T	SYRACUSE	BMLCT	3 (-)	100.000	N	42-56-40	282.4	176.1	9.0	125.0
21252	NY LIC C	19870325KR	I	305		076-07-08		51.12	Clear	
DWXXAT	ALBANY		4 ( )	1.000	D	42-37-01	191.1	0.9	244.6	244.6
	NY DTV		I	366		074-00-46		243.66	Short <sup>1</sup>	
WXXA-DT	ALBANY	BPCDT	4 ( )	8.100	D	42-37-00	189.4	1.0	244.6	244.6
11970	NY APP C	19991027AB	I	347	29447	074-00-45		243.63	Short <sup>1</sup>	
	UTICA		4 (-)		N	43-07-50	306.2	95.9	244.6	244.6
25101	NY C		I			074-57-44		148.70	Short <sup>2</sup>	
WIVT-DT	BINGHAMPTON	BPCDT	4 ( )	1.000	N	42-03-39	249.1	171.2	244.6	244.6
11260	NY CP C	19991101AG	I	274.7	39811	075-56-36		73.43	Short <sup>3</sup>	
WIVT-DT	BINGHAMTON	BMPCD	4 ( )	1.500	N	42-03-39	249.1	171.2	244.6	244.6
11260	NY APP C	20021213AA	I	263	45936	075-56-36		73.43	Short <sup>3</sup>	
DWMGCT	BINGHAMTON		4 ( )	1.000	D	42-03-39	249.1	171.2	244.6	244.6
	NY DTV		I	281		075-56-36		73.43	Short <sup>3</sup>	
WNBC	NEW YORK	BLCT	4 (Z)	17.400	N	40-42-43	180.1	212.5	244.6	244.6
47535	NY LIC C	19840312KG	I	515		074-00-49		32.09	Short <sup>3</sup>	
WBZ-TV	BOSTON	BLCT	4 (-)	60.300	N	42-18-37	97.8	230.8	244.6	244.6
25456	MA LIC C	20010228AB	I	353	29337	071-14-14		13.84	Short <sup>3</sup>	
	ST-JEAN(25)		4 ( )	0.000		45-19-00	B	11.5	305.5	306.0
	QU CAN		I	0		073-14-00		0.52	Short <sup>4</sup>	
	TRENTON		4 ( )	0.000		44-06-00	B	300.8	332.7	306.0
	ON CAN		I	0		077-35-00		26.75	Clear	
CBOT	OTTAWA		4 ( )	0.000		45-30-11	VL	336.0	352.1	291.0
	ON CAN		I	0		075-51-02		61.11	Clear	

<sup>1</sup> WXXA-DT has filed a petition for rule making to change its allotment from channel 4 to channel 7. The WNYA-DT proposal is contingent upon the WXXA-DT channel change.

<sup>2</sup> Vacant analog NTSC allotment no longer requires consideration per FCC action in MM Docket No. 87-268.

<sup>3</sup> Protection provided using OET-69, see Figure 3.

<sup>4</sup> As shown in Figure 5, the proposed interfering contour will not overlap the protected coverage area of the channel 4 DTV allotment at St-Jean.

# Dielectric

Date **23 Apr 2003**  
Call Letters **WNYA-DT**  
Location **Pittsfield, MA**  
Customer  
Antenna Type **THB-C3-2/6-1**

Exhibit No.

Channel **4**

## AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**

Frequency **69 MHz**  
Drawing # **THB-C3**

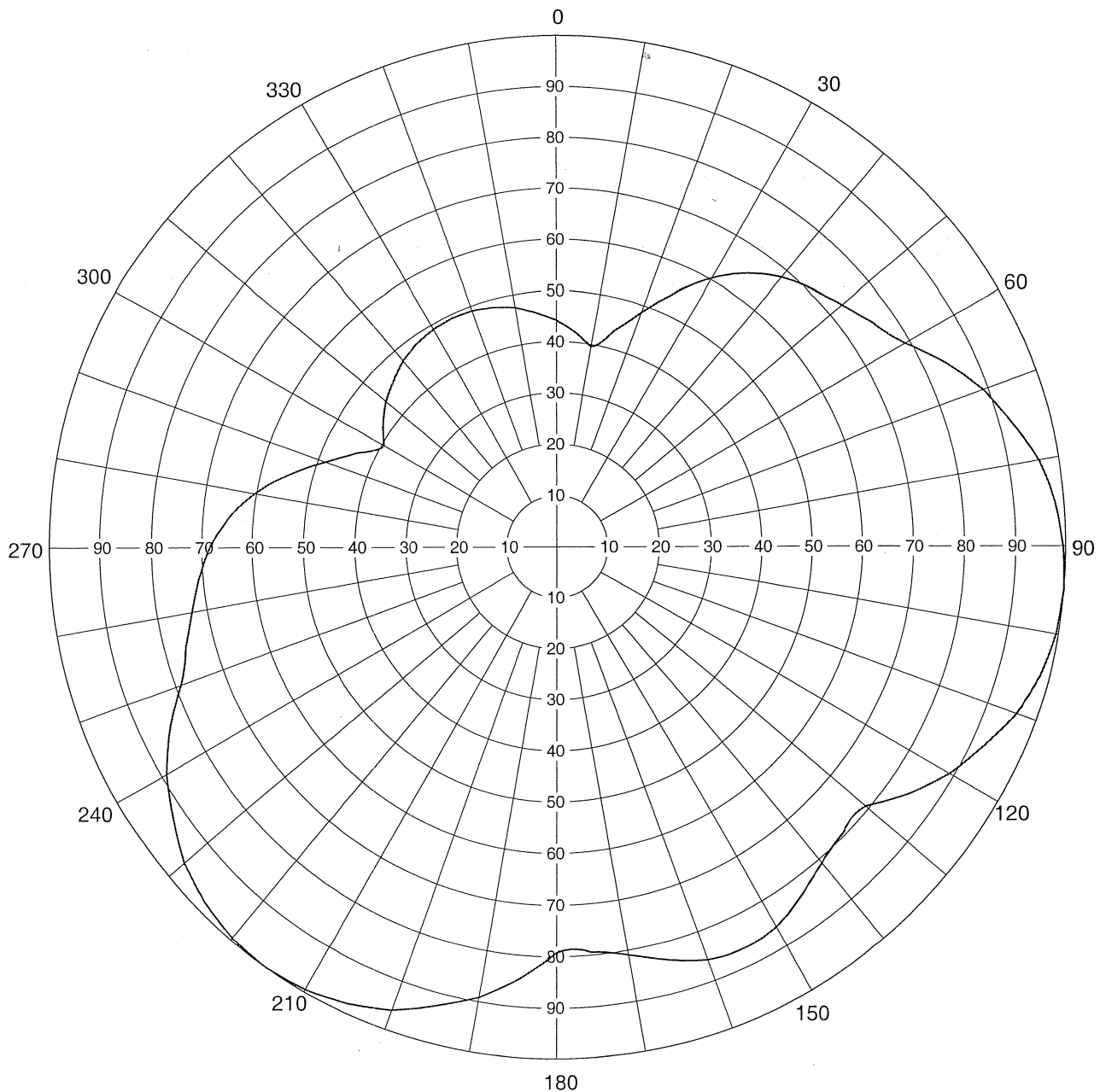


Exhibit No.



Date 24 Apr 2003  
Call Letters  
Location Pittsfield, MA  
Customer  
Antenna Type THB-C3-2/6-1  
Channel 4

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # THB-C3

Angle	Field
0	0.442
10	0.396
20	0.486
30	0.604
40	0.684
50	0.731
60	0.790
70	0.890
80	0.960
90	0.995
100	0.995
110	0.960
120	0.891
130	0.792
140	0.809
150	0.858
160	0.858
170	0.809
180	0.792
190	0.891
200	0.960
210	0.995
220	0.995
230	0.960
240	0.890
250	0.790
260	0.731
270	0.684
280	0.604
290	0.486
300	0.396
310	0.442
320	0.474
330	0.491
340	0.491
350	0.474

### Maxima

Angle	Field
95	1.000
155	0.866
215	1.000
335	0.493

### Minima

Angle	Field
10	0.396
132	0.786
178	0.786
300	0.396



Exhibit No.

# Dielectric

Date	23 Apr 2003	
Call Letters	WNYA-DT	Channel 4
Location	Pittsfield, MA	
Customer		
Antenna Type	THB-C3-2/6-1	

## ELEVATION PATTERN

RMS Gain at Main Lobe	2.1 (3.22 dB)	Beam Tilt	0.00 Degrees
RMS Gain at Horizontal	2.1 (3.22 dB)	Frequency	69.00 MHz
Calculated / Measured	Calculated	Drawing #	02H021000-90

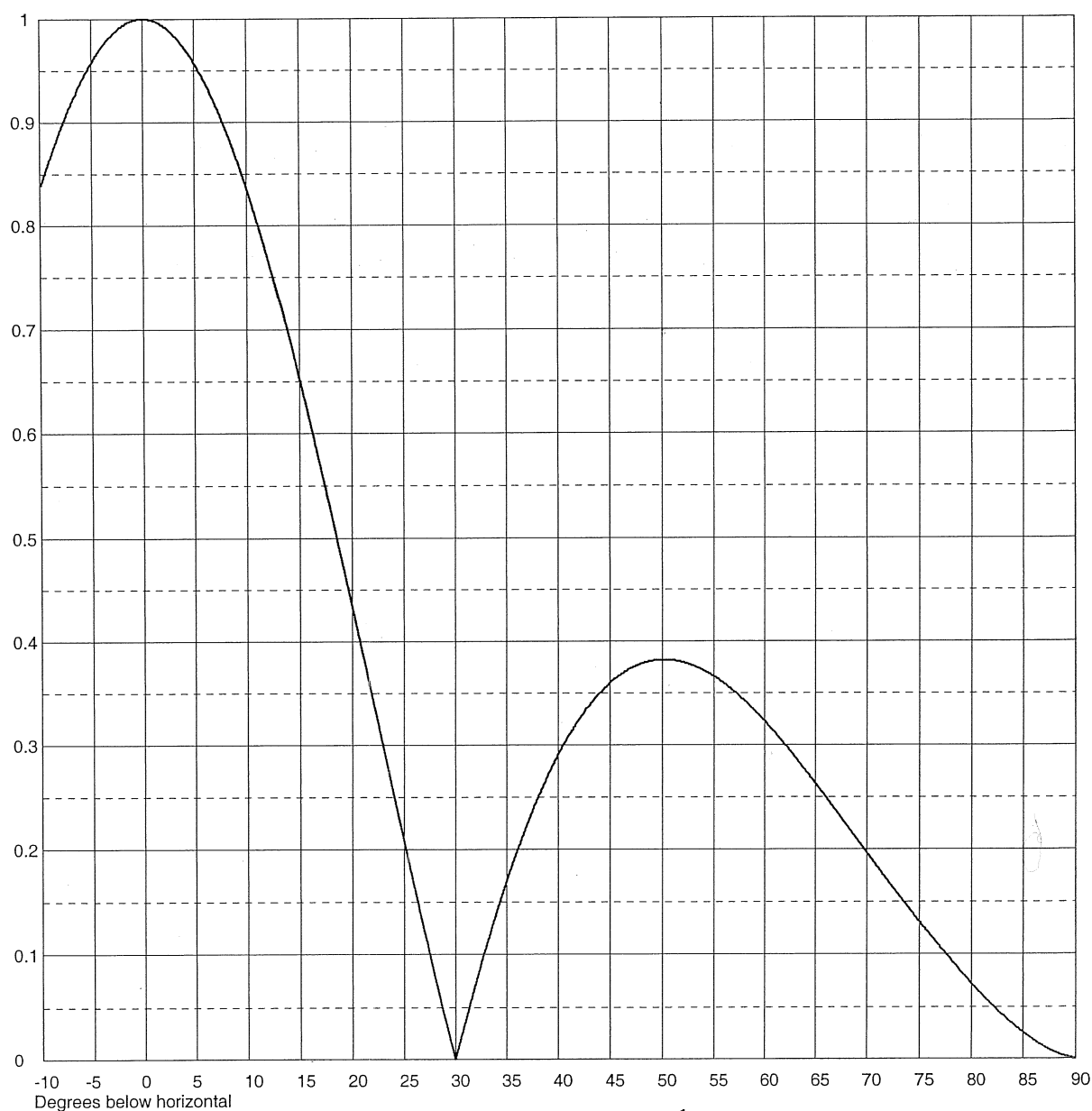


Exhibit No.



Date **23 Apr 2003**  
 Call Letters **WNYA-DT** Channel **4**  
 Location **Pittsfield, MA**  
 Customer  
 Antenna Type **THB-C3-2/6-1**

# TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **02H021000-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.835	2.4	0.990	10.6	0.816	30.5	0.019	51.0	0.382	71.5	0.176
-9.5	0.851	2.6	0.988	10.8	0.810	31.0	0.037	51.5	0.381	72.0	0.170
-9.0	0.865	2.8	0.986	11.0	0.803	31.5	0.056	52.0	0.380	72.5	0.163
-8.5	0.879	3.0	0.984	11.5	0.786	32.0	0.073	52.5	0.378	73.0	0.157
-8.0	0.893	3.2	0.982	12.0	0.768	32.5	0.091	53.0	0.377	73.5	0.150
-7.5	0.905	3.4	0.980	12.5	0.750	33.0	0.107	53.5	0.374	74.0	0.144
-7.0	0.917	3.6	0.978	13.0	0.731	33.5	0.124	54.0	0.372	74.5	0.137
-6.5	0.928	3.8	0.975	13.5	0.712	34.0	0.140	54.5	0.369	75.0	0.131
-6.0	0.939	4.0	0.973	14.0	0.693	34.5	0.155	55.0	0.366	75.5	0.125
-5.5	0.948	4.2	0.970	14.5	0.673	35.0	0.170	55.5	0.363	76.0	0.118
-5.0	0.957	4.4	0.967	15.0	0.652	35.5	0.184	56.0	0.359	76.5	0.112
-4.5	0.965	4.6	0.964	15.5	0.632	36.0	0.198	56.5	0.355	77.0	0.106
-4.0	0.973	4.8	0.961	16.0	0.611	36.5	0.212	57.0	0.351	77.5	0.100
-3.5	0.979	5.0	0.957	16.5	0.589	37.0	0.224	57.5	0.347	78.0	0.095
-3.0	0.984	5.2	0.954	17.0	0.568	37.5	0.237	58.0	0.343	78.5	0.089
-2.8	0.986	5.4	0.950	17.5	0.546	38.0	0.249	58.5	0.338	79.0	0.083
-2.6	0.988	5.6	0.947	18.0	0.524	38.5	0.260	59.0	0.333	79.5	0.078
-2.4	0.990	5.8	0.943	18.5	0.501	39.0	0.271	59.5	0.328	80.0	0.072
-2.2	0.992	6.0	0.939	19.0	0.479	39.5	0.281	60.0	0.323	80.5	0.067
-2.0	0.993	6.2	0.935	19.5	0.456	40.0	0.291	60.5	0.317	81.0	0.062
-1.8	0.994	6.4	0.931	20.0	0.434	40.5	0.300	61.0	0.312	81.5	0.057
-1.6	0.996	6.6	0.926	20.5	0.411	41.0	0.309	61.5	0.306	82.0	0.052
-1.4	0.997	6.8	0.922	21.0	0.388	41.5	0.317	62.0	0.300	82.5	0.047
-1.2	0.998	7.0	0.917	21.5	0.365	42.0	0.325	62.5	0.294	83.0	0.043
-1.0	0.998	7.2	0.913	22.0	0.343	42.5	0.332	63.0	0.288	83.5	0.038
-0.8	0.999	7.4	0.908	22.5	0.320	43.0	0.338	63.5	0.282	84.0	0.034
-0.6	0.999	7.6	0.903	23.0	0.297	43.5	0.345	64.0	0.276	84.5	0.030
-0.4	1.000	7.8	0.898	23.5	0.275	44.0	0.350	64.5	0.269	85.0	0.026
-0.2	1.000	8.0	0.893	24.0	0.252	44.5	0.355	65.0	0.263	85.5	0.022
0.0	1.000	8.2	0.887	24.5	0.230	45.0	0.360	65.5	0.256	86.0	0.018
0.2	1.000	8.4	0.882	25.0	0.208	45.5	0.364	66.0	0.250	86.5	0.015
0.4	1.000	8.6	0.877	25.5	0.186	46.0	0.368	66.5	0.243	87.0	0.012
0.6	0.999	8.8	0.871	26.0	0.164	46.5	0.371	67.0	0.237	87.5	0.009
0.8	0.999	9.0	0.865	26.5	0.142	47.0	0.374	67.5	0.230	88.0	0.007
1.0	0.998	9.2	0.860	27.0	0.121	47.5	0.377	68.0	0.223	88.5	0.004
1.2	0.998	9.4	0.854	27.5	0.100	48.0	0.379	68.5	0.217	89.0	0.002
1.4	0.997	9.6	0.848	28.0	0.079	48.5	0.380	69.0	0.210	89.5	0.001
1.6	0.996	9.8	0.842	28.5	0.059	49.0	0.381	69.5	0.203	90.0	0.000
1.8	0.994	10.0	0.835	29.0	0.039	49.5	0.382	70.0	0.196		
2.0	0.993	10.2	0.829	29.5	0.019	50.0	0.382	70.5	0.190		
2.2	0.992	10.4	0.823	30.0	0.000	50.5	0.382	71.0	0.183		

TECHNICAL EXHIBIT  
PREPARED IN SUPPORT OF  
PETITION FOR RULE MAKING TO  
MODIFY THE DTV ALLOTMENT TABLE  
PITTSFIELD, MASSACHUSETTS

Interference and Service Summary

I. Interference Caused

Protected Station	FCC Service Population	Unique Interference Population
WFSB, NTSC Ch. 3 Hartford, CT Licensed Authorized CP	5,181,895 5,181,895	0 (0.0%) 0 (0.0%)
WSTM-TV NTSC Ch. 3 Syracuse, NY Licensed Authorized CP	No Interference Calculated No Interference Calculated	
WBZ-TV NTSC Ch. 4 Boston, MA	6,919,604	22,802 (0.3%)
WPXT-DT, DTV Ch. 4 Portland, ME Authorized CP DTV Allotment	642,321 642,321	165 (0.0%) 0 (0.0%)
WIVT, DTV Ch. 4 Binghamton, NY Authorized CP Pending Application Allotment	711,086 711,086 711,086	12,829 (1.8%) 7,904 (1.1%) 3,361 (0.5%)
WIVB-TV, NTSC Ch. 4 Buffalo, NY Licensed Authorized CP	2,482,329 2,481,115	0 (0.0%) 0 (0.0%)
WNBC, NTSC Ch. 4 New York, NY Licensed	18,666,308	0 (0.0%)
WHP-DT, DTV Ch. 4 Harrisburg, PA DTV Allotment Licensed	1,963,568 1,963,568	0 (0.0%) 0 (0.0%)

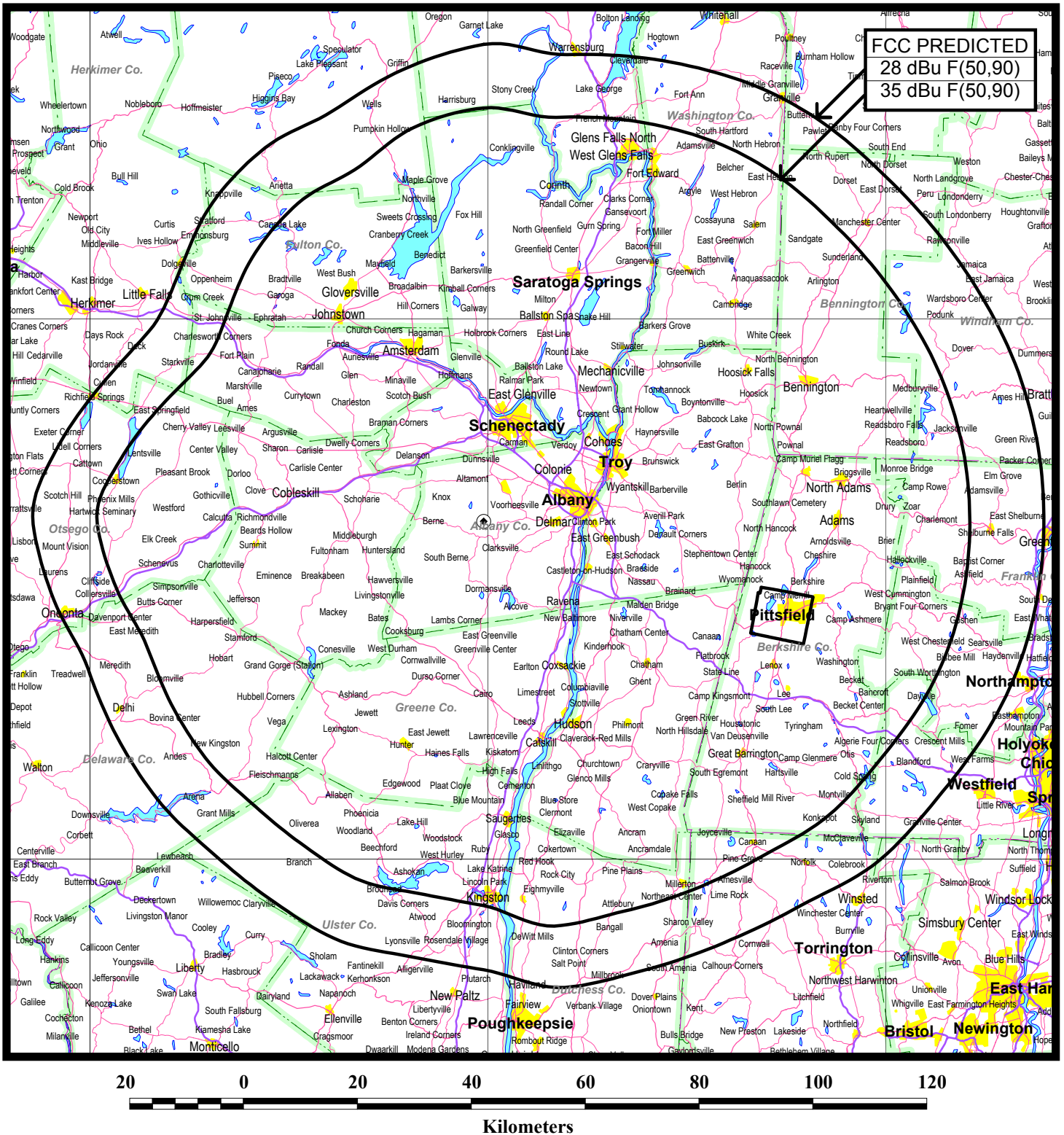
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PITTSFIELD, MASSACHUSETTS

Interference and Service Summary

II. Service

	Population within
Within Noise-Limited Contour	1,577,224
Not Affected by Terrain Losses	1,501,243
Lost to NTSC Interference	26,200
Lost to DTV Interference	5,254
Total Service	1,469,789

Figure 4



## FCC PREDICTED COVERAGE CONTOURS

DTV STATION WNYA-DT

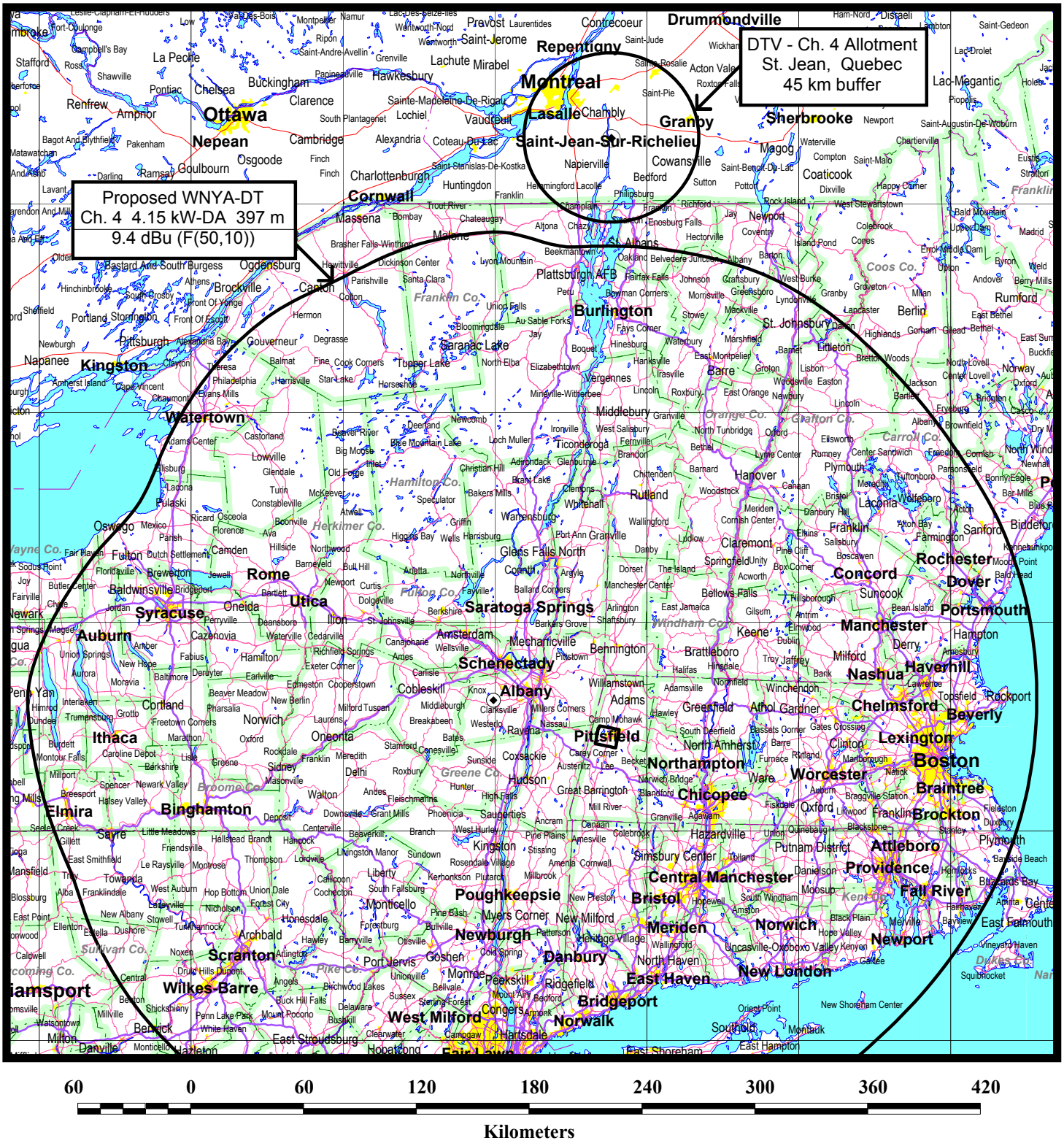
PITTSFIELD, MA

CH 4 4.15 KW (DA) 397 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



Figure 5



## CANADIAN ALLOCATION STUDY MAP

STATION WNYA-DT  
PITTSFIELD, MA

CH 4 4.15 KW (DA) 397 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida