

**EXHIBIT #1  
ENGINEERING STATEMENT**

Concerning the Application of  
Vermont Public Radio  
To Construct a New FM Translator  
To Serve Burlington, Vermont  
Long Form – BNPFT20030317HKB

August 2003

**Channel 233D**

**0.01 kW ERP Omni**

This engineering statement supports the application filed by Vermont Public Radio to construct a new FM translator to serve Burlington, Vermont on Channel 233. The applicant proposes to modify the proposed primary station.

Under the instant proposal, the off-air audio signal of primary station WVPS, channel 300, Burlington, will be delivered to a type-approved transmitter. This unit will deliver 0.0217 kW to the input of a 1 bay Shively 6812. The antenna has a power gain of 0.46 resulting in an effective radiated power of 0.01 kW, polarized circularly.

A total of 12 evenly spaced radials were used to determine the antenna height above average terrain. The highest radial of the 12 was used to determine the maximum effective radiated power. The USGS 30 arc-second terrain elevation database was employed to determine the elevations along the radials that were averaged using the required four-point interpolation method. The resulting averaged radial antenna heights were employed using the Commission's own TVFMINT algorithm to project the distances to signal contours. A tabular listing of the distance to the 1 mV/m contour can be found on page #3 of this exhibit. A coverage map can be found on page #4.

**Exhibit #10** is a map of the 60 dBu contours of the primary station, WVPS and the proposed translator. The proposed translator will be a "fill-in" facility.

**Exhibit #12** is an Allocation Study showing that no interference will be caused any existing licenses, construction permits or allocations. The first page is a computer channel study of all stations having a frequency and distance relationship. The exhibit gives current operating powers, HAAT's bearings and distances. (All distances were computed according to the method described under Section 73.208 of the Commission's Rules.) Page #2 of this exhibit is an explanation of the methods used.

The proposed station is within 320 kilometers of the US border with Canada, however there are no pertinent Canadian relationships. The 34 dBu interference contour does not extend beyond 60 kilometers (See Ex #1, Page #3). The Mexican border is more than 320 kilometers in distance. The proposed facility is okay with respect to AM stations, FCC monitoring stations, Table Mountain and the West Virginia Quiet Zone.

Exhibit #16 is an RF hazard compliance statement.

Page #5 of Exhibit #E1 is a statement of the qualifications of the preparer.

Kate Michler

Doug Vernier Telecommunications Consultants  
 Long Form BNPFT20030317HKB Burlington 233  
 ERP = 0.01 kW  
 Channel = 233

Azimuth Deg. T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 60 dBu Contour km	F(50-10) Distance to 34 dBu Contour km
0	55.6	134.4	-20.000	6.73	31.79
30	111.1	78.9	-20.000	5.17	24.16
60	164.0	26.0	-20.000	3.15	14.16
90	170.6	19.4	-20.000	3.15	14.16
120	154.4	35.6	-20.000	3.42	15.50
150	147.0	43.0	-20.000	3.78	17.50
180	57.6	132.4	-20.000	6.68	31.54
210	32.2	157.8	-20.000	7.28	34.54
240	67.6	122.4	-20.000	6.45	30.34
270	64.9	125.1	-20.000	6.51	30.67
300	37.2	152.8	-20.000	7.16	33.99
330	33.6	156.4	-20.000	7.25	34.39
Ave. = 91.3 M		98.7 M			

Antenna Radiation Center AMSL = 190 M  
 NGDC 30 Arc Sec.

Geographic Coordinates:

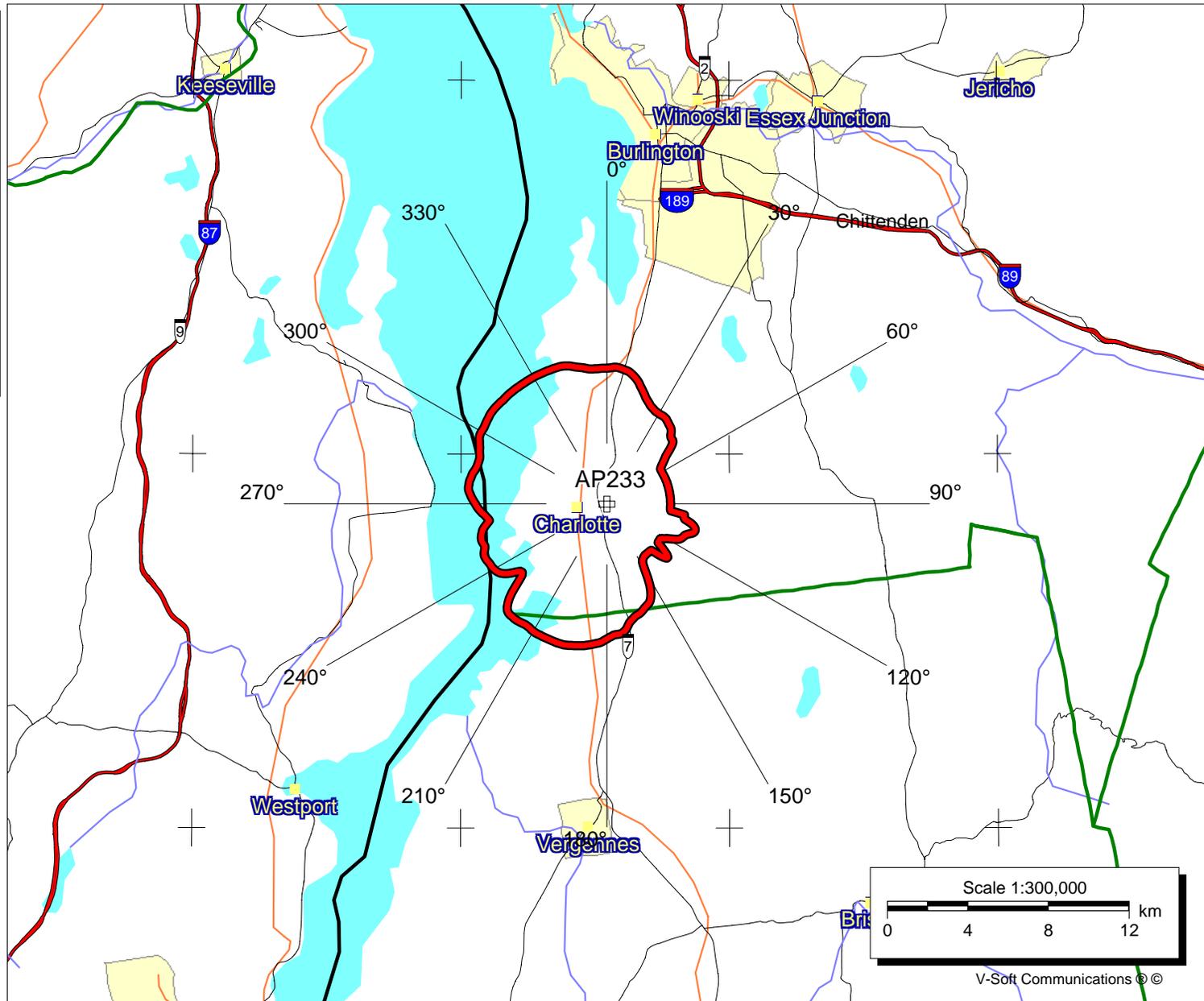
N. Lat. 44 18 40  
 W. Lng. 73 14 34

# Proposed Translator 60 dBu Coverage

**AP233**  
BNPFT20030317HKB  
Latitude: 44-18-40 N  
Longitude: 073-14-34 W  
ERP: 0.01 kW  
Channel: 233  
Frequency: 94.5 MHz  
AMSL Height: 190.0 m  
Elevation: 153.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Contour

Pop = 3,641  
Area = 107.7 sq km

August 14, 2003



**Declaration:**

I, Katherine A. Michler, have received a Bachelor of Science degree from the University of Northern Iowa, and;

That, I declare that I have received training as a technical consultant as a member of the staff of Doug Vernier Telecommunications Consultants, and;

That, I have apprenticed under Douglas Vernier for over five years, and;

That, he has been active in broadcast consulting for over 25 years, and;

That, his qualifications are a matter of record with the Federal Communications Commission, and;

That, I am an Associate Member (#20792) of the Society of Broadcast Engineers, Indianapolis, Indiana, and;

That, the consulting firm of Doug Vernier Telecommunications Consultants has been retained by Vermont Public Radio;

That, I have personally prepared these engineering showings, the technical information contained in same and the facts stated within are true to my knowledge, and;

That, under penalty of perjury, I declare that the foregoing is correct.

Katherine A. Michler Katherine A. Michler

Executed on August 14, 2003