

Town of Marlboro Broadband Innovation Proposal

Submitted to:

Broadband Innovation Grant
Department of Public Service
112 State Street, Floor 3
Montpelier, VT 05062
psd.telecom@vermont.gov

Before the Deadline:

Friday October 25th @ 4:30pm

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Transmittal Letter

This Application for a Broadband Innovation Grant is made by the Town of Marlboro and transmitted via email to the Public Service Department of Vermont as a pdf document, scanned from the original to include the signatures required. <psd.telecom@vermont.gov>

Marlboro's BIG Application consists of 14 pages. Please confirm receipt of this application by notifying Steven John, MCUB Chair at sbjohn@sover.net .

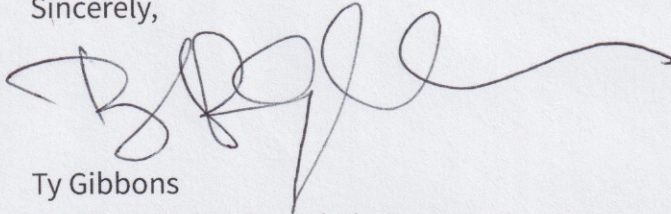
Thank you!

Certification

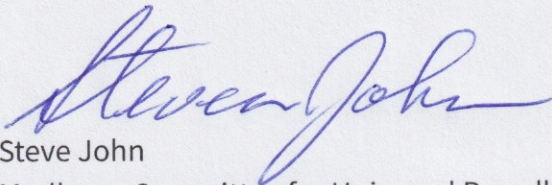
To Whom it May Concern,

This is a letter summarizing the applications and the official nature of the application, as indicated by the below signatures.

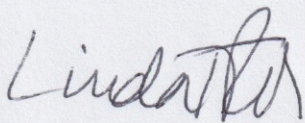
Sincerely,

A handwritten signature in black ink, appearing to read 'Ty Gibbons', with a long horizontal flourish extending to the right.

Ty Gibbons
Marlboro Select Board Chair

A handwritten signature in blue ink, appearing to read 'Steve John', with a long horizontal flourish extending to the right.

Steve John
Marlboro Committee for Universal Broadband Chair

A handwritten signature in black ink, appearing to read 'Linda Peters', with a long horizontal flourish extending to the right.

Linda Peters
Treasurer, Town of Marlboro

Proposal

General Information

Marlboro, VT is a town in Windham County with 1078 people sparsely populating 40.7 square miles with 54.5 miles of town roads of which 3.9 miles are paved. A major east west highway - 8.3 miles of VT Route 9 bisects the town. The town has 714 registered voters and supports a K-8 elementary school with about 100 students. 24% of our registered voters voted on Town Meeting Day. Marlboro College is the largest employer in town with student enrollment hovering around 100.

Replacing a previous Connectivity Committee, the Marlboro Committee on Universal Broadband (MCUB) is an appointed subcommittee of the Marlboro Selectboard with the mission of “acquiring universal broadband in the Town of Marlboro”. (Marlboro SB Minutes, June 27, 2019)

The Marlboro Committee for Universal Broadband (MCUB) meets on a regular monthly schedule. All meetings publicly warned with minutes posted at the Town Office and online. The MCUB has:

- Determined to create an accurate coverage map for the Town and issued a public survey (online and in paper format) to conclude gathering data by Oct, 10, 2019.
- With the SB approval mailed and emailed Requests for Information to six ISPs serving Marlboro residents.
- Received responses to our RFI from 3 of the six and anticipate no more information will be received. Comcast, Consolidated Communications, and VTel replied. Duncan Cable, Southern VT Cable, and FirstLight (Sovernet) did not.

For the administration of any grant, the following qualified participants will be involved:

- Carole D. Monroe, Consultant.
 - Former CEO of ValleyNet, Inc.

- Steven B. John, EdD, Chair, MCUB.
 - Directly oversees the work of the Consultant
- Tyler Gibbons, Chair, Marlboro Select Board.
 - Evaluates the results of the Consultant's work for the SB and Town.
- Linda Peters, Treasurer, Town of Marlboro
 - Compliance & financial oversight.

Summary of Previous Effort to Improve Broadband Service

Marlboro Connectivity Committee worked for 15 Years (2004 to 2019).

The Connectivity Committee completed several internet status and interest surveys with Town Residents and found:

- Considerable interest and need town-wide.
- No residence had sufficient service (25 Mbps/3 Mbps)

Town Meetings and Selectboard Responses:

- Lack of connectivity was a subject of discussion at most Town Meetings.
- SB and members of Connectivity Committee shared coverage information, and reviewed actions taken, and promising technical means considered to improve ISP coverage.

For example: (in historical order)

2015

- Connectivity Committee surveyed residents regarding internet service
 - 106 people responded, 37 were satisfied and 63 were unsatisfied including 11 who had no service. 6 reported mixed feelings.
 - Most were served by Fairpoint: 31 satisfied, 41 unsatisfied, 5 mixed feelings.

- Other providers in town included AT&T, Verizon, Hughes Net, Excede, personal cell phone, US Cellular, SoverNet, VTEL, and dial up.
- Collaborating to share and/or access a T-1 line owned by Marlboro College. This line was installed in 1998 when the College Graduate Center in Brattleboro opened.
- Successfully extended the Marlboro College network to a planned unit development (PUD) providing housing to the Marlboro Music Festival.

2016

- An early member of Connectivity Committee improved his broadband service to exceed federal standards by paying a private firm to connect to the Sovernet fiber on Route 9 to his home/business. He set up a local mesh network for his neighbors using this connection. No other residents living along Route 9 had the means to follow this model.

2017

- Feasibility study of wireless “Mesh” network for some neighborhoods, specifically taking advantage of the Marlboro Elementary School’s fiber broadband (Sovernet/FirstLight).
 - A company in Brattleboro came to the school to determine line of sight to Town Office for a model. This proposal was not viable due to trees (a half mile of woods).
 - Experts from the NYCMesh project in New York City were consulted.

2018

- At the urging of the Connectivity Committee, the SB negotiated improved broadband access for the Town Office via fiber Fairpoint. This now represents the best service anywhere in town. The connection is shared with the Town Library and Community Center – new uses for the first floor of the seasonal Community Congregational Church. Residents who bring their laptops to the Community Center are amazed at what a robust internet connection can enable them to accomplish!

- VTel installed a repeater telephone pole transmitter at the junction of Route 9 and South Road (leads to the Town Office). This wireless technology extends their coverage from a large communications tower atop Mt. Olga just west of Marlboro in Wilmington. Due to Marlboro's topography and forests, the number of residents who can access VTel's ISP service is severely limited (< 10). Those who have connected report quite variable and "spotty" service adversely affected by precipitation and other unidentified circumstances.
- Expanded the Connectivity Committee to include new members
- Attended regional connectivity consortium in Newfane

2019

- The Connectivity Com. has found no prospects among neighboring towns or neighborhoods to establish a CUD. This realization came despite numerous efforts to reach out and collaborate. We recognize that our neighbors (perhaps excepting only Halifax) enjoy much better broadband service than Marlboro.
- Arranged initial meeting with Carole Monroe to review strategies learned from EC Fiber, and to understand actions taken in Chesterfield, NH.
- Spoke with Michael Birnbaum about his work with Kingdom Fiber.
- Two representatives of the Connectivity Committee met with Brad Roscoe, the former Chesterfield Select Board Member, who led his town's successful initiative to establish improved broadband service throughout Chesterfield NH. He advised us re: the steps he and a small group of volunteers took in concert with the Select Board. The result was a contract with Consolidated Communication to provide universal access via fiber – a model for other public private partnerships to provide broadband in sparsely populated towns in our region.
- The Connectivity Committee proposed that the Marlboro SB reorganize the committee with the charge to provide broadband access inclusively and universally for All in the Town.
- The SB followed this recommendation by establishing the Marlboro Committee for Universal Broadband (MCUB) at their meeting on June 27, 2019
- As a result of our public meetings being posted online, a representative from Matrix Design Group, a fiber installation and ISP company, came to our meeting. He described an approach to universal broadband via fiber that was

new to us. The town of Petersham MA has an agreement with Matrix based on an individual subscriber's financial commitment. Matrix has asked to be included in the RFP Marlboro anticipates issuing in the near future.

- With the SB submitted a notice of intent to apply for a BIG.
- MCUB Chair attended the Broadband Information Meeting in Wilmington on Sept. 11th. This meeting hosted by our Representatives in the legislature was very well attended. As a result MCUB Chair established contact with Tristen Roberts in Halifax and at Sarah Coffey's suggestion reached out to Guilford. Mr. Roberts was invited to the next MCUB meeting, but no response. Following an initial conversation Zon Eastes, recently appointed to the Guilford SB, reported that Guilford's SB was very interested in improving broadband service, but they realized they didn't know what to do next. MCUB Chair suggested appointing a public committee to do research and advise the SB and asked if there were underserved neighborhoods adjacent to Marlboro that might form a CUD. Mr. Eastes didn't know and had no information re: broadband service in Guilford.
- Completed an online and offline survey of town residents, including those attending the annual Marlboro Town Fair at the Muster Field on Sat. Sept. 28th.
- Correlated the results from our survey with the Marlboro Grand List database to locate any neighborhoods (roads) that needed additional data. MCUB members volunteered to contact those residents by phone or in person.
- Produced a broadband coverage map for Marlboro. (See attachments for map and service data.)
- Submitted an application for a BIG to hire a consultant to advise and assist the committee to recommend a Request for Proposal that the Board would approve to invite our region's ISPs, Matrix Inc. and any others made known.
- Completed a recent survey (October 2019) with approximately 120 responses submitted (70 from online survey, 50 from paper) and found that most people in Marlboro, VT are reasonably satisfied with their internet service at the current moment (basically fairly comfortable with their limited capabilities). This does not take into account the rapidly expanding size of content being posted, streamed and downloaded from the web. A fair amount of residents (~25%) expressed discontent / frustration with their internet access options and feel that their, and their families' capabilities online are severely compromised.

Project Description

1. This proposal includes all residences and cottage industries and businesses in the Town of Marlboro VT.
2. Summary of broadband availability in Marlboro
 - a. See PSD coverage map based on data from residents served by Consolidated Communications (Fairpoint), Duncan Cable and VTel. Comcast serves no residents in Marlboro.
 - b. See database in excel spreadsheet including all tax parcels on the Marlboro Grandlist.
 - c. Less than a dozen residents have broadband connection that meets the federal standard of 25/3 Mbps. Half of these enjoy fiber connectivity on the extreme northwest border with Wilmington VT via Duncan Cable or the extreme northeastern border with Brattleboro & Dummerston VT via Consolidated Communications. The others live on or near Staver Road and are connected to Sovernet/FirstLight.
 - d. All other residents who access the internet do so via VTel wireless or Consolidated Communications via copper DSL. Although quite variable depending on location, topography, and weather, only one of these customers reports their service ever meets the 25/3 Mbps standard.
 - e. The PSD data for broadband coverage in Marlboro (as of 12/31/18):
 - (1) Marlboro has 611 buildings.
 - (2) 451 of these (73%) have BB access rates of 4/1 Mbps or better.
 - (3) 224 or (36%) have 10/1 Mbps service or better.
 - (4) Only one building has 25/3 Mbps service or better.
 - f. According to the PSD's coverage data comparing the 23 towns in Windham County, Marlboro ranks third from the last. Only two towns have poorer service - Halifax and Somerset.

Note: "The PSD makes no guarantee to the accuracy of this information."

<https://publicservice.vermont.gov/sites/dps/files/documents/Connectivity/BroadbandReports/2019/BroadbandStatistics_2018_123118.pdf>

3. Types of technology to be evaluated for deployment:
 - a. Cable
 - b. Wireless
 - c. Fiber

4. Preliminary analysis of barriers and limitations:
 - a. Marlboro is a sparsely populated town with 40.7 sq. miles, 670 tax parcels and 611 buildings (90% residential). This makes ISPs unwilling to invest in the infrastructure for adequate broadband service.
 - b. The topography and forests (90% wooded) make wireless connectivity available only to those in line of sight with the VTel tower on Mt. Olga or the repeater telephone pole at the corner of VT Route 9 and South Road.
 - c. Sovernet (FirstLight) connects Marlboro Elementary School with all the schools and libraries in the Windham Central Supervisory Union via broadband fiber with unlimited bandwidth. Unfortunately, no one can connect to this fiber service at a reasonable cost. One business did five years ago for a \$6000 connection fee that was waived with a 3-year commitment for 40MB at \$400/month. He now pays \$315 per month for 30MB. This service is no longer available to new customers.
 - d. Marlboro College had a T-1 line installed about 20 years ago. This was supplanted by a fiber connection in 2005. The College provides connectivity for their students, the campus and some faculty. This service is not available to town residents.

5. Retail prices and service tiers for available broadband in Marlboro:
 - a. Duncan Cable - fiber on Marlboro Heights neighborhood
 - i. (KO) -\$50 per month for 30/10 service. Platinum service at 50/30 for \$60/month w/ 1 yr. contract or \$70/month no contract. Platinum Plus at 100/60 for \$120/month with 1 yr. contract or \$220/month no contract.
 - b. Consolidated Communications - Everyone has a different "special" deal.
 - i. Fiber connection for a business account just off Route 9 costs \$315 per month for 30/30 Mbps.
 - ii. Bonded DSL - (SJ) \$59.39 per month for 16/2 Mbps. Internet access requires land phone connection an additional \$42.84 plus \$4.04 for long distance. Total cost \$106.27 per month.
 - iii. DSL - (JP) \$21.47 per month for 2.7/0.2 Mbps.
 - c. VTel Wireless - Quality of service varies with location, trees, and weather. (TS) pays \$40/month for 25 GB Plan per month. "Unlimited by slows down over 25 GB/month." 100 GB costs \$60/month plus \$10 per additional 50 GB.
 - i. (MF) pays \$60/month for internet only with a 100GB wall-mounted router. Throughput is variable but averages around 30/15. "Speedtest today got 48.4/22.5."

6. Identify potential partner entities to be evaluated including, but not limited to:
 - a. Comcast
 - b. Consolidated Communications
 - c. Duncan Cable
 - d. FirstLight
 - e. Matrix Design Group - an engineering firm building fiber networks for towns and CUDs
 - f. Southern Vermont Cable
 - g. Vtel

7. Identify potential funding sources
 - a. Municipal Bond to partner with private business with repayment of the bond guaranteed by the partner following the Chesterfield NH model.
 - b. Private investor(s) to fund the infrastructure installation looking for a reasonable return on their investment. This approach would be in lieu of a municipal bond.
 - i. Note: In either case (a or b above) the plan is to provide every building in Marlboro with broadband access (ideally 100/100 Mbps). A private ISP would build the infrastructure and guarantee repayment of the bond or investor(s). The ISP would be allowed to collect a construction fee in addition to competitive service rates from customers to service any debt for a contracted length of time.
 - c. Subscription commitments by residents to a firm that guarantees improved connectivity and builds the infrastructure to support it. This is the Matrix Design Group's model in Petersham MA. \$400 per connection with \$200 paid up front and \$200 paid upon connection of service. Requires a minimum participation rate of residences.
 - d. In any case the RFP will require that an agreement will not increase the municipal tax rate for Marlboro.

8. Marlboro has a very dedicated and able MCUB (Marlboro Committee for Universal Broadband) spearheading this project. MCUB was appointed by the Select Board and can count on the Board to follow the Committee's recommendations. A sense of the Town is that any reasonable proposal to provide broadband service to all residences in Marlboro would be approved at Town Meeting 2020. Furthermore the Select Board is eager to call for any Special Town Meetings that may be required to approve a proposed "Broadband Innovation" project deemed feasible by his study and business plan. (See three business models cited above.)

Price Proposal

Marlboro proposes to use this BIG solely for a professional consultant's services to fine tune our prior work on the feasibility of any plan and a business model that is sustainable. Our consultant will also prepare an RFP to all prospective ISP's and fiber build out firms, e.g. Matrix.

Preferred Consultant: Carole Monroe, Valley Net Consultant

Cost: \$5000 for consulting services plus 2% for administration (Linda Peters, Marlboro Treasurer) \$100.

Total \$5100.

Attachments

- Broadband Coverage Map. See PSD website:
https://publicservice.vermont.gov/sites/dps/files/documents/Connectivity/BroadbandReports/2019/BroadbandStatistics_2018_123118.pdf
- Audited Financial Statement for the Town of Marlboro VT. From pages 8-9 in Marlboro Town Meeting Warning, 2019.

AUDITORS

Contact us at MarlboroTownReport@gmail.com

We conducted our work according to 24 V.S.A. 1681-1684, which requires that we examine and adjust the accounts of town and school district. To the best of our knowledge, the following reflects a true and accurate picture of the town's business for the year ending December 31, 2018.

For those of you who want to save paper, the Town Report will be posted on the Town Web-site for viewing prior to Town Meeting. We will still have plenty of printed copies available at the Town Office.

We are still requesting that all Town Organizations and Offices establish an email account for your organization. We are spending too much time trying to track down the email of whoever is in charge of an organization and often the report is delayed. Having an organization email provides a single point of contact for your organization and consistency when members change. It can easily be done through a gmail account. Once you have created an email account for your organization, please email it to us - MarlboroTownReport@gmail.com

Please send any changes of Municipal Meeting times and information relating to Marlboro Organizations to the auditors at the above email address. If we do not hear from you, we will assume your information from the last Town Report has not changed.

Rose Watson Gail MacArthur Andy Reichsman

COMPARATIVE BALANCE SHEET

Assets:	2017	2018
General Fund:	\$ 194,739.25	\$199,205.23
Equipment Account:	\$142,865.22	\$98,015.20
Delinquent Tax Bills:	\$148,911.76	\$161,422.54

Liabilities:

Tax Levy due to School and State:	\$105,058.39	\$85,919.16
Excess of Assets over Liabilities:	\$381,457.84	\$372,723.81

Town of Marlboro- ACT 68-2018

FY2018 Education Funding Cash Flow for Municipality

In 2018, the amount raised for ACT 68 was \$2,152,838.01

School 11/20/2018 \$86,006.16

School 02/08/2019 Municipal Treasury \$4,843.97

TOWN INDEBTEDNESS: NONE