

Expanding Broadband in Bolton

July 27, 2020 Presented by the Bolton Economic Resource Committee

Summary

Residents of Bolton desperately need increased service levels to meet the amplified demands that are now placed on our community. Due to Covid-19, access to broadband internet has become even more of a necessity than before. This document provides details of the research that the Bolton Economic Resource Committee has compiled since May 2020 to address this urgent issue. We have been working with Waitsfield Telecom to document the necessity for improving services around town and where the greatest needs are for improving service.

The Bolton Town Plan of 2017 on page 31 describes the internet services as 98.8% of buildings in Bolton have broadband internet available; however, 187 locations are under 25/3 Mbps and less than 1/3 of all buildings in Bolton have fiber with connections of 100/100 Mbps. Recognizing this limitation, in the Town Plan, the Planning Commission recommended:

Objective 9.7

Increase wired high-speed internet access on roads currently without broadband

The specific urgency for wired high speed internet is due to the geographic nature of Bolton with the high peaks, vast forest areas, and limited wireless access in town defining our area as not ideal for satellite or mobile choices.

Residents who have been heavily impacted by the Governor's executive orders due to COVID-19 have found that the level of internet service is not adequate to meet the needs of online education, telemedicine, video conferencing and working from home. 84 locations in underserved areas (less than 25/3 Mbps) have requested better service, providing better service to these areas will help 228 people, just over one quarter of the town residents.

We hope this document helps demonstrate the urgency for increasing internet service for Bolton residents particularly due to Covid-19 demands.

Research Methodology

The Bolton Economic Resource Committee began investigating the need for expanding broadband in Bolton in May 2020. Due to COVID-19 and the subsequent shuttering of schools, medical practices, town offices, and businesses, we determined this critical utility was essential and should be our team's top priority.

Step 1: Reaching out for Support

We contacted the Chittenden County Regional Planning Commission who informed us there is no broadband team nor anyone looking into this issue as the majority of Chittenden county is well served. We turned to State Representatives Theresa Wood and Tom Stevens who have been very supportive of our efforts providing contacts for other resources to help us refine our task throughout this process. We talked with several different groups around the state who were working with their

regional planning commissions to create strategies for expanding internet services for their communities. Most of the approaches we discovered were very complex and required more time than we felt we had based on the urgency of our situation. When we reached out to Waitsfield Telecom, they were receptive to our efforts and became a valuable resource for our research and have continued to support our goals. Based on our data they will be submitting their estimate for addressing our needs by applying for funding assistance.

Step 2: Defining the Need

Our first step was to determine if this was a true need or merely perceived. We created an initial survey to make that determination. We promoted the survey through Front Porch Forum and our town newsletter, the Bolton Gazette which is sent to residents. 105 people responded, 71 of the people who responded indicated that their internet service did not meet their needs. Figure 1 shows that the video conferencing required for school and work is a significant need in Bolton that lower speeds of service just cannot meet.

Figure 1: Responses to Question: Select all that apply for use of the Internet

ANSWER CHOICES	RESPONSES
Work: Video conferencing	83.84% 83
Work: Access to company systems and data	78.79% 78
School - distance learning: Zoom (or other online video)	56.57% 56
School - distance learning: School lessons	48.48% 48

As a volunteer team with no background in developing surveys or guidance from the CCRPC or other governmental resources we developed a second survey to collect more information including physical and email addresses. We mailed out 111 letters to the priority areas of town as we wanted to ensure everyone was aware of this important survey. We also created 2 pages on the town web site to share our process and to provide additional information about internet speeds.

<http://boltonvt.com/broadband/>
<http://boltonvt.com/internet-options-in-bolton/>

Step 3: Refining the Data

We worked closely with Roger Nishi from Waitsfield Telecom to identify which areas of town had the greatest needs based on what service level was available. Using the survey results we narrowed our focus to 6 priority areas of town. These priority areas are displayed on the attached map series (Vermont Broadband Map) and the linked web map below. The purple droplets represent the locations of people who responded to the survey. The map contains the 2019 Department of Public Service Broadband Status data set which includes approximate locations of fiber, cable and household level internet speed. As can be seen in the attached document a large portion of Bolton is underserved. These maps were created by a committee volunteer, Joseph Grossman (Environmental Scientist) who would like to move to Bolton, however, he requires broadband internet access for his work.

After talking with Tim Briglin, Chair of the House Energy and Technology Committee on July 17, we learned that Public Service, a category we had not collected data on was of interest, so we created a third survey. The table below shows the total responses to the surveys and the second row shows the

priority areas calculating the numbers based on limited service for the 6 areas of town with the lowest service levels

Figure 2: Results of Survey #3 Resident Internet Use and Occupations

Survey #3 Results						
	# Responses	Total Users	Public Service Employees or Volunteers	Conduct Education Online	Use or Provide Telemedicine	Work from Home
Total	175	466	63	189	181	255
Priority Areas	87	230	45	92	101	126

We also reached out to the school district to determine how many students live in Bolton. The most recent data was from October 2019. There were 145 students, 73 in K-4th, 31 in 5-8th, and 41 in 9-12th.

The number of people who responded to 3 surveys in 2 months indicates how many people really need this enhanced service. We have included in the next section some of the feedback we received from residents about their needs and why this is such a critical issue for Bolton right now.

The maps attached are also available online and we would like to extend a huge THANKS to Joe for all his efforts in plotting this data on the State Broadband maps. If you would like to see interactive data from the attached maps, please go to this URL.

<https://vhb.maps.arcgis.com/apps/webappviewer/index.html?id=9c2da16097f54ef89d925dee0bbb80d2>

Resident Comments:

The following comments were provided during the survey process.

- “At this point everyone needs to be off the net for me to be on a work zoom call. Remote learning is a struggle especially when our college son returned home early due to COVID and added to the data load.”
- “I work remotely and had to leave at times to be able to do my job”
- “We have (3) kids who will either be homeschooling full time or part time in the fall, and I’ll need access to good internet in order to download lesson plans and video lessons, as well as them possibly needing to be online for virtual school meetings. We (the adults) also need the internet in order to do online billing for our businesses.”
- “2 essential employees, trying to work from home with less than 12mbps download, can’t both be on a call at the same time at the moment.”
- “Our daughter has special needs so I’m researching info a lot on internet. If they don’t do virtual learning this Fall we will be keeping our daughter home and do homeschooling and will be doing even more on computer. We have 2 sons with their families that we virtual communicate with as we don’t see them otherwise.”
- “I am teacher that needs better internet to communicate well with my students. While I am doing this my 3 children need internet for their classes. As of now our internet is not meeting our needs even closely! My son was supposed to take part in summer tutoring and

couldn't because we can not successfully have a google meet! Please help!!! Thanks so much!!"

- "The mobile home park has over 70 units so it must be financially viable to get better service."
- "To add another layer of detail, I work as a magazine editor and need to download large graphics files that are shared with my remote team on Dropbox. Our data service is so slow that I can start the download of an InDesign file and go make lunch before it's complete. Slow internet is a big productivity killer."
- "I'm a healthcare worker trying to provide remote services, but I cannot video conference due to slow access"
- "Thank you for this effort!"

Conclusion

Bolton critically needs broadband internet now. Our community is doing everything we can to stay safe during this horrible COVID-19 crisis but without better internet capabilities, we are crippled by slow speeds. Our kids need to be able to access schoolwork and video resources. We have multiple healthcare workers in town as well as many residents who need telemedicine. Several of our town board members cannot attend GoToMeetings due to poor internet service. Better internet service is not a want for Bolton; it is a critical need that is essential for the education, health and economic strength of our community. We ask that you financially support the requests from Waitsfield Telecom to help bring better broadband to Bolton.