

Town of Long Island Broadband Exploratory Committee Broadband Fiber to the Home

I. SUMMARY OF PROPOSED FUTURE BROADBAND OPTIONS

The Broadband Exploratory Committee (BPEC) has been investigating options for bringing broadband service to Long Island for the past two years. In our initial report of October 24, 2016, mailed to all residents, our clear recommendation was for a Gigabit capable Fiber to the Home (FTTH) system able to meet our needs well into the future. Our present system is rapidly becoming obsolete and improvement to the existing copper will be needed to keep the island attractive for both year-round and seasonal residents. We have considered options for technologies and suppliers, and are now approaching the point where the Town can choose an option to make it happen. This second report of March 2018 outlines a few of the options.

Basically, beyond doing nothing, there are two options with caveats. The first is to pay Consolidated Communications (formerly Fairpoint) \$25,000 to do an engineering study and then \$750,000 to \$1.5 million to install a fiber-to-the-home (FTTH) system which they would own and build in the future on their timetable and operate at subscriber expense like now.

The second option is to install a system that the Town (or other entity) would own and operate. The estimated installation cost we have received from Axiom Technologies is \$775,000. Voters at Town Meeting would determine payment options for installation and operational costs. This would include the level of subscriber/tax support. Other towns have covered the initial costs of installing a broadband system by issuing a bond paid back over 20 years with a mix of tax and subscriber revenues. There are other models. Besides the Cranberry Islands and Islesboro, there are 34 other island and remote coastal communities looking into these options. If we decide to move ahead, we will have the experience of others to follow.

Later in this report you will find several options for funding a system. One extreme option is to have subscribers pay monthly fees to cover both operating cost and installation cost. The other extreme would be to have public funding cover both the installation AND the monthly operating costs. This would result in everyone on the island being offered broadband/phone service with no monthly cost. More common are towns choosing a path of funding that is a mix. A detail of several sample proposals follows.

We hope you will read this report and attend and respond with questions at informational meetings to be held in the coming months.

II. PURPOSE/BACKGROUND

In the Fall of 2015, several of us attended a state wide Broadband Conference and came away convinced of the need and importance of high speed Internet availability and reliability for the future economic diversity and sustainability of our island community.

In these two plus years, BBEC has studied the broadband options available to Long Island. While we are working in a dynamic and changing telecommunications landscape, we have done our best to identify potential courses of action that meet our original three criteria for a broadband system:

1. It must be available to all residents.
2. It must be available at a reasonable cost.
3. It must be as future proof as possible.

In October of 2016, the Committee published its findings in a “*Long Island Broadband Exploratory Committee Report*” which was mailed to all Long Island property owners. A copy of that report may be viewed on the town website.

Our conclusion and recommendation at that time was that the broadband solution for Long Island that would best meet the three criteria would be fiber to the home (FTTH).

Following a public meeting in December 2016 we were encouraged to move forward to explore more closely what such an FTTH system would entail. The next step was to solicit Requests For Information (RFIs) to potential Internet service providers for an engineering study. The five RFI returns gave costs of such a study starting at \$25,000 to over \$100,000 to do just the study with no guarantee that the study would be useable by a different company to build it. Funding of \$25,000 was requested from the Finance Committee but not approved.

We decided to join with Chebeague and Cliff Islands and with the assistance and support of the Island Institute, formed the Down Bay Technology Task Force. Axiom Technologies, one of the original RFI respondents offered a flat rate of \$25,000 to do all three islands. The Island Institute offered to fund \$16,000 of this engineering study leaving each island with a balance of \$3,000 allowing us to again move forward.

The study was completed by Axiom in November 2017 and we are bringing forth several potential scenarios based on information from that study. An RFP (request for proposals) to actually build this system was issued in December 2017. We received only one response, which was from Axiom Technologies. At this point we had enough information to proceed with some sample financial ways to achieve FTTH.

III. BENEFITS OF BROADBAND

We know that our survival as a community depends not only on maintaining but also on increasing our year-round population. Doing this depends on many factors, such as full year sustainable housing, jobs, economic diversity, education, reliable services and transportation to name a few things that help keep and attract younger and working families.

Most Maine islands, including Long, have economies strongly dependent on changing and threatened fisheries. Broadband is a tool that holds much promise to help diversify and expand local island economic diversity. People and business worldwide have come to expect broadband as a necessary utility. The lack of broadband services negatively affects everyone: businesses and future business opportunities, fishermen, schools, municipal services, and access to medical services for residents and visitors. The present copper based DSL Internet limits capability to carry broadband speeds that fiber

can bring. Long Island is not economically viable for large companies to bring cable or fiber here to serve us. This will put us at ever-greater gaps in keeping and attracting residents as time moves on.

We, as an island town, must try to meet the needs of residents to help insure our ability to maintain this town as a healthy year-round community. There are forces working against this. Many of these are not within easy local control such as the aging of our population and fewer young residents to maintain the services needed. The declining number of available residents to serve on committees, staff fire and rescue positions, do the service work, healthcare etc. will make staying here ever more difficult for the rest. While broadband is not a cure-all for the many issues faced by rural places and faced even more by islands, it is one positive thing that we can offer to not only help keep folks here but also potentially attract new families who may be able to live and prosper here in a fast changing world.

Broadband is becoming a necessity for students to complete assignments at home, and can help adults take online courses. It can meet the demands of telecommuters for service fast enough to do their work and meet their employers' Internet requirements. It is becoming a necessity to meet the needs of small businesses, of town government, of services such as fire and rescue for training. Telemedicine is quickly becoming more than a convenience. It has the power to bring first class medical service to your home and will become critical to helping our "aging in place" initiatives moving forward. It can also deliver mental health services and substance recovery and support programs to those in need of immediate and confidential help without the normal island issue of lack of privacy and the challenge of access.

Our geographic remoteness does not mean we need broadband less than do our mainland neighbors; we actually need it more simply because we are rapidly moving forward in a world in which people cannot live here without it. We know that without broadband, people may move away or choose not to locate here in the first place. With it, the opportunity is present for people to move and prosper here. Aside from these future benefits, broadband has the potential for cost savings now, which will be discussed later.

IV. OPTIONS/ MEANS OF FINANCING FTTH

Long Island, like the other 14 remaining year-round islands, is unique and that holds true for our Internet service history and its future. On the one hand, we have been fortunate to move from dial-up Internet to DSL relatively quickly compared to many rural areas and many islands, but the level of service has been location dependent: some have it, some do not. Recently some Long Island residents have gained the option of increased speeds up to "25/2" (download/upload) for Internet DSL, but it is also location dependent and therefore not available to all who want it. Other limited options, as outlined in our original October 2017 BBEC report remain for some.

None of these options including Consolidated's improved "25/2" bonded DSL meet even the low minimum Federal or State broadband standards of today or anything near the lightning fast speeds available in many places on the mainland. Examples commonly advertised by cable companies (Comcast/Xfinity and Time-Warner/Spectrum) now offer 200/20 on their systems. Verizon's FiOS system (fiber-based) offers 980/880 speeds.

These options, widely advertised on TV and other media, do not and will not apply to Long Island. As noted in our October 2016 report, our outreach and contact with cable companies was definitive. They are not coming here, which again highlights our need to research other options. Urban areas will have this broadband access; rural areas will not and are left behind economically.

The Axiom preliminary estimate for building a FTTH system is \$775,000. This includes leasing space for fiber attachment on existing poles from CMP with a microwave backhaul to/from the mainland. This assumes a subscriber rate of 200 households (out of 360) for a system meeting the criteria of being available to all households with basic starter speeds up to 100/100 and with Gigabit speeds (1000/1000) at additional costs for those who might desire them.

We present some potential solutions to funding the Axiom-designed and priced system so comparisons can be made with what they might cost compared to what individual households are actually paying now for DSL and phone. Note - The following models assume the Town would borrow the capital improvement costs for the installation and the bond is paid back depending on the model chosen. All models except #4 assume municipal ownership, but other models exist. These are summarized with sample costs later in Table #1.

#1. 100% Subscriber funded – This model assumes that all monthly operating costs AND initial construction of the system would be funded entirely by subscriber fees. There is no tax impact with this option, but the monthly service is more expensive than other models.

#2. 100% Public funded - This model assumes that all monthly operating costs and initial construction would be publicly funded. Every resident would get their basic monthly broadband and phone for free. This has the highest tax impact.

#3. Subscriber/public mix – Subscribers pay an average of \$80/month, depending on speed selected. This will cover network operating costs and a portion of debt service. The remainder of debt service costs is paid with real estate taxes.

#4. Consolidated (Fairpoint) – Built with public tax funds but owned and operated by private company (Consolidated). Monthly costs paid by subscriber to private owner.

V. COST/BENEFIT ANALYSIS

On the strong assumption that Long Island is not going to be the recipient of broadband service let alone fiber to the home (FTTH) by any providers as discussed in our original report to residents, we have proceeded to quantify as best as possible what it might cost to get this service here. We are not debating the future or “selling” any funding model to achieve it.

Our purpose is to present some of the options and costs that can possibly achieve that goal and keep the discussion moving forward in the near term if desired by the residents of the town. An important caveat is that many things outside of our control are

in motion in the field of communications and technology in general. The new acquisition by Consolidated of Fairpoint is an example of that. In a perfect world, Consolidated might step forward and consider small and rural places worthy of better and equal service as is expected in more urban areas. We must continue to monitor this as we consider other options.

The several options presented in Section IV (summarized in Table 1 below) give you some range of ways of paying for this service. In Table 2, you can compare what you may be paying now for DSL and phone to see if some or all of the options above could be beneficial in replacing your current methods of information access. Table 2 below focuses on Option #3 (from Table #1) to show the impact on properties of different values.

Table #1 below gives some approximate comparisons of these four different models (options) and their impact on the tax rate, monthly subscription cost, and annual and monthly household tax implications.

Table #1 – Selected Funding Options

Model Funding Type	Mil Rate Increase	Monthly Subscriber Cost	Annual Tax Increase per \$100K Property Valuation	Monthly Tax Increase per \$100K Property Valuation
Option #1 100% Subscriber Funded In this option the subscribers pay all network operating and debt service costs.	0.00	\$94 average	\$0.00	\$0.00
Option #2 100% Public Funded In this option the public, via real estate taxes, pays all network operating and debt service costs.	1.43	\$0.00	\$143	\$11.92
Option #3 Mixed Subscriber/Public Funding In this option subscribers pay an average of \$80/mo. This will cover network operating costs and a portion of debt service costs. The remainder of the debt service costs are paid by the public via real estate taxes.	0.21	\$80 average	\$21	\$1.75
Option #4 Consolidated (Fairpoint) Option Public pays 100% of construction costs, i.e. they pay all debt service. Subscribers pay Consolidated fees for the residential service they choose.	0.35 to 0.70	\$43 to \$198	\$35 to \$70	\$2.92 to \$5.83

Table #2 below takes a closer look at Option #3 (from Table 1) (subscribers pay operating costs and town funds much of initial construction). You can see the impact on properties of different valuations.

For “monthly subscription” cost, we used a typical Consolidated monthly DSL/phone bill of approximately:

\$35-40 per month for telephone (including taxes and fees)

\$45-55 per month for Internet service (depends on DSL speed chosen)

Total cost is \$80-95 per month (not including satellite TV costs)

Table #2 – Option #3 (from Table #1) Cost to selected Property Valuations

Individual Subscriber Impact "Model 3"						
Property Value	\$100,00	\$300,000	Average LI Property \$360,000	\$500,000	\$700,000	\$900,000
Monthly Subscription	\$80 ave.	\$80 ave.	\$80 ave.	\$80 ave.	\$80 ave.	\$80 ave.
Mil Rate Increase	0.21	0.21	0.21	0.21	0.21	0.21
Annual Tax Increase	\$21.00	\$63.00	\$75.60	\$105.00	\$147.00	\$189.00
Monthly Tax Increase	\$1.75	\$3.50	\$6.30	\$8.75	\$12.25	\$15.75
Total Monthly Cost	\$81.75	\$83.50	\$86.30	\$88.75	\$92.25	\$95.75

The bottom number in each column should be compared to what individual households pay now for broadband and telephone service.

If the cost assumptions provided by Axiom hold true, this means that nearly every subscriber on Long Island will pay nearly the same for their telephone and Internet service than they do now yet get much higher speeds and improved reliability. Everyone, everywhere on the island will be able to access the same benefits of this system.

There is an additional bonus possible with even more significant savings. Many satellite/cable TV networks are turning to broadband to allow “streaming” of their program content to your TV without a satellite hookup. Local TV stations are doing the same. This would allow residents to drop their DirecTV or Dish Network service packages, and choose only what they want to see, rather than buy the programming “bundles” offered now. This could make broadband an even more cost attractive option as the TV market continues to evolve.

Finally, a tighter analysis of actual costs can only be determined when and if a decision is made to move forward. Axiom Technologies is open to cost savings in non-CMP pole installs, local labor and volunteer help, revenue sharing, and if multiple islands move forward together; administrative and on going operational costs can be shared. We have explored lightly but not expanded in this report a discussion of alternate installation methods. Grant opportunities are also always a possibility, but at this time we have not found ones that fit our needs and eligibility.

VI. PROPOSED ACTION PLAN.

This report is being submitted to the Board of Selectmen for their review and disseminated to the public as the Committee feels it has met its initial goals and mandates. There are no plans to consider moving this ahead in the 2018 fiscal year. Much public input and consideration is needed before any option is brought forward.

Our report makes no recommendation on which model of funding is best. When and if there is strong consensus to move forward, there remain many policy questions and risk topics to research further. Examples include such things as burying cables vs. use of poles; ownership – municipal or private; future relationships with Consolidated; choosing a vendor to build; administration of the system; seasonal subscribers; private-public partnership; how much bandwidth, to name just a few. All impact both the cost to build and ongoing cost to run the system.

When in doubt, we have tried to err on the high side of estimating costs, which seemed prudent at this time. As examples, we have added \$100,000 contingency to the Axiom construction estimate. We have added \$30,000 for alternate bond costs. The monthly operating costs are more significant than the construction over time. These operating figures include budgeted costs to rebuild the entire system in 30 years. We have not accounted for potential operating cost savings that alternate methods of avoiding high CMP “pole costs” might achieve. We have assumed we would not share any administrative, maintenance, and other costs with Chebeague or Cliff in this accounting. The point is, these costs may be higher or lower depending on decisions made going forward, which would change monthly subscribers costs. Subscriber “take rates” and other assumptions used to create these funding models can skew costs up or down.

Following distribution of this report, we will be glad to hold public meetings and/or other forums for further discussion. It was a challenge to boil down the information and conflicting cost scenarios and underlying assumptions in a way that would be easy to grasp. We expect that your questions will help refine understanding the many factors that impact actual cost to you.

We became interested in broadband as a significant tool for helping keep on-island economic options open for the future well being of our community. Anything that can be reasonably done to help diversify opportunities on islands so heavily dependent on an uncertain fisheries future seems worthwhile. We are keenly aware of maintaining modest tax rates and that not all folks are necessarily in need of higher Internet speeds at this time as some others may be.

After 2 ½ years of work on this project, we consider our “exploratory” work done. Continued work will depend on whether there is a strong interest to move forward. The next step will be for the citizens of the town to decide if they want to have a broadband system and if so, when, and how to pay for it. We hope that our community comes to understand the significance of this technology and that it not only benefits the future but also may now have potential cost benefits. Thank you to fellow committee members for your significant time, effort and insights.

Respectfully submitted,

Pierre Avignon Doug Grant Mark Greene Curt Murley Ralph Sweet
March 2018