TOWN OF MOUNT WASHINGTON
BROADBAND
BUSINESS PLAN

INTRODUCTION

The Town of Mount Washington, Massachusetts, hereafter referred to as the Town, intends to construct a fiber to the home (FTTH) active Ethernet network (the "Network"). The Network consists of approximately 19.5 miles of backbone, distribution and drop fiber optic cable connecting approximately 87 homes using Optical Network Terminals (ONT) to the active Ethernet equipment in the Mount Washington town hall.

THE DESIGN

The Network will be active Ethernet, with star topology. It will have dedicated fiber strands to each household and will originate off the MassBroadband's middle mile backbone termination point at Town Hall. All electronics will be in the back room at Town Hall. The Network will deliver 1 Gpbs bandwidth and will be capable of IPTV and VoIP telephone services.

THE ROUTES

The Network is more particularly shown on the fiber route plans (attached as Exhibit A). The fiber route plans were originally mapped by G4S in 2012 and were the result of extensive research and development by the Town's Broadband Committee. More recently, the Town polled its residents and determined who wanted service and was willing to pay year round approximately $100.00 per month for internet and telephone (See list of subscribers attached as Exhibit B). As a result of that survey, to cut construction costs, the fiber route maps were modified to eliminate homes that did not want service or were unwilling to pay for such service year round. The Town put the project out to Bid and intends to award a contract to construct the fiber Network to NextGen.

THE CONTRACTOR

For information regarding NextGen, see Exhibit C attached.

NextGen has reviewed all plans and specifications and has spent substantial time in Town documenting poles and undergrounds and fine tuning the plans. Their bid was most specific, responsive and detailed and overall the lowest cost. NextGen received unconditional recommendations from third parties with whom they have worked and seemed most familiar with the project and the middle mile and make ready requirements. NextGen will perform all work required to install the Network (the "Work") including utility permit applications, management and oversight of utility pole make-ready effort, final design (if needed) of the Network, construction and commission. The Network will have easy, efficient capability to expand to all buildings in the Town.

THE PRICE AND PAYMENT

The Construction Agreement (see the Agreement on our website, archives, January) is intended to be for a fixed sum, however, there are certain items that will be the responsibility of the Town and are only estimates, specifically, application fees and make ready costs to Verizon and National Grid estimated by NextGen at approximately $100,000.00. In addition, the Town will be responsible for modifying the equipment room in the back of the Town hall and we are waiting for a quote to do that. In addition, there may be a need for plowing underground lines where conduits to homes are inadequate (estimated worst case scenario is approximately $26,000.00 at $3.50 fixed per foot). The total current cost of the entire Network is approximately $603,000.00. With potential underground costs, potential additional make-ready, the equipment room, and a healthy reserve, the total cost should not exceed $650,000.00.

The Town intends to pay for construction of the Network by (1) using $250,000.00 from its Stabilization account (as of January 31, 2016 there is over $800,000 in various stabilization or savings accounts the Town holds); and (2) borrowing $400,000.00 through a state house loan program (See Exhibit D for projection prepared by Clark Rowell of Unibank and an explanation from our consultant, Clark Rowell). Massachusetts Broadband Institute has allocated $230,000 to the Town in State funds provided the Town builds a robust, sustainable system. Funds received after construction from MBI can be used to pay down the borrowing and if that is done, all borrowing will be paid in approximately 5 years. We will also ask homeowners to contribute $300.00 to commit to service per residence for a total of approximately $26,100.00 as additional reserve.

ANNUAL INCOME AND EXPENSES

Annual Income

It is anticipated that the Town will receive $75.00 monthly for 87 subscribers, totaling $78,300. per year in annual income. It is estimated that the company that will actually provide internet and telephone service will charge $44.95 per month (per Crocker Communications a service provider with a state contract). The subscribers will be charged $119.95 monthly and the service provider will remit $75.00 per subscriber, per month, back to the Town to cover all maintenance and operation costs.

If, for some reason annual income is short, any remainder would need to come from the Town's general funds, although we have done our best to estimate annual expenses and to cover them. Keep in mind that two-thirds of the system is a benefit to the entire town, not just subscribers so it is not unreasonable that the Town as a whole helps to maintain the system. Those people who do not subscribe will undoubtedly also benefit from the installation of the system because broadband will help them maintain value, make property more marketable, and the system will be available to them when they choose to subscribe.

Annual Expenses are estimated as follows:

Insurance	$	6,000.00 (per MIIA, Town insurer)
Pole Rental		6,000.00 (per Verizon/National Grid lists)
Maintenance/Operation		25,000.00 (per Crocker and NextGen)
Electric		1,500.00 (estimated per Jeb Rong)
Financing		30,000.00 (per Clark Rowell, estimates attached)
Reserve		9,800.00
Total Expenses:		$78,300.00

Notes on Expenses: Bill Stathis of Crocker Communications quoted $44.95 for internet and telephone and provided estimated maintenance and operation costs base on costs incurred by the Town of Leverett which installed broadband. NextGen has substantially concurred in annual maintenance and operation expenses.
Insurance cost was estimated by the Town's insurance agent from MIIA.
Pole rental for Verizon is $7.59 per pole and National Grid is 5.93 per pole (all joint)

ORGANIZATION AND ACCOUNTING

The Town will hire a third party to operate and maintain the system. The Operator will bill homeowners for service, retain its cost and remit the balance to the Town. The Town will simply incorporate income and expenses into its regular budget process. Broadband will have a separate ledger for Broadband income and expenses and will be accounted for in the Town's budgeting process. Any funds exceeding construction will be held as reserve and may be used to pre-pay the borrowing.

If there is a shortage in income and a deficiency in Broadband annually, any deficiency would come from general Town funds.

TIMELINE

Construction is expected to take six to nine months, mostly depending on the time it takes with Verizon and National Grid in the application and pole readiness process. Construction by NextGen will not take more than three months.