January 27, 2020

Wireless Broadband Option

New Braintree
(unless town agrees to accept lower coverage)

- Solutions require speeds ≥25/3 Mbps & 96% coverage
- $720,000 towards a broadband solution
- MBI Grant allocation for New Braintree
- $1,910,000 estimate for a FTTH solution
- MBI's desktop cost estimate for fiber-to-the-home

- 13.75 square miles
- 1,510 estimated number of poles
- 49 estimated aerial route miles
- 379 estimated unserved premises (400 estimated units)

Key town statistics
Town Contribution: $0 - $210,000
$522,000 - $930,000 - Cost Estimate from Study Commissioned by MBI in 2019

Fixed Wireless Network

Use MBI Allocation to cover as much of the Town as possible

Crocker Proposal (Flexible Grant Program)

Grant Request: $2,966,600
Comcast Proposal (Flexible Grant Program)

amount deficit,

$2,246,600. Town would be required to cover a significant portion of the Grant
Town Contribution - TBD; Comcast proposal exceeds Town's MBI allocation by

Crocker Proposal (Flexible Grant Program)

Town Contribution - $1,190,000
$1,910,000 - Cost Estimate from Desktop Model Commissioned by MBI in 2015

Municipally-Owned Broadband Network

New Broadband Options:

New Broadband - Choosing a Pathway
Sawyer, Royalston, Middlefield, and Warwick
and central Massachusetts communities – Florida, Hawley, Monroe,
Interise has conducted similar wireless studies for seven western

MBI selected Interise Consulting Group

comprehensive wireless cost study
engineering firm to do a preliminary design and
MBI conducted a closed but competitive RFP to hire an

BrainTree

service to at least 96% of residential premises in New
wireless network that can provide 25/3 Mbps broadband
MBI wanted to know what it would cost to deploy a fixed

New BrainTree – Wireless Study

MBI
maximize quality of service. ISPs would likely deploy multiple radios at each transmitter site to
transmitter sites located on wooded utility poles of various heights (50 - 80
feet) and build radio frequency networks. Network would have substantial significance.

Scenario B - A locally based ISP, such as VTrail, currently constructing a mobile
wireless network, would serve Florida, Hawaii, Monroe and Savoy, that
size towers/monopoles (over 100 feet).

Scenario A - A national or regional ISP, such as Redzone Wireless or
nterest in applying to MBI for a

Grant to design, build and operate a wireless broadband network.

Two distinct types of wireless internet service providers (ISPs) were

Identified for the study that could be interested in applying to MBI for a

and Raggled Hill Fire tower. Raggled Hill Fire tower

High Level Design - A network design that uses potential transmitter

High level of integration in account a variety of access issues. Utilities, State Police tower

locations optimized to provide efficient coverage of premises while

network infrastructure, vertical assets, construction, and testing.

Cost Study - Calculate and summarize cost elements to construct a
Scenario B - Stats

- Estimated coverage
  - 1.3% at speeds > 25/3Mbps
  - 95.8% at speeds ≥ 25/3Mbps

Network Information

CBRS, 5 GHz
900 MHz, 2.4 GHz, 3.5/3.65 GHz
Unlicensed radio frequencies
- 43 radios
- 11 transmitter sites

Scenario A - Stats

- Estimated coverage
  - 2.1% at speeds > 25/3Mbps
  - 95.8% at speeds > 25/3Mbps

Network Information

2.5 GHz
Licensed radio frequencies
- 11 radios
- 4 transmitter sites
Scenario B - Costs

- $316,168 without PM & CPE costs
- $511,733 = Total estimate

(PM)
- $50,000 for project management
- Equipment (CPE)
- $145,356 for customer premise equipment
- $25,986 for additional network
- (no land acquisition)
- $290,300 for transmitter sites
- Costs by category

Scenario A - Costs

- $738,750 without PM & CPE costs
- $929,060 = Total estimate

(PM)
- $50,000 for project management
- Equipment (CPE)
- $140,250 for customer premise equipment
- $27,860 for additional network
- (includes land acquisition)
- $710,700 for transmitter sites
- Costs by category

New Britain - Costs Breakdown
• 100 installation fee for new customers.
• NO installation costs for existing subscribers to upgrade from legacy service.
• $30/month for reduced speeds.
• $350/month for broadband speeds (expected to be 25/3 Mbps or greater).

Technologies:
• Town is upgrading existing wireless network utilizing several different technologies.

<table>
<thead>
<tr>
<th>Phone and Internet Bundles</th>
<th>Stand Alone Internet</th>
<th>Internet Speed</th>
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</thead>
<tbody>
<tr>
<td>$104.90</td>
<td>$79.95</td>
<td>50/10 Mbps</td>
</tr>
<tr>
<td>$79.90</td>
<td>$45.95</td>
<td>25/3 Mbps</td>
</tr>
<tr>
<td>$69.90</td>
<td>$44.95</td>
<td>12/2 Mbps</td>
</tr>
</tbody>
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Installation fee of $99.95 is currently being waived.

Four Town Projects Under Construction in Florida, Hawley, Monroe, and Sayre.

Viwalley/Otejo

Sampling of Fixed Wireless Internet Pricing
wireless provider responses submitted to MBI.

Subsequent steps would depend on the nature of the

providers and obtain real world pricing proposals. 

test the market, gauge the level of interest at 

A solicitation would allow MBI and New Braintree to 

the Flexible Grant Program.

responses from interested wireless providers through 

At the request of the Selectboard, MBI would solicit