



# QUINCY BROADBAND MASTER PLAN SUMMARY PRESENTATION

Prepared for The Quincy City Council

December 14, 2020

# Overview of the Broadband Master Plan

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13. Legal Structure & Financing Considerations
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# Current Market Analysis – Residential Plans



Speed (Mbps) [Down / Up]	Introductory Pricing [contract required]	Standard Pricing [not including taxes & fees]	Data Caps
25 / 3	\$50.00	\$55.00	300 GB
100 / 10	---	\$78.00	500 GB
200 / 10	\$50.00	\$93.00	600 GB
600 / 12	\$90.00	\$103.00	1,000 GB
940 / 50	\$90.00	\$108.00	1,200 GB
2,000 / 50	\$300.00	\$300.00	1,200 GB

**Taxes and Fees often represent an additional (20%-30%) of Standard Pricing**

Shared Network – Speeds are “Up To” and are not guaranteed.

Speeds are not Symmetrical

Additional Data - \$10.00 per 100 GB used

xFi Gateway Modem - \$14.00 per month

**Availability depends upon location – not available in all areas.**



Speed (Mbps) [Down]	Standard Pricing [not including taxes & fees]	Install Fee [not including taxes & fees]
1.1 - 3	\$40.00	Not Disclosed

**Taxes and Fees often represent an additional (10%-15%) of Standard Pricing**

Shared Network – Speeds are “Up To” and are not guaranteed.

Speeds are not Symmetrical

Soft Data Caps apply to all service plans

**Availability depends upon location – not available in all areas.**

# Current Market Analysis – Business Plans

## COMCAST BUSINESS

Speed (Mbps) [Down / Up]	Promo Pricing [contract required]	Contract Term	Standard Pricing [not including taxes & fees]	Contract Amount
35 / 5	\$70.00 (24 mo.)	2 Years	\$70.00	\$1,680.00
100 / 15	\$70.00 (24 mo.)	3 Years	\$100.00	\$2,880.00
100 / 15	\$80.00 (24 mo.)	2 Years	\$80.00	\$1,920.00
200 / 20	\$90.00 (24 mo.)	3 Years	\$120.00	\$3,600.00
200 / 20	\$100.00 (24 mo.)	2 Years	\$100.00	\$2,400.00
300 / 30	\$140.00 (24 mo.)	3 Years	\$170.00	\$5,400.00
300 / 30	\$160.00 (24mo.)	2 Years	\$160.00	\$3,840.00
600 / 35	\$190.00 (24 mo.)	3 Years	\$220.00	\$7,200.00

**Taxes and Fees often represent an additional (20%-30%) of Standard Pricing**

Shared Network – Speeds are “Up To” and are not guaranteed.

Speeds are not Symmetrical

xFi Gateway Modem - \$14.00 per month

**Availability depends upon location – not available in all areas.**



November 25, 2020 – “Comcast to raise internet and TV prices nationwide next year”

<https://www.theverge.com/2020/11/25/21719695/comcast-internet-tv-cost-bill-increase-price-2021>

November 25, 2020 – “Comcast is imposing a data cap on home internet use in Massachusetts”

<https://www.boston.com/news/media/2020/11/25/comcast-data-caps-massachusetts>

November 13, 2020 – “Broadband power users explode, making data caps more profitable for ISPs”

<https://arstechnica-com.cdn.ampproject.org/c/s/arstechnica.com/tech-policy/2020/11/broadband-power-users-explode-making-data-caps-more-profitable-for-isps/?amp=1>

# Current Market Analysis – Cost per Mbps DL Speed



DL Speed	Cost	Mbps Cost
25	\$66.00	\$2.64
100	\$93.60	\$0.94
200	\$111.60	\$0.56
600	\$123.60	\$0.21
940	\$129.60	\$0.14
2000	\$360.00	\$0.18



DL Speed	Cost	Mbps Cost
35	\$84.00	\$2.40
100	\$96.00	\$0.96
200	\$120.00	\$0.60
300	\$192.00	\$0.64
600	\$264.00	\$0.44



## Quincy Fiber Network

DL Speed	Cost	Mbps Cost
1000	\$48.65	\$0.048 w/ Infrastructure
1000	\$31.65	\$0.031 w/o Infrastructure

## Worst-case Scenario

DL Speed	Cost	Mbps Cost
1000	\$55.00	\$0.055 w/ Infrastructure



DL Speed	Cost	Mbps Cost
2	\$42.00	\$21.00

# Current Market Analysis – Conclusion

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THE EQUIVALENT OF AN ISP MONOPOLY IN QUINCY



Quincy Residents and Businesses are paying for a Luxury Automobile but getting a Subcompact

# Benefits of Moving Forward

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1. Eliminate near-monopoly broadband control
2. Introduce competitive pricing
3. Enable faster network speeds
4. Increase network reliability
5. Reduce costs for local businesses
6. Increase speeds for local businesses
7. Provide local solution for the digital divide
8. Provide local control over service quality
9. Enable essential infrastructure for economic growth
10. Enable essential Infrastructure for innovation
11. Improve property values

# Broadband Strategy – Guiding Principles & Goals

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1. Nobody will be forced to participate. Subscription would be on a voluntary, opt-in basis.
2. Taxes would not be increased to fund the network.
3. The ongoing operation of the network would be self-sustaining and not dependent on any kind of subsidy from the City.
4. The City may contribute a nominal amount to get the network started – but only if the amount can be paid back to the City over a short period of time.
5. Primary goals for this initiative include the following:
  - Lower the cost of internet access by 25% - 35% for residents and businesses.
  - Significantly increase the speed and reliability of internet access.
  - Increase competition giving residents and businesses multiple options for Internet Service Providers (5-6 new options).
  - Build a state-of-the-art network that will improve economic development and foster innovation.
  - Leverage the network to improve the services provided in the city including public safety, transportation, healthcare, education, emergency communications, and new services that will become possible with advanced network infrastructure.



# Financing the Network

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## The Money is Already in Quincy



Premises (Homes / Businesses)

32,500



Average Monthly Internet Cost

\$94.05



Annual Internet Spend

\$36,679,500



20 Year Internet Spend

\$733,590,000

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Average Residential ISP Cost in Quincy

Quincy Broadband Survey = Average Speed 168/41 Mbps = \$94.05 per Month Average

# Estimated Infrastructure Cost Per Premise

Costs at 60% Take Rate			
50% Buried   50% Aerial			
Description	Common	Drop	Total
Labor - Hours	15.63	3.75	19.38
Labor - Dollars	859.38	206.25	\$1,065.63
Equipment	278.04	42.94	\$320.98
Materials	362.71	119.03	\$481.75
Supplies	93.27	5.63	\$98.90
Restoration	48.10	1.76	\$49.86
Hut/Cabinet	108.07	5.90	\$113.97
Feeder Fiber	36.02	0.99	\$37.01
Engineering	37.10	1.03	\$38.13
Professional Services	148.42	15.16	\$163.58
Electronics	166.67	350.00	\$516.67
Subscriber Acquisition	0.00	0.00	\$0.00
<b>Total</b>	<b>\$2,137.76</b>	<b>\$748.69</b>	<b>\$2,886.45</b>
Backbone Cost per Premise			\$82.14
<b>Total w/ Backbone</b>			<b>\$2,968.58</b>
Short Term Interest			\$118.74
<b>Total Capitalized</b>			<b>\$3,087.33</b>
Monthly Infrastructure Per Premise Cost		\$18.10	

Costs at 60% Take Rate			
100% Aerial			
Description	Common	Drop	Total
Labor - Hours	10.42	2.50	12.92
Labor - Dollars	572.92	137.50	\$710.42
Equipment	185.36	28.63	\$213.98
Materials	241.81	79.36	\$321.16
Supplies	\$93.27	\$5.63	\$98.90
Restoration	\$48.10	\$1.76	\$49.86
Hut/Cabinet	\$108.07	\$5.90	\$113.97
Feeder Fiber	\$36.02	\$0.99	\$37.01
Engineering	\$37.10	\$1.03	\$38.13
Professional Services	\$148.42	\$15.16	\$163.58
Electronics	\$166.67	\$350.00	\$516.67
Subscriber Acquisition	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$1,637.72</b>	<b>\$625.95</b>	<b>\$2,263.67</b>
Backbone Cost per Premise			\$82.14
<b>Total w/ Backbone</b>			<b>\$2,345.80</b>
Short Term Interest			\$90.55
<b>Total Capitalized</b>			<b>\$2,436.35</b>
Monthly Infrastructure Per Premise Cost		\$14.29	

# Total Estimated Infrastructure Investment

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## Financial Pro-Forma of Full Project Costs - 3 Year Build - Ethernet Architecture

Projected Backbone	Included
Projected Cost Per Premise (Common and Drop) <sup>1</sup>	\$3,087.33
Estimated Subscribers	24,350
Total Cost (Common & Drop)	\$75,175,817.21
Professional Services	Included
Total Projected Project Costs	\$75,175,817.21

<sup>1</sup> Assumes 50% Buried / 50% Arial, 60% take rate & short-term interest rate of 8% and long-term bond rate of 3.5% for 20 years.

# Estimated Monthly Cost to Subscribers

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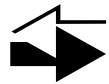
Monthly Infrastructure Cost Premises

~~\$17.00~~



Monthly Maintenance & Operations

\$21.66



Private Network LAN Connections

Included



Monthly ISP Cost – Symmetrical Gig  
(1000/1000 Mbps)

\$9.99



Monthly Cost to Subscribers

~~\$48.65~~

\$31.65

[once infrastructure is paid off]

# Next Steps

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1. Finalize recommendations from the Quincy Solicitor's Office and Outside Bond Counsel regarding the proposed legal structure and supporting legal documents for Quincy owned infrastructure.
2. Establish Electric Light Plant Structure.
3. Refine Community Engagement Plan.
4. Explore network financing options.
5. Select outside resources for the Community Engagement Plan (Marketing, Communication, Public Relations, etc.).
6. Implement Community Engagement and demand aggregation process.
7. Conduct RFP to select Design (Engineering) and Build (Construction) partner(s).
8. Conduct RFP to select Network Management / Open Access platform.
9. Create Design/Build Project Plan.
10. Create formal design of the network.
11. Advance initiative to City Council for approval when demand aggregation (Take-Rate) makes the project feasible.
12. Formalize network financing plan.
13. Launch make-ready process for utility pole attachments.
14. Construct network.

# Timeline

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To Be Determined