

BROADBAND TASK FORCE

October 18, 2016

Neighborhood and Long Term Planning, Public Facilities,
Arts and Celebrations Committee

TIMELINE

CHARGE OF THE COMMITTEE

HIGHLIGHTS LEARNED IN PHASE 1

GOALS

TECHNICAL WORK

TILSON

RECOMMENDATION

TASK FORCE
RECOMMENDATION

PHASE I CONCLUSIONS

- Partial dark fiber network does not address all the goals.
- Deeper analysis on the costs to build and operate a network are needed.
- City-owned municipal broadband system is the best way to meet all the goals
- Alternatives could also achieve a similar result with less risk and cost.

GOALS

AFFORDABILITY & EQUITY

CHOICE & COMPETITION

SUPPORTING ENTREPRENEURS
& SMALL BUSINESSES

INNOVATION & EXCELLENCE

LOCAL CONTROL

AFFORDABILITY & EQUITY

Can a municipal service be affordable by all residents?

Can a municipal service be equitable for all?

- No “lower classes service” for low income households

GOALS

CHOICE & COMPETITION

**Can a municipal service compete
with today's market providers?**

GOALS

SUPPORTING ENTREPRENEURS & SMALL BUSINESSES

Can a municipal service adequately support today's and tomorrow's entrepreneurs?

- This includes running businesses from their homes

GOALS

INNOVATION & EXCELLENCE

Can a municipal service serve as a catalyst for Cambridge-based innovation?

GOALS

LOCAL CONTROL

**Can the municipal service keep
Cambridge's interests above any
other party?**

GOALS

MUNICIPAL BROADBAND FEASIBILITY STUDY

- Meets all 5 goals
- A private option would potentially eliminate local control and weaken Cambridge's ability to address the other goals
- Evaluating the feasibility of the full build option would give us a detailed perspective on balancing scope and risk
- Less comprehensive build options could arise as alternatives if risks are found excessive

PHASE II QUESTIONS

BUILDING THE FIBER NETWORK

- How much will it cost on a street-by-street basis?
- Over what time frame would the project run?
- How is the project funded over the time frame?
- Are there other technologies to consider on top of the fiber network?

PHASE II QUESTIONS

OPERATING THE FIBER NETWORK

- How much revenue will it potentially generate?
- How much are the on-going costs and maintenance?
- How long does it take to pay-back with the revenues?
- Which city department is responsible for the network operation and customer support?

QUESTIONS

CambridgeMA.GOV/BroadbandTaskForce

DIG ONCE

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What is Dig Once?

Policies and/or practices that minimize the number and scale of excavations when installing telecommunications infrastructure in highway rights-of-way

Dig Once Policy Considerations

Implementing *Dig Once* policies at the local, rather than at the statewide or national level, would be more effective given the complexities of implementing a policy that spans jurisdictions. Federal, state and local infrastructures, for instance, are subject to different laws regulating build-out plans for deploying broadband. In addition, most work for managing and maintaining utility facilities on roadways are the responsibility of counties and cities, including requests for utility permits to install and conduct work on existing facilities.

An approach that encourages cooperation, but does not prevent excavation when needed is most supported by federal, state and local agencies when implemented as part of the cooperative planning process.

Web: <http://www.fhwa.dot.gov/policy/otps/exeorder.cfm>

***Dig Once* Strategies**

Policies and/or practices related to *Dig Once* that have been proposed or put into effect by state and local planning or transportation agencies include the following:

- *Joint-trench agreements* (a.k.a. “joint use” or “joint build”) to improve coordination with telecommunication providers when plans are made for opening the ground. *Joint use* means requiring that all providers of broadband services (in some cases, all utilities) install their infrastructure at the same time, in the same trench, or in the same conduit, and in most cases, share the cost of installing the infrastructure.
- Moratoriums on street excavation to preserve new roadway construction.
- Installation of empty conduit in ROW during new construction to prepare for future broadband needs, or an analysis thereof.
- Use of trenchless technologies, such as horizontal directional drilling or microtrenching.

Micro-trenching involves digging a small trench just inches under the road surface along the curb line to install fiber optic lines.



Siting Policy – Telecommunications Common Trench

- Administered through Pole & Conduit Commission
- April 1, 2000 – Covers Telecommunications
- Excludes maintenance, repair or replacement
- Must exhaust existing conduit before applying to install new conduit
- Owners of existing conduit must make conduit available to other companies for a reasonable commercial price
- Installation includes 25% reserve capacity
- Applicants for new conduits must notify all companies on record on installation and invite them to participate
- Prohibit excavation on streets within 5 years of paving