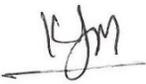




Conor Baldwin
Chief Financial Officer

MEMORANDUM

TO: Kevin J. Murphy, City Manager 
FROM: Conor Baldwin, Chief Financial Officer 
DATE: October 2, 2017

SUBJECT: MOTION RESPONSE: 9/26/17 8.7 C. Leary - Req. City Mgr. Review The Feasibility Of Implementing A City-Wide Ordinance Requiring The Installation Of Additional Conduit In The Public Right Of Way Whenever A Street Opening Or Trench Permit Is Processed On Behalf Of Telecommunication Providers, Utility Service Providers, Communication Carriers And Other Similar Providers; The Review Should Include If There Is An Economic Benefit To The City/Tax Payer For Creating Such An Ordinance.

In response to Councilor Leary's motion, the finance team has investigated the potential public benefit of the implementation so-called "shadow conduit" or "dig once" ordinances. Access to the internet is no longer a luxury—it is an essential component of a municipality's economic development strategy and a necessary tool to providing educational and employment opportunities in a gateway city. This City Council has made a number of requests concerning the high cost of such technologies to residents and the Administration has, in the past, investigated the feasibility of offering broadband internet access as a municipal utility. Unfortunately, cost factors have prohibited implementation and have thus far prevented Lowell from fully realizing its potential as a "tech hub" with both affordable, equal access to all residents and a complete utilization by the city of all technological advancements in providing state-of-the-art services.

While a complete build-out of a municipal fiber network may not be currently feasible for Lowell, the implementation of a so-called "shadow conduit" ordinance and/or a formal "dig once" policy would enable the gradual construction of a comprehensive, publically-owned fiber network. Many other communities in Massachusetts and across the country have employed this method with considerable success. The framework of the ordinance would contemplate a requirement that any time a contractor or private utility opens the roadway for underground construction, sufficient and necessary space shall be reserved, free of expense, for municipal purposes. In the alternative, an additional conduit, known as a "shadow conduit", of equal size and length shall be laid along with the permitted conduit, for the exclusive use, and under the exclusive control of the city. This ordinance would allow for the continued expansion of technology at a reduced cost to the taxpayers and could eventually result in a network which would serve as the backbone for internet service providers to offer competitive services, driving down costs to residents.

A memorandum from the city's Chief Information Officer is enclosed which describes some of the specific benefits of this strategy both to the residents and the City itself. The finance department has begun to work with the law department to draft a proposed ordinance for consideration by the City Council.



Mirán Fernandez
Chief Information Officer
Cable TV Coordinator

John Meyers
MIS Director

MEMORANDUM

To: Conor Baldwin, Chief Financial Officer

From: Mirán Fernandez, Chief Information Officer

Re: Shadow Conduit and Dig Once Ordinances/Policies

Date: September 26, 2017

During the past 20 years, local governments across the country have begun subscribing to a relatively simple and inexpensive best practice, commonly referred to as a “Dig Once” policy. Dig Once policies typically require public and private excavators to coordinate with a municipality whenever ground will be broken in the public right-of-way (PROW). As a part of their Dig Once policy, municipalities often require the installation of “Shadow Conduit” of either equal size and length, or subject to other municipal specifications, to be laid along with any permitted conduit, for the exclusive use and under the exclusive control of the municipality.

Shadow Conduit typically leverages construction by third-parties, at either their expense or as a component of a municipality’s capital improvement plan and has many benefits including:

1. Coordination of fiber and conduit construction with utility construction and other disruptive areas in the PROW
2. Construction of spare conduit capacity where multiple service providers or entities may require infrastructure within the PROW
3. Facilitating private communications network deployment by reducing construction costs on infrastructure projects
4. An opportunity to extend communications networks within the municipality to areas that may otherwise be underserved or inaccessible (e.g., internet services, public Wi-Fi, etc.)
5. The deployment of a public communications network, or deployment of conduit that can be made available to other entities, which may include revenue opportunities

While Dig Once and Shadow Conduit ordinances are subject to the PROW construction activity as it occurs, the cost to install Shadow Conduit during construction is a fraction of what it would cost to install similar conduit at a later time.

Given the City of Lowell’s commitment to infrastructure improvements which may lead to future additional economic development, implementing either an official Dig Once or Shadow Conduit ordinance better positions the City for the future.