

AGENDA ITEM #: 21-105  
COUNCIL MTG OF: August 17, 2021  
FROM: Dave Caron, Town Administrator  
OFFERED BY: Michael J. Gagnon, Fire Chief  
PREPARED BY: Michael J. Gagnon, Fire Chief  
SUBJECT: Recommendation to Decommission Town Hardwire Fire Alarm System

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**PURPOSE:**

Recommendation to gradually decommission the Towns aging and near obsolete hardwire Fire Alarm System.

**TOWN ADMINISTRATOR COMMENTS:**

For reasons of safety and economics as set forth in this staff report, the Council is encouraged to adopt Resolution #2021-056 to authorize the decommissioning of the hardwire fire alarm system.

**BACKGROUND:**

The Town of Derry has owned and maintained a 110 milliampere (mA) hardwire Fire Alarm call box system for over a hundred years. The hardwire Fire Alarm call boxes have what amounts to a preprogrammed telegraph system that sends a special character that is unique to the box and therefore the location. The technology used today remains nearly the same as when first installed. These systems operate under normal conditions with alarms transmitting over closed metallic circuits from the box to our Communications Center. The Town decommissioned all stand-alone street boxes approximately 20 years ago. Remaining hardwire fire alarm boxes/systems are connected to customers such as business, churches, multi-family residential, state and town owned buildings; the system is utilized to transmit fire alarms directly to our Communications Center. These circuits are very fragile to weather events from downed tree limbs and lightning strikes which most times result in an open circuit and questionable reliability of alarms being transmitted until repaired. Maintenance and repair of the system requires manually driving the circuits and looking for the problem; sometimes requiring physical examination of each connection point on every telephone pole within the circuit. This process is extremely time consuming and inefficient; no technology is available without a significant expense of replacing most of the existing hardwire system to expedite this process.

**DISCUSSION:**

The Town Fire Code states that NFPA 101 (Life Safety Code – 2015 edition) identified occupancies with fire alarms present shall be connected to the municipal fire alarm system by the way of a direct connection (110 mA) or radio transmission or monitored by a Listed Central Station Service. For the last few years, we have been encouraging new businesses to utilize the Listed Central Station Service monitoring option as this option is often less expensive initially than purchasing a radio box. A significant benefit of a Listed Central Station Service as compared to our Town hardwire Fire Alarm System is that specific fire alarm information is transmitted to assist responding personnel to include sprinkler flow, kitchen Ansul, multiple smoke alarms versus a single pull station, etc. Our proposal would be to continue this practice and slowly decommission our existing hardwire fire alarm system over the next several years. The hardwire system operates by utilizing seven (7) geographic loops or circuits. Some circuits have 100 connections, while others have far less: with a hardwire system wide total of 222 connections. Our intention would be to decommission the circuits with the least number

of customers being affected in the initial stages. This would allow other customers to prepare for this eventual expense for fire protection monitoring.

**FISCAL IMPACT:**

The Town does not receive any revenue from customers connected to utilize the direct connection via our 110 mA fire alarm system. In the last three (3) years, we have had to deploy personnel and resources 80 times for a total of 150 service hours maintaining this very fragile system. We have also spent nearly \$10,000 in overtime for personnel to assist while off-duty, and another \$5,000 in materials. We are required to maintain approximately \$25,000 in hardware to monitor these alarms within our Communications Center, and our 2004 telescoping bucket truck to reach the connection points on each telephone pole will be approximately \$150,000 to replace. Further – we are required to keep personnel trained to perform maintenance and repairs of the system. Third party vendors are available for maintenance and repairs but are often slow to respond and expensive. The Town maintains a significant liability when a circuit is open, and transmission of an alarm is not reliable or not possible in many situations. The estimated cost for a customer to connect to a Listed Central Station Service utilizing modern technology is approximately \$50 monthly if they have no existing infrastructure; it is important to note that many customers are already monitored by a third-party Listed Central Station Service for burglary protection, so existing property monitoring accounts may already exist.

**RECOMMENDED ACTION BY COUNCIL:**

Authorize the Fire Department to methodically decommission the Town’s aging, fragile and nearly obsolete hardwire Fire Alarm System.

**RECOMMENDED MOTION:**

See attached Resolution #2021-056