Sprinkler System Pressure Solution

Summary of Issue: There is not enough water pressure in our existing sprinkler lines to accommodate the new addition sprinkler system needs. This must be rectified before the Town of McCandless can issue an occupancy permit for the new addition.

What is needed: We will install an inline pump on the main sprinkler line. Per code, the pump requires an emergency power supply (generator). The pump must be located in a fire-rated space. All sprinkler heads in the existing building must be replaced with upgraded "quick response type heads" to reduce draw on water pressure to make a smaller pump sufficient.

How we propose to accomplish this: We will use a combination of vendors to achieve a maximum efficiency of time and costs.

- Pump purchase and installation: Our current project plumbers, Vrabel Plumbing have been working with MFP Fire Protection Co., their sprinkler system subcontractors, to design the sprinkler system for the new addition. This work includes determining the pressure required and the size of in-line pump needed to accomplish this. This work also included a survey of the sprinkler system in the existing building. Since this work is outside of the scope of the existing project work, we can authorize this work through an RFCO under our existing contract with Vrabel Plumbing.
    - Cost: Unknown, pump is expected to be in the neighborhood of $24,000. Most of the existing sprinkler lines in the sprinkler room need to be removed, replaced and reconfigured. There will be additional material and labor costs.
    - Timing: Once ordered the pump could take up to 10-12 weeks to arrive. Hopefully preparation work can begin prior to receiving the pump.
- Emergency Power supply: We will work with Merit Electrical Group, a CoStars vendor, to provide the generator to serve as the back-up power source for the in-line pump. They will work with a subcontractor to install a natural gas line to fuel the pump generator. This gas line will hopefully be sized to accommodate our full-building generator in the future.
    - Cost: About $7,000 for the generator plus material and labor costs for the gas line, plus material and labor costs for the necessary electrical work including breakers and transfer switch.
    - Timing: Once ordered, the generator could take up to 10 weeks to arrive. During that time the gas line will be installed and other prep work will be done. The generator can be installed in less than a day once it arrives.

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- Existing sprinkler head replacement: We will use ABC Fire Extinguishers, Inc., our existing sprinkler system inspectors to replace all existing sprinkler heads that are not already quick response heads, with the necessary quick response heads throughout the building.
    - Cost: First quote was about $4,500, but included more than is necessary for this. We're waiting for a revised quote.
    - Timing: This should be able to be done by the time the pump is installed.
- Fire-rating (and possibly expanding) the sprinkler room: We can use FMS Construction Co. to do a "design build" to achieve what is necessary to expand the existing sprinkler room (if necessary to accommodate the pump to meet code requirements) and to fire-rate the room to meet code requirements. Since this work is outside of the scope of the existing project work, we can authorize this work through an RFCO under our existing contract with FMS Construction Co.
- Design work: The above approach should reduce and hopefully eliminate the need for additional design work from our architects, but staff may need to authorize an "Add Service" addendum to the R3A contract for work deemed to be outside of the scope of the contract. Staff are working hard to minimize this impact, and will consult with our solicitors before proceeding.

Proposed Motions:

1. Approval to authorize staff to use ABC Fire Extinguishers, Inc. to replace all existing sprinkler heads that are not already "quick response heads" with quick response heads throughout the building.
2. Motion to authorize staff to use RFCO process to direct Vrabel Plumbing to order and install an in-line pump on the main sprinkler line.
3. Motion to authorize staff to engage Merit Electrical Group through the CoStars state approved procurement process to purchase and install a natural gas-powered generator adequate to operate the in-line sprinkler system pump.
4. Motion to authorize staff to use RFCO process to direct FMS Construction Co. to design/build the sprinkler room to fire-rating standards and size required to house the in-line pump.
5. Motion to authorize staff to execute an "Add Service" addendum to the R3A contract if additional design work is required to complete the work needed to obtain the necessary water pressure for the new sprinkler system.

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