References

Southwest Homes



Uponor involvement

Project highlights

- Retrofit installation
- Recessed sprinklers with cover plates
- Drywall installer consulted to minimize damage to drywall

Products used

- Uponor AquaPEX® Tubing
- AquaSAFE™ Fire Sprinkler System

Assisted-living Home Finds Fire Sprinkler Solution with AquaSAFE™

After Saskatchewan passed the requirement for fire sprinklers in all assisted-living housing, this home needed a solution that would be fast and minimize...

In 2010, the Saskatchewan government passed a mandate for all assisted-living housing to install fire sprinkler systems for the safety of the residents. Generally speaking, the number of residents outnumber the staff that are there to protect and assist them, and for those needing help in evacuating a home in the case of a fire, a sprinkler system is designed to give them the time to get out safely. In the case of the Uponor AquaSAFE™ system, the fire is often extinguished completely.

Southwest Homes is an assisted living facility housing six full-time residents along with two staff members and six office employees during the day. The home has a common kitchen and living room area upstairs, with bathrooms, bedrooms, a recreational room, kitchenette, administration office and mechanical room in the basement.

Project Facts:

Location	Completion
Saskatchewan, Canada	2015

Building Type

Single homes

Project Type

New building

Southwest Homes Assisted-living Facility

The facility was originally built with a copper plumbing system, which posed a challenge when retrofitting for fire sprinklers. A commercial sprinkler system would have to be installed separate from the plumbing, which would mean the piping would be on the outside of the walls with sprinkler heads protruding from the ceiling. Not attractive, and very obtrusive and costly. The commercial system process had been used in a prior building owned by the same customer and the results were unsatisfactory.

Len's Plumbing and Heating, the contractor chosen for the project, had used flexible, durable Uponor AquaPEX® in previous plumbing jobs and wanted to consider Uponor's AquaSAFE™ fire sprinkler system for this project. Because the home had a ¾" service from the street, they needed an option that would eliminate the need to dig up the street to accommodate a 2" line from the curb (which would have been needed for the commercial system).

Uponor Design Services provided the sprinkler design with an Uponor Logic layout using ½" and 1" Uponor AquaPEX pipe with ASTM F1960 ProPEX® engineered polymer (EP) multiport tees and Reliable® sprinklers. To resolve the service pipe issue, they incorporated a pump and 250-gallon storage tank.

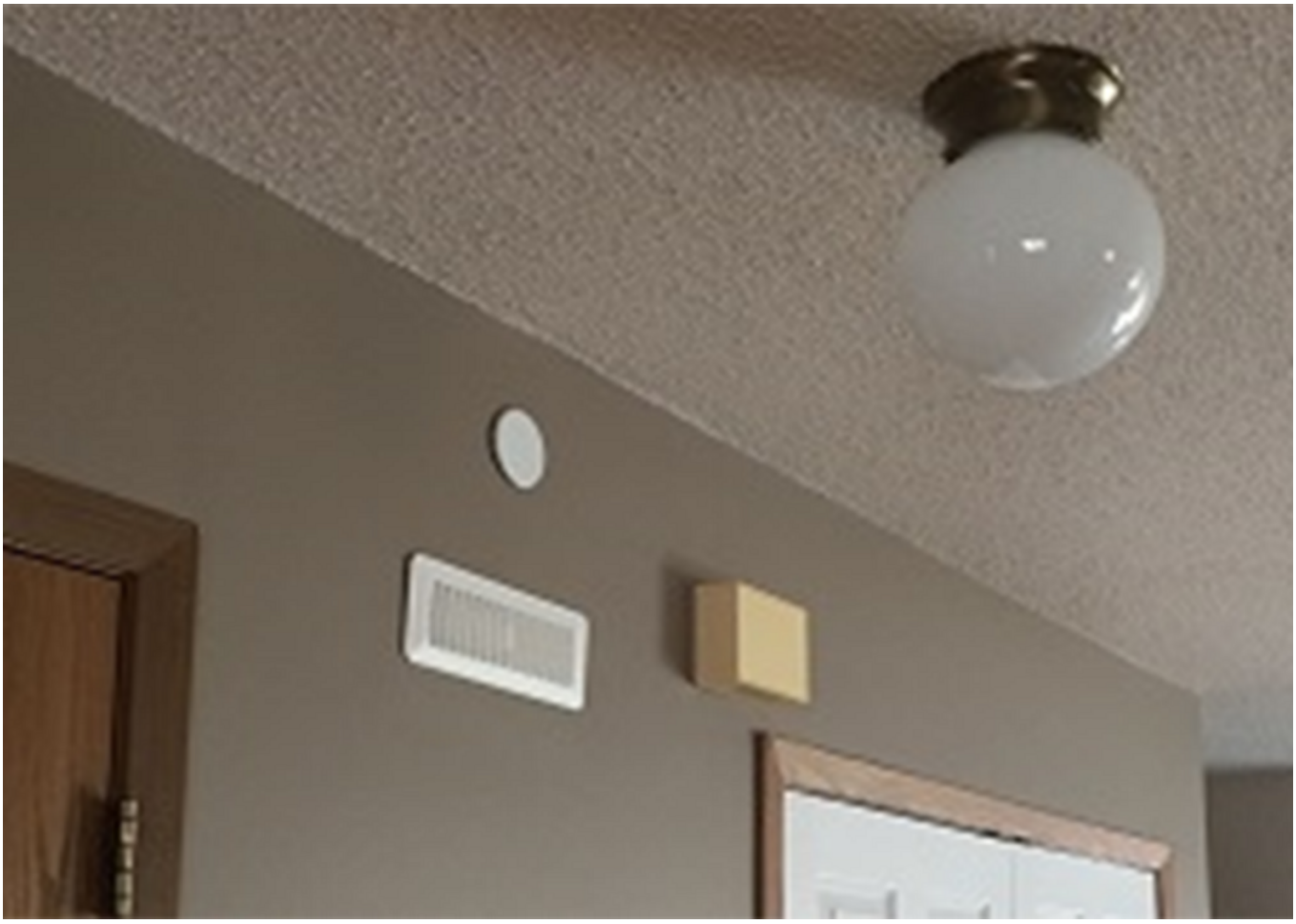
For new construction, the Uponor AquaSAFE fire sprinkler system features a key benefit of integrating with a home's cold-water plumbing. For this retrofit installation, the installers were able to tap the fire sprinkler lines into the existing copper system. The lines were able to be hidden behind the walls due to the flexible properties of the PEX pipe. The design also included recessed sprinklers with cover plates to seamlessly blend in with the ceiling (for aesthetic purposes).

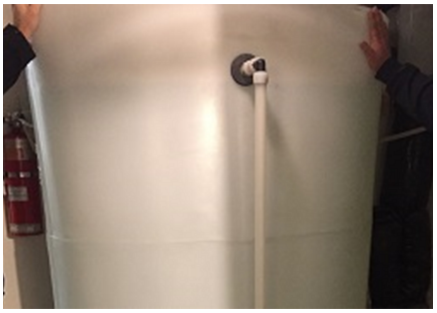
To minimize damage to the existing walls, the drywall installer worked with the plumbers to strategically pinpoint areas for small access holes to feed in the PEX piping. The crew also installed a drop ceiling in the basement to cover the pipe in rooms where it could not be accommodated within the ceiling joists due to electrical and ductwork room capacity.

During the installation, a dedicated Uponor Field Technical Service Representative was available on the jobsite to walk through the sprinkler design and help with installation and troubleshooting. One of the challenges during installation was making directional changes with the 1" pipe in joist spaces to connect a sprinkler. Adding an elbow was not an option due to do the fact it would restrict flow. Having the expertise of the Uponor Field Technical Service Representative onsite was invaluable—finding solutions for bend supports, etc., made the work quick and easy.

Uponor's ASTM F1960 ProPEX expansion fitting system also provided a faster install because it only requires the use of one simple tool to create a fitting in under 30 seconds. And because the ProPEX system capitalizes on the shape memory of Uponor PEX pipe, it offers greater confidence in the connection. In fact, ProPEX is the only fitting system that actually gets stronger over time.

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