

For Immediate Release

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CASE STUDY: VANDEVER BUILDING: TULSA, OKLAHOMA

Installer-friendly PEX-a Plumbing Pumps New Life into Historic Department Store

Abandoned for three decades, Tulsa’s historic Vandever building got a fresh start when a development company converted the former premier department store into a modern loft-apartment building. PEX-a piping for the plumbing system streamlined this delicate restoration, saving 40 percent in labor and halving material costs.

BY TONY BARA

TULSA, OKLAHOMA (MAY 5, 2015) – Oil was king in the early twentieth century, and Tulsa was its capital. Part of Indian Territory well into the late nineteenth century, Tulsa had only been incorporated as a city in 1898. The discovery of oil in the area a few years later spurred population growth, as Easterners sought to get rich quick on the black gold.

One new arrival, however, had a different plan for success. W.A. Vandever, a businessman from Illinois, sought to capitalize on the influx of migrants by constructing a shopping establishment only recently coming into popularity — the department store.



In the early and middle part of the 20th century, the Vandever Department store was “the place to be” for consumers and their families living in Tulsa.

Department stores had developed in the second half of the nineteenth century as an innovative way to provide consumers with everything they might need under one roof. This was the era when juggernauts like Macy's in New York and Marshall Field's in Chicago first came into existence.

Vandever, doubtless privy to these shopping trends, opened Vandever's Dry Goods store soon after arriving in Tulsa in 1904. By 1924, the business had moved to 16 E. Fifth St. and become the Vandever Department Store.

For decades, the store served as a weekend pastime for Tulsa's middle class. Shopping at Vandever's became a weekly event for many families, and the store itself became a focal point of the downtown business district's hustle and bustle. Traveling back in time, one can imagine a store filled with women wearing long dresses and men wearing silk top hats walking around and eyeing the latest washing machine or refrigerator as their children play tag through the aisles.

Project Profile

Location:

Tulsa, Oklahoma

Neighborhood:

Downtown

Developer:

Brickhugger LLC

Installer:

Palmer Mechanical

- 40 loft spaces
- 10,500 feet of PEX-a

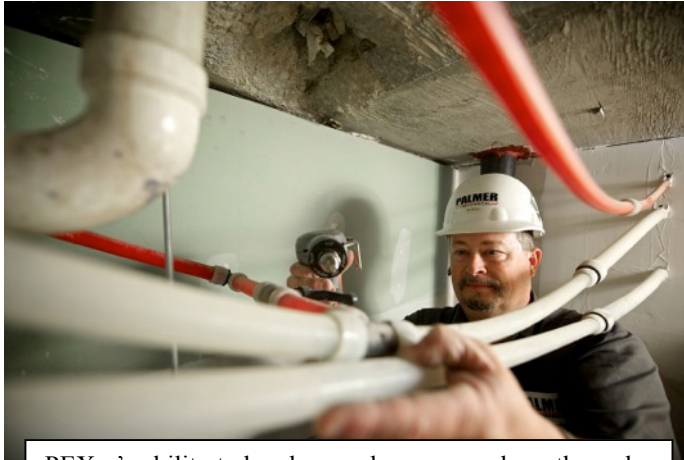
Decades passed and America began to change. By the second half of the twentieth century, department stores began to wane with the rising tide of "Big Box" store chains like Walmart. By 1985, the once-thriving Vandever Department Store was a boarded-up relic of the past. As seasons passed, memories of this ruin's golden age began slowly to fade in Tulsans' minds.

Revival

In 2005, the former Vandever Department Store had been empty for 20 years. Brickhugger LLC, a local real estate development company that specializes in reviving historical buildings, saw the potential to breathe new life into the derelict building and purchased it. Even so, it would be another seven years before the once-famous shopping center would discover its future.

After receiving a \$250,000 zero-interest loan for 10 years from a downtown housing and development fund in 2012, Brickhugger reached a decision. "We decided to develop it into a six-story apartment building with 40 units to accommodate tenants

in the heart of the city,” explains John Snyder, developer and owner of Brickhugger LLC.



PEX-a’s ability to bend around corners and run through tight spots without fittings allowed for a more cost-effective plumbing layout.

Snyder, no amateur when it comes to restoring old buildings, knew what the process would entail. A fine balance must be struck between antiquity and modernity in order to attract buyers and tenants. “When it comes to historical renovations, you must preserve the building’s historic features, while incorporating the modern amenities people are accustomed to,” he explains.

The most significant challenge to accomplishing this compromise between “old” and “new” is the efficient use of space for the building’s infrastructure. “Having chases, wiring, ductwork and piping hanging everywhere ruins the building’s historic charm, so we can’t have that,” explains Snyder. Unfortunately, the question of where to install this infrastructure posed a vexing issue. For example, tenants adore high ceilings in such buildings, but the higher the ceiling, the tighter the space for running mechanical, electrical and plumbing lines.

The problem is aggravated when copper or some other rigid piping system is used. Every additional copper fitting not only utilizes more space, but also increases the system’s potential number of leak points. Furthermore, cramped conditions in the historic building — between the ceilings and the floors above — create a difficult and potentially dangerous situation when it comes to making weld connections. Finally, copper’s rising cost can add significant financial strain to any restoration project. It was clear, then, that if the renovation could avoid copper plumbing, it definitely should.

PEX to the Rescue

Fortunately for Brickhugger, they had restored buildings before, including Tulsa's Mayo Hotel, without using copper, instead resorting to a more cost-effective, flexible and durable plumbing system designed with PEX piping.

PEX, an acronym for crosslinked polyethylene, is a growing alternative to traditional rigid piping systems. Uponor's particular type — PEX-a, marketed under the trade name AquaPEX® — is crosslinked during the manufacturing process when polyethylene is in its amorphous state. This results in a more uniform and — here's the key — flexible product.

This flexibility, along with its availability in long coils, drastically reduces the required fittings and connections. Eliminating fittings means less material, less installation labor and fewer potential leak points, resulting in more efficient installs and lower costs.

Brickhugger's Snyder knew PEX-a piping's advantages from prior restorations, and didn't doubt that it would serve equally well in the Vandever project. The lack of wiggle room when redoing the infrastructure for a historic building means the plumbing system needs to be as flexible as possible. To complete the work, Brickhugger employed Todd Ringgold of Palmer Mechanical, a Tulsa-based mechanical contractor that has made historical renovations a major part of its business in recent years.

The project called for 40 loft spaces, each containing its own kitchen, bathroom, water heater and a ductless mini-split HVAC system, which was another way to save space and preserve the building's historical aesthetic. Ringgold emphasized the importance of the project being "design-build" when it came to plumbing, meaning that the team could lay out the network of risers and pipe branches as they saw fit. "It was great because we had the freedom to 'make it work,'" recalls Ringgold.

PEX pipe's flexibility made "making it work" all the easier. Although the team managed to salvage the vertical copper water main running from the basement, PEX was used for the rest of the water supply lines. PEX's ability to bend around corners and run through tight spots without fittings allowed Ringgold to create a more cost-effective plumbing layout. For example, he reduced the spacing between the plumbing lines in most units by installing the kitchen sink on the same wall as the

bathroom. This reduced the size of the required soffit, allowing the ceilings to be higher (around 13 feet) and preserving the building's desired aesthetic.

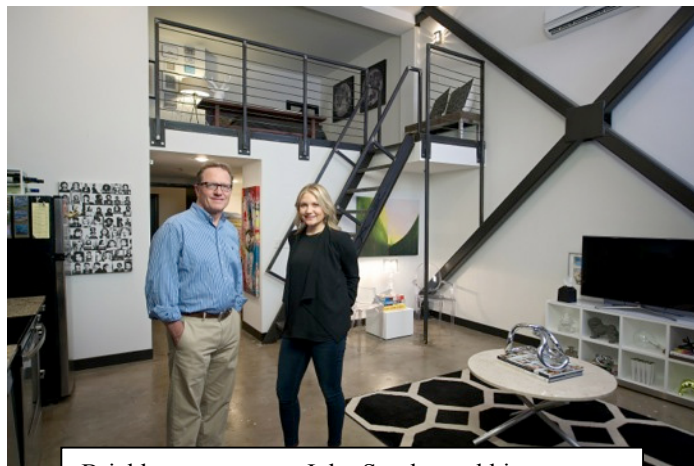
The reduction in fittings proved to be a monumental job-saver for Ringgold. "Using PEX, we were able to have 25- to 30-foot pipe runs from the water main in the hallway to the individual fixtures in the rooms."

Long pipe runs proved especially beneficial in running water lines through a four-inch space in the bathroom. "Had we used copper, it would have taken significantly more effort to connect those fittings in such a tight space," estimates Ringgold. "Copper would have required roughly 40 percent more labor and cost twice as much."

Overall, the team installed 10,500 feet of PEX-a in the building, running 1-1/2-inch piping in the hallways and 3/4-inch and 1/2-inch piping in the apartments. To maximize efficiency and cooperation with other contractors, Ringgold would pre-cut the pipe and install brackets as rooms were being framed. Once the rooms were completed, he would run the pipe through.

The majority of the work was completed by Ringgold and one or two helpers over a period of 10 months. "The entire job flowed really well, and there were no unexpected challenges," reports Ringgold.

Only a couple external inconveniences presented themselves. Located on a busy, two-lane downtown street with



Brickhugger owners John Snyder and his daughter, Shelby, stand inside one of the newly-restored lofts in the Vandever building.

no parking lot, the team had to deliver materials during non-peak hours of the day. Fortunately, PEX's light weight made it easy to move into the building. A malfunctioning elevator also created a slight hurdle, but, again, the piping's lighter weight eased the task of carrying it up six flights of stairs.

A Bright Future

Since the restoration was completed in July 2014, Brickhugger's Snyder has been thrilled. "We haven't received any plumbing service calls at all," reports Snyder, an achievement he attributes to PEX-a piping's ability to expand and contract, minimizing the threat of pipe bursts. He also praises the piping's simple color coding — red representing the hot-water lines and blue representing the cold-water lines.

Interestingly, Snyder notes that many of the building's tenants are in their 20s and 30s. "It seems all the younger people want to live in the old buildings these days," he observes. Indeed, urban centers that were once thriving commercial districts a century or more ago are increasingly being renovated across the country due to greater demand by today's younger generation. It's the reason why Brickhugger restores old buildings, instead of tearing them down and constructing new ones.

The younger crowd is a hopeful sign for the Vandever building's future. It reveals a respect and appreciation for what came before, an indispensable attitude if historic buildings are to survive into the next century. Still, many of these tenants might be intrigued to learn that 90 years ago, someone just their age was probably standing at a cash register where they are now sleeping.

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Uponor, Inc. is a leading provider of plumbing, fire safety, radiant heating and cooling, hydronic piping and pre-insulated piping systems for residential and commercial building markets. Uponor, Inc. employs 500 people at its North American headquarters in Apple Valley, Minn. For more information, visit www.uponor-usa.com or call (800) 321-4739.

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Hi-res versions of a photograph to accompany this release are available for immediate download in .tif format by using this link: <http://uponor.oreilly-depalma.com/casestudies/vandever-building.shtml>.

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