

# CASE STUDY

## TROJAHN PLUMBING CHOOSES FLOWGUARD GOLD® AND CORZAN® CPVC PIPE AND FITTINGS FOR MILLION-DOLLAR CONDOS AT THE CRESCENT; SAVES DEVELOPER \$50,000

### Trojahn Plumbing

St. Louis, Missouri

Established: Early 1920's

#### St. Louis Plumber Credits Stable Costs, Easy Installation and Reduced Condensation and Noise for Boom in CPVC Projects

Greg Friederich, vice president of operations for St. Louis-based Trojahn Plumbing Systems, thought he would never use anything but copper for the commercial plumbing systems he installs. After all, he had used nothing but copper since 1973 when he first joined the profession.

That was before the dramatic price increases hit. Not only were they steep, but they were volatile. It got so bad that his team would bid a job and, by the time the job started, there was no way to complete the project on budget.

"Then we faced the challenge of fighting with the owner to try to recoup our costs," said Friederich. "Even our wholesale supplier wasn't willing to lock in a price with prices changing as much as 20 percent in a short period of time. We got to the point that the only way we could guarantee a price was if the owner actually provided us with a check within two weeks of the bid and we would physically buy and store the copper to ensure the price wouldn't change."

But then Friederich learned of a solution – FlowGuard Gold® CPVC pipe and fittings.

"We had heard good things about the product, but since it hadn't been used much in our market previously, we decided we needed to do a little more research before making a final decision," said Friederich.

The proof came in the form of a trip down to Florida where CPVC has been successfully used for decades for both residential and commercial applications. Accompanied by the local FlowGuard Gold field rep, Friederich had the opportunity to speak directly with other contractors and hear of their experiences.

"What I immediately noticed was a quieter piping system," said Friederich. "This was important to me since we had received a number of complaints

regarding a rattling noise in the copper plumbing systems we had installed. In response to these complaints, we would have to drain the water down to let air in and utilize shock arrestors to minimize the sound. We were eager to identify a solution that would eliminate this problem."

Confident of the product's performance and added-value benefits, Trojahn Plumbing installed its first commercial CPVC plumbing system less than two years ago. But the St. Louis plumbing market wasn't yet ready to adapt to a new material. After some time passed and skyrocketing copper pipe prices continued to squeeze margins for both contractors and developers, the market was more eager to explore alternatives.

It was in early 2006 that Trojahn Plumbing successfully convinced a local developer to convert to FlowGuard Gold and Corzan® CPVC pipe and fittings for a nine-story, 64-unit luxury condominium project. The Crescent, scheduled for completion in 2008, is located in the exclusive area of Clayton and features a high-end product offering designed to appeal to discriminating tastes. The least expensive unit sells for \$800,000, with the average unit priced at \$1 million, not including the six penthouses on the top level.

"When we first bid the project with copper, we were estimating approximately \$75,000 in total costs," said Friederich. By the time the project was ready to move forward, that bid increased 67% to account for rising copper pipe prices. We offered to maintain our original budget if the developer agreed to convert to CPVC, not just because of lower material costs but also because we didn't need to insulate as much to offset noise and condensation concerns. When you start flashing that kind of dollar savings in front of developers, they usually take it."

In this case it wasn't just the developer who was happy. Friederich's plumbers quickly gained a comfort level with the new product. "Internal feedback has been very positive," said Friederich. "My guys are looking forward to using it more in



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**Type of Construction:**  
Residential – High Rise

**Installation Type:**  
New

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PIPING SYSTEMS  
**FLOWGUARD GOLD®**

**CORZAN**

**FLOWGUARD GOLD**



the future because of the ease of putting it in. The solvent cement is a much easier process than soldering. We also noticed fewer leaks after the system was together. And for those leaks we did find during testing, we discovered they required much less time and effort to repair."



To prepare his crew for the upcoming project, Friederich worked with the local FlowGuard Gold representative to arrange for on-site training over a three-month period for the 50+-man crew. Friederich, himself, attended FlowGuard Gold CPVC University in Cleveland where he was able

to gain hands-on experience with the product and tour the research facility to see, firsthand, the rigorous product testing and R&D processes that assure a superior product performance.

Trojahn Plumbing, which has been in business since the early 1920s, is one of the larger plumbing contractors in the St. Louis area. They work exclusively in the commercial arena handling both new construction and rehabs.

Although The Crescent was not the first Trojahn project completed using FlowGuard Gold and Corzan pipe and fittings, it did mark the first time that the company utilized CPVC throughout the entire system. Larger Corzan CPVC piping in 4" diameter was used for the main pipe and the risers. Smaller diameter FlowGuard Gold CPVC pipe (available in diameters from 1/2" to 2") was used for the branch lines.

Friederich estimates that about 50 percent of his company's current non-design-build work is being done with CPVC; however, approximately 90 percent of their design-build work is converting to CPVC, including a number of other condo projects and even a county jail scheduled to begin construction in late 2007.

"We will typically price a project both ways," Friederich explained. "On average, we're able to show a 30 percent savings with CPVC between material costs and a reduction in the use of insulation around the pipe. That's impressive. And not too many people are willing to walk away from that."

In addition to the significant cost savings, easy installation, reliable performance and reduced problems with noise and condensation, there's one other advantage that makes Friederich and his team staunch supporters of FlowGuard Gold and Corzan CPVC systems—peace of mind with regard to copper pipe corrosion.

"We've been fortunate to not have major corrosion problems this side of the Mississippi River," said Friederich. "But in East St. Louis, specifically in the Collinsville area, they have a lot of problems. One of my plumbers lives there and has already had to replace parts of his copper system within the first eight years of its installation. Now that more of the system is failing, he plans to replace the entire line with CPVC."

As a result of the company's positive experience, Friederich predicts that they will continue to increase the number of projects they do with FlowGuard Gold and Corzan CPVC pipe and fittings.

"This is a heavy traditional copper market that's stubborn to change its ways," said Friederich. "But price is forcing a lot more people to look at alternatives. For me, personally, I plan to stay with FlowGuard Gold and Corzan pipe and fittings even if copper prices do ever come down."

Since Lubrizol's development of CPVC plumbing systems over 45 years ago, more than four (4) billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels, including OVER twelve (12) million homes. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 1-888-234-2436, X7393, or visit [www.flowguardgold.com](http://www.flowguardgold.com).

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Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3201 / 1.216.447.5000 / [www.flowguardgold.com](http://www.flowguardgold.com)

**FlowGuard Gold® CPVC  
Marketing Department**  
9911 Brecksville Road  
Cleveland, Ohio 44141-3201 USA  
888.234.2436 ext.7393  
216.447.5000  
216.447.5750 FAX