

# CASE STUDY

## CONVERSION TO FLOWGUARD GOLD® CPVC PIPE AND FITTINGS SAVES CONTRACTOR 40 PERCENT ON OFF-CAMPUS HOUSING PROJECT AT RPI

### Collett Mechanical, Inc.

Albany, New York

Established: 1991

#### Albany's Collett Mechanical Identifies Attractive Plumbing Alternative for Meeting Tight Deadlines and Tighter Budgets

It's hard to work in the engineering or sciences field long without becoming familiar with Rensselaer Polytechnic Institute (better known as RPI). Founded in 1824 in Troy, approximately 150 miles north of New York City, RPI is the nation's oldest technological university.

Over the years, the university has been responsible for grooming thousands of engineers, scientists and information technology majors. Despite its pricey annual tuition of \$33,000 (not including board), RPI attracts approximately 4,900 undergraduates and 1,200 graduate students each year with its fully networked classrooms and hands-on, high-tech approach.

As a result of the university's history and stellar reputation, its student population had been outgrowing local housing capacity, creating the need for a new, privately owned, four-story, 75-unit apartment project. Work on the off-campus housing, known as Congress Street Apartments, needed to



be done on an accelerated schedule in order to accommodate the start of the fall semester.

To appeal to the discriminating tastes of RPI's average student, Congress Street Apartments features a number of upscale amenities, including custom kitchens. Not only are the new apartments luxuriously designed, but staying true to the high-tech feel of the university, they also feature a number of higher performing, advanced technologies, even down to the plumbing system used.

In fact, Congress Street Apartments at RPI became one of the state's first student housing projects to feature a CPVC plumbing system. Previously, the state plumbing code did not allow the use of CPVC pipe and fittings in this type of commercial construction. But in 2003, the state adopted the International Plumbing Code, which allows the use of CPVC not only for the individual bathrooms, but also for the main risers.

Albany's Collett Mechanical, Inc., founded in 1991, was responsible for the decision to change the specifications from traditional copper to non-corrosive CPVC.

The company specifically chose FlowGuard Gold® CPVC pipe and fittings for the project. Despite the numerous performance advantages of the FlowGuard Gold system, however, Collett initially chose the CPVC alternative to offset skyrocketing copper prices.

"The owner was looking for a way to bring down costs, so we value engineered the project," explained Joe Collier, project manager at Collett Mechanical. "We found that not only could we save substantially on material costs using the FlowGuard Gold system, but we also significantly reduced our labor costs due to the fast and easy installation process."

In fact, Collier estimated installation time on the project was reduced by roughly 30 percent because CPVC pipe requires no soldering. A one-step solvent cement joining system creates a lasting, reliable bond within minutes without the need for heavy

equipment, messy oils or the fire risk associated with soldering. It was many of these same benefits that caused the building owners to opt for a BlazeMaster® CPVC fire sprinkler system, which is based on the same technology as FlowGuard Gold pipe and fittings.

Combined with the material cost savings, Collier believes his crew saved the owner more than 40 percent of the total cost of the plumbing project. In addition, Collett realized one other economic advantage of converting to CPVC.

"No one stole it," said Collier. "With the high scrap value on copper these days, we see it disappearing from the job site, especially since most projects are not locked up or even enclosed until late in the process."

Collett had previously tried PEX plumbing on several, smaller residential projects in an effort to reduce material and labor costs. "The problem was that we



*"We found that not only could we save substantially on material costs using the FlowGuard Gold system, but we also significantly reduced our labor costs due to the fast and easy installation process."*

**Type of Construction:**  
Educational

**Installation Type:**  
New

**FLOWGUARD GOLD®**  
PIPE & FITTINGS  
**NOT A DROP OF DOUBT.**

# FLOWGUARD GOLD®

couldn't make it look nice," said Collier. "And my crew kept complaining it didn't have a professional appearance. The FlowGuard Gold pipe is more rigid. It looks more like what we're used to seeing."

Collier has also been pleased with the performance of the system. Furthermore, Collett is assured of a reliable, long-term performance from the CPVC system, because it's 100 percent resistant to corrosion and pitting in potable water applications. Its natural thermoplastic characteristics also mean higher energy efficiency (less heat loss), less condensation and less noise. An NSF test, in fact, confirmed that a FlowGuard Gold CPVC system is four times quieter than copper.

"Converting to CPVC means providing a better value to our customers," said Collier. "With FlowGuard Gold we retain all of the benefits we're used to with copper with the bonus of having superior performance as the result of a corrosion-resistant, quieter, more energy efficient product."

Taking into consideration all of the product's benefits, Collier is confident his company will use CPVC more often in the future as they continue their work in the commercial arena, including schools, hospitals and even arsenals.

"All of our business is deadline and budget driven," said Collier. "You can't afford to miss a deadline. In the case of RPI, we would have completed the

project on time, no matter what we needed to do. But thanks to the FlowGuard Gold CPVC system, we were able to finish the work on time without adding extra man hours. That is an incredible advantage."



Since Lubrizol Advanced Materials, Inc. (formerly BFGoodrich Performance Materials) developed CPVC plumbing systems over 50 years ago, more than four billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 888-234-2436, x447-7393, or visit [www.flowguardgold.com](http://www.flowguardgold.com).

*"Converting to CPVC means providing a better value to our customers. With FlowGuard Gold we retain all of the benefits we're used to with copper with the bonus of having superior performance as the result of a corrosion-resistant, quieter, more energy efficient product."*

**FLOWGUARD GOLD®**  
PIPE & FITTINGS  
**NOT A DROP OF DOUBT.**

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information often is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.

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

© The Lubrizol Corporation 2008, all rights reserved  
FlowGuardGold® and Corzan® are registered trademarks of The Lubrizol Corporation  
FGG-CS59

Printed in U.S.A.  
December 2008

**FlowGuard Gold® CPVC  
Marketing Department**  
9911 Brecksville Road  
Cleveland, Ohio 44141-3201 USA  
888.234.2436 ext.447.7393  
216.447.5000  
216.447.5750 FAX