

CASE STUDY



SCIENCE. SERVICE. SAFETY.

PROJECT:

Montrose County Courthouse

LOCATION:

Montrose, Colorado

INSTALLATION TYPE:

Retrofit

SCOPE OF PROJECT:

Heads: 312

Stories: Five floors

CONTRACTOR:

Fox Valley Fire Protection

BENEFIT:

Design Flexibility Preserved
Historical Architectural
Elements

BlazeMaster® Fire Protection Systems Streamlines Retrofit of Historic Courthouse

A cherished community landmark, the County Courthouse in Montrose, Colorado, has been listed on the National Register of Historic Places for more than 30 years. Opened in 1923, the 45,000 square-foot, wood and brick building has been building has most recently been used as office space for county officials, though it needed a major renovation, including restoring two unused floors and bringing the entire facility up to code.

The upgrades included adding a fire sprinkler system, among other enhancements. The fire sprinkler contractor, Fox Valley Fire Protection of Durango, Colorado, had to comply with federal regulations to preserve the historical look and feel of the century-old building. For example, working around the original wood beams and framing added complexity. Reducing the load on the building was also an important consideration. As always, budgets were tight.

BlazeMaster CPVC Delivers Significant Cost Savings

For Fox Valley Fire Protection, BlazeMaster® Fire Protection Systems offered clear advantages over steel pipe in saving time and money, its light weight and ease of installation.

"Based on our past experience, we knew BlazeMaster Fire Protection Systems would be more efficient to install than steel pipe—especially while meeting the unique demands of retrofitting a historic building," said Jason Beier, of Fox Valley Fire Protection. "By choosing BlazeMaster CPVC, we achieved a 60% savings on material costs as well as labor."



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Jason Beier
Fox Valley Fire Protection





BlazeMaster Fire Protection Systems' commitment to service helped the project go smoothly from start to finish.

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Fox Valley Fire Protection



Here are three ways BlazeMaster CPVC reduced cost and streamlined installation:

- **One-step solvent cement welding.** Compared to steel pipe, one-step solvent cement welding allows projects to be completed quickly in the field by trained personnel. That allows contractors to install high-performance systems with a smaller crew, in less time and without heavy equipment and hotwork permits required for steel pipe.
- **On-site fabrication.** With BlazeMaster Fire Protection Systems, installers readily adapted to design changes and unanticipated obstacles on-site. For instance, changes to pipe location and height were easily adjusted when unforeseen issues arose, or the HVAC might need to change size or direction from the original planning. With steel pipe, design changes often mean the system needs to go back for off-site prefabrication, adding cost and delays.
- **Flexible drops.** BlazeMaster CPVC was used in conjunction with flexible heads instead of hard-pipe connections, which made it easier to cut heads accurately into the center of tile without every drop needing to be offset. While there's a common misconception that BlazeMaster Fire Sprinkler Systems cannot be used with flexible drops, it is an ideal option for any project with a finished ceiling.

"BlazeMaster Fire Protection Systems' commitment to service helped the project go smoothly from start to finish," said Beier.

Some of the cost savings can be linked to the superior hydraulics of BlazeMaster CPVC compared to steel pipe, which means system designers can specify smaller diameter pipe while ensuring the same level of water flow. The courthouse project consisted of five total pipe sizes ranging from three-quarters inch to two-inch CPVC pipe.

Design Advantages Key to Retrofit

Using BlazeMaster Fire Protection Systems also helped Fox Valley Fire Protection meet key design challenges.

- **Architectural Edge.** Smaller diameter pipe offers design flexibility by providing more room around existing structures needed to preserve historic elements of the building construction.
- **Lightweighting.** BlazeMaster CPVC – 84% lighter than Schedule 40 steel – helped project leaders meet goals for lightweighting to reduce the overall load on the historic building.
- **Integration with Steel.** The project also included 200 feet of steel pipe. While there is a common misconception that CPVC cannot be combined with steel, hybrid metallic and CPVC systems are widely used in NFPA 13.

Strong Support Keeps the Project Moving

The team at BlazeMaster Fire Protection Systems provided technical support throughout the project,



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Jason Beier
Fox Valley Fire Protection



including working with local Authorities Having Jurisdiction (AHJs) to ensure compliance, quality installation and code acceptance.

BlazeMaster CPVC Helps Meet Project Goals

The fast, efficient installation method ensured the fire sprinkler system met deadlines to keep the overall project on track. The fire sprinkler project was completed in about six weeks, from material delivery to completion.

Fox Valley Fire Protection's ability to save time and money using BlazeMaster CPVC was also key to overall project goals. In addition to savings on installation, the BlazeMaster Fire Sprinkler System will ensure long-term protection with lower maintenance costs than a steel system. That's because, unlike steel pipe, BlazeMaster Fire Sprinkler Systems will not corrode and are 100%

immune to Microbiologically Influenced Corrosion (MIC), which reduces the need for costly long-term maintenance and increases system longevity. As a result, BlazeMaster Fire Protection Systems deliver high performance protection with a lower total cost of ownership than metallic pipe. For instance, visual inspections required for steel pipe per NFPA 25 are not needed for CPVC (see NFPA 25 14.2.1.5).

"BlazeMaster Fire Protection Systems helped us meet the challenges of this historic renovation with high-quality pipe and fittings and a great support team," Beier said. "We'll continue to use BlazeMaster CPVC for a wide range of projects."



BlazeMaster®
FIRE PROTECTION SYSTEMS

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