BlazeMaster®
FIRE SPRINKLER SYSTEMS

Case Study

Historic, five-star Broadmoor completes life safety upgrade during brief off season

Type of Construction:
Hotel/Motel

Installation Type:
Retrofit

Location:
Colorado Springs, Colorado

Scope of Project:
Heads: 2,274
Sq. Feet: 233,600
Stories: 6 buildings; up to 10 stories each

Fire Sprinkler Contractor:
Western States Fire Protection

Meeting Aggressive Schedule

In designing the historic Broadmoor in Colorado Springs, CO, entrepreneur Spencer Penrose and his wife Julie set out to create the most beautiful resort in the world. On June 29, 1918, the doors of The Broadmoor officially opened with four wings, a striking pink stucco facade and an 18-hole golf course designed by master architect Donald Ross. Known as the "grande dame of the Rockies," The Broadmoor has been the vacation destination of hundreds of presidents, statesmen, foreign dignitaries and celebrities, in addition to many entertainment and sports figures. It's one of the few properties to receive Mobile's Five-Star rating every year of the award's 45-year existence, as well as AAA's Five Diamond rating every year of that award's 27-year history.

In May of 2002, work was completed on a $75 million renovation of the resort's main building to preserve the structure's integrity and update amenities and systems, such as life-safety instruments. This included the installation of three new elevators, two emergency exit stairwells and a complete fire protection system – all in less than six months. A key factor in compressing the time to completion of this normally 18-month project down to one-third was the selection of building materials that allowed for quick installation, such as BlazeMaster® CPVC fire sprinkler systems.

"We had a very aggressive schedule that was designed to allow us to complete the renovation without affecting our occupancy levels during our peak season," said Terry McHale, Broadmoor director of facilities management. "We selected the BlazeMaster CPVC fire sprinkler system over metal because it offered a much quicker installation. We couldn't have completed the project on time had we used metal."

More than 150 guestrooms ranging from 500 to 550 square feet were equipped with BlazeMaster fire sprinkler systems. Significant to the tremendous time savings on the project is the fact that BlazeMaster CPVC fire sprinkler systems were

engineered quickly by Western States Fire Protection, who installed the system. The system is lightweight and easy to transport, and required only simple hand tools, so fabrication, changes and alterations were all done on site.

"The renovation was completed floor-by-floor with all of the tradesmen working simultaneously," said McHale. "Western States' contractors were able to install the system so quickly that they often had to wait for the other trades to catch up before moving to the next floor."

Protecting a Priceless Treasure

Though all of the guestroom floors were completely gutted for the recent renovation, the lobby and mezzanine levels were left intact. However they still needed to be sprinklered to protect not only lives, but also the historic architecture.

The flexible engineering of BlazeMaster CPVC fire sprinkler systems and the fact that the system employs a solvent-cement joining system rather than torches allowed for the sprinklering of these areas without damaging the décor.

"There are hand-painted ceilings throughout the mezzanine and lobby level. Initially we were very worried about how we were going to approach these areas," said McHale. "It was quite difficult to route some of the piping. For that reason, simplistic installation was once again an obvious factor that led us to install the BlazeMaster CPVC system.

Now listed for more types of applications than any other non-metallic system.

Because the system affords the ability to go under the existing ceiling voids with mechanical equipment and ductwork, the Western States contractors were able to do a great job of winding through the space without disturbing the historic ceilings.

"Western States had to consider where they placed the sprinkler heads to integrate them into the artwork and then also work carefully above it," said McHale. "We were pleased in that not only was there no water damage, but also there were no negative effects in regards to the aesthetics."

"We were dealing with very small spaces," said Rich Charles, Western States sales representative. "The fact that the system employs a solvent-cement joining system rather than torches or heavy equipment made the installation much safer and easier than with metal. It wouldn't have been wise to introduce an open flame near priceless architecture and ceiling artwork."

"The lack of torches meant the elimination of messy solder, which can be destructive to a sensitive surface," said Charles. "Also, because BlazeMaster pipe and fittings will never pit or corrode, The Broadmoor management doesn't have to worry about potential pinhole leaks damaging the ceiling either."

Preserving the Past, Moving into the Future

Although management wanted to give The Broadmoor an updated appearance, preservation of the original architecture and design were important in maintaining the property's history. The guestrooms are larger and more elegant than their predecessors. But, according to McHale, anyone who walks into the guestrooms, lobby or mezzanine would think that it looks just like it did in 1918.

"When you walk into the hotel today, you would be hard pressed to recognize that we completed a renovation to the extent that we did," said McHale. "We now have things like Internet access, multiple phone lines and luxury bathrooms. But, it's in keeping with the theme of The Broadmoor.

"In terms of the BlazeMaster CPVC system, the sprinkler heads are integrated beautifully. You'd never notice them," said McHale. "That speaks well of BlazeMaster fire sprinkler systems."

For more information, call 888-234-2436, e-mail blazemaster@blazemaster.com or visit www. blazemaster.com

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