

## **Case Study**

### *Historic Public Buildings*

#### **University of Minnesota Auditorium: Unusual Challenges and Value-Added Opportunities for State-of-the-Art Fire Protection**

---

The buildings on the core campus of the University of Minnesota in Minneapolis have the classic architecture of higher learning institutions everywhere. Stately-looking and always accessible to literally thousands of students and the public at large who use them annually, the beloved structures can also be what Scott Futrell, President of Futrell Fire, calls “classic fire and life safety concerns, unless they are adequately protected against fire.”

The U of M’s Northrop Auditorium is one such hallowed building on the large university campus mall. With its timeless Greek columns outside and spacious 5000-seat interior, the Northrop stage has played host to everything from the scholarly lectures of Nobel Peace Prize winners to the hottest rock and classical music groups, scores of theatrical performances, and dance ensembles.

The auditorium’s awesome 80-foot-high ceiling, thick walls, many exits, complex egress system and winding corridors, plus a labyrinth of offices throughout the main floors and in the basement, are signature characteristics of the popular public space. Until 10 years ago, they were lacking a good fire protection system.

In 1991, Futrell Fire was engaged by the project architect and engineers for the University to provide a complete fire protection design for the sprinkler system of the entire Northrop structure – with one caveat: there could be no interruption to services, performances or other functions in the building.

“The Northrop Auditorium needed multiple levels of protection with an extensive sprinkler system,” recalls Scott Futrell. “That large ceiling area alone had another huge 60- to 80-foot space above it to the roof. Our design was a kind of multiple-tiered effect to cover all the areas seen and unseen in the building.”

Because it was an historical structure, many other professional personnel needed to be consulted for the project, including building officials, fire chiefs, fire marshals, and university officials. “Our challenge was to shoehorn a fire protection system into the building without damaging its historical character,” Futrell says. “There was no wiggle room for deviation.”

The project also attracted the highest quality bidders because it was so challenging and public – and because the University dictated the highest quality design proficiencies. Adds Futrell, “With historical work of that nature, the professional fire protection team needs to bring value-added services to the project to ensure that the design and execution meet the requirements of the building owner.”

The University’s satisfaction with the project was reaffirmed when Futrell Fire was included on the design team for similar projects at Walter and Wilson Libraries and other U of M buildings, among them several historical structures. Today the stakeholders at the University of Minnesota are even better served with fire and life safety built into the historical grandeur of their most treasured public buildings.