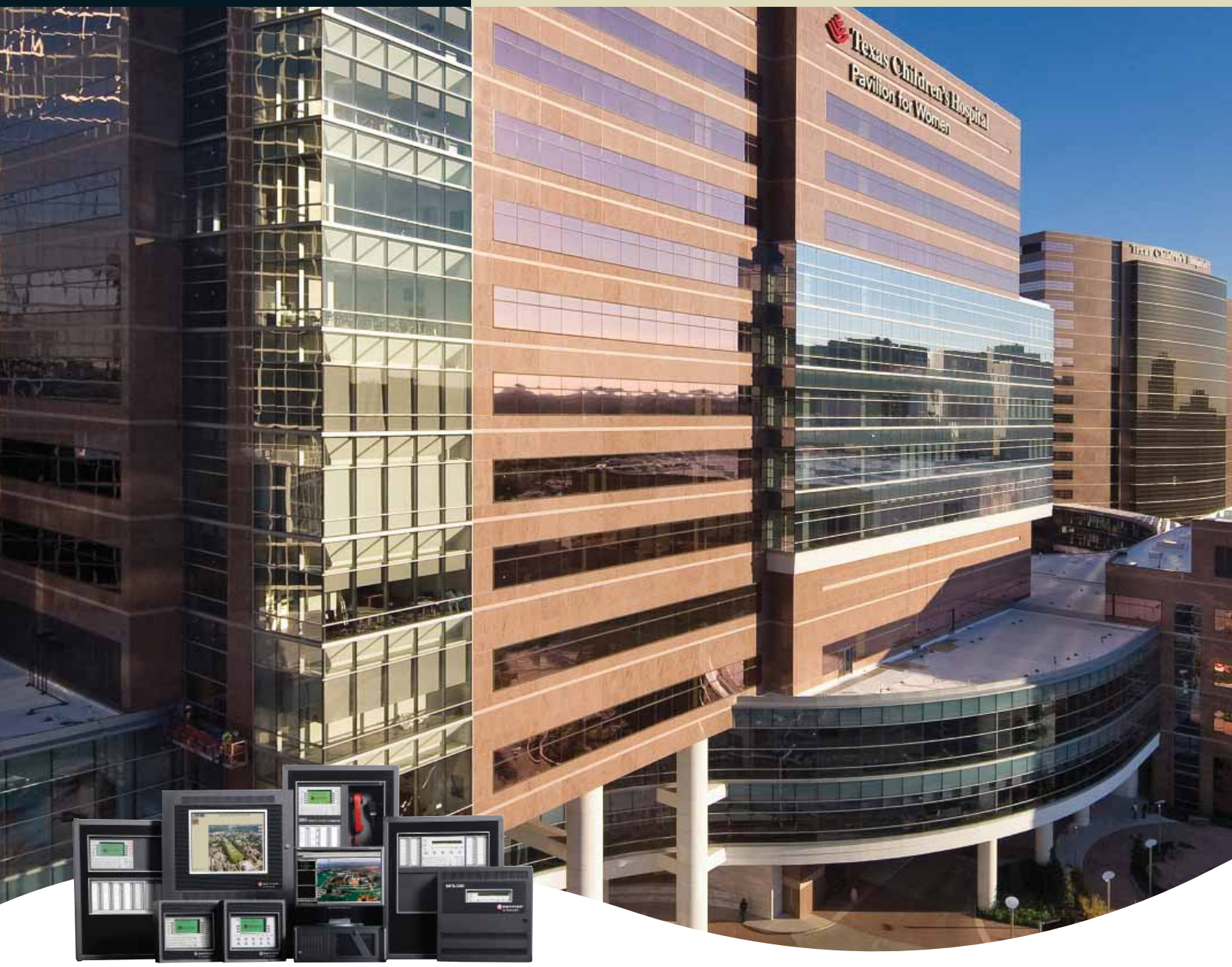
Project Profile Texas Children's Hospital



NEW FIRE PROTECTION DEEMED ESSENTIAL PART OF HOSPITAL'S CARE

Texas Children's Hospital recently added a new high-rise facility to its five-building campus in Houston. The new Pavilion for Women, designed to care for the highest risk mothers and babies, is essentially two towers, one 15 floors, the other six floors, that are connected at the base. The building is an entire city block wide and two football fields long.

Fire protection is of critical importance to the nature of care provided at Pavilion for Women, says Lonnie Rinehart, the hospital's plant operations manager.

"For us, it all goes back to patient safety," says Rinehart. "We have babies in neonatal intensive care that literally fit in the palm of your hand. They can't go anywhere during a fire alarm – it's all a part of what we do to protect them."

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FireTron, Inc., a local NOTIFIER Engineered Systems Distributor, commissioned the pavilion's fire alarm system and will perform the ongoing service, testing and maintenance of the systems protecting the entire hospital complex.

DETECTION & RESPONSE

Nearly all rooms within the new pavilion were fitted with self-regulating detectors that examine a combination of environmental factors. Acclimate Plus detectors, produced by System Sensor, scan for the visual signatures of smoke and fire, as well as unusual spikes in room temperatures.

Given the ever-changing needs of patients and the equipment utilized within this facility's rooms, each detector's ability to automatically adjust its own sensitivity settings based on slow, minor changes within its surrounding environment has all but eliminated severely intrusive false alarms.

Some rooms, where aerosolizing treatments were used for respiratory treatment, have had issues with older detectors, because aerosol from the treatment would set them off, says Rinehart. FireTron equipped all respiratory treatment areas with System Sensor IntelliQuad detectors, which examine four major signatures of fire: smoke, heat, infrared and carbon monoxide. Six levels of sensitivity enable these specialized detectors to be programmed to provide accurate detection, tailored to a particular environment.

"The main goal is to reduce false alarms and the other is to increase speed of response," explains FireTron's VP of Sales and Marketing, Bob Kaczmarek. "You don't want that to happen in a hospital unless it's the real deal – unless you know for certain that there's a fire. And then they always want to know where the fire is, the *actual* physical location."

An addressable fire alarm system provides that pinpoint location. When a smoke detector goes into alarm, it is easy to spot, too. Rinehart explains the detectors have two red LED lights that "glow nice and bright" when in alarm. If a detector in a patient's room alerts, the nurse station is even alerted, so the nurses can get right on scene.

The hospital has a standard operating procedure for fire alarms – a "Dr. Pyro" team addresses the issue. The public isn't alerted and the system sends out automatic preset emails, texts and pages with critical information in the case of an emergency. Predetermined teams of security, engineering and a nursing administrator respond to the alarm. Security and engineering handle the event until firefighters arrive, and the nursing administrator commandeers anyone needed to handle patient safety.

The system also boasts a voice evacuation system that can be targeted to certain areas with recorded emergency messages. In addition, there's the flexibility to give manual voice instructions via a microphone.

INTEGRATION & MAINTENANCE

There is a degree of integration that has been built into the system at the Pavilion for Women beyond that involving the nurses' call stations described earlier.

"Our system is interfaced with all the security doors in the building – if there is a fire condition in the building, or on a floor, the system unlocks doors on the fire floor, and floors above and below," says Kaczmarek.

And in Texas, he explains, there are safety requirements to have smoke removal systems in all hospital operating rooms.

"We had to integrate between the Honeywell building management system (BMS) and our system to accomplish that. We basically tell the BMS when to open and close fire and smoke dampers, when to start exhaust fans – so if there is a fire in the operating room, it deals with the smoke," says Kaczmarek. "The equipment itself, due to the tremendous flexibility in the system software and programming, really makes it easier to handle these complex applications."

The new technology allows for ease of maintenance as well, informing operators of a smoke detector in need of cleaning, for example. Using the keyboard at any of the fire alarm control panels, operators can temporarily bypass detectors or other devices when performing maintenance on the system.

The fire alarm systems protecting the hospital's five buildings, plus its new pavilion, are monitored within its own Service Response Center (SRC). Construction of the new pavilion has afforded the hospital the opportunity to move and upgrade its SRC, which will include the latest NOTIFIER ONYXWorks graphic workstation, displaying graphic layouts of each building and all major fire alarm components. Notifications of all devices in-alarm are immediately displayed on facility maps, along with information on the cause of an alarm, to enable a fast response.

BACKWARD HARMONY

One significant advantage of the new fire alarm system is backward-compatibility. NOTIFIER control panels installed more than 20 years ago in the hospital's five other buildings have held up well, which will be phased over to the latest NFS-3030 panels throughout the next year.

"That's huge. If we can keep the majority of the system in place and only have to replace the panels, for instance, that's cost savings to us, but it's also less intrusive for our patients, staff and visitors," says Rinehart.

FireTron is working with Texas Children's Hospital on a five-year plan to incorporate technology upgrades, maintenance and other investments.

"The backward compatibility is where it really saves the customer money," says Kaczmarek. "They may only have 'X' number of capital dollars to spend in 2012, so we can provide them with incremental upgrades so they don't have to spend more."

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