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State University Chooses Wireless Fire Alarm Solution

CWSI Case Study: Montclair State University, Montclair, NJ

Montclair State University (MSU) is a large university campus located in northern New Jersey, comprised of more than 50 buildings located in three bordering towns. The campus profile includes dormitories, academic, administrative, and service related occupancies. The resident student population consists of approximately 5,000 individuals, in addition to staff and faculty members living on campus.

The University's dormitories are compliant with State regulations, housing both fire detection and suppression systems. These systems are maintained by the University's Department of Fire Safety. Automatic Suppression and Alarm Systems, Inc., (ASASI) is the University's contracted provider for fire alarm services. The University's systems have redundant monitoring capabilities and are monitored by the Department of Fire Safety, the University Police Department, and ASASI.

Issue at Hand

The Hawk Crossings dormitory complex consists of three buildings with hard wired, addressable systems installed in common area stairwells located outside of the resident apartments. Inside the resident apartments, battery-operated, single-station smoke alarms were located in the bedrooms and common areas. Because the stand alone devices are battery-operated, New Jersey Uniform Fire Code requires weekly testing and inspections on each device, resulting in maintenance expenditures totaling $52,000.00 per year.

In addition, these devices were not supervised, which could result in undetected tampering without the knowledge of the University's Department of Fire Safety. Such problems would not be discovered until the next weekly inspection and test. Moreover, these devices did not report alarms to a central monitoring station, rather emitting only a local audible.

If a fire occurred, the University Police Department would not be notified in an expedient manner. The only way for a fire alarm signal to be sent to the Police Department was either through the activation of a sprinkler system or through the activation of one of the common area, stairwell smoke alarms. These options were unacceptable, as was the cost related to maintaining the current system.

Challenge

ASASI was asked to submit solutions to this on-going problem to increase the reliability and life safety protection for the residents, while reducing the overall maintenance cost associated with the current system. In addition, any associated work needed to be done within a timeframe that would be convenient for the buildings' occupants, namely during one of their vacations. The buildings are traditionally unoccupied during the University's winter and spring breaks.

The main challenge to this endeavor was cost and timing. The cost to extend the existing common area addressable smoke detection system to the sleeping areas was $125,000 per building. Additionally, the time to install this equipment would be longer than the winter or spring breaks allowed, approximately 4 weeks per building.

Hawk Crossings Dormitory Complex, Montclair State University

Advantages

The advantages of the CWSI Wireless System:

- Alleviates the manpower and financial burden of having to perform manual checks on battery-operated, single station smoke alarms
- Provides an addressable fire alarm system for the occupants of the dormitories
- Supervision allows for the system to be monitored in multiple locations
- Allows the Department of Fire Safety to detect any tampering with individual devices assuring system operation at all times
- Reduction in cost of $52,000 per year incurred by the University
- Installation cost of $75,000 compared to $375,000 for the hard wired alternative

Solution

Having eliminated the hard-wired choice due to cost and time constraints, the use of Commercial Wireless Systems International (CWSI) products was proposed.

In conjunction with the University's Director of Fire Safety, Mr. Robert Ferrara, a specification for the overall system operation and the specific system design for the first "trial" building was reviewed and approved. "Our first step was to install the five repeaters and the control panel, followed by the smoke detectors with tandem capability, representing approximately 100 devices. The total time to install the equipment was about a week, rather than the original time frame of a month. All devices were enrolled, programmed, and tested before the students returned to school. After the 'trial system' was inspected and approved notice to proceed with the other two buildings in the Hawks Crossing complex was authorized," said Rick DeHeer of ASASI.

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