

Texas-Sized Retrofit is Big on Simplicity

Legacy system compatibility at the Texas Capitol building in Austin assured detection installation ease while minimizing downtime that could disrupt state business.



Devices had to blend into the architecture throughout the capitol, including the Capitol Expansion (far left) that was completed in 1993, as well as in one of the original courtrooms.

Built in 1888, the Texas Capitol in Austin is the largest in gross square footage of all state capitols and is second in total size only to the National Capitol in Washington D.C., yet nearly 15 feet taller. Though heralded by preservationists for its 15th century Italian architecture, the Texas Capitol needed to update its fire and life safety protection by replacing its discontinued legacy systems that had reached the end of their lifecycle.

Koetter Fire Protection of Austin was responsible for retrofitting the fire and life safety system throughout the main capitol building, as well as the four-level, 667,000-square-foot underground extension that effectively doubled the floor space of the entire capitol complex upon its completion in 1993.

Besides being sensitive to preserving this historically significant building, the Koetter team understood that the Texas Capitol is also a high-profile, state facility that has to maintain strict security procedures. As an installer, that meant being accompanied by a security escort at all times and working at a busy facility with hundreds of daily occupants.

“You work by their schedule with the goal of ‘No impact to any of the operations of the state processes in the capitol,’” says Jason Ferguson, vice president of Koetter. “Also, the capitol systems have to stay online, so maintaining coverage is critical.”

The ease of detector replacement aided Koetter in maintaining proper fire and life safety protection at all times during the installation process. “Basically, the timeline challenge was to have the system minimally impacted as far as coverage,” says Ferguson, adding that compatibility between the old and new detection systems was the key to continuously maintaining appropriate coverage. The replacement included the fire alarm control panel and smoke, heat and duct detectors. Managing the replacement in phases met the capitol’s operations requirements and scheduling requests.

Koetter replaced the legacy detectors while the capitol’s legacy NOTIFIER FACP equipment was still in place, and then swapped the NOTIFIER Model 2020 fire panel with a new Model 3030 panel. In all, Koetter installed about 1,300 Honeywell photoelectric smoke detectors (NOTIFIER Model FSP-851), 50 FST-851R heat detectors and 170 InnovairFlex™ duct smoke detectors, which work in conjunction with one another throughout the main building and the extension.

Although the installation was simplified by the technology compatibility and use of existing detection locations, Ferguson says that the unique nature of the building, which includes various atria, arches and other architecturally imposing building features, made maneuverability difficult at times. Some devices had been strategically located to blend into the look and feel of the building, which challenged installer access.

But Ferguson maintains: “The process was as much a challenge as the location. This type of retrofit requires long-term planning and studying of the customer’s requirements. You have to know them and their system.”