

A FORSYTHE CASE STUDY

Data Center Design & Relocation

A National Retailer

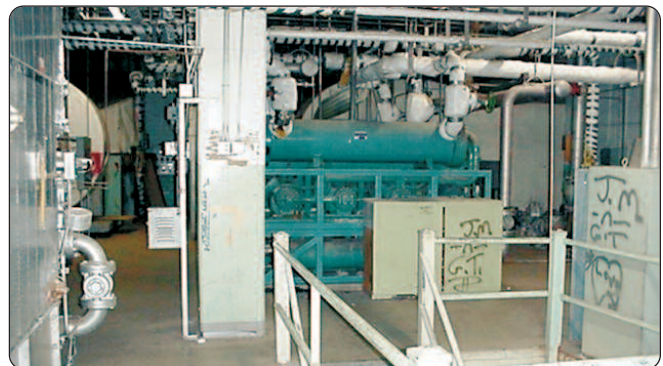
Business Challenge

A national retailer was about to build a new data center to house its mission-critical IT environment. It needed a more reliable facility with upgraded building systems infrastructure and improved hardening against possible tornado damage-which is an annual local threat. The retailer had worked with Forsythe to create a basic facility concept plan to meet its requirements and a budget to support the plan. Now it needed its new data center fully designed and built as quickly as possible, while remaining on budget and making sure all the details were right.

Solution

The first stage of the process was to create a comprehensive blueprint for the new facility, which was to be built in an unused section of the company's existing headquarters. Forsythe began by walking the retailer step-by-step through all of the options-beginning with best practice standards and then evaluating cost-benefit for each and every design element-down to the size and construction of the doors. For instance, typical office doors are 6'8", but it is common to have 7' equipment cabinets in a data center (as this data center would), making 8' doors more convenient access points. Likewise, while ADA (the Americans with Disabilities Act) requires 36" wide doors in all newly-constructed workplaces, the regular need for loading, unloading, and moving large, heavy equipment makes double doors-a total of 6' wide-a more practical alternative. It was determined that, in order to truly secure the facility against tornadoes and other potential threats, the walls and roof would need to be constructed of 8-12"-thick insulated concrete forms (ICFs). A structural engineer was involved to ensure that the rest of the building could support the excess weight of the specialized walls and roof.

Once the blueprints were ready, Forsythe oversaw the selection process for a general contractor experienced in data center construction. Each prospective contractor presented a proposal based upon their review of blueprints. Once Forsythe narrowed the pool to three finalists-based on experience, price, and work style-representatives of the retailer observed and participated in the interview process. The final decision was left to them, as it was imperative that they be comfortable working with all the people involved in the project.



Before: A long-unused section of the retailer's corporate headquarters was chosen as the most securable, cost-effective location for the new data center. Prior to construction, five weeks of demolition were required to remove old HVAC and electrical infrastructure, which included asbestos-wrapped piping.



After: Low-voltage wiring being installed in the nearly-completed facility.

The construction phase took 5 months. Upon completion, the final challenge was the seamless relocation of the IT equipment the facility had been built to house. Initially, the retailer planned to handle the move internally. But, as they worked with Forsythe to understand the steps and safeguards required, they decided to take advantage of Forsythe's expertise and additional resources. One compelling factor in their decision was the realization that handling the relocation internally would void or suspend the warranties and maintenance contracts on virtually all equipment, requiring the retailer to pay each manufacturer, per unit, to recertify the equipment. Forsythe is OEM-certified to move equipment while preserving all warranty and maintenance contracts.

The first installment of the multi-phase move was completed just before the retailer "locked down" its IT operations for the holiday shopping season. The move was successfully completed within a defined downtime window of less than 12 hours-between closing time Friday night and opening time Saturday morning. The remaining phases of the move will recommence once the holiday lock-down is lifted.

Results

Having previously worked with Forsythe to develop a plan and an approved budget for its new Tier II+ data center facility (on a scale of I-IV as defined by the Uptime Institute, which publishes industry standards) the retailer was able to take the concept from plan to blueprint to completed, operational facility on time and on budget, thanks to Forsythe's attention to the details. The cost-savings produced by situating the new facility in an existing, unused section of the company's headquarters are complemented by the decrease in risk to the company's IT and business operations provided by having a facility better suited for disaster avoidance (especially with regard to tornadoes).

Because of the breadth of Forsythe's data center services expertise-from assessment, to design, to securing local permits, to screening construction contractors, to relocating equipment while preserving all manufacturer warranties and contracts-the retailer was able to rely on a single point of contact and accountability to successfully accomplish an enormous undertaking on time, on budget, and without business interruption. Forsythe will continue to assist the retailer with the final stages of its data center relocation, and with its ongoing IT infrastructure needs.

For more information about Forsythe's offerings, visit www.forsythe.com

