

## TEXAS DEPARTMENT OF CRIMINAL JUSTICE

**Mark W. Stiles Prison Unit, Beaumont, Texas**  
**February 24, 2009**

### **SITUATION:**

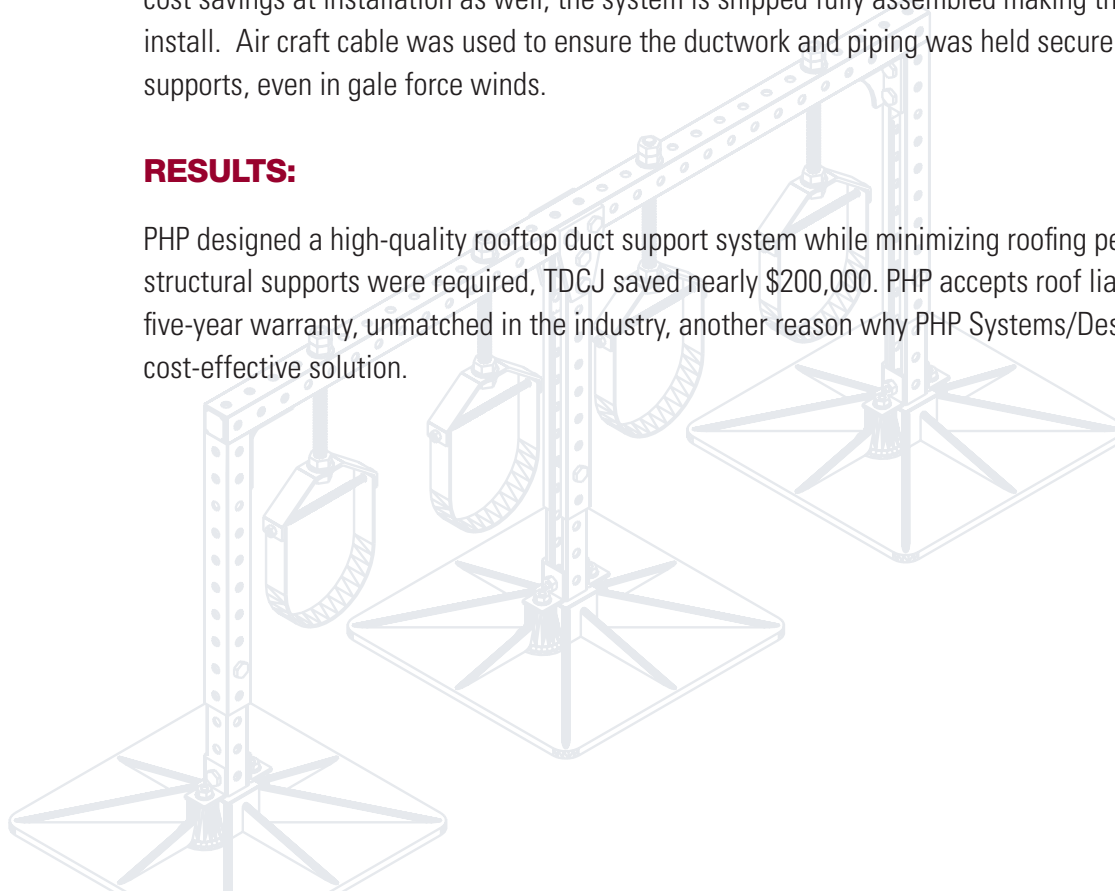
After hurricanes Katrina and Rita tore through Beaumont, Texas with winds in excess of 90 miles-per-hour, the Stiles Unit at the Texas Department of Criminal Justice's (TDCJ) facility needed a new roof and a ductwork support system. The job required that varying sizes of ducting, from 8-inch round piping to 48-inch by 48-inch square ductwork be anchored securely enough to withstand 120 mile-per-hour sustained hurricane force winds.

### **SOLUTION:**

The PHP support system was the only pipe support system considered by TDCJ engineers that was rated to withstand 120 mile-per-hour winds. Another advantage was that the system's design and schematic plans were designed for free by PHP engineers. In addition, they proposed drawings were stamped by an independent, third-party mechanical engineer. A unique feature of PHP's design was that it specked a minimum number of roof penetrations, just 122 throughout the entire 3,600 linear feet of supported systems. This meant long-term reduced risk of roof leaks that could potentially result in damage. The PHP system offered cost savings at installation as well; the system is shipped fully assembled making the job quicker and easy to install. Air craft cable was used to ensure the ductwork and piping was held securely in place within the pipe supports, even in gale force winds.

### **RESULTS:**

PHP designed a high-quality rooftop duct support system while minimizing roofing penetrations. Since fewer structural supports were required, TDCJ saved nearly \$200,000. PHP accepts roof liability by delivering a full five-year warranty, unmatched in the industry, another reason why PHP Systems/Design is a dependable and cost-effective solution.



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“With PHP Systems/Design, proposed designs and drawings get stamped from an independent, third-party engineer up front to confirm that the design will work. PHP has proven expertise and quality products and the PHP warranty accepts liability for their work... The biggest factor for us was that PHP designed an anchored system built to withstand 120 mph hurricane force winds. Not only could the pipe hangers handle the wind, but they minimized the number of roof penetrations, and were installation cost-effective because PHP Systems arrives fully assembled.”

- William L. Stephens, Operations Director  
Mark W. Stiles Unit