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## ASPHALT ANCHORS KEEP MODULAR BUILDINGS GROUNDED

'Modular construction' is a method of using prefabricated large-volume components to assemble a building on the final construction site. This efficient method has gained followers as early as the mid 1850's after a carpenter built and then disassembled a small house in London in preparation for his son's emigration to Australia in 1837 .

Today modular construction is used for temporary or permanent offices, schools, hospitals and even in Disney's Polynesian resort. Because modules need to be transported from the factory to the construction sites, they are engineered to be rugged and rigid. For this reason, many of the installations do not require an elaborate foundation to hold the building structure together. The buildings still need to be tied securely to the ground, however, to resist winds and ground movement.

The most common method of installing modular buildings is to place the buildings on cement blocks



MODULAR OFFICE AND STRAP

and to secure them to the ground using auger-style earth anchors with straps. The straps are placed all around the building, and pull the undercarriage at a 45 degree angle in a manner similar to the tie-downs used on tents - except that these straps are short and are placed under the building where they are out of harm's way.

A leading manufacturer of precast building, Anchor Modular Buildings based in Williamsburg VA, was tasked with installing a 3,000 square foot modular building on 12" thick asphalt. "This kind of asphalt is unusually thick and we had to find



a work around," said Anchor Modular's President, Jack Dooley. Using the traditional earth auger anchors was not practical for asphalt. "We needed something that would easily bolt into the asphalt, but still be able to meet our requirements of resisting 1,800 pounds of pull at a 45-degree angle." With a need for 68 anchors to meet code requirements, it was also essential that the solution be simple and inexpensive to install.

An onsite engineer was able to help. Having successfully used these in the past, the engineer recommended BoltHold™ asphalt anchors as a solution. These anchors, manufactured by Asphalt Anchors Corp. (AAC) of NJ, are specially designed to bond with asphalt using a special grout. Of unusual design and length, when compared with concrete anchors, these anchors turned out to be the perfect solution.

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BoltHold anchors securely hold down equipment to asphalt without damage to the asphalt surface. A number of models are available to meet pull force and shear

resistance requirements. To hold down the modular structure, Anchor Modular selected the SP12, rated at 2,000 lb. pull resistance.

Installation was quick — drilling one-inch diameter holes in the asphalt, filling the holes with the special grout provided by AAC, then pushing the anchors all the way until flush with the asphalt. After 15 minutes each anchor was ready for use. The provided bolt is removed from the installed anchor, and the strap is bolted to the anchor.

The asphalt anchors' unique properties and installation made it

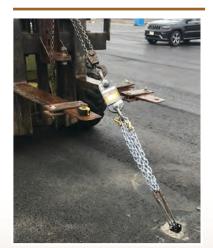
easy for Dooley's team to install them without cracking or ruining the surrounding asphalt. After the installation was completed, a conformity pull test was performed on a sampling of the anchors to ensure that they would remain secure in compliance with local building codes. The BoltHold anchors had beaten the goal of 1,800 pounds

of resistance per anchor, by resisting 5,400 pounds.

"We certainly were very impressed," Dooley said. "Not only with how well it performed, but also with how easy it was to install. When we have such an application again, you can bet we'll use Asphalt Anchors."

Anchor Modular Buildings is a one-stop shop for such structures. Since 2002 Anchor Modular has been constructing commercial structures to meet needs of industrial, military, transportation, education, petrochemical, manufacturing and

petrochemical, manufacturing and other organizations. With factories throughout the country, Anchor Modular provides quality, reliable and cost-effective modular installations.



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