



# Port Solutions

*We've Got You Covered*

## Port Charleston

Maintenance Facility  
Port Charleston, SC



"I first learned of Universal eight years ago. They erected a similar fabric structure for us in 2000 at the Columbus Street Terminal, and we were very pleased with the results. So for this project I specified Universal only."

-Rusty Piggot, Maintenance Contract Manager  
Wando Welch Port

## Background

It's summer in Charleston, South Carolina. It's hot, it's humid, and the sun is beating down hard on everyone. For those working outside at the Wando Welch Terminal at Port Charleston, it's not only hot and sunny, but the threat of afternoon thunderstorms is always present. Not to mention hurricane season is on the horizon. With summer temperatures soaring above one hundred degrees for days in a row, and winter temperatures plummeting below freezing, working at the port means being ready for all types of weather.

Working outside in Charleston is brutal, no matter what the season. Because of this, Rusty Piggott, Maintenance Contract Manager for the Wando Welch Port, had a problem. A building used to house maintenance activities and wash downs on heavy equipment used at the port had been demolished.

He needed a new structure to protect his workers, and he needed it quickly.



Fortunately, Universal Fabric Structures, a Quakertown, Pennsylvania-based manufacturer of fabric structures, had a structure that would meet all local and port building codes, stand up to the harshest weather conditions, and was portable.

## Scope of Work

A 60' wide by 45' long steel-framed truss structure with high sidewalls providing an interior clearance of 30'.

## Solution

To fill this need, UFS supplied a 60' wide by 45' long steel-framed truss structure with high sidewalls providing an interior height clearance of 30'. The building was designed to meet the hurricane wind requirements (IBC 2003 120 mph wind load, exposure C) of the Carolina coast. The fabric used was a flame resistant, PVC coated, opaque, 40-ounce premium Ferrari 1302.

The Port Charleston facility is a customized structure based on Universal's SFS Series. The SFS line of fabric structures are engineered to economically meet large width project requirements and are popular in warehousing, maintenance, recreation, aviation, and event applications. They withstand all regular code required wind, snow, and seismic loads, and can be environmentally controlled in any climate.



“UFS worked diligently to get this structure here on time and put it up quickly,” said Piggott. “We had time constraints in that we had demolished an existing building already and needed a replacement quickly. Everybody loves the new structure; it stays cold during the hot season and warm during the cold season.” - Rusty Piggot, Contract Manager

Prior to installation, UFS provided the port with all the proper documentation to confirm that the structure met all codes required by the building authorities. As promised, the structure was completed on-time and on budget.

This is the second structure that has been supplied to the South Carolina Port Authority by UFS. The first one has been installed since 2000 and has withstood four hurricanes. In the first six months of use of the new structure, the facility has withstood two major weather events with winds in excess of 70 miles per hour.



The port is also impressed with the appearance and aesthetics of the Universal structure. Its uncommon shape offsets the standard landscape of corrugated metal structures. An added benefit of the white opaque, heavy weight, PVC coated Ferrari fabric adds to the aesthetics of the structure while its ability to reflect sunlight, provides a cool work area for the maintenance facility even during the hot South Carolina summer days. In addition, the fabric is pre-stressed before coating to increase life and wear and decrease buffeting or flapping during high wind conditions.

The unique high side walls (twice the normal height of an SFS standard structure) allow for significant interior clearance along the entire width of the structure, and yet have been engineered so that the structure meets the high wind load building code requirements of the Carolina coast.

Although all types of doors are available on UFS structures, the port chose an open gable end for flexibility of access. UFS also designed the building to interface seamlessly with a utility building that was installed next to the structure.

#### About Wando Welch Terminal

Wando Welch Terminal (WWT) has received worldwide recognition for its innovative design and overall terminal productivity. Opened in 1982, the final stage of terminal construction was recently completed. At present, it is the port's largest terminal in terms of volume and physical size. Each day an average of more than six vessels sail into South Carolina's harbors, carrying 32,000 tons of cargo worth more than \$75 million. In 2006, the Port of Charleston was one of the busiest container ports along the Southeast and Gulf coasts. It is recognized as one of the nation's most efficient and productive ports. Top commodities across Charleston docks include agricultural products, consumer goods, machinery, metals, vehicles, chemicals, and clay products.

Visit [www.port-of-charleston.com](http://www.port-of-charleston.com)

#### About Universal Fabric Structures

Universal Fabric Structures (USA) is committed to providing high quality, cost effective, engineered fabric structure systems based on customer-driven needs. Established in 1983, the company has delivered on this commitment providing solutions for military, sport, industrial, and commercial and event applications. Projects include professional sports teams, NCAA institutions and private clubs throughout the world.

ISO 9001:2008 certified



Visit [www.ufsinc.com](http://www.ufsinc.com)