



ODOT Facility Relies on Shelter-Rite® for Bulk Storage Facility



In 2012, the Oklahoma Department of Transportation (ODOT) needed a new bulk salt storage facility to house roadway deicing salt. This massive new facility at the Tulsa Port of Catoosa needed the capacity to store 50,000 tons of salt, and would almost double the available storage at the time in Oklahoma.



Overseeing improvements at the Port of Catoosa was Craig Swengle, P.E. an associate vice president for Dewberry Engineers Inc., and the primary engineer/architect at Port of Catoosa. According to Swengle, this new building allowed for ODOT to “dispense the salt stored at this new location to maintenance distribution sheds before major snow or ice events during the winter. Previously, salt was stored in the open and covered with tarps after being off-loaded from barges. The new building will protect the salt supply from being compromised by wind and precipitation.”

The Tulsa Port of Catoosa was strategically chosen as the site for the new facility because it allows ODOT to transport salt to the northern part of the state on a barge via inland waterway. This reduces material transportation costs for the taxpayers and provides an avenue to procure extra salt shipments when road deliveries aren’t feasible.

This new facility measures 203 feet wide by 400 feet long, with 16-foot cast-in-place concrete walls and a rigid frame roof design. With peaks up to a height of 70 feet, this design maximizes the usable interior space needed by ODOT. All the steel, components and hardware in the building were hot dip galvanized.

Facility designers recognized the advantages of using a tensioned fabric structure for the shell of the facility for simplicity, cost savings, easy/speed of installation, low maintenance, and in the case of salt storage, elimination of corrosion concerns. ODOT selected Legacy Building Solutions of South Haven, Minnesota for construction. Based on ODOT requirements, Legacy selected a PVC Architectural Fabric manufactured by Seaman Corporation to complete the structure.

Seaman Corporation Architectural material is manufactured with a heavy knitted polyester base fabric, covered by a UV stable coating, and ultimately finished with acrylic. The top finish seals the membrane for longer life, while the rugged base fabric and coating provide the strength and mechanical properties necessary for building design. The Shelter Rite® product meets all applicable fire codes for US Construction, including the stringent California Fire Marshal Standard.

Additionally, a Shelter Rite tan material was selected for its ability to withstand wind and snow. The ODOT building is built to withstand winds of 90 mph and hold snow loads of 20 pounds per square foot. White skylights allow sunlight while ventilation is provided through mesh eaves.

“Once the general contractor completed the footings and floors, Legacy installed the fabric building very quickly, in about two weeks,” said Swengle. “It was a very positive process with smooth communication between Legacy and Dewberry throughout the project.”

Headquartered in Wooster, Ohio, USA, with a location in China at Shanghai Seaman Trading Co., Ltd., Seaman Corporation has been a worldwide leader of Industrial Coated Fabrics since 1949.

About Shelter-Rite Architectural Fabrics by Seaman Corporation

Seaman Corporation, a world leader in the innovation and design of high performance coated fabrics since 1949, manufactures Shelter-Rite architectural fabrics. A vertically integrated company, Seaman Corporation develops proprietary formulations, knits, weaves, and coats fabric in two U.S.-based plants.

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