



CITY OF CLEBURNE MEETS CHALLENGES OF STRICT ENVIRONMENTAL STANDARDS AND SEVERE WEATHER WITH DURABLE ALUMINUM DOME ROOFS

The public works department of Cleburne, Texas, located 30 miles south/southwest of Dallas-Fort Worth, needed to replace the aging concrete covers on two potable water tanks to meet environmental regulations. The concrete ground tanks store treated water and help serve the city with about two million gallons of water daily.

Gracon Construction was selected as the general contractor for the project, and began by power washing and painting the existing concrete roofs with a protective coating.

“We selected aluminum dome roofs from CST Covers. We knew their aluminum roofs would be responsible for 99% of the job of protecting the tanks and stored potable water, but the coating was our one percent insurance barrier,” said Cory Graves, project manager for Gracon Construction.



Gracon reviewed proposals from three manufacturers. While two presented similar roof designs, CST Covers recommended fully interlocking panels, which are easier to fabricate on site. The CST dome roofs require significantly less time and labor for installation and provide a long-lasting, durable and extremely low-maintenance solution.

“The panels for the CST dome roofs required half the assembly time of their competitors. What we found was that it was very easy to assemble the roofs, basically like putting together an Erector Set – A goes into A, and so forth,” said Graves. “Today the two domes look like a golf ball cut in half and placed on top of our two concrete tanks.”

A construction crew of six built the domes, one at a time. Construction took eight weeks - four weeks for each dome. Gracon Construction had never assembled a CST Cover product but the experience was a positive one, and the team was pleased with the overall simplicity and ease of construction of the CST roofs.

At 133 feet in diameter, the dome roofs were engineered by CST Covers. Although Gracon’s project engineer was not involved in the design of the covers, he reviewed the engineering prior to construction and, pleased with the design, gave his approval which allowed construction to move ahead.

“CST Covers provides custom engineering for every project. Our aluminum dome roof panels have been designed to allow for easy assembly, so whether our teams complete the construction, or another team does, the CST dome roofs are simple to install, as well as durable and reliable for the long run,” said Jack Staat, regional sales manager for CST Covers.

At one point during construction, Gracon found itself short on hardware, which threatened to cause a delay. However, CST delivered additional pieces to the work site within 24 hours.



“We appreciated the immediate attention and quick turnaround by CST Covers, which allowed us to solve the problem efficiently and begin moving ahead again with the project,” said Graves. The contract gave Gracon 270 days to complete construction. However, Gracon finished 42 days ahead of schedule.

Less than six months after installation, the durability of the roofs was tested when severe weather and damaging tornadoes struck Cleburne.

“When I heard the news my first thought was, ‘Oh no! I hope nothing happened to them!’” said Gracon’s Cory Graves. The aluminum covers held up to the harsh weather, and similarly, when strong storms passed through the area in May 2013 there was no damage. The City of Cleburne Public Works, which prides itself on “efficiency in a small utility,” made a good decision and investment in its two durable aluminum dome roofs from CST Covers.

Benefits of CST Covers Aluminum Domes:

- **Corrosion Resistance:** Aluminum is inherently corrosion resistant compared to other materials. It will last the lifetime of the structure and will not need to be painted or repainted for protection from the elements.
 - **Low Lifetime Maintenance Cost:** With no need to maintain a protective finish to prevent corrosion over time, there are little-to-no maintenance costs associated with an aluminum dome.
 - **Clear-Span Capability:** Aluminum’s lightweight characteristics allow for larger clear-span cover capability than structures utilizing steel, concrete and other materials.
 - **Fast & Low-Cost Construction:** Creative design and lightweight components provide for installation in 1/3 the time it takes to install other cover systems. Less time, labor and equipment needs combine for a low total cost of installation.
 - **Design Flexibility:** Aluminum’s excellent strength-to-weight ratios and creative component designs yield covers and structures that cannot be achieved with other materials.
 - **Aluminum is a “Green Material”:** Not only are aluminum cover systems recyclable after their service life, but more than 50% of the aluminum used in the cover systems is made from recycled aluminum.
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