

Seward Ship's Drydock

Location: Seward, Alaska
Application: Ship dry dock cover
Building Series: TITAN®
Building Size: 110' x 220'



Harsh conditions no match for Cover-All® TITAN® building

Since Seward Ship's Drydock incorporation in 1990, covering the shipyard so harsh weather wouldn't affect day-to-day operations had been a top priority. But finding a suitable building was no easy task. Because of tough zoning requirements including exposure D, earthquake zone 4, and the extreme winds in Seward, Alaska, the search would span the world for several years. The discovery of a unique module steel wall system and a Cover-All® building would come together as the solution they were looking for.

"We literally shopped the world for 10 years to create what we have today," says Don Whitman, general manager, Seward Ship's Drydock. The impressive structure is comprised of a 110' x 210' Cover-All® TITAN® building mounted on a 55' x 220' steel foundation. The foundation is constructed of submarine enclosure modules that sat on the site without a cover since 1998 while the search continued for the ideal building solution.

"Before we found Cover-All three years ago, we couldn't find a building that was big enough that met UBC (Unified Building Code) and NFC (National Fire Code) requirements yet was still cost-effective," says Whitman. "We service ships from all over the world that are 5,000 tons and 350 feet long, so having adequate room is important." Cover-All® buildings are pre-engineered fabric-covered buildings that offer clear-span widths up to 160 feet, to any length which accommodate a multitude of industrial applications.

Because of the unusual installation required for this project, local Cover-All Dealer, Alaska Cover-All, worked with several companies to plan each stage of installing the TITAN® on top of the massive 55 foot high steel wall. "It was an effort from everyone," says Paul Nelson, general manager, Alaska Cover-All. "If it wasn't for the creativity and ingenuity of the people involved, this project would never have gotten off the ground."

The Cover-All® TITAN® building's steel trusses were constructed in five separate sections on the ground then lifted by crane onto the foundation. Once the sections were in place, a specialized winch was used to position the fabric panels and join the sections together to complete the building cover. The installation of the Cover-All® building was complete in just 14 days.

Since the building's construction, it has become a local landmark. "The city is very pleased with the final look. It was a group and community effort to complete this project," says Whitman.

Building Highlights

Custom Building Features

- Twenty-four 15' long by 3/8" thick reinforced steel kick out braces were added along the sides of the TITAN® for additional strength to meet the area's tough zoning requirements
- In order to achieve the 110' building height needed to service ships, custom 12' wall extensions were added to the TITAN®

Foundation

- The 55' x 220' steel foundation is submarine enclosure modules that were going to be used in the process to attach stealth plating to the sides of submarines; when the process didn't work, they were the perfect alternative solution for high permanent walls needed for this project instead of steel walls or driving H-beam piles into the ground

Installation

- The heaviest section of the Cover-All® building lifted onto the foundation was 17,000 lbs, so spreader bars and straps were certified to meet 51,000 lb strength tests
- A crane was used to lift the steel trusses into place to complete the building installation



The massive dry dock facility is comprised of a 110' x 210' Cover-All TITAN mounted on a 55' x 220' steel foundation



Kick out braces were added along the sides of the Cover-All TITAN for additional strength to meet the areas tough zoning requirements



The building was installed on the ground, then lifted in sections by crane and mounted on top of the steel wall



The completed structure gives Seward Ship's Drydock the optimum space to service ships from around the world

"The building has gone through the full weather test. During one wind storm, the needle on a wind speed gauge actually broke off and it goes up to 86 mph. The winds must have exceeded 100 mph."

Don Whitman
General Manager, Seward Ship's Drydock
Seward, Alaska