

Swanson Rink provides design services for Wyoming ARFF

Swanson Rink provided design services for Casper/ Natrona County International Airport's new state-of-the-art Airport Rescue and Firefighting Facility. The project includes training fuel storage, burner fuel delivery systems, and control system for the project, which is the only 100% diesel fuel training facility in the U.S.



The training fuel storage, burner fuel delivery systems, and control systems allow for burns to be customized based on the needs of the first responder training.

Casper is among only a few airports in the western U.S. with facilities to train first responders responsible for extinguishing aircraft fires. All commercial airports are required by the Federal Aviation Administration to have trained ARFF personnel on site and they must receive training annually.

Unlike other recently constructed ARFF facilities, the new Casper facility will employ a diesel fuel system, which is the most similar in character and nature to jet fuel. The training fuel storage, burner fuel delivery systems, and control systems, designed by consulting engineering firm Swanson Rink, allow for burns to be customized based on the needs of the first responder training. This includes flexibility to adjust for varying amounts of fuel to simulating responses for different zones of the aircraft, from cockpit fires to auxiliary power unit fires in the tail, in addition to providing training opportunities for exterior engine and wheel fires.

Swanson Rink's design also included a fully automated controls system that tracks how much fuel is used for each type of training exercise for accurate pricing and cost control.

Now serving training needs of ARFF personnel from across the west, construction of the new facility began in 2020. The project was funded by \$8.7 million in federal grants, \$348,750 in state of Wyoming grants and \$232,500 in funding from the airport.

The project involved renovating and expanding the existing ARFF facility, the purchase of a new 3,000-gallon ARFF vehicle and an expansion of the public safety building to add dedicated training space. The facility's design team was led by Jviation, a Woolpert Co., which provided project management and civil design. The team also included Elevation Structural Design and Swanson Rink for mechanical, electrical and plumbing design. The project was built by GH Phipps Wyoming.