

NORTH POLE, ALASKA, USA

Chena Flood Control Project Office

Acuity's estimate included costs for energy efficient design components, local labor and locally produced materials.

High energy costs, outdated design, and inadequate space for receiving the public led the U.S. Army Corps of Engineers to modernize the Chena Flood Control Project Office and visitor reception center.

Funded through the American Recovery and Reinvestment Act (ARRA), the project featured a 2,250-sf addition that was designed in an "Alaskan style" reminiscent of the grand lodges often found in national parks. Because temperatures in this remote area of Alaska can hover at 40 degrees below zero for weeks at a time, and the heating season lasts for two-thirds of the year, an energy efficient design was vital to reducing the facility's annual energy costs. Engineers were required to apply LEED principles to the design.

Acuity was engaged by the engineer to provide cost estimates at the 35%, 65%, 95%, and 100% stages of design. Acuity traveled to the project site for a two-day design meeting and assembled a team of architectural, structural, civil, mechanical, and electrical cost estimators. Because the ARRA funding mandated that local resources be used, Acuity's estimate included costs for local materials such as flooring, cabinetry, masonry heater in the fireplace, concrete countertops, mechanical, electrical, and roofing materials.

Energy efficient features included:

- Structurally insulated panels.
- Oil-fired radiant floor heating system.
- Future connections for solar panels.
- Masonry heater designed to serve as the primary heat source; in an emergency, the heater would be capable of heating the entire office by itself.



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