



PDC INC. ENGINEERS

Transforming Challenges into Solutions



Communications, Detection, and Alarm Systems Clear Radar Upgrade

Working with the U.S. Army Engineer District, Alaska, as well as the user groups – the Electronic Systems Center at Hanscom AFB, Massachusetts, and the Air Force Space Command at Peterson AFB – PDC prepared a preliminary design and the criteria for a Design/Build Request for Proposal for this \$100+ million project. The project was kicked off with extended partnering meetings and design charrettes facilitated by our team with high level Department of Defense officials.

The building itself consists of an approximately 110-foot-tall, 60,000 sf, three-sided steel framed structure enclosed with a metal skin system designed to be compatible with the existing base facilities. Its unique shape consists of two angled faces at an obtuse angle, with the third side creating the enclosure. The radar faces occupy the greater portion of two sides of the building. The interior houses the Missile Warning Operations Center and Control Station (MWOC), administrative offices, and related functions (including mechanical and electrical support and backup capability) that allow the distribution of information into the national defense system.

The site provides access, parking, radiation fencing, security, lighting, and utility services. Utilities include water wells for potable, cooling water and fire services; multiple primary electrical services for reliability and to protect ordinary systems from pulsed radar energy and its effects; wastewater, sanitary and drainage systems; and communications for secure and ordinary voice, data and other services.

Electrical building systems include red/black power to selected spaces, security (intrusion detection, video surveillance, secure access, etc.), lighting, power, UPS, emergency generation, telephone, data LANs and special communication systems. Mechanical building systems include chilled water antenna face cooling, heating, ventilation, air-conditioning, plumbing, fire protection, fuel, exhaust, controls and special energy systems. Civil systems include several wells on-site, cooling water discharge, parking, paving, grading, on-site septic tank and leach-field, drainage, fencing and compaction.

Client:
U.S. Army
Corps of Engineers

Location:
Clear AS, Alaska

Project Completion:
1998

PDC Involvement:

- Civil Engineering
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering

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