

Project Scope:

Great Northern Engineering was part of the winning design team bid for Port of Alaska, Port Modernization Project – Phase I. The design team included GNE, COWI, R&M Consultants, and KPB Architects.

Project Detail:

- Phase 1 of the Port Modernization Project included design of the new Petroleum Cement Terminal (PCT) and South Floating Dock.
- Design elements included: rigorous seismic design requirements, a 75-year structural design life, a new trestle and terminal containing a new Petroleum Hose Tower with six loading arms, a new Operational Building, and six new 12-inch diameter product transfer lines running approximately 2000 feet both above and below grade from the Hose tower to the existing POAVY valve yard.
- Provided mechanical, electrical, instrumentation, and control system designs for Phase I of the work.
- Deliverables provided included 285 sheets of plan drawings and details, 390 pages of technical specifications, 182 pages of Basis of Design, and over 4400 pages of design calculations.
- Embedded within the PCT design was a series of smaller studies to build the project that included a Hose Tower vs. Loading Arm Study, a Route Clearing Survey, and a Seismic Design Summit where multiple design options were presented and discussed at length to assist with the final selected design options.
- Innovative design elements were introduced to accomplish the design requirements and design life throughout the design and engineering process.

