

### Project Scope:

Great Northern Engineering provided design and construction engineering for a new "Taxi-Thru" Remote Fueling Apron that would accommodate three Group V aircraft (Boeing 747-400), two of which can also accommodate Group VI aircraft (Antonov AN-124) for refueling and all other services. The apron consists of three separate concrete fueling hardstands located within the 430,000 square foot apron located between Taxiways "V" and "M". The refueling system consists of a 12-inch diameter supply main providing fuel to a hydrant distribution system made up of six 6-inch diameter lateral branch lines. These laterals provide fuel to 6 separate underwing hydrant pits locations.

### Project Detail:

- Designed electrical taxiway lighting and emergency fuel shutdowns.
- Designed and built the fuel system to operate at 285 psig for refueling delivery rates of up to 600 gpm per hydrant location.
- Tied new distribution pipelines into the existing supply at a utility vault near Taxiway "V" and extended to hydrant fueling service points at each parking location.
- Designed the replacement of catch basins, site drainage infrastructure.
- Provided an on-site owner representative for the duration of the project to coordinate with the State of Alaska DOT and contractor construction personnel.
- Provided submittal reviews, on-site inspections, daily technical support as well as record as-built drawings for the completed project.
- Ensured that the project was completed on time, within the construction budget, and in conformance with the design specification.

