SEA-TAC AIRPORT
Specifies Rapid Set® Cement Concrete For Full-Depth Runway and Apron Panel Replacements

Concrete Contractors:
SCI Concrete
Lydig Construction

Product:
Rapid Set® Cement

Seattle-Tacoma (SEA-TAC) International Airport is one of the busiest airports on the West Coast with approximately 1,200 aircraft movements daily. In 1994, Airport Engineers initiated a 4-year Runway and Apron Rehabilitation Project for Runway 16C, which handled 50 percent of the daily landing traffic. Based on the proven performance of Rapid Set® Cement Concrete in heavy-use pavement applications and harsh climates, it was chosen to replace 531 Runway 16C panels.

Project specifications called for 550 psi flexural strength and 4,930 psi compressive strength within 4 hours after placement. Slump requirements were 4 to 6 inches with an air content requirement of 3.5 to 5.5 percent. Existing runway panels were 20’ x 20’ x 14” and apron panels sized at 20’ x 20’ x 12”. Both areas were being replaced with 18” thick panels.

Project challenges included tight construction timelines for replacement. Nighttime construction operations on the apron started at 8:00PM and runway operations started at 10:30PM with completion required by 6:30AM. Contractors faced a late penalty of $5,000 per hour until the specified 550 psi flexural strength was achieved.

SCI used Rapid Set Cement Concrete on the runway panels, batching and placing two 20’ x 20’ x 18” panels (22-1/2 cubic yards) per shift using ready mix trucks. Lydig Construction replaced two panels of the same volume per shift via volumetric mixing trucks. Both runway pavements and apron replacement panels were completed and opened on time every night.

Rapid Set Cement Concrete provided a rapid-setting, high performance concrete solution engineered to provide extended service life and significant savings in repair and replacement costs at SEA-TAC for many years to come.