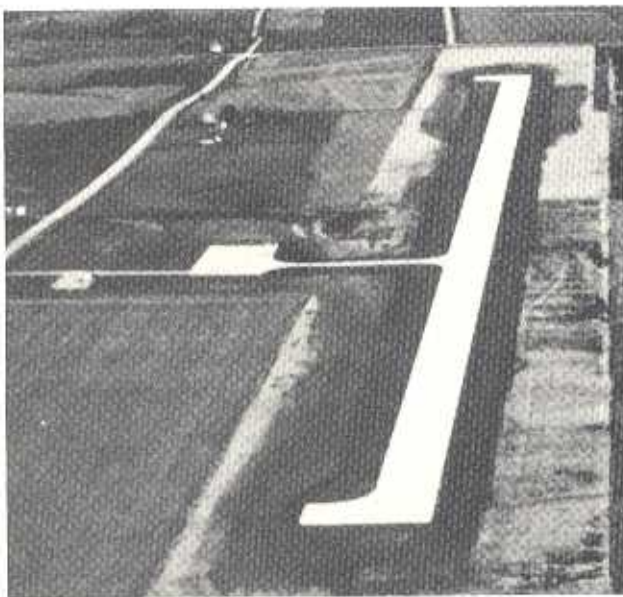


OSCEOLA, IOWA AIRPORT

Project Report #4

August, 1987



Business jet and twin-engine aircraft will soon be landing at the new Osceola Municipal Airport. The facility is located five miles east of town and replaces a small grass strip presently serving this southern Iowa community.

The new 4,000 ft. by 75 ft. Portland cement concrete (PCC) runway, 3,500 SY apron and connecting taxiway were paved using the innovative "FAST TRACK" method. "FAST TRACK" was proposed by the contractor, Central Paving Corporation of Indianola, as a method to keep their paving crew and high-capacity central mix plant in production. This would result in an earlier completion date and a lower project cost.

The project plans and specifications were prepared by Clapsaddle-Garber Associates of Marshalltown, Iowa using Federal Aviation Administration (FAA) standards. The pavement design called for a 5 in. P-501 PCC surface on a 4 in. P-209 crushed aggregate

base. A pavement flexural strength of 550 PSI was required before mechanical equipment could be operated on an existing lane of pavement. A minimum of 28 day flexural strength of 620 PSI was required for acceptance of the project.

The contractor's plan was to pave the center 25 ft. of the runway and every other 25 ft. pass of the ramp and turnarounds using "FAST TRACK" concrete. Because of the high, early-strength characteristics of "FAST TRACK" concrete, the adjacent runway passes and fill-in passes on the ramp and turnarounds could be paved after a 3-day curing period instead of a normal 7-day period.

The concrete mix was designed specifically for the project. The "FAST TRACK" concrete utilized 6.82 sacks of Type III cement/CY of mix and included air entrainment, water reducer and fly ash admixtures. The standard mix for the outside passes of the runway and fill-in passes consisted of 5.63 sacks of Type I cement/CY of mix and included air entrainment, water reducer and fly ash admixtures.

The plan was a success. Average flexural strengths of the "FAST TRACK" concrete were 590 PSI in 3 days, 640 PSI in 5 days and 725 PSI in 28 days. With the exception of a rain delay on the final pass on the apron and turnarounds and miscellaneous radii, the pavement was completed in 9 calendar days.

Total cost of the project was \$552,000. PCC paving was bid at \$9.55/SY. The FAA funded 90% of the project cost through the Airport Improvement Program, and the other 10% was funded by the city of Osceola.



Additional information may be obtained by contacting the Iowa Concrete Paving Association at (515) 278-0606.

(Information provided by Clapsaddle-Garber Associates of Marshalltown, Iowa.)