Case Study 1

Seattle Seahawk Garage & Exhibition Hall

Turner Construction chose a mix with 30% Class F fly ash to meet the architectural and performance needs for the Seattle Seahawks Garage and Exhibition Hall. Turner had already completed a number of projects for Seahawks owner Paul Allen (cofounder of Microsoft) – including the Rose Garden in Portland, Oregon – and intended to maintain the same high quality on this project that they had provided on the previous projects.

Developers of one of Seattle's highest-profile construction projects turned to high volume fly ash concrete to meet the facility's demanding architectural specifications.

This facility was different from a typical parking structure because of the combined use factor. Most of the concrete walls and columns were designed as the final architectural finish, from smooth walls for the interior exhibition hall to the custom trapezoid finish for the exterior.

The mix that Turner chose was not new to them or to the market. Ready mix producer Lone Star Northwest (now Glacier) had supplied the mix at a .32 water to cement ratio, 560 pounds of Type 1-2 cement and 250 pounds of Class F fly from the Headwaters Resources plant in Centralia, Washington on previous Turner projects. The mix had been used primarily as a low shrinkage, low permeability post-tension deck mix.

Turner knew that the mixes with early strengths of 3,000 PSI in two to three days would keep them on schedule. More importantly, the high fly ash content responded well to pumping and vibration, eliminating segregation and rock pockets, and the low shrinkage of the mix would reduce stress cracks.

The finish of the architectural concrete met Turner's needs by eliminating the need to sack and patch the architectural trapezoid finish. On other projects sacking and patching might be an inconvenience, but on this project it would have been extremely undesirable. The walls were sandblasted at the end of the project and any patch marks would have been obvious.

A 30% Class F fly ash concrete was chosen by the contractor for early strength and form finish.

For more information or answers to questions about the use of fly ash in specific applications, contact your nearest Headwaters Resources Technical Sales Representative or call 1-888-236-6236.

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