

Location: Bismarck, ND

Architect/Engineer: Ritterbush-Ellig-Hulsing PC

Structural Engineer: Ulteig Engineers

Contractor: Northwest Contracting Inc.

Precast Products: Load bearing, insulated wall precast panels in exposed aggregate, medium sandblast finish and thin brick finish



A LOOK AT **SUNRISE ELEMENTARY SCHOOL**

The Bismarck School District charged the design team with following ASHRAE's Advanced Energy Design Guide for K-12 School Buildings, (ASHRAE is a national organization dedicated to advancing HVAC&R to serve humanity and promote a sustainable world) while maximizing energy and integrating design practices.

Description:

Ritterbush-Ellig-Hulsing Architects inquired Wells Concrete's help early on in the design process to provide preliminary pricing for several options to effectively evaluate different wall systems. After thorough analysis of cost and job condition requirements, the design team concluded that the precast concrete walls panels were cost effective and eased the construction schedule.

Precast offered many benefits and sustainable features for this school –

- Edge-to-edge insulation offers 'no solid zones' eliminating thermal bridges and cold spots providing a true R-value rating throughout the entire panel.
- The durability of concrete minimizes long term operational maintenance costs.

- Interior wall surfaces were steel troweled offering a paint-ready surface, further eliminating the waste associated with additional interior wall products while minimizing long-term maintenance.
- Concrete's natural resistance to mold offers a better environment for learning; coupled with its superior resistance to natural disasters and fire, offer savings on maintenance and insurance costs.

The thermal envelope was the number one concern, though the district was pleasantly surprised with the outstanding aesthetics precast offered in the end.