

Concrete NDT

Leveling a 12 Year-Old Curling Rink

The Project

Caliber Construction of Alberta, Canada was given the challenge of raising a 6-inch thick concrete curling rink floor to make it level again. Caliber specializes in "slabjacking."



Project Description

Both ends of the curling rink had settled about three inches, and the rest of the floor varied in settlement from 0-3 inches. Due to the settling, the facility owner had to make 4-5 inches of ice to achieve a level rink rather than the usual one inch.

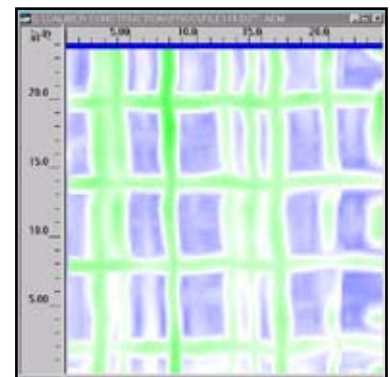
The rink pad could be leveled by hydraulically pumping a sand mixture through one-inch holes to replace the sand base, which would raise the pad to its proper height. The challenge in this process was drilling 172 one-inch holes in a grid pattern every six or seven feet. Only 2 3/4 inches existed between the water lines beneath the slab to drill the holes, leaving only 7/8 of an inch for error.

StructureScan by GSSI was used to scan and mark the entire rink. When the scanning process was complete, 40 yards of sand was poured into the drilled holes to level the pad.

Outcome

Terry Lummerding of Caliber said, "The hard part of this job was having only a 2 3/4 inch space between the water lines to drill a one-inch hole. This meant we had an extremely small margin for error. With 172 holes to drill in the pad, chances of hitting water lines were very high. GPR proved to be incredibly exact at locating the plastic water lines. Without the help of GPR, completing a job like this is impossible."

StructureScan allowed the crew to see the subsurface of the rink and safely hit their marks.



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Subsurface Imaging™**

Courtesy: Caliber Construction
Grande Prairie, Alberta, Canada