



PROJECT PROFILE

Northwestern University Norris Aquatic Center

Renovation of Swimming Pool and Pool Deck | Evanston, IL



CLIENT

Northwestern University

BACKGROUND

The Norris Center Olympic-size pool, with high dive towers on one end of the pool, consists of cast-in-place concrete foundations and walls and an at-ground level, cast-in-place concrete pool deck slab. The pool deck concrete is finished with ceramic tiles placed in mortar bedding over the waterproofing membrane; pool concrete walls and slabs are also finished with ceramic tiles set in mortar bed. Linear floor drains are set in the perimeter of the pool deck. Three underwater window openings are located in the pool walls. The structure's walls consist of steel columns covered with precast concrete panels and insulated precast wall panels on the exterior along the west, north and east elevations.

The tiles, setting bed mortar, and waterproofing membrane on the pool deck had begun to deteriorate. Linear drains at the pool deck were clogged and needed to be replaced. Tiles and setting bed in the pool were also deteriorated at numerous locations. Portions of the underside of the pool deck were severely delaminated. The client sought an experienced consultant to inspect the deterioration and to develop repair plans. Complicating the project, all repair work had to be completed in nine weeks.



SOLUTION

The tiles, mortar setting bed, and waterproofing membrane were removed to expose the structural deck slab. Repairs were made to delaminated areas found on its top and underside. A new waterproofing membrane, grounding, linear floor drains, and concrete topping were then installed to provide the slope for the finished floor. Delaminated tiled areas on the pool's bottom and walls were repaired with new tiles set in mortar bedding. The three underwater windows, existing lights, and speakers were removed. Their cavities were then enclosed with cast-in-place concrete and tiled.



Additional improvements to the pool space included replacing the existing steel doors and door frames with stainless steel and installing new aluminum doors. WJE also replaced the sealant on the exterior walls, restored the bleachers, and installed additional pool ladders and an ADA lift.