ALPHA FOUNDATIONS

COMMERCIAL **CASE STUDY**

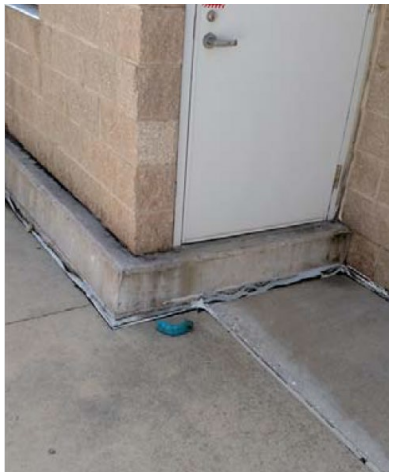
PolyLevel®

Project: City of Tallahassee Public Pools
Location: Tallahassee, FL
Date: February 2017

Installing PolyLevel around pool edges with lift assist tool

Challenge:

The Jack Mclean and Trousdell Aquatic Centers are part of the City of Tallahassee Public Pools system and have over 60,000 square feet of aquatic area. The concrete pool decks at the two aquatic centers had multiple areas with differential settlements of up to 2 inches at the slab joints which created trip hazards. Concrete grinding was performed in some areas; however, differential settlement remained problematic as the slabs continued to settle. Options for remedial action were evaluated which included further concrete grinding, slab replacement and polyurethane foam injection. The City of Tallahassee specified that the concrete be lifted back toward level, voids be filled beneath the slabs, and the entire project be completed before the season opening in March which was about one month away.

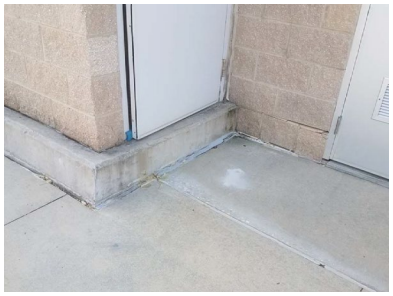


Pump room slab settlement and previous slab grinding

Solution:

PolyLevel® polyurethane injection was selected as the preferred option based on the cost effectiveness, speed of repair and the ability to use the facility immediately after placement of the foam. PolyLevel® is a two-part urethane that expands into a rigid foam used to fill voids, stabilize slabs and lift concrete. Once injected through small 5/8-inch drilled “ports” in a slab or surface, a chemical reaction converts the liquid urethane components to a strong, rapidly-setting foam material. In its foam state, PolyLevel® is extremely light, weighing two to six pounds per cubic-foot (pcf). Other void-filling or lifting materials can weigh upwards of 120 pcf, adding significant weight to supporting soils or base materials and potentially contributing to further settlement.

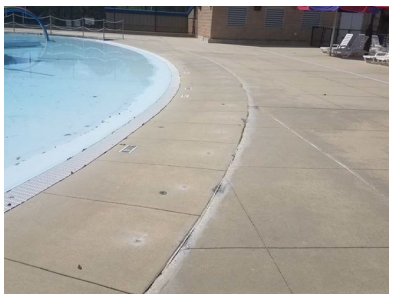
With a typical compressive strength of at least 35 pounds per square inch (psi), PolyLevel® 250 was proposed to relevel and support the concrete slabs. Alpha Foundations prepared the work area by first cutting through joints with a concrete saw to eliminate friction and prevent binding between the slabs. Large voids were discovered at the deck slabs around the perimeter of the pools. Releveling of the smaller slabs at these areas was difficult to control so a custom designed lift assist tool was used to lift the slab to the proper elevation prior to the foam injection. A total of 1,950 pounds of PolyLevel® 250 was injected below the concrete deck slabs at the two aquatic centers. The PolyLevel® injection was able to fill the voids and restore the pool slab surface back toward level, thereby minimizing potential trip hazards. The project took 3 days to complete.



Pump room slab after lifting with PolyLevel

Project Summary

PolyLevel® Installer: Alpha Foundations
Products Installed: PolyLevel® 250, High Density Spray Polyurethane



Pool edge slabs after PolyLevel injection

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