

Alchatek

CASE STUDY
SOIL IMPROVEMENT

COMMUNITY POOL SHELL

Verified Soil Improvement *Beneath a Pool Shell*

TREATED AREA
10,000 *sq ft*

PRODUCT
AP Lift 475

01 What made this job *difficult.*

COMMUNITY POOL SHELL

Cracks in a community pool shell were discharging water into the subgrade. The leak stripped fines from the upper three feet of soil, and the shell settled as bearing was lost beneath it. Patching the cracks alone would not have held, because the soil supporting the pool was still failing.

KEY CONDITION

Penetrometer testing confirmed the loss. The cone advanced through the upper 2.6 feet without a recorded blow, and resistance stayed in single digits down to 3.6 feet. Below that, the profile firmed into competent sandy clay, reaching refusal at 9.5 feet.

THE CONSTRAINT

3 *weeks*

DESIGN REMEDY DURATION

The design remedy called for scraping back two feet of subgrade and rebuilding it, a three-week job.

AT A GLANCE

4 ft	10,000 sq ft	900 rods	10 ft
INJECTION GRID SPACING	TREATED AREA	INJECTION RODS DRIVEN	TREATED DEPTH

02 What was specified, *and how it went in.*

AP LIFT 475

The contractor specified AP Lift 475 with the Deep Lock® process. The two-component polyurethane expands into weak soil and compacts it in place. Crews injected through rods driven from the surface, leaving the shell and deck undisturbed.

THE MATERIAL

AP Lift 475

AP LIFT 475 WITH DEEP LOCK® PROCESS

Two-component polyurethane that expands into weak soil and compacts it in place.

THE METHOD

01	02	03	04
Logged	**Laid out**	**Drove**	**Injected**
baseline penetrometer readings to refusal	a 4-foot injection grid across 10,000 sq. ft. around the pool	900 injection rods and injected AP Lift 475	a second level beneath the shell, compacting the soil between the two injection levels

03 What the result was, *and what confirmed it.*

INCREASE IN CUMULATIVE RESISTANCE

Restored bearing in the eroded upper three feet, where cumulative blow counts rose from 2 to 101. Increased cumulative resistance 139% through the upper 6.6 feet, with values below that depth unchanged.

INCREASE IN CUMULATIVE RESISTANCE

139%

Increased cumulative resistance 139% through the upper 6.6 feet, with values below that depth unchanged.

START THE CONVERSATION

Send us the job.
We will send back an approach.

Send us the soil report or the failure photos and Technical Services will return a written approach within two business days.

TECH SUPPORT

404 · 618 · 0438

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Alchatek

Alchatek manufactures polyurethane resins, chemical grouts, and injection equipment for infrastructure repair: leak sealing, soil stabilization, concrete lifting, and seawall repair. Headquarters in Tucker, Georgia, with a bonded warehouse in Reno, Nevada.

Information in this document is believed accurate at the date of publication. Product performance depends on site conditions and application; consult the current Technical Data Sheet, which is the controlling document.