

CASE STUDY/Ramp Repair

Brandon Amphitheater

The Problem

The Brandon Amphitheater has two pedestrian ramps showing signs of slab drop and settling. The drop on the ramp descending from the top tier seating level (Ramp #1) appears to be approximately 3 inches while the second ramp (Ramp #2) appears to have settled 1 inch from original pour height.

The 6'x12' section between these ramps has also dropped approximately 3 inches.

After conducting a site evaluation and speaking with superintendent for Thrash Commercial Greg Moseley, it is our opinion that the slabs have settled due to poor soil compaction and/or shifting in the material used to build up the ramp section.



The Solution

Helms Polyfoam recommends a void fill, slab lift, and soil/material stabilization using our deep injection methods. 5/8" holes will be drilled throughout the slabs to allow for polyurethane resins to be pressure injected directly to the problem areas. Metal rods will then be bored to a depth of approximately 4' where we will begin the injection process. As the two component resins mix under the slab, they will begin to react and expand, creating a "squeeze" application that will compact and fill all voids present. This will provide a stable base to help achieve slab lift.

As mentioned above, we estimate Ramp # 1 to require 3" of lift and Ramp #2 to require 1" while both ramps will require stabilization of the material under the ramps to prevent further drop and settling.

Why Our Method Produces Results

Unlike the previous attempts of tear out and replacement, this deep injection process will address the underlying issue which is poor compaction and voids present in material. The polyurethane resins will seek to fill all voids and will combine the soil/rock mixture into a solid, strong, water impermeable mass, creating a stable foundation for your concrete ramps.