

## A CASE HISTORY

**Project:**

Mezzanine foundations,  
Harvard University,  
Cambridge, MA

**Anchor Contractor:**

Jager Construction  
Amherst, NH

**Anchor Design:**

Veitas & Veitas  
Braintree, MA

**Project Engineer:**

Haley & Aldrich  
Cambridge, MA

**Job Description:**

HELICAL PIER<sup>®</sup> Foundation Systems anchors were installed inside the Briggs Gymnasium to support columns for a new mezzanine.

**Repair:**

The concrete floor was removed in the areas where the anchors were to be installed. A Bobcat with a 20,000 ft.-lb. hydraulic drive head was used to install 25 anchors, each with 10"- and 12"-diameter anchor plates. Each helix was installed through an organic fill layer into dense sand, to a depth of 10 to 12 feet, for a minimum ultimate capacity of 45 kips. Some anchors achieved an ultimate capacity of up to 80 kips. Anchor pile caps were cast to complete the foundations in three days without major disruptions at a cost savings versus alternate methods considered.

