

# Subsurface Constructors

Ground Improvement

## Marina Lofts Apartment Buildings



### **Vibro stone columns for riverside development project**

Subsurface Constructors designed and installed over 1,600 [vibro stone columns](#) to support multiple apartment buildings and a clubhouse in Toledo, Ohio. This project is part of the growing Marina District bordering the Maumee River. The site generally consisted of fill materials atop natural sands, lean clays and silty sands with zones of organic silts and clays. The ground improvement resulted in bearing pressures of 3,000 psf and less than one inch of total settlement.

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## Project details:

**Owner:** Hallmark Campus Communities

**Geotechnical Engineer:** Geotechnical Consultants Inc.

**General Contractor:** Continental Building Co. of Columbus, Ohio

**Structural Engineer:** Dean A. Wenz Architects

**Services Provided:** Ground improvement, stone columns

**Year:** 2019

**Location:** Toledo, Ohio