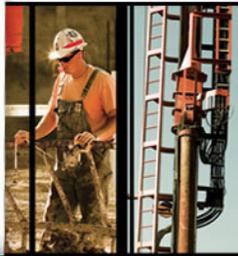




# SUBSURFACE CONSTRUCTORS INCORPORATED



www.subsurfaceconstructors.com

WE TAKE THE NEWEST  
TECHNOLOGY  
AND RUN IT INTO THE GROUND.

GROUND IMPROVEMENT   **AGGREGATE PIERS**   VIBRO COMPACTION   DRILLED SHAFTS   EARTH RETENTION   DRIVEN PILE   AUGERCAST PILE   MICROPILE

## Villa Lighting New Warehouse

### PROJECT DESCRIPTION

#### Vibro Stone Columns to Improve Fill Soils Under Footings and Floor Slabs

When Villa Lighting wanted to construct a new 200,000 sq. ft. headquarters and warehouse building, they chose a site near downtown St. Louis, MO that had been used as a railcar maintenance facility, and had been developed with residential and commercial properties dating back to the late 1800's. This ultimately resulted in a site consisting of various fill soils, buried steel and concrete, bricks, and cinders. Although some of the fill materials had been compacted, uncertainty still existed as to the potential for differential settlement across such a large site.

In order to provide a more uniform, improved bearing surface across the site, Subsurface Constructors designed and installed roughly 4,000 stone columns at this site. Due to the presence of existing rubble and old foundations, Subsurface pre-drilled through some of these materials. In one location, an old foundation slab was used as the termination point for stone columns, thus eliminating the need to excavate and dispose of the old foundation.

For Villa Lighting, a system of Subsurface Constructors' vibro stone columns provided an economical solution compared to costly remove and replace and other aggregate pier types.

### PROJECT TEAM

**Owner:**

Villa Lighting

**Geotechnical Engineer:**

Midwest Testing / SCI Engineering

**Structural Engineer:**

Alper Audi, Inc.

**General Contractor:**

Clayco

**Ground Improvement Design/Builder:**

Subsurface Constructors, Inc.



TODAY'S INNOVATION WITH 1906 ROOTS.