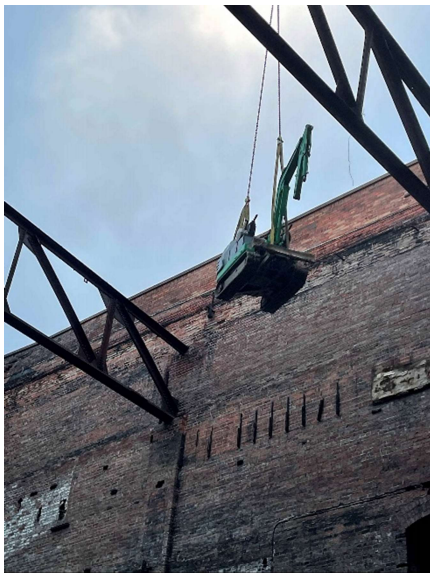
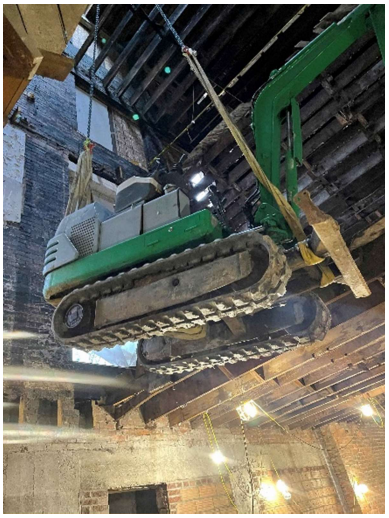
Helical Piles used to Restore Historic Building

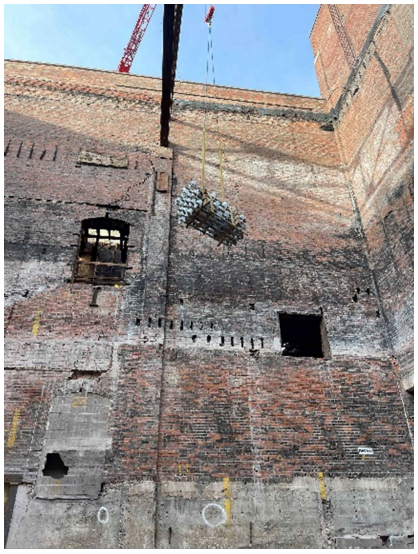
Great Falls, Montana



In 2009 a fire compromised the integrity of several floors of the Rocky Mountain Building in Great Falls, Montana. Built in 1914, The Rocky Mountain Building was the previous home of the Rocky Mountain Fire Insurance Company, the Pantages Theater, and a Public Drug store. Ever since the fire, the building has been left vacant. The building was such an eye-sore that many locals asked why it wasn't torn down.



To save the piece of Great Falls history, Alluvion set out to build a state of the art, full-service clinic optimized for the patients' needs. They worked with Nelson Architects and the Sletten Construction Company, breaking ground in 2022 with a budget of 29 million dollars for phase one. Gittins Foundation Specialist Inc. installed all the drilled and grouted pull down ECP helical piles to provide structural support to the interior load bearing columns. Each ECP grouted



Project Overview

Engineering and Geotechnical - Thomas Dean & Hoskins Engineering and Geotech

General Contractor – Sletten Construction Company

Helical Contractor – Gittins Foundation Specialist INC

Helical Screw Piles - Mfg. by Earth Contact Products

Products Installed - ECP Grouted Helical Piles

Helical Screw Piles – TAF-175-84-10-12

Extensions – TAE-175-84

Caps – TAF-175-NC

Other - 6-inch grout ring

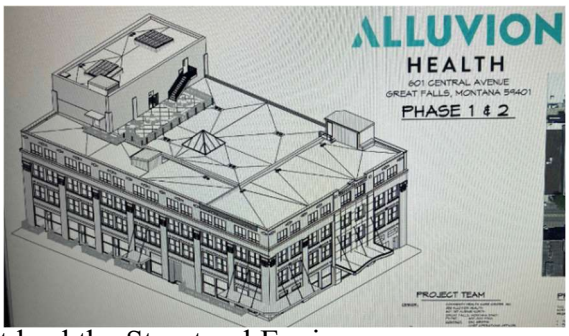
Target depth - 30-35 feet

Working Load - 30 kips compression and tension

Ultimate Load - tested to 100 kips per pile

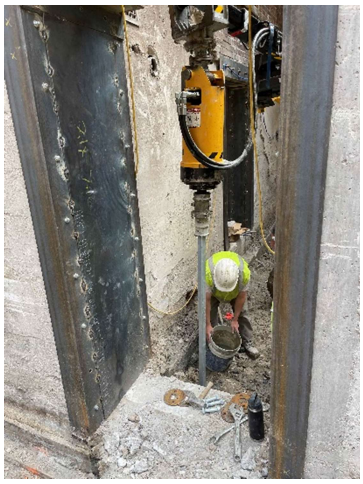
Installation Torque – 10,000 ft-lbs.

helical pile was driven to 30-35 feet below grade where they developed a load bearing capacity of 100 kips.



The teams faced very limited access to the charred building site. All equipment and products had to be craned into the basement of the four-story building. On top of this, there was limited headroom for installation of foundation elements. The geotech investigation revealed that the soils encountered at bearing elevation are very weak and compressible yet expansive. This, coupled with the magnitude of the anticipated foundation loads for the project, is what lead the Structural Engineer, Geotechnical Engineer, and General Contractor to the decision to use grouted helical piles.

With the design team, comprising Thomas Dean & Hoskins Engineering & Geotech, and consultation from Gittins Foundation Specialist, Inc., both on the same page, they proceeded with installing ECP TAF-175-84 with a 10/12 helical flight and a 6-inch diameter grout ring. The grout ring, made of steel, was placed just below the coupler. This allowed the grouted columns to continue to a load bearing stratum target depth of 30-35 feet. After reaching the target depth, the concrete piles were capped with new construction pile caps with number 6 rebar full cages.



After completing another in a long line of helical projects, Gittins Foundation Specialists described Earth Contact Products as “the very best” and “the finest engineered foundation restoration products in the industry.”