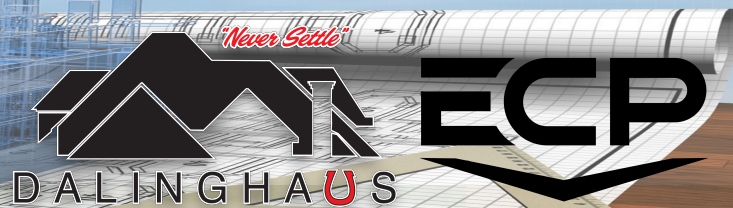


CASE STUDY BROUGHT TO YOU BY DALINGHAUS CONSTRUCTION, INC



Project: Residential Helical Pier Repair

Project Location: Villa Park, CA

Project Background Information:

A Villa Park, CA homeowner reached out to Dalinghaus Construction, INC after they believed their home was showing signs of settling. There were cracks appearing all over the walls and ceiling, some being stair step cracks and others being massive shearing from floor to ceiling. There were even cracks in the tiles on the floor. After the cracks started appearing, the homeowner was advised by a friend to rip up the carpet to see if the cracks in their slab foundation ran from one side to the other. Once they found their slab was riddled with cracks as well the homeowner scheduled a free foundation inspection to allow for measurements of the home's slab foundation. Mark Cook performed the initial inspection and measured a variety of elevation changes with up to -4.5 inches of settlement in the corner of the home where the largest cracks were present.

Project Design Phase:

The initial design concept for the project consisted of helical piers and a dual component polyurethane to both stabilize and attempt to lift the beautiful home that had settled 4.5 inches. The homeowner had received bids for mudjacking and concrete piers, which neither provided a long-term solution for the foundation's issues. ECP's model 288 Round Helical Pier could be used to stabilize the home's foundation away from the incompetent soils supporting it with their 9,500 ft lbs of torque and 100,000 lbs ultimate capacity. Alchemy Spetec's AP 430 could be used to permeate and stabilize soils and fill any voids created during the lift process.

Dalinghaus Solution:

After completing the inspection, Mark designed a repair plan consisting of 22 helical piers to not only stabilize the home and prevent any future settlement issues, but to also attempt to lift the home to maximum practical recovery. The homeowner's primary concern was preventing future damage, but our team's plan was to attempt to recover some of the settlement before locking the helical brackets and foundation in place.

The helical piers were to be spaced every 5' around the perimeter and 2' from corners of the affected area. This resulted in two sides of the home receiving the helical piers. Jesse, one of the team's Project Managers, and his crew installed all of the helical piers and anchors without the use of heavy machinery due to the small confines presented around the home. Each helical pier was hydraulically driven to predetermined torque and pressure values in order to ensure the home's weight would be transferred to competent, load-bearing strata. The team was able to recover 3 of those 4.5 inches before locking everything in place.

Project Team

General Contractor:
ECP Helical Anchor Installer:
Alchemy Spetec AP 430 Installer:

Dalinghaus Construction, Inc
Dalinghaus Construction, Inc
Dalinghaus Construction, Inc

Products Installed

- ECP's 150 RCSB 1 1/2" Helical Anchor
- ECP's 288 Helical Pier 2 7/8" Round Helical Pier
- Alchemy Spetec's AP 430 Dual Component Polyurethane

