

# CASESTUDY

APR 2020



**1800'S HOME REPAIRED  
AND LIFTED WITH  
HELICAL PIERS IN ORANGE**

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# HISTORICAL HOME BUILT PRIOR TO 1890 LIFTED & REPAIRED WITH HELICAL PIERS IN ORANGE, CA

## PROJECT BACKGROUND

A homeowner in the City of Orange decided to call the Dalinghaus Construction team after multiple cracks started appearing on both the inside and outside of their beautiful 1800's home. The home is unofficially the oldest home in Orange, and paperwork can be found online suggesting the home was built prior to the 1890's. The homeowner inherited the home from his mother, and in the 1980's took it about himself to lift a corner of the home to repair cracks in the foundation. These repairs held for almost 30 years before he decided it was time to call the foundation specialists.

## PROJECT DESIGN PHASE

Dalinghaus Construction sent out Phil Laney, who performed the initial inspection on the home and measured over 1.7 inches of settling in the corner that had been previously repaired. While inspecting the home's crawlspace, Phil found multiple posts and pads that were in dire need of replacement with many of them no longer providing any support to the girder beams and sub-flooring.

After finalizing the inspection, Phil converted his drawing of the home's floor plan into a scaled CAD drawing. A repair plan was designed consisting of 5 helical piers to attempt to lift and stabilize the settling corner in addition to replacing 4 posts and pads.

## DALINGHAUS SOLUTION

With only 5 piers and a small amount of crawlspace work, Isaac's crew wanted to ensure they completed the project in just two days. They began by excavating the pier locations and found a rather shallow footing, which meant installing helical piers would be preferred over installing push piers. The team found that construction standards were much different back in the 1800's and this home was extremely light.

Once the excavations were complete, the crew was able to begin installing ECP's helical piers to predetermined PSI values of at least 1800psi. Once the piers were installed it was time for the brackets. The brackets allowed the crew to transfer the load of the home away from the incompetent clay soils on the surface and to competent soils 12'-14' deep.

While lifting the home to maximum practical recovery, Isaac's crew was able to recover 1.5 inches of settlement, and ensure the home would no longer face issues related to the incompetent soils it was built on. After lifting the home, the team headed into the crawlspace to replace the posts and pads, and strap all of the posts and pads to their respective girder beams.

## INSTALLATION OVERVIEW

TOTAL HELICAL PIERS

5

CRAWLSPACE POST & PAD

4

PRODUCT MANUFACTURER

**EARTH CONTACT PRODUCTS  
(ECP)**

PRODUCT MODEL

**TAF-288 ROUND PIPE SHAFT 2-7/8"  
HELICAL PIER**



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