CASESTUDY

SEP 2019

114 TOTAL HELICALS INSTALLED AT HILLSIDE HOME IN MURRIETA, CA

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HELICAL PIERS & TIE-BACKS HYDRAULICALLY DRIVEN TO SUPPORT SUNKEN MURRIETA BACKYARD

PROJECT BACKGROUND

Dalinghaus Construction has quite the history with this home and it's poly compacted slope in which it sets upon. Prior to the home owner purchasing the home in 2015, Dalinghaus Construction proposed to install push piers around the perimeter of the home to lift and stabilize the 7,100 sqft home. The home lift and stabilization was completed in early 2016. After purchasing the home, the owner had since added an infinity pool, walkways, hardscape, and landscaping around the perviously barren back yard of the home. The contractors that installed these items failed to take into consideration of the poorly compacted soils that lay in the upper 15' of the slope. Less than 2 years of the pool and hardscape renovations being completed, the owner started to notice cracks and movement of newly constructed walls and the pool.

PROJECT DESIGN PHASE

Having been familiar with the property and the slope conditions, the owner called us to come out to the home and evaluate the site conditions. During the evaluation time Southern California experienced an unseasonably large amount of rain. The rain water was able to saturate the loose soils and caused the movement and cracking of the walls, hardscape, and pool to increase at an alarming rate. Dalinghaus Construction recommended the owner contact the services of Helfrich and Associates to help design a permanent slope stabilization solution.

DALINGHAUS SOLUTION

Helfrich and Associates came back with a repair plan to install 87 TAF288 vertical helical piles and 27 TAF150 helical tiebacks throughout the slope. The piles and tiebacks would be embedded into new grade beams and columns. Along with the new grade beams and columns, numerous piles and tiebacks were installed on the existing walls and pool. The methodology for the design was to create a structurally sound solution to the slope's previously unsupported crepe characteristics.

Dalinghaus Construction was able to successfully install the 87 piles and 27 tiebacks in 4 separate phases to help solidify the hillside. The project was installed utilizing our hand held installation equipment along with a mini excavator. The piles were installed to an average depth between 14' - 25' and the tiebacks were installed to an average depth of 28'.

INSTALLATION OVERVIEW

TOTAL HELICAL PIERS
87

TOTAL HELICAL TIE-BACKS
27

PRODUCT MANUFACTURER
EARTH CONTACT PRODUCTS (ECP)

ENGINEERING TEAM
HELFRICH & ASSOCIATES








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