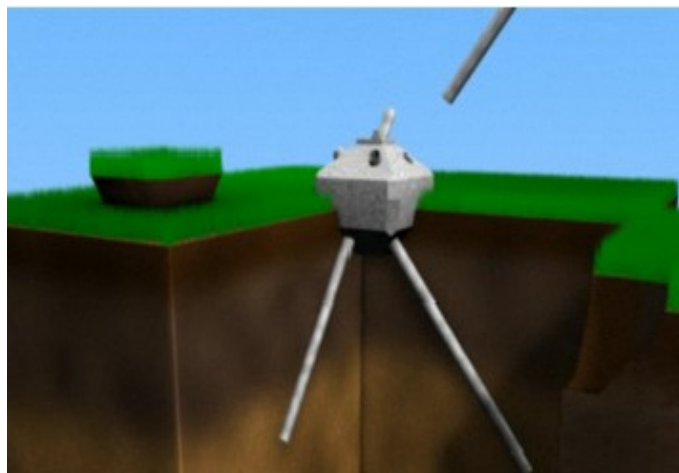


**FOUNDATION ALTERNATIVES 2<sup>nd</sup> Edition 2022**

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**Helical Screw Piles; Diamond Pin Piles and Cantilevers offer alternative support without excavation, backfill, or concrete.**



**Detail images showing Helical and Pin Pile Systems**



Above images show implementation sequence. Shear pins connect the driving head to the Screw (helical) pile. Screw Piles can be installed using hand held or machine attached, hydraulic driving equipment. Piles are inserted with connecting extensions. As insertion continues, the connecting pin shears at a, engineered, pre-calculated resistance.



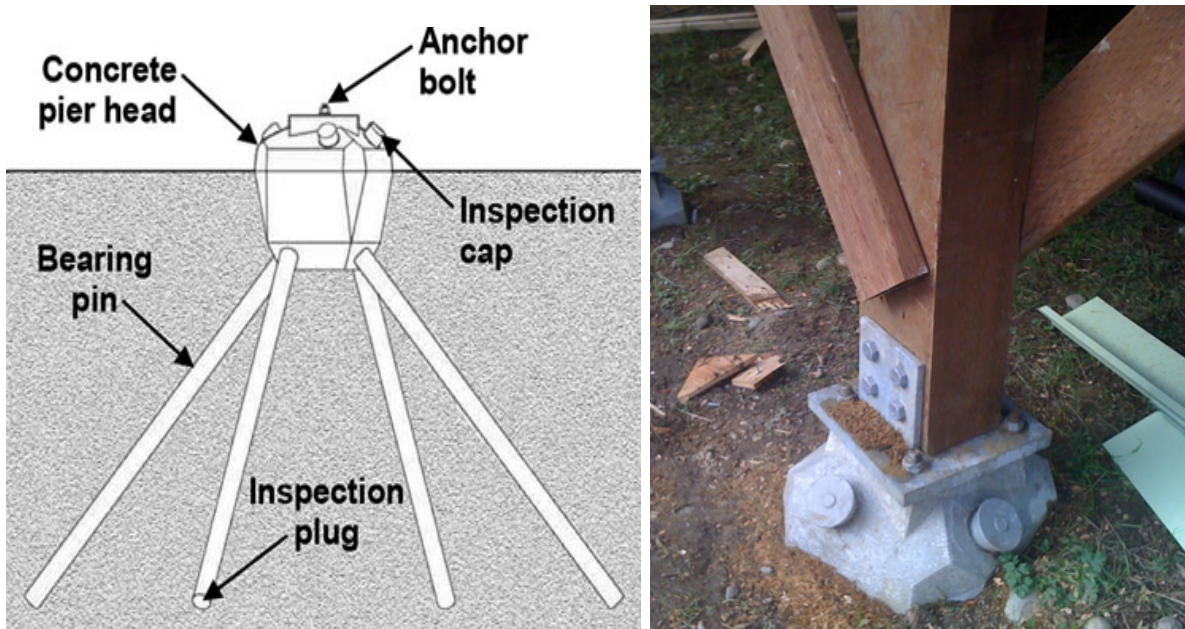


Above Images: Attached anchor heads are capped with concrete, providing continuous structure. These have been additionally faced with stone.



Above Images: Helical anchors may also be used to support stairways on sensitive coastal banks. Storm erosion is less impacting to helical based piles than traditional post and frame structures. Protocol for work on coastal banks should always include ladders to prevent erosion. For additional information regarding Helical Anchor Screw Piles, go to <http://www.piertech.com/products/helical-piers.html?gclid=CJ-muNPs2sMCFQ4dgQod8ZEAPA>

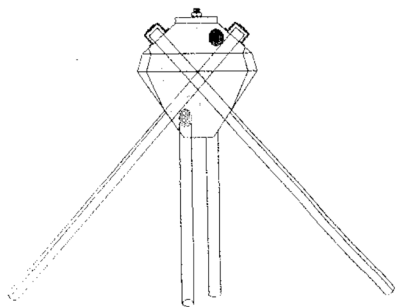
Diamond Pin Piers require minimal installation: A layer of sod is removed; the pre-cast pier is set in place; Pins are installed using a rotary hammer. <http://www.diamondpier.com/videos.htm>



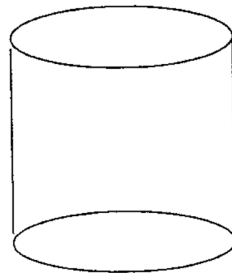
The company provides no cost engineering assistance. Various sizes of piers and pins accommodate different loads. We advocate using these. For More information go to <http://www.diamondpier.com/index.html> This booklet may be shared for educational use. [www.SafeHarborEnv.Com](http://www.SafeHarborEnv.Com)

### CAPACITY COMPARISON:

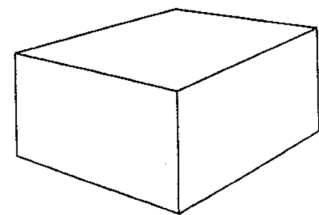
Concrete Cylinder or Cube Footing to DP-50 Diamond Pier™



**DP-50 w/ 36" Pins**



**Concrete Cylinder**  
18"dia. = 255 sq. in. = 1.77 SF



**Concrete Cube**  
16"sq. = 256 sq. in. = 1.78 SF



**USE OF CANTILEVERS:** Cantilevered transfer of loads often requires consulting with an Engineer but it is nonetheless a viable alternative for sensitive resource area buffer zones. Using this system allows open space, light and habitat to exit beneath a structure. We often include flo-thru decking or grted light windows to enhance habitat performance.



Cantilevers can be directly attached to a foundation wall, freeing up space beneath the proposed structure. We also add “Light Windows”