



# Underpin Residence and Install Tiebacks



Customer: Mr. and Mrs. Brandal

Project: Underpin residence and install tiebacks with very limited access

Solution: Hand installed pin piles and hand installed Manta-Ray anchors

## Project Summary

Project Name & Location	The Brandal Residence, Richland WA
Pile Installer	McDowell NW Pile King
Pile Designer	Nelson and McClure, Olympia WA
Pile Specificaiton	2" diameter driven pin piles
Tieback Specificaiton	Manta-Ray MR-4
Number of Units	31 pin piles, 28 tiebacks
Depth of Element	Pin piles to 25', tiebacks to 15'
Working Capacity (D.L.)	Pin piles 6kips, tiebacks 10kips

McDowell NW Pile King was selected to install the pin piles and tiebacks because of our extensive experience and large fleet of capable equipment. Piles and tieback anchors were installed in extremely limited access areas at various locations around the residence.



**Manta Ray Installation:** Installing the Manta-Ray MR-4 with a 90# jackhammer, using a come-along to apply crowd.



**Foundation Core Drilling:** Holes cored in the foundation to allow installation of the Manta-Ray MR-4



**Low Overhead Clearance:** Pre-drilling holes in the dense ground prior to installation of the Manta-Ray MR-4. Overhead clearance of 48".



**Load Test:** Tieback lock-off equipment in place and ready. Tiebacks tensioned to 10 kips and locked off. Note the pin piles and underpin brackets at the footing level.

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Pin (Pipe) Pile Foundations  
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Manta Ray Earth Anchors  
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