

May 3, 2024

JN 20279-1

Ian and Tracy Clarkson
8510 Southeast 82nd Street
Mercer Island, Washington 98040
Via email: tracyclarkson2@yahoo.com and iclarkso@gmail.com

Subject: **Review of Completed Western Piles Stabilization Wall**
Clarkson Residence
8163 West Mercer Way
Mercer Island, Washington

Ian and Tracy,

We have been communicating with Brandt Design Group regarding the constructed configuration of the soldier pile stabilization wall that was installed along the western side of your property, just to the east of the pre-existing concrete driveway wall. Our firm observed the installation of these piles. In conjunction with their installation, soil was removed between the piles and the existing concrete retaining wall for equipment access. The timber lagging was placed between the above-grade portions of the piles to permanently retain soil from the rear yard grade (approximate elevation 105 feet) down to the now gently-sloped grade that exists between the concrete wall and the soldier pile stabilization wall.

The soldier piles were designed for active soil pressure down to elevation 89 feet, where the passive soil resistance zone starts. This is in conformance with the recommendations of our original geotechnical report. There is at least a 3:1 (Horizontal:Vertical) zone between the active/passive transition and the elevation of the driveway. This is appropriate to develop full passive resistance for the soldier piles in the event of failure of the concrete retaining wall or soil movement in front of the soldier piles. The "worst case" for this condition is shown on the Passive Resistance Diagrams on sheet A102 prepared by Brandt Design, dated 05.02.24.

The removal of the large volume of soil between the concrete and soldier pile walls has dramatically decreased the soil pressure acting on the concrete wall, improving its long-term stability. We recommend that this gently-sloped grade remains as is.

If you have any questions regarding this letter, please contact us.

Respectfully submitted,

GEOTECH CONSULTANTS, INC.

Marc R. McGinnis, P.E.
Principal



cc: **The Brandt Design Group** - Bree Medley
via email: bree@brandtdesigninc.com

5/3/2024

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