

May 17, 2022

JN 21165

Sharon Nguyen  
9831 Southeast 42<sup>nd</sup> Place  
Mercer Island, Washington  
via email: [sharon\\_win@mac.com](mailto:sharon_win@mac.com)

Subject: **Temporary Anchor Support for Existing Basement Wall**  
Proposed New Residence  
9831 Southeast 42<sup>nd</sup> Place  
Mercer Island, Washington

Dear Ms. Nguyen,

Following our discussions with your design team, we understand that the existing western basement wall of your current home will be preserved to act as temporary shoring during the construction of your new house. Helical anchors will be installed through holes cored in the existing wall to provide the necessary lateral support when the existing framing and floor slab are removed. This is a relatively common approach, and it will be far more economical and less disruptive to the site than if conventional shoring, such as soldier piles, was installed.

The existing wall should be assumed to resist a lateral active soil pressure of 40 pounds per cubic foot (pcf) acting from the top of the soil grade to the base of the existing footing.

Resisting this active soil pressure, helical anchors can be installed through holes cored in the existing wall. We expect that two rows of anchors will be needed, in order to provide restraint for both the upper and lower portions of the wall. The anchors would be installed at an inclination of approximately 15 degrees and be torqued into the ground until a minimum installation torque of at least 3,000 foot-pounds is achieved. Assuming each anchor has a lead section with an 8-inch/10-inch double helice configuration, an allowable 15-kip tensile capacity would be achieved. The anchors should extend at least 10 feet behind the wall, but will likely be longer than this to achieve adequate torque.

Please contact us if you have any questions regarding this letter.

Respectfully submitted,  
GEOTECH CONSULTANTS, INC.

Marc R. McGinnis, P.E.  
Principal



cc: **Brandt Design Group** – Bree Medley  
via email: [bree@brandtdesigninc.com](mailto:bree@brandtdesigninc.com)

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MRM:kg