

April 25, 2022

Mr. Mark Houtchens
6024 SE 22nd Street
Mercer Island, WA 98040

Re: **Geotechnical Site Assessment**
Proposed Carport
6024 SE 22nd Street
Mercer Island, WA

Dear Mr. Houtchens,

This report summarizes the results of my site assessment and geologic research on the residential property located on the south side of SE 22nd Street. It is understood that the proposed new carport will be constructed on the east side of the existing residence after removal of the existing garage. Geologic mapping by Troost, et al in 2005 along with previous investigations in this area were used as references for this report.

Site Conditions

According to geologic mapping for this area the property is underlain by dense glacial deposits (Qvt) that are competent for structure support. Observations of the existing slope showed there were no signs of prior landslide conditions or surficial instability that have occurred on this property. This property is level across the existing building pad area, and there are concrete block walls on the south and east sides that will maintain lateral support for the new garage structure.

Geotechnical Recommendations

Based on the results of our geologic assessment and subsurface exploration, it is my recommendation that the new foundations extend down to the dense glacial soils that consist primarily of silty sands and gravel. Depths to these glacial soils will range from 2 to 3 feet based on the results of two shallow test pits on the south and east sides of the existing garage.

It is recommended that a soil bearing value of 2500 psf be used for foundation design that includes a passive pressure of 250 pcf for lateral restraint. The new concrete floor slab in the garage should be reinforced due to the presence of the medium dense fill soils that exist under most of the garage area.

All storm water collected from the impervious surface areas of the driveway and garage roof will need to be discharged into the ten foot wide drainage easement located along the lower end of this property.

We will provide appropriate field inspections during site construction, and field memos will be prepared to document engineering approval of this proposed field work. Please call me if there are any questions.

Respectfully,



Robert M. Pride, P. E.
Principal Geotechnical Engineer

dist: (1) Addressee

rmp: Houthchens22ndRes1