PanGEO INCORPORATED
Geotechnical & Earthquake
Engineering Consultants

September 7, 2021
File No. 16-106.300

Wes Giesbrecht
Cayson Fields LLC
atlin@qwestoffice.net

Subject: **Foundation Recommendations and Geotechnical Plan Review**
Pratt Plat – Lot 6
7910 SE 72nd Place
Mercer Island, Washington

Reference: **PanGEO Geotechnical Report**
Proposed Short Plat, 7233-80th Avenue SE, Mercer Island, Washington, dated April 28, 2016

Dear Mr. Giesbrecht,

Based on correspondence with Scott McMillen of Architectural Innovations, P.S., we understand that the below grade detention vault immediately west of the residence planned at Lot 6 of the Pratt Plat has been constructed and temporary excavations to construct the vault encroached into the footprint of residence. We further understand that the onsite glacial till soils were used to backfill the vault and the backfill extends into the footprint of the proposed building. In order to provide adequate support for the proposed residence, we recommend the following:

- The project structural engineer should confirm whether the below grade detention vault was designed for the Lot 6 foundation surcharge.

- If the detention vault was designed for the surcharge loads, the detention vault backfill in the vicinity of the residence should be removed to expose competent native glacial till and the excavation backfilled to the design residence footing elevation using a PanGEO approved granular structural fill such as crushed rock, Gravel Borrow, or controlled density fill (CDF). The backfill removal should

extend at least 2 feet horizontally beyond the edges of the residence footings. The imported granular structural fill should be moisture conditioned to within about 3 percent of optimum moisture content, placed in loose, horizontal lifts less than 8 inches in thickness, and compacted to at least 95 percent of the materials maximum dry density as determined using ASTM D 1557 (Modified Proctor).

- If the detention vault cannot resist the surcharge loads, the west perimeter footing of the residence should be lowered to beyond a 1H:1V upward projection from the detention vault footing.

We recommend the above recommendations be included in the plans.

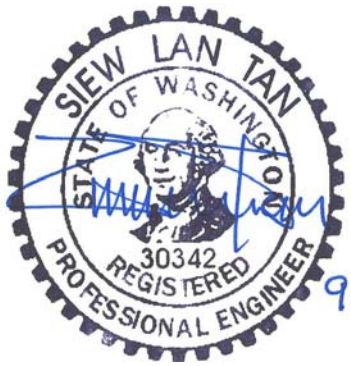
Plan Review **-** PanGEO reviewed the following design documents for the subject project:

- Lot 6 architectural plan set prepared by Architectural Innovations, P.S. dated 08/27/2021.
- Lot 6 structural plan set prepared by Mulhern+Kulp dated 7/29/2021.

Based on our review, it is our opinion that the above-referenced plans incorporated all substantial geotechnical recommendations outlined in our above referenced geotechnical report dated April 28, 2016.

We trust that the information outlined in this letter meets your need at this time. Please call if you have any questions.

Sincerely,



9.7.2021

Steven T. Swenson, L.G.
Project Geologist

Siew L. Tan, P.E.
Principal Geotechnical Engineer