

December 18, 2017
File No. 15-293.200

Brian and Mina Sung
2441 - 76th Ave SE, Apt 535
Mercer Island, WA 98040

**Subject: Seasonal Development Limitation Waiver
Proposed Addition
5004 West Mercer Way, Mercer Island, Washington**

Dear Brian and Mina Sung,

As requested, PanGEO prepared this letter to assist you to apply for a seasonal development limitation waiver such that earthwork and foundation construction of the proposed project can be conducted in the wet season (October 1 through April 1).

Based on the current schedule provided to us, it is anticipated that earthwork and foundation construction at the site in the wet season will start in January 2018 and will mainly include the following:

1. Clearing, grubbing, and demo – 2 weeks;
2. Site/foundation excavations – 1 week;
3. Foundation construction and backfill – 2 weeks;
4. Driveway, concrete walkway, and patio construction – 2 weeks; and
5. Utility construction – 2 weeks.

We understand that these earthwork and foundation activities will be completed by April 2018. Based on review of current excavation plans, the soil conditions at the site, the construction schedule, and anticipated earthwork activities, in our opinion, the proposed site grading may be accomplished during wet season without adversely affecting the site

stability at the subject and surrounding properties. In our opinion, the potential for erosion at the site can be adequately mitigated by employing best management practices (BMPs). During construction, erosion control should include measures for reducing concentrated surface runoff and for reducing the potential of off-site sediment transport by protecting disturbed or exposed surfaces. As a minimum, the following temporary erosion and sediment control measures for the wet season construction should be implemented:

- Where practical, maintain vegetation buffers around construction areas;
- Site stripping, excavation and subgrade preparation should be followed promptly by the placement and compaction of clean structural fill or CDF;
- The size and type of construction equipment used may have to be limited to prevent soil disturbance;
- The ground surface within the construction area should be graded to prevent surface water run-off of away from the site and the ponding of water;
- Geotextile silt fences should be located along the perimeter of construction areas to control erosion and the movement of soil;
- Adequately cover soil stockpiles and temporary cut slopes with plastic sheeting;
- Hydroseed or place straw in areas where grading is completed;
- Construct shallow, upgrade perimeter ditches or low earthen berms to divert water away from the top of slopes;
- If possible, stage construction such that the amount of exposed soil and exposure time is minimized;
- If necessary, temporary storm water detention ponds may be established or baker tank be installed at the site to trap sand and silt before surface water is discharged to a suitable outlet; and

- Structural fill should consist of less than 7% fines.

The erosion control measures at the site during the wet season should also follow applicable state and city regulations. In addition, PanGEO should conduct periodic site visits to monitor the site stability and erosion control measures during wet season grading, and may provide other recommendations for erosion control or site stabilization measures as needed throughout the wet season. In summary, provided that above recommendations are followed, it is our opinion that earthwork for the above project can be accomplished in the wet season and we recommend that a seasonal development limitation waiver be granted between January 1, 2018 and April 1, 2018.

The stability of the site slopes and temporary excavations should be closely monitored during construction. In the event that signs of slope instability for the site and temporary excavations are observed, measures such as buttressing the slopes, backfilling the excavations, and installing temporary shoring, etc. should be immediately implemented to repair/maintain the slope stability. PanGEO should be notified immediately if such signs are observed during construction.

We trust that the information presented herein meets your need at this time. Please call if you have any questions.

Sincerely,



Michael H. Xue, P.E.
Senior Geotechnical Engineer