



February 7, 2022
ES-8218.01

Earth Solutions NW LLC

Geotechnical Engineering, Construction
Observation/Testing and Environmental Services

2265 LLC
P.O. Box 481
Mercer Island, Washington 98040

Attention: Mr. Jon Friedman

**Subject: Plan Review and Minimum Risk Statement
8005 Southeast 34th Place
Mercer Island, Washington**

Reference: Earth Solutions NW, LLC
Geotechnical Consultation
8005 Southeast 34th Place
ES-8218
Dated November 22, 2021

Site Surveying, Inc.
Topographic Survey
8005 Southeast 34th Place
Mercer Island, Washington
Dated September 28, 2021

Encompass Engineering & Surveying
Erosion Control Plans and Notes and Grading and Utility Plan
8005 Southeast 34th Place
Sheets 1 through 3
Dated December 3, 2021

Architects Northwest
Friedman Homes Plan M2595B3F-9
Sheets A0 through A13
Revised Date December 20, 2021

Pitzer & Associates, PLLC
Structural Plans and Notes
Plan M2595B3F-9
Sheets SH1 through S3
Dated December 7, 2021

Dear Mr. Friedman:

In accordance with your request, Earth Solutions NW, LLC (ESNW) has prepared this letter providing a plan review, opinion regarding slopes and their stability characteristics on the subject site, and a minimum risk statement as required by the City of Mercer Island.

The subject project will include construction of a new residential structure at the above-mentioned addresses in Mercer Island, Washington. We have reviewed the referenced plans for the project in comparison to the recommendations described in the referenced letter providing our recommendations and observations of the subsurface. Upon our review of the referenced plans, the proposed residence will not be adding surcharge loads to the slopes under concern. The subject structure will be sited outside of the 1H1:V (Horizontal:Vertical) zone of influence on the subject slopes which are designated as steep slopes on the City of Mercer Island GIS website.

Based on our review, Landslide hazard area are defined by the City of Mercer Island code as:

1. Areas of historic failures.
2. Areas with all three of the following characteristics:
 - a. Slopes steeper than 15 percent;
 - b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - c. Springs or ground water seepage.
3. Areas that have shown evidence of past movement or that are underlain or covered by mass wastage debris from past movements.
4. Areas potentially unstable because of rapid stream incision and stream bank erosion.

We have reviewed topography for the subject site, and have determined that the steepest section of slopes (excluding the rockery on the north side of the site) have slopes on the order of six feet in total height, and are inclined at 2H:1V (Horizontal:Vertical) or 50 percent.

In our opinion, the slopes on the site do not meet the criteria described in the municipal code. The sloped regions are on the order of less than ten feet in vertical relief based on our review. The areas on the site which are over 15 percent in inclination are underlain by firm native soil which is homogeneous in nature, where there is a lack of coarse-grained soil overlying firm silt or bedrock. There is little risk of landslide hazard on the subject site due to the stable nature of any slopes on the subject site, and the relatively dense nature of the soil underlying the project area.

Additionally, it is our opinion that the slopes under concern (on the north and west sides of the property) are the result of past legal grading activities, where the overall slope complex in the neighborhood was flattened within lot areas to create level building pads, which resulted in steepened zones on the margins of the lots.

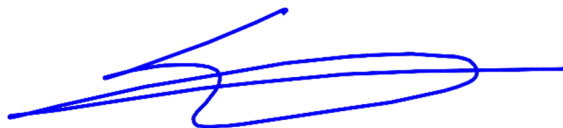
As a result of our findings, it is our opinion there is no necessity to apply the prescribed buffer (75 feet) from the slopes on the subject site, and the proposed building footprint and setback from the top-of-slope is suitable from a geotechnical standpoint.

Based on our review, the geologic hazard area will be modified, or the development has been designed so that the risk to the lot and adjacent property is eliminated or mitigated such that the site is determined to be safe.

We trust this letter meets your current needs. If you have any questions, or if additional information is required, please call.

Sincerely,

EARTH SOLUTIONS NW, LLC



Stephen H. Avril
Project Manager



Kyle R. Campbell, P.E.
Principal Engineer