

January 22, 2026
PanGEO File No. 17-143.400

N5 Architecture

Attn: Seth Hale
4200 Stone Way North
Seattle, WA 98103

**Subject: Geotechnical Addendum No. 1
 Proposed Residence – 2025 Design
 5236 West Mercer Way
 Mercer Island, Washington 98125**

*Reference: Geotechnical Engineering Report, Proposed Residence, 5236 West Mercer
 Way, Mercer Island, Washington, prepared by PanGEO Inc., dated
 October 5, 2017.*

Dear Seth:

As requested, PanGEO prepared this geotechnical addendum to provide updated geotechnical recommendations for the subject project, which has been modified since the preparation of our original referenced report in 2017. We reviewed the current set of project plans, and our 2017 report, and recommend the following revisions to our report.

SEISMIC DESIGN CONSIDERATIONS

SEISMIC SITE CLASS

Originally, the project utilized the 2015 IBC, as referenced in our 2017 report.

We understand that the seismic design of the currently proposed residence will be accomplished using the 2021 edition of the International Building Code (IBC), which specifies a design earthquake having a 2% probability of occurrence in 50 years (return interval of 2,475 years). Based on the definition of the site class parameters outlined in ASCE 7-16, the seismic site class was determined based on the field SPT for the upper 100

feet of the soil profile. Based on the results of the test borings and our understanding of the local geology, we recommend the Site Class is “C” be used for the project. Table 1 below presents the seismic design parameters in accordance with IBC 2021/ ASCE 7-16.

Table 1 – 2021 IBC / ASCE 7-16 Seismic Design Parameters

IBC Year	Site Class	Spectral Acceleration at 0.2 sec. (g) S_s	Spectral Acceleration at 1.0 sec. (g) S_1	Site Coefficients		Design Spectral Response Parameters	
				F_a	F_v	S_{DS}	S_{D1}
2021	C	1.45	0.503	1.2	1.497	1.16	0.502

The above spectral response accelerations were obtained from the SEAOC/OSHPD website <http://seismicmaps.org> for the project latitude and longitude.

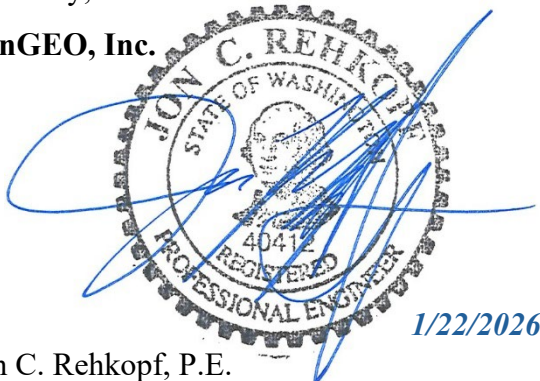
SEISMIC EARTH PRESSURE

We recommend that a uniform pressure of 9H psf be added to all permanent walls to reflect the increase loading for seismic conditions, where H corresponds to the buried depth of the wall, in feet. This applies to permanent soldier pile walls, and permanent cast-in-place basement walls.

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

Sincerely,

PanGEO, Inc.



1/22/2026

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