



Wood Environment & Infrastructure Solutions, Inc.
4020 Lake Washington Blvd NE, Suite 200
Kirkland, Washington 98033
T: 425-368-1000
www.woodplc.com

May 4, 2021

Project Number PS21-20341-B

Robin Proebsting
City of Mercer Island
Community Planning and Development
Mercer Island, Washington

Subject: Geotechnical Peer Review – CAO15-001
5637 East Mercer Way
Mercer Island, Washington

Dear Ms. Proebsting:

Wood Environment & Infrastructure Solutions, Inc., (Wood) presents this letter that summarizes our third-party geotechnical engineering review of the additional geotechnical information submitted for the development permit application requesting a reasonable use exception and a variance. We reviewed the following documents:

- Geotechnical Engineering Assessment of Landslide Hazard Mitigation, Proposed Mercer Island Treehouse Residence, 5637 East Mercer Way, by Geotech Consultants, dated December 3, 2020.
- Site Plan 5637 East Mercer Way, prepared by Core Design, dated November 6, 2020.
- Letter CAO15-001 & VAR18-002 MI Treehouse, LLC, by McCullough Hill Leary, PS, dated January 27, 2021, which summarizes the new information provided as requested by the Hearing Examiner.
- Email from Robin Proebsting RE: Contract Renewal, dated March 23, 2021, which attached the above-described documents and included Comments 6 & 7 from the Hearing Examiner decision.

The Geotechnical Engineering Assessment references previous geotechnical engineering documents prepared by GeoGroup NW between 2015 and 2019 for this development. Geotech Consultants reviewed those previous documents and provided their opinion regarding the recommendations. Those previous documents have also been peer reviewed by another consultant representing the City of Mercer Island.

Our scope of work was to review the recent Geotechnical Engineering Assessment of Landslide Hazard Mitigation by Geotech Consultants and provide our opinion as to whether it meets the request of the Hearing Examiner, the Mercer Island critical areas ordinance, and the standard of practice for geotechnical engineering.

The site is located within the base of an east trending ravine that is currently undeveloped and heavily vegetated with trees, bushes, and undergrowth. Steep slopes rise to the south, west, and north, and extend beyond the property boundaries. Development is not planned on the steep slopes; however, the Hearing Examiner requested more information regarding the entire steep slope to the south and west because development is proposed at the base of these slopes.

Robin Proebsting
City of Mercer Island
May 4, 2021
Page 2 of 2

The proposed residential structure will be supported on driven pile foundations, and soldier piles will be installed to support the basement wall and a retaining wall near the driveway. These two walls will be designed as catchment walls to resist shallow surficial slide debris. The development will also include drainage systems due to the presences of surface wall runoff through the ravine and shallow groundwater.

Geotech Consultants describe the soils composing the steep slopes as Glacial Till based on their surface observations at the site and their research. They describe Glacial Till and the slope stability issues that are typical with this soil type.

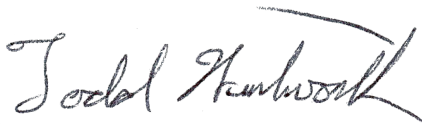
The Geotechnical Engineering Assessment by Geotech Consultants adequately addressed the geologic hazards at the site relative to the proposed development. They assessed the steep slopes that extended beyond the property boundaries and confirmed the geotechnical engineering recommendations for the proposed development provided by GeoGroup NW.

It should be noted that our scope of work for this letter was limited to a review of the documents supplied to us. Our scope did not include a site visit, exploration of actual subsurface conditions, nor does our review purport to verify the accuracy of the geotechnical engineering results presented within the documents.

We hope this letter meets your current needs. If you have any questions, please do not hesitate to contact us at your convenience.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.



Todd Wentworth, PE, PG
Principal Geotechnical Engineer
Direct Tel: 1-425-368-0938
E-mail: todd.wentworth@woodplc.com

TDW:al

\\sea-fs1\wordproc\projects\20000s\20341 city of mercer island\20341-b city of mercer island 2021\reports\001\peer review letter-5637 east mercer way geotechnical review.docx