



May 7, 2024  
Project No. 20180261E001

Mr. Harvey Chen  
1542 24<sup>th</sup> Avenue NE  
Issaquah, Washington 98029

Subject: Geotechnical Addendum  
City of Mercer Island Code Items – Critical Areas  
Chen Residence  
5024 West Mercer Way  
Mercer Island, Washington

Dear Mr. Chen:

As requested, Associated Earth Sciences, Inc. (AESI) presents the following responses to selected items of the Mercer Island City Code (MICC). AESI has previously issued a “Subsurface Exploration, Geologic Hazard, and Geotechnical Engineering Report,” dated September 20, 2018, and a “Response to City Comments” letter, dated May 17, 2023, for the proposed project. In a review letter dated October 31, 2023, City of Mercer Island staff requested that we provide our opinion regarding mitigation sequencing (described in MICC 19.07.100), relative to the currently-proposed project. The pertinent MICC sections, with AESI’s responses, are presented below.

(Our responses to the below items can be found in **bold** text.)

**19.07.100:** *Mitigation sequencing.*

*Except as otherwise provided in this chapter, an applicant for a development proposal or activity shall implement the following sequential measures, listed below in order of preference, to avoid, minimize, and mitigate impacts to environmentally critical areas and associated buffers. Applicants shall document how each measure has been addressed before considering and incorporating the next measure in the sequence:*

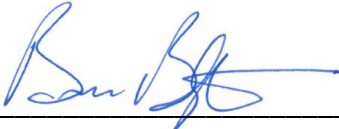
- A. *Avoiding the impact altogether by not taking a certain action or parts of an action. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. However, avoidance shall not be construed to mean mandatory withdrawal or denial of the development proposal or activity if the proposal or activity is an allowed, permitted, or conditional use in this title. In determining the extent to which the proposal should be redesigned to avoid the impact, the code official may*

*consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal and identified changes to the proposal. Development proposals should seek to avoid, minimize and mitigate overall impacts based on the functions and values of all of the relevant critical areas and based on the recommendations of a critical area study. If impacts cannot be avoided through redesign, use of a setback deviation pursuant to section 19.06.110(C), or because of site conditions or project requirements, the applicant shall then proceed with the sequence of steps in subsections B through E of this section; **The proposed alteration will be limited to excavation for the foundation of the residence. This does not significantly alter the existing contours of the slopes beyond this structure. As stated in our May 17, 2023 letter, our review of the grading and landscaping plans indicates that the area near to the residence will be excavated down to a level bench and mulched, with the existing vegetation remaining along the steep slope to provide mitigation for long term erosion.***

- B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, using a setback deviation pursuant to section 19.06.110(C), using appropriate technology, or by taking affirmative steps to avoid or reduce impacts; **The footings along the north side of the residence are to be embedded roughly 4 to 8 feet below existing surface to allow placement of a partial basement level. In our opinion, this embedment should provide a suitable effective setback from the top of the slope.***
- C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; **As stated above, our review of the grading and landscaping plans indicates that the existing vegetation remains along the steep slope to provide mitigation for long term erosion. In addition, approximately 3 inches of mulch is planned for the area surrounding the residence, including along the resulting level bench along the north side of the residence, as a means to restore the affected environment.***
- D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; **In our opinion, the existing vegetation remaining along the steep slope should provide mitigation for long term erosion.***
- E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; **In our opinion, the existing vegetation remaining along the steep slope should provide mitigation for long term erosion. The 3 inches of mulch placed over the area surrounding the residence should act as a substitute resource for vegetation in that area.***
- F. Monitoring the impact and taking appropriate corrective measures to maintain the integrity of compensating measures; **We anticipate that the effort needed to monitor the proposed mulch or new plantings over time, along with appropriate corrective measures, can be achieved through typical yard maintenance practices.***

If you should have any questions concerning this letter, please do not hesitate to call our office.

Sincerely,  
**ASSOCIATED EARTH SCIENCES, INC.**  
Kirkland, Washington



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Bruce L. Blyton, P.E.  
Senior Principal Engineer



Jeffrey P. Laub, P.E., L.G., L.E.G.  
Associate Engineer/Geologist