

August 6, 2024

JN 23365

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Sent to: McFadden Design  
Attention: Michael McFadden  
via email: [michael@mcfaddendesign.com](mailto:michael@mcfaddendesign.com)

Subject: **Project Update and Review of Plans**  
Proposed Residence Addition Project  
8035 Southeast 45<sup>th</sup> Street  
Mercer Island, Washington

Greetings:

We completed a geotechnical engineering study for this residence addition project to be constructed at 8035 Southeast 45<sup>th</sup> Street on Mercer Island dated December 1, 2023. Plans have subsequently been submitted to the City of Mercer Island. Based on recent comments by city personnel, some updated geotechnical information (specifically with regards to providing “mitigation sequencing”) and our review of the project plans has been requested. This report provides information for both of these requests.

With regards to mitigation sequencing, we have provided the guidelines noted in the Mercer Island Municipal Code below, followed by our response/recommendations in *italics*.

- 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 new development for the project will be located in flat areas that are essentially already covered by existing imperious surfaces. No development will be done on any steep slopes. All new building loads will be founded on or into competent native soil, and thus the steep slope on the western edge of the property will not be affected by this project.*

- 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.

*As noted above, the new development (building additions) will be located in flat areas that are covered with impervious surfaces. Also, the development will not extend into the western steep slope. Thus, the western slope will not be affected or impacted by the proposed development.*

- C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.  
*Since the impacts are limited to the areas that are already covered with impervious surfaces, there are no needed repairs, rehabilitation, or restoration needed.*
- D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.  
*Areas of existing impervious surfaces will be replaced with new building roofs. Thus, no new impervious surfaces are proposed. Thus, the impact to the site is extremely limited and will not impact the site.*
- E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.  
*None of these are needed for this project in our opinion.*
- E. Monitoring the impact and taking appropriate corrective measures to maintain the integrity of compensating measures.  
*During the project, the contractor will monitor the areas surrounding the areas of disturbance, which currently contain impervious surfaces. And damage to these the impervious-surface areas outside of the new additions will be repaired to current conditions.*

We have completed a general review of the geotechnical aspects of the plans for the residence addition project. The plans we reviewed include: 1) Sheets S1.0 through S5.0, which were prepared by Quantum Engineering dated May 3, 2024, and 2) Sheet A1.0 through A6.0, which were prepared by McFadden Design dated May 1, 2024. In our judgment, the plans conform to the recommendations in our geotechnical engineering report. We prepared a "Statement of Risk" in our 2023 study. However, we have been requested to update the statement based on our review of the project plans. As such, we make the following statement:

*It is our professional opinion that the plans for the proposed project will render the development as safe as if it were not located in a geologically hazardous area and will not adversely impact adjacent properties.*

If there are any questions regarding this review letter, or if we can be of further service, please do not hesitate to contact us.

Respectfully submitted,  
GEOTECH CONSULTANTS, INC.

D. Robert Ward, P.E.  
Principal



8/06/2024

DRW:kg