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A R C H I T E C T S

Date: February 7, 2025

To: City of Mercer Island Building Department
9611 SE 36th Street
Mercer Island, WA 98040

From: Brad Sturman
John Magcawas
Sturman Architects

Re: O'niell Residence
8030 SE 20th St
Mercer Island, WA 98040
Tax Id # 545230-2220

Subj.: Criteria Compliance Narrative Matrix for CAR2

Below are our responses to **MICC19.07.160-Geologically Hazardous Areas A-E** showing our compliance for a CAR2 application.

MICC19.07.160(A):

Designation and typing. Geologically hazardous areas are lands that are susceptible to erosion, landslides, seismic events, or other factors identified by WAC 365-190-1220. These areas may not be suited for development activities because they may pose a threat to public health and safety. Areas susceptible to one or more of the following hazards shall be designated as geologically hazardous areas: landslide hazard areas, seismic hazard area, and erosion hazard areas.

Answer:

According to both the survey and Mercer Island GIS, the site located on 8030 SE 20th St, Mercer Island is located on landslide, seismic, and erosion hazards making this a geologically hazardous site.

MICC19.07.160(B)

General review requirements. Alteration within geologically hazardous areas or associated buffers is required to meet the standards in this section, unless the scope of work is exempt pursuant to section 19.07.120, exemptions, or a critical area review 1 approval has been obtained pursuant to section 19.07.090(A).

1. When alteration within a landslide hazard area, seismic hazard area or buffer associated with those hazards is proposed, the applicant must submit a critical area study concluding that the proposal can effectively mitigate risks of the hazard. The study shall recommend appropriate



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design and development measures to mitigate such hazards. The code official may waive the requirement for a critical area study and the requirements of subsection (B)(2) and (B)(3) of this section when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

Answer: A Geotechnical report and Critical Area Study has been prepared by Geotech Consultants, Inc. dated November 18, 2024 and addresses the hazards listed below.

2. Alteration of landslide hazard areas and seismic hazard areas and associated buffers may occur if the critical area study documents find that the proposed alteration:
 - a. Will not adversely impact other critical areas;
 - b. Will not adversely impact the subject property or adjacent properties;
 - c. Will mitigate impacts to the geologically hazardous area consistent with the best available science to the maximum extent reasonably possible such that the site is determined to be safe; and
 - d. Includes landscaping of all disturbed areas outside of building footprints and installation of hardscape prior to final inspection.

Answer: As per the geotechnical report starting on page 4 “Critical Area Study”, the study finds and recommends that all new structures to be supported on or into the underlying glacially-compressed soils, which protects them in the event of any future slope movement in the looser, near surface soils. These recommendations if followed will prevent the project from negatively impacting the stability of the site or neighboring properties.

3. Alteration of landslide hazard areas, seismic hazard areas and associated buffers may occur if the conditions listed in subsection (B)(2) of this section are satisfied and the geotechnical professional provides a statement of risk matching one of the following:
 - a. An evaluation of site-specific subsurface conditions demonstrate that the proposed development is not located in a landslide hazard area or seismic hazard area;
 - b. The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk



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to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;

- c. Construction practices are proposed for the alteration that would render the development as safe as if it were not located in a geologically hazardous area and do not adversely impact adjacent properties; or
- d. The development is so minor as not to pose a threat to the public health, safety and welfare.

Answer: As per the geotechnical report, the site and proposed structures are located on soils that will support the foundations of the planned structures that are not liquefiable, due to their glacially-compressed nature.

MICC19.07.160(C)

Development standards-Landslide hazard areas. Development is allowed within landslide hazard areas and associated buffers, when the following standards are met:

1. A critical area study shall be required for any alteration of a landslide hazard area or associated buffer;

Answer: A critical area report has been included in the geotechnical report provided by Geotech Consultants, Inc. dated November 18, 2024.

2. Buffers shall be applied as follows. When more than one condition applies to a site, the largest buffer shall be applied.
 - a. *Steep slopes.* Buffer widths shall be equal to the height of a steep slope, but not more than 75 feet, and applied to the top and toe of slopes.

Answer: As per the Geotech report on page 5 “Buffers and Mitigation”, construction of the project can be done without the need for a buffer from the top/toe of the steep slope.

MICC19.07.160(E)

Development standards-Erosion hazard areas.

1. All development proposals shall demonstrate compliance with chapter 15.09, storm water management program.

Answer: Compliance with 15.09 is documented on the plan set.



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2. No development or activity within an erosion hazard area may create a net increase in geological instability on or off site.

Answer: Following the recommendations given by the Geotech report should not have a new increase of the geological stability on or off site.

Sincerely,
Sturman Architects,
Brad Sturman and John Magcawas