



Memorandum

To:	Jeromy Hicks, Fire Marshal - City of Mercer Island	Date:	January 6, 2023
From:	April Ng		
Project:	Buttenwieser/Wiley Residence 6838 96 th Ave SE Mercer Island, WA 98040 King County APN 302405-9010	File No:	2205-199
Subject:	Fire Code Alternate Request		

Janet Buttenwieser and Matthew Wiley, the owners of the home at 6838 96th Ave SE, are requesting an alternate to the current fire code requirements for their property to build a new residential single-family home and detached garage for their family.

GENERAL INFORMATION:

The project site is a waterfront site on the southeast side of Mercer Island. The sloped site runs primarily West to East, accessed via a private driveway from 96th Avenue SE and descends to the Lake Washington Shoreline. Three structures currently occupy the site: a primary two-story residence, a two-car garage and a small potting shed. There is also an existing dock and boat lift on Lake Washington. The house, garage and shed are in poor state of repair and will be demolished for the construction of the new residence.

There are several sensitive and environmentally critical areas on the site. A geotechnical report and critical area study have been completed for the project. The geotechnical engineer, ecologist and arborist have been consulted throughout design to review plans and design intent. The primary goal of the clients, that the design team shares, is to restore the existing site and improve it such that it doesn't continue to degrade.

Site work includes replacing the existing concrete driveway that is worn smooth and visibly cracked. The existing nonconforming driveway is roughly 10' wide and varies from a 23% - 30% slope as it descends toward the parking pad. The team's strategy has been to hold the grades along the extent of the driveway while also trying to lessen grades over 25% and maintain a specific distance from the wetland that was delineated to the north of the driveway. The new driveway will be a minimum of 12' wide with a heavily raked finish.

FIRE DEFICIENCIES:

The following deficiencies for the site have been identified:

1. Grade exceeds 10% (Over 15 must be raked concrete).
2. Distance from the Fire Hydrant to rear of residence.
3. Fire flow is less than required.
4. Width of fire access is less than required
5. No turn around – inadequate turn around.

FIRE DEFICIENCY MITIGATION PROPOSALS:

The owners of the new home propose the following alternate construction for the new residence to make the overall fire resistance equal to or better than the code requirement:

1. NFPA 13r Fire Sprinkler System. Coverage to include:
 - a. Covered Areas
 - b. Covered Decks
 - c. Mechanical areas in Attics or Crawl Spaces
 - d. Covered Walkways connecting buildings
2. NFPA 72 “Chapter 29” Monitored Fire Alarm System per NFPA and CoMI Standards
3. Type X 1hr Gypsum Throughout
4. Solid Core Doors
5. FDC/standpipe to be installed from garage to lakeside area. The FDC/Standpipe must be installed per CoMI Standards and NFPA 14. Placement and install to be approved by Fire Marshal.
6. Grades over 15% shall be raked concrete

SUMMARY

We believe that the mitigation we are proposing is equal to or above the current adopted code requirements.

Sincerely,



April Ng, AIA, Associate