



Date: May 6, 2021

To: **City of Mercer Island**
Community Planning & Development

From: **Brad Sturman – Sturman Architects**
Kati Eitzman – Sturman Architects
Jon Tellefson – Seascapes Homes, LLC.

Re: **Forest Creek – Lot 4**
5202 Forest Ave. SE
Mercer Island, WA 98040
Permit # 2007-212

Subj.: Explanation and Justification for removal of exceptional trees

This letter is being submitted as part of the Corrections #2 Response for Building Permit #2007-212.

The following listed trees and statements is our response to your request for justification of why trees 316 & 319 need to be removed as part of our construction project. We feel that for these reasons we have no option but to remove these trees.

Tree 320

This tree was deemed a hazard by the arborist of record and so can be removed.

Trees 316 & 319

Existing Soils

A large portion of Lot 4 has 5-10 feet of fill (per Geotech report) on top of native bearing soils. This top layer of fill cannot support a foundation and will have to be removed. As seen in the building sections, per Geotech recommendation, quarry spalls will need to be placed under house for a depth of 7' below existing grade, so extensive excavation is required. It was decided to build an extended garage in this excavated area to increase structural stability.

Placement of House and South Retaining Wall

The rear of the Lot 4 house is 10' from property line and shouldn't be pushed any further north to keep distance from the detention tanks required on site, and to allow for a designated yard area. The retaining wall running along the south property line should not be moved closer to the house, to ensure the footing of the house doesn't undermine the footing of the retaining wall.

Slope Stability

Slope stability sections, per Geotech report previously submitted, show areas of slope at risk and their factor of safety. A slope with a factor of safety greater than 1.5 is generally considered stable. Plate 43 & 44 shows a section with a factor of safety of 2.721 and 3.337 respectively, for both seismic and static conditions. The area of slope at risk for slipping encompasses the entire area in between planned developments of Lots 3 and 4. For this reason, it was decided for the overall stability of the site to develop this area with engineered retaining walls and terracing.

Average Building Elevation, Site Design

Due to the dramatic elevation change between Lots 3 and 4, their Average Building Elevations differ greatly; the Lot 3 ABE is almost 20' higher than Lot 4. To address this large discrepancy, it was decided to develop a series of terraces which could be filled with plantings to create a gentler transition down the hill. This also greatly alleviates the amount of soil pressure against the south side of the Lot 4 house. Additionally, to build three-story houses and stay under the building height limit, the Main Floor elevation must be set below the ABE. Setting the house lower in elevation increases the limits of excavation.

Foundation Considerations

For Lot 3, conventional concrete foundations without pin piles will need to extend at least 7-8' below existing grade, so extensive excavation will be required. Because such deep foundations will be required for Lot 3, it was decided to install a basement in the excavated area to increase site stability. This was a concurrent design consideration during the development of Lot 4.

Comprehensive Design Intent

Sturman Architects is concurrently developing the plan sets for Lots 3 and 4. We find it to be irresponsible and short-sighted to not consider the development of both lots jointly and comprehensively, as each is affected by the other. This thinking is reflected and supported by the Geotech report.



S T U R M A N
A R C H I T E C T S

Additional Tree 319 Consideration

Tree 319 is located in a building pad previously approved by Short Plat Plans SUB07-003, which indicates acknowledgement by the city of Mercer Island that a structure is allowed to be constructed within the area that contains this tree. Additionally, the necessary excavation for Lot 4, outlined above, will come within approximately 3' of the face of the trunk. The root system will be destroyed, and survival is not expected.