TECHNICAL MEMORANDUM

Date:	March 23, 2020
To:	Leif Anderson
From:	Ryan Kahlo, PWS, Senior Ecologist
Project Name:	Mercer Island Leif Anderson
Project Number:	200310

Subject: Watercourse Buffer Regulations Assessment

Introduction

This memorandum has been prepared to assess the potential effects of the recent updates to the Mercer Island Critical Areas Regulations (Mercer Island City Code [MICC] 19.07), as they relate to sub-platting and redevelopment of the property located at 9740 SE 35th Place (Parcels #0724059009 & 0724059010). The project is currently vested to the previous regulations in effect at the time of the sub-plat application. However, the City has requested that the applicant consider applying the revised (or current) regulations.

There is one piped watercourse present along the western half of the southern property boundary. The piped watercourse enters the property from the adjacent property to the west, coming from the southwest, turning north at the property boundary, and discharging into Lake Washington. The on-site portion of the piped watercourse is approximately 370 feet.

Code Summaries

Under the code to which the project is vested, the piped watercourse requires a 25-foot standard buffer with no additional building setback. Piped watercourse buffers may be reduced through buffer enhancement. While the vested code does not specify a minimum allowable buffer width through this process, the City has typically required a minimum five-foot buffer, in our experience. Most development is prohibited in watercourse buffers under the vested code, although certain allowances are provided for expansion of a single-family residence with appropriate mitigation.

Under the current code, piped watercourses do not have a regulatory buffer but require a 45-foot building setback, as measured from the watercourse centerline. The 45-foot setback may be reduced to a 15-foot buffer if the applicant daylights the watercourse. Alternatively, piped watercourse setback widths shall be reduced to a 10-foot setback on lots with a lot width of 50

feet or more and five feet on lots with a width of less than 50 feet, when daylighting is determined by qualified professional to result in one or more of the following outcomes:

- Increased risk of landslide or other potential hazard that cannot be mitigated;
- Increased risk of environmental damage (e.g., erosion, diminished water quality) that cannot be mitigated;
- The inability of a legally established existing lot to meet the vehicular access requirements of this title; or
- The inability of a legally established existing lot to meet the building pad standards in MICC 19.09.090.

The distinction between a watercourse buffer under the vested code and a setback under the both the vested and revised codes is significant. Under MICC 19.07.180.C.8, the following are allowed in the 45-foot setback under the current code but would not be allowed in the 25-foot buffer under the vested code:

- Landscaping;
- Uncovered decks less than 30 inches above existing or finished grade, whichever is lower;
- Building overhangs if such overhangs do not extend more than 18 inches into the setback area;
- Hardscape and driveways; provided, that such improvements may be subject to requirements in Chapter 15.09 MICC, Storm Water Master Program;
- Split-rail fences;
- Trails; and
- Subgrade components of foundations; provided, that any temporary impacts to building setbacks shall be restored to their previous condition or better.

Analysis

The on-site portion of the piped watercourse is within the root zone of 13 trees, including five exceptional trees. Most notably, two old-growth giant sequoia trees (62-inch and a 64-inch dbh) are located directly above the piped watercourse. The piped watercourse is also located within the rootzone of two exceptional western red cedar trees (36-inch and 40-inch dbh) and one off-site exceptional cherry tree (24-inch dbh). Daylighting the watercourse would necessitate the removal of all of these trees, plus a significant number of additional non-exceptional trees. The City prioritizes the retention of exceptional trees, and the two giant sequoias, in particular, are irreplaceable trees. It could feasibly be demonstrated that removal of two old-growth giant sequoia trees would represent an unnecessary risk of environmental damage due to the irreplaceable loss of habitat, soil stability, and evapotranspiration functions provided by these old-growth sequoia trees, as well as the two exceptional western red cedar trees. The environmental benefit of daylighting this short watercourse segment would not compensate for the loss of these four trees, and it is not possible to completely mitigate the loss of these trees. If the City agreed with this interpretation, the 45-foot setback could be reduced to 10 feet (we have been informed that Parcel #0724059010 is exactly 50 feet wide). It should be noted, however, that this is a new provision, and our interpretation has not been verified by the City for this project, and there is no precedent for this particular provision in our experience.

Daylighting the watercourse would also require removal and relocation of the existing driveway, likely outside of the new 15-foot buffer that would be applied to the restored watercourse. Since any stream channel creation would likely require at least some grading on adjacent private properties, and the associated buffer/setback would be similarly modified on adjacent properties, neighboring property owners would have to agree to the daylighting proposal.

Daylighting the watercourse would require authorization from the U.S. Army Corps of Engineers and the Washington Department of Ecology, under Sections 404 and 401, respectively, of the Clean Water Act. Applications for federal permits must also demonstrate compliance with the Section 7 of the Endangered Species Act through a preparation of a biological assessment and Section 106 of the National Historic Preservation Act through a cultural resource assessment. A Hydraulic Project Approval from the Washington Department of Fish and Wildlife would be required, as would preparation of a SEPA Checklist. The Muckleshoot Indian Tribe often provides comments and recommendations for in-water work projects that require state or federal permits. Daylighting the watercourse would also likely require planting the 15-foot buffer and monitoring/maintaining the area for five years. This

would be a costly and lengthy permitting process that would result in little ecological benefit compared to the existing condition. We recommend that this option be avoided.

Since no development is proposed within the vested 25-foot piped watercourse buffer, and the driveway is an existing non-conformance that should be allowed to continue in its current configuration and use, we recommend applying the vested code, rather than applying the revised code. Any future development proposals would require adherence to the revised code, and the potential reduction of the building setback could be addressed if/when it becomes necessary. Additionally, under the vested code, the 25-foot buffer could be further reduced through the addition of native plantings. The precise reduced width is unknown, but some amount of reduction could occur without daylighting the stream or removing existing trees. If the applicant would prefer to use the revised code under the assumption that the setback can be reduced to ten feet based on the prohibitive environmental damage described above, we recommend that a request be submitted for a determination from the City prior to agreeing to apply the revised code.