

## ARBORIST CORRECTIONS

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**Project Name:** Mercer Island Treehouse

**Site Address:** 5637 East Mercer Way, Mercer Island, WA 98040  
King County Parcel # 1924059312

**Prepared For:** Bill Summers,

**Date:** August 12, 2022

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### REASON FOR THE REPORT

The City of Mercer Island provided 4 correction it required. They are responded to here and in other submittals.

### Page 43, TREE REVIEW, # 1

#### TREE REVIEW#1

1. (From Intake for Architect/Arborist/Civil) Several exceptional trees are proposed for removal. Justification for each exceptional tree removal is required under 19.10.060.A.3. Trees 976,982 are exceptional and proposed for removal. Tree 986 was also required to be retained as part of a plat condition according to the arborist report. A modification to the detention tank to retain the tree was recommended. Update the plans with this proposal to save the tree. ¶

#### Response:

##### Tree Removal:

Six of the nine trees proposed for removal are within the building footprint. Three of the nine trees proposed for removal are within the required construction. None of the trees can be retained.

##### Tre 986:

Great effort and expense have gone into the design of the improvements with the express effort to retain tree # 986.

To this end, the detention tank has been modified as required.



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**Page 43, TREE REVIEW, # 4**

TREE-REVIEW#1  
 4. (For Architect/Arborist) It appears all the trees on site are part of an exceptional grove. Each exceptional grove tree that is allowed to be removed must be replaced by six trees. Unless they are in poor condition, then I am allowed to reduce the replacement ratio. But it would be at least one tree that is replaced. Trees will be replaced according to the following. At least half of the trees need to be Pacific Northwest native, see the following link: [https://oregonstate.edu/trees/name\\_common.html](https://oregonstate.edu/trees/name_common.html). The trees need to be at least 10' apart from each other, structures, fences and utilities. If requested and you can show no room exists on site for all the trees, the remainder can be a fee in lieu if requested. ¶

**Responses:**

Replacement Trees:

Nine trees are proposed to be removed. They will be replaced with 6 trees each for a total of 54 replacement trees. Proposed is a schedule of native and non-native species. The proposal is for 32 native trees and 22 non-native landscape trees. The Non-native species were selected based upon a combination of their survivability on this unique site, their environmental and aesthetic benefits, as well as them *not* being invasive. The selection was also based upon what species are available at local nurseries and plant wholesale companies.

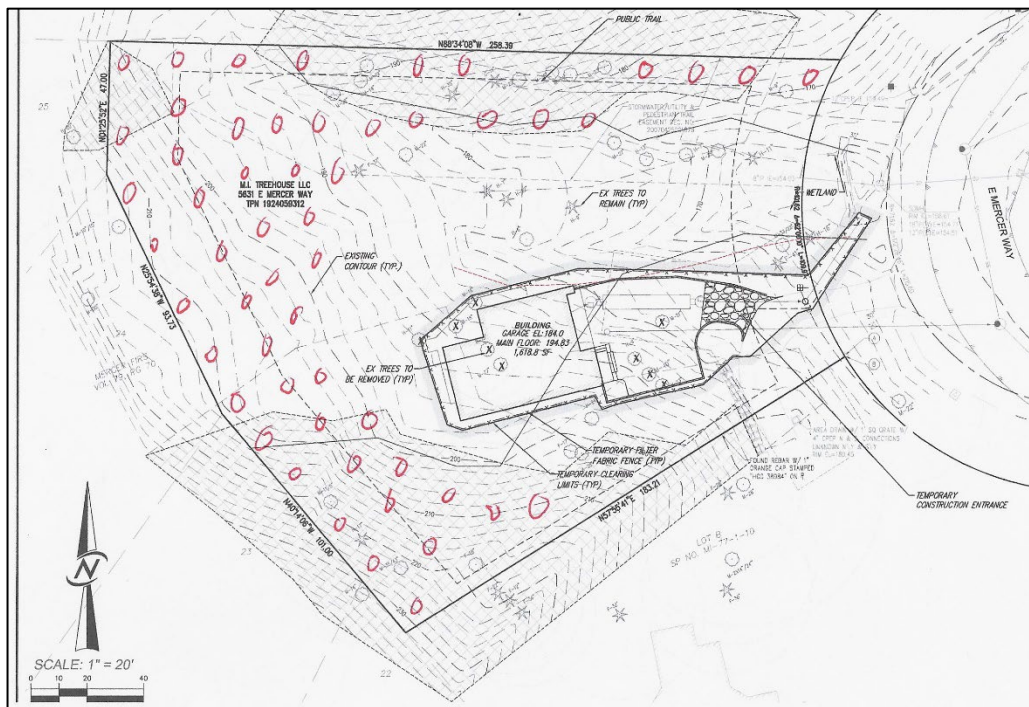
TREEHOUSE PROJECT, REPLACEMENT TREE SCHEDULE			
- 9 Exceptional Grove Trees are proposed to be removed.			
- They will be replaced with 6 trees each as required for a total of 56 replacement trees.			
- The lot is large, 37,554 Square Feet. This provides adequate room to accomplish the 10-spacing requirement.			
Minimum of 1/2 Replacement Trees Native Species:			
#	Common Name	Scientific Name	Comments
4	Pacific Crabapple	<i>Malus fusca</i>	Small compact tree. Good performer in this sort of planting site. Fruits attract songbirds.
7	Oregon Ash	<i>Fraxinus latifolia</i>	Large tree. Performs very well on moist slopes. Yellow fall color.
7	Douglas Fir	<i>Pseudotsuga menziesii</i>	Already successful on this site.
7	Western Red Cedar	<i>Thuja plicata</i>	Already successful on this site.
7	Sitka Mountain Ash	<i>Sorbus sitchensis</i>	Small stature. Fruit remains on tree until late winter making it valuable for winter favorite for songbirds. Tolerates moist soils.
<b>32</b>	<b>Sub Total</b>		
Up to 1/2 Non-Native Landscape Trees--All known NOT to be invasive.			
#	Common Name	Scientific Name	Comments
5	Swamp White Oak	<i>Quercus bicolor</i>	Common in north central and northeastern mixed forests. Tolerates moist soils. Long lived. Rapid growing but moderate sized.
5	Tupelo	<i>Nyssa Sylvatica</i>	Large stature, tolerates moist soils, great fall color.
12	Lindsey's Skyward Bald Cypress	<i>Taxodium distichum</i> , 'Lindsay's Skyward'	Slender tall tree. Tolerates moist soils. Deciduous conifer tree--needles turn golden in fall and drop off. This allows more sunlight penetration in winter.
<b>22</b>	<b>Sub Total</b>		
<b>54</b>	<b>Grand Total # of Replacement Trees</b>		

Detention Vault:

The civil plans have been adjusted as requested and resubmitted.

• **Replanting Plan:**

- Given the topography and the existing vegetation this replanting plan is generic and not specific in any way. The lot is 37,554 square feet. There is plenty of room for the tree installation at the minimum of 10-foot spacing.
- A professional landscape installation company shall be employed to properly install the 54 replacement trees.
  - The trees themselves as well as the installation shall conform to current industry standards.



**Page 44, TREE REVIEW, # 2**

TREE-REVIEW#  
2. (For-Civil/Arborist)-Limits-of-allowable-disturbance-will-be-determined-by-the-arborist-for-all-exceptional-and-saved-trees-showing-development-within-their-driplines.. This-root-zone-analysis-should-be-determined-by-noninvasive-techniques-such-as-air-excavation.. These-limits-must-meet-the-standards-in-MICC19.10.080.. The-arborist-must-how-the-code-will-be-met.. These-limits-of-allowable-disturbance-will-be-shown-and-called-out-on-the-civil-plans. ¶

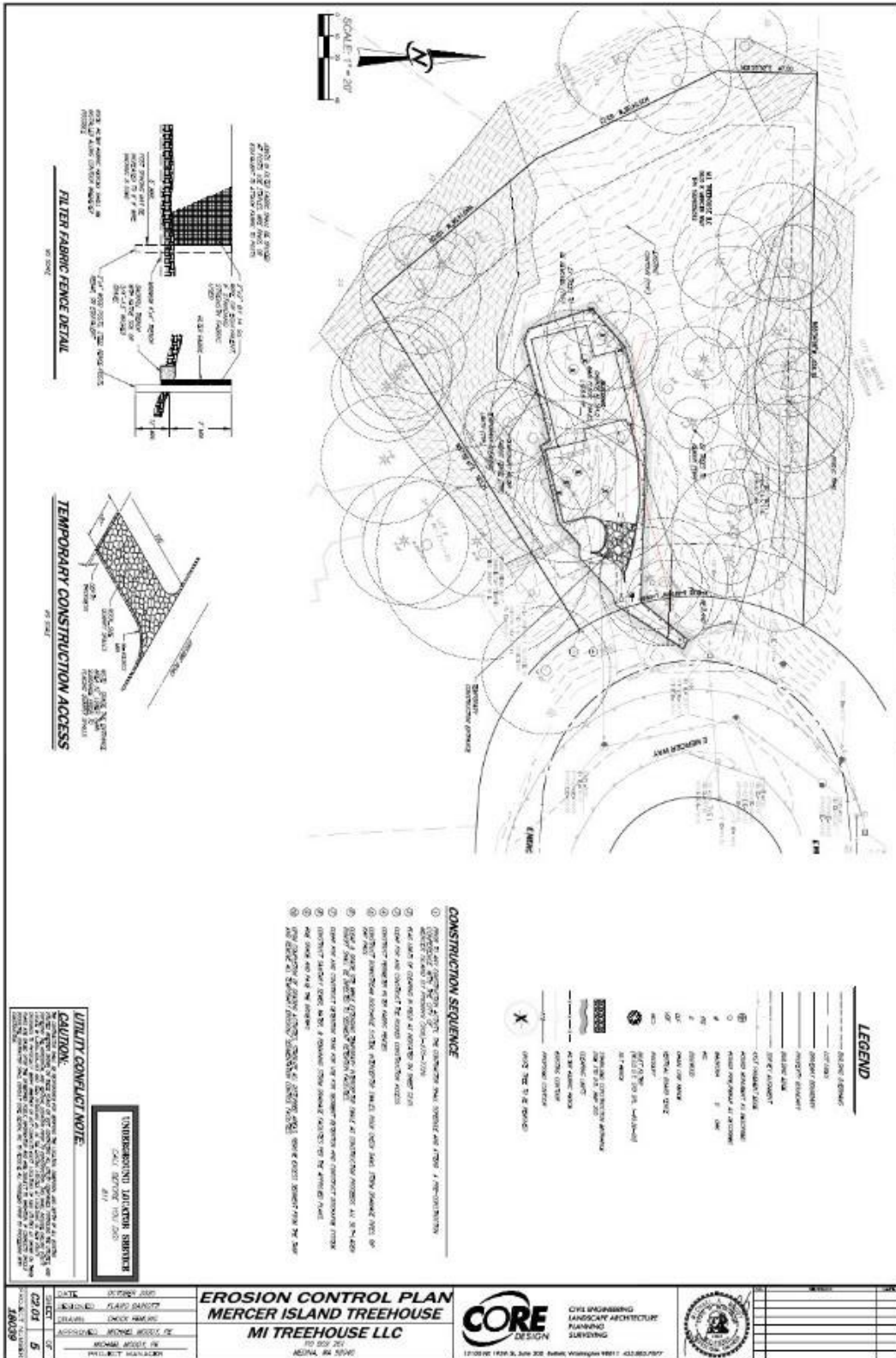
**Response:**

In previous reports tree protection measures were clearly outlined. These measures are called out on the Civil Plans as required.

**TREE PROTECTION MEASURES:**

1. Tree Protection Fence:
  - a. Tree Protection Fences will need to be placed around the tree retained on the adjacent property.
    - i. *The Filter Fabric Fencing location is the same as the tree protection fencing.*
  - b. Tree Protection Fences are to be placed according to the drawing below.
  - c. Tree Protection Fences must be inspected and approved by the City prior to the beginning of any construction work activities.
  - d. The area inside of the fence is *The Tree Protection Zone*.
  - e. The area outside of the fence is *The Development Zone*.
    - i. Nothing must be parked or stored within the Tree Protection Fences—no equipment, vehicles, soil, debris, or construction supplies of any sorts.
  - f. Tree Protection Fence Signage:
    - i. The Tree Protection Fences need to be clearly marked with the following text:

*TREE PROTECTION AREA  
Entrance Prohibited  
To report violations contact  
City Code Enforcement at  
206-507-2064*





2. Canopy Pruning:

- a. It may be necessary to prune the canopies of some retained trees to provide access and a safe work environment.
- b. The pruning *must* be done by a qualified International Society of Arboriculture *Certified Arborist* or *Certified Tree Worker*.
  - i. The work must be done adhering to all industry pruning and safety standards as well as all OSHA and WISHA safety standards.
  - ii. The canopy must be accessed with ropes. Spikes or gaffs are not allowed!

3. Cement Trucks:

- a. Cement trucks must not be allowed to deposit waste or wash out materials from their trucks within the Tree Protection Fences in the *Tree Protection Zone*.

4. Chips/Mulch:

- a. The area within the Tree Protection Fencing for tree # 986 must be covered with wood chips, hog fuel, or similar materials to a depth of 8 to 10 inches. The materials should be placed prior to beginning construction and remain until the Tree Protection Fencing is taken down at the end of the project just before the landscaping is installed.

5. Excavation:

- a. When excavation occurs near tree, the following procedure must be followed to protect the long-term survivability of the tree:
  - i. An International Society of Arboriculture, (ISA) Certified Arborist must be working with and in control of all equipment operators.
  - ii. The excavation contractor must provide a laborer outfitted with a shovel and a garden rake to be under the direction of the Certified Arborist.
    1. The Certified Arborist should be outfitted with a shovel, hand pruners, a pair of loppers, a handsaw, and a power saw (a “saws-all” is recommended).
  - iii. The contractor must provide an air spade with all required equipment including a skilled operator.
  - iv. The furthest limits of the excavation must be jointly agreed upon by the Arborist, equipment operator, and site superintendent/supervisor.
  - v. The air spade operator will blow a trench, approximately 12 inches wide and as deep as required.
    1. When roost of 1” or greater are encountered, the ground crew member will carefully expose the root(s) with hand tools.

2. The roots will be properly cut with the appropriate tool.
- vi. The Certified Arborist should then instruct the equipment operator to continue the air excavation until another large root is discovered.
- vii. This same careful hand excavation is to be followed and the root cleanly cut.
- viii. This process will continue until the proper depth is achieved or when the Certified Arborist determines that there are no more large roots to be found any deeper.
- ix. Then the hoe can take over the excavation to complete the required excavation requirements.
  1. hoe must be placed to “comb” the material directly away from the trunk as opposed to cutting across the roots.
  2. Combing is the gradual excavation of the ground cover plants and soil in depths that only extend as deep as the tines of the hoe.

6. Putting Utilities Under the Root Zone:

- a. Boring under the root systems of trees (and other vegetation) shall be done under the supervision of an ISA Certified Arborist. This is to be accomplished by excavating a limited trench or pit on each side of the critical root zone of the tree and then hand digging or pushing the pipe through the soil under the tree. The closest pit walls shall be a minimum of 7 feet from the center of the tree and shall be sufficient depth to lay the pipe at the grade as shown on the plan and profile.
- b. Tunneling under the roots of trees shall be done under the supervision of an ISA Certified Arborist in an open trench by carefully excavating and hand digging around areas where large roots are exposed. No roots 1 inch in diameter or larger shall be cut.
- c. The contractor shall verify the vertical and horizontal location of existing utilities to avoid conflicts and maintain minimum clearances; adjustment shall be made to the grade of the new utility as required.

**Page 44, TREE REVIEW, # 3**

TREE REVIEW

3. (For Civil) A tree protection plan is required according to the following checklist. No tree numbers matching the arborist report are shown for example. Trees driplines need to reflect the measurements in the arborist report. Update the tree protection plan with suggestions in the arborist report the civil information. [https://www.mercerisland.gov/sites/default/files/fileattachments/community\\_planning\\_amp\\_development/page/21988/treessubmittalchecklist.pdf](https://www.mercerisland.gov/sites/default/files/fileattachments/community_planning_amp_development/page/21988/treessubmittalchecklist.pdf)

**Response:**

Tree tag numbers and driplines have been added to the plans as required.

**WAIVER OF LIABILITY**

There are many conditions affecting the stability of a slope. The recommendations in this report are to meet the comments of the City Planning and Development Department for permit approval. It is not a guarantee against severe erosion or landslide. Tree, shrub, and groundcover roots cannot prevent deep-seated landslides from occurring. If a severe landslide occurs, all trees and vegetation will be swept away as part of the landslide. It is strongly recommended that a qualified geotechnical engineer be retained to review the recommendations involved in this report and the condition of the slope itself.

There are also many conditions affecting a tree's health and stability which may be present and cannot be ascertained, such as, root rot, previous or unexposed construction damage, internal cracks, stem rot and more which may be hidden. Changes in circumstances and conditions can also cause a rapid deterioration of slope stability. While I have used every reasonable means to examine the slope and all relevant factors, this tree management plan represents my opinion of the situation at this point in time. These findings do not guarantee future safety nor are they predictions of future events. It is the property owner/project manager's responsible to engage the services of a qualified geotechnical engineer to ascertain the conditions of the slope and actions that will enhance or destabilize the slope.

As conditions change, it is the responsibility of the property owners to schedule additional site visits by the necessary professionals to ensure that the long-term success of the project is ensured. It is the responsibility of the property owner to obtain all required permits from city, county, state, or federal agencies. It is the responsibility of the property owner to comply with all applicable laws, regulations, and permit conditions. If there is a homeowner's association, it is the responsibility of the property owner to comply with all Codes, Covenants, and Restrictions (CC&R's) that apply to tree pruning and tree removal.

This tree evaluation is to be used to inform and guide the client in the management of their trees. This in no way implies that the evaluator is responsible for performing recommended actions or using other methods or tools to further determine the extent of internal tree problems without written authorization from the client. Furthermore, the evaluator in no way holds that the opinions and recommendations are the only actions required to ensure that the tree will not fail. A second opinion is recommended. The client shall hold the evaluator harmless for any and all injuries or damages incurred if the



evaluator's recommendations are not followed or for acts of nature beyond the evaluator's reasonable expectations, such as severe winds, excessive rains, heavy snow loads, etc.

This report and all attachments, enclosures, and references, are confidential and are for the use of the client concerned. They may not be reproduced, used in any way, or disseminated in any form without the prior consent of the client concerned and Gilles Consulting.

Thank you for calling Gilles Consulting for your arboricultural needs.

Sincerely,



Brian K. Gilles, Consulting Arborist  
*International Society of Arboriculture:*

- *ISA Certified Arborist # PN-0260A*
- *ISA TRAQ Qualified*
- *ISA TRAQ Certified Instructor*

*American Society of Consulting Arborists*

- *ASCA Registered Consulting Arborist # RCA-418*
- *ASCA Tree & Plant Appraisal Qualified*
- *ASCA Tree & Plant Appraisal Certified Instructor*

